# SUMIT RASTOGI CLASSES

## CMA INTER (Paper-8)

## SYLLABUS-2016

## By CMA SUMIT RASTOGI

## Content Covered

1. Suggested Answers (June-2017 to Dec-2022)
2. Bits (Objective Question by ICMAI)
3. Chapter Wise MCQ of CMA Study Material
4. Chapter Wise True/False of CMA Study Material
5. Chapter Wise Fill in the Blanks of CMA Study Material
6. Chapter Wise Matching of CMA Study Material
7. Costing Summary Notes
8. Extra MCQ of Costing
9. Costing Theory Notes by CMA Sumit Rastogi
10. Short Notes of Costing (Paper-8) of All Past MTP

# INTERMEDIATE EXAMINATION
## GROUP -II
## (SYLLABUS 2016)

## SUGGESTED ANSWERS TO QUESTIONS

## JUNE- 2017

### Paper- 8 : COST ACCOUNTING

**Time Allowed : 3 Hours** **Full Marks : 100**

**The figures on the right margin indicate full marks.**
**All Sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.**
**All working notes must form part of the answer.**
**Wherever necessary, candidates may make appropriate assumptions and clearly state them.**
**No present value factor table or other statistical table will be provided in addition to this question paper.**

## Section - A

**Section A contains Question Number 1. All parts of this question are compulsory.**

**1. Answer the following questions:**

**(a) Choose the correct answer from the given alternatives (You may write only the Romannumeral and the alphabet chosen for your answer): 1×10=10**

**(i) In process, conversion cost means**
- **(A) Cost of direct materials, direct labour, direct expenses**
- **(B) Direct labour, direct expenses, indirect material, indirect labour,indirectexpenses**
- **(C) Prime cost plus factory overheads**
- **(D) All costs up to the product reaching the consumer, less direct material costs**

**(ii) At the economic ordering quantity level, the following is true:**
- **(A) The ordering cost is minimum**
- **(B) The carrying cost is minimum**
- **(C) The ordering cost is equal to the carrying cost**
- **(D) The purchase price is minimum**

**(iii) When a direct worker is paid on a monthly fixed salary basis, the following is true:**
- **(A) There is no idle time lost.**
- **(B) There is no idle time cost.**
- **(C) Idle time cost is separated and treated as overhead.**
- **(D) The salary is fully treated as factory overhead cost.**

**(iv) The following is an example of direct expenses as per CAS-10:**
- **(A) Special raw material which is a substantial part of the prime cost.**
- **(B) Travelling expenses to site.**
- **(C) Overtime charges paid to direct worker to complete work before time.**
- **(D) Catalogue of prices of finished products.**

**(v) The following is not treated as a manufacturing overhead:**
- **(A) Lubricants**
- **(B) Cotton waste**
- **(C) Apportioned administration overheads**
- **(D) Night shift allowance paid to a factory worker due to general work pressure.**

(vi) When you attempt a reconciliation of profits as per Financial Accounts and Cost Accounts, the following is done:
- (A) Add the under absorption of overheads in Cost Accounts if you start from the profits as per Financial Accounts.
- (B) Add the under absorption of overheads in Cost Accounts if you start from the profits as per Cost Accounts.
- (C) Add the over absorption of overheads in Cost Accounts if you start from the profits as per Financial Accounts.
- (D) Add the over absorption of overheads in Cost Accounts if you start from the profits as per Cost Accounts.

(vii) Batch Costing is applied effectively in the following situation:
- (A) paper manufacturing
- (B) drug manufacturing
- (C) designer clothes manufacturing
- (D) oil refining

(viii) In the context of Contract a/c, work completed and not yet certified will beshown
- (A) at cost plus + 2/3rd of the notional profit under 'Completed Work'.
- (B) at cost plus notional profit less retention money under 'Completed Work'.
- (C) at cost under 'Completed Work'.
- (D) at cost under WIP a/c.

(ix) A certain process needed standard labour of 24 skilled labour hours and 30 unskilled labour hours at ` 60 and 40 respectively as the standard labour rates. Actually, 20 and 25 labour hours were used at ` 50 and 50 respectively. Then, the labour mix variance will be
- (A) Adverse
- (B) Favourable
- (C) Zero
- (D) Favourable for skilled and unfavourable for unskilled

(x) If an organization has all the resources it needs for production, then the principal budget factor is most likely to be
- (A) non-existing
- (B) sales demand
- (C) raw materials
- (D) labour supply

(b) Match the following (You may opt write only the Roman numeral and the matched alphabet instead of copying contents into the answer books): 1×5=5

| | Column I | | Column II |
|---|---|---|---|
| xi | High inventory turnover ratio | A | Works Overhead |
| xii | Job evaluation | B | Opportunity Cost |
| xiii | Salary of product designers | C | Co-product |
| xiv | By product value | D | Sales and Production Budget |
| xv | Master Budget | E | Administrative Overhead |
| | | F | P & L Budget |
| | | G | Rationality in wage structure |
| | | H | Efficient use of stock |
| | | I | Purchase cost/average inventory |
| | | J | Evaluation of employee performance |

(c) State whether the following are 'True' or 'False' (You may write only the Roman numeral and whether 'True' or 'False' without copying the statements into the answer books): 1×5=5

(xvi) Uniform Costing is a unique method of costing to determine costs accurately.

(xvii) When overtime wages are incurred due to the general policy of the company arising due to lack of capacity, normal wages are treated as direct labour cost and the premium on overtime wages is treated as factory overheads.

**(xviii) In marginal and absorption costing, variable factory overhead is treated as direct cost.**

**(xix) Operation Costing and Operating Costing are interchangeably used for the same technique of costing.**

**(xx) Standard Costs are costs that are estimated costs that are likely in the future production period.**

**(d) Fill in the blanks (You may write only the Roman numeral and the content filling the blank): 1×5=5**

**(xxi) Profit volume ratio_____with increase in fixed cost (indicate the nature ofchange).**

**(xxii) In the graph showing the angle of incidence, when the quantity is zero, the total costline cuts the costs axis (y axis) at_____. (indicate the value)**

**(xxiii) A process account is credited with value for_____loss when scrap value is zero(indicate the type of loss).**

**(xxiv) When special material is purchased for direct use in a job, _____ account isdebited in the Integral Accounts System.**

**(xxv) VED analysis is primarily used for control of_____(indicate type of material).**

**Answer:**

**1. (a)** (i) (B)
(ii) (C)
(iii) (B)
(iv) (B)
(v) (D)
(vi) (A)
(vii) (B)
(viii) (D)
(ix) (C)
(x) (B)

**(b)** (xi) (H)
(xii) (G)
(xiii) (A)
(xiv) (B)
(xv) (F)

**(c)** (xvi) False
(xvii) False
(xviii) False
(xix) False
(xx) False

**(d)** (xxi) is constant
(xxii) Fixed Cost value
(xxiii) abnormal
(xxiv) WIP Control A/c
(xxv) Components or spare parts

## Section - B

**Answer any five questions from question numbers 2 to 8.**
**Each question carries fifteen marks.**

**2. (a) The following summarized information is available from the records of Oil Ltd. for the month of March, 2017:**

**Sales for the month: ` 19,25,000**
**Opening stock as on 1 March, 2017 : 1,25,000 litres @ ` 6.50 per litre**
**Purchases (including freight and insurance):**
**March 5 1,50,000 litres @ ` 7.10 per litre**
**March 27 1,00,000 litres @ ` 7.00 per litre**
**Closing stock as on 31st March, 2017 1,30,000 litres**

**Expenses for the month is ` 45,000. Pricing of material issues is being done at the end of the month after all receipts during the month.**
**On the basis of above information, calculate the following using FIFO and LIFO methods of pricing:**
**(i) Value of closing stock as on 31 March, 2017.**
**(ii) Cost of goods sold during March, 2017.**
**(iii) Profit or loss for March, 2017.**
**(A detailed stores ledger account is not required. Only relevant figures need to be calculated). 8**

**(b) A factory has 3 production departments ($P_1$,$P_2$, $P_3$) and 2 service departments ($S_1$&$S_2$). The following overheads and other information are extracted from the books for the month of May 2017:**

| Expenses | Amount (`) |
|---|---|
| Rent | 7,200 |
| Plant Repair | 3,600 |
| Depreciation | 2,700 |
| Lighting | 600 |
| Supervision | 9,000 |
| Fire Insurance for stock | 3,000 |
| Cost of Idle Time | 900 |
| Power | 5,400 |

| Particulars | $P_1$ | $P_2$ | $P_3$ | $S_1$ | $S_2$ |
|---|---|---|---|---|---|
| Area sq ft | 400 | 300 | 270 | 150 | 80 |
| No. of workers | 54 | 48 | 36 | 24 | 18 |
| Wages Rs. | 18,000 | 15,000 | 12,000 | 9,000 | 6,000 |
| Value of plant Rs. | 72,000 | 54,000 | 48,000 | 6,000 | |
| Stock value Rs. | 45,000 | 27,000 | 18,000 | | |
| Horse power of plant | 600 | 400 | 300 | 150 | 50 |

**(i) Allocate the overheads among the various departments on the most appropriate basis (primary distribution only).**
**(ii) If $S_1$and $S_2$use 10% of each other's facilities, find the total cost of$S_1$by the simultaneous equation method. 7**

**Answer:**

**2. (a)** (i) Valuation of closing stock as on 31-03-2017:

**(a)** FIFO Method: (the closing stock will comprise the items purchased in the end)

| | ` |
|---|---|
| 1,00,000 litres purchased on 27-03-2017 @ ` 7.00 | 7,00,000 |
| 30,000 litres from purchases made on 05-03-2017 @ ` 7.10 | 2,13,000 |
| 1,30,000 value of closing stock under FIFO method | 9,13,000 |

**(b)** LIFO Method: (the closing stock will comprise the items lying in opening stock and purchased in the beginning)

| | ` |
|---|---|
| 1,25,000 litres from opening stock @ ` 6.50 | 8,12,500 |
| 5,000 litres from purchases made on 05-03-2017 @ ` 7.10 | 35,500 |

| | |
|---|---|
| 1,30,000 value of closing stock under LIFO method | 8,48,000 |

(ii) Cost of Goods Sold:

| | FIFO Method (`) | LIFO Method (`) |
|---|---|---|
| Opening stock as on 01.03.2017 | 8,12,500 | 8,12,500 |
| Purchases made on 05.03.2017 | 10,65,000 | 10,65,000 |
| Purchases made on 27.03.2017 | 7,00,000 | 7,00,000 |
| Total | 25,77,500 | 25,77,500 |
| Less: Closing stock as per (i) | 9,13,000 | 8,48,000 |
| Cost of material consumed | 16,64,500 | 17,29,500 |
| Add: Expenses | 45,000 | 45,000 |
| Cost of goods sold | 17,09,500 | 17,74,500 |

(iii) Profit for March, 2017:

| | FIFO Method (`) | LIFO Method (`) |
|---|---|---|
| Sales | 19,25,000 | 19,25,000 |
| Cost of goods sold | 17,09,500 | 17,74,500 |
| Profit | 2,15,500 | 1,50,500 |

**(b)** The primary distribution of overheads is as follows:

| Expenses | Total ` | Basis | P1 ` | P2 ` | P3 ` | S1 ` | S2 ` |
|---|---|---|---|---|---|---|---|
| Rent | 7,200 | Area sq. ft. | 2,400 | 1,800 | 1,620 | 900 | 480 |
| Plant Repair | 3,600 | Plant value | 1,440 | 1,080 | 960 | 120 | -- |
| Depreciation | 2,700 | Plant Value | 1,080 | 810 | 720 | 90 | -- |
| Lighting | 600 | Area sq. ft. | 200 | 150 | 135 | 75 | 40 |
| Supervision | 9,000 | No. of Workers | 2,700 | 2,400 | 1,800 | 1,200 | 900 |
| Fire Insurance for stock | 3,000 | Stock Value | 1,500 | 900 | 600 | -- | -- |
| Cost of Idle Time | 900 | Wages | 270 | 225 | 180 | 135 | 90 |
| Power | 5,400 | Horse Power | 2,160 | 1,440 | 1,080 | 540 | 180 |
| Total | 32,400 | | 11,750 | 8,805 | 7,095 | 3,060 | 1,690 |

$S_1 = 3,060 + 0.1\ S_2$
$S_2 = 1,690 + 0.1\ S_1$
$S_2 = 1,690 + 0.1(3,060 + 0.1\ S_2) = 1,690 + 306 + 0.01\ S_2 = 0.99\ S_2 = 1,996$
$\therefore S_2 = 1,996 / 0.99 = 2,016.16$
$\therefore S_1 = 3,060 + 201.62 = 3,261.62$

*Or*

$S_1 = 3,060 + 0.1\ S_2$
$S_2 = 1,690 + 0.1\ S_1$
$S_1 = 3,060 + 0.1\ (1690 + 0.1\ S_1) = 3,060 + 169 + 0.01\ S_1$
$\therefore 0.99\ S_1 = 3,229 \quad \therefore S_1 = 3,229 / 0.99 = 3,261.62$
$\therefore S_2 = 1,690 + 326.16 = 2,016.16$

**3. (a) From the following particulars calculate the profit as per cost records and also prepare a reconciliation statement, if the profit as per financial accounts for the year ending 31st March, 2017 was `1,35,525:**

| Particulars | ` | ` |
|---|---|---|
| **Opening stock of raw materials** | | **50,000** |
| **Opening stock of finished goods** | | **1,50,000** |
| **Purchase of raw materials** | | **3,50,000** |
| **Direct wages** | | **1,50,000** |
| **Factory lighting** | **3,000** | |
| **Factory rent** | **24,000** | |
| **Power and fuel** | **30,000** | |

| | | |
|---|---|---|
| **Indirect wages** | **2,500** | |
| **Depreciation on plant & machinery** | **50,000** | |
| **Oil waste etc.** | **2,000** | |
| **Work manager's salary** | **23,000** | |
| **Miscellaneous factory expenses** | **1,250** | **1,35,750** |
| **Office rent** | **18,000** | |
| **Office lighting** | **600** | |
| **Depreciation on office appliances** | **2,000** | |
| **Office staff salaries** | **20,000** | **40,600** |
| **Closing stock of finished goods** | | **50,000** |
| **Closing stock of raw materials** | | **75,000** |
| **Donations** | | **10,000** |

**Factory overhead is charged at 20% on prime cost and office and administrative expenses at50% of factory overhead. The selling price is fixed by adding 25% on the total cost ofmanufactured and finished articles sold. Assume no WIP. 9**

**(b) Fill up the following table in accordance with the principles of Cost Accounting Standards applicable:**

| SI. No. | Items of expenses | Employee Cost as per CAS | Disclosure | Element of Cost |
|---|---|---|---|---|
| | | Included/Excluded/ Not applicable (NA) | Yes/No/ NA | |
| I | II | III | IV | V |
| i | **Basic Wages to Direct Worker** | | | |
| ii | **Normal Idle time Cost of Direct Worker** | | | |
| iii | **Perquisite paid by company to administration staff** | | | |
| iv | **Late payment fee to PF authorities for delayed remittance of Employer's contribution to Provident Fund** | | | |

**(You may write only columns I, II, IV and V in your answer books). 6**

**Answer:**

**3. (a)**

Statement of Cost and Profit

| Particulars | ` |
|---|---|
| Opening Stock of Raw Material | 50,000 |
| Add: Purchases of Raw Material | 3,50,000 |
| Less: Closing Stock of Raw Material | 75,000 |
| Raw Material consumed | 3,25,000 |
| Direct Wages | 1,50,000 |
| Prime Cost | 4,75,000 |
| Factory overheads (20% of Prime Cost) | 95,000 |
| Works Cost | 5,70,000 |
| Office and Administrative Overheads (50% of Factory Overhead) | 47,500 |
| Cost of Production | 6,17,500 |
| Add: Opening Stock of Finished Goods | 1,50,000 |
| Less: Closing Stock of Finished Goods | 50,000 |
| Cost of Goods Sold/ Total Cost | 7,17,500 |
| Profit (25% of Total Cost) | 1,79,375 |
| Sales | 8,96,875 |

Reconciliation Statement

| Particulars | ` |
|---|---|

| | |
|---|---|
| Profit as per Financial Accounts | 1,35,525 |
| Add: Factory Overheads under recovered in Cost Accounts (` 1,35,750 – ` 95,000) | 40,750 |
| Donation not charged in Cost Accounts | 10,000 |
| | 1,86,275 |
| Less: Office Overhead over recovered in Cost Accounts (` 47,500 – ` 40,600) | 6,900 |
| Profit as per Cost Accounts | 1,79,375 |

**(b)** Fill up the following table in accordance with the principles of Cost Accounting Standards applicable.

| Sl.No. | Items of expenses | Employee Cost as per CAS | Disclosure Required under CAS 7 | Element of Cost |
|---|---|---|---|---|
| | | Included/Excluded/ Not applicable(NA) | Yes/No/NA | |
| (i) | Basic Wages to Direct Worker | Included | Yes | Direct Labour |
| (ii) | Normal Idle time Cost of Direct Worker | Excluded | No | Factory Overhead |
| (iii) | Perquisite paid by company to administration staff | Included | Yes | Administration Overhead |
| (iv) | Late payment fee to PF authorities for delayed remittance of Employer's contribution to Provident Fund | Excluded | NA | Not an element of Cost |

**4. (a) A factory has to produce and supply 48000 units of a component annually to a customer. The carrying cost per unit is ` 2 per component per month. The production run set up cost is ` 3,600 per production run.**

**(i) Find out the economic batch size that must be produced to minimize total cost based on the above information.**

**(ii) If it is found that the dye and hydraulic mechanism get heated up and consequently the dye has to be replaced by a new one at a cost of ` 1,200 for each run that has a batch quantity exceeding 1000 units, what batch size would you recommend to minimize overall costs? Substantiate your recommendations with appropriate calculations.**

**(iii) Between the quantities suggested in (i) and (ii) above, how much would be the amount of savings or incremental expenses in (ii) over (i) with cost of dye replacement? 8**

**(b) A company produces a product 'M' by three distinct processes before it is ready for sale. From the information given below, work out the selling price of the product if the Management decides to earn a profit of 20% over its works cost. Present the process a/c for each process.**

| Particulars | | Processes | | |
|---|---|---|---|---|
| | | A | B | C |
| 1 | Input of raw materials @ ` 40 per kg. (kg) | 10,000 | - | - |
| 2 | Normal loss of input | 5% | 5% | 5% |
| 3 | Delivered to next process (kg) | 9,000 | 8,000 | - |
| 4 | Total direct labour cost (`) | 15,000 | 15,750 | 13,000 |
| 5 | Variable overhead (%of direct labour) | 150% | 120% | 100% |
| 6 | Fixed overhead (% of direct labour) | 250% | 180% | 200% |
| 7 | Finished stock held back (kg) | 400 | 400 | - |

**7**

**Answer:**

**4. (a)** (i)

| |
|---|
| Economic Batch Quantity = $\frac{\sqrt{2\ X\ 48{,}000\ X\ 3600}}{2\ X\ 12}$ = 3,795 units approximately / batch |

(ii)

| | |
|---|---|
| Hence, number of Set- ups = 48,000 ÷ 3,795 = 12.65 say 13 (Set up can not be in Fraction). However, lenient view to be taken and marks to be awarded accordingly) | |
| Then, batch size = 48,000/13 = 3693 units per batch | |
| Carrying cost = 2 X (3693 /2) X 12 | = 44,316 |
| Set up cost = 13 X 3600 | = 46,800 |
| Total relevant cost | = 91,116 |
| **Overall Cost as per (ii) of Question** | |
| Carrying cost = 1,200/2 X 12 X 2 | = 14,400 |
| Set up cost = 4,800* X 13 | = 62,400 |
| Total relevant cost | = 76,800 |
| Saving in (ii) over (i) | = 14,316 |

- 3,600 + 1,200 =4,800 Set up Cost as batch size is more than 1000 Units per batch. (Candidates do not have to show the following, however, they may consider this approach, but the analysis should lead to the above result)
  If the dye cost is built in to the setup cost, revised setup = 4800 per run

| | |
|---|---|
| EBQ = $\frac{\sqrt{2\ X\ 48{,}000\ X\ 4800}}{2\ X\ 12}$ = $\sqrt{1{,}92{,}00{,}000}$ = 4,382 units / batch in this case, | |
| No. of set ups = 48,000/ 4,382 = 10.95 say 11 | |
| Set up cost = 11 X 4800 | = 52,800 |
| Carrying cost = 2 X 12 X 4,382 / 2 | = 52,584 |
| Total relevant cost | = 1,05,384 |

**(b)**

Process A Account

| Particulars | Kg. | ` | Particulars | Kg. | ` |
|---|---|---|---|---|---|
| To Input of Raw Material | 10,000 | 4,00,000 | By Normal loss | 500 | --- |
| To Direct Labour | | 15,000 | By Abnormal loss | 100 | 5,000 |
| To Variable Overheads | | 22,500 | By Transfer to Process B | 9,000 | 4,50,000 |
| To Fixed Overheads | | 37,500 | By Closing Stock | 400 | 20,000 |
| | 10,000 | 4,75,000 | | 10,000 | 4,75,000 |

Cost per kg = `4,75,000/9,500kg = `50

Process B Account

| Particulars | Kg. | ` | Particulars | Kg. | ` |
|---|---|---|---|---|---|
| To Transfer From Process A | 9,000 | 4,50,000 | By Normal loss | 450 | --- |
| To Direct Labour | | 15,750 | By Abnormal loss | 150 | 9,000 |
| To Variable Overheads | | 18,900 | By Transfer To Process C | 8,000 | 4,80,000 |
| To Fixed Overheads | | 28,350 | By Closing Stock | 400 | 24,000 |
| | 9,000 | 5,13,000 | | 9,000 | 5,13,000 |

Cost per kg = `5,13,000/8,550 kg = `60

Process C Account

| Particulars | Kg. | ` | Particulars | Kg. | ` |
|---|---|---|---|---|---|
| To Transfer From Process B | 8,000 | 4,80,000 | By Normal loss | 400 | --- |
| To Direct Labour | | 13,000 | By Transfer to Finished Stock A/c | 7,600 | 5,32,000 |
| To Variable Overheads | | 13,000 | | | |
| To Fixed Overheads | | 26,000 | | | |
| | 8,000 | 5,32,000 | | 8,000 | 5,32,000 |

Cost per kg. = ` 5,32,000/7,600 kg = `70
Selling Price = ` 70 × 120/100 = ` 84 per kg. (20% above Works Cost)

**5. (a) The following information relating to two vehicles is given. Prepare the Operating Cost Statement and determine the cost per running kilometre for each vehicle.**

| | Vehicle A (`) | Vehicle B (`) |
|---|---|---|
| **Cost of vehicle** | **25,000** | **15,000** |
| **Road licence fee per year** | **750** | **750** |
| **Supervision yearly Salary** | **1,800** | **1,200** |
| **Driver's wages per hour** | **4.00** | **4.00** |
| **Cost of fuel per litre** | **1.50** | **1.50** |
| **Repairs and maintenance per km** | **1.50** | **2.00** |
| **Tyre cost per km** | **1.00** | **0.80** |
| **Garage rent per year** | **1,600** | **550** |
| **Insurance yearly** | **850** | **500** |
| **Kilometres run per litre** | **6** | **5** |
| **Kilometres run during the year** | **15,000** | **6,000** |
| **Estimated life of vehicle (km)** | **1,00,000** | **75,000** |

**Charge interest at 10% on the cost of vehicle. Each vehicle runs 20 km. per hour on an average. 8**

**(b) A company undertook a contract for construction of a large building complex. The construction work commenced on 1st April 2016 and the following data are available for the year ended 31st March 2017:**

| Particulars | (` '000) |
|---|---|
| **Contract price** | **35,000** |
| **Work certified** | **20,000** |
| **Progress payments received** | **15,000** |
| **Materials issued to site** | **7,500** |
| **Planning and estimating costs** | **1,000** |
| **Direct wages paid** | **4,000** |
| **Materials returned from site** | **250** |
| **Equipment hire charges** | **1,750** |
| **Wage related costs** | **500** |
| **Site office costs** | **678** |
| **Head office expenses apportioned** | **375** |
| **Direct expenses incurred** | **902** |
| **Work not certified** | **149** |

**The contractor owns a plant which originally cost ` 20 lakhs and has been continuously in use only in this contract throughout the year. The residual value of the plant after 5 years of life is expected to be ` 5 lakhs. Straight line method of**

**depreciation is in use. As on 31st March 2017, the direct wages due and payable amounted to ` 2,70,000 and the materials at site were estimated at ` 2,00,000**

**(i) Prepare the contract account for the year ended 31st March 2017. Present figures in(` '000)**

**(ii) Compute the amount of profit/loss to be taken to the profit and loss account of the year ending 31-3-2017. 7**

**Answer:**

**5. (a)**

Operating Cost Statement

| | Vehicle A (`) | Vehicle B (`) |
|---|---|---|
| Operating and maintenance cost per km. | 3.20 | 3.50 |
| Fixed charges per km. | 0.50 | 0.75 |
| Operating cost per km. | **3.70** | **4.25** |
| Workings: | | |
| Calculation of Operating and maintenance cost per km. | | |
| Driver's wages 4/20 | 0.20 | 0.20 |
| Cost of fuel (1.50/6) (1.50/5) | 0.25 | 0.30 |
| Repairs and maintenance per km | 1.50 | 2.00 |
| Tyre cost per km | 1.00 | 0.80 |
| Depreciation | 0.25 | 0.20 |
| Operating and maintenance cost per km. | **3.20** | **3.50** |
| Calculation of fixed charges per km. | | |
| Fixed changes per annum: | | |
| Road licence | 750 | 750 |
| Supervisor's salary | 1,800 | 1,200 |
| Garage rent | 1,600 | 550 |
| Insurance | 850 | 500 |
| Interest | 2,500 | 1,500 |
| | 7,500 | 4,500 |
| Km. run during the year | 15,000 | 6,000 |
| Fixed charges per km. A-(7,500/15,000) B-(4,500/6,000) | **0.50** | **0.75** |

**(b)**

Contract Account for the year ended 31st March 2016

| Particulars | ` '000 | Particulars | ` '000 |
|---|---|---|---|
| To Materials issued | 7,500 | By Materials returned to stores | 250 |
| To Direct wages paid and accrued | 4,270 | By Material at site | 200 |
| To Wages related costs | 500 | By Working-in-progress: | |
| To Direct Expenses | 902 | Work certified | 20,000 |
| To Equipment hire changes | 1,750 | Work uncertified | 149 |
| To Planning & Estimation cost | 1,000 | | |
| To Site office costs | 678 | | |
| To H.O. expenses (apportioned) | 375 | | |
| To Plant depreciation (2000 – 500)/5 years | 300 | | |
| To National Profit c/d | 3,324 | | |
| | 20,599 | | 20,599 |
| To Profit & Loss A/c (Transfer) | 1,662* | By National Profit b/d | 3,324 |
| To WIP A/c (Reserve) | 1,662 | | |
| | 3,324 | | 3,324 |

* % 0f Work completed:

(20,000 / 35,000) × 100 = 57.14%
∴ 2/3rd Profit (Notional)
3,324 × (2/3) × (15,000 Cash received)/ 20,000 Work certified)
= 3,324/2 = ` 1,662

**6. (a) ABC Ltd. has furnished the following data for the two years:**

| Particulars | 2015-16 | 2016-17 |
|---|---|---|
| Sales (`) | 10,00,000 | ? |
| Profit/Volume Ratio | 50% | 37.5% |
| Margin of safety sales as a % of total sales | 40% | 21.875% |

**There has been substantial savings in the fixed cost in the year 2016-17 due to the restructuring process. The company could maintain its sales quantity level of 2015-16 in 2016-2017 by reducing the selling price.**
**You are required to calculate the following values (in `):**
**(i) Sales for 2016-17**
**(ii) Break-even sales for 2016-17**
**(iii) Fixed cost for 2016-17** **8**

**(b) A firm can produce three different products from the same raw material using the same production facilities. The requisite labour is available in plenty at ` 8 per hour for all products. The supply of raw material, which is imported at `8 per Kg is limited to 10,400 kg. for the budget period. The variable overheads are ` 5.60 per hour. The fixed overheads are ` 50,000. The selling commission is 10% on sales.**

**From the following information, you are required to suggest the sales mix which will maximize the firm's profits. Also determine the profit that will be earned at the level:**

| Product | Market Demand (units) | Selling Price Per unit (`) | Labour (Hours Required per unit) | Raw Material (Kg Required per unit) |
|---|---|---|---|---|
| X | 8,000 | 30 | 1 | 0.7 |
| Y | 6,000 | 40 | 2 | 0.4 |
| Z | 5,000 | 50 | 1.5 | 1.5 |

**7**

**Answer:**

**6. (a)** In 2015, P/V ratio = 50%
Variable cost ratio = 100%-50% = 50%
Variable cost in 2015 – 2016 = ` 10,00,000 ×50% = ` 5,00,000
In 2016 - 2017, sales quantity has not changed. Thus Variable Cost in 2016 – 2017 is ` 5,00,000.
In 2016 - 2017, P/V ratio = 37.50%
Thus, Variable Cost ratio = 100%-37.5% = 62.5%
(i) Thus sales in 2016 - 2017 = 5,00,000/62.5% = ` **8,00,000**
At break-even point, Fixed Cost is equal to contribution.
In 2016 - 2017 Break-even Sales = 100%-21.875% = 78.125%
(ii) Break-even sales = 8,00,000 ×78.125% = `**6,25,000**
(iii) Fixed Cost of 2016 - 2017= B.E. sales × P/V ratio
= 6,25,000 ×37.50% = `**2,34,375**

**(b)**

Marginal Profitability Statement

| Particulars | Production | | |
|---|---|---|---|
| | X(`) | Y(`) | Z(`) |
| Direct Materials | 5.60 | 3.20 | 12.00 |
| Direct Labour | 8.00 | 16.00 | 12.00 |
| Variable Production Overheads | 5.60 | 11.20 | 8.40 |

| | | | |
|---|---|---|---|
| Variable Selling Overheads | 3.00 | 4.00 | 5.00 |
| (A) Total Variable Cost | **22.20** | **34.40** | **37.40** |
| (B) Selling Price | 30.00 | 40.00 | 50.00 |
| (C) Contribution per unit (B-A) | **7.80** | **5.60** | **12.60** |
| (D) Contribution per kg of raw material (Rs.) | 11.14 | 14.00 | 8.40 |
| (E) Ranking | II | I | III |

| Product | Demand Max. Units | Suggested Production Max. Units | Raw Materials Consumed (Kgs.) | Balance of Raw Materials (Kgs.) | Contribution (`) |
|---|---|---|---|---|---|
| Y | 6,000 | 6,000 | (6,000 × 0.4) = 2,400 | 8,000 | (6,000 × 5.60) = 33,600 |
| X | 8,000 | 8,000 | (8,000 × 0.7) = 5,600 | 2,400 | (8,000 × 7.80) = 62,400 |
| Z | 5,000 | 2,400/1.50 = 1,600 | 2,400 | NIL | (1,600 × 12.60) = 20,160 |
| | | | Total Contribution | | 1,16,160 |
| | | | Less: Fixed Cost | | 50,000 |
| | | | Profit | | 60,160 |

**7. (a) The standard material inputs required for 1,000 kgs. of a finished product are given below:**

| Material | Quantity (in kgs.) | Standard rate per kg (in `) |
|---|---|---|
| **A** | **450** | **20** |
| **B** | **400** | **40** |
| **C** | **250** | **60** |
| | **1,100** | |
| **Less: Standard loss** | **100** | |
| **Standard output** | **1,000** | |

**Actual production in a period was 40,000 kgs. of the finished product for which the actual quantities of material used and the prices paid thereof are as under:**

| Material | Quantity (in Kg) | Purchase price per kg. (in `) |
|---|---|---|
| **A** | **20,000** | **19** |
| **B** | **17,000** | **42** |
| **C** | **9,000** | **65** |

**Compute the following variances giving materialwise break up and indicate whether Favourable(F) or Adverse (A):**

**(i) Material cost variance** **(ii) Material price variance**
**(iii) Material usages variance** **(iv) Material Mix variance**
**(v) Material yield variance** **8**

**(b) A glass manufacturing company requires you to calculate and present the Master Budget for the year 2017-18 from the following information:**

**Annual Sales : Toughened glasses A** ` **30,00,000**
**Toughened glasses B** ` **50,00,000**
**Direct material cost** **60% of sales**
**Direct wages** **20 workers @ ` 1,500 p.m.**
**Factory overheads & indirect labour:**
**Works manager** ` **5,000 p.m.**
**Foreman** ` **4,000 p.m.**
**Stores and spares** **2.50% of sales**
**Depreciation on machinery** ` **1,26,000**
**Light and power** ` **50,000**
**Repairs and maintenance** ` **80,000**

**Other sundries** **10% of direct wages**
**Administration, selling &distribution expenses** **` 1,40,000 p.a.** **7**
**(Present the fixed and variable overheads separately showing itemwise breakup)**

**Answer: 7. (a):**

| |
|---|
| Material cost variance = (16,00,000 – 16,79,000) = ` 79,000 (A) |
| Material price variance = (16,20,000 – 16,79,000) = ` 59,000 (A) |
| Material usage variance = (16,00,000 – 16,20,000) = ` 20,000 (A) |
| Material mix variance = (16,72,727 – 16,20,000) = ` 52,727 (F) |
| Material yield variance = (16,00,000 – 16,72,727) = ` 72,727 (A) |
| **Workings:** |
| (1) Actual Cost of Materials used =(AQ X AR) |
| A 20,000 X 19 = `3,80,000 |
| B 17,000 X 42 = `7,14,000 |
| C 9,000 X 65 = `5,85,000 |
| = `16,79,000 |
| (2) Standard Cost of Material used : |
| A 20,000 X 20 = ` 4,00,000 |
| B 17,000 X 40 = ` 6,80,000 |
| C 9,000 X 60 = ` 5,40,000 |
| = Rs.16,20,000 |
| (3) Standard Cost of Material if it had been used in standard proportion |
| A 450/ 1,100 X 46,000 X 20 = `3,76,363 |
| B 400/ 1,100 X 46,000 X 40 = `6,69,091 |
| C 250/ 1,100 X 46,000 X 60 = `6,27,273 |
| = `16,72,727* **OR** |
| (4) standard Cost of output |
| A 450X 40 X 20 = ` 3,60,000 |
| B 400 X 40 X 40 = ` 6,40,000 |
| C 250 X 40 X 60 = ` 6,00,000 |
| = `16,00,00** **OR** |
| |

*

| Std. data | | | |
|---|---|---|---|
| | Q | P | V |
| A | 18818.18 | 20 | 376363.6 |
| B | 16727.27 | 40 | 669090.8 |
| C | 10454.55 | 60 | 627273.0 |
| | 46000 | | 1672727 |
| Less: Loss | 4181.82 | | - |
| | 41818.18 | | 1672727 |

**

| | 1 |
|---|---|
| | SQSP |
| A | 18000 x 20 |
| B | 16000 x 40 |
| C | 10000 x 60 |
| A | 360000 |
| B | 640000 |
| C | 600000 |

| | |
|---|---|
| | 1600000 |

SQ for A = $\frac{18818.18}{41818.18}$ x 40000=18000
SQ for B = $\frac{16727.27}{41818.18}$ x 40000=16000
SQ for C = $\frac{10454.55}{41818.18}$ x 40000=10000

**(b)**

| Master Budget for the year 2017-2018 | | | |
|---|---|---|---|
| **Particulars** | ` | ` | ` |
| Sales: | | | |
| Toughened glasses | 30,00,000 | | |
| Bent Toughened glasses | 50,00,000 | | |
| **Total Sales (A)** | | | **80,00,000** |
| Less: Cost of Sales: | | | |
| Direct Material (60% of Sales) | 48,00,000 | | |
| Direct Wages (20 * ` 1,500 * 12) | 3,60,000 | | |
| **Prime Cost** | | **51,60,000** | |
| Factory Overheads (Variable) | | | |
| Store and Spares (2.5% on Sales) | 2,00,000 | | |
| Light and Power | 50,000 | | |
| Repairs and Maintenance | 80,000 | **3,30,000** | |
| Fixed: Works Manager's salary | 60,000 | | |
| Fore men's Salary | 48,000 | | |
| Depreciation of Machinery | 1,26,000 | | |
| Sundries | 36,000 | **2,70,000** | |
| Work Cost (B) | | | 57,60,000 |
| Gross Profit (A-B) | | | 22,40,000 |
| Less: Administration, Selling and Distribution Overheads | | | 1,40,000 |
| **Net Profit** | | | **21,00,000** |

**8. Answer any three out of the following four questions: 5×3=15**

**(a) List three items included and two items excluded under the Cost Accounting Standards for Direct Expenses.**

**(b) State why and under what conditions will profits under absorption costing be**
- **(i) higher than**
- **(ii) equal to and**
- **(iii) lower than the profits under marginal costing.**

**(c) Differentiate between Financial Accounting and Management Accounting.**

**(d) How would you classify costs based on behaviour? Give an example to explain each class.**

**Answer:**

**8. (a)** Items included under CAS 10:

Any expense directly related to a cost centre or cost object, not being material or labour.
Cost of patents, royalty payments
Hire charges of special machinery or plant
Cost of special patterns, designs or tools.
Experimental costs and expenditure in connection with models and pilot schemes
Architects, surveyors and other consultants' fees
Travelling expenses to sites
Inward charges and freight charges on special material.

**Exclusions:**

A direct expense which cannot be economically traced to the cost object or cost unit.

Portion unamortised out of a lumpsum, to be amortised later over its utility period.

Finance cost incurredin connection with any self generated or procured resources shall not form part ofthe direct expenses

Any subsidy, grant or incentive or any amount received or receivable with respect to any direct expense shall be reduced

Penalties/damages paid to statutory authorities shall not form part of the direct expenses.

**(b)** Profits as per absorption costing will be:

(i) higher than in marginal costing when closing stock is more than opening stock, since some overheads will be included in the inventory value under absorption costing while MarginalCosting considers the full overheads as cost of production,

(ii) equal when the opening and closing stocks are equal,

(iii) lower when opening stock is more than closing stock.

Since under Marginal Costing, only the current period's overheads are charged to production, while underabsorption costing, a portion of the earlier period's overheads will be included in the opening stockvalue.

**(c)** Differences between Financial Accounting and Management Accounting:

| Sl. No. | Financial Accounting | Management Accounting |
|---|---|---|
| (i) | Provides general business information like P&L account, Balance Sheet | Specific information relating to specific problems and decision making. |
| (ii) | Information for owners and outside parties | Information is for management for optimizing decisions. |
| (iii) | Importance is on recording rather than control | Emphasis is on control like using details of materials, labour, etc for standard costing, budgetary control. |
| (iv) | All commercial transactions between the business and external parties are recorded. | Concerned with Internal transaction not involving payment or receipt |
| (v) | Only those transactions that can be measured in monetary terms are recorded. | Other parameters like cost units, apportioning bases are also recorded. |
| (vi) | Efficiency of resource utilization - men/materials or machine is not available | Available for corrective action. |
| (vii) | Stocks are valued at cost or market value, whichever is lower. | Always valued at cost. |
| (viii) | Records are maintained as per Companies Act and as per Income Tax Act | Records are maintained as per Companies Act only in certain cases, that too as per Cost Accounting requirements, but mainly to suit the management for efficiency and control |

**(d) Classification of costs based on behaviour:**

**Fixed Costs:**

Costs that do not vary with the change in the volume of activity in the short run.

They are not affected by temporary fluctuation in activity of an enterprise.

Example: rent, depreciation, etc.

**Variable Costs:**

These costs vary directly with the volume of activity,
Variable costs may be direct (like Direct Material, Direct Labour and Direct Expenses), when they are part of prime costor they could be indirect, like selling expenses, variable factory overheads, etc. when they are calledvariable overheads.

**Semi-Variable costs:**
These contain both fixed and variable elements. The variable elements behave like the Variable Cost andthe fixed element behaves like the Fixed Cost. The sum total therefore varies with change in activity, butnot in the same proportion as variable costs.
Example: Factory supervision, maintenance, etc

# INTERMEDIATE EXAMINATION
## GROUP -I
## (SYLLABUS 2016)

## SUGGESTED ANSWERS TO QUESTIONS

## DECEMBER- 2017

### Paper-8: COST ACCOUNTING

**Time Allowed : 3 Hours** **Full Marks : 100**

***The figures on the right margin indicate full marks .***
**All Sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.**
**All working notes must form part of the answer.**
**Wherever necessary, candidates may make appropriate assumptions and clear ly state them.**
**No present value factor table or other statistical table will be provided in addition to this question paper.**

## Section - A

***Section A contains Question Number 1. All parts of this question are compulsory.***

**1. Answer the following questions:**

**(a) Choose the correct answer from the given alternatives** ***(You may write only the Roman numeral and the alphabet chosen for your answer):*** **1×10=10**

**(i) Cost of idle time arising due to non -availability of raw material is**
**(A) recovered by inflating the raw material rate.**
**(B) recovered by inflating the wage rate.**
**(C) charged to factory overheads.**
**(D) charged to costing profit and loss account.**

**(ii) Selling and distribution overheads are absorbed on the basis of**
**(A) rate per unit.**
**(B) percentage on works cost.**
**(C) percentage on selling price of each unit.**
**(D) Any of the above**

**(iii) What entry will be passed under integrated system for purchase of stores on credit?**
**(A) Dr. Stores**
**Cr. Creditors**
**(B) Dr. Purchases**
**Cr. Creditors**
**(C) Dr. Stores Ledger Control A/ c**
**Cr. Creditors**
**(D) Dr. Stores Ledger Control A/ c**
**Cr. General Ledger Adjustment A/ c**

**(iv) In a process 800 units are introduced during 2016 -17. 5% of input is normal loss. Closing work- in-progress 60% complete is 100 units. 660 completed units are transferred to next process. Equivalent production for the period is**
**(A) 760 units**
**(B) 744 units**
**(C) 540 units**
**(D) 720 units**

(v) _____ deals with the principles and methods of determining the production or operation overheads.
(A) CAS-3
(B) CAS-5
(C) CAS-9
(D) CAS-16

(vi) There is a loss as per financial accounts Rs.10,600, donations not shown in cost accounts Rs. 6,000. What would be the profit or loss as per cost accounts?
(A) Loss Rs. 16,600
(B) Profit Rs. 16,600
(C) Loss Rs. 4,600
(D) Profit Rs. 4,600

(vii) A hotel having 100 rooms of which 80% are normally occupied in summer and 25% in winter. Period of summer and winter be taken as 6 months each and normal days in a month be assumed to be 30. The total occupied room days will be
(A) 1525 Room days
(B) 18900 Room days
(C) 36000 Room days
(D) None of the above

(viii) A firm has fixed expenses Rs. 90,000, sales Rs. 3,00,000 and profit Rs. 60,000. The P/V ratio of the firm is
(A) 10%
(B) 20%
(C) 30%
(D) 50%

(ix) Marginal costing technique follows the following basis of classification:
(A) Element -wise
(B) Function- wise
(C) Behaviour -wise
(D) Identifiability -wise

(x) Which of the following is not a potential benefits of using a budget?
(A) More motivated managers
(B) Enhanced co -ordination of firm activities
(C) Improved inter -departmental communication
(D) More accurate external financial statements

(b) Match the statement in Column I with the most appropriate statement in Column II: (You may opt to write only the Roman numeral and the matched the alphabet instead of copying contents into the answer Books) 1x5=5

| | Column I | | Column II |
|---|---|---|---|
| (i) | Component of Cost Sheet | (A) | High initial costs |
| (ii) | Objective of Cost Accounting | (B) | Classification of cost |
| (iii) | CAS1 | (C) | In terms of completed units |
| (iv) | Equivalent Production | (D) | Reference to the job |
| (v) | De-merit of a centralized purchase organization | (E) | To determine the value of closing inventory |

(c) State whether the following statements are 'True' or 'False':(You may write only the Roman numeral and whether True or False without copying the statements into the answer Books) 1x5=5

**(i) By-products may undergo further processing before sale.**
**(ii) Materials which can be identified with the given product unit of cost centre is called as indirect materials.**
**(iii) Increasing Labour Turnover increases the productivity of labour resulting in low costs.**
**(iv) In case of materials that suffers loss in weight due to evaporation etc. the issue price of the materials is inflated to cover up the losses**
**(v) Penalties and fines are included in cost acc ounts to determine the cost of production.**

**(d) Fill in the blanks suitably: (You may write only the Roman numeral and content filling the blanks) 1x5=5**

**(i) In standard costs,_____norm is applied as a scale of reference for assessing actual cost to serve as a basis of cost control.**
**(ii) Material Transfer Note is a_____for transferring the materials from one job to other job.**
**(iii) One of the disadvantages of overtime working is incurring_____labour cost.**
**(iv) CAS-2 deals with Cost Accounting Standard on_____determination.**
**(v) Where the cost and financial accounts are maintained independently of each other, it is indispensable to_____ them, as there are differences in the profits of two sets of books.**

**Answer:**

1. (a) (i) (D)
(ii) (D)
(iii) (C)
(iv) (D)
(v) (A)
(vi) (C)
(vii) (B)
(viii) (D)
(ix) (C)
(x) (D)

(b)

| | Column I | | Column II |
|---|---|---|---|
| (i) | | (D) | |
| | | | |
| | | | |
| | | | |
| | | | |

(c) (i) True
(ii) False
(iii) False
(iv) True
(v) False

(d) (i) predetermined
(ii) document
(iii) excess (or additional or more or higher)
(iv) capacity
(v) reconcile

## Section - B

***Answer any five questions from question numbers 2 to 8.***
***Each question carries 15 marks.*** ***15 x 5=75***

**2. (a) From the following particulars with respect to a particular item of materials of a manufacturing company, calculate the best quantity to order:**

| Ordering quantities (tonne) | Price per ton ( Rs.) |
|---|---|
| Less than 250 | 6.00 |
| 250 but less than 800 | 5.90 |
| 800 but less than 2,000 | 5.80 |
| 2,000 but less than 4,000 | 5.70 |
| 4,000 and above | 5.60 |

**The annual demand for the material is 4,000 tonnes. Stock holding costs are 25% of material cost p.a. The delivery cost per order is Rs. 6.00. 8**

**(b) The summary as per primary distribution is as follows:**

**Production departments A - Rs. 2,500; B- Rs. 2,300 & C- Rs. 1,700**
**Service departments X–Rs. 700; Y–Rs. 900**
**Expenses of service departments are distributed in the ratios of:**
**X department: A - 20%, B- 40%, C- 30% and Y- 10%**
**Y department: A - 40%, B- 20%, C- 20% and X- 20%**
**Show the distribution of service costs among A, B and C under repeated distribution method. 7**

**Answer:**

**2. (a)**

Statement showing computation of total inventory cost at different order size

| | | Ordering Quantities | | | | |
|---|---|---|---|---|---|---|
| | Particulars | 200 | 250 | 800 | 2,000 | 4,000 |
| (i) | Purchasing cost | 24,000 | 23,600 | 23,200 | 22,800 | 22,400 |
| (ii) | No. of orders | 20 | 16 | 5 | 2 | 1 |
| (iii) | Ordering Cost | 120 | 96 | 30 | 12 | 6 |
| (iv) | Average size of orders | 100 | 125 | 400 | 1,000 | 2,000 |
| (v) | Inventory carrying cost per unit | 1.5 (6x25%) | 1.475 (5.9x25%) | 1.45 (5.8x25%) | 1.425 (5.7x25%) | 1.4 (5.6x25%) |
| (vi) | Inventory carrying cost (iv)x (v) | 150 | 184.375 | 580 | 1,425 | 2,800 |
| (vii) | Total inventory cost (i)+(iii)+ (vi) | 24,270 | 23,880 | 23,810 | 24,237 | 25,206 |

For the above computations the best quantity to order is 800 units.

Note: Minimum ordering quantity assumed to be 200 tons; it may be any quantity below 250 tons, but the decision will remain same.

**(b)**

| | Particulars | Production departments | | | Service departments | |
|---|---|---|---|---|---|---|
| | | A | B | C | X | Y |
| | | Rs. | Rs. | Rs. | Rs. | Rs. |
| 1 | As per primary distribution | 2,500 | 2,300 | 1,700 | 700 | 900 |
| 2 | Service Dept. X | 140 | 280 | 210 | (700) | 70 |
| 3 | Service Dept. Y | 388 | 194 | 194 | 194 | (970) |
| 4 | Service Dept. X | 38.8 | 77.6 | 58.2 | (194) | 19.4 |
| 5 | Service Dept. Y | 7.76 | 3.88 | 3.88 | 3.88 | (19.4) |
| 6 | Service Dept. X | 0.776 | 1.552 | 1.164 | (3.88) | 0.388 |
| 7 | Total | 3,075.336 | 2,857.032 | 2,167.244 | 0 | 0.388 |

It can be noticed that the undistributed balance in service department is very negligible and thus can be ignored for further distribution .

**3. (a) How would you treat overtime in cost records as per CAS- 7? 5**

**(b) The following is the Trading & Profit and Loss Account of Ram & Co.:**

| Particulars | Rs. | Particulars | Rs. |
|---|---|---|---|
| To Materials consumed | 23,01,000 | By Sales (30000 units) | 48,75,000 |
| To Direct wages | 12,05,750 | By Stock of Finished goods (1000 units) | 1,30,000 |
| To Production overheads | 6,92,250 | By W.I.P: | |
| | | Material 55,250 | |
| | | Wages 26,000 | |
| | | Prod. O. H. 16,250 | 97,500 |
| To Administration Overheads | 3,10,375 | By Interest on Bank deposit | 65,000 |
| To Selling & Distribution Overheads | 3,68,875 | By Dividends | 3,90,000 |
| To Preliminary expenses written off | 22,790 | | |
| To Goodwill written off | 45,000 | | |
| To Fines | 3,250 | | |
| To Interest of mortgage | 13,000 | | |
| To Loss on sale of machine | 16,250 | | |
| To Taxation | 1,95,000 | | |
| To Net Profit | 3,83,960 | | |
| | 55,57,500 | | 55,57,500 |

**Ram & Co. manufactures a standard unit. The cost accounting records of the firm shows the following information:**

**(i) Production overheads have been charged at 20% on prime cost.**

**(ii) Administration overheads have been recovered at Rs. 9.75 per finished unit.**

**(iii) Selling and distribution overheads have been recovered at Rs. 13 per unit sold.**

**Required:**

**(i) Prepare a statement showing cost and profit as per cost records.**

**(ii) Prepare a statement reconciling the profit disclosed by cost accounts with that shown in financial accounts. 10**

**Answer:**

3. (a) **Treatment of overtime in Cost Records :** As per CAS -7, Overtime Premium shall be assigned directly to the cost object or treated as ov erheads depending on the economi c feasibility and specific circumstances requiring such overtime.

When overtime is worked due to exigencies or urgencies of the w ork, the basic/normal payment is treated as Direct Labour Cost and charged to Production or cost unit on which the worker is employed. Where as the amount of premium (extra amount) is treated as overhead.

If overtime is spent at the request of the customer , then the entire amount (including over time premium) is treated as direct wages and should be charged to the job.

When the overtime is worked due to lack of capacity as general policy of the company thenthe total amount paid is treated as direct wages w hich is computed at the estimated rate based on the figures of the previous years.

Overtime worked on account of the abnormal conditions such as flood, earthquake, etc., should not be charged to cost, but to Costing Profit and Loss Account if integrated a ccounts are maintained.

It will thus be seen that overtime involves payment of increased wages and should be resorted to only when extremely essential.

(b) (i) Statement Showing Cost and Profit in Cost Records

Production 31,000 units

| Particulars | Amount (Rs.) | | |
|---|---|---|---|
| | Total | W.I.P. | Production |
| Material Consumed | 23,01,000 | 55,250 | 22,45,750 |
| Wages | 12,05,750 | 26,000 | 11,79,750 |
| **Prime Cost** | 35,06,750 | 81,250 | 34,25,500 |
| Add: Production Overhead (20% on prime cost) | 7,01,350 | 16,250 | 6,85,100 |
| **Works Cost** | 42,08,100 | 97,500 | 41,10,600 |
| Add: Administration Overhead @ Rs. 9.75 per unit | | | 3,02,250 |
| **Cost of Production** | | | 44,12,850 |
| Less: Closing Stock = $\frac{44,12,850 \times 1,000}{31,000}$ | | | 1,42,350 |
| **Production Cost of Goods Sold** | | | 42,70,500 |
| Add: Selling and Distribution Overhead (30,000×13) | | | 3,90,000 |
| **Cost of Sales** | | | 46,60,500 |
| **Profit** | | | 2,14,500 |
| **Sales** | | | 48,75,000 |

(ii) Reconciliation Statement

| Particulars | Rs. | Rs. |
|---|---|---|
| Net Profit as per Cost Accounts | | 2,14,500 |
| Add:(i) Excess Production Overhead in Cost Records [6,85,100 – (6,92,250 – 16,250 WIP)] | 9,100 | |
| [3,90,000-3,68,875] | 21,125 | |
| (iii) Interest on bank deposits not included in Cost Books | 65,000 | |
| (iv) Dividend not shown in Cost Books | | 4,85,225 |
| | | 6,99,725 |
| Less:(i)Administration Overhead under -recovered in | 8,125 | |
| | 12,350 | |
| (iii) Preliminary expenses written off in Financial Books only | 22,790 | |
| (iv) Goodwill written off in Financial Books only | | |
| (v) Fines shown in Financial Books only | 3,250 | |
| (vi) Interest charged in Financial Books only | | |
| (vii)Loss on sale of machine shown in Financial Books only | | |
| (viii)Income tax provided in financial books only; | 1,95,000 | 3,15,765 |
| Profit as per Financial B ooks | | 3,83,960 |

**4. (a) Component 'Citipride' is made entirely in cost centre 200. Material cost is 6 paise per component and each component takes 10 minutes to produce. The machine operator is paid 72 paise per hour, and machine hour rate is Rs. 1.50. The setting up of the machi ne to produce the component 'Citipride' takes 2 hours 30 minutes. On the basis of this information, prepare a cost sheet showing the production and setting up cost, both in total and per component, assuming that a batch of:**

**(i) 10 components,**

**(ii) 100 comp onents, and**

**(iii) 1000 components is produced. 9**

**(b) SG Ltd. manufactures product A which yields two by- products B and C. The actual joint expenses of manufacturing for a period were Rs. 9,000.**

**The profits on each product as a percentage of sales are 33-1/3%, 25% and 15% respectively.**

**Subsequent expenses are as follows:**

**Products (Rs.)**

| Particulars | 'A' | 'B' | 'C' |
|---|---|---|---|
| **Material** | **100** | **75** | **25** |
| **Direct** | **200** | **125** | **50** |
| **Overheads** | **150** | **125** | **75** |
| **Total** | **450** | **325** | **150** |
| **Sales** | **6,300** | **4,800** | **2,500** |

**Apportion the joint expenses.** **6**

**Answer:**

4. (a)

Cost Sheet Component 'Citipride'

| Particulars | Batch Size | | | | | |
|---|---|---|---|---|---|---|
| | 10 components | | 100 components | | 1000 components | |
| | Total Rs. | Per component Rs. | Total Rs. | Per component Rs. | Total Rs. | Per component Rs. |
| A. Setting up Cost: | | | | | | |
| Machine Operators wages (2.5 hours @ Re. 0.72 p.h) | 1.80 | 0.180 | 1.80 | 0.0180 | 1.80 | 0.00180 |
| Overheads 2.5 hours @ Rs. 1.50 p.h) | 3.75 | 0.375 | 3.75 | 0.0375 | 3.75 | 0.00375 |
| Total of (A) | 5.55 | 0.555 | 5.55 | 0.0555 | 5.55 | 0.00555 |
| B. Production Cost: | | | | | | |
| Material Cost @ Re. 0.06 per component | 0.60 | 0.060 | 6.00 | 0.0600 | 60.00 | 0.06000 |
| MachineOperators Wages [(Refer to Working Note (1)] | 1.20 | 0.120 | 12.00 | 0.1200 | 120.00 | 0.12000 |
| Overheads | | | | | | |
| [(Refer to Working Note (2)] | 2.50 | 0.250 | 25.00 | 0.2500 | 250.00 | 0.25000 |
| Total of (B) | 4.30 | 0.430 | 43.00 | 0.4300 | 430.00 | 0.43000 |
| C. Total Cost: (A +B) | 9.85 | 0.985 | 48.55 | 0.4855 | 435.55 | 0.43555 |

Working Notes:

| | 10 Components | 100 Components | 1000 Components |
|---|---|---|---|
| (1) Operators Wages<br>Time taken in minutes by machine operators @10 minutes per component<br>Operators Wages @ Re. 0.72 per hour (Rs.) | 1.20<br>[(100/60)x0.72] | 12.00<br>[(1000/60)x0.72] | 120.00<br>[(10000/60)x0.72] |
| (2) Overhead expenses<br>Total overhead expenses @ Rs.1.50 per Machine hour (Rs.) | 2.50<br>[(100/60)xRs.1.50] | 25.00<br>[(1000/60)xRs.1.50] | 250.00<br>[(10000/60)xRs. 1.50] |

(b) Statement Showing Apportionment of Joint Expenses

| Particulars | A | B | C | Total |
|---|---|---|---|---|
| Sales | 6,300 | | | |
| (-) Profit | 2,100 | | | |
| Total Cost (Joint & Separate C ost) | 4,200 | | | |
| Separate Expenses | 450 | | | |
| Share of Joint Expenses | 3,750 | | | |

**5. (a) Shri Rajesh Agarwal has started transport business with a fleet of 10 taxies. The various expenses incurred by him are given below:**

**(i) Cost of each taxi Rs. 3,00,000.**
**(ii) Salary of Office Staff Rs. 5,000 p.m.**
**(iii) Salary of Garage's Supervisor Rs. 10,000 p.m.**
**(iv) Rent of Garage Rs. 5,000 p.m.**
**(v) Drivers Salary (per taxi) Rs. 10,000 p.m.**
**(vi) Road Tax and Repairs per taxi Rs. 6,000 p.a.**
**(vii)Insurance pre mium @ 6% of cost p.a.**

**The life of a taxi is 300000 Km. and at the end of which it is estimated to be sold at Rs. 25,000. A taxi runs on an average 6000 Km. per month of which 10% it runs empty, petrol consumption 11 Km. per litre of petrol costing Rs. 72 per litre. Oil and other sundry expenses amount to Rs. 50 per 100 Km.**

**Calculate the effective cost of running a taxi per kilometre. If the hire charge is Rs. 13 per kilometre on average, find out the profit that Shri Agarwal may expect to make in the firstyear of operation. 8**

**(b) A contractor has undertaken a construction work at a price of Rs. 5,00,000 and begun the execution of work on 1st January, 2016. The following are the particulars of the contract up to 31st December, 2016.**

| Particulars | Amount (Rs.) | Particulars | Amount (Rs.) |
|---|---|---|---|
| Machinery | 30,000 | Overheads | 8,252 |
| Materials | 1,70,698 | Materials returned | 3,098 |
| Wages | 1,48,750 | Work certified | 3,90,000 |
| Direct expenses | 6,334 | Cash received | 3,60,000 |
| Uncertified work | 9,000 | Materials on 31.12.2016 | 3,766 |
| Wages outstanding | 5,380 | | |
| Value of plant on 31.12.2016 | 23,000 | | |

**It was decided that the profit made on the contract in the year should be arrived at by deducting the cost of work certified from the total value of the architect's certificate, that1/3 of the profit so arrived at should be regarded as a provision against contingencies and that such provision should be increased by taking to the credit of Profit and Loss Account only such portion of the 2 / 3rd profit, as the cash received to the work certifie d. Prepare the Contract Account showing the profit on the Contract. 7**

**Answer:**

5. (a) Statement showing computation of effective cost and profit for the year:

| Particulars | Amount (Rs.) | Amount (Rs.) |
|---|---|---|
| Fixed expenses: | | |
| Salary of staff | 5,000 | |
| Salary of garage supervisor | 10,000 | |
| Rent of garage | 5,000 | |
| Driver Salary (10 x 10,000) | 1,00,000 | |
| Road tax and repairs (6,000 x 10/12) | 5,000 | |
| Insurance premium (3,00,000 x 6% x 10/12) | 15,000 | 1,40,000 |
| Cost per km = 14,000/6,000 = 2.33 (Alternatively, Fixed Cost per Taxi may be worked out directly) | | 2.33 |
| | | |
| | | 0.92 |
| | | 6.55 |
| Oil & sundry expenses (50/100) | | 0.50 |
| Cost | | 10.30 |
| Effective cost per Km = 10.30 x (100/90) | | 11.44 |

Profit for year = (13.00 – 1 1.44) x 10 x 5,400 x 12 = Rs.10,10,880

(b)

Contract Account

Dr. Cr.

| Particulars | Amount | Particulars | Amount (Rs.) |
|---|---|---|---|
| To, Machinery A/c | | By, Plant & Machinery A/c | 23,000 |
| | | By, Materials returned A/c | 3,098 |
| | | By, Materials on hand A/c | 3,766 |
| | | By, W.I.P A/c | 3,99,000 |
| | | Work certified 3,90,000 | |
| | | Work uncertified 9,000 | |
| | | | |
| | | | 4,28,864 |

***** Total Cost = Expenses before Profit and Reserve = Rs. 3,69,414 – Rs. 29,864 credits
∴ Total Expenses = Rs. 3,39,550 .
Hence, Total Cost = Rs. 3,99,000 WIP – Rs. 3,39,550 =Rs. 59,450
or
Alternatively, Total including WIP = Rs. 4,28,864 – Rs. 3,69,414 = Rs. 59,450

$\frac{\text{Cash Received}}{\text{Work Certified}} = \frac{3,60,000}{3,90,000} = 0.92308$

∴ Rs. 59,450 × 0.92308 = Rs. 54,877 ∴ $\frac{2}{3}$rd of Rs. 54,877 = Rs.36,585 Profit
Hence, Balance (Rs. 59,450 – Rs. 36,585)= Rs. 22,865 is Reserve

**6. (a) Following particulars relate to a manufacturing factory for the month of March, 2017**

| | |
|---|---|
| **Variable cost per unit** | **Rs. 14** |
| **Fixed factory overhead** | **Rs. 5,40,000** |
| **Fixed selling overhead** | **Rs. 2,52,000** |
| **Sales price per unit** | **Rs. 20** |

**(i) What is the break -even point expressed in rupee sales?**
**(ii) How many units be sold to earn a target net income of Rs. 60,000 per month?**
**(iii) How many units must be sold to earn a net income of 25% on cost?**
**(iv) What should be the selling price per unit if break -even point is to be brought down to 120000 units? 8**

**(b) There are three similar plants under one Corporate Management who wa nts them to be merged for better operation. The following are the details relating to these plants.**

| | Plant A | Plant B | Plant C |
|---|---|---|---|
| **Capacity in Operation** | **100%** | **70%** | **50%** |
| | **(Rs. in lakhs)** | | |
| **Turnover** | **300** | **280** | **150** |
| **Variable Cost** | **200** | **210** | **75** |
| **Fixed Cost** | **70** | **50** | **62** |

**You are required to calculate:**
**(i) Capacity of merged plant to be operated to break -even;**
**(ii) Profitability of working at 75% capacity;**
**(iii) The turnover from the merged plant to give a profit of Rs. 28 lakhs. 7**

**Answer:**

6. (a) (i) Calculation of BEP in rupee sales:

$$\text{P/V Ratio} = \frac{S-V}{S} = \frac{20-14}{20} \times 100 = 30\%$$

$$\text{BEP} = \frac{F}{\text{P/V Ratio}} = \frac{5,40,000 + 2,52,000}{30\%} = \text{Rs. } 26,40,000$$

(ii) Sales to earn a target net income of Rs. 60,000 per month:
Contribution per unit = Rs. 20 – Rs. 14 = Rs. 6.

$$\text{Sales in units} = \frac{\text{F + Desired Profit}}{\text{Contribution per unit}} = \frac{7,92,000 + 60,000}{6} = 1,42,000 \text{ units.}$$

(Sales in Rupees = 1,42,000 × Rs. 20 = Rs. 28,40,000.)→ This is optional

(iii) No. of units to be sold to earn a net income of 25% on cost:
Profit @ 25% on cost means a profit @ 20% on Sales. Let sales be assumed as Rs. x; the desired profit will be 20% of x or .20x.

$$\text{Now, } x = \frac{\text{F + Desired Profit}}{\text{P / V Ratio}}$$

$$\text{Or } x = \frac{7,92,000 + 0.20x}{1} \times \frac{100}{30}$$

or 30x = 7,92,00,000 + 20x
or 10x = Rs. 7,92,00,000
or x = Rs. 79,20,000

$$\text{No. of units to be sold} = \frac{79,20,000}{20 \text{ (S.P. per unit)}} = 3,96,000 \text{ units}$$

(iv) Selling Price per unit if BEP is brought down to 1,20,000 units :

$$\text{Contribution per unit} = \frac{\text{Fixed Cost}}{\text{BEP in units}} = \frac{7,92,000}{1,20,000} = 6.60 \text{ per unit.}$$

Now, S.P. per unit = V + C = Rs. 14 + Rs. 6.60 = Rs. 20.60.

(b) Computation of Sales and Variable Costs for Plants B and C at 100 per cent capacity of working. (Rs. in lakhs)

| Capacity | Plant A | Plant B | Plant C | Merged Plant |
|---|---|---|---|---|
| | 100% | 100% | 100% | 100% |
| Sales | 300 | 400 | 300 | 1,000 |
| Less: Variable Cost a t 100% Capacity | 200 | 300 | 150 | 650 |
| Contribution | 100 | 100 | 150 | 350 |
| Less: Fixed Cost | 70 | 50 | 62 | 182 |
| Profit | 30 | 50 | 88 | 168 |

(i) $$\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100 = \frac{350}{1,000} \times 100 = 35\%$$

$$\text{BEP (in Rs.)} = \frac{\text{Fixed Cost}}{\text{P / V ratio}} = \frac{182}{35\%} = \text{Rs. 520 lakh}$$

$$\text{Capacity of Rs. 520 lakhs to total sales Rs. 1,000 lakhs} = \frac{520}{1,000} \times 100 = 52\%.$$

(ii) Sales at 75% capacity = Rs. 750 lakhs
P = (Sales × P/V ratio) – Fixed Cost

$$= 750 \times \frac{35}{100} - 182 \text{ or } 262.5 - 182 = \text{Rs. 80.5 lakhs.}$$

(iii) Sales to earn a profit of Rs. 28 lakhs.

$$\text{Sales} = \frac{\text{Fixed Cost + Desired Profit}}{\text{P / V Ratio}} = \frac{182 + 28}{35\%} = \frac{210}{35\%} = 600 \text{ lakhs.}$$

**7. (a) The details regarding the composition and the weekly wage rates of labour force engaged on a job scheduled to be completed in 30 weeks are as follows:**

| Category of Workers | Standard | | Actual | |
|---|---|---|---|---|
| | No. of Workers | Weekly Wage Rate per worker | No. of Workers | Weekly Wage Rate per worker |
| Skilled | 75 | 60 | 70 | 70 |
| Semi-skilled | 45 | 40 | 30 | 50 |
| Unskilled | 60 | 30 | 80 | 20 |

**The work is actually completed in 32 weeks.**

**Calculate the following Labour Variances:**

**(i) Labour Cost Variance;**
**(ii) Labour Rate variance;**
**(iv) Labour Efficiency Variance;**
**(v) Labour Revised Efficiency Variance;**
**(v) Labour Mix Variance. 8**

**(b) Three Articles X, Y and Z are produced in a factory. They pass through two cost centers A and B. From the data furnished, compile a statement for budgeted machine utilization in both the centers.**

**(i) Sales budget for the year:**

| Product | Annual Budgeted Sales (units) | Opening stock of finished products (units) | Closing stock |
|---|---|---|---|
| X | 4800 | 600 | Equivalent to 2 months sales |
| Y | 2400 | 300 | - Do -- |
| Z | 2400 | 800 | - Do -- |

**(ii) Machine hours per unit of product:**

| Product | Cost centers | |
|---|---|---|
| | A | B |
| X | 30 | 70 |
| Y | 200 | 100 |
| Z | 30 | 20 |

**(iii) Total number of machines:**

| | | |
|---|---|---|
| Cost Centre: | A | 338 |
| | B | 305 |
| Total | | 643 |

**(iv) Total working hours during the year: Estimated 2100 hours per machine 7**

**Answer:**

7. (a) Computation of Standard and Actual Time

| Category | Standard Time (ST) | Actual Time (AT) |
|---|---|---|
| Skilled | 75x30 = 2,250 | |
| Semiskilled | 45 x30= 1,350 | |
| Unskilled | 60x30 = 1,800 | |

Computation of Standard Cost and Actual Cost

| Category of Worker | Standard | | | Actual | | | Revised |
|---|---|---|---|---|---|---|---|
| | Time ST | Rate SR (Rs.) | Cost SC(Rs.) | Time AT | Rate AR(Rs.) | Cost AC(Rs.) | |
| Skilled | 2,250 | 60 | 1,35,000 | 2,240 | 70 | 1,56,800 | 2,400 |
| | | | | | | | |

**Computation of Revised Standard Time (RST)**

Skilled worker : $\frac{2,250}{5,400} \times 5,760 = 2,400$ Hours

Semi-skilled worker : $\frac{1,350}{5,400} \times 5,760 = 1,440$ Hours

Unskilled worker : $\frac{1,800}{5,400} \times 5,760 = 1,920$ Hours

Computation of Variances

(i) LCV (Labour Cost Variance) = TSC – TAC = 2,43,000 – 2,56,000 = Rs. 13,000 (A)

(ii) LRV (Labour Rate Variance) = AT(SR–AR)
Skilled Worker : 2,240 (60 – 70) = Rs. 22,400 (A)
Semiskilled Worker :960 (40 – 50) = Rs. 9,600 (A)
Unskilled Worker : 2,560 (30 – 20) = Rs. 25,600 (F) = Rs. 6,400 (A)

(iii) LEV (Labour Efficiency Variance) = SR(ST–AT)
Skilled Worker : 60 (2,250 – 2,240) = Rs.600 (F)
Semiskilled Worker : 40(1,350 – 960) = Rs. 15,600 (F)
Unskilled Worker : 30(1,800 – 2,560) = Rs. 22,800 (A) = Rs. 6,600 (A)

(iv) LREV (Labour Revised Efficiency Variance) = SR (ST – RST)
Skilled Worker : 60(2,250 – 2,400) = Rs. 9,000 (A)
Semiskilled Worker : 40(1,350 – 1,440) = Rs. 3,600 (A)
Unskilled Worker : 30(1,800 – 1,920) = Rs. 3,600 (A) = Rs. 16,200 (A)

(v) LMV (Labour Mix Variance) = SR (RST – AT)
Skilled Worker : 60(2,400 – 2,240) = Rs. 9,600 (F)
Semiskilled Worker : 40(1,440 – 960) = Rs. 19,200 (F)
Unskilled Worker : 30(1,920 – 2,560) = Rs. 19,200 (A) = Rs. 9,600 (F)

(b) Calculation of Units of Production of Different Products

| Particulars | Product X | Product Y | Product Z |
|---|---|---|---|
| Sales | 4800 | 2400 | |
| Add: Closing Stock | 800 | 400 | |
| | 5600 | 2800 | |
| Less: Opening Stock | 600 | 300 | |
| | 5000 | 2500 | |

Machine Utilisation Budget

| Cost Centres→ | A | | | | B | | | |
|---|---|---|---|---|---|---|---|---|
| Product → | X | Y | Z | TOTAL | X | Y | Z | TOTAL |
| Particulars ↓ | | | | | | | | |
| (i) Production (units) | 5000 | 2500 | 2000 | | 5000 | 2500 | 2000 | |
| (ii) Hours per unit | 30 | 200 | 30 | | 70 | 100 | 20 | |
| (iii) Total Machine Hours | 1,50,000 | 5,00,000 | 60,000 | 7,10,000 | 3,50,000 | 2,50,000 | 40000 | 6,40,000 |
| (iv) Utilisation of Number of Machines | 71 | 238 | 29 | 338 | 167 | 119 | 19 | 305 |

**8. Answer *any three* out of the following four questions: 5×3=15**

**(a) "Cost Accounting and Management Accounting are inter -dependent." Do you agree, discuss.**

**(b) Differentiate between Operation Cost and Operating Cost.**

**(c) Enumerate the need for predetermined overhead rate.**

**(d) What is Responsibility Accounting? Also state the Principles of Responsibility Accounting.**

**Answer:**

8. (a) **Cost Accounting:** In cost accounting, primary emphasis is on cost and it deals with its collection, analysis, relevance, interpretation and presentation for various problems of management.

**Management Accounting:** It utilizes the principles and practices of financial account ing and cost accounting in addition to other management techniques for efficient operations of a concern. It widely uses different techniques from various branches of knowledge like Statistics, Mathematics, Economics, Law and Psychology to assist the manag ement in its task of maximizing profits or minimizing losses. The main thrust in management accounting is towards determining policy and formulating plans to achieve desired objectives of management.

From the above discussion it may be concluded that cost accounting and management accounting are inter -dependent, greatly related and inseparable.

**(b) Operation Cost:**

Operation cost is the cost of a specific operation involved in a production process or business activity. The cost unit in this method is the o peration, instead of process . When the manufacturing method of a concern consists of a number of distinct operations, operating costing is suitable.

**Operating Cost:**

Operating cost is the cost incurred in conducting a business activity. It refers to the cost of concerns which do not manufacture any product but which provide services. Industries and establishments like power house, transport and travel agencies, hospitals, schools etc. which undertake services rather than the manufacture of products, ascerta in operating costs. The cost units used are Kilo Watt Hour (KWH), Passenger Kilometre and Bed in the Hospital etc.

Operation costing method constitutes a distinct type of costing but it may also be classed as a variant of process cost since costs in this method are usually compiled for a specified period.

**(c) Need for predetermined Overhead Rate:**

Predetermined Overhead Rate is needed for the following reasons:

i) actual Rate can be determined only after the overheads have been incurred
ii) to avoid delay in computing cost
iii) to prepare Quotations in time and quickly
iv) actual Overhead Rate may fluctuate from period to period. But in case of predetermined rate, it is not so.
v) to ensure cost control.

**OR**

**As per study material as under:**

Advantages of Predetermined Overhead Rate:

i) Enables prompt preparation of cost estimates, quotations and fixation of selling prices.

ii) Cost data is available to management along with financial data.

iii) In case of Cost –plus contracts prompt billing is possible through pre – determined recovery rate/s.

iv) In concerns having budgetary control system, no extra clerical efforts are required in computing the pre –determined overhead rate.

**(d) Responsibility Accounting:**

It is a system of accounting that recogn izes various responsibility centres throughout the organisation and reflects the plans and actions of each of these centres by assigning particular revenues and costs of the one having the pertinent responsibility.

It is a system in which the person holding the supervisory posts as president, function head, foreman, etc. are given a report showing the performance of the company or department or section as the case may be. The report will show the data relating to operational results of the area and th e items of which he is responsible for control. Responsibility accounting follows the basic principles of any system of cost control and standard costing. It differs only in the sense that it lays emphasis on human beings and fixes responsibilities for ind ividuals. It is based on the belief that control can be exercised by human beings, so responsibilities should be fixed for individuals.

Principles of Responsibility Accounting:

(i) A target is fixed for each department or responsibility centre.

(ii) Actual perf ormance is compared with the target.

(iii) The variances from plan are analysed so as to fix the responsibility.

(iv) Corrective action is taken by higher management and is communicated.

# INTERMEDIATE EXAMINATION

## GROUP -II
## (SYLLABUS 2016)

## SUGGESTED ANSWERS TO QUESTIONS

## JUNE- 2018

### Paper-8 : COST ACCOUNTING

**Time Allowed : 3 Hours** **Full Marks : 100**

**The figures in the margin on the right side indicate full marks.**
**All Sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.**
**All working notes must form part of the answer.**
**Wherever necessary, candidates may make appropriate assumptions and clearly state them.**
**No present value factor table or other statistical table will be provided in addition to this question paper.**

## Section - A

**Section A contains Question Number 1. All parts of this question are compulsory.**

**1. Answer the following questions:**

**(a) Choose the correct answer from the given alternatives (You may write only the Romannumeral and the alphabet chosen for your answer): 1×10=10**

**(i) Batch costing is suitable for**
- **(a) Oil Industry**
- **(b) Sugar Industry**
- **(c) Chemical Industry**
- **(d) Pharmaceutical Industry**

**(ii) Idle time is**
- **(a) Time spent by workers in office**
- **(b) Time spent by workers in factory**
- **(c) Time spent by workers off their work**
- **(d) Time spent by workers on their job**

**(iii) Warehouse expense is an example of**
- **(a) Production overhead**
- **(b) Administration overhead**
- **(c) Selling overhead**
- **(d) Distribution overhead**

**(iv) Standard deals with the principles and methods of determining depreciation and amortization cost is**
- **(a) CAS-8**
- **(b) CAS -11**
- **(c) CAS-16**
- **(d) CAS-20**

(v) In Reconciliation Statement expenses shown only in cost accounts are
(a) Added to financial profit
(b) Deducted from financial profit
(c) Ignored
(d) Deducted from costing profit

(vi) In a job cost system, costs are accumulated
(a) On a monthly basis
(b) By specific job
(c) By department or process
(d) By kind of material used

(vii) In a process 6,000 units are introduced during a period. 5% of input is normal loss. Closing work-in-process 60% complete is 800 units. 4,900 completed units are transferred to next process. Equivalent production for the period is
(a) 6,800 units
(b) 5,700 units
(c) 5,680 units
(d) 5,380 units

(viii) Which of the following best describes a fixed cost?
(a) It may change in total where such change is unrelated to changes in production.
(b) It may change in total where such change is related to changes in production.
(c) It is constant per unit of change in production.
(d) It may change in total where such change depends on production within the relevant range.

(ix) Z Ltd. is planning to sell 1,00,000 units of product A for Rs. 12.00 per unit. The fixed costs are Rs. 2,80,000. In order to realize a profit of Rs. 2,00,000, what would the variable costs be?
(a) Rs. 4,80,000
(b) Rs. 7,20,000
(c) Rs. 9,00,000
(d) Rs. 9,20,000

(x) Sales budget is an example of
(a) Expenditure budget
(b) Functional budget
(c) Capital budget
(d) Master budget

(b) Match the statement in Column I with the most appropriate statement in Column II:
(You may opt to write only the Roman numeral and the matched alphabet instead of copying contents into the answer Books) 1x5=5

| | Column I | | Column II |
|---|---|---|---|
| (i) | Imputed costs | A | Cost control technique |
| (ii) | FSN analysis | B | Treated as part of factory expenses |
| (iii) | Captive power plant expenses | C | Costing profit and loss account |
| (iv) | Abnormal loss is transferred to | D | Process of classifying material |
| (v) | Variance analysis | E | Direct allocation |
| | | F | Not involving cash outlay |
| | | G | Management by exception |
| | | H | Decision package |

(c) State whether the following statements are 'True' or 'False':(You may write only the Roman numeral and whether 'True' or 'False' without copying the statements into the

**answer books): 1x5=5**

**(i) Factory overhead cost applied to a job is usually based on a pre-determined rate.**
**(ii) CAS-19 deals with the principles and methods of determining the manufacturing cost of excisable goods.**
**(iii) Cost ledger control account makes the cost ledger self-balancing.**
**(iv) FIFO method is followed for evaluation of equivalent production when prices are fluctuating.**
**(v) Standard costs and budgeted costs are inter-related and inter-dependent.**

**(d) Fill in the blanks: (You may write only the Roman numeral and the content filling the blanks) 1x5=5**

**(i) _____is the process of regulating the action so as to keep the element of costwithin the set parameters.**
**(ii) In absorption costing_____is added to inventory.**
**(iii) CAS_____stands for cost of service cost Centre.**
**(iv) At_____contribution available is equal to total fixed cost.**
**(v) The document which describes the budgeting organisation, budgeting procedure etc.isknown as_____.**

**Answer:**

1. (a) (i) (d)
(ii) (c)
(iii) (d)
(iv) (c)
(v) (b)
(vi) (b)
(vii) (d)
(viii) (a)
(ix) (b)
(x) (b)

(b)

| | Column I | | Column II |
|---|---|---|---|
| (i) | Imputed costs | F | Not involving cash outlay |
| (ii) | FSN analysis | D | Process of classifying material |
| (iii) | Captive power plant expenses | B | Treated as part of factory expenses |
| (iv) | Abnormal loss is transferred to | C | Costing profit and loss account |
| (v) | Variance analysis | G | Management by exception |

(c) (i) True
(ii) False
(iii) True
(iv) False
(v) False

(d) (i) Cost Control
(ii) Fixed Cost
(iii) CAS - 13
(iv) Break even point
(v) Budget Manual

## Section - B

**Answer any five questions from question numbers 2 to 8.**
**Each question carries 15 marks.**

**15 × 5 = 75**

**2. (a) The existing Incentive system of SHRISTI LTD is as under:**

**Normal working week : 5 days of 8 hours each plus 3 late shifts of 3 hours each**
**Rate of Payment : Day work :Rs.160 per hour**
**Late shift:Rs. 225 per hour**

**Average output per operatorfor 49-hours week i.e. including**
**3 late shifts : 120 articles.**

**In order to increase output and eliminate overtime, it was decided to switch on to a system of payment by results. The following information is obtained:**

| | |
|---|---|
| **Time-rate (as usual)** | **:Rs. 160 per hour** |
| **Basic time allowed for 15 articles** | **: 5 hours** |
| **Piece-work rate** | **: Add 20% to basic piece-rate** |
| **Premium Bonus** | **: Add 50% to time.** |

**Required:**
**Prepare a Statement showing hours worked, weekly earnings, number of articles produced and labour cost per article for one operator under the following systems:**
**(i) Existing time-rate**
**(ii) Straight piece-work**
**(iii) Rowan system**
**(iv) Halsey premium system**

**Assume that 135 articles are produced in a 40-hour week under straight piece work, Rowan Premium System, the Halsey Premium System above and worker earns half the time saved under Halsey Premium System. 9**

**(b) The following figures are taken from the accounts of BALEN LTD a manufacturing concern for the month of October, 2017:**

**Indirect Materials : Production Departments : X Rs. 19,000; Y Rs. 24,000; Z Rs. 4,000;**
**Service Departments : Maintenance Rs. 30,000; Stores Rs. 8,000.**
**Indirect Wages : Production Departments : X Rs. 18,000; YRs. 22,000; Z Rs. 6,000;**
**Service Departments : Maintenance Rs. 20,000; Stores Rs.13,000.**

**Other Expenses: Power and Light: Rs. 1,20,000; Rent and Rates Rs. 56,000; Insurance of Assets Rs. 20,000; Meal Charges Rs. 60,000; Depreciation @ 6% p.a. on capital value of assets.**

**Departmental Data**

| Items | Production Departments | | | Service Department | |
|---|---|---|---|---|---|
| | X | Y | Z | Maintenance | Stores |
| Area (Sq. Ft.) | 4,000 | 4,000 | 3,000 | 2,000 | 1,000 |
| Capital Value of Assets (Rs.) | 20,00,000 | 24,00,000 | 16,00,000 | 12,00,000 | 8,00,000 |
| Kilowatt Hours | 2,000 | 2,200 | 800 | 750 | 250 |
| Number of Employees | 180 | 240 | 60 | 80 | 40 |

**Service rendered by Maintenance Department to Production Departments:**
**X 50%; Y 30%; Z 20%.**
**Service rendered by Stores Department to Production Departments:**
**X 40%; Y 40%; Z 20%.**

**From the above data, prepare a Departmental Distribution Summary showing apportion of costs ofService Departments to the Production Departments and the Total Overheads of the ProductionDepartments. 6**

**Answer:**

2. (a)

Table Showing Labour Cost Per Article

| Method of Payment | Hourswor ked | Weeklyearnings produced (Rs.) | Number ofarticles | Labour costper article (Rs.) |
|---|---|---|---|---|
| Existing time rate | 49 | 8,425.00 | 120 | 70.21 |
| Straight piece rate system | 40 | 8,640.00 | 135 | 64.00 |
| Rowan Premium System | 40 | 9,007.41 | 135 | 66.72 |
| Halsey Premium System | 40 | 8,600.00 | 135 | 63.70 |

Working Notes:

(i) Existing Time Rate

| | | |
|---|---|---|
| Weekly wages | 40 hours @ Rs.160 per hr. | = Rs. 6,400 |
| | 9 hours @ Rs.225 per hr. | = Rs. 2,025 |
| | | Rs. 8,425 |

(ii) Piece Rate System

| | | |
|---|---|---|
| Basic Time | 5 hours for 15 articles | |
| | Cost of 15 articles at hourly rate of Rs.160/hr | = Rs. 800 |
| | Add: 20% | = Rs. 160 |
| | | = Rs. 960 |

∴ Rate per article = Rs. 960 ÷ 15 = Rs. 64.
Earning for the week = 135 articles × Rs. 64 = Rs. 8,640.

(iii) Rowan Premium System

Basic Time 5 hours for 15 articles
50% to time
7.5 hours for 15 articles or 30 minutes per article
∴Time allowed for 135 articles = 67.50 hours
Actual time taken for 135 articles = 40 hours
Earnings = (HW × RH) +$(\frac{TA-HW}{TA} \times HW \times RH)$
= (40 hours × Rs.160) +$(\frac{67.50-40}{67.50} \times 40 \times Rs.160)$ = Rs. 9,007.41

(i) Halsey Premium System:
Earnings = (HW × RH) +$\{\frac{50}{100}$ (TA – HW ) × RH}
= (40 × Rs.160) + $\{\frac{1}{2}$ (67.50 -40) × Rs.160} = Rs. 8,600

(b) Departmental Distribution Summary

| Items | Basis of Apportionment | Total | Production Departments | | | Service Departments | |
|---|---|---|---|---|---|---|---|
| | | | X | Y | Z | Maintenance | Stores |
| | | | Rs. | Rs. | Rs. | Rs. | Rs. |
| Indirect Materials | Allocation | 85,000 | 19,000 | 24,000 | 4,000 | 30,000 | 8,000 |
| Indirect Wages | Allocation | 79,000 | 18,000 | 22,000 | 6,000 | 20,000 | 13,000 |
| Power &Light | Kilowatt Hours (200:220:80:75:25) | 1,20,000 | 40,000 | 44,000 | 16,000 | 15,000 | 5,000 |
| Depreciation (1 Month) | Value of Assets (5:6:4:3:2) | 40,000 | 10,000 | 12,000 | 8,000 | 6,000 | 4,000 |
| Insurance | Value of Assets | 20,000 | 5,000 | 6,000 | 4,000 | 3,000 | 2,000 |
| Rent & Rates | Area | 56,000 | 16,000 | 16,000 | 12,000 | 8,000 | 4,000 |
| Meal Charges | No. of Employees | 60,000 | 18,000 | 24,000 | 6,000 | 8,000 | 4,000 |
| | | 4,60,000 | 1,26,000 | 1,48,000 | 56,000 | 90,000 | 40,000 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Maintenance Department | | - | 45,000 | 27,000 | 18,000 | Nil | |
| Stores Department | | - | 16,000 | 16,000 | 8,000 | | Nil |
| Total Overheads | | 4,60,000 | 1,87,000 | 1,91,000 | 82,000 | | |

**3. (a) What are the Direct Expenses as defined in CAS-10 (Limited Revision 2017)? Also discuss the general principles of its measurement as per CAS-10. (any five only) 6**

**(b) The net profit of X Ltd., appeared at Rs. 41,800 as per financial records for the year ending 31st March, 2018. A scrutiny of the figures from both the sets of accounts revealed thefollowing facts:**

| | | Rs. |
|---|---|---|
| **Works overhead under-recovered in costs** | | **1,500** |
| **Administrative overheads over-recovered in costs** | | **850** |
| **Depreciation charged in financial accounts** | | **5,600** |
| **Depreciation recovered in costs** | | **6,250** |
| **Interest on investments not included in costs** | **3,000** | |
| **Loss due to obsolescence charged in financial accounts** | | **2,850** |
| **Income tax reserve made in financial accounts** | **20,150** | |
| **Bank interest and transfer fee credited in financial books** | | **370** |
| **Stores adjustment (credit) in financial books** | | **230** |
| **Value of opening stock in : Cost accounts** | **24,800** | |
| **: Financial accounts** | | **26,300** |
| **Value of closing stock in : Cost accounts** | **25,000** | |
| **: Financial accounts** | | **23,000** |
| **Interest charged in cost accounts** | | **2,000** |
| **Imputed rent charged in cost accounts** | | **1,000** |
| **Goodwill written off** | | **5,000** |
| **Loss on sale of furniture** | | **600** |
| **Selling and distribution expenses not charged in cost accounts** | | **10,000** |
| **Donations to Prime Minister's Relief Fund** | | **5,100** |
| **Transfer to Debenture Redemption Fund** | | **9,000** |
| **Transfer to Dividend Equalisation Fund** | | **20,500** |

**Required:**
**Prepare a statement showing the reconciliation statement and find out the profit as per costAccounts. 9**

**Answer:**

3. (a) **Direct Expenses** : As per CAS - 10 ( Limited Revision 2017), Direct Expenses are the "Expenses relating tomanufacture of a product or rendering a service, which can be identified or linked with the cost object other thandirect material cost and direct employee cost."

**General Principles of Measurement**: (Any five points)

(i) Identification of direct expense shall be based on traceability in an economically feasible manner.

(ii) Direct expenses incurred for bought out resources shall be determined at invoice price including all taxes and duties and any other expenditure directly attributable thereto net of trade discounts, taxes and duties refundable or to be credited.

(iii) Direct expenses paid/incurred in lump-sum or which are in the nature of onetime payment shall beamortized on the basis of estimated output or benefit to be derived from such expenses.

(iv) Finance cost incurred in connection with selfgenerated or procured resources shall not form part of thedirect expenses.

(v) Any subsidy/grant/incentive or any amount received or receivable with respect to any direct expensesshall be reduced for ascertainment of the cost of the cost object.

(vi) Penalties/damages paid to statutory authorities or other third parties shall not form part of the directexpenses.

(vii) Any change in the cost accounting principles applied for measurement of the direct expenses should bemade only if it is required by law or for compliance with the requirements of a CAS or a change wouldresult in a more appropriatepreparation or presentation of cost statement of the organization.

(viii) Credit/recoveries relating to direct expenses if material and quantifiable shall be deducted to arrive at thenet direct expenses.

(ix) Any abnormal portion of direct expenses which is material and quantifiable shall not form part of thedirect expenses.

(b)

**Reconciliation Statement**

| Particulars | Rs. | Rs. |
|---|---|---|
| Profit as per Financial Accounts | | 41,800 |
| Add: | | |
| Works Overhead under-recovered in Cost Accounts | 1,500 | |
| Expenses and losses debited in Financial Accounts but excluded from Cost Accounts: | | |
| Income Tax Reserve | 20,150 | |
| Loss on sale of Furniture | 600 | |
| Loss due to obsolescence | 2,850 | |
| Goodwill written off | 5,000 | |
| Selling and Distribution expenses not charged in Cost Accounts | 10,000 | |
| Donation to Prime Minister's Relief Fund | 5,100 | |
| Transfer to Debenture Redemption Fund | 9,000 | |
| Transfer to Dividend Equalisation Fund | 20,500 | |
| Under valuation of Opening Stock in Cost Accounts | 1,500 | |
| Over valuation of Closing Stock in Cost Accounts | 2,000 | 78,200 |
| | | 1,20,000 |
| Less: | | |
| Administrative Overheads over-recovered in Cost Accounts | 850 | |
| Depreciation over-charged in Cost Accounts | 650 | |
| Incomes and gains credited in Financial books but not shown in Cost Accounts: | | |
| Interest on Investments | 3,000 | |
| Bank interest and transfer fees | 370 | |
| Stores adjustments | 230 | |
| Imputed rent charged in Cost Accounts | 1,000 | |
| Interest charged in Cost Accounts | 2,000 | 8,100 |
| Profit as per Cost Accounts | | 1,11,900 |

**4. (a) The following data are available from the books and records of VEEMYES Ltd. for the month of November 2017.**

**Direct Labour cost : Rs. 20,000 (125 % of factory overheads)**

**Inventory accounts show the following figures:**

| | November 1 Rs. | November 30 Rs. |
|---|---|---|
| **Raw materials** | **10,000** | **20,000** |
| **Work in progress** | **8,000** | **4,000** |
| **Finished goods** | **10,000** | **5,000** |
| **Selling expenses** | | **15,000** |
| **Office expenses** | | **10,000** |

| | | |
|---|---|---|
| **Sales** | | **1,25,000** |

**The company maintains a profit of 25% on cost.**
**You are required to prepare a cost sheet for the month of November 2017 with all elements. 8**

**(b) CBA Ltd., manufactures certain grades of products known as M, B1 and B2. In course of manufacture of product M (main product), by-products- B1 and B2 emerge. The joint expenses of manufacture amount to Rs. 2,37,600.**

**All the three products are processed further after separation and sold as per details given below:**

**Product – M**

**(By Products)**

| | | Product – B1 | Product – B2 |
|---|---|---|---|
| **Sales (Rs.)** | **2,00,000** | **1,20,000** | **80,000** |
| **Cost incurred after separation (Rs.)** | **20,000** | **15,000** | **10,000** |
| **Profit as percentage on sales** | **25** | **20** | **15** |

**Total fixed selling expenses are 10% of total cost of sales which are apportioned to the three products in the ratio of 20:40:40.**

**Required:**

**(i) Prepare a statement showing the apportionment of joint costs to the products (M, B1 and B2)**

**(ii) If the product B1 (by product) is not subject to further processing and is sold at the point of separation, for which there is a market at Rs.1,00,440 without incurring any selling expenses, would you advise its disposal at this stage? Show the workings. 7**

**Answer:**

4. (a)

Statement of Cost and Profit

| Particulars | Amount in Rs. |
|---|---|
| Opening Stock of Raw Materials | 10,000 |
| Purchase of Raw Materials | 40,000 |
| | 50,000 |
| Less: Closing Stock of Raw Materials | 20,000 |
| Cost of Materials consumed | 30,000 |
| Add: Direct Labour Cost | 20,000 |
| Prime Cost | 50,000 |
| Add: Factory Overheads | 16,000 |
| | 66,000 |
| Add: Opening Stock of Work-in –Progress | 8,000 |
| | 74,000 |
| Less: Closing Stock of Work-in-Progress | 4,000 |
| Factory Cost | 70,000 |
| Add: Office Expenses | 10,000 |
| Cost of Production | 80,000 |
| Add: Opening Stock of Finished Goods | 10,000 |
| | 90,000 |
| Less: Closing Stock of Finished Goods | 5,000 |
| Cost of Goods sold | 85,000 |
| Add: Selling Expenses | 15,000 |
| Total Cost | 1,00,000 |
| Add: Profit | 25,000 |
| Sales | 1,25,000 |

Workings: Calculation of purchase of raw materials

| Details | Amount in Rs. |
|---|---|
| Sales | 1,25,000 |
| Less: Profit | 25,000 |
| Total Cost | 1,00,000 |
| Less: Selling Expenses | 15,000 |
| Cost of Goods Sold | 85,000 |
| Add: Closing Stock of Finished Goods | 5,000 |
| | 90,000 |
| Less: Opening Stock of Finished Goods | 10,000 |
| Cost of Production | 80,000 |
| Less: Office Expenses | 10,000 |
| Factory Cost | 70,000 |
| Add: Closing Stock of Work-in-Progress | 4,000 |
| | 74,000 |
| Less: Opening Stock of Wok-in-Progress | 8,000 |
| | 66,000 |
| Less: Factory Overheads | 16,000 |
| Prime Cost | 50,000 |
| Less: Direct Labour Cost | 20,000 |
| Cost of Raw Materials consumed | 30,000 |
| Less: Opening Stock of Raw Materials | 10,000 |
| | 20,000 |
| Add: Closing Stock of Raw Materials | 20,000 |
| Purchase of Raw Materials | 40,000 |

(b) (i) Statement of Apportionment of Joint Cost

| Particulars | Total | Product | By-Products | |
|---|---|---|---|---|
| | | M | B1 | B2 |
| | Rs. | Rs. | Rs. | Rs. |
| Sales | 4,00,000 | 2,00,000 | 1,20,000 | 80,000 |
| Less: Profit | 86,000 | 50,000 | 24,000 | 12,000 |
| Cost of Sales | 3,14,000 | 1,50,000 | 96,000 | 68,000 |
| Less: Selling & Distribution Expenses (10% of Rs. 3,14,000 in the Ratio 20:40:40) | 31,400 | 6,280 | 12,560 | 12,560 |
| Cost of Production | 2,82,600 | 1,43,720 | 83,440 | 55,440 |
| Less: After separation Cost | 45,000 | 20,000 | 15,000 | 10,000 |
| Joint Cost | 2,37,600 | 1,23,720 | 68,440 | 45,440 |

(ii) By product B1 earns Rs. 24,000 as profit after separation

Profit before separation = Rs.1,00,440–Rs. 68,440 = Rs. 32,000

If By product B1 is sold before further processing, then the profit of the by product may be increased by Rs. (32,000 - 24,000) = Rs. 8,000.

Hence it is advisable to sell the product B1 at the point of separation.

**5. (a) JANATA TRANSPORT LTD. a Transport Company is running 4 buses between two towns which are 50 kms. away. Seating capacity of each bus is 40 passengers. The following information is obtained from its books for November, 2017:**

| Particulars | Rs. |
|---|---|
| **Wages of drivers, conductors and cleaners** | **24,000** |
| **Salaries of office and supervisory staff** | **10,000** |
| **Diesel, oil and other lubricants** | **40,000** |
| **Repairs and maintenance** | **8,000** |
| **Taxes, insurance etc.** | **16,000** |
| **Depreciation of buses** | **26,000** |

| | |
|---|---|
| **Interest and other charges** | **20,000** |

**Actual passengers carried were 75% of the seating capacity. All the 4 buses ran on all the days of the month. Each bus made one to and fro round trip per day.**
**Prepare the Operating Cost Statement and determine the cost per passenger km. for each bus. 8**

**(b) A contractor, who prepares his accounts on 31st March each year, commenced a Contract No. 220 on 1st July, 2016. The following information is revealed from his costing records on 31st March, 2017:**

| Particulars | (Rs.) |
|---|---|
| Materials sent to site | 2,51,000 |
| Labour | 5,65,600 |
| Foreman's salary | 81,300 |

**A machine costing Rs. 2,60,000 remained in use on site for 146 days. Its working life is estimated at 7 years and final scrap value at Rs. 15,000. A supervisor is paid Rs. 8,000 per monthand has devoted one half of his time on the contract. All other expenses amount to Rs. 1,36,500. Materials at site on 31st March, 2017 cost Rs. 35,400. The contract price is Rs. 20,00,000. On 31st March, 2017 two-third of the contract was completed, however, the architect gave certificate only for 50% of the contract price and Rs. 7,50,000 had so far been paid on account.**

**Prepare Contract Account and state how much profit or loss should be included on 31st March, 2017 in financial accounts. 7**

**Answer:**

5. (a) Operating Cost Statement

| Particulars | | Amount in Rs. |
|---|---|---|
| (A) | Fixed Costs or Fixed Charges: | |
| | Wages of Drivers, Conductors and Cleaners | 24,000 |
| | Salary of Office and Supervisory Staff | 10,000 |
| | Taxes, Insurance etc. | 16,000 |
| | Interest and other charges | 20,000 |
| | Depreciation of buses | 26,000 |
| | Total Fixed Costs | 96,000 |
| (B) | Variable Costs or Running Charges: | |
| | Diesel, Oil and other Lubricants | 40,000 |
| | Repairs and Maintenance | 8,000 |
| | Total Variable Costs or Running Charges | 48,000 |
| (C) | Total Operating Charges or Cost (A + B) | 1,44,000 |
| (D) | Effective Passenger kms. | 3,60,000 |
| (E) | Cost per Passenger km. (C/D) | 0.40 |

**Note: Depreciation can also be shown as Variable Cost or Running Charges as per study module.**

**Working Note:**

Calculation of Effective Passenger kms.:

kms. in one round trip = 50 x 2 = 100 kms

Passenger kms.= Buses x Trip kms. x Trips x Days x Passengers x Capacity

= 4 x 100 x 1 x30 x 40 x75%

= 3,60,000 Passenger kms.

(b)

Working Notes:

(i) Calculation of Depreciation on Machine:

| | |
|---|---|
| Cost of Machine | Rs. 2,60,000 |
| Less: Scrap Value | Rs. 15,000 |
| Cost of Machine to be written off | Rs. 2,45,000 |

Depreciation of 1 Year = Rs. 2,45,000/7 = Rs. 35,000
Depreciation for 146 days = Rs. 35,000 (146/365) = Rs.14,000

(ii) Calculation of Cost of Work Uncertified:
Cost of 2/3rd completed work = Rs. 10,49,000
Total Cost of completed Contract = Rs. 10,49,000× 3/2 = Rs. 15,73,500
Part of uncertified work = 2/3 – ½ = 1/6
Therefore, Cost of uncertified work = Rs. 15,73,500× 1/6 = Rs. 2,62,250

(iii) Profit Transferred to Profit and Loss Account:

Notional Profit × 2/3 × $\frac{7,50,000}{10,00,000}$ = Rs. 1,06,625

Contract Account

Dr. (for the year ended 31st March, 2017) Cr.

| Particulars | Rs. | | Particulars | Rs. |
|---|---|---|---|---|
| To Materials | 2,51,000 | | By Materials at site | 35,400 |
| To Labour | 5,65,600 | | By Balance c/d (Total Cost) | 10,49,000 |
| To Foreman's Salary | 81,300 | | | |
| To Supervisor's Salary (Rs. 8,000 × $\frac{1}{2}$ × 9) | 36,000 | | | |
| To Depreciation on Machine | 14,000 | | | |
| To other Expenses | 1,36,500 | | | |
| | 10,84,400 | | | 10,84,400 |
| To Balance b/d | 10,49,000 | | By Work-in-Progress: | |
| To Notional Profit c/d | 2,13,250 | | Certified Rs. 10,00,000 | |
| | | | Uncertified Rs. 2,62,250 | 12,62,250 |
| | 12,62,250 | | | 12,62,250 |
| To profit & Loss Account | 1,06,625 | | By Notional Profit b/d | 2,13,250 |
| To Work-in-Progress A/c (Reserve) | 1,06,625 | | | |
| | 2,13,250 | | | 2,13,250 |

**6. (a) ANKIT LTD. a manufacturing Company which produces three products furnishes the following information for the year 2016-17:**

| Particulars | Products | | |
|---|---|---|---|
| | A | B | C |
| Selling Price (per unit) | Rs. 200 | Rs. 150 | Rs. 100 |
| Profit Volume Ratio | 10% | 20% | 40% |
| Raw Material content as a % of Variable Cost | 50% | 50% | 50% |
| Maximum Sales Potential (units) | 40,000 | 25,000 | 10,000 |

**Fixed costs are estimated at Rs. 12 lakhs. The firm uses same raw material in all the three products. Raw material is in 'Short Supply'. The firm has a quota for the supply of raw materials of the value of Rs. 36 lakhs for the year 2016-17 for the production of three products to meet sales demand.**

**Required:**
**Determine the optimal product mix and ascertain the maximum profit therefrom. 8**

**(b) The following figures are obtained from the records of P. Ltd.:**

| | 2015-16 (Rs.) | 2016-17 (Rs.) |
|---|---|---|

| | | |
|---|---|---|
| **Sales** | **80,000** | **1,00,000** |
| **Net Profit** | **10,000** | **16,000** |

**Required:**
**Calculate the following:**
**(i) Profit Volume Ratio**
**(ii) Break Even Point**
**(iii) Profit or loss at sales of Rs. 40,000**
**(iv) Sales required to earn a profit of Rs. 22,000**
**(v) Margin of Safety if sales is Rs. 55,000** **7**

**Answer:**

6. (a) Marginal Cost Statement

| Particulars | Product | | |
|---|---|---|---|
| | A (Rs.) | B (Rs.) | C (Rs.) |
| Selling Price (SP) | 200 | 150 | 100 |
| Less: Variable Cost (VC) = SP -(SP × P/V Ratio) | 180 | 120 | 60 |
| Contribution per Unit (SP –VC) | 20 | 30 | 40 |
| Contribution per Key-Factor {C/KF(50% of VC)} | 0.22 | 0.50 | 1.33 |
| Ranking | III | II | I |
| Units Produced | 20,000 (18,00,000/90) | 25,000 (Maximum) | 10,000 (Maximum) |
| Raw Material used (Rs.) | 18,00,000 (Rs.36,00,000 – Rs.18,00,000) | 15,00,000 (25,000 × Rs.60) | 3,00,000 (10,000 × Rs.30) |

Optimal Product Mix:
Product A 20,000 units (From remaining raw material)
Product B 25,000 units (Maximum)
Product C 10,000 units (Maximum)

Calculation of Profit

| Particulars | | (Rs.) |
|---|---|---|
| Product A | 20,000 units x Rs. 20 (C per unit) | 4,00,000 |
| Product B | 25,000 units x Rs. 30 | 7,50,000 |
| Product C | 10,000 units xRs. 40 | 4,00,000 |
| Total Contribution | | 15,50,000 |
| Less : Fixed Cost | | 12,00,000 |
| Maximum Profit | | 3,50,000 |

(b) (i) Profit Volume Ratio:
P/V Ratio = (Change in Profit / Change in Sales) x 100
= (Rs. 6,000 / 20,000)* x 100 = 30%

| | Sales (Rs.) | Profit (Rs.) |
|---|---|---|
| * 2016-17 | 1,00,000 | 16,000 |
| 2015 -16 | 80,000 | 10,000 |
| | 20,000 | 6,000 |

(i) Break Even Point (BEP):
BEP = Sales× P/V Ratio (Contribution) = Fixed Cost (FC) + Profit or,
Rs. 80,000 × 30% = Fixed Cost + Rs. 10,000 or,
Rs. 24,000 = Fixed Cost + Rs. 10,000 Or Fixed Cost =Rs. 14,000

**Or**

Rs. 1,00,000× 30% =FC + Rs. 16,000 or,
Rs. 30,000 =FC + Rs.16,000 Or FC = Rs.14,000
Now, BEP = Sales × P/V Ratio = FC or, Sales× 30% = Rs. 14,000 or BEP = Rs. 46,667

**Or,** BEP Sales = Fixed Cost/ (P/V Ratio) = Rs.14,000/0.30 =Rs.46,667

(ii) Profit or Loss at Sales of Rs. 40,000:

We know that : Sales × P/V Ratio = Fixed Cost + Profit

∴ Rs. 40,000 × 30% = Rs. 14,000 + Profit or,

Rs. 12,000 = Rs. 14,000 + Profit or Profit = ( - ) Rs. 2,000

When Sales are Rs. 40,000, loss is Rs. 2,000.

(iii) Sales required to earn a Profit of Rs. 22,000:

We know that: Sales × P/V Ratio = Fixed Cost + Profit or,

Sales × 30% =Rs.14,000 + Rs. 22,000 or Sales = Rs. 1,20,000

(iv) Margin of Safety if Sales is Rs.55,000:

Margin of Safety (MS) = Sales at Activity Level – Break Even Sales

= Rs. 55,000 – Rs. 46,667 orRs. = Rs.8,333

**7. (a) The standard cost card of A & Co. shows the following costs:**

| | |
|---|---|
| **Material cost - 2 kg @ Rs. 2.50 each** | **Rs. 5.00 per unit** |
| **Wages - 2 hours @ 50 paise each** | **Re.1.00 per unit** |

**The actual data from business operations are as follows:**

| | |
|---|---|
| **Production** | **8,000 units** |

**Actual total cost of production:**

| | |
|---|---|
| **Material cost - 16,500 kg @ Rs. 2.40 each** | **Rs. 39,600** |
| **Wages -18,000 hours @ 40 paise each** | **Rs. 7,200** |

**Calculate the following variances:**

**(i) Material Cost Variance (MCV);**
**(ii) Material Price Variance (MPV);**
**(iii) Material Usage Variance (MUV);**
**(iv) Labour Cost Variance (LCV);**
**(v) Labour Rate Variance (LRV);**
**(vi) Labour Efficiency Variance (LEV).** **8**

**(b) Summarised below are the revenue and expenditure figures of AB Ltd. for the month of March to August,2017:**

| Month | Sales (Rs.) | Purchases (Rs.) | Wages (Rs.) | Expenses (Rs.) |
|---|---|---|---|---|
| March | 6,50,000 | 4,00,000 | 1,20,000 | 50,000 |
| April | 7,00,000 | 4,80,000 | 1,50,000 | 50,000 |
| May | 7,50,000 | 4,50,000 | 1,50,000 | 60,000 |
| June | 8,00,000 | 4,80,000 | 1,80,000 | 60,000 |
| July | 8,20,000 | 4,00,000 | 1,80,000 | 80,000 |
| August | 8,90,000 | 5,00,000 | 2,00,000 | 80,000 |

**The following further information is available:**

**(i) 10% Purchases and sales are on cash basis.**
**(ii) Advance payment of income tax in August, 2017 Rs. 50,000.**
**(iii) Plant purchased and price to be paid in June, 2017 Rs. 1,00,000.**
**(iv) Time lag-**

| | |
|---|---|
| Credit sales | 2 months |
| Credit purchases | 1 month |
| Wages | ½month |
| Expenses | ½month |

**Required:**

**Prepare a Cash Budget for 3 months starting on 1st June, 2017 when cash balance is Rs. 2,00,000.** **7**

**Answer:**

7. (a)

Working Notes:

Standard Quantity for actual output = 8,000 Units × 2 kg. = 16,000 kg.

Standard Hours for actual output = 8,000 Units × 2 hours = 16,000 hours

Standard Cost of Material = SQ × SP = 16,000 kg.× Rs.2.50 = Rs. 40,000

Actual Cost of Material AQ × AP = 16,500 kg. × Rs.2.40 = Rs. 39,600

Standard Cost of Wages = SH × SR = 16,000 hours × Re.0.50 = Rs. 8,000

Actual Cost of Wages = AH × AR = 18,000 hours × Re. 0.40 = Rs. 7,200

Material Variances:

(i) MCV = TSC – TAC = Rs. 40,000 – Rs.39,600 = Rs. 400(F)

(ii) MPV = AQ(SP – AP) =16,500 kg. (Rs.2.50 – Rs.2.40) = Rs. 1,650 (F)

(iii) MUV = SP(SQ – AQ) = Rs. 2.50(16,000kg. – 16,500 kg.) = Rs. 1,250(A)

Labour Variances:

(iv) LCV = SC – AC = Rs. 8,000 – Rs.7,200 = Rs. 800(F)

(v) LRV = AH (SR –AR)= 18,000hours ( Re.0.50 – Re. 0.40) = Rs. 1,800(F)

(vi) LEV = SR(SH –AH) = Re.0.50 (16,000 hours – 18,000 hours)= Rs. 1,000 (A)

(b)

Working Notes:

(i) Collection from Debtors:

| | June (Rs.) | July (Rs.) | August (Rs.) |
|---|---|---|---|
| Sales for April, May and June respectively | 7,00,000 | 7,50,000 | 8,00,000 |
| Less: 10% for Cash Sales | 70,000 | 75,000 | 80,000 |
| Credit Sales (Collection from Debtors) | 6,30,000 | 6,75,000 | 7,20,000 |

(ii) Payment to Creditors:

| | June (Rs.) | July (Rs.) | August (Rs.) |
|---|---|---|---|
| Purchases for the preceding month | 4,50,000 | 4,80,000 | 4,00,000 |
| Less: 10% for Cash Purchases | 45,000 | 48,000 | 40,000 |
| Credit Purchases (Payment to Creditors) | 4,05,000 | 4,32,000 | 3,60,000 |

Cash Budget
(for June to August, 2017)

| Particulars | June (Rs.) | July (Rs.) | August (Rs.) |
|---|---|---|---|
| Cash Balance | 2,00,000 | 1,32,000 | 1,67,000 |
| Receipts: | | | |
| Cash Sales | 80,000 | 82,000 | 89,000 |
| Collection from Debtors | 6,30,000 | 6,75,000 | 7,20,000 |
| Total Receipts (A) | 9,10,000 | 8,89,000 | 9,76,000 |
| Payments: | | | |
| Cash Purchases | 48,000 | 40,000 | 50,000 |
| Payment to Creditors | 4,05,000 | 4,32,000 | 3,60,000 |
| Wages | 1,65,000 | 1,80,000 | 1,90,000 |
| Expenses | 60,000 | 70,000 | 80,000 |
| Plant | 1,00,000 | | |
| Advance Income Tax | | | 50,000 |
| Total Payments (B) | 7,78,000 | 7,22,000 | 7,30,000 |
| Cash Balance (A – B) | 1,32,000 | 1,67,000 | 2,46,000 |

**8. Answer *any three* out of the following four questions:** 5×3=15

(a) Differentiate between cost control and cost reduction.

(b) Cost accounting has emerged as a specialized discipline due to various factors. List out these factors. (*Any five*)

(c) What is Economic Order Quantity (EOQ)? State the assumptions underlying EOQ.

(d) What is Principal Budget Factor? Explain your answer with suitable example.

---

**Answer:**

8. (a) Cost **Control** vs.**Cost Reduction** : Both cost control and cost reduction are efficient tools for management buttheir concepts and procedure are widely different. The main differences are as follows:

| | Cost Control | Cost Reduction |
|---|---|---|
| (i) | Cost control representseffortsmadetowards achieving target or goal. | Costreduction represents the achievement in reduction of cost. |
| (ii) | The Process of cost control is to setup a target, ascertain the actual performance and compare it with the target, investigate the variances, and take remedial measures. | Cost reduction is not concerned with maintenance of performance according to standards. |
| (iii) | Cost control assumes the existence of standards or norms which are not challenged. | Cost reduction assumes the existence of concealed potential savings in standards or norms which are therefore subjected to a constant challenge with a view to improvement by bringing out savings. |
| (iv) | Cost control is a preventive function. Costs are optimized before they are incurred. | Cost reduction is a corrective function. It operates even when an efficient cost control system exists. There is room for reduction in the achieved costs under controlled conditions. |
| (v) | Cost control lacks dynamic approach. | Cost reduction is a continuous process of analysis by various methods of all the factors affecting costs, efforts and functions in an organization. The main stress is upon the why of a thing and the aim is to have continual economy in costs. |

(b) The main factors attributable for emerging cost accounting as a specialized discipline are as under:(Any Five Factors)

(i) Limitations placed on financial accounting.
(ii) Improved cost consciousness.
(iii) Rapid industrial development after industrial revolution and World wars.
(iv) Growing competition among the manufacturers.
(v) To control galloping price rise, the cost of computing the precise cost of product / service.
(vi) To control cost, several legislations passed throughout the World and in India too, such as EssentialCommodities Act, Industrial Development and Regulation Act (IDRA), etc.

(c) Economic Order Quantity (EOQ): EOQ is the size of the order for which both ordering and carrying costsare minimum.

Assumptions underlying EOQ:

(i) Ordering cost per order and carrying cost per unit per annum are known and they are fixed.
(ii) Anticipated usage of material in units in known.
(iii) Cost per unit of the material is constant and is known as well.
(iv) The quantity of material ordered is received immediately i.e. lead time is zero.

(d) Principal Budget Factor:

Budgets cover all the functional areas of the organisation. For the effectiveimplementation of the budgetarysystem, all the functional areas are to be considered which are interlinked. Because of these interlinks, certainfactors have the ability to affect all other budgets. Such factor is known as principal budget factor.

Principal budget factor is the factor the extent of influence of which must first be assessed in order to ensurethat the functional budgets are reasonably capable of fulfillment. A principal budget factor may be lack ofdemand, scarcity of raw material, non-availability of skilled labour, inadequate working capital etc. Forexample, an organisation has the capacity to produce 2,500 units per annum. But the production department isable to produce only 1,800 units due to non-availability of raw materials. In this case, non-availability of rawmaterials is the principal budget factor (limiting factor). If the sales manager estimates that he can sell only1,500 units due to lack of demand, then lack of demand is the principal budget factor. This concept is also known as key factor, or governing factor. This factor highlights the constraints withinwhich the organization functions.

# INTERMEDIATE EXAMINATION

## GROUP I

## (SYLLABUS 2016)

## SUGGESTED ANSWERS TO QUESTIONS

## DECEMBER 2018

## Paper-8: COST ACCOUNTING

**Time Allowed : 3 Hours** **Full Marks : 100**

***The figures in the margin on the right side indicate full marks.***

***All sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.***

**All working notes must form part of the answers.**

**Wherever necessary, candidates may make appropriate assumptions and clearly state them.**

**No present value factor table or other statistical table will be provided in addition to this question paper.**

**Section A**

**Section A contains Question Number 1. All parts of this question are compulsory.**

**1. Answer the following questions:**

**(a) Choose the correct answer from the given alternatives (you may write only the Roman numeral and the alphabet chosen for your answer): 1×10=10**

**(i) Joint Cost is suitable for**

- **(a) Oil Industry**
- **(b) Fertilizer Industry**
- **(c) Ornament Industry**
- **(d) Infrastructure Industry**

**(ii) Cost of idle time arising due to non-availability of raw materials is**

- **(a) recovered by inflating the raw materials cost.**
- **(b) recovered by inflating the wage rate.**
- **(c) charged to factory overheads.**
- **(d) charged to costing profit and loss account.**

**(iii) Charging to a cost center those overheads that result solely for the existence of that cost center is known as**

- **(a) Allotment**

(b) **Allocation**

(c) **Absorption**

(d) **Apportionment**

(iv) **Standard deals with the cost of service cost center is**

(a) **CAS-9**

(b) **CAS-13**

(c) **CAS-16**

(d) **CAS-22**

(v) **In Reconciliation Statement income shown only in financial accounts is**

(a) **added to financial profit.**

(b) **deducted from financial profit.**

(c) **ignored.**

(d) **deducted from costing profit.**

(vi) **The most suitable cost system where the products differ in type of material and work performed is**

(a) **Process Costing**

(b) **Batch Costing**

(c) **Job Costing**

(d) **Operating Costing**

(vii) **In a process 10000 units are introduced during a period. 10% of input is normal loss. Closing work-in-process 70% complete is 1500 units. 7500 completed units are transferred to next process. Equivalent production for the period is**

(a) **9550 units**

(b) **9000 units**

(c) **8550 units**

(d) **8500 units**

(viii) **The sales and profit of a firm for the year 2016 are Rs.1,50,000 and Rs.20,000 and for the year 2017 are Rs.1,70,000 and Rs.25,000 respectively. The P/V Ratio of the firm is**

(a) **15%**

(b) **20%**

(c) **25%**

(d) **30%**

(ix) **Standard quantity of material for one unit output is 10 kg @ Rs.8 per kg. Actual output during a given period is 600 units. The standard quantity of material for actual output is**

(a) **1200 kg**

(b) **6000 kg**

(c) **4800 kg**

(d) **48000 kg**

(x) **Which of the following is a long-term Budget?**

(a) Master Budget

(b) Production Budget

(c) Flexible Budget

(d) Capital Budget

**(b) Match the statement in Column I with the most appropriate statement in Column II**

**(You may opt to write only the Roman numeral and the matched alphabet instead of copying contents into the Answer Books): 1×5=5**

| | Column I | | Column II |
|---|---|---|---|
| (i) | Cash discount allowed | (A) | Joint Cost |
| (ii) | Escalation Clause | (B) | Imputed Cost |
| (iii) | CAS-19 | (C) | Direct Expenses |
| (iv) | Notional Cost | (D) | Not shown is cost sheet but debited to profit and loss account |
| (v) | Zero base budgeting | (E) | Sunk Cost |
| | | (F) | Contract Costing |
| | | (G) | Decision Package |
| | | (H) | Variable Cost |

**(c) State whether the following statements are „True" or „False" (You may write only the Roman numeral and whether „True"or „False" without copying the statements into the Answer Book): 1×5=5**

(i) Multiple costing is suitable for banking industry.

(ii) Slow moving materials have a high turnover ratio.

(iii) Cost ledger control account makes the cost ledger self-balancing.

(iv) There is inverse relationship between batch size and carrying costs.

(v) Marginal costing follows the identifiability wise classification of costs.

**(d) Fill in the blanks (you may write only the Roman numeral and the content filling the blanks): 1×5=5**

(i) _____is discount allowed to the bulk purchaser.

(ii) CAS_____stands for cost of utilities.

(iii) Under integrated accounting system, the accounting entry for payment of wages is to debit_____and to credit cash account.

(iv) If the actual loss in a process is less than the normal loss, the difference is known as _____

(v) The principal budget factor for consumer goods manufacturer is normally _____.

**Answer: 1 (a)**

(i) (a)

(ii) (d)

(iii) (b)

(iv) (b)

(v) (b)

(vi) (c)

(vii) (c)

(viii) (c)

(ix) (b)

(x) (d)

**Answer: 1 (b)**

| | Column I | | Column II |
|---|---|---|---|
| (i) | Cash discount allowed | (D) | Not shown in cost sheet but debited to profit and loss account |
| (ii) | Escalation Clause | (F) | Contract Costing |
| (iii) | CAS-19 | (A) | Joint Cost |
| (iv) | Notional Cost | (B) | Imputed Cost |
| (v) | Zero base budgeting | (G) | Decision Package |

**Answer: 1 (c)**

(i) False

(ii) False

(iii) True

(iv) False

(v) False

**Answer: 1 (d)**

(i) Quantity Discount/ Trade Discount/ Cash Discount

(ii) CAS – 8

(iii) Wages Control Account

(iv) Abnormal gain/Abnormal Profit

(v) Sales Demand/Market Demand / Lack of Demand

**Section - B**

**Answer any five questions from question numbers 2 to 8.**

**Each question carries 15 marks.** **15×5=75**

**2. (a) ZEDYAAH TUBES LTD. manufactures a special product, which requires ZEDY. The following particulars were collected for the year 2017-18:**

| | | | |
|---|---|---|---|
| **(i)** | **Monthly demand of Zedy** | **:** | **7500 units** |
| **(ii)** | **Cost of placing an order** | **:** | **Rs.500** |
| **(iii)** | **Re-order period** | **:** | **5 to 8 weeks** |
| **(iv)** | **Cost per unit** | **:** | **Rs.60** |
| **(v)** | **Carrying cost % p.a.** | **:** | **10%** |
| **(vi)** | **Normal usage** | **:** | **500 units per week** |

| | | | |
|---|---|---|---|
| **(vii)** | **Minimum usage** | **:** | **250 units per week** |
| **(viii)** | **Maximum usage** | **:** | **750 units per week** |

**Required:**

**Calculate the following:**

**(i) Re-order quantity**
**(ii) Re-order level**
**(iii) Minimum stock level**
**(iv) Maximum stock level**
**(v) Average stock level** **7**

**(b) SONAX LTD. has three Production Departments and two Service Departments. The overhead distribution sheet showed the following totals:**

| | |
|---|---|
| **Production Departments:** | |
| **A** | **25,000** |
| **B** | **31,000** |
| **C** | **28,000** |
| **Service Departments:** | |
| **S** | **8,000** |
| **T** | **13,900** |

**Required:**
**Using the following bases of apportionment, distribute the cost of service departments under Simultaneous Equation Method:**

| | A | B | C | S | T |
|---|---|---|---|---|---|
| **Department S** | **30%** | **20%** | **40%** | **-** | **10%** |
| **Department T** | **40%** | **15%,** | **25%** | **20%** | **-** |

**8**

**Answer: 2 (a)**

| | | | |
|---|---|---|---|
| (i) | Re-order Quantity | = | $\sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 7,500 \times 12 \times 500}{60 \times 10\%}}$ = 3,873 units. |
| (ii) | Re-order Level | =<br>= | Maximum Re-order Period x Maximum Usage<br>8 weeks × 750 unite per week = 6,000 units |
| (iii) | Minimum Stock Level | =<br>= | Re-order Level - {Normal Usage × Normal Re-order Period}<br>6,000 - (500 × 6.5) = 2,750 units |
| (iv) | Maximum Stock Level | =<br>= | Re-order Level + Re-order Quantity - (Minimum Usage × Minimum Re-order Period)<br>6,000 + 3,873 - (250 × 5) = 8,623 units. |
| (v) | Average Stock Level | =<br>= | $\frac{1}{2}$ (Minimum Stock Level + Maximum Stock Level)<br>$\frac{1}{2}$ (2,750 + 8,623) = 5,687 units.<br>**OR**<br>Minimum Level + $\frac{1}{2}$ Re-order Quantity =<br>2,750 +1,937 = 4,687 units |

**Answer: 2 (b)**

Let x be the expense of Department S

and y be the expense of Department T

Then x = Rs. 8,000 + $\frac{1}{5}$ th of y (20% of y)

Y = Rs.3,900 + $\frac{1}{10}$ th of x

Putting the value of x, we get:

y = Rs.13,900 + $\frac{1}{10}$ of (8,000 + $\frac{1}{5}$ of y)

Or, y = Rs.13,900 + Rs.800 + $\frac{1}{50}$y

Or, y = Rs.14,700 + $\frac{1}{50}$ y , or 50 y = 7,35,000 + y

Or, 50y - y = Rs. 7,35,000 or, y =Rs. $\frac{7,35,000}{49}$ = Rs.15,000

Putting the value of y we get

x = Rs 8,000 + $\frac{1}{5}$ th of y, or, x = Rs. 8,000 + $\frac{1}{5}$ of Rs.15,000

or, x = Rs.8,000 + Rs.3,000, or x = Rs.11,000

Total expenses of Dept. S = Rs.11,000

Total expenses of Dept. T = Rs.15,000

**Overhead Distribution Summary**

| Particulars | A | B | C | S | T |
|---|---|---|---|---|---|
| | Rs. | Rs. | Rs. | Rs. | Rs. |
| Total as per | | | | | |
| Primary Distribution | 25,000 | 31,000 | 28,000 | 8,000 | 13,900 |
| Distribution of Expenses of Dept. S in the ratio 3:2:4:1 | 3,300 | 2,200 | 4,400 | -11,000 | 1,100 |
| Distribution of Expenses of Dept. T in the ratio 8:3:5:4 | 6,000 | 2,250 | 3,750 | 3,000 | -15,000 |
| | 34,300 | 35,450 | 36,150 | - | - |

**3. (a) What are the various types of materials included in the Material Cost as dealt with by CAS-6 relating to Cost Accounting Standard on Material Cost?**
**State the objective and scope of the Standard. 6**

**(b) The following information is available from the financial books of PQR Ltd. having a normal production capacity of 60000 units for the year ended 31st March, 2018:**

**(i) Sales Rs.10,00,000 (50000 units)**
**(ii) There was no opening and closing stock of finished units.**
**(iii) Direct material and direct wages costs were Rs.5,00,000 and Rs.2,50,000 respectively.**
**(iv) Actual factory expenses were Rs.1,50,000 of which 60% are fixed.**
**(v) Actual administrative expenses were `Rs.45,000 which are completely fixed.**
**(vi) Actual selling and distribution expenses were Rs.30,000 of which 40% are fixed.**
**(vii) Interest and dividends received Rs.15,000**

**You are required to**

**(A) find out profit as per financial books for the year ended 31st March, 2018.**
**(B) prepare the cost sheet and ascertain the profit as per cost accounts for the year ended 31st March, 2018 assuming that the indirect expenses are absorbed on the basis of normal production capacity.**
**(C) prepare a statement reconciling profits shown by financial and cost books. 9**

**Answer: 3 (a)**

**CAS-6: Cost Accounting Standard on Material Cost [Limited Revision 2017]**

**This standard** deals with principles and methods of determining the Material Cost. Material for the purpose of this standard includes Raw Materials, Process Materials, Additives, manufactured / bought out Components, Sub-assemblies, Accessories, Semi-finished Goods, Consumable Stores, Spares and other indirect Materials.

This standard deals with the principles and methods of classification, measurement and assignment of Material Cost, for determination of the Cost of Product or Service, and the presentation and disclosure in Cost Statements.

**Objective**

The objective of this standard is to bring uniformity and consistency in the principles and methods of determining the Material Cost with reasonable accuracy.

**Scope**

This standard should be applied to Cost Statements which require classification, measurement, assignment, presentation and disclosure of Material Costs including those requiring attestation.

**Answer: 3 (b)**

**(a) Profit and Loss Account for the year ended 31st March, 2018**

| Particulars | Rs. | Particulars | Rs. |
|---|---|---|---|
| To Direct Materials | 5,00,000 | By Sales (50,000 units) | 10,00,000 |
| To Direct Wages | 2,50,000 | By Interest and Dividends | 15,000 |
| To Factory Expenses | 1,50,000 | | |
| To Administration Expenses | 45,000 | | |
| To Selling & Distribution Expenses | 30,000 | | |
| To Profit | 40,000 | | |
| | 10,15,000 | | 10,15,000 |

**(b) Cost Sheet for the year ended 31st March, 2018**

| | Rs. | Rs. |
|---|---|---|
| Direct Material | | 5,00,000 |
| Direct Wages | | 2,50,000 |
| **Prime Cost** | | 7,50,000 |
| Factory Expenses: | | |
| Variable | 60,000 | |
| Fixed (Rs.90,000 × 5/6) | 75,000 | 1,35,000 |
| **Works Cost** | | 8,85,000 |
| Administration Expenses (Rs.45,000 × 5/6) | | 37,500 |
| **Cost of Production** | | 9,22,500 |
| Selling & Distribution Expenses: | | |
| Variable | 18,000 | |
| Fixed (Rs.12,000 × 5/6) | 10,000 | 28,000 |
| **Cost of Sales** | | 9,50,500 |
| Profit | | 49,500 |
| Sales | | 10,00,000 |

**(c) Reconciliation Statement**

| | **Rs.** | **Rs.** |
|---|---|---|
| **Profit as per Cost Accounts** | | 49,500 |
| Add : Interest and Dividends received only credited in Financial Accounts | | 15,000 |
| | | 64,500 |
| Less : | | |
| Factory expenses under-charged in Cost Accounts (Rs.1,50,000 – Rs.1,35,000) | 15,000 | |
| Administrative expenses under-charged in Cost Accounts (Rs.45,000 – Rs.37,500) | 7,500 | |
| Selling and Distribution Expenses under-charged in Cost Accounts (Rs. 30,000 – Rs. 28,000) | 2,000 | 24,500 |
| **Profit as per Financial Accounts** | | 40,000 |

**4. (a) Z Ltd., manufactured and sold 200 typewriters in the year 2017. Its summarised Trading and Profit & Loss Account for the year 2017 is as follows:**

**Total Output (in units) 200**

| **Particulars** | **Rs.** | **Particulars** | **Rs.** |
|---|---|---|---|
| **To Cost of Material consumed** | **1,20,000** | **By Sales** | **6,00,000** |
| **To Direct Wages** | **1,80,000** | | |
| **To Manufacturing Charges** | **75,000** | | |
| **To Gross Profit c/d** | **2,25,000** | | |
| | **6,00,000** | | **6,00,000** |
| **To Management Expenses** | **90,000** | **By Gross Profit b/d** | **2,25,000** |
| **To General Expenses** | **30,000** | | |

| | | | |
|---|---|---|---|
| **To Rent, Rates & Taxes** | **15,000** | | |
| **To Selling Expenses** | **45,000** | | |
| **To Net Profit** | **45,000** | | |
| | **2,25,000** | | **2,25,000** |

**For the year 2018, it is estimated that**

**(i) The output and sales will be 300 typewriters.**

**(ii) Price of material will rise by 25% compared to previous year level.**

**(iii) Wages per unit will rise by 10%.**

**(iv) Manufacturing charges will increase in proportion to the combined cost of material and wages**

**(v) Selling expenses per unit will remain unchanged.**

**Other expenses will remain unaffected by the rise in output.**

**Required:**

**Prepare a Cost Sheet showing the cost at which typewriters will be manufactured in 2018 and give price at which it should by marketed so as to show profit of 10% on selling price. 8**

**(b) The following details are extracted from the costing records of EVINIE LTD., an oil mill for the year ended 31st March, 2018. Purchased 2000 tons of copra for Rs.1,00,000 and other expenses were as under:**

| | Crushing( Rs.) | Refining (Rs.) | Finishing (Rs.) |
|---|---|---|---|
| **Cost of Labour** | **10,000** | **6,000** | **4,000** |
| **Sundry Material** | **4,000** | **3,000** | **2,000** |
| **Electric Power** | **3,000** | **2,000** | **1,600** |
| **Steam** | **2,000** | **2,000** | **1,500** |
| **Repair of Machine** | **2,000** | **1,000** | **500** |
| **Cost of Casks** | **—** | **—** | **7,500** |

**Factory Expenses were Rs.10,000 to be apportioned on the basis of wages. 1700 tons of crude oil was produced; 1540 tons of oil was refined and finally 1500 tons of oil was finished for delivery. Realised Rs.2,000 from sale of sacks; Rs.5,000 by sale of 250 tons of copra residue and Rs.5,100 by sale of 120 tons of by-products in refining process.**

**Prepare Process Accounts for the year ending on 31st March, 2018. 7**

**Answer: 4 (a)**

**Cost Sheet of Z Ltd. For the year 2017**

| Particulars | Total Cost Rs. | Cost per unit Rs. |
|---|---|---|
| Direct Material | 1,20,000 | 600 |
| Direct Labour | 1,80,000 | 900 |
| **Prime Cost** | 3,00,000 | 1,500 |
| **Add** : Factory Overhead (Manufacturing exp.) | 75,000 | 375 |
| **Factory Cost** | 3,75,000 | 1,875 |
| **Add** : **Office Overhead** : | | |
| Management Expenses 90,000<br>General Expenses 30,000<br>Rent, Rates & Taxes 15,000 | 1,35,000 | 675 |

| | | |
|---|---|---|
| **Cost of Production** | 5,10,000 | 2,550 |
| **Add:** Selling & Distribution Expenses | 45,000 | 225 |
| **Total Cost** | 5,55,000 | 2,775 |
| Profit | 45,000 | 225 |
| **Selling Price** | 6,00,000 | 3,000 |

| **Estimate for the year 2018 :** | **Rs.** |
|---|---|
| 1. Material Cost per Unit: | 600 |
| Add : Expected increase in Price of Material in 2018 (It is 25% compared to year 2017) | 150 |
| Expected price of material per unit | 750 |
| 2. Wages per unit | 900 |
| Add : Expected increase @ 10% | 90 |
| Expected Wages per Unit | 990 |
| 3. Manufacturing charges are Rs.375 per Unit and total of Material and Labour cost is Rs.1,500 per Unit so percentage of manufacturing expenses to combined Cost of Material and Wages is as follows : $= \frac{\text{Manufacturing Expenses}}{\text{Material Cost + Labour Cost}} \times 100$ $= \frac{375}{1,500} \times 100 = 25\%$ Manufacturing expenses are 25% of combined Cost of Material and Wages: 25% of Rs.1,740 | 435 |

To ascertain the Selling Price to be quoted in the year 2018 the estimated cost sheet for the year 2018 will be prepared as follows:

**Estimated Cost Sheet**
**for the year 2018**

**Production = 300 Units**

| **Particulars** | **Total Cost Rs.** | **Cost per unit Rs.** |
|---|---|---|
| Direct Material | 2,25,000 | 750.00 |
| Direct Labour | 2,97,000 | 990.00 |
| **Prime Cost** | 5,22,000 | 1,740.00 |
| Factory Overhead (25% of Cost of Material & Wages) | 1,30,500 | 435.00 |
| **Factory Cost** | 6,52,000 | 2,175.00 |
| **Office Overhead** | 1,35,000 | 450.00 |
| Cost of Production | 7,87,500 | 2,625.00 |
| Selling & Distribution Overhead (300 × Rs.225) | 67,500 | 225.00 |
| Total Cost | 8,55,000 | 2,850.00 |
| Profit (10% of Selling Price or 1/9 of Total Cost) | 95,000 | 316.67 |
| Selling Price | 9,50,000 | 3,166.67 |

**ALETRNATIVE**

An alternative answer with volume multiplier can simplify the solution as follows

| PARTICULARS | Amount in Rs. | Cost Per Unit Rs. |
|---|---|---|
| Direct materials (1,20,000*1.5*1.25) | 2,25,000 | 750 |
| Direct Labour (1,80,000*1.5*1.1) | 2,97,000 | 990 |
| Prime Cost | 5,22,000 | 1,740 |
| Manufacturing Charges (75,000/3,00,000)*5,22,000 | 1,30,500 | 435 |
| Factory Cost | 6,52,500 | 2,175 |
| Office Overheads: | | |
| Management Expenses 90,000 | | |
| General Expenses 30,000 | | |
| Rent , Rates & Taxes 15,000 | 1,35,000 | 450 |
| Cost of Production | 7,87,500 | 2,625 |
| Selling Expenses (45,000*1.5) | 67,500 | 225 |
| Total Cost | 8,55,000 | 2,850 |
| Profit (1/9 of 8,55,000) | 95,000 | 317 |
| Sales | 9,50,000 | 3,167 |
| Selling price per typewriter (9,50,000/300) | 3,166.67 r/o 3,167 | |

Note: Volume multiple is 300/200 =1.5 times

**Answer: 4 (b)**

**Crushing Process Account**

| Particulars | Tons | Amount Rs. | Particulars | Tons | Amount Rs. |
|---|---|---|---|---|---|
| To Copra | 2,000 | 1,00,000 | By Copra Sacks | - | 2,000 |
| To Labour | | 10,000 | By Copra Residue | 250 | 5,000 |
| To Sundry Materials | | 4,000 | By Loss in Crushing (Balancing Figure) | 50 | - |
| To Electric Power | | 3,000 | By Transfer to Refining @ Rs.70 per ton | 1,700 | 1,19,000 |
| To Steam | | 2,000 | | | |
| To Repairs of Machines | | 2,000 | | | |
| To Factory Expenses* | | 5,000 | | | |
| | 2,000 | 1,26,000 | | 2,000 | 1,26,000 |

**Refining Process Account**

| Particulars | Tons | Amount | Particulars | Tons | Amount Rs. |
|---|---|---|---|---|---|
| To Crushing Process a/c | 1,700 | 1,19,000 | By Sale of By Products | 120 | 5,100 |
| To Labour | | 6,000 | By Loss in Refining Process Balancing Figure) | 40 | - |

| | | | | | |
|---|---|---|---|---|---|
| To Sundry Materials | | 3,000 | | | - |
| To Electric Power | | 2,000 | By Transfer to Finishing Process @ Rs. 85 per ton | 1,540 | 1,30,900 |
| To Steam | | 2,000 | | | |
| To Repairs of Machines | | 1,000 | | | |
| To Factory Expenses* | | 3,000 | | | |
| | 1,700 | 1,36,000 | | 1,700 | 1,36,000 |

**Finishing Process Account**

| Particulars | Tons | Amount Rs. | Particulars | Tons | Amount Rs. |
|---|---|---|---|---|---|
| To Refining Process a/c | 1,540 | 1,30,900 | By Loss in Finishing Balancing Figure) | 40 | - |
| To Labour | | 4,000 | By Cost of Production Transferred to Finished Oil a/c @ Rs.95 per ton | 1,500 | 1,42,500 |
| To Sundry Materials | | 2,000 | | | |
| To Electric Power | | 1,600 | | | |
| To Steam | | 1,500 | | | |
| To Repairs of Machines | | 500 | | | |
| To Factory Expenses | | 2,000 | | | |
| | 1,540 | 1,42,500 | | 1,540 | 1,42,500 |
| To Cost of Production of Finished Oil | 1,500 | 1,42,500 | By Total Cost @ Rs. 100 per Ton | 1,500 | 1,50,000 |
| To Cost of Casks | | 7,500 | | | |
| | 1,500 | 1,50,000 | | 1,500 | 1,50,000 |

**Working Note**:

*Factory overhead of Rs. 10,000 is apportioned in the ratio of labour cost, i.e. 5:3:2.

**5. (a) GOLDEN TRANSPORT CO. has been given a route 20km. long for running buses. The company has a fleet of 10 buses each costing Rs.60,000 and having a life of 5 years without any scrap value.**

**The following are estimated expenditure and other details:**

| | | |
|---|---|---|
| **(i)** | **Insurance charges** | **3% p. a.** |
| **(ii)** | **Annual tax for each bus** | **Rs.3,000** |
| **(iii)** | **Total garage charges** | **Rs.4,000 p.m.** |
| **(iv)** | **Driver"s salary for each bus** | **Rs.10,000 p. m.** |
| **(v)** | **Conductor"s salary for each bus** | **Rs.7,000 p. m.** |
| **(vi)** | **Annual repairs to each bus** | **Rs.6,000** |
| **(vii)** | **Commission to be shared by the driver and conductor equally: 10% of the takings** | |
| **(viii)** | **Cost of stationary** | **Rs.1,500 p. m.** |
| **(ix)** | **Manager"s salary** | **Rs.12,000p.m** |
| **(x)** | **Accountant"s salary** | **Rs.9,000 p.m.** |
| **(xi)** | **Petrol and oil** | **Rs.400 per 100 km** |

**Each bus will make 3 round trips carrying on an average 40 passengers on each trip. The bus will run on an average for 25 days in a month.**
**Assuming 15% profit on takings, Calculate the bus fare to be charged from each passenger. 8**

**(b) OMEGA LTD. undertook a contract for Rs.5,00,000 on 1st January, 2017. The company furnishes the following details for the year ended 31st December, 2017:**

| | Rs. |
|---|---|
| **Materials consumed** | **1,65,000** |
| **Direct Expenses** | **5,000** |
| **Wages** | **30,000** |
| **Materials returned to stores** | **5,000** |
| **Materials stolen from site** | **10,000** |
| **Insurance claim admitted** | **6,000** |
| **Works expenses @ 20% on wages** | |
| **Office expenses @ 10% on works cost** | |
| **Materials in hand on 31.12.2017** | **15,000** |
| **Cash received to the extent of 90% of works certified** | **2,70,000** |
| **Cost of work uncertified** | **11,000** |

**Plant sent to site costing Rs.60,000 with a scrap value of Rs.10,000 and its useful life is 5 years. The plant was used on the contract for 146 days.**

**Required:**

**Prepare Contract Account showing therein the cost of materials issued to site and the amount of profit or loss to be transferred to the Profit & Loss Account. 7**

**Answer: 5 (a)**

| Particulars | Amount Rs. |
|---|---|
| 1. Insurance (Rs.60,000 × 3% × 10/12) | 1,500 |
| 2. Tax (Rs.3,000 × 10/12) | 2,500 |
| 3. Total Garage charges | 4,000 |
| 4. Drivers' salary (Rs.10,000 × 10) | 1,00,000 |
| 5. Conductors' salary (Rs.7,000 × 10) | 70,000 |
| 6. Repairs (Rs.6,000 × 10/12) | 5,000 |
| 7. Cost of stationary | 1,500 |
| 8. Manager's salary | 12,000 |
| 9. Accountant's salary | 9,000 |
| 10. Depreciation (Rs.60,000 × 10/5 × 1/12) | 10,000 |
| 11. Petrol * (30,000/100) × 400 | 1,20,000 |
| 12. Commission of conductor & driver 4,47,333 × (10/100) | 44,733 |
| 13. Total Cost | 3,80,233 |
| 14. (+) Profit @ 15% on takings (4,47,333 × 15/100) | 67.100 |
| 15. Takings ** | 4,47,333 |

* 10 × 20 × 3 × 2 × 25 = 30,000

**Let 'X' be the takings

X = Rs.3,35,500 + (10/100 X) + (15/100 X)

100 X = Rs. 3,35,50,000 + 25X

⇨ X = Rs. 4,47,333

Fare per passenger Km = Rs.4,47,333 / (30,000 × 40) = Re. 0.3727 say Re.0.37

**Answer: 5 (b)**

**Calculation of Cost of Materials issued to site**

| | | Rs. |
|---|---|---|
| | Materials consumed | 1,65,000 |
| Add: | Materials stolen | 10,000 |
| | Materials returned to stores | 5,000 |
| | Materials in hand (31.12.2017) | 15,000 |
| | | 1,95,000 |

**Contract Account**
**for the year ended 31st Dec. 2017**

| Dr. | | | Cr. |
|---|---|---|---|
| | Rs. | | Rs. |
| To Materials issued to site | 1,95,000 | By Materials returned to stores | 5,000 |
| To Direct Expenses | 5,000 | By Insurance claim A/c (Loss of Stock ) | 6,000 |
| To Wages | 30,000 | By Profit and Loss A/c (Stolen Rs. 10,000 – Rs.6,000) | 4,000 |
| To Works Expenses 20% of wages | 6,000 | By Materials in hand | 15,000 |
| To Office Expenses 10% of Works Cost (Note 1) | 21,000 | By Cost of Contract Balancing Figure) | 2,31,000 |
| To Depreciation on Plant (Note 2) | 4,000 | | |
| | 2,61, 000 | | 2,61,000 |
| To Cost of Contract b/d | 2,31,000 | By Work in Progress : | |
| To Notional Profit | 80,000 | Work certified | 3,00,000 |
| | | Work uncertified | 11,000 |
| | 3,11,000 | | 3,11,000 |
| To Profit & Loss A/c (Note 3) | 48,000 | By Notional Profit | 80,000 |
| To Profit Reserve | 32,000 | | |
| | 80,000 | | 80,000 |

**Working Notes:**

**1. Calculation of works cost**

| | Rs. |
|---|---|
| Materials consumed | 1,65,000 |
| Add: Direct Wages | 30,000 |
| Direct Expenses | 5,000 |
| Prime Cost | 2,00,000 |
| Add: Works expenses | 6,000 |
| Deprecation | 4,000 |
| | 2,10,000 |

**2. Calculation of Depreciation on Plant**

$$\text{Rs.} = \frac{60,000 - 10,000}{5} \times \frac{146}{365} = \text{Rs.}4,000$$

**3.** Profit to be credited to profit & Loss A/c

$$\frac{2}{3} \times \text{National Profit} \times \frac{\text{Cash received}}{\text{Work certified}}$$

$$= \frac{2}{3} \times 80,000 \times \frac{2,70,000}{3,00,000} = \text{Rs.}48,000$$

**6. (a) A company budgets for a production of 5 lakh units at a variable cost of Rs.20 each. The fixed costs are Rs.20 lakh. The selling price is fixed to yield a profit of 25% on cost.**

**You are required to calculate**

**(i) P/V Ratio and Break- even point.**

**(ii) If the selling price is reduced by 20%,**

**Ascertain:**

**(A) The effect of price reduction on the P/V Ratio and BEP.**

**(B) The number of units required to be sold at the reduced selling price to obtain an increase of 20% over the budgeted profit. 8**

**(b) AVONA LTD., a toy factory presents the following information for the year ended 31st March, 2018:**

| | Rs. |
|---|---|
| **Material cost** | **1,20,000** |
| **Labour cost** | **2,40,000** |
| **Fixed overheads** | **1,20,000** |
| **Variable overheads** | **60,000** |
| **Units produced** | **12,000** |
| **Selling Price per Unit** | **50** |

**The available capacity is a production of 20000 units per year. The firm has an offer for the purchase of 5000 additional units at a price of Rs.40 per unit. It is expected that by accepting this offer there will be a saving of rupee one per unit in material cost on all units manufactured, the fixed overhead will increase by Rs.35,000 and the overall efficiency will drop by 2% on all production.**

**State whether offer is acceptable or not. 7**

**Answer: 6 (a)**

**Workings:**

**Statement Showing Unit Sales Price**

| Particulars | Rs. |
|---|---|
| Budgeted Variable Cost per Unit | 20.00 |
| Budgeted Fixed Cost per Unit (Rs.20,00,000 / 5,00,000) | 4.00 |
| Total Budgeted Cost per Unit | 24.00 |
| Add : Profit (25% on Total Cost) | 6.00 |
| Per unit selling price | 30.00 |

**Statement of Budgeted Profit**

| Particulars | Rs. |
|---|---|
| Budgeted Sales (5,00,000 × Rs.30) | 1,50,00,000 |
| Less : Variable Cost (5,00,000 × Rs.20) | 1,00,00,000 |
| Contribution | 50,00,000 |
| Less : Budgeted Fixed Cost | 20,00,000 |
| Budgeted Profit | 30,00,000 |

**OR**

**Budgeted Profit =** Contribution (C)per Unit X Total Production Units – Fixed Cost

= {(Rs. 30 – Rs. 20) X 5,00,000} – Rs. 20,00,000 = Rs. 30,00,000

**I** P/V Ratio = (Contribution/ Sales) X 100 = (50,00,000/1,50,00,000) X 100 =(100/3)%

**Or ,** P/V ratio = $\frac{10}{30} \times 100 = 33\frac{1}{3}\%$ (Or 100/3%)

**BEP (in units)** = $\frac{F}{C\text{per unit}} = \frac{20,00,000}{10} = 2,00,000$ units

**Or , BEP (in Rs.)** = $\frac{F}{P/V\ Ratio} = \frac{`20,00,000}{33\frac{1}{3}\%} = `60,00,000$

**II** (a) New P/V ratio = $\frac{New\ C}{New\ SP} \times 100 = \frac{`24 - 20}{`30 - 6} \times 100 = 16\frac{2}{3}\%$ (or 50/3%)

**New BEP (in Units)** = $\frac{Fixed\ cost}{New\ SP - VC} = \frac{`20,00,000}{`24 - 20} = 5,00,000$ units

**Or ,** New BEP (in Rs.) = (F/ New P/V ratio) = (20,00,000/50/3%)= 1,20,00,000

(b) Sales units needed to attain 20% more than Budgeted Profit at reduced Selling Price.

Desired profit = Budgeted Profit + 20% of Budgeted Profit

= 30,00,000 + 6,00,000 = Rs.36,00,000

Sales (units) required = $\frac{Fixed\ costs + Desired profit}{Contribution\ per\ unit}$

= $\frac{20,00,000 + 36,00,000}{`4\ per\ unit} = 14,00,000$ units

**Answer: 6 (b)**

**Profitability Statement for the year ended31st March, 2018**

| Particulars | | Total Rs. | Per unit Rs. |
|---|---|---|---|
| Sales | (A) | 6,00,000 | 50 |

| | | | |
|---|---|---|---|
| Variable Cost: | | | |
| Materials | | 1,20,000 | 10 |
| Labour | | 2,40,000 | 20 |
| Variable overhead | | 60,000 | 5 |
| Total | (B) | 4,20,000 | 35 |
| Contribution | (A) – (B) | 1,80,000 | 15 |
| Less: Fixed overheads | | 1,20,000 | 10 |
| Profit | | 60,000 | 5 |

Profitability Statement (17000 units at 85% capacity) → (including 5,000 units special offer)

| | | | Rs. | Mark/s |
|---|---|---|---|---|
| Sales | | | | |
| Existing: | (12000x Rs.50) | | 6,00,000 | |
| Additional: | (5000x Rs.40) | | 2,00,000 | |
| | 17,000 Units | Total (A) | 8,00,000 | **0.5 +0.5** |
| Variable Cost : | | | | |
| Material (17,000 × (Rs. 10 – Re. 1) or (17000 x Rs.9) | | | 1,53,000 | **0.5** |
| Labour (17,000× (Rs. 20 – 2% Drop) or (17000 x 20.40) | | | 3,46,800 | **0.5** |
| Variable Overhead | (17000 xRs. 5) | | 85,000 | |
| Total (B) | | | 5,84,800 | **0.5** |
| Contribution | | (A) – (B) | 2,15,200 | **0.5** |
| Less: Fixed Costs (Rs. 1,20,000 + Rs.35,000 increase) | | | 1,55,000 | **0.5** |
| Profit | | | 60,200 | **0.5** |

**Analysis:** With the acceptance of special offer of 5,000 Units, the Profit is increased by Rs. 200 (i.e. Rs. 60,200 – Rs. 60,000). Hence, the firm can accept the special offer.

**[ Working Notes as under may be shown separately or as shown in above table "Profitability Statement"]**

| | Rs. |
|---|---|
| 1. Material cost per unit | 10 |
| Less : 10% decrease | 1 |
| Total | 9 |
| 2. Labour Cost per unit | 20.00 |
| Add : 2% drop in efficiency | 0.40 |
| Total | 20.40 |
| 3. Present Production units | 12,000 |
| Add : Addl. Production units | 5,000 |
| Total | 17,000 |
| 4. Present Fixed Cost | 1,20,000 |
| Add: Increase | 35,000 |
| Total | 1,55,000 |

**Alternative**

Labour Cost if taken at Rs.20.41 in the working. An alternative answer with an incremental approach lead to the same analysis.

| PARTICULARS | Amount in Rs. |
|---|---|
| Sales (5000*40) | 2,00,000 |
| Less: Variable Cost: | |
| Direct Materials (DM)(5000*9) | 45,000 |
| Direct Labour (DL)(5000*20)/0.98 | 1,02,041 |
| Variable Overheads (VO/Hs)(5000*5) | 25,000 |
| Contribution | 27,959 |
| Add :Savings in Materials (12000*1) | 12,000 |
| Less: Additional Labour Cost (ADLC) (12000*0.41) | 4,920 |
| Less: Increase in Fixed cost | 35,000 |
| Net Surplus | 39 |
| Decision : It is better to Accept the offer | |

**7. (a) The details regarding the composition and the weekly wage rates of labour force of PB LTD engaged on a job scheduled to be completed in 30 weeks are as follows:**

| Category of Workers | Standard | | Actual | |
|---|---|---|---|---|
| | No. of Workers | Weekly Wage Rate per worker (Rs.) | No. of Workers | Weekly Wage Rate per worker (Rs.) |
| **Skilled** | **75** | **60** | **70** | **70** |
| **Semi-Skilled** | **45** | **40** | **30** | **50** |
| **Unskilled** | **60** | **30** | **80** | **20** |

**The work is actually completed in 32 weeks.**
**Calculate the following Labour Variances: 8**

**(i) Labour Cost Variance (LCV)**
**(ii) Labour Rate Variance (LRV)**
**(iii) Labour Efficiency Variance (LEV)**
**(iv) Labour Revised Efficiency Variance (LREV)**
**(v) Labour Mix Variance (LMV)**

**(b) NP LTD produces a standard product. The estimated costs are given below:**

| | Rs. |
|---|---|
| **Raw Materials** | **10** |
| **Direct Wages** | **8** |
| **Direct Expenses** | **2** |
| **Variable Overheads** | **3** |

| | 23 |
|---|---|

**Semi-variable overheads at 100% capacity level (10,000 units) are expected to be Rs.40,000 and these overheads vary in steps of Rs.2,000 for each change in output of 1,000 units. Fixed overheads are estimated at Rs.50,000. Selling price per unit is expected to be Rs.40.**

**Required:**
**Prepare a Flexible Budget at 50%, 70% and 90% level of activity on marginal cost basis. 7**

**Answer: 7 (a)**

In the question no information is given regarding standard time and actual time, so it is computed as follows :

**(In Weeks)**

| Category | Standard time (ST) | Actual Time (AT) |
|---|---|---|
| Skilled | 75 × 30 = 2,250 | 70 × 32 = 2,240 |
| Semiskilled | 45 × 30=1,350 | 30 × 32 = 960 |
| Unskilled | 60 × 30=1,800 | 80 × 32 = 2,560 |

Now all information can be arranged as follows :

| Category | Standard | | | Actual | | | Revised |
|---|---|---|---|---|---|---|---|
| | Time | Rate | Cost | Time | Rate | Cost | Time |
| | ST | SR (Rs.) | SC(Rs.) | AT | AR(Rs.) | AC(Rs.) | RST |
| Skilled | 2,250 | 60 | 1,35,000 | 2,240 | 70 | 1,56,800 | 2,400 |
| Semiskilled | 1,350 | 40 | 54,000 | 960 | 50 | 48,000 | 1,440 |
| Unskilled | 1,800 | 30 | 54,000 | 2,560 | 20 | 51,200 | 1,920 |
| Total | 5,400 | - | 2,43,000 | 5,760 | - | 2,56,000 | 5,760 |

Revised standard time is computed as follows:

Skilled worker : $\frac{2,250}{5,400} \times 5,760 = 2,400$ hrs .

Semiskilled worker : $\frac{1,350}{5,400} \times 5,760 = 1,440$ hrs.

Unskilled worker : $\frac{1,800}{5,400} \times 5,760 = 1,920$ hrs.

**Variances are computed as follows:**

LCV = TSC – TAC = 2,43,000-2,56,000 = Rs. 13,000 (A)

(i) LRV = AT (SR – AR)

Skilled : 2,240 (60 – 70) = Rs. 22,400 (A)

Semiskilled : 960 (40 – 50) = Rs. 9,600 (A)

Unskilled : 2,560 (30 – 20) = Rs. 25,600 (F) Rs. 6,400 (A)

(ii) LEV = SR (ST-AT)

Skilled : 60 (2,250 – 2,240) = Rs. 600 (F)

Semiskilled : 40 (1,350 – 960) = Rs. 15,600 (F)
Unskilled : 30 (1,800 – 2,560) = Rs. 22,800 (A) Rs. 6,600 (A)

(iii) LREV = SR (ST – RST)
Skilled : 60 (2,250 – 2,400) = Rs. 9,000 (A)
Semiskilled : 40 (1,350 – 1,440) = Rs. 3,600 (A)
Unskilled : 30 (1,800 – 1,920) = Rs. 3,600 (A) Rs. 16,200 (A)

(iv) LMV = SR (RST – AT)
Skilled : 60 (2,400 – 2,240) S = Rs. 9,600 (F)
Semiskilled : 40 (1,440 – 960) = Rs. 19,200 (F)
Unskilled : 30 (1,920 – 2,560) = Rs. 19,200 (A) Rs. 9,600 (F)

**Answer to Question No. 7 (b):**

**Flexible Budget**

| Particulars | Capacity Levels | | |
|---|---|---|---|
| | 50% | 70% | 90% |
| Output in Units | 5,000 | 7,000 | 9,000 |
| Prime Cost: | Rs. | Rs. | Rs. |
| Materials | 50,000 | 70,000 | 90,000 |
| Direct Wages | 40,000 | 56,000 | 72,000 |
| Direct Expenses | 10,000 | 14,000 | 18,000 |
| | 1,00,000 | 1,40,000 | 1,80,000 |
| Variable Overheads | 25,000 | 35,000 | 45,000 |
| Marginal Cost (1 + 2) | 1,25,000 | 1,75,000 | 2,25,000 |
| Sales | 2,00,000 | 2,80,000 | 3,60,000 |
| Contribution ( 4 – 3) | 75,000 | 1,05,000 | 1,35,000 |
| Fixed Costs | 70,000 | 70,000 | 70,000 |
| Profit ( 5 – 6) | 5,000 | 35,000 | 65,000 |

Working Note:
Semi – variable Expenses have been classified into Fixed and Variable elements as under :
Per Unit Variable Cost = Rs.2000 ÷ 1,000 = Rs. 2

Fixed Costs = Rs.40,000 – Rs.(10,000 x 2) = Rs. 20,000

Total Variable Overheads per Unit = Rs 3+ Rs. 2 = Rs. 5

Total Fixed Overhead = Rs.50,000 + Rs. 20,000 = Rs. 70,000

**8. Answer any three out of the following four questions: 5×3= 15**

**(a) State the advantages of cost control (any five).**

**(b) Describe briefly the main scope of cost accountancy.**

**(c) What is just-in-time (JIT) system? List out its main benefits.**

**(d) Write a brief note on Performance Budgeting describing its main concepts.**

**Answer to Question No. 8 (a):**

**Advantages of Cost Control**

The advantages of cost control are mainly as follows:

(i) Achieving the expected return on capital employed by maximising or optimizing profit.
(ii) Increase in productivity of the available resources.
(iii) Reasonable price of the customers.
(iv) Continued employment and job opportunity for the workers.
(v) Economic use of limited resources of production.
(vi) Increased credit worthiness.
(vii) Prosperity and economic stability of the industry.

**Answer to Question No. 8 (b):**

**Scope of Cost Accountancy**

The scope of cost accountancy is very wide and includes the following:

(a) **Cost Ascertainment**: The main objective of cost accounting is to find out the cost of product/service rendered with reasonable degree of accuracy.
(b) **Cost Accounting**: It is the process of accounting for cost which begins with recording of expenditure and ends with preparation of statistical data.
(c) **Cost Control**: It is the process of regulating the action so as to keep the element of cost within the set parameters.
(d) **Cost Reports**: This is the ultimate function of Cost Accounting. These reports are primarily prepared for use by the management at different levels. Cost Reports help in planning and control, performance appraisal and managerial decision making.
(e) **Cost Audit**: Cost Audit is the verification of correctness of Cost Accounts and check on the adherence to the Cost Accounting Plan, its purpose is not only to ensure the arithmetic accuracy of cost records but also to see the principles and rules have been applied correctly.

**Answer to Question No. 8 (c):**

**Just –in –Time (JIT)**

Just in Time is a production strategy that strives to improve a business return on investment by reducing in-process inventory and associated carrying costs. Inventory is seen as incurring costs, or waste, instead of adding and storing value, contrary to traditional accounting. In short, the just-in-time inventory system focuses on "the right material, at the right time, at the right place, and in the exact amount" without the safety net of inventory.

**The benefits of Just-in-Time system are as follows:**

(a) Increased emphasis on supplier relationships. A company without inventory does not want a supply system problem that creates a part shortage. This makes supplier relationships extremely important.
(b) Supplies come in at regular intervals throughout the production day. Supply is synchronized with production demand and the optimal amount of inventory is on hand at any time. When parts move directly from the truck to the point of assembly, the need for storage facilities is reduced.
(c) Reduces the working capital requirements, as very little inventory is maintained.
(d) Minimizes storage space.
(e) Reduces the chance of inventory obsolescence or damage.

**Answer to Question No. 8 (d):**

**Performance Budgeting**

Performance Budgeting is synonymous with Responsibility Accounting which means the responsibility of various levels of Management is predetermined in terms of output or result keeping in view the authority vested with them.

The main concepts of such a system are enumerated below:

(a) It is based on a classification of managerial level for the purpose of establishing a budget for each level. The individual in-charge of that level should be made responsible and held accountable for its performance over a given period of time.
(b) The starting point of the performance budgeting system rests with the organisation chart in which the spheres of jurisdiction have been determined. Authority leads to the responsibility for certain costs and expenses which are forecasted or present in the budget with the knowledge of the manager concerned.
(c) The cost in each individual`s or department`s budget should be limited to the cost controllable by him.
(d) The person concerned should have the authority to bear the responsibility.

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# GROUP - I
## (SYLLABUS 2016)

## SUGGESTED ANSWERS TO QUESTIONS

## JUNE - 2019

### Paper - 8 : COST ACCOUNTING

Time Allowed : 3 Hours | Full Marks : 100

The figures in the margin on the right side indicate full marks.
All Sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.
All working notes must form part of the answer.
Wherever necessary, candidates may make appropriate assumptions and clearly state them.
No present value factor table or other statistical table will be provided in addition to this question paper.

## Section - A

Section A contains Question Number 1. All parts of this question are compulsory.

1. Answer the following questions:

(a) Choose the correct answer from the given alternatives (You may write only the Roman numeral and the alphabet chosen for your answer): $1 \times 10 = 10$

(i) The main purpose of Cost Accounting is
- (A) to maximise profit.
- (B) to help in inventory valuation.
- (C) to help in the fixation of selling price.
- (D) to provide information to management for decision making.

(ii) Which of the following is considered to be a normal loss of material?
- (A) Loss due to accident
- (B) Pilferage
- (C) Loss due to breaking the bulk
- (D) Loss due to careless handling of material

(iii) In Reconciliation Statement expenses shown only in financial accounts are
- (A) added to financial profit.
- (B) added to costing profit.
- (C) ignored.
- (D) deducted from financial profit.

(iv) Which of the following is a service department?
- (A) Refining department
- (B) Machining department
- (C) Receiving department
- (D) Finishing department

(v) Which of the following items is not included in preparation of cost sheet?
- (A) Purchase returns
- (B) Carriage inwards
- (C) Sales commission
- (D) Interest paid

(vi) In job costing to record the issue of direct materials to a job which of the following document is used?
- (A) Purchase order
- (B) Goods receipt note
- (C) Material requisition
- (D) Purchase requisition

(vii) In a process 4000 units are introduced during a period. 5% of input is normal loss. Closing work-in-progress 60% complete is 500 units. 3300 completed units are transferred to next process. Equivalent production for the period is
- (A) 3550 units
- (B) 3600 units
- (C) 3800 units
- (D) 3950 units

(viii) Product A generates a contribution to sales ratio of 40%. Fixed cost directly attributable to A amount Rs. 60,000. The sales revenue required to achieve a profit of Rs.15,000 is
- (A) Rs 2,00,000
- (B) Rs 1,85,000
- (C) Rs 1,87,500
- (D) Rs 2,10,000

(ix) During a period 13600 labour hours were worked at a standard rate of Rs. 8 per hour. The direct labour efficiency variance was Rs. 8,800 (Adv). How many standard hours were produced?
- (A) 12000 hours
- (B) 12500 hours
- (C) 13000 hours
- (D) 13500 hours

(x) Cash Budget of ABC Ltd. forewarns of a short-term surplus. Which of the following would be appropriate action to be taken in such a situation?
- (A) Purchase new fixed assets
- (B) Repay long-term loans
- (C) Write off preliminary expenses

(D) Pay creditors early to obtain a cash discount

(b) Match the statement in Column I with the most appropriate statement in Column II (You may opt to write only the Roman numeral and the matched alphabet instead of copying contents into the answer books): 1x5=5

| | Column I | | Column II |
|---|---|---|---|
| (i) | Pharma Industry | A | Opportunity Cost |
| (ii) | Management by exception | B | Direct Allocation |
| (iii) | Assessment of employee with respect to a job | C | Joint Cost |
| (iv) | Royalties | D | Batch Costing |
| (v) | CAS-19 | E | Merit Rating |
| | | F | Variance Analysis |
| | | G | Job Evaluation |
| | | H | Notional Cost |

(c) State whether the following statements are 'True' or 'False': (You may write only the Roman numeral and whether 'True' or 'False' without copying the statements into the answer books): 1x5=5

(i) Bin card is maintained by the costing department.

(ii) CAS-8 deal with the principles and methods of determining the direct expenses.

(iii) FIFO method is followed for evaluation of equivalent production when prices are fluctuating.

(iv) Profit Volume ratio remains constant at all levels of activity.

(v) The principal factor is the starting point for the preparation of various budgets.

(d) Fill in the blanks: (You may write only the Roman numeral and the content filling the blanks) 1x5=5

(i) Differential cost is the change in the cost due to change in_____from one level to another.

(ii) CAS_____stands for cost of service cost centre.

(iii) In contract costing, the cost unit is _____.

(iv) Marginal cost is the_____of sales over contribution.

(v) When actual cost is less than the standard cost, it is known as _____variance.

Answer:

1. (a) (i) (D)
(ii) (B)
(iii) (A)
(iv) (C)
(v) (D)
(vi) (C)
(vii) (B)
(viii) (C)
(ix) (B)
(x) (D)

(b)

| | Column I | | Column II |
|---|---|---|---|
| (i) | Pharma Industry | D | Batch Costing |
| (ii) | Management by exception | F | Variance Analysis |
| (iii) | Assessment of employee with respect to a job | E | Merit Rating |
| (iv) | Royalties | B | Direct Allocation |
| (v) | CAS-19 | C | Joint Cost |

(c) (i) False
(ii) False
(iii) False
(iv) True
(v) True

(d) (i) Activity
(ii) CAS - 13
(iii) Per Contract
(iv) Excess
(v) Favourable

## Section – B

Answer any five questions from question numbers 2 to 8.
Each question carries 15 marks.

$15 \times 5 = 75$

2. (a) ZINTES LTD. a manufacturing company has its factories at two locations. Rowan plan is in use at location A and Halsey plan at location B. Standard time and basic rate of wages are same for a job which is similar and is carried out on similar machinery. Time allowed is 60 hours.

Job at location A is completed in 36 hours while at B, it has taken 48 hours. Conversion costs at respective places are Rs.1224 and Rs.1500. Overheads amount to Rs.20 per hour.

Required:
(i) Find out the normal wage rate, and
(ii) Compare conversion costs. 7

(b) ALPHA LTD. has three Production Departments and two Service Departments. The overhead distribution sheet of the company showed the following totals:

| Production Department: | Amount (Rs.) |
|---|---|
| P | 75,500 |
| Q | 72,000 |
| R | 96,500 |
| Service Department: | |
| X | 46,250 |
| Y | 15,750 |

Other information is as follows:

(a) Working hours of production departments are P-6226 hours, Q-4028 hours and R-4066 hours.

(b) Services rendered by service departments are as under:

| | P | Q | R | X | Y |
|---|---|---|---|---|---|
| Department X | 20% | 30% | 40% | — | 10% |
| Department Y | 40% | 20% | 30% | 10% | — |

Required:

(i) Calculate the total overhead of production departments distributing the cost of service departments by Simultaneous Equation Method.

(ii) Calculate the overhead rate per hour of production departments. 8

Answer:

2(a):

Let Rs. X per hour be the normal wage rate. Wage rate at location A will be Rs. 36x and at location B - it will be Rs. 48x, on the basis of actual time taken, as against 60 hours permitted. For time saved, bonus will be payable as under:

1

Location A:

Bonus under Rowan system $= \frac{\text{Time saved}}{\text{Time allowed}} \times$ Hrs. worked $\times$ Rate per hour

$= \frac{24}{60} \times$ Rs. 36 $\times$ x = Rs. 14.4x

Total wages =Rs. 36x + Rs.14.4x = 50.4x

Overheads @Rs. 20 per hour worked = 36 hrs. $\times$ Rs. 20 = Rs. 720

Therefore, total conversion cost is (50.4x+ Rs. 720) = Rs. 1,224 or 50.4x =Rs. 504

Or x = Rs.504/50.4 = Rs. 10

So, Bonus = 14.4x =14.4 $\times$ Rs. 10 = Rs. 144

Location B:

Bonus under Halsey plan = 50% of time saved $\times$ rate per hour

= 50% of Rs. 12x = Rs.6x

Total wages = Rs. 48x + Rs. 6x = Rs. 54x

Overheads @ Rs. 20 per hour = 48 hrs. $\times$ Rs. 20 = Rs. 960

Total conversion cost is (54x + Rs. 960) = Rs.1,500 or 54x = Rs. 540

Hence, x= Rs. 540/54 = Rs. 10

Bonus= 6x = 6 × Rs.10 =Rs. 60

(i) Comparative conversion cost:

| Location→ | A (Rowan) | B (Halsey) |
|---|---|---|
| Amount→ | Rs. | Rs. |
| Wages @ Rs.10 per hour worked | 360 | 480 |
| Bonus | 144 | 60 |
| Overheads | 720 | 960 |
| Total | 1,224 | 1,500 |

(b) :

(i) Simultaneous Equation Method:

Let Total Cost of Service Department X be Rs. "x" and

Let Total Cost of Service Department Y be Rs "y"

X = Rs. 46,250 + 10% Y

Y = Rs. 15,750 + 10%x

By multiplying both Equations by 100, we get

100x = Rs. 46,25,000 + 10y or 100x- 10y = Rs. 46,25,000 (1)

100y = Rs. 15,75,000 + 10x or -10x +100y =Rs. 15,75,000 (2)

By Multiplying Equation (2) by 10, we get

Equation (1) 100x – 10y = Rs. 46,25,000

Equation (2) -100x +1,000y = Rs. 1,57,50,000

By adding we get 990y =Rs. 2,03,75,000 ∴ y = Rs. 20,581

Substituting the value of "y" in Equation (1), we get

100x - (10 × Rs. 20,581) = Rs. 46,25,000 or

100x = Rs. 46,25,000 + Rs.2,05,810 or 100x = Rs. 48,30,810

∴ x= Rs. 48,308

Calculation of Total Overheads of Production Departments:

| Particulars | P | Q | R | X | Y |
|---|---|---|---|---|---|
| Overheads (Rs.) | 75,500 | 72,000 | 96,500 | 46,250 | 15,750 |
| Costs of X (Rs. 48,308) [2:3:4:1] | 9,662 | 14,492 | 19,323 | (48,308) | 4,831 |
| Costs of Y (Rs. 20,581)[4:2:3:1] | 8,233 | 4,116 | 6,174 | 2,058 | (20,581) |
| Total | 93,395 | 90,608 | 1,21,997 | - | - |

(ii) Calculation of Overhead Rate per Hour:

| | P | Q | R |
|---|---|---|---|
| (aa) Total Overheads (Rs.) | 93,395 | 90,608 | 1,21,997 |
| (bb) Working Hours | 6,226 | 4,028 | 4,066 |
| (cc) Overhead Rate per Hour [(aa)/(bb)] (in Rs.) | 15.00 | 22.49 | 30.00 |

3. (a) What is the Employee Cost as defined in CAS-7 (Limited Revision 2017)? Also discuss the general principles of its measurement as per CAS-7. (any five only) 6

(b) The following information has been extracted from the financial books of ABC Ltd. for the year ended 31st March, 2019:

| Particulars | Amount (Rs.) |
|---|---|
| Direct materials consumption | 10,00,000 |
| Direct wages | 6,00,000 |
| Factory Overhead | 3,20,000 |
| Administrative Overhead | 1,40,000 |
| Selling and Distribution Overhead | 1,92,000 |
| Bad debts | 16,000 |
| Preliminary expenses written-off | 8,000 |
| Legal expenses | 2,000 |
| Dividend received | 20,000 |
| Interest on deposits received | 4,000 |
| Sales(24000 units) | 24,00,000 |
| Closing stock of finished goods (800 units) | 64,000 |
| Closing stock of work-in-progress | 48,000 |

The cost accounts for the same period reveal that the direct materials consumption was Rs. 11,20,000. Factory overheads recovered at 20% of prime cost; Administration overheads recovered @ Rs. 6 per unit of production; and selling and distribution overheads recovered at Rs. 8 per unit sold.

Required:

(i) Find out the profit as per financial books.

(ii) Prepare the cost sheet and ascertain the profit per cost accounts.

(iii) Prepare a statement reconciling profit shown by financial and cost accounts. 9

Answer:

3. (a) Employee Cost - CAS-7 [Limited Revision 2017):

As per CAS-7 [Limited Revision 2017] Employee Cost is the benefits paid or payable in all forms of consideration given for the service rendered by employee (including temporary, part time and contract employee/s) of an entity.

General Principles of Measurement:

The guidelines for ascertaining the Labour Cost/Employee Cost are as follows:

(i) Employee Cost shall be ascertained taking into account the gross pay including all allowances payable along with the cost to the employer of all the benefits.

(ii) Bonus whether payable as a statutory minimum or on a sharing of surplus shall be treated as part of Employee Cost. Ex-gratia payable in lieu of or in addition to bonus shall also be treated as part of the Employee Cost.

(iii) Remuneration payable to managerial personnel including executive directors on board and other officers of a corporate body under a statute will be considered as part of the Employee Cost of the year under reference, whether the whole or part of the remuneration is considered as a percentage of profits.

(iv) Separation costs related to voluntary retirement, retrenchment, termination etc. shall be amortized over the period of benefitting from such costs.

(v) Employee Cost shall not be included any imputed costs.

(vi) Any subsidy, grant, incentive or any such amount received or receivable with respect to any Employee Cost shall be reduced from ascertainment of cost of the project to which such amounts are related.

(vii) Any abnormal cost where it is material and quantifiable shall not form part of the Employee Cost.

(viii) Penalties, damages paid to statutory authorities or other third parties shall not form part of the Employee Cost.

(ix) The cost of free housing, free conveyance and any other similar benefits provided to an employee shall be determined at the total cost of all resources consumed in providing such benefits.

(x) Any recovery from employees towards the facilities provided shall be reduced from the Employee Cost.

(xi) Cost of idle time is ascertained by the idle hours multiplied by the hourly rate applicable to idle employee or a group of employees.

(xii) Where Employee Cost is accounted at standard cost, variances due to normal reasons related to employee cost shall be treated as part of Employee Cost. Variances due to abnormal reasons shall be treated as part of abnormal cost.

(xiii) Any change in the cost accounting principles applied for the determination of the Employee Cost should be made only if it is required by law or for compliance with Cost Accounting Standard or change would result in a more appropriate way of presentation of Cost Statement.

(b) (i)

Financial trading and Profit & Loss Account
for the Year ended 31st Mach, 2019

Dr. Cr.

| Particulars | Amount (Rs.) | Particulars | Amount (Rs.) |
|---|---|---|---|
| To Direct Materials | 10,00,000 | By Sales | 24,00,000 |
| To Direct Wages | 6,00,000 | By Dividend received | 20,000 |
| To Factory Overheads | 3,20,000 | By Interest received | 4,000 |
| To Administration Overheads | 1,40,000 | By Closing Stock: | |
| To Selling & Distribution Overheads | 1,92,000 | Finished Goods | 64,000 |

| | | | |
|---|---|---|---|
| To Bad Debts | 16,000 | | |
| To Preliminary Expenses | 8,000 | Work-in-process | 48,000 |
| To Legal Expenses | 2,000 | | |
| To Net Profit | 2,58,000 | | |
| | 25,36,000 | | 25,36,000 |

(ii)

Cost Sheet

| Particulars | Amount (Rs.) |
|---|---|
| Direct Materials | 11,20,000 |
| Direct Wages | 6,00,000 |
| Prime Cost | 17,20,000 |
| Factory Overheads (20% of Prime Cost) | 3,44,000 |
| | 20,64,000 |
| Less: Closing Stock of WIP | 48,000 |
| Factory Cost | 20,16,000 |
| Administration Overheads (24,800 ×Rs. 6) | 1,48,800 |
| Cost of Production | 21,64,800 |
| Less: Closing stock of Finished Goods {(21,64,800 × 800)/24800} | 69,832 |
| Cost of Goods Sold | 20,94,968 |
| Selling & Distribution Overheads (24,000 ×Rs. 8) | 1,92,000 |
| Cost of Sales (Total Cost) | 22,86,968 |
| Sales | 24,00,000 |
| Profit (Sales – Total Cost) | 1,13,032 |

(iii)

Reconciliation Statement

| Particulars | Amount (Rs.) | Amount (Rs.) |
|---|---|---|
| Profit as per Cost Accounts | | 1,13,032 |
| Add: | | |
| Over recovery of Direct Materials | | 1,20,000 |
| Over recovery of Factory Overheads | | 24,000 |
| Over recovery of Administration Overheads | | 8,800 |
| Financial incomes not considered in Cost Accounts : | | |
| Dividend received | 20,000 | |
| Interest on deposits received | 4,000 | 24,000 |
| | | 2,89,832 |
| Less: | | |
| Over valuation of Closing Stock of Finished Goods in Cost Accounts | | 5,832 |
| Pure Financial Expenses not considered in Cost Accounts : | | |
| Bad debts | 16,000 | |
| Preliminary Expenses | 8,000 | |
| Legal Expenses | 2,000 | 26,000 |
| Profit as per Financial Accounts | | 2,58,000 |

4. (a) VIPUL LTD. submits the following information on 31st March, 2019:

| Particulars | Amount (Rs.) |
|---|---|
| Sales for the year | 55,00,000 |
| Purchases of material for the year | 22,00,000 |
| Direct labour | 13,00,000 |
| Inventories at the beginning of the year— | |
| Finished goods | 1,40,000 |
| Work-in-progress | 80,000 |
| Materials inventory— | |
| At the beginning of the year | 60,000 |
| At the end of the year | 80,000 |
| Inventories at the end of the year— | |
| Work-in-progress | 1,20,000 |
| Finished goods | 1,60,000 |

Factory overheads were 60% of the direct labour cost.

Administration expenses were 5% of sales.

Selling & distribution expenses were 10% of sales.

You are required to prepare a Cost Sheet with all elements 8

(b) WEST LAND LTD. in the course of refining crude oil obtains four joint products P, Q, R and S. The total cost till the split-off point was Rs. 9,76,640. The output and sales in the year 2018 were as follows:

| Product | Output (Gallon) | Sales Amount (Rs.) | Separate Costs Amount (Rs.) |
|---|---|---|---|
| P | 50,000 | 12,50,000 | 2,60,000 |
| Q | 10,000 | 30,000 | 20,000 |
| R | 5,000 | 50,000 | — |
| S | 8,000 | 80,000 | 10,000 |

Required:

(i) Calculate the net income for each of the products if the joint costs are apportioned on the basis of Net realisable values (NRV) of the different products.

(ii) Calculate the net income of each of the products if the company decides to sell the products at the split-off point itself as – P @ Rs. 18, Q @ Rs. 1.50, R @ Rs. 10 and S @ Rs. 7.80 per gallon. 7

Answer:

4. (a)

Cost Sheet on 31st March, 2019

| Particulars | Amount (Rs.) |
|---|---|
| Materials consumed: | |
| Opening Stock + Purchase – Closing Stock Rs.( 60,000 + 22,00,000 - 80,000) | 21,80,000 |
| Direct Labour | 13,00,000 |
| Prime Cost | 34,80,000 |
| Factory Overheads (60% of Direct Labour Cost) | 7,80,000 |

| | |
|---|---|
| | 42,60,000 |
| Add: Opening Work-in-progress | 80,000 |
| Less: Closing Work-in-progress | 1,20,000 |
| Factory Cost | 42,20,000 |
| Administration Expenses (5% of Sales) | 2,75,000 |
| Cost of Production | 44,95,000 |
| Add: Opening Stock of Finished Goods | 1,40,000 |
| Less: Closing Stock of Finished Goods | 1,60,000 |
| Cost of Goods Sold | 44,75,000 |
| Selling & Distribution Expenses (10% of Sales) | 5,50,000 |
| Cost of Sales | 50,25,000 |
| Sales | 55,00,000 |
| Profit (Sales-Cost of Sales) | 4,75,000 |

(b) (i) Statement showing Profit after Further Processing:

Amount (Rs.)

| Particulars | P | Q | R | S | Total |
|---|---|---|---|---|---|
| (a)Sales after further processing | 12,50,000 | 30,000 | 50,000 | 80,000 | 14,10,000 |
| (b)Separate Costs | 2,60,000 | 20,000 | --- | 10,000 | 2,90,000 |
| (c)Sales after split off (a-b) | 9,90,000 | 10,000 | 50,000 | 70,000 | 11,20,000 |
| (d)Joint Costs (on the basis of NRV) | 8,63,280 | 8,720 | 43,600 | 61,040 | 9,76,640 |
| (e)Profit (c-d) | 1,26,720 | 1,280 | 6,400 | 8,960 | 1,43,360 |

(ii) Statement showing Profit at Split off Point:

Amount (Rs.)

| Particulars | P | Q | R | S | Total |
|---|---|---|---|---|---|
| (a) Sales at Split off in Units | 50,000 | 10,000 | 5,000 | 8,000 | |
| (b) Sale Price in Rs. | 18 | 1.50 | 10 | 7.80 | |
| (c) Sales at Split off in Rs. | 9,00,000 | 15,000 | 50,000 | 62,400 | 10,27,400 |
| (d) Joint costs | 8,63,280 | 8,720 | 43,600 | 61,040 | 9,76,640 |
| (e) Profit (c - d) | 36,720 | 6,280 | 6,400 | 1,360 | 50,760 |

5. (a) CARLHAMS LTD. runs a lodging home in a hill station. For this purpose, it has hired a building at a rent of Rs. 1,20,000 per month along with 5% of total takings. The lodging home has three types of suites for its customers, viz., single room, double rooms and triple rooms.

Following information is given:

| Type of Suite | Number | Occupancy% |
|---|---|---|
| Single Room | 100 | 80% |
| Double Rooms | 40 | 60% |
| Triple Rooms | 20 | 50% |

The rent of double rooms suite is to be fixed at 1.5 times of the single room suite and that of triple rooms suite as twice of the double rooms suite.

The expenses for the year 2018 are as follows:

| Particulars | Amount (Rs.) |
|---|---|
| Staff salaries | 32,50,000 |
| Room attendants' wages | 12,00,000 |
| Lighting, heating and power | 9,75,000 |
| Repairs & renovation | 4,80,000 |
| Laundry charges | 1,65,000 |
| Interior decoration | 1,80,000 |
| Sundry expenses | 1,94,000 |

Provide profit @ 20% on total takings and assume 360 days in a year.

You are required to work out the room rent chargeable per day for each type of suite. 8

(b) NIRVANA LTD. undertook a contract for Rs. 50,00,000 on 1st April, 2018. On 31st March, 2019 when the accounts of the company were closed, the following details about the contract were gathered:

| Particulars | Amount (Rs.) |
|---|---|
| Materials purchased | 10,00,000 |
| Wages paid | 4,50,000 |
| General expenses | 1,00,000 |
| Plant purchased | 5,00,000 |
| Materials on hand on 31.03.2019 | 2,50,000 |
| Wages accrued on 31.03.2019 | 50,000 |
| Work certified | 20,00,000 |
| Cash received | 15,00,000 |
| Work uncertified | 1,50,000 |
| Depreciation of plant | 50,000 |

The above contract contained an escalation clause which read as follows:

"In the event of prices of materials and rates of wages increase by more than 5%, the contract price would be increased accordingly by 25% of the rise in the cost of materials and wages beyond 5% in each case."

It was found that since the date of signing the agreement, the price of materials and wage rates increased by 25%. The value of work certified does not take into account the effect of the above clause.

Required:

Prepare Contract Account of the company as on 31st March, 2019. 7

Answer:

5.(a) Computation of Total Equivalent Single Room Suites

| Nature of Suites | Occupancy Calculation | Total Occupancy | Equivalent Single Room Suites | |
|---|---|---|---|---|
| | | | Occupancy Rate | Equivalent Number |
| | A | B | C | B × C = D |
| Single Rooms | 100 × 360 × 80% | 28,800 | 1 | 28,800 |
| Double Rooms | 40 × 360 × 60% | 8,640 | 1.5 | 12,960 |
| Triple Rooms | 20 × 360 × 50% | 3,600 | 3 | 10,800 |
| Total | | | | 52,560 |

Statement of Total Cost

| Particulars | Amount (Rs.) |
|---|---|
| Staff salaries | 32,50,000 |
| Room attendants' wages | 12,00,000 |
| Lighting, Heating and Power | 9,75,000 |
| Repairs and Renovation | 4,80,000 |
| Laundry charges | 1,65,000 |
| Interior decoration | 1,80,000 |
| Sundry Expenses | 1,94,000 |
| Sub-total | 64,44,000 |
| Add: Building rent (1,20,000 ×12 Months ×5% of total takings) | 14,40,000 + 5% of total takings |
| Total Cost | 78,84,000 + 5% of total takings |

Profit is 20% of total takings.

Therefore, Total takings = Rs. 78,84,000 + 25% of Total Takings
Now, let 'x' be the rent for single room suite,

Then, 52,560x = Rs. 78,84,000 + 25% of 52,560x
52,560x = Rs. 78,84,000 + 13,140x or 39,420x = Rs. 78,84,000
∴ x = Rs. 78,84,000/39,420 = Rs. 200

Therefore,

Rent chargeable for Single Room Suite = Rs. 200× 1 = Rs. 200

Rent chargeable for Double Room Suite = Rs. 200 × 1.5 = Rs. 300

Rent chargeable for Triple Room Suite = Rs. 200 × 3 = Rs. 600

(b)

Contract Account of Nirvana Ltd
(for the Year ending on 31st March, 2019)

Dr Cr

| Particulars | Amount (Rs.) | | Particulars | Amount (Rs.) | |
|---|---|---|---|---|---|
| To Materials | | 10,00,000 | By Materials on hand | | 2,50,000 |
| To Wages paid | 4,50,000 | | By Work-in-progress | | |
| Add: Accrued | 50,000 | 5,00,000 | Work certified | 20,00,000 | |
| | | | Work uncertified | 1,50,000 | 21,50,000 |
| To General expenses | | 1,00,000 | By Contract escalation (W. N. 1) | | 50,000 |
| To Depreciation on Plant | | 50,000 | | | |
| To Notional Profit c/d | | 8,00,000 | | | |
| | | 24,50,000 | | | 24,50,000 |
| To P & L A/c [W. N. 2] | | 1,95,122 | By Notional Profit b/d | | 8,00,000 |
| To Reserve A/c | | 6,04,878 | | | - |
| | | 8,00,000 | | | 8,00,000 |

Working Notes:

(i) Calculation of Escalation Amount:

Cost of Materials and Wages incurred = Rs. 10,00,000 + 4,50,000 + 50,000 – 2,50,000
= Rs. 12,50,000

Cost of Materials and Wages before increase in prices = (Rs. 12,50,000× 100)/125
= Rs.10,00,000

Therefore, increase in Contract Price = (25/100 )[`Rs.12,50,000 – {(10,00,000 × 105)/100}]
= Rs. 50,000

(ii) Profit to be credited to P&L A/c:
Profit = Notional Profit ×{(1/3) ×(cash received/work certified)}
The contract escalation is added to work certified:
Profit = Rs. 8,00,000 ×{(1/3) ×(15,00,000/20,50,000)} = Rs. 1,95,122

6. (a) MODERN LTD. has three departments X, Y and Z, each of which makes a different product. The budgeted data for the coming year are as follows:

| | Amount (Rs.) | | |
|---|---|---|---|
| Particulars | X | Y | z |
| Sales | 22,40,000 | 11,20,000 | 16,80,000 |
| Direct materials | 2,80,000 | 1,40,000 | 2,80,000 |
| Direct labour | 1,12,000 | 1,40,000 | 4,48,000 |
| Direct expenses | 2,80,000 | 1,40,000 | 5,60,000 |
| Fixed cost | 5,60,000 | 2,80,000 | 5,60,000 |

The management of the company is considering to close down department 'Z'. There is a possibility of reducing fixed cost by Rs. 1,50,000 if department 'Z' is closed down.

Advise the management whether or not department 'Z' should be closed down. 8

(b) SRIJAN LTD. had incurred fixed expenses of Rs. 9,00,000 with sales of Rs. 20,00,000 and earned a profit of Rs. 3,00,000 during the first half-year. In the second-half, it suffered a loss of Rs. 1,50,000.

Required:
Calculate the following:
(i) The P/V Ratio, Break Even Point and Margin of Safety for the first half-year.
(ii) The expected sales amount for the second half-year assuming that the selling price and fixed expenses remained unchanged during the second half-year.
(iii) The Break Even point and Margin of Safety for the whole year. 7

Answer:

6. (a)

Statement of Profit before closing Department 'Z'

Amount (Rs.)

| Particulars | X | Y | Z | Total |
|---|---|---|---|---|
| (i) Sales | 22,40,000 | 11,20,000 | 16,80,000 | 50,40,000 |

| | | | | |
|---|---|---|---|---|
| (ii) Variable Cost: | | | | |
| Direct Materials | 2,80,000 | 1,40,000 | 2,80,000 | 7,00,000 |
| Direct Labour | 1,12,000 | 1,40,000 | 4,48,000 | 7,00,000 |
| Direct Expenses | 2,80,000 | 1,40,000 | 5,60,000 | 9,80,000 |
| (iii) Total Variable Cost | 6,72,000 | 4,20,000 | 12,88,000 | 23,80,000 |
| (iv) Contribution (i-iii) | 15,68,000 | 7,00,000 | 3,92,000 | 26,60,000 |
| (v) Fixed Cost (As given in Question) | 5,60,000 | 2,80,000 | 5,60,000 | 14,00,000 |
| (vi) Profit (iv-v) | 10,08,000 | 4,20,000 | (1,68,000) | 12,60,000 |

Statement of profit after closing Department 'Z'

Amount (Rs.)

| Particulars | X | Y | Total |
|---|---|---|---|
| (i) Sales | 22,40,000 | 11,20,000 | 33,60,000 |
| (ii)Variable cost: | | | |
| Direct Materials | 2,80,000 | 1,40,000 | 4,20,000 |
| Direct Labour | 1,12,000 | 1,40,000 | 2,52,000 |
| Direct Expenses | 2,80,000 | 1,40,000 | 4,20,000 |
| (iii) Total Variable Cost | 6,72,000 | 4,20,000 | 10,92,000 |
| (iv) Contribution (i-iii) | 15,68,000 | 7,00,000 | 22,68,000 |
| (v) Fixed cost | | | 12,50,000 |
| (vi) Profit (iv-v) | | | 10,18,000 |

Advice: From the comparative profitability statements stated supra, it is clear that profit is decreased by Rs. 2,42,000 that is (Rs. 12,60,000 –Rs.10,18,000) by closing down Department 'Z'. Therefore, it should not be closed down.

(i) (b) P/V Ratio = (Contribution/ Sales) × 100

Where, Contribution = Fixed Cost + Profit = Rs. 9,00,000 + Rs. 3,00,000 = Rs. 12,00,000

P/V Ratio = (Rs. 12,00,000 / 20,00,000) × 100 = 60%

Break Even Point = (Fixed Cost)/ (P/V Rtio)

= Rs. 9,00,000/ 60% = Rs. 15,00,000

Margin of Safety = Sales- Break Even Point

= Rs. 20,00,000 - Rs. 15,00,000 = Rs.5,00,000

Or Margin of Safety = (Profit)/ (P/V Ratio) = Rs. 3,00,000/60% = Rs.5,00,000

(ii) Contribution during the second half-year = Fixed Cost + Profit

= Rs. 9,00,000 + (- Rs. 1,50,000) = Rs. 7,50,000

Expected Sales = (Contribution) / (P/V Ratio)

= Rs. 7,50,000/60% = Rs.12,50,000

(iii) Break Even Point for the whole year = Fixed Cost for the whole year/(P/V Ratio)

= Rs. 18,00,000/60% = Rs. 30,00,000

Margin of Safety = Sales- Break Even Point

= Rs. 32,50,000 - Rs. 30,00,000 = Rs.2,50,000

Or Margin of Safety = (Profit)/ (P/V Ratio) = Rs. 1,50,000/60% = Rs.2,50,000

7. (a) BENCO LTD. a manufacturing concern which has adopted standard costing furnishes the following information for the month ending March 31, 2019:

The standard mix to produce one unit of product Z is as under—

Material A 30kg @ Rs. 30 per kg

Material B 40kg @ Rs. 50 per kg

Material C 50kg @ Rs. 40 per kg

During the month of December 2018, 10 units of product Z were actually produced and consumption was as under—

Material A 320kg @ Rs. 35 per kg

Material B 475kg @ Rs. 55 per kg

Material C 435kg @ Rs. 36 per kg

Required:

Calculate the following Material Variances:

(i) Material Cost Variance

(ii) Material Price Variance

(iii) Material Usage Variance

(iv) Material Mix Variance

(v) Material Yield Variance 8

(b) ANKRITI LTD. manufactures product X and product Y during the year ending on 31st March, 2019. It is expected to sell 7500 kg of product X and 37500 kg of product Y @ Rs. 60 and Rs. 32 per kg respectively.

The direct materials A, B and C are mixed in the proportion of 4:4:2 in the manufacture of Product X and in the proportion of 3:5:2 in the manufacture of product Y. The actual and budget inventories for the year are as follows:

| Particulars | Opening Stock (kg) | Expected Closing Stock (kg) | Anticipated Cost per kg (Rs.) |
|---|---|---|---|
| Material A | 3000 | 2400 | 10 |
| Material B | 2500 | 5800 | 8 |
| Material C | 16000 | 17300 | 6 |
| Product X | 1500 | 2000 | — |
| Product Y | 3000 | 3500 | — |

Required:

Prepare the Production Budget and Materials Budget showing the purchase cost of materials for the year ending 31st March, 2019. 7

Answer:

7. (a) Statement showing Standard and Actual Material Cost

| | Standard for 10 Units | | | Actual for 10 Units | | |
|---|---|---|---|---|---|---|
| Material | Quantity (Units) | Rate (Rs.) | Amount (Rs.) | Quantity (Units) | Rate (Rs.) | Amount (Rs.) |
| A | 300 | 30 | 9,000 | 320 | 35 | 11,200 |
| B | 400 | 50 | 20,000 | 475 | 55 | 26,125 |
| C | 500 | 40 | 20,000 | 435 | 36 | 15,660 |
| Total | 1,200 | | 49,000 | 1,230 | | 52,985 |

(i) Material Cost Variance = Standard Cost – Actual Cost
= Rs.49,000 - Rs.52,985 = Rs.3,985 (A)

(ii) Material Price Variance = Actual Quantity (Standard Price – Actual Price)
Material A = 320 (Rs. 30 – 35) = Rs. 1,600 (A)
Material B = 475 (Rs. 50 - 55)=Rs. 2,375 (A)
Material C= 435 (Rs. 40 - 36) = Rs. 1,740 (F)
= Rs.2,235 (A)

(iii) Material Usage Variance = Standard Price ( Standard Quantity – Actual Quantity)
Material A = 30 (Rs. 300 – 320) = Rs. 600 (A)
Material B = 50 (Rs. 400 - 475)=Rs. 3,750 (A)
Material C= 40 (Rs. 500 - 435) = Rs. 2,600 (F)
= Rs.1,750 (A)

(iv) Material Mix Variance = Standard Price (Revised Std. Quantity – Actual Quantity)
Material A = 30 (Rs. 307.50 - 320) = Rs. 375 (A)
Material B = 50 (Rs. 410 – 475) = Rs. 3,250 (A)
Material C= 40 (Rs. 512.50 - 435) = Rs. 3,100 (F)
= Rs.525 (A)

Note: Revised Standard Quantity (RSQ) is calculated as under:
Material A $= \frac{1,230}{1,200} \times (300) = 307.50$kg
Material B $= \frac{1,230}{1,200} \times (400) = 410$ kg
Material C $= \frac{1,230}{1,200} \times (500) = 512.50$kg

(v) Material Yield Variance = Standard Cost per Unit ( Actual Yield – Standard Yield)
Rs. 4,900 (10 - 10.25) = Rs. 1,225 (A)

Note:
(a) Standard Material Cost per Unit of output = Rs. 49,000/10 = Rs. 4,900
(b) Standard Yield = Actual usage of material/ Standard usage per Unit of output
= 1,230/120 = 10.25 Units

(b)

Production Budget for the Year ending 31st March 2019

| Particulars | Product - X ((kgs.) | Product – Y (kgs.) |
|---|---|---|
| Sales | 7,500 | 37,500 |
| Add: Closing Stock | 2,000 | 3,500 |
| Sub-total | 9,500 | 41,000 |
| Less: Opening tock | 1,500 | 3,000 |
| Production | 8,000 | 38,000 |

(c)

Materials Purchase Budget
(for the year ending 31st March 2019)

| Particulars | A | B | C | Total |
|---|---|---|---|---|
| Materials required for product-X in the ratio of 4:4:2 | 3,200 | 3,200 | 1,600 | 8,000 |
| Materials required for product-Y in the ratio of 3:5:2 | 11,400 | 19,000 | 7,600 | 38,000 |

| | | | | |
|---|---|---|---|---|
| Total requirement | 14,600 | 22,200 | 9,200 | |
| Add: Closing Stock | 2,400 | 5,800 | 17,300 | |
| | 17,000 | 28,000 | 26,500 | |
| Less: Opening Stock | 3,000 | 2,500 | 16,000 | |
| Purchases (Kgs) | 14,000 | 25,500 | 10,500 | |
| Cost per Kg (Rs.) | 10 | 8 | 6 | |
| Total Purchase Cost (Rs.) | 1,40,000 | 2,04,000 | 63,000 | Rs. 4,07,000 |

8. Answer any three out of the following four questions: 5×3=15

(a) Distinguish between Cost Allocation and Cost Apportionment.
(b) State the main objectives of Cost Accounting,
(c) List out the various measures to reduce the Labour Turnover (any five).
(d) Write a brief note on Master Budget.

Answer:

8. (a) Difference between Cost Allocation and Cost Apportionment:

Cost Allocation: When items of cost are identifiable directly with some products or departments such costs are charged to such cost centres. This process is known as cost allocation. Wages paid to workers of service department can be allocated to the particular department. Indirect materials used by a particular department can also be allocated to that department. Cost allocation calls for two basic factors - (i) Concerned department/product should have caused the cost to be incurred, and (ii) exact amount of cost should be computable.

Cost Apportionment: When items of cost cannot directly be charged to or be accurately identifiable with any cost centres, they are prorated or distributed amongst the cost centres on some pre-determined basis. This method is known as cost apportionment. Thus, items of indirect costs residual to the process of cost allocation are covered by cost apportionment. The pre-determination of suitable basis of apportionment is very important and usually following principles are adopted - (i) Service or use, (ii) Survey method, or (iii) Ability to bear. The basis ultimately adopted should ensure an equitable share of common expenses for the cost centres and the basis once adopted should be reviewed at periodic intervals to improve upon the accuracy of apportionment.

OR ( Alternative)

Cost Allocation: CIMA defines Cost Allocation as, " the charging of discrete, identifiable items of cost to cost centres or cost units." In simple words complete distribution of an item of overhead to the departments or products on logical or equitable basis is called allocation. Where a cost can clearly be identified with a Cost Centre or Cost unit, then it can be allocated to that particular Cost Centre or

Cost Unit. In other words, allocation is the process by which cost items are charged directly

to a Cost Unit or Cost Centre. For example, electricity charges can be allocated to various departments if separate meters are installed, depreciation of machinery can be allocated to various departments as the machines can be identified, salary of stores clerk can be allocated to stores department, cost of coal used in boiler can directly be allocated to boiler house division. Thus allocation is a direct process of identifying overheads to cost units or cost centres. So the term allocation means allotment of whole item of cost to a particular cost centre or cost object without any division.

Cost Apportionment:

Cost Apportionment is the allotment of proportions of items to Cost Centres. Wherever possible, the overheads are to be allocated. However, if it is not possible to charge the overheads to a particular Cost Centre or Cost Unit, they are to be apportioned to various departments on some suitable basis.

This process is called "Apportionment" of overheads. The basis for apportionment is normally predetermined and is decided after a careful study of relationship between the base and the other variables within the organisation. The Cost Accountant must ensure that the selected basis is the most logical. A lot of quantitative information has to be collected and constantly updated for the purpose of apportionment. The basis selected should be applied consistently to avoid vitiation.

However, there should be a periodical review of the same to revise the basis if needed.In simple words, distribution of various items of overheads in portions to the departments or products on logical or equitable basis is called apportionment.A general example of various bases that may be used for the purpose of apportionment is shown below:

| Overhead item | Basis |
|---|---|
| Rent and Building | Floor space occupied by each department |
| General Lighting | No. of light points in each department |
| Telephones | No. of extensions in a department |
| Depreciation of factory building | Floor space |
| Material handling | No. of material requisitions or Value of material used |

The above list is not exhaustive and depending upon peculiarities of the organisation, it could be extended. This allocation and/or apportionment is called primary distribution of overheads.

OR (Alternative)

Note: The question asks: Distinguish between Cost Allocation and Cost Apportionment.

Distinction between Cost Allocation and Cost Apportionment:

Although the purpose of both allocation and apportionment is identical, that is to identify or allot the costs to the Cost Centres or Cost Units, both are not the same.

Allocation deals with the whole items of cost and apportionment deals with proportion of items of cost.

Allocation is direct process of departmentalisation of overheads, whereas apportionment needs a suitable basis for sub-division of the cost.

Whether a particular item of expense can be allocated or apportioned does not depend on

the nature of expense, but depends on the relation with the Cost Centre or Cost Unit to which it is to be charged.

(b) Main Objectives of Cost Accounting:

The main objectives of cost accounting are as under:

(i) To ascertain the costs under different situations using different techniques and systems of costing.
(ii) To determine the selling prices under different circumstances.
(iii) To determine and control efficiency by setting standards for Materials, Labour and Overheads.
(iv) To determine the value of closing inventory for preparing financial statements of the concern.
(v) To provide a basis for operating policies of the concern

(c) Measures to Reduce Labour Turnover:

Labour Turnover may be reduced by removing its avoidable causes and taking preventive remedial measures.

The various measures may be as under:

(i) Efficient, sympathetic and impartial personnel administration.
(ii) Effective communication system to keep the workers informed on matters that affect them.
(iii) Improving working conditions and placing the right man on the right job.
(iv) Job enrichment to reduce boredom and monotony and to provide job satisfaction.
(v) Introducing fair rates of pay and allowance/s and incentives, pension, gratuity etc.
(vi) Strengthening welfare measures.
(vii) Augmenting recreational activities and schemes.

(d) Master Budget:

Master Budget is the budget prepared to cover all the functions of the business organization. It can be taken as the integrated budget of business concern, that means, it shows the profit or loss and financial position of the business concern such as Budgeted Profit and Loss Account, Budgeted Balance Sheet etc. Master budget, also known as summary budget or finalized profit plan, combines all the budgets for a period into one harmonious unit and thus, it shows the overall budget plan.

The master budget incorporates all the subsidiary functional budgets and the Budgeted Profit and Loss Account and Budgeted Balance Sheet. Before the budget plan is put into operation, the master budget is considered by the management and revised if the position of profit disclosed therein is not found to be satisfactory. After suitable revision made, the Master Budget is finally approved and put into action.

# INTERMEDIATE EXAMINATION

## GROUP -II
## (SYLLABUS 2016)

## SUGGESTED ANSWERS TO QUESTIONS

## DECEMBER- 2019

### Paper-8 : COST ACCOUNTING

**Time Allowed : 3 Hours** **Full Marks : 100**

**The figures in the margin on the right side indicate full marks .**
**All Sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.**
**All working notes must form part of the answer.**
**Wherever necessary, candidates may make appropriate assumptions and clear ly state them.**
**No present value factor table or other statistical table will be provided in addition to this question paper.**

## Section - A

**Section A contains Question Number 1. All parts of this question are compulsory.**

**1. Answer the following questions:**

**(a) Choose the correct answer from the given alternatives (You may write only the Roman numeral and the alphabet chosen for your answer): 1×10=10**

**(i) Costs which are ascertained after they have been incurred are known as**
- **(A) Sunk Costs**
- **(B) Imputed Costs**
- **(C) Historical Costs**
- **(D) Opportunity Costs**

**(ii) Prime cost plus variable overheads is known as**
- **(A) Factory Cost**
- **(B) Marginal Cost**
- **(C) Cost of Production**
- **(D) Total Cost**

**(iii) In which of thefollowing methods, issue of materials are priced atpre- determined rate?**
- **(A) Specific price method**
- **(B) Standard price method**
- **(C) Inflated price method**
- **(D) Replacement price method**

**(iv) For reducing the labour cost per unit, which of the following factors is the most important?**

**(A) Low wage rates**
**(B) Longer hours of work**
**(C) Higher input-output ratio**
**(D) Strict control and supervision**

**(v) Maximum possible productive capacity of a plant when no operating time is lost is its**

**(A) Normal capacity**
**(B) Practical capacity**
**(C) Theoretical capacity**
**(D) Capacity based on sales expectancy**

**(vi) In job costing, which of the following documents is used to record the issue of direct materials to a job?**

**(A) Goods Receipt Note**
**(B) Purchase Order**
**(C) Purchase Requisition Note**
**(D) Material Requisition Note**

**(vii) The main purpose of accounting of joint products and by -products is to**

**(A) determine the profit/loss on each product line.**
**(B) determine the selling price.**
**(C) comply with the statutory requirements.**
**(D) identify the cost and load it on the main product.**

**(viii) During a period 2560 labour hours were worked at a standard rate of Rs. 7.50 per hour. The direct labour efficiency variance was Rs. 825 (A). How many standard hours were produced?**

**(A) 2400**
**(B) 2450**
**(C) 2500**
**(D) 2550**

**(ix) PQR Ltd. manufactures a single product which it sells for Rs.40per unit. Fixed cost is Rs. 60,000 per year. The contribution to sales ratio is 40% . PQR Ltd.'s Break Even Point in units is**

**(A) 3500**
**(B) 3700**
**(C) 3750**
**(D) 4000**

**(x) The fixed-variable cost classification has a special significance in the preparation of**

**(A) Cash budget**
**(B) Master budget**
**(C) Flexible budget**
**(D) Capital budget**

**(b) Match the statement in Column I with the most appropriate statement in Column II(You may opt to write only the Roman numeral and the matched alphabet instead of copying contents into the answer books): 1x5=5**

| | Column I | | Column II |
|---|---|---|---|
| (i) | Notional cost | A | Replacement method |
| (ii) | Labour turnover | B | Cost of utilities |
| (iii) | CAS-10 | C | Production strategy |
| (iv) | Contract costing | D | Direct expenses |
| (v) | JIT | E | Costing department |
| | | F | Imputed cost |
| | | G | Escalation clause |
| | | H | Decision package |

**(c) State whether the following are 'True' or 'False' :(You may write only the Roman numeral and whether 'True' or 'False' without copying the statements into the answer books): 1x5=5**

**(i) Profit is the result of two varying factors sales and variable cost.**

**(ii) Bin card is a record of both quantities and value.**

**(iii) Overtime premium is directly assigned to cost object.**

**(iv) In Reconciliation statements, expenses shown only in financial accounts areadded to financial profit.**

**(v) P/V ratio remains constant at all levels of activity.**

**(d) Fill in the blanks: (You may write only the Roman numeral and the content filling the blanks) 1x5=5**

**(i) _____ costs are historical costs which are incurred in the past.**

**(ii) In Absorption costing,_____cost is added to inventory.**

**(iii) CAS-2 deals with Cost Accounting Standard on_____determination.**

**(iv) _____is the summary of all functional budgets.**

**(v) Standard costing is one of the_____techniques.**

**Answer:**

1. (a) (i) (C)
(ii) (B)
(iii) (B)
(iv) (C)
(v) (C)
(vi) (D)
(vii) (A)
(viii) (B)
(ix) (C)
(x) (C)

(b)

| | Column I | | Column II |
|---|---|---|---|
| (i) | Notional cost | F | Imputed cost |
| (ii) | Labour turnover | A | Replacement method |
| (iii) | CAS-10 | D | Direct expenses |
| (iv) | Contract costing | G | Escalation clause |
| (v) | JIT | C | Production strategy |

(c) (i) False

(ii) False

(iii) True

(iv) True

(v) True

(d) (i) Sunk

(ii) Fixed

(iii) Capacity

(iv) Master budget

(v) Cost Control

## Section - B

**Answer any five questions from question numbers 2 to 8.**
**Each question carries 15 marks.**

**15 × 5 = 75**

**2. (a) ZION LTD uses three types of materials A, B and C for production of Product -P for which the following data apply:**

| Raw Material | Usage per unit of Product (kgs) | Reorder quantity (kgs) | Price per Kg (Re.) | Delivery period (in weeks) | | | Reorder level (kgs) | Minimum level (kgs) |
|---|---|---|---|---|---|---|---|---|
| | | | | Minimum | Average | Maximum | | |
| A | 10 | 10000 | 0.10 | 1 | 2 | 3 | 8000 | ? |
| B | 4 | 5000 | 0.30 | 3 | 4 | 5 | 4750 | 1550 |
| C | 6 | 10000 | 0.15 | 2 | 3 | 4 | ? | 2000 |

**Weekly production varies from 175 to 225 units, averaging 200 units of the said product.**

**What would be the following quantities? 9**

**(i) Minimum stock of A,**

**(ii) Maximum stock of B,**

**(iii) Re-order level of C,**

**(iv) Average stock level of A.**

**(b) In a manufacturing unit of EXOTICA LTD overhead was recov ered at a pre determined rate of Rs. 30 per man -day. The total factory overhead incurred and the man -days actually worked were Rs. 5,20,000 and 12,500 respectively.**

**Out of the 40000 units produced during a period, 30000 units were sold. There were also 30000 uncompleted units which may be reckoned at 60% complete.**

**On analysing the reasons, it was found that 50% of the unabsorbed overheads were due to defective planning and the rest were attributable to increased overhead costs. How would unabsorbed overhe ad be treated in Cost Accounts? 6**

**Answer:**

2. (a) (i) Minimum stock of A

Re-order level – (Average rate of consumption x Average time required to obtain fresh delivery)

= 8,000kgs. – (200 x 10 x 2) kgs = 4,000 kgs.

(ii) Maximum stock of B

Re-order level – (Minimum consumption x Minimum delivery period) + Re –order quantity

= 4,750kgs. – (175 x 4 x 3)kgs. + 5,000kgs.

= 9,750 – 2,100 = 7,650 kgs.

(iii) Re-order level of C

Maximum delivery period x Maximum usage

= 4 x 225 x 6 = 5,400 kgs.

OR

Re-order level of C

= Minimum stock of C + [Average rate of consumption x Average time required to obtain fresh delivery]

= 2,000kgs. + [(200 x 6) x 3] kgs. = 5,600 kgs.

(iv) Average stock level of A

= Minimum stock level of A + ½ Re –order quantity of A

= 4,000kgs.+ ½ x 10,000kgs. = 4,000kgs. + 5,000kgs. = 9,000 kgs.

OR

Average Stock Level of A

$$\frac{\text{Minimum Stock level of A} + \text{Maximum Stock Level of A}}{2} = \text{(Refer to working note)}$$

$$\frac{4,000 + 16,250}{2} = 10,125 \text{ Kgs.}$$

Working note:

Maximum stock level of A = ROL+ ROQ – (Minimum consumption x Minimum re-order period)

= 8,000kgs. + 10,000kgs.– [(175 x 10) x 1] kgs.

= 16,250 kgs.

(b)

| | Amount (Rs.) |
|---|---|
| Overheads incurred | 5,20,000 |
| Less: Overheads absorbed (12,500 man-days * Rs.30) | 3,75,000 |
| Under absorption | 1,45,000 |

The under absorption of Rs. 1,45,000 being considerable whether due to defectiveplanning or due to increase in prices, would be disposed off by applyingSupplementary Overhead Rate in the following manner:

Supplementary Overhead Rate = Rs. 1,45,000/[{30,000+10,000+(30,000*60%)}Units]
= Rs. 1,45,000/58,000 units = Rs. 2.50 per Unit

To be absorbed on cost of goods sold = 30,000 Units×Rs. 2.50 = Rs.75,000

To be absorbed on closing stock = 10,000 Units ×Rs. 2.50 = Rs. 25,000

To be absorbed on work -in-progress = 30,000Units ×Rs.2.50×60% =Rs. 45,000

**ALTERNATIVE ANSWER 2(b):**

| | Amount (Rs.) |
|---|---|
| Overheads incurred | 5,20,000 |
| Less: Overheads absorbed (12,500 man days × Rs.30) | 3,75,000 |
| Under absorption | 1,45,000 |

Students may treat 50% of under-absorption (Rs. 72,500) due to defective Planning as Abnormal Loss to be debited to Costing Profit & Loss Account and balance Rs. 72,500 to be disposed off by applying Supplementary Overhead Rate in the following manner:

Supplementary Overhead Rate = Rs. $\frac{72,500}{[30,000+10,000+(30,000\times 60\%)]\text{units}}$

= Rs. 72,500 /58,000 units = Rs. 1.25 per unit.

To be absorbed on Cost of Goods Sold = 30,000 units × Rs.1.25 = Rs.37,500

To be absorbed on Closing Stock = 10,000 units × Rs. 1.25 = Rs 12,500

To be absorbed on Work-in-progress = 30,000 units × Rs.1.25× 60% = Rs. 22,500

**3. (a) What are the objectives and scope of Cost Accounting Standard (CAS -4) (Revised 2018) on "Cost of Production/Acquisition/Supply of Goods/Pr ovision of Services"? 6**

**(b) Pass the Journal entries for the following transactions in a double entry cost accounting system: 9**

| Particulars | Amount (Rs.) |
|---|---|
| **(i) Issue of material:** | |
| **Direct** | **6,50,000** |
| **Indirect** | **2,50,000** |
| **(ii) Allocation of wages and salaries:** | |
| **Direct** | **2,60,000** |
| **Indirect** | **40,000** |
| **(iii) Overheads absorbed in jobs:** | |
| **Factory** | **1,50,000** |
| **Administration** | **30,000** |
| **Selling** | **50,000** |
| **(iv) Under/over absorbed overheads:** | |
| **Factory (over)** | **25,000** |
| **Administration (under)** | **12,500** |

**(Narration is not required)**

**Answer:**

3. (a) CAS-4 (REVISED 2018) on "Cost of Production/Acquisition/Supply of Goods/Provision of Services"

**Objectives:** The objective of this Standard is to bring uniformity and consistency in the principles and methods of determining the cost of production or acquisition or supply of Goods or provision of servicesas required under the provisions of GST Act/Rules.

The cost statements prepared based on this Standard will be used for determination of value of supply of Goods or services or both. This Standard and its disclosurerequirement will provide transparency in the valuation of Goods and services.

This Standard shall further ensure adequate accuracy in computing TransactionValue of supply for Goods orservices or both, where the open market value of supply of Goods and services or value of supply of Goods orservices of like kind and quality are not available or same is not verifiable.

**Scope:** This Standard should be applied to cost statements which requireclassification, measurement, assignment, presentation, and disclosure of related costs for determination of the following under the relevant provisions of GST Act/Rules:

(i) Determination of cost of production of Goods;
(ii) Determination of cost of acquisition of Goods;
(iii) Determination of cost of supply of Goods;
(iv) Determination of cost of provision/supply of services; and
(v) Determination of value of supply of goods or services as per open market value oras per Goods orservices of like kind and quality.

(b)

Journal Dr.Cr.

| S.No. | Particulars | | Amount (Rs.) | Amount (Rs.) |
|---|---|---|---|---|
| 1 | Work in Progress Control A/C | Dr. | 6,50,000 | |
| | Factory Overheads Control A/C | Dr. | 2,50,000 | |
| | To Material Control A/C | | | 9,00,000 |
| 2 | Work in Progress Control A/C | Dr. | 2,60,000 | |
| | Factory Overheads Control A/C | Dr. | 40,000 | |
| | To Wages Control A/C | | | 3,00,000 |
| 3 | Work in Progress Control A/C | Dr. | 1,50,000 | |
| | Finished Goods Control A/C | Dr. | 30,000 | |
| | Cost of Sales A/C | Dr. | 50,000 | |
| | To Factory Overheads Control A/C | | | 1,50,000 |
| | To Administrative Overhead Control A/C | | | 30,000 |
| | To Selling Overhead Control A/C | | | 50,000 |
| 4 | Factory Overheads Control A/C | Dr. | 25,000 | |
| | To Costing Profit & Loss A/C | | | 25,000 |
| 5 | Costing Profit & Loss A/C | Dr. | 12,500 | |
| | To Administrative Overheads Control A/C | | | 12,500 |

**4. (a) SARATHI & CO is manufacturing building bricks and fire bricks. Both the products require two processes: Brick forming and Heat treatment. The requirements for the two bricks are:**

| | Building Bricks | Fire Bricks |
|---|---|---|
| **Forming per 100 bricks** | **6 hours** | **4 hours** |
| **Heat treatment per 100 bricks** | **4 hours** | **10 hours** |

**Total costs of the two departments in one month were:**

| | |
|---|---|
| **Forming** | **Rs. 42,400** |
| **Heat treatment** | **Rs. 97,600** |
| **Production during the month was:** | |
| **Building Bricks** | **130000 numbers** |
| **Fire Bricks** | **70000 numbers** |

**Required:**

**Prepare statement of manufacturing cost for the two varieties of bricks. 7**

**(b) REACON LTD is engaged in process Engineering Industry. During a month 4000 units of input were introduced in Process B at a cost of Rs. 20,000. The normal loss was estimated at 10% of input. The process costs were direct materials Rs. 10,425, direct wages Rs. 20,400 and factory overhead 50% of direct wages. At the end of the month 3200 units were produced and transferred to Process C, 500 units were scrapped and realised @ Rs. 5 per unit. Scrapped units were 50% processed. 300 units wereincomplete and t he stage of completion was material 75%, wages and overhead 50%.**

**Required:**

**(i) Find out equivalent production, cost per completed unit, value of work-in-progress and**

**(ii) Prepare Process B account. 8**

**Answer:**

4. (a)

Statement showing number of hours

| Particulars | Building Bricks | Fire Bricks | Total |
|---|---|---|---|
| Forming:<br>$(\frac{1,30,000}{100} \times 6)$<br>$(\frac{70,000}{100} \times 4)$ | 7,800 | 2,800 | 10,600 |
| Heat Treatment<br>$(\frac{1,30,000}{100} \times 4)$<br>$(\frac{70,000}{100} \times 10)$ | 5,200 | 7,000 | 12,200 |
| Total | 13,000 | 9,800 | 22,800 |

Cost of Forming per hour $= \frac{Rs.42,400}{10,600}$ = Rs.4

Cost of Heat Treatment per hour $= \frac{Rs.97,600}{12,200}$ = Rs.8

Statement showing manufacturing cost of two varieties of bricks:

| Particulars | Building Bricks Rs. | Fire Bricks Rs. | Total Rs. |
|---|---|---|---|
| Forming:<br>(7,800 Hrs. × Rs. 4)<br>(2,800 Hrs. × Rs. 4) | 31,200 | 11,200 | 42,400 |
| Heat Treatment<br>(5,200 Hrs. × Rs. 8)<br>(7,000 Hrs. × Rs. 8) | 41,600 | 56,000 | |

| | | | |
|---|---|---|---|
| | | | 97,600 |
| Total | 72,800 | 67,200 | 1,40,000 |

**ALTERNATIVE PRESENTATION OF SECOND PART AS UNDER:**

Where students consider Cost of Production per 100 Bricks:

Statement showing manufacturing cost of two varieties of bricks:

| Particulars | Building Bricks Rs. | Fire Bricks Rs. | Total Rs. |
|---|---|---|---|
| Forming:<br>(6 Hrs. × Rs. 4)<br>(4 Hrs. × Rs. 4) | 24 | 16 | 40 |
| Heat Treatment<br>(4 Hrs. × Rs. 8)<br>(10 Hrs. × Rs. 8) | 32 | 80 | 112 |
| Total | 56 | 96 | 152 |

(b) (i) Statement of Equivalent Production :

| Input | Particulars of output | Units | Equivalent Production | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Material I (Input) | | Material II (Added) | | Labour& Overhead | |
| | | | % | Units | % | Units | % | Units |
| 4,000 | Fully completedand transferred to process C | 3,200 | 100 | 3,200 | 100 | 3,200 | 100 | 3,200 |
| | Normal Wastage | 400 | --- | --- | --- | --- | --- | --- |
| | Abnormal Wastage | 100 | 100 | 100 | 50 | 50 | 50 | 50 |
| ____ | WIP at end | 300 | 100 | 300 | 75 | 225 | 50 | 150 |
| 4,000 | Total | 4,000 | | 3,600 | | 3,475 | | 3,400 |

Statement of Cost

| Elements of Cost | Amount (Rs.) | Equivalent Production (Nos.) | Unit Cost (Rs.) |
|---|---|---|---|
| Material I (Input)(Rs. 20,000-Rs. 2,000) | 18,000 | 3,600 | 5.00 |
| Material II (Added) | 10,425 | 3,475 | 3.00 |
| Wages | 20,400 | 3,400 | 6.00 |
| Overheads | 10,200 | 3,400 | 3.00 |
| Total | 59,025 | - | 17.00 |

Statement of Evaluation

| Elements of Cost | Unit Cost (`) | Work in Progress | | Abnormal Loss | |
|---|---|---|---|---|---|
| | | E.P. | Cost (Rs.) | E.P. | Cost (Rs.) |
| Material I | 5.00 | 300 | 1,500 | 100 | 500 |
| Material II | 3.00 | 225 | 675 | 50 | 150 |
| Wages | 6.00 | 150 | 900 | 50 | 300 |
| Overheads | 3.00 | 150 | 450 | 50 | 150 |
| Total | 17.00 | | 3,525 | | 1,100 |

(ii)

Dr. Process B Account Cr.

| Particulars | Units | ` | Particulars | Units | Rs. |
|---|---|---|---|---|---|
| To Input | 4,000 | 20,000 | By Normal Wastage | 400 | 2,000 |
| To Materials Added | | 10,425 | By Abnormal Wastage | 100 | 1,100 |
| To Wages | | 20,400 | By Work-in-Progress | 300 | 3,525 |
| To Overheads | | 10,200 | By Process C (3,200 ×Rs. 17) | 3,200 | 54,400 |
| | 4,000 | 61,025 | | 4,000 | 61,025 |

**5. (a) HOTEL IREVNA INN, has a capacity of 200 single rooms and 40 double rooms. The average occupancy of both single and double rooms is expected to be 80% throughout the year of 365 days. The rent for double room has been fixed at 125% of the rent of a single room. The costs are as under:**

| | | |
|---|---|---|
| **Variable Costs :** | **Single Rooms** | **Rs. 110 each per day** |
| | **Double Rooms** | **Rs. 175 each per day** |
| **Fixed Costs:** | **Single Rooms** | **Rs. 60 each per day** |
| | **Double Rooms** | **Rs. 125 each per day** |

**Required:**

**Calculate the rent chargeable for each single room and double room per day in such a way that the hotel earns a margin of safety of 20% on rent of rooms. 7**

**(b) OMEGA LTD undertook a contract for the construction of a building at a contract price of Rs. 45,00,000. During the first year, the following amounts were spent against which a sum of Rs. 16,87,500 (representing 90% of the work certified) was received by the contractor:**

| | **Rs.** |
|---|---|
| **Materials used** | **7,87,500** |
| **Wages paid to the workers** | **4,50,000** |
| **Overhead expenses** | **1,12,500** |

**During the second year, the contractor spent the following amounts:**

| | **Rs.** |
|---|---|
| **Materials used** | **11,25,000** |
| **Wages paid to the workers** | **9,00,000** |
| **Overhead expenses** | **2,25,000** |

**In the second year, the contract was completed and a sum of Rs.26,25,000 was received by the contractor.**

**You are required to prepare the Contract Account and the Contractee Account for both the years and determine the profits. 8**

**Answer:**

5. (a)

Occupancy (Number of room days in a year):

| Nature of Room | Occupancy |
|---|---|
| Single Rooms | 200 × 365 × 80% = 58,400 Room days |
| Double Rooms | 40 × 365 × 80% = 11,680 Room days |

Computation of Total Cost:

| Variable Costs: | Amount (Rs.) | Amount (Rs.) |
|---|---|---|
| Single Rooms (58,400 Room days × Rs. 110) | 64,24,000 | |

| | | |
|---|---|---|
| Double Rooms (11,680 Room days × Rs. 175) | 20,44,000 | 84,68,000 |
| Fixed Costs: | | |
| Single Rooms (58,400 Room days × Rs. 60) | 35,04,000 | |
| Double Rooms (11,680 Room days × Rs. 125) | 14,60,000 | 49,64,000 |
| Total Costs | | 1,34,32,000 |

Computation of Total Revenue:
Margin of safety 20%, Break Even Point 80%
Sales at BEP = Total Cost = Rs. 1,34,32,000
Total Revenue = Rs. 1,34,32,000 / 0.80 = Rs. 1,67,90,000

Computation of Notional Single Rooms Day:

| | | |
|---|---|---|
| Single Rooms | (58,400 × 1) | 58,400 |
| Double Rooms | (11,680 × 1.25) | 14,600 |
| Total: | | 73,000 |

Computation of Room Rent:

| | | |
|---|---|---|
| Rent per day per Single Room | = Rs. 1,67,90,000 / 73,000 | =Rs. 230 |
| Rent per day per Double Room | = Rs. 230 × 1.25 | = Rs.287.50 |

(b) **:** Contract Account

(At the end of 1st Year)

| Particulars | Rs. | Particulars | Rs. |
|---|---|---|---|
| To Materials Used | 7,87,500 | By Work-in-Progress (16,87,500 / 0.90) | 18,75,000 |
| To Wages Paid | 4,50,000 | | |
| To Overhead Expenses | 1,12,500 | | |
| To Notional Profit c/d | 5,25,000 | | - |
| | 18,75,000 | | 18,75,000 |
| To Profit & Loss A/c (Rs. 5,25,000× $\frac{1}{3}$ × 90%) | 1,57,500 | By Notional Profit b/d | 5,25,000 |
| To Work-in- Progress (Reserve) | 3,67,500 | | |
| | 5,25,000 | | 5,25,000 |

Contractee Account

| Particulars | Rs. | Particulars | Rs. |
|---|---|---|---|
| To Balance c/d | 16,87,500 | By Bank A/c | 16,87,500 |
| | 16,87,500 | | 16,87,500 |

Contract Account
(On completion of Contract in the 2nd Year)

| Particulars | Rs. | Particulars | Rs. |
|---|---|---|---|
| To Work-in-Progress (Rs. 18,75,000 – Rs. 3,67,500) | 15,07,500 | By Contractee Account | 45,00,000 |
| To Materials Used | 11,25,000 | | |
| To Wages Paid | 9,00,000 | | |
| To Overhead Expenses | 2,25,000 | | |
| To Profit & Loss A/c (Transfer) | 7,42,500 | | - |
| | 45,00,000 | | 45,00,000 |

Contractee Account

| Particulars | Rs. | Particulars | Rs. |
|---|---|---|---|
| To Contract A/c | 45,00,000 | By Balance b/d | 16,87,500 |
| | | By Bank A/c | 26,25,000 |
| | | By Balance c/d | 1,87,500 |
| | 45,00,000 | | 45,00,000 |

**6. (a) PANCHAL LTD, a toy manufacturer earns an average net profit of Rs. 1.80 per piece on a selling price of Rs. 16.50 by producing and selling 12000 pieces or 60% of the capacity. His cost of sales per toy is as under:**

| | Amount (Rs.) |
|---|---|
| **Direct material** | **4.25** |
| **Direct wages** | **1.60** |
| **Works Overheads (40% fixed)** | **7.15** |
| **Sales Overheads (30% fixed)** | **0.90** |

**During the current year, he intends to produce the same number of toys but anticipates that fixed cost will go up by 10%. Direct wages and material will increase by 6% and 4% respectively but he has no option of increasing the selling price. Under this situation, he obtains an offer for further sale of 20% of the capacity.**

**Required:**

**What minimum price you will recommend for acceptance of the offer to ensure the manufacturer an overall profit of Rs. 30,100? 8**

**(Show your calculations upto 3 decimal points.)**

**(b) The following data pertaining to sales and profit are extracted from the records of READYAAH LTD. for two years:**

| | Sales | Profit |
|---|---|---|
| **Year 2017** | **Rs. 12,00,000** | **Rs. 80,000** |
| **Year 2018** | **Rs.14,00,000** | **Rs. 1,30,000** |

**Required:**

**Calculate the following:**

**(i) P/V Ratio**

**(ii) Break Even Point**

**(iii) Profit when sales are Rs. 18,00,000**

**(iv) Sales required to earn a profit of Rs. 1,20,000**

**(v) Margin of safety in the year 2018. 7**

**Answer:**

6. (a)

Computation of Profit at present after increase in Cost

| | Particulars | Amount (Rs.) | Amount (Rs.) |
|---|---|---|---|
| I. | Selling Price | | 16.500 |
| II | Variable Cost: | | |
| | Direct Material (4.25 × 104) / 100 | 4.420 | |
| | Direct Wages (1.60 × 106) / 100 | 1.696 | |
| | Works Overheads (60% of Rs. 7.15) | 4.290 | |
| | Sales Overheads (70% of Re. 0.90) | 0.630 | |
| | Other Variable Cost:<br>(S.P Rs. 16.50) – (Profit Rs. 1.80) - Cost of Sales Rs.(DM 4.25 + DW 1.60 + WO 7.15 + SO 0.90) | 0.800 | 11.836 |
| III | Contribution per Unit/ Piece (I – II) | | 4.664 |
| IV | Total Contribution (12,000 Units/Pieces × Rs. 4.664) | | 55,968 |
| V | Fixed Cost: | | |
| | Works Overheads | 2.860 | |

| | | | |
|---|---|---|---|
| | Sales Overheads | 0.270 | |
| | | 3.130 | |
| | (Rs. 3.13 × 12,000 Units = Rs. 37,560 × 110) / 100 | | 41,316 |
| VI | Profit (IV – V) | | 14,652 |

Computation of Selling Price of the Offer:

| Particulars | Amount (Rs.) |
|---|---|
| Variable Cost of order (4,000 Units/Pieces × Rs. 11.836 | 47,344 |
| Add: Required Profit (Rs. 30,100 – Rs. 14,652) | 15,448 |
| ∴ Sales required (in Rs.) | 62,792 |
| ∴ Selling Price per Unit/Piece of the order = Rs. 62,792 / 4,000 Units/ Pieces | 15.698 say Rs. 15.70 |

**ALTERNATIVE ANSWER :6 (a)**

Computation of Profit at present after increase in Cost

| | Particulars | Amount (Rs.) |
|---|---|---|
| I | Net Profit per Piece | 1.80 |
| II | Total Pieces | 12,000 |
| III | Total Net Profit (I × II) | 21,600 |
| IV | Increased Direct Material Cost ( Rs.4.25 × 4%) × 12,000 | 2,040 |
| V | Increased Direct Wages Cost ( Rs.1.60 × 6%) × 12,000 | 1,152 |
| VI | Increased Works Overhead [{ ( Rs.7.15 × 40%) × 12,000} × 10%] | 3,432 |
| VII | Increased Sales Overhead [{( Rs.0.90 × 30%) × 12,000} × 10%] | 324 |
| VIII | Net Profit after increase in Cost {III – (IV +V v + VI + VII)} | 14,652 |
| IX | Expected Net Profit | 30,100 |
| X | Net Profit required to be earned (IX – VIII) | 15,448 |

Computation of Selling Price of the Offer:

| | Particulars | Amount (Rs.) | Amount (Rs.) |
|---|---|---|---|
| I | Variable Cost: | | |
| | Material (4.25 × 104) / 100 | 4.420 | |
| | Wages (1.60 × 106) / 100 | 1.696 | |
| | Works Overheads (60% of Rs. 7.15) | 4.290 | |
| | Sales Overheads (70% of Re. 0.90) | 0.630 | |
| | Other Variable Cost | 0.800 | 11.836 |
| II | Profit Per Piece (Rs. 15,448 / 4,000 Pieces) | | 3.862 |
| III | Selling Price per Piece of the order ( I + II) | | 15.698 Say Rs. 15.70 |

(b) :

| | Sales (Rs.) | Profit (Rs.) |
|---|---|---|
| Year 2017 | 12,00,000 | 80,000 |
| Year 2018 | 14,00,000 | 1,30,000 |
| Difference | 2,00,000 | 50,000 |

(i) P/V Ratio = (Difference in Profit / Difference in Sales) × 100
∴ P/V Ratio = (Rs. 50,000/ 2,00,000)× 100 = 25%

| | |
|---|---|
| Contribution in 2017 (Rs. 12,00,000× 25% | Rs. 3,00,000 |
| Less: Profit | Rs. 80,000 |
| = Fixed Cost | Rs. 2,20,000 |

**ALTERNATIVELY**

| | |
|---|---|
| Contributioin in 2018 (Rs. 14,00,000× 25%) | Rs. 3,50,000 |
| Less: Profit | Rs. 1,30,000 |
| = Fixed Cost | Rs. 2,20,000 |

**s**

(ii) Break Even Point = Fixed Cost / PV Ratio = Rs. 2,20,000 /25% = Rs. 8,80,000

(iii) Profit when sales are Rs. 18,00,000

| | |
|---|---|
| Contribution (Rs. 18,00,000× 25% | Rs. 4,50,000 |
| Less: Fixed Cost | Rs. 2,20,000 |
| Profit | Rs. 2,30,000 |

(iv) Sales to earn a profit of Rs. 1,20,000
= (Fixed Cost + desired Profit) / PV Ratio
= (Rs. 2,20,000 + Rs. 1,20,000) / 25% Rs. 13,60,000

(v) Margin of Safety in 2018
=Actual Sales – Break Even Point
= Rs. 14,00,000 – Rs. 8,80,000 Rs. 5,20,000

**7. (a) SUNRISE LTD, a manufacturing Company using Standard costing furnishes thefollowing information:**

**The standard mix to produce one unit of product A is as under:**

**Material P 2 kg @ Rs. 20 per kg**
**Material Q 3 kg @ Rs. 25 per kg**
**Material R 4 kg @ Rs.15 per kg**

**During the month of March 2019, 20 units of product A were actually produced and consumption of material was as under:**

**Material P 35 kg @ Rs.22 per kg**
**Material Q 60 kg @ Rs. 24 per kg**
**Material R 90 kg @ Rs.16 per kg**

**Required:**

**Calculate the following Material Variances: 8**

(i) Material Cost Variance

(ii) Material Price Variance

(iii) Material Quantity Variance

(iv) Material Mix Variance

(v) Material Yield Variance

(Calculate upto 2 decimal points.)

**(b) The monthly (September 2019) budgets for Production overhead Costs of TANISHA LTD for two levels of Activity were as follows:**

| Particulars | Capacity Level | |
|---|---|---|
| | 60% | 100% |
| Budgeted Production (Units) | 15000 | 25000 |
| | Rs. | Rs. |
| Wages | 60,000 | 1,00,000 |
| Consumable Stores | 45,000 | 75,000 |

| | | |
|---|---|---|
| **Maintenance** | **55,000** | **75,000** |
| **Power and Fuel** | **80,000** | **1,00,000** |
| **Depreciation** | **2,00,000** | **2,00,000** |
| **Insurance** | **50,000** | **50,000** |
| | **4,90,000** | **6,00,000** |

**Required:**

**(i) Prepare Production overhead Costs Budget of 80% and 90% Capacity level for September, 2019 and**

**(ii) Compute the total Cost, both fixed and variable overheads per unit of output at 80% and 90% Capacity level. 7**

**Answer:**

7 (a):

Statement showing Standard and Actual Material Cost:

| Standard for 20 Units | | | | Actual for 20 Units | | |
|---|---|---|---|---|---|---|
| Material | Qty. (Units) | Rate (Rs.) | Amount (Rs.) | Qty. (Units) | Rate (Rs.) | Amount (Rs.) |
| P | 40 | 20 | 800 | 35 | 22 | 770 |
| Q | 60 | 25 | 1,500 | 60 | 24 | 1,440 |
| R | 80 | 15 | 1,200 | 90 | 16 | 1,440 |
| Total | 180 | | 3,500 | 185 | | 3,650 |

(i) Material Cost Variance
= Standard Cost (SC) – Actual Cost (AC)
= Rs. 3,500 – Rs. 3,650 = Rs. 150 (A)

(ii) Material Price Variance
= Actual Quantity [Standard Price (SP) – Actual Price (AP)]
Material P = 35 (Rs.20 – Rs. 22) = Rs. 70 (A)
Material Q = 60 (Rs. 25 – Rs.24) = Rs. 60 (F)
Material R = 90 ( Rs.15 – Rs.16) =Rs. 90 (A)
= Rs. 100 (A)

(iii) Material Quantity (Usage) Variance
= SP (SQ – AQ) where Q = Quantity
Material P = 20 (Rs.40 – Rs. 35) = Rs. 100 (F)
Material Q = 25 (Rs. 60 – Rs.60) = Nil
Material R = 15 ( Rs.80 – Rs.90) =Rs. 150 (A)
= Rs. 50 (A) **1**

(iv) Material Mix Variance
= SP (Revised SQ- AQ)
Material P = 20 (kgs.41.11 – Rs. 35) = Rs. 122.20 (F)
Material Q = 25 (kgs. 61.67 – Rs.60) = Rs. 41.75 (F)
Material R = 15 (kgs.82.22 – Rs.90) =Rs. 116.70 (A)
= Rs. 47.25 (F) **1**

Note: Revised Standard Quantity (RSQ) is calculated as follows:
Material P = (185/180) ×40 = 41.11 kgs.
Material Q = (185/180) ×60 = 61.67 kgs.
Material R = (185/180) × 80 = 82.22 kgs.

(v) Material Yield Variance
= Standard Cost (Yield Price)per Unit (Actual Yield – Standard Yield)
= Rs. 175 (20 Units– 20.56 Units) = Rs.98 (A)
Note:
(a) Standard Material Cost (Yield Price) per Unit of output
= Rs. 3,500 /20 = Rs. 175
(b) Standard Yield = Actual Usage of Material / Standard Usage per Unit of output

= 185 /9 = 20.56 Units

(b) :

Production Overhead Costs Budget:
(For September 2019)

| | Capacity level | | | |
|---|---|---|---|---|
| Particulars | 80% | | 90% | |
| Production (Units) ' | 20,000 | | 22,500 | |
| | Rs. | Per Unit Rs. | Rs. | Per Unit Rs. |
| Variable Overhead Costs: [A] | | | | |
| Wages @ Rs. 4 | 80,000 | | 90,000 | |
| Consumable Stores @ Rs. 3 | 60,000 | | 67,500 | |
| Maintenance @ Rs. 2 | 40,000 | | 45,000 | |
| Power and Fuel @ Rs. 2 | 40,000 | | 45,000 | |
| Total [A] | 2,20,000 | 11.00 | 2,47,500 | 11.00 |
| Fixed Overhead Costs: [B] | | | | |
| Maintenance | 25,000 | | 25,000 | |
| Power and Fuel | 50,000 | | 50,000 | |
| Depreciation | 2,00,000 | | 2,00,000 | |
| Insurance | 50,000 | | 50,000 | |
| Total [B] | 3,25,000 | 16.25 | 3,25,000 | 14.44 |
| Grand Total [A + B] | 5,45,000 | 27.25 | 5,72,500 | 25.44 |

Working Notes:

(i) Maintenance Costs:
Variable = (Rs. 75,000 – Rs. 55,000) / (25,000 Units – 15,000 Units) = Rs. 2
Fixed = (Rs. 55,000) – ( 15,000 Units × Rs. 2) = Rs.25,000

(ii) Power and Fuel:
Variable = (Rs. 1,00,000 – Rs. 80,000) / (25,000 Units – 15,000 Units) = Rs.2
Fixed = (Rs. 80,000) – (15,000 Units × Rs. 2) = Rs. 50,000

**8. Answer any three out of the following four questions: 5×3=15**

**(a) Explain the concept of Opportunity Cost and Imputed Cost with suitable examples.**
**(b) State the limitations of Cost Accounting System.**
**(c) Describe the main objectives of Material Control System.**
**(d) Write a brief note on Principal Budget Factor.**

**Answer:**

**8.** (a) **Opportunity Cost :**

Opportunity cost is the value of alternatives foregone by adopting a particularstrategy or employingresources in specific manner. It is the return expected from an investment other than the present one. These refer tocosts which result from the use or application of material, labour or other facilities in a particular manner which hasbeen foregone due to not using the facilities in the manner originally planned.Resources (or input) like men,materials, plant and machinery, finance etc., when utilized in one particular way, yield a particular return (or output).If the same input is utilized in another way, yielding the same or a different return, the original return ontheforsaken alternative that is no longer obtainable is the opportunity cost. Forexample, if fixed deposits in the bankare proposed to be withdrawn for financing project, the opportunity cost would be the

loss of interest on thedeposits. Similarly, when a building leased out on rent to a party is got vacated for own purpose or avacant space isnot leased out but used internally, say, for expansion of theproduction programme, the rent so foregone is theopportunity cost.

**Imputed Cost:**

Imputed cost is hypothetical or notional cost, not involving cash outlay and computedonly for the purpose ofdecision -making. In this respect, imputed cost is similar to opportunity cost. Interest on funds generated internally,payment for which is not actually made is an example of imputed cost. When alternative capital investment projectsare being considered o ut of which one or more are to be financed from internal funds, it is necessary to take intoaccount the imputed interest on own funds before a decision is arrived at.

(b) Limitations of Cost Accounting System:

(i) Like any other system of accounting, Cost Accountancy is not an exact science but an art which has been developed through theories and accounting practices based on reasoning and commonsense. Many of the theories cannot be proved nor can they be disproved. They grownup in course of time to become conventions and accepted principles of Cost Accounting.

(ii) These principles are by no means static, they are changing from day to day and what is correct today may not hold true in the circumstances tomorrow.

(iii) In cost accounting, no cost can be said to be exact as they incorporate a large number of conventions, estimations and flexible factors such as : -

(iiia) Classification of costs into its elements.

(iiib) Materials issue pricing based on average or standard costs.

(iiic ) Apportionment of overhead expenses and their allocation to cost units/centres.

(iiid) Arbitrary allocation of joint costs.

(iiie)Division of overheads into fixed and variable.

(iv) Cost Accounting lacks the uniform procedures and formats in preparing the cost information of a product/ service.

(v) Keeping in view above limitations, all Cost Accounting results can be taken as mere estimates.

s

(c) Objectives of Material Control System:

(i) To make continuous availability of materials so that there may be uninterrupted flow of materials for production. Production may not be held up for want of materials.

(ii) To purchase requisite quantity of materials to avoid locking up of working capital and to minimise risk of surplus and obsolete stores.

(iii) To make purchase competitively and wisely at the most economical prices so that there may be reduction in cost of materials.

(iv) To purchase proper quantity of materials to have minimum possible wastage of materials.

(v) To serve as an inf ormation centre on the knowledge in respect of materials for prices, sources of supply, lead time, quality and specification.

(d) Principal Budget Factor:

Budgets cover all the functional areas of the organisation. For the effecti veimplementation of the budgetary system, all the functional areas are to beconsidered which are interlinked. Because of these interlinks, certain factors have the ability to affect all other budgets. Such factor is known as principal budget factor.

Principal Budget Factor is the factor the extent of influence of which must first be assessed in order to ensurethat the functional budgets are reasonably capable of fulfillment. A principal budget factor may be lack ofdemand, scarcity of raw material, non-availability of skilled labour, inadequate working capital etc. If forexample, the organisation has the capacity t o produce 2,000 units per annum; b ut the productiondepartment isable to produce only 1,600 units due to non -availability of rawmaterials. In this case, non -availability of rawmaterials is the principal budget factor ( limiting factor ). If the sales manager estimates that he can sell only1,400 units due to lack of demand, then lack of demand is the principal budget factor. This concept isalsoknow n as key factor or governing factor. This factor highlights the constraints within which the organization functions.

SUGGESTED ANSWERS TO QUESTIONS

INTERMEDIATE EXAMINATION

GROUP - I

(SYLLABUS 2016)

DECEMBER- 2021

Paper- 8 : COST ACCOUNTING

Time Allowed : 3 Hours | Full Marks : 100

Section : A MCQ | 20X1 = 20 Marks

**Cost units used in power sector is called: Ans**

1. Number of hours
2. Kilo meter (K. M)
3. Number of electric points
4. ✔ Kilowatt-hour(KWH)

**Cost units of Automobile Industry is .**

**Which word(s) according to you appropriately fills in above blank?**

**Ans**

1. Cubic meter
2. ✔ Number of vehicle
3. Bed Night
4. Number of call

**Q.3 Which of the following most appropriately defines 'Idle time'?**

**Ans**

1. Time spent by workers in factory
2. Time spent by workers in office
3. ✔ Time spent by workers off their work
4. Time spent by workers on their job

**Q.4 The allotment of whole items of cost of centers or cost unit is called**

**Ans**

1. Overhead absorption
2. ✔ Cost allocation
3. None of these
4. Cost apportionment

**Q.5 If an organization has all the resources it needs for production, then the principalbudget factor is most likely to be**

**Ans**

1. labour supply
2. ✔ sales demand
3. raw materials
4. non-existing

**Q.6 Time and motion study is conducted by the**

**Ans**

1. Time –keeping department
2. Payroll department
3. Personnel department
4. ✔ Engineering department

**Q.7 Sales budget is an example of**

**Ans**

1. ✔ Functional budget
2. Master budget
3. Expenditure budget
4. Capital budget

Q.8 Absolute Tonne-km. is an example of:

Ans
1. Composite unit in power sector
2. Composite unit for oil and natural gas
3. Composite unit for bus operation
✔ 4. Composite unit of transport sector

Q.9 Which of the following is not an element of master budget?

Ans
1. Capital Expenditure Budget
✔ 2. Production Schedule
3. Operating Expenses Budget
4. All of these

Q.10 Selling and distribution overheads are absorbed on the basis of

Ans
1. rate per unit
✔ 2. Any of these
3. percentage on selling price of each unit
4. percentage on works cost.

Q.11 Standards deals with the principles and methods of determining depreciation and amortization cost-

Ans
1. CAS 12
2. CAS 9
✔ 3. CAS 16
4. CAS 15

Q.12 Which of the following is a service department?

Ans
1. Machining department
2. Finishing department
3. Refining department
✔ 4. Receiving department

Q.13 Batch Costing is a type of_.
Which word(s) according to you appropriately fills in the above blank?

Ans
1. Direct Costing
2. Process Costing
✔ 3. Job costing
4. Differential Costing

Q.14 Audit fees paid to cost auditors is part of:

Ans
✔ 1. Administration Cost
2. None of these
3. Selling & Distribution cost
4. Production cost

Q.15 Which of the following is not an element of works overhead?

Ans
✔ 1. Sales manager's salary
2. Factory repairman's wages
3. Product inspector's salary
4. Plant manager's salary

Q.16 In Reconciliation Statement expenses shown only in cost accounts are

Ans
✔ 1. Deducted from financial profit
2. Ignored
3. Added to financial profit
4. Deducted from costing profit

**Q.17** From cost control point of view the standard most commonly used is:

**Ans**
1. Theoretical standard
2. Expected standard ✔
3. Normal standard
4. Basic standard

**Q.18** Which of the following is generally a long term budget?

**Ans**
1. Sales budget
2. Cash budget
3. Research and Development budget
4. Capital expenditure budget ✔

**Q.19** Which method of absorption of factory overheads do you suggest in a concern which Produces only one uniform time of product?

**Ans**
1. Direct labour rate
2. Percentage of direct wages basis
3. Machine hour rate
4. A rate per units of output ✔

**Q.20** In the context of Contract a/c, work completed and not yet certified will be shown

**Ans**
1. at cost under 'Completed Work'
2. at cost under WIP a/c ✔
3. at cost plus notional profit less retention money under 'Completed Work'
4. at cost plus + 2/3rd of the notional profit under 'Completed Work'

**Q.1 If actual loss in a process is less than normal loss, the difference is known as _____.Using the appropriate word(s) fill in the Blank.**

**Answer: Abnormal Gain**

**Q.2 Profit volume ratio with increase in fixed cost. Using the appropriate word(s) fill in the Blank.**

**Answer: is constant**

**Q.3 VED analysis is primarily used for control of___.Using the appropriateword(s) fill in the Blank.**

**Answer: Components or spare parts**

**Q.4 What is the name the type of loss for which a Process Account is credited withvalue for such loss when scrap value is zero?**

**Answer: Abnormal Loss**

**Q.5 When raw material is accounted at standard cost, variances due to normal reasonswill be treated as_____cost. Using the appropriate word(s) fill in the Blank.**

**Answer: Direct Material**

**Q.6 CAS____stands for cost of service cost centre. Using the appropriateword(s) fill in the Blank.**

**Answer: CAS 13**

**Q.7 Notional remuneration to owner is expense debited only in_____. Usingthe appropriate word(s) fill in the Blank.**

**Answer: Cost Accounts**

**Q.8 Historical costing uses post period costs while standards costing uses _____costs. Using the appropriate word(s) fill in the Blank.**

**Answer: Predetermined**

**Q.9_____leads to budgeting and budgeting leads to budgetary control. Using the appropriate word(s) fill in the Blank.**

**Answer: Forecasting**

**Q.10 Fixed cost is Rs 30,000 and P/V ratio is 20%. Compute breakeven point.**

**Answer: Rs. 1,50,000**

**Q.11 The amount of sales of a product is Rs 1,00,000. Its variable cost is Rs 40,000 andfixed cost is Rs . 50,000. The amount of BEP sales will be _____**

**Answer: Rs. 83,334**

**Q.12 A labour cost standard is based on estimates of the____toproduce a unit of product and the cost of labour per unit. Using the appropriate word(s) fill in the Blank.**

**Answer: Labour hours required**

**Q.13 A factory has to produce and supply 24000 units of a component annually to acustomer. The carrying cost per unit is Rs 2 per component per month. The production run set up cost is Rs 1,800 per production run. Find out the economic batch size that must be produced to minimize total costbased on the above information.**

**Answer: Economic Batch Quantity = 1897 units approx. / batch**

**Q.14 Standard Costing is one of the_____techniques. Using theappropriate word(s) fill in the Blank.**

**Answer: Cost Control**

**Q.15 Cost variance is the difference between_____.Using the appropriate word(s) fillin the Blank.**

**Answer: The standards cost and actual cost.**

**Q.16 A work measurement study was carried out in a firm for 10 hours. The informationgenerated was: Units produced 600; Idle time 15%; Performance rating 120%; and Relaxation Allowance 10% of standard time. What is the standard time for each unit produced?**

**Answer: Standard Time for each unit = 1.133 minutes**

**Q.17 Differential cost is the change in the cost due to change in_____from one level to another. Using the appropriate word(s) fill in the Blank.**

**Answer: Activity**

**Q.18 In Absorption costing,____cost is added to inventory. Using theappropriate word(s) fill in the Blank.**

**Answer: Fixed**

**Q.19 Match the items in Column I with the most appropriate items in Column II. State theitem no. only**

| Item | Column I | Item | Column II |
|---|---|---|---|
| (i) | Escalation Clause | (A) | Sunk Cost |
| (ii) | Notional Cost | (B) | Contract Costing |
| | | (C) | Imputed Cost |

**Answer: (i) (B) Contract costing**
**(ii) (C) Imputed Cost**

**Q.20 Margin of safety is_____.Using the appropriate word(s) fill in the Blank.**

**Answer: Actual sales – sales at Breakeven point or Profit/ PV Ratio.**

Section : C

(4X12 = 48 Marks)

ONE LAQ

6 Marks

**Two workmen, Suresh and Umesh, produce the same product using the same material. Their normal wage rate is also the same. Suresh is paid bonus according to the Rowan system, while Umesh is paid bonus according to the Halsey system. The time allowed to make the product is 25 hours. Suresh takes 15 hours while Umesh takes 20 hours to complete the product. The factory overhead rate is Rs 5 per man-hour actuallyworked. The factory cost for the product for Suresh is Rs 1,745 and for Umesh it is Rs 1,800.**

**(i) What is the amount of normal rate of wages per hour? [2]**

**(ii) The cost of materials would be how much? [2]**

**(iii) What is the amount of wages payable to workmen Suresh ?[2]**

**Answer:**

**(i) Normal rate of wages = Rs. 20**

**(ii) Cost of materials = Rs. 1250**

**(iii) The wages payable to workman Suresh=Rs. 420**

6 Marks

**Rajput Transport Service is a Delhi based national goods transport service provider, owning five trucks for this purpose. The cost of running and maintaining these trucks are as follows:**

| Particulars | Amount |
|---|---|
| Diesel cost | Rs 30 per km. |
| Engine oil | Rs 8,400 for every 28,000 km. |
| Repair and maintenance | Rs 24,000 for every 20,000 km. |
| Driver's salary | Rs 40,000 per truck per month |
| Cleaner's salary | Rs 14,000 per truck per month |
| Supervision and other general expenses | Rs 30,000 per month |
| Cost of loading of goods | Rs 400 per Metric Ton (MT) |

**Each truck was purchased for Rs. 30 lakh with an estimated life of 7,20,000 km. During the next month, it is expecting 6 bookings, the details of which are as follows:**

| Sl. No. | Journey | Distance (in km) | Weight- Up (in MT) | Weight- Down (in MT) |
|---|---|---|---|---|
| 1. | Delhi to Kochi | 2,700 | 15 | 7 |
| 2. | Delhi to Guwahati | 1,890 | 13 | 0 |
| 3. | Delhi to Vijayawada | 1,840 | 16 | 0 |
| 4. | Delhi to Varanasi | 815 | 11 | 0 |
| 5. | Delhi to Asansol | 1,280 | 13 | 5 |
| 6. | Delhi to Chennai | 2,185 | 11 | 9 |
| | Total | 10,710 | 79 | 21 |

**(i) What is the total absolute Ton-km for the next month? [3]**

**(ii) The cost per ton-km would be how much ? [3]**

**Answer:**

**(i) Total absolute Ton-km = 1,89,115 ton-km**

**(ii) Cost per ton-km= Rs. 5.84**

8 Marks

**The following information is available from the financial books of BG Mfg. Co. having a normal production capacity of 120,000 units for the year ended 31st March, 2021:**

***Sales Rs 20, 00,000 (100,000 units).**

***There was no opening and closing stock of finished units.**

***Direct material and direct wages cost were Rs 10, 00,000 and Rs 5, 00,000 respectively.**

***Actual factory expenses were Rs 3, 00,000 of which 60% are fixed.**

***Actual administrative expenses related with production activities wereRs 90,000 which are completely fixed.**

***Actual selling and distribution expenses were Rs 60,000 of which 40% are fixed.**

***Interest and dividends received Rs 30,000. Required:**

**(i)** **Find out profit as per financial books for the year ended 31st March, 2021; (3)**

**(ii)** **What is the amount of profit as per cost accounts for the year ended 31st March, 2021 assuming that the indirect expenses are absorbed on the basis of normal production capacity; (4)**

**(iii)** **What is the amount of Factory expenses under charged in cost Accounts?(1)**

**Answer:**

**(i)** **Profit as per financial accounts = Rs. 80,000**

**(ii)** **Profit as per Cost accounts = Rs. 99,000**

**(iii)** **Factory expenses under-charged in cost accounts = Rs. 30,000**

4 Marks

**Q.2 List the objective and scope of CAS-24.**

**Answer:**

**CAS 24 Cost Accounting Standard on Treatment of Revenue in Cost Statements [Limited Revision 2017]**

**This standard deals with the principles and methods of classification, measurement, treatment and assignment of revenue and its presentation and disclosure in cost statements.**

**Objective The objective of this standard is to bring uniformity and consistency in the principles and methods for treatment of revenue in cost statements with reasonable accuracy.**

**Scope This standard shall be applied to cost statements which require classification, measurement, treatment, assignment, presentation and disclosure of revenue including those requiring attestation.**

6 Marks

**SUN Ltd. undertook a contract for Rs 50,00,000 on 1st April, 2020. On 31st March,2021 when the accounts of the company were closed, the following details about the contract were gathered:**

| Particulars | Amount (Rs) |
|---|---|
| Materials purchased | 10,00,000 |
| Wages paid | 4,50,000 |
| General expenses | 1,00,000 |
| Plant purchased | 5,00,000 |
| Materials on hand on 31-03-2021 | 2,50,000 |
| Wages accrued on 31-03-2021 | 50,000 |
| Work certified | 20,00,000 |
| Cash received | 15,00,000 |
| Work uncertified | 1,50,000 |
| Depreciation of plant | 50,000 |

**The above contract contained an escalation clause which read as follows:**

**"In the event of prices of materials and rates of wages increase by more than 5%, the contract price would be increased accordingly by 25% of the rise in the cost of materials and wages beyond 5% in each case."**

**It was found that since the date of signing the agreement, the price of materials andwage rates increased by 25%. The value of work certified does not take into account the effect of the above clause.**

**(i) The contract price will be increased by_____.(1)**

**(ii) What is the amount of Notional Profit for the year ended March 31, 2021 ?(4)**

**(iii) The value of work-in-progress (Reserved) shown in the balance sheet is . (1)**

**Answer:**

**(i) Contract price increased by = Rs. 50,000**

**(ii) Notional Profit = Rs. 8,00,000**

**(iii) Value of work-in-progress (Reserve) = Rs. 6,00,000**

6 Marks

**Q.2 ESPM Ltd sold 5,50,000 units of its product at Rs 75 per unit. Variable costs are Rs35 per unit (manufacturing costs of Rs 28 and selling cost Rs 7 per unit). Fixed costs are incurred uniformly throughout the year and amount to Rs 70,00,000 (including depreciation of Rs 30,00,000). There is no opening or closing stock.**

**(i) Estimate the breakeven sales level quantity and cash breakeven sales level quantity.(2)**

**(ii) What is the P/V ratio ? (2)**

**(iii) The sales level to be achieved an after-tax income (PAT) of Rs 5,00,000 would be how much? (Assume 40% corporate Income Tax rate). (2)**

**Answer:**

**(i) Break even Sales Quantity = 1,75,000 units**

**Cash Break even sales Quantity = 1,00,000 units**

**(ii) P/V ratio = 53.33% or 53.33333**

**(iii) Sales level to achieve an after-tax income (PAT) of Rs.5,00,000 = Rs.1,46,87,500**

FOUR LAQ

6 Marks

**QBZ Limited produces and sells a single product. Sales budget for calendar year 2020 by a quarter is as under:**

| Quarters | I | II | III | IV |
|---|---|---|---|---|
| No. of units to be sold | 36,000 | 44,000 | 50,000 | 54,000 |

**The year is expected to open with an inventory of 12,000 units of finished products and close with inventory of 16,000 units. Production is customarily scheduled to provide for 70% of the current quarter's sales demand plus 30% of the following quarter demand. The budgeted selling price per unit is Rs 80 . The standard cost details for one unit of the product are as follows:**

**Variable Cost Rs 69.00 per unit**

**Fixed Overheads @ Rs 4 per hour based on a budgeted production volume of 2,20,000 direct labour hours for the year. Fixed overheads are evenly distributed through-out the year.**

**(i) What is the Budgeted Total Production (in unit) for the year 2020? (4)**

**(ii) In which quarter of the year, company expected to achieve break-even point? (2)**

**Answer:**

**(i) Budgeted Total Production for the year 2020 = 1,88,000 units**

**(ii) The company will break even in the end of Second Quarter**

**The total sales by the end of Quarter 2 will be 80,000 units i.e. (36,000 + 44,000). Hence the Company will break-even in the end of Second Quarter.**

6 Marks

**The total overhead expenses of a factory of SWASTIK Ltd are Rs 535656. Taking into account the normal working of the factory, overhead was recovered in production at Rs 1.60 per hour. The actual hours worked were 274785. The factory produced 7800 units of which 7000 were sold. There were 200 equivalent units inwork-in-progress.**

**On investigation, it was found that 50% of the unabsorbed overhead was on account of increase in cost of indirect materials and indirect labour and theremaining 50% was due to factory inefficiency.**

**Required:**

**(i) What is the amount of unabsorbed overheads?(2)**

**(ii) Ascertain the supplementary rate per unit.(1)**

**(iii) The amount of unabsorbed overheads to be distributed by using supplementary rate among cost of sales would be how much? (2)**

**(iv) Which amount of unabsorbed overheads should be charged to Profit and loss Account? (1)**

**Answer:**

**(i) Unabsorbed overheads = Rs. 96,000**

**(ii) Supplementary rate per unit: Rs. 6 per unit**

**(iii) Cost of Sales = Rs. 42,000**

**(iv) Unabsorbed overhead charged to profit & Loss Account = Rs. 48,000**

2+4+2+2+2 = 12 Marks

**SWASTY Ltd. furnishes the following information for the month of November, 2021.**

| Particulars | Budget Details | Static Budget | Actual |
|---|---|---|---|
| Units produced & Sold | | 4,000 | 3,200 |
| | | (Rs) | (Rs) |
| Direct Material | 3 kg p.u. @ Rs.30 per kg. | 3,60,000 | 3,10,000 |
| Direct Labour | 1 hr. p.u.@ Rs. 72 per hr. | 2,88,000 | 2,25,600 |
| Variable Overhead | 1 hr. p.u. @ Rs.44 per hr. | 1,76,000 | 1,47,200 |
| Fixed Overhead | | 1,80,000 | 1,68,000 |
| Total Cost | | 10,04,000 | 8,50,800 |
| Sales | | 12,00,000 | 8,96,000 |
| Profit | | 1,96,000 | 45,200 |

**During the month 10,000 kg. of materials and 3,100 direct labour hours wereutilized.**

**i)** **What is the amount of Direct Labour cost for flexible Budgeted Production and sold?**

**ii)** **What is the amount of flexible budgeted profit for the month of November 2021?**

**iii)** **Calculate the material usage variance for the actual vs the flexible budget**

**iv)** **The direct labour rate variance for the actual vs the flexible budget is_____**

**v)** **The material price variance for the actual vs the flexible budget would be how much?**

**Answer:**

**(i)** **Direct Labour cost for flexible Budgeted Production and sold is Rs. 2,30,400**

**(ii)** **Flexible budgeted profit = Rs. 1,20,800**

**(iii)** **Material Usage Variance for the Actual vs Flexible Budget = Rs. 12,000 (A)**

**(iv)** **The Direct Rate Variance for the Actual vs the Flexible Budget is Rs. 2,400 (A)**

**(v)** **Material Price Variance for the Actual vs Flexible Budget is Rs. 10,000 (A)**

SIX LAQ

(3x4 = 12 Marks)

**Q.1 Write Short Notes on Differentiate between Operation Cost and Operating Cost** 3 Marks

**Answer:** **Operation Cost: Operation cost is the cost of a specific operation involved in a production process or business activity. The cost unit in this method is the operation, instead of process. When the manufacturing method of a concern consists of a number of distinct operations, operating costing is suitable.**

**Operating Cost: Operating cost is the cost incurred in conducting a business activity. It refers to the cost of concerns which do not manufacture any product but which provide services. Industries and establishments like power house, transport and travel agencies, hospitals, schools etc. which undertake services rather than the manufacture of products, ascertain operating costs. The cost units used are Kilo Watt Hour (KWH), Passenger Kilometre and Bed in the Hospital etc. Operation costing method constitutes a distinct type of costing but it may also be classed as a variant of process cost since costs in this method are usually compiled for a specified period.**

**Q.2 Write Short Notes on Benefits of Integrated Accounting system** 3 Marks

**Answer:** **Integrated accounting system has the following benefits:–**

**As only one set of accounting records is kept, the need for reconciliation between the profits shown by the two records are eliminated.**

**The duplication is eliminated, thus the cost is reduced.**

**Simple to understand and easy to operate, unnecessary complications are eliminated.**

**Cost data can be available promptly and regularly.**

**There is cross - checking of various figures in cost as well as in financial accounts and this ensures accuracy of cost and financial data.**

**Use of mechanized accounting methods can be made.**

**Q.3 Write Short Notes on Advantages of Budget Manual** 3 Marks

**Answer:** **The methods and procedures of budgetary control are standardized.**

**It is a formal record defining the functions and responsibilities of each executive.**

**There is synchronization of the efforts of all which result in maximization of the profits of the organization.**

**Ambiguity is avoided.**

**Q.4 Write Short Notes on Perpetual Inventory System** 3 Marks

**Answer:** **Perpetual Inventory System means continuous stock taking. CIMA defines Perpetual Inventory System as 'the recording as they occur of receipts, issues and resulting balances of individual items of stock in either quantity or quantity and value'. Under this system a continuous record of receipt and issue of materials is maintained by the stores department and the information about the stock of materials is always available. Entries in the Bin card and stores ledger are made after every receipt and issue and the balance is reconciled on regular basis with the physical stock. The main advantage of this system is that it avoids disruptions in the production caused by periodic stock taking. It's a very reliable check on the stocks.**

**Q.5 Write Short Notes on Cost-plus Contract** 3 Marks

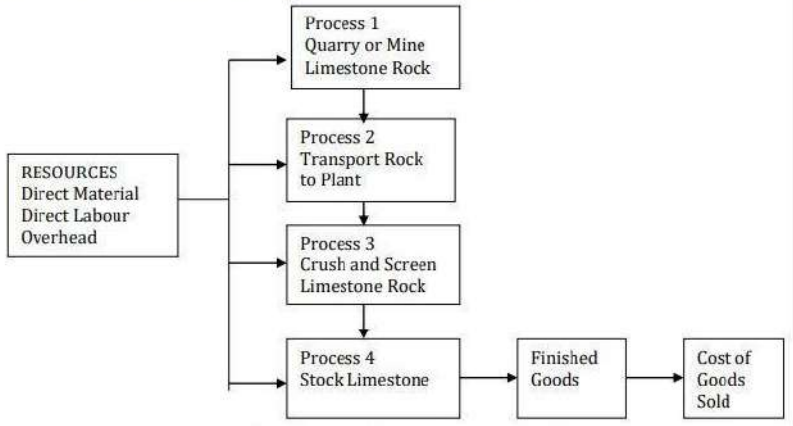
**Answer:** **In this type of contracts the contractor is usually entitled to a stipulated amount of profit in addition to actual cost of the service. The amount of profit to be added to the actual cost of contract may be in the form of fixed amount on a percentage on actual cost. This type of contract is generally entered into for executing special type of work which is not usually undertaken by the contractor. Examples of this type of contracts are construction work during war, production of newly designed ship, etc. This type of contract is advantageous both to the contractor and the contractee. Contractor generally receives a reasonable profit. He is protected from any loss or unusual risk. Contractee can ensure a fair price of the contract because the contractee is entitled to verify the books of contractor.**

Section : D - Case Study Question

3+3+3+3 = 12 Marks

**Q.1**

SSKM Ltd.'s plant operations are in Newtown. The plant process limestone rock that is quarried in a nearby mine. The following exhibit shows the various processing steps:




Process-3 is Crushing and Screening the rock. To produce the crushed Limestone, the company starts with Limestone rocks from it quarry and puts the rocks through a crushing process.

During the month of January, 2021, the company quarried and shipped to its processing plant 288 tons of rock from its quarry, and at the end of the month, 15 tons rock remained in process which is on average 40% complete. The cost of rocks from the quarry is Rs. 120 per ton. Labour and overhead cost during January, 2021 in the rock crushing process were Rs. 39,060.Assume there was no work in process at the beginning of January, 2021.

**i) What are the Equivalent Productions of materials and Labour & Overheads (in units).**

**ii) What are the cost of materials per unit and cost of labour & Overheads per unit?**

**iii) What is the value of closing W.I.P?**

**iv) What is the amount of transfer to Process -4 shown in the Process-3 Account?**

**Answer:**

**(i) Material = 288 units**

**Labour & Overheads = 279 units**

**(ii) Cost of material per unit = Rs. 120**

**Cost of Labour & Overheads per unit = Rs. 140**

**(iii) Value of Closing WIP = Rs. 2,640**

**(iv) Amount transferred to Process-4 Account = Rs. 70,980**

54049

# INTERMEDIATE EXAMINATION

December 2022 *P–8(CAC)*

*Syllabus 2016*

## Cost Accounting

Time Allowed: 3 Hours Full Marks: 100

*The figures in the margin on the right side indicate full marks.*
*All Sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.*
*All working notes must form part of the answer.*
*Wherever necessary, candidates may make appropriate assumptions and clearly state them in answer.*

### SECTION – A

Section A contains Question Number 1.
All parts of this question are compulsory.
Answer the following questions:

**1.** (a) Choose the correct answer from the given alternatives (You may write only the Roman numeral and the alphabet chosen for your answer): 1×10=10

(i) State which of the following are characteristics of job costing:

(1) Homogenous products

(2) Customer-driven production

(3) Complete production possible within a single accounting period

(A) (1) only

(B) (1) and (2) only

(C) (2) and (3) only

(D) All of them

(ii) Cost which relates to an item where the input has an explicit physical relationship with the output is known as

(A) Imputed Cost

(B) Engineered Cost

(C) Managed Cost

(D) Opportunity Cost

(iii) Method Study and Motion Study are conducted by the

(A) Personnel Department

(B) Engineering Department

(C) Payroll Department

(D) Time-keeping Department

(iv) SANUM P.I.C. producing product-ZEMO provides the following information:

| | |
|---|---|
| Royalty paid on Sales | ₹ 35,000 |
| Design Charges paid for the product | ₹ 8,000 |
| Higher Charges for Equipment used for production | ₹ 3,000 |

Direct Expenses will be

(A) ₹ 58,000

(B) ₹ 55,000

(C) ₹ 46,000

(D) None of these

(v) Which of the following is usually classed as Discretionary Fixed Costs?

(A) Supervisors' wages

(B) Depreciation

(C) Rent

(D) Research and Development Cost

(vi) Which of the following CASs deals with the principles and methods of determining the material cost?

(A) CAS-6 (Limited Revision 2017)

(B) CAS-10 (Limited Revision 2017)

(C) CAS-14 (Limited Revision 2017)

(D) CAS-15

(vii) BETA LTD. made a profit of ₹ 2,00,000 during the year ending March 31, 2022 as per costing records. If interest on investments and Income Tax paid were ₹ 15,000 and ₹ 90,000 respectively, what will be the profit as per financial records?

(A) ₹ 3,09,000

(B) ₹ 1,25,000

(C) ₹ 1,17,000

(D) None of the above

(viii) Cost plus contract is usually entered into those cases where

(A) Cost of certified and uncertified work

(B) Cost can be easily estimated

(C) Cost of certified work

(D) None of the above

(ix) The break-even point of GOMIN LTD. is ₹ 3,20,000. The fixed cost is ₹ 1,28,000 and the variable cost per unit is ₹ 12. What will be the P/V Ratio?

(A) 30%

(B) 40%

(C) 45%

(D) 50%

(x) In a factory of PERT LTD. where standard costing was followed, 4,000 kgs of materials at ₹15 per kg were consumed resulting in Material Cost Variance of ₹ 1,000 (Adv.). The Standard Material Cost of actual production was

(A) ₹ 61,000

(B) ₹ 60,000

(C) ₹ 59,000

(D) None of the above

(b) Match the statement in Column I with the most appropriate statement in Column II. (You may opt to write only the Roman numeral and the matched alphabet instead of copying contents into the answer book): 1×5=5

| | Column I | | Column II |
|---|---|---|---|
| (i) | Relevant Cost | (A) | Break-even Analysis |
| (ii) | Job Evaluation | (B) | Decision Package |
| (iii) | Pollution Control Cost | (C) | Assessment of the relative worth of jobs within a business enterprise |
| (iv) | Margin of Safety | (D) | Management by Exception |
| (v) | Zero-based Budgeting | (E) | CAS-14 (Limited Revision 2017) |
| | | (F) | Functional Budget |
| | | (G) | Specific Situation |
| | | (H) | Notional Cost |

(c) State whether the following are 'True' or 'False': (You may write only the Roman numeral and whether 'True' or 'False' without copying the statements into the answer book): 1×5=5

(i) Notional Costs and Imputed Costs mean the same thing.

(ii) Idle facility and idle time are the same.

(iii) JIT deals with controlling defects in time.

(iv) Multiple costing is suitable for the banking industry.

(v) CVP Analysis is a simple break-even analysis.

(d) Fill in the blanks: (You may write only the Roman numeral and the content filling the blank): 1×5=5

(i) _____ costs are historical costs which are incurred in the past.

(ii) _____ Analysis is used primarily for control of spare parts.

(iii) CAS-19 deals with the principles and method of determining _____.

(iv) A company maintains a margin of safety of 30% when P/V Ratio is 20%, and Profit is_____% of Sales.

(v) A flexible budget recognizes the behaviour of _____ and _____ costs.

## Section-B

Answer *any five* questions from questions number 2 to 8.

Each question carries 15 marks. 15×5=75

**2.** (a) M/s SJBA Private Limited manufactures 20,000 units of a product per month. The cost of placing an order is ₹ 1,500. The purchase price of the raw material is ₹ 100 per kg. The re-order period is 5 to 7 weeks. The consumption of raw materials varies from 200 kg to 300 kg per week, with the average consumption being 250 kg. The carrying cost of inventory is 9.75% per annum. Lead time for emergency purchases is 5 days.

You are required to calculate:

(i) Re-order quantity

(ii) Re-order level

(iii) Maximum level

(iv) Minimum level

(v) Average stock level

(vi) Danger level

8

(b) PITAB LTD. manufactures a single product and absorbed the production overhead at a pre-determined rate of ₹ 10 per machine hour.

Total production, overhead expenses incurred and the actual Machine hours for the department for the month of September, 2022 were ₹ 2,00,000 and 10,000 hours, respectively. Of the amount of ₹ 2,00,000, ₹ 30,000 became payable due to an award of the Labour Court and ₹ 10,000 was in respect of expenses of the previous year booked in the current month (September). Actual production was 40,000 units of which 30,000 units were sold.

On analyzing the reasons, it was found that 60% of the under-absorbed overhead was due to defective planning and the rest was attributed to the normal cost increase.

**Required**:

How would you treat the under-absorbed overhead in the Cost Accounts? 7

3. (a) What disclosures are required to be made in the cost statement as per Cost Accounting Standard (CAS)-3 on 'Production and Operation Overheads'? 7

(b) ROS Ltd. showed a Net Loss of ₹ 35,400 as per their Cost Accounts for the year ended 31st March, 2022. However, the Financial Accounts disclosed a net profit of ₹ 67,800 for the same period. The following information was revealed as a result of scrutiny of the figures of cost accounts and financial accounts:

| S.No. | Particulars | ₹ |
|---|---|---|
| (i) | Administrative overhead under recovered | 25,500 |
| (ii) | Factory overhead over recovered | 1,35,000 |
| (iii) | Depreciation under charged in Cost Accounts | 26,000 |
| (iv) | Dividend received | 20,000 |
| (v) | Loss due to obsolescence charged in Financial Accounts | 16,800 |
| (vi) | Income Tax provided | 43,600 |
| (vii) | Bank interest credited to Financial Accounts | 13,600 |
| (viii) | Value of Opening Stock:<br>In Cost Accounts<br>In Financial Accounts | <br>1,65,000<br>1,45,000 |
| (ix) | Value of Closing Stock:<br>In Cost Accounts<br>In Financial Accounts | <br>1,25,500<br>1,32,000 |
| (x) | Goodwill written-off in Financial Accounts | 25,000 |
| (xi) | Notional rent of own premises charged in Cost Accounts | 60,000 |
| (xii) | Provision for doubtful debts in Financial Accounts | 15,000 |

**Required**:

Prepare a Reconciliation Statement by taking costing net loss as the base. 8

**4.** (a) ZOXIN LTD. manufactures two types of pens 'Super Pen' and 'Normal Pen'. The cost data for the year ended 31st March, 2022 is as follows:

| | ₹ |
|---|---|
| Direct Materials | 8,00,000 |
| Direct Wages | 4,48,000 |
| Production Overhead | 1,92,000 |
| Total | 14,40,000 |

It is further ascertained that:

(1) Direct materials cost in Super Pen was twice as much as direct material in Normal Pen

(2) Direct Wages for Normal Pen were 60% of those for Super Pen

(3) Production overhead per unit was at the same rate for both the types

(4) Administration overhead was 200% of direct labour for each

(5) Selling cost was ₹ 1 per Super Pen

(6) Production and sales during the year were as follow:

| **Production** | | **Sales** | |
|---|---|---|---|
| | **No. of Units** | | **No. of Units** |
| Super Pen | 40,000 | Super Pen | 36,000 |
| Normal Pen | 1,20,000 | | |

(7) Selling price was ₹ 30 per unit for Super Pen.

**Required**:

Prepare a cost sheet for 'Super Pen' showing:

(i) Total work cost

(ii) Cost per unit and Total Cost

(iii) Profit per unit and Total Profit 8

(b) CISDON CHEM LTD. a multi-product manufacturing company, electrolysis common salt to obtain three products – CSD, CH and HY. During a costing period, the expenditure relating to the inputs for the common process amounted to ₹ 4,20,000. After separation expenses amounting to ₹ 1,90,000, ₹ 90,000 and ₹ 15,000 were incurred for CSD, CH, and HY respectively. The entire production of the Products was sold and ₹ 4,50,000, ₹ 3,00,000 and ₹ 72,000 were realized for the products, CSD, CH, and HY respectively. The selling expenses were estimated at 5% of the realization from the sale values. The company expected profits @ 15%, 12% and 10% of realization from the Sale of the products CSD, CH, and HY respectively.

**Required**:

Prepare a statement showing the apportionment of joint costs and profitability of each product. 7

**5.** (a) SANT TRAVELS AGENCY is a bus and operates a tourist service on daily basis. The bus starts from New City to Rest Village and returns to New City the same day. The distance between New City and Rest Village is 250 km. This trip operates for 10 days a month. The bus also plies for another 10 days between New City and Kolanpur and returns to New City the same day, the distance between these two places is 200 km. The bus makes local sight-seeing trips for 5 days in a month covering a total distance of 80 km per day.

The following data are given:

Cost of Bus ₹ 35 lakh. Depreciation 25% (Straight line method)

Driver's Salary = ₹ 16,000 p.m.

Conductor's Salary – ₹ 10,000 p.m.

Part-time clerk's salary – ₹ 6,000 p.m.

Insurance – ₹ 18,000 p.a.

Diesel consumption 5 km per litre @ ₹ 65 per litre

| | |
|---|---|
| Token Tax | ₹ 30,000 p.a. |
| Permit fee | ₹ 4,500 p.m. |
| Sundry Expenses | ₹ 1,000 for the month |
| Lubricant oil | ₹ 500 for every 200 km |
| Repairs and Maintenance | ₹ 11,000 p.m. |

The normal capacity of the bus is 50 passengers. While playing to and fro Rest Village the bus occupies 90% of the capacity and 80% when it plies between New City to Kolanpur (both ways). In New City, the bus runs at full capacity.

Passenger Tax is 15% of the net takings of the travel firms. Ignore interest and taxes.

**Required**:

Calculate the rate to be charged to Rest Village and Kolanpur from New City per passenger if the profit required to be earned is 25% of the takings of the Agency. 8

(b) Monteck Ltd., a construction company with a paid-up share capital of ₹ 50 lakhs undertook a contract to construct LIG house. The contract work commenced on 1st April, 2021 and the contract price was ₹ 50 lakhs. Cash received on account of the contract on 31.03.2022 was ₹ 18 lakh (90% of the work certified). Work completed but not certified was estimated at ₹ 1,00,000. As on 31.03.2022 material at the site was estimated at ₹ 30,000 and machinery at the site costing ₹ 2,00,000 was returned to stores. Plant and machinery at the site is to be depreciated at 5%. Wages outstanding on 31.03.2022 was ₹ 5,000.

| Particulars | ₹ |
|---|---|
| Land and Buildings | 15,00,000 |
| Plant and Machinery at cost (60% at site) | 25,00,000 |
| Lorries and other vehicles | 8,00,000 |
| Furniture | 50,000 |
| Office equipment | 10,000 |
| Materials sent to the site | 14,00,000 |
| Fuel and Power | 1,25,000 |
| Site expenses | 5,000 |
| Postage and telegrams | 4,000 |
| Office expenses | 8,000 |
| Rates and taxes | 15,000 |
| Cash at Bank | 1,33,000 |
| Wages | 2,50,000 |

**Required:**

(i) Prepare the Contract Account to ascertain the profit from the contract.

(ii) Calculate the value of WIP A/c to be shown in the Balance Sheet. 5+2=7

**6.** (a) SBZ Ltd., a manufacturing company using a standard costing system has the following production budget for November, 2022:

Product A= 20,000 units and Product B= 40,000 units

A standard hour represents 10 units of A and 8 units of B. The standard wage rate per hour is ₹ 0.50.

During the month 7500 hours were paid (@₹ 0.60 per hour) which included 350 unproductive hours due to unbudgeted holidays as also loss of production of 250 units of Product A due to machine breakdown.

Actual production for the month was 24,000 units of A and 38,000 units of B.

**Calculate:**

(i) Direct labour rate variance.

(ii) Direct labour idle time variance.

(iii) Direct labour efficient variance.

(iv) Direct labour total variance. 2×4= 8

(b) ASHREEN, a manufacturing company estimated its sales for the year 2022-23 quarter-wise as under:

| Quarter | Sales units |
|---|---|
| I | 30,000 |
| II | 37,500 |
| III | 41,250 |
| IV | 45,000 |

The opening of finished goods is 10,000 units and the company expects to maintain the closing stock of finished goods at 16,250 units at the end of the year. The production

pattern in each quarter is based on 80% of the sales of the current quarter and 20% of the sales of the next quarter. The opening stock of raw material at the beginning of the year is 10,000 kgs and the closing stock at the end of the year is required to be maintained at 5,000 kgs. Each unit of finished output requires 2 kgs of Raw materials.

You are required to prepare the following for the year 2022-23 quarter-wise:

(i) Production Budget (in units)

(ii) Raw material consumption budget (in quantity)

(iii) Raw material purchase budget (in quantity) for the year 2022-23 7

7. (a) SUBN Ltd. a single-product company sells its products at ₹ 60 per unit. In 2021, the company operated at a margin of 40%. The Fixed Costs amounted to ₹ 3,60,000 and the variable cost ratio to sales was 80%.

In 2022, it is estimated that the variable cost will go up by 10% and the fixed costs will increase by 5%.

**Required**:

Find the selling price required to be fixed in 2022 to earn the same P/V ratio as in 2021. Assuming the same selling price of ₹ 60 per unit in 2022, find the number of units required to be produced and sold to earn the same profit as in 2021. 8

(b) PANT Ltd., producing a single product sells it at ₹ 50 per unit variable cost is ₹ 35, and the fixed cost amount to ₹ 12 lakh per annum.

With this data, you are required to calculate the following treating each independent of the other.

(i) P/V ratio and break-even sales

(ii) New Break-even sales if variable cost increases by ₹ 3 per unit, without an increase in selling price

(iii) Increase in sales required if profits are to be increased by ₹ 2.4 lakhs

(iv) Percentage increase/decrease in sales volume units to off-set

(I) An increase of ₹ 3 in the variable cost per unit

(II) A 10% increase in selling price without affecting existing profits quantum 7

**8.** Write short notes on *any three* out of the following questions: 5×3=15

(a) Enumerate what are the objectives of cost accounting.

(b) What is just in time (JIT)? Discuss what are the advantage of JIT (any three).

(c) Zero-based Budgeting (ZBB).

(d) Enumerate what are the advantages of cost control.

# SUGGESTED ANSWERS TO QUESTIONS

## SECTION – A

**1X10 = 10 Marks**

**1. (a).**

(i) **(**C)
(ii) (B)
(iii) (B)
(iv) (C)/ (D)
(v) (D)
(vi) (A)
(vii) (B)
(viii) (A)/ (D)
(ix) (B)
(x) (C)

**1. (b).** **1X5 = 5 Marks**

(i) (G)
(ii) (C)
(iii) (E)
(iv) (A)
(v) (B)

**1. (c).** **1X5 = 5 Marks**

(i) True
(ii) False
(iii) False
(iv) False
(v) True

**1. (d).** **1X5 = 5 Marks**

(i) Sunk
(ii) VED (Vital, Essential, and Desirable)
(iii) Joint Cost
(iv) 6%
(v) Variable, Fixed

# SECTION – B

**(Any FIVE from questions number 2 to 8)**

**15X5=75 Marks**

**2. (a).** **8 Marks**

(i) Re-Order Quantity (ROQ) = 2000 Kg.
(ii) Re-order Level (ROL) = 2100 Kg.
(iii) Maximum Level = 3100 Kg
(iv) Minimum Level = 600 Kg.
(v) Average Stock Level = 1850 Kg OR 1600 Kg.
(vi) Danger Level = 1000 Kgs.

**2. (b).** **7 Marks**

**(Amount in ₹)**

| | |
|---|---|
| Under-absorbed Overheads | **60000** |
| Treatment of under-absorbed overhead in the cost Accounts: | |
| (i) 60% of under-absorbed overhead is due to defective planning. This being abnormal should be debited to the Costing Profit and Loss account (60000 × 0.60) | **36000** |
| (ii) Balance of 40% of under-absorbed overhead should be distributed over, closing stock of finished goods and cost of sales by supplementary rate (40% of 60000) | **24000** |

**3 (a):** **7 Marks**

**The cost statements shall disclose the following:**

(i) The basis of assignment of production or operation overheads to the cost objects.

(ii) Production or operation overheads incurred in foreign exchange.

(iii) Production or operation overheads relating to resources received from or supplied to related parties (Related party as per the applicable legal requirements relating to the cost statement as on the date of the statement).

(iv) Any subsidy, grant, incentive, or any amount of similar nature received or receivable reduced from production or operation overheads.

(v) Credits or recoveries relating to the production or operation overheads.

(vi) Any abnormal cost not forming part of the production or operation overheads

(vii) Any unabsorbed production or operation overheads.

**3. (b).** **8 Marks**

| **Particulars** | **Amount (₹)** |
|---|---|
| Net loss as per Cost Accounts | **(35400)** |
| Total Additions | **255100** |
| Total Deduction | **(151900)** |
| Net Profit as per Financial A/cs | **67800** |

**4. (a).** **8 Marks**

(i) Total work cost = ` 528000

(ii) Cost per unit and Total Cost = ` 23.09 and ` 831200

(iii) Profit per unit and Total profit = ` 6.91 and ` 248800

**4. (b).** **7 Marks**

**Statement showing the Apportionment of Joint Costs to the three Joint products and the Profitability of each product.**

| PARTICULARS | Products | | | |
|---|---|---|---|---|
| | CSD | CH | HY | Total |
| | (₹) | (₹) | (₹) | (₹) |
| Realization from sale | 450000 | 300000 | 72000 | 822000 |
| Less: Expected profit (15%, 12%, and 10%) on realization | 67500 | 36000 | 7200 | 110700 |
| Less: Selling exp. (5% on realization) | 22500 | 15000 | 3600 | 41100 |
| The estimated cost of production | 360000 | 249000 | 61200 | 670200 |
| Less: After separation costs | 190000 | 90000 | 15000 | 295000 |
| Estimated joint cost and their percentages | 170000<br>45.31% | 159000<br>42.38% | 46200<br>12.31% | 375200<br>100% |
| Actual joint cost apportioned in the ratio of estimated joint costs (45.31: 42.38: 12.31) | 190302 | 177996 | 51702 | 420000 |
| Add: After separation cost | 190000 | 90000 | 15000 | 295000 |
| The actual cost of production | 380302 | 267996 | 66702 | 715000 |
| Add: Selling expenses | 22500 | 15000 | 3600 | 41100 |
| Profit realized (Balancing figure) | 47198 | 17004 | 1698 | 65900 |
| Realization from sale | 450000 | 300000 | 72000 | 822000 |

**5. (a).** **8 Marks**

| **Charges Per Passenger:** | | |
|---|---|---|
| To Rest Village from New City | = 250 x 1.026 | = **₹ 257** |
| To Kolanpur from New City | = 200 x 1.026 | = ₹ **205** |

**5. (b).** **5+2 = 7 Marks**

**Contract Account for the period ending 31.03.2022**

**(Amount in ₹)**

| | | | | |
|---|---|---|---|---|
| To Material sent | | | By Work Certified | 2000000 |
| To Site | 1400000 | | 1800000 x (100/90) | |
| Less: Material at the site | 0000 | 1370000 | By Work not certified | 100000 |
| ” Wages | 250000 | | | |
| Add: Outstanding | 5000 | 255000 | | |
| ” Site Expenses | | 5000 | | |
| ” Postage and Telegram | | 4000 | | |
| ” Power and Fuel | | 125000 | | |
| ” Office Expenses | | 8000 | | |

| | | | |
|---|---|---|---|
| " Rates and Taxes | 15000 | | |
| " Depreciation (2500000 x 0.60 x 0.05) | 75000 | | |
| " Notional Profit (Balance C/d) | 243000 | | |
| | 2100000 | | 2100000 |
| " P & L A/c. 1/3 x 90/100 x 243000 | 72900 | | |
| " WIP – A/c. (Reserve of unrealized profit | 170100 | | |
| | 243000 | | 243000 |
| Working – in – Progress A/c. | | | |
| Work Certified | | 2000000 | |
| Less: Cash Received | | 1800000 | |
| | | 200000 | |
| Less: Reserve for unrealized profit | | 170100 | |
| | | 29900 | |
| Add: Work done but no certified | | 100000 | |
| | | 129900 | |

**6. (a).** **2X4 = 8 Marks**

i. Direct Labour Rate Variance = ₹ 750 (Adv.)
ii. Direct Labour Idle Time Variance = ₹ 187.50 (Adv.)
iii. Direct Labour efficiency variance = ₹ 12.50 (Fav.)
iv. Direct Labour total variance = ₹ 925 (Adv.)

**6. (b).** **7 Marks**

| Year 2022 – 23 Quarter | | | | | |
|---|---|---|---|---|---|
| | I Units | II Units | III Units | IV Units | Total Units |
| (i) Production Budget (in units) | 31500 | 38250 | 42000 | 48250 | 160000 |
| (ii) Raw Material consumption budget (in quantity) | 63000 | 76500 | 84000 | 96500 | 320000 |
| (iii) Raw Material purchase budget (in quantity) for the year 2022 – 23. = 315000 Kg | | | | | |

**7. (a).** **8 Marks**

Selling price required to be fixed in 2022 = ₹ 66
Number of Units to be produced and sold in 2022 = 85834 units

**7. (b).** **7 Marks**

(i) P/V Ratio and Break Even Sales = 30% and ₹ 40 Lakhs
(ii) New Break-even sales = ` 50 Lakhs
(iii) Increase in Sales = ` 8 Lakhs
(iv) I- Increase in Sales Volume = 25%
II- Decrease in Sales Volume = 25%

**8. Short Notes: (ANY THREE)**

**5X3=15 Marks**

**(a) Objective of Cost Accounting:**

The following are the main objectives of Cost Accounting:

(i) To ascertain the Costs under different situations using different techniques and systems of costing

(ii) To determine the selling prices under different circumstances

(iii) To determine and control efficiency by setting standards for Materials, Labour, and Overheads

(iv) To determine the value of closing inventory for preparing financial statements of the concern

(v) To provide a basis for operating policies which may be the determination of Cost Volume relationship, whether to close or operate at a loss, whether to manufacture or buy from the market, whether to continue the existing method of production or to replace it by a more improved method of production etc.

**(b) Just-in-Time (JIT):**

Just in time (JIT) is a production strategy that strives to improve the business return on investment by reducing in-process inventory and associated carrying costs. Inventory is seen as incurring costs, or waste, instead of adding and storing value contrary to traditional accounting. In short, the Just-in-Time inventory system focuses on "the right material, at the right time, at the right place, and in the exact amount" without the safety net of inventory.

**The advantages of Just - in - Time system are as follows: (Any Three)**

(i) Increased emphasis on supplier relationships. A company without inventory does not want a supply system problem that creates a part shortage. This makes supplier relationships extremely important.

(ii) Supplies come in at regular intervals throughout the production day.

(iii) Reduces the working capital requirements, as very little inventory is maintained.

(iv) Minimizes storage space.

(v) Reduces the chance of inventory obsolescence or damage.

**(c) ZERO-BASED BUDGETING (ZBB):**

Zero-Based Budgeting (ZBB) is a method of budgeting which requires each cost element to be specifically justified, though the activities to which the budget relates are being undertaken for the first time, without approval, the budget allowance is 'zero'. It is an activity-based budgeting system in which a budget is prepared for each activity and the justification in the form of cost-benefits for the activity is necessary to be given.

**ZBB involves various stages:**

(a) identification of decision packages and their description in detail,

(b) evaluation of decision packages,

(c) selection of decision packages according to priority, and

(d) allocation of resources after approval of the budget committee and the top management.

**(d) Advantages of Cost Control**

The advantages of cost control are mainly as follows

(i) Achieving the expected return on capital employed by maximizing or optimizing profit
(ii) Increase in productivity of the available resources
(iii) Reasonable price for the customers
(iv) Continued employment and job opportunities for the workers
(v) Economic use of limited resources of production
(vi) Increased credit worthiness
(vii) Prosperity and economic stability of the industry.

**INTERMEDIATE EXAMINATION** **SET 1**

**MODEL QUESTION PAPER** **TERM – JUNE 2023**

**PAPER - 8**

**COST ACCOUNTING**

**Time Allowed: 3 Hours** **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

Where considered necessary, suitable assumptions may be made and clearly indicated in the answer.

Answer Question No. 1 and any five from Question No. 2, 3, 4, 5, 6, 7 and 8.

## SECTION - A

## (Compulsory)

**1. (a)** Choose the correct answer from the given alternatives (you may write only the Roman numeral and the alphabet chosen for your answer): **[1 × 12 = 12]**

(i) Costs which are ascertained after they have been incurred are known as
   a. Sunk Costs
   b. Imputed Costs
   c. Historical Costs
   d. Opportunity Costs

(ii) Prime cost plus variable overheads is known as
   a. Factory Cost
   b. Marginal Cost
   c. Cost of Production
   d. Total Cost

(iii) In which of the following methods, issue of materials is priced at pre-determined rate?
   a. Specific price method
   b. Standard price method
   c. Inflated price method
   d. Replacement price method

(iv) For reducing the labour cost per unit, which of the following factors is the most important?
   a. Low wage rates
   b. Longer hours of work
   c. Higher input-output ratio
   d. Strict control and supervision

(v) Maximum possible productive capacity of a plant when no operating time is lost is its
   a. Normal capacity
   b. Practical capacity
   c. Theoretical capacity
   d. Capacity based on sales expectancy

(vi) In job costing, which of the following documents is used to record the issue of direct materials to a job?
   a. Goods Receipt Note
   b. Purchase Order
   c. Purchase Requisition Note
   d. Material Requisition Note

(vii) The main purpose of accounting of joint products and by-products is to
   a. determine the profit/loss on each product line.
   b. determine the selling price.
   c. comply with the statutory requirements.
   d. identify the cost and load it on the main product.

(viii) The following is not treated as a manufacturing overhead:
   a. Lubricants
   b. Cotton waste
   c. Apportioned administration overheads
   d. Night shift allowance paid to a factory worker due to general work pressure.

(ix) When you attempt a reconciliation of profits as per Financial Accounts and Cost Accounts, the following is done:
   a. Add the under absorption of overheads in Cost Accounts if you start from the profits as per Financial Accounts.
   b. Add the under absorption of overheads in Cost Accounts if you start from the profits as per Cost Accounts.
   c. Add the over absorption of overheads in Cost Accounts if you start from the profits as per Financial Accounts.
   d. Add the over absorption of overheads in Cost Accounts if you start from the profits as per Cost Accounts.

(x) The fixed-variable cost classification has a special significance in the preparation of
   a. Cash budget
   b. Master budget
   c. Flexible budget
   d. Capital budget

(xi) Which one of the following is related to the calculation of labour turnover.
   a. Replacement method
   b. Cost of utilities
   c. Decision package
   d. Direct expenses

(xii) Cost Accounting Standard 10 (CAS-10) relates to
   a. Cost of utilities
   b. Decision package
   c. Direct expenses
   d. Production strategy

**(b) State whether the following statements are "True" or "False". [1 × 7 = 7]**

(i) Profit is the result of two varying factors sales and variable cost.
(ii) Bin card is a record of both quantities and value.
(iii) Overtime premium is directly assigned to cost objects.
(iv) In a reconciliation statement, expenses shown only in financial accounts are added to financial profit.
(v) The basic assumption under which Direct Costing is operational is that the contribution to sales ratio remains constant at all levels of activity.
(vi) Performance Budgeting is synonymous with Responsibility Accounting.
(vii) Any deviation from the standards can be quickly detected and responsibility pinpointed so that the company can take appropriate action to eliminate inefficiencies or take advantage of efficiencies - this is termed as management by exception.

**(c) Fill in the blanks [1 × 6 = 6]**

(i) _____costs are historical costs which are incurred in the past.
(ii) In Absorption Costing, _____cost is added to inventory.
(iii) CAS-2 is the Cost Accounting Standard on_____determination.
(iv) _____is the summary of all functional budgets.
(v) Standard Costing is one of the_____techniques.
(vi) Distribution of identifiable expenses to any department is called_____.

**SECTION - B**

**(Answer any five questions)**

2. (a) Fire, Water and Air Ltd is a small machine part manufacturing company. You are the cost accountant of the unit. The top management places before you the following information from the cost records of the company. The records refer to the six months ending on 31st Dec., 2022.

| | ` |
|---|---|
| Materials used | 1,50,000 |
| Direct wages | 1,20,000 |
| Factory overhead expenses | 24,000 |
| Office expenses | 17,640 |

From the above particulars you are to prepare a Cost Sheet for the period. The top management also seeks from you the price which the company should quote for the manufacture of a machine requiring materials valued at ` 1,250 and expenditure on productive wages of ` 750, so that the price may yield a profit of 20% on the selling price.

For the purpose of price quotation, you are to charge factory overhead as a percentage of direct wages and office overhead as a percentage of works cost which is the standard company policy. **[7]**

(b) (i) What is direct expense?

(ii) State the definition of direct expenses as per CAS 10

**(iii)** State the principles of measurement of direct expense as per CAS 10 (any four) **[1 + 2 + 5 = 8]**

3. (a) ASA FP LLP manufactures a particular brand of fountain pens called ASA MAYA, which requires ebonite 'Nicco' for the blank. The following particulars were collected for the year 2021-22:

| | |
|---|---|
| Monthly demand of' Nicco' | 7500 units |
| Cost of placing an order | ` 500 |
| Re-order period | 5 to 8 weeks |
| Cost per unit | ` 60 |
| Carrying cost % p.a. | 10% |
| Normal usage | 500 units per week |
| Minimum Usage | 250 units per week |
| Maximum Usage | 750 units per week |

You are required to calculate

(i) Re-order quantity
(ii) Re-order level
(iii) Minimum stock level
(iv) Maximum stock level
**(v)** Average stock level **[8]**

(b) Calculate total monthly remuneration of three workers, A, B and C from the following data.

- Standard production per month per worker – 1000 units, actual production during the month, A – 850 units, B – 750 units and C – 950 units.
- Piecework rate `10 per unit [actual production]
- Additional production bonus is `10 for each percentage of actual production exceeding 80%
- Dearness pay fixed `50 per month. **[7]**

4. (a) LOTUS FP LLP has three Production Departments and two Service Departments. The overhead distribution sheet showed the following totals:

| Production Departments | ` |
|---|---|
| A | 25,000 |
| B | 31,000 |
| C | 28,000 |
| Service Departments | |
| S | 8,000 |
| T | 13,900 |

Given that the two service departments cater to the needs of the three production departments as per the following schedule (in percentage).

| | A | B | C | S | T |
|---|---|---|---|---|---|
| Department S | 30% | 20% | 40% | - | 10% |
| Department T | 40% | 15%, | 25% | 20% | - |

Under the circumstance you are required to distribute the Overhead cost of the two service department on suitable basis such that iterations are avoided.
What according to you is the other way of apportioning the service department overheads under the above circumstance? **[3+4=7]**

(b) In XYZ Ltd, the management finds that for a particular period the Profit as per cost accounts is ` 2,91,000 while for the same period Profit as per financial accounts in ` 2,88,000. He extracts the following from the records as the possible reason for the difference.

- Works overheads under-recovered ` 19,000
- Administration overheads under - recovered ` 45,500
- Selling overheads over - recovered ` 39,000
- Overvaluation of opening stock in cost accounts ` 30,000
- Overvaluation of closing stock in cost accounts ` 15,000
- Interest earned during the year ` 7,500
- Rent received during the year ` 54,000
- Bad debts written off during the year ` 18,000
- Preliminary expenses written off during the year ` 36,000

You, as a cost accountant of XYZ Ltd, are asked to analyse the above information and discuss how the difference between profit as per cost accounts and profit as per financial accounts can be presented to management in a suitable manner. **[8]**

5. (a) You have been recently appointed as a Cost Accountant of Ratnamsons LTD. After going through the cost records you find that the selling price of Job No. 3286 has been calculated in the previous year on the following basis:

| Particulars | Amount (₹) |
|---|---|
| Materials | 1,208 |
| Direct Wages – 22 hours at `25 per hour | 550 |
| Department<br>A – 10 hours<br>B – 4 hours<br>C – 8 hours | |
| Prime Cost | 1,758 |
| Plus 33% on Prime Cost | 586 |
| Total | 2,344 |

An analysis of the previous year's Profit & Loss Account shows the following:

| Particulars | Amount (₹) | Particulars | Amount (₹) |
|---|---|---|---|
| Materials Used | 77,50,000 | Factory Overheads: | |
| Direct Wages: | | A | 2,50,000 |
| A | 5,00,000 | B | 4,00,000 |
| B | 6,00,000 | C | 1,00,000 |
| C | 4,00,000 | Selling Overhead | 30,00,000 |

You are required to:

(i) Make suitable calculations after making revision to the cost estimate on the basis of the previous year's figures;

(ii) Draw up a Job Cost Sheet on the basis of the calculations made in (i) above.

**(iii)** Make suitable analysis on per unit basis and infer the selling price if profit is to be estimated at add to 10% of cost of sales. **[3+3+2=8]**

(b) VAZIR LTD. undertook a contract for ` 5,00,000 on 1st January, 2022. The company furnishes the following details for the year ended 31st December, 2022:

| | ` |
|---|---|
| Materials consumed | 1,65,000 |
| Direct Expenses | 5,000 |
| Wages | 30,000 |
| Materials returned to stores | 5,000 |
| Materials stolen from site | 10,000 |
| Insurance claim admitted | 6,000 |
| Works expenses @ 20%onwages | |
| Office expenses @ 10%onworkscost | |
| Materials in hand on 31.12.2022 | 15,000 |
| Cashreceivedtotheextentof90%ofworkscertified | 2,70,000 |
| Cost of work uncertified | 11,000 |

A machine was sent to site costing `60,000 with a scrap value of ` 10,000 and its useful life is 5 years. The machine was used for the contract for 146 days.

Required:

You are required to make suitable calculations and prepare the Contract Account for the year ended 31/12/2022 showing therein the cost of contract and also calculate the amount of profit or loss to be transferred to the Profit & Loss Account. **[7]**

6. (a) The following details are extracted from the cost records of MAGNACARTA LTD, an oil refining factory for the year ended 31st March, 2022. Purchased 2000 tons of copra for `1,00,000 and other expenses were as under:

| | Crushing (`) | Refining (`) | Finishing (`) |
|---|---|---|---|
| Cost of Labour | 10,000 | 6,000 | 4,000 |
| Sundry Material | 4,000 | 3,000 | 2,000 |
| Electric Power | 3,000 | 2,000 | 1,600 |
| Steam | 2,000 | 2,000 | 1,500 |
| Repair of Machine | 2,000 | 1,000 | 500 |
| Cost of Casks | — | — | 7,500 |

Factory Expenses were ` 10,000 to be apportioned on the basis of wages. 1700 tons of crude oil was produced; 1540 tons of oil was refined and finally 1500 tons of oil was finished for delivery. Realized ` 2,000 from sale of sacks; ` 5,000 by sale of 250 tons of copra residue and ` 5,100 by sale of 120 tons of by-products in refining process.

Prepare Process Accounts for the year ending on 31st March, 2022. **[8]**

(b) (i) There are two warehouses for storing finished goods produced in a factory. Warehouse 'A' is at a distance of 10 kms. and Warehouse 'B' is at a distance of 15 kms from the factory. A fleet of 5 tonne lorries is engaged in transporting the finished goods from the factory. The records show that the lorries average a speed of 30 kms. per hour when running and regularly take 40 minutes to load at the factory. At warehouse 'A' unloading takes 30 minutes per load while at warehouse 'B' it takes 20 minutes per load. Drivers' Wages, depreciation, insurance and taxes amount to `18 per hour operated. Fuel oil, tyres, repairs and maintenance cost ` 2.40 per kilometer.

Prepare a statement showing the cost per tonne kilometer of carrying the finished goods to the two warehouses.

(ii) Distinguish between absolute basis and commercial basis of calculating composite cost unit. **[4+3=7]**

7. (a) Lurvey Men's Clothing's revenues and cost data for 2022 are as follows:

| Particulars | ` | ` |
|---|---|---|
| Revenues | | 6,00,000 |
| Cost of goods sold | | 3,00,000 |
| Gross margin | | 3,00,000 |
| Operating costs: | | |
| Salaries (fixed) | 1,70,000 | |
| Sales commissions (10% of sales) | 60,000 | |
| Depreciation of equipment and fixtures | 20,000 | |
| Store rent (4,500 per month) | 54,000 | |
| Other operating costs | 45,000 | 3,49,000 |
| Operating income (loss) | | -49,000 |

Mr. Lurvey, the owner of the store, is unhappy with the operating results. An analysis of other operating costs reveals that it includes ` 30,000 variable costs, which vary with sales volume, and ` 15,000 (fixed) costs. Mr. Lurvey approaches you as a qualified cost accountant and asks you to

(i) Critically assess the contribution margin of Lurvey Men's Clothing.

(ii) Evaluate the contribution margin percentage.

**(iii)** Mr. Lurvey estimates that he can increase revenues by 15% by incurring additional advertising costs of `13,000. Assess the impact of the additional advertising costs on operating income. **[7]**

(b) The following particulars are extracted from the records of a company.

| Particulars | Per Unit | |
|---|---|---|
| | **Product A** | **Product B** |
| Sales | ` 100 | ` 120 |
| Consumption Of Material | 2 Kg | 3 Kg |
| Material Cost | ` 10 | ` 15 |
| Direct Wages Cost | ` 15 | ` 10 |
| Direct Expenses | ` 5 | ` 6 |
| Machine Hours Used | 3 hours | 2 hours |
| **Overhead Expenses** | | |
| Fixed | ` 5 | ` 10 |
| Variable<br>Direct Wages per hour ` 5 | ` 15 | ` 20 |

I. You as a Cost Accountant is required to comment on profitability of each product, both of which use the same raw material in the following alternative situations:

a. Total sales potential in units is limited;

b. Total sales potential in value is limited;

c. Raw material is in short supply;

d. Production capacity (in terms of machine hours) is the limiting factor

**II.** Assuming raw material as the key factor, availability of which is 10,000 kgs and each product cannot be sold more than 3,500 units, advise on the product mix which will yield the maximum profit. **[8]**

8. (a) Mr. Hardik, the owner of Trident Ltd. provides the following information regarding the production process of a particular fountain pen called the Magneye. After careful consideration he has noted that a group of workers usually consists of 10 skilled, 5 semi-skilled and 5 unskilled workers, paid at standard hourly rates of ` 50.00, ` 32.00 and ` 28.00 respectively. In a normal working week of 40 hours, the group is expected to produce 1,000 units of Magneye.

During March 2023, adjustments were to be made to the actual composition of the group, due to non-availability of labour and actually consisted of 13 skilled, 4 semi-skilled and 3 unskilled employees; actual wages paid were ` 48.00, ` 34.00 and ` 26.00 respectively.

Two hours were lost due to abnormal idle time and 960 units of Magneye were produced.

Mr Hardik is worried about the variances in labour cost and asks you as a Cost Accountant to analyse the labour cost variances. **[7]**

(b) Trinity Engineering Ltd. wishes to calculate an operating budget for the forthcoming period. Information regarding products, costs and sales levels is as follows:

| **Product** | **A** | **B** |
|---|---|---|
| Material required | | |
| X (kg) | 2 | 3 |
| Y (litres) | 1 | 4 |
| Labour hours required | | |
| Skilled (hours) | 4 | 2 |
| Semi – Skilled (hours) | 2 | 5 |
| Sales level (units) | 2000 | 1500 |
| Opening stock (units) | 100 | 200 |

Closing Stock of materials and finished goods will be sufficient to meet 10% of demand. Opening stocks of material X was 300 kg and for material Y was 1000 litres. Material prices are ` 100.00 per kg for material X and ` 80.00 per hour for the semi-skilled workers.

You are required to prepare the following budget:

- Production budget
- Material usage budget
- Material Purchase budget **[8]**

**INTERMEDIATE EXAMINATION** **SET 2**

**MODEL ANSWERS** **TERM – JUNE 2023**

**PAPER - 8**

**COST ACCOUNTING**

**Time Allowed: 3 Hours** **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

Where considered necessary, suitable assumptions may be made and clearly indicated in the answer.

Answer Question No. 1 and any five from Question No. 2, 3, 4, 5, 6, 7 and 8.

## SECTION - A

## (Compulsory)

**1. (a)**

| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | (x) | (xi) | (xii) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| c | d | d | c | a | c | d | a | c | a | c | c |

**(b)**

| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) |
|---|---|---|---|---|---|---|
| True | False | False | True | False | True | False |

**(c)**

| (i) | (ii) | (iii) | (iv) | (v) | (vi) |
|---|---|---|---|---|---|
| pre-determined | document | excess (or additional or more or higher) | capacity | reconcile | sales budget |

## SECTION - B

## (Answer any five questions)

2. (a)

| High Low method | Units | Cost in ₹ |
|---|---|---|
| Highest month | 900 | 2,000 |
| Lowest month | (400) | (1,000) |
| Net total | 500 | 1000 |

The additional cost between the highest and lowest month

$$\frac{₹1,000}{500} = ₹\ 2 \text{ per unit}$$

So, taking either higher or lower number

Higher → 900×₹ 2 = ₹ 1,800 So fixed cost = ₹ 200

Lower → 400 × ₹ 2 = ₹ 800 So fixed cost = ₹ 200

**(b)** (i) The Accounting standard 6 (CAS -6) deals with principles and methods of determining the Material Cost. Material for the purpose of this standard includes raw materials, process materials, and additives, manufactured / bought out components, sub-assemblies, accessories, semi-finished goods, consumable stores, spares and other indirect materials. This standard does not deal with Packing Materials as a separate standard is being issued on the subject. This standard deals with the principles and methods of classification, measurement and assignment of Material Cost, for determination of the cost of product or service, and the presentation and disclosure in cost statements.

- **Objective** - The objective of this standard is to bring uniformity and consistency in the principles and methods of determining the Material Cost with reasonable accuracy.
- **Scope-** This standard should be applied to cost statements which require classification, measurement, assignment, presentation and disclosure of Material Costs including those requiring attestation.

(ii) The Institute of Cost Accountants of India issued 24 CAS till to date (31/03/2023). Classification of cost is the arrangement of items of costs in logical groups having regard to their nature (subjective classification) or purpose (objective classification).

The Scheme of classification should be such, so that every item of cost can be classified. As per CAS-1 the following basis are normally followed:

a) Nature of expense;
b) Relation to object – traceability;
c) Functions / activities;
d) Behaviour - Fixed, Semi-variable or Variable;
e) Management decision making;
f) Production Process and
g) Time period

(iii) The cost statements shall disclose the following: -

1. The basis of assignment of overheads to the cost objects.
2. Overheads incurred in foreign exchange.
3. Overheads relating to resources received from or supplied to related parties.
4. Any Subsidy / Grant / Incentive or any amount of similar nature received / receivable reduced from overheads.
5. Credits / recoveries relating to overheads.
6. Any abnormal cost not forming part of the overheads.
7. Any unabsorbed overheads.

**3. (a)**

i. $EOQ = \sqrt{\frac{2AO}{C}}$

A = Annual requirement = 36,000 units

O = Ordering Cost per order = ₹ 25

C = Carrying cost per unit per annum = 1 x 20% = ₹ 0.20

$EOQ = \sqrt{\frac{2 \times 36{,}000 \times 25}{0.20}}$ = 3,000 units

**Comparative Cost Statement of Existing Purchase Policy with proposed EOQ Purchase Policy**

| | **Existing Purchase Policy Ordering Quantity = $\frac{36{,}000}{6}$ = 6,000 units** | | **Proposed EOQ Purchase Policy Ordering Quantity = 3,000 units** | |
|---|---|---|---|---|
| | | ₹ | | ₹ |
| Purchase Cost | 36,000 x 1 | 36,000 | 36,000 x 1 | 36,000 |
| Ordering Cost | 6 x 25 | 150 | 12 x 25 | 300 |
| Carrying Cost | $\frac{1}{2} \times 6{,}000 \times 1 \times 20\%$ | 600 | $\frac{1}{2} \times 3{,}000 \times 1 \times 20\%$ | 300 |
| Total Cost | | 36,750 | | 36,600 |

Net Savings = ₹ 36,750 - ₹ 36,600 = ₹ 150

(ii) This is also in the form of incidental material residue coming out of certain types of manufacturing processes but it is usually in small amounts and has low measurable utility or market value, recoverable without further processing. Numerous examples of scrap may be given; scrap may arise in the form of turnings, borings, trimmings, fillings, shavings etc., from metals on which machine operations are carried out; saw dust and trimmings in the timber industry; dead heads and bottom ends in foundries; and cuttings, pieces, and split in leather industries. Scrap should always be physically available unlike waste which may or may not be present in the form of a residue.

Accounting treatment of scrap is as follows:

- **Sales credited to revenue**

  In this method, the scrap is not cost and its value does not, therefore, appear separately in the cost accounts. Only a quantitative record of the scrap returned to storeroom from the shops is maintained and the sale value realized

from time to time is credited to the profit and loss account as miscellaneous revenue.

- **Credit to overhead**
  In this method and in the following method the scrap is assigned a cost. The cost is usually the sale value of the scrap less selling and distribution costs. If the scrap has no ready market but has only utility or use value, and is taken as a credit to manufacturing overhead. The effect of this credit is to reduce the overhead recovery rate. When predetermined overhead rates are in use, it is more expedient to credit an estimated allowance for the scrap instead of the amount of actual scrap.
- **Credit to jobs**
  The scrap is assigned a cost and is traced to the job which yielded the scrap. This affords a reasonable amount of credit to the jobs and widely different.
- **Transfer to other jobs**
  Scrap arising in one job may be issued for utilization in another job. Such transfers of scrap from one job to another should be affected through Material Transfer Notes. Alternatively, scrap may be returned to store room and subsequently issued to another job for utilisation. The latter method is more appropriate when some further processing is required on the scrap before it can be utilized for other jobs.

**(b)** **(i)** Labour turnover is the rate of change in the labour force of a concern during a specific period. In every organisation some employees leave every year while new employees are recruited in their place. This is a natural phenomenon in industrial sector and it gives rise to the problem of labour turnover. The rate at which the employees depart from the organisation is normally measured as the ratio of number of persons leaving in a period to the average number of employees on the pay roll. A controlled level of labour turnover is considered as desirable because it helps the firm to adjust the size of its labour force in response to needs such as for seasonal changes or changes in technology.

The rate of labour turnover is high if the number of employees leaving the organisation occurs frequently. This leads to—

(i) decrease in the productivity and efficiency in the concern,
(ii) destabilize normal flow of work,
(iii) increases the labour cost.

**Causes of Labour Turnover**

The causes giving rise to high labour turnover may be broadly classified under the following heads:

- **Personnel Causes:** Workers may leave employment purely on personal grounds, e.g.,
  a) Dislike for the job, locality or environments.
  b) Domestic troubles and family responsibilities.
  c) Change of line for betterment.
  d) Retirement due to old age and ill health.
  e) Death.

  In all such cases, personal factors count the most and employer can practically do nothing to help the situation.
- **Unavoidable Causes:** In certain circumstances it becomes obligatory on the part of the management to ask some of the workers to leave. These circumstances are:
  a) Retrenchment due to seasonal trade, shortage of any material and other resources, slack market for the product, etc.
  b) Discharge on disciplinary grounds.
  c) Discharge due to continued or long absence.
- **Avoidable Causes:** Under this head, may be grouped the causes which need the attention of the management most so that the turnover may be kept low by taking remedial measures. The main reasons for which workers leave are:
  a) Unsuitability of job
  b) Low pay and allowance
  c) Unsatisfactory working conditions
  d) Unhappy relations with co-workers and unsatisfactory behaviour of superior
  e) Dispute between rival trade unions.
  f) Lack of transport, accommodation, medical and other facto₹
  g) Lack of amenities like recreational centres, schools, etc.

  The above causes may also be classified in a different manner under three heads, viz., Financial Causes, Social and Economic Causes and Psychological Causes relating to human relationship.

**Measurement of Labour Turnover**

It is essential for any organisation to measure the Labour Turnover. This is necessary for having an idea about the turnover in the organisation and also to

compare the labour turnover of the previous period with the current one. The following methods are available for measurement of the labour turnover:

- **Additions Method:** Under this method, number of employees added during a particular period is taken into consideration for computing the Labour Turnover. The method of computing is as follows:

  Labour Turnover = $\frac{\text{Number of Additions}}{\text{Average Number of Workers during the period}}$ x 100

- **Separation Method:** In this method, instead of taking the number of employees added, number of employees left during the period is taken into consideration. The method of computation is as follows:

  Labour Turnover = $\frac{Number\ of\ Separation}{\text{Average Number of Workers during the period}}$ x 100

- **Replacement Method:** In this method neither the additions nor the separations are taken into consideration. The number of employees replaced is taken into consideration for computing the labour turnover.

  Labour Turnover = $\frac{Number\ of\ Replacements}{\text{Average Number of Workers during the period}}$ x 100

- **Flux Method:** Under this method Labour Turnover is computed by taking into consideration the additions as well as separations. The turnover can also be computed by taking replacements and separations also. Computation is done as per the following methods:

  Labour Turnover = $\frac{\frac{1}{2}\text{ x (Number of Additions+Number of Separations)}}{\text{Average Number of workers during the period}}$ x 100

(ii) Let 'T' be the time taken by the worker

Earnings under Rowan Plan = T x R + $\frac{TS}{TA}\ x\ T\ x\ R$

T = Time Taken,

TA = Time Allotted or Allowed,

TS = Time Saved = TA – T,

R = Rate per hour

or, Earnings = T x 1.25 + $\frac{40-T}{40}\ x\ T\ x\ 1.25$

or = $\frac{50T+50T-1.25T^2}{40}$

or = $\frac{100-1.25T^2}{40}$

Factory Cost = Material Cost + Wages + Factory Overhead

or, 161.875 = 100 + $\frac{100T-1.25T^2}{40}$ +0.5T

or, 6,475 = 4,000 + 100T – 1.25$T^2$ + 20T

or, $1.25T^2$ - 120T + 2,475 = 0
Dividing the equation by 1.25
or, $T^2$ - 96T + 1,980 = 0
or, $T^2$ - 66T - 30T + 1,980 = 0
or, T (T - 66) - 30 (T - 66) = 0
or, (T - 66) (T - 30) = 0
or, T ≠ 66 [Since, Time taken should not be more than Time Allotted]
So, T = 30. Hence, Time taken by the worker = 30 hours

**4. (a)** Since, different materials are used for producing products, it is advisable, preferable and appropriate to use the method of absorbing overheads based on percentage of material cost instead of percentage on prime cost which is shown as follows:

| **Particulars** | **Product A** ₹ | **Product B** ₹ | **Product C** ₹ |
|---|---|---|---|
| Materials | 1,600 | 2,000 | 800 |
| Labour | 1,200 | 1,000 | 400 |
| Prime Cost | 2,800 | 3,000 | 1,200 |
| Actual Overhead Incurred | 800 | 650 | 350 |
| | $= \frac{Rs.\ 800}{Rs.\ 1,600} x100$ **= 50%** | $= \frac{Rs.\ 650}{Rs.\ 2,000} x100$ **= 32.50%** | $= \frac{Rs.\ 350}{Rs.\ 800} x100$ **= 43.75%** |

Overhead Recovery Rate is calculated based on historical data. So, actual overhead is used to calculate the future recovery rate.

**(b)**

**Journal**

| **Particulars** | | **Dr.** Amount (₹ ) | **Cr.** Amount (₹ ) |
|---|---|---|---|
| Material Control A/c | Dr | 40,000 | |
| To Cash A/c | | | 40,000 |
| Work in Progress Control A/c | Dr | 30,000 | |
| To Material Control A/c | | | 30,000 |
| Wages Control A/c | Dr | 24,000 | |
| To Cash A/c | | | 24,000 |
| Factory Overhead Control A/c (24,000 x 30%) | Dr | 7,200 | |
| To Wages Control A/c | | | 7,200 |
| Work in Progress Control A/c (24,000 x 70%) | Dr | 16,800 | |
| To Wages Control A/c | | | 16,800 |

| | | | |
|---|---|---|---|
| Factory Overhead Control A/c Dr<br>To Cash | | 19,000 | <br>19,000 |
| Work in Progress Control A/c Dr<br>To Factory Overhead Control A/c | | 18,000 | <br>18,000 |
| Selling and Distribution Overhead Control A/c Dr<br>To Cash A/c | | 4,000 | <br>4,000 |
| Cost of Sales A/c Dr<br>To Selling and Distribution Overhead A/c | | 4,000 | <br>4,000 |
| Finished Goods Control A/c Dr<br>To Work in Progress Control A/c | | 40,000 | <br>40,000 |
| Debtors A/c Dr<br>To Profit and Loss A/c | | 58,000 | <br>58,000 |
| Cash A/c Dr<br>To Debtors A/c | | 13,800 | <br>13,800 |
| Creditors A/c Dr<br>To Cash A/c | | 12,000 | <br>12,000 |

**5. (a)**

Cost Sheet Component 'The Blank'

| Particulars | Batch Size | | | | | |
|---|---|---|---|---|---|---|
| | **10 Components** | | **100 Components** | | **1,000 Components** | |
| | p.u. | Total | p.u. | Total | p.u. | Total |
| | ₹. | ₹. | ₹. | ₹. | ₹. | ₹. |
| **A. Production Cost** | | | | | | |
| Material Cost | 0.06 | 0.60 | 0.06 | 6.00 | 0.06 | 60.00 |
| Machine Operators Wages (WN 1) | 0.12 | 1.20 | 0.12 | 12.00 | 0.12 | 120.00 |
| Overheads (WN 2) | 0.25 | 2.50 | 0.25 | 25.00 | 0.25 | 250.00 |
| **Total Production Cost** | **0.43** | **4.30** | **0.43** | **43.00** | **0.43** | **430.00** |
| B. **Setting up Cost** | | | | | | |
| Machine Operator Wages (WN 3) | 0.168 | 1.68 | 0.0168 | 1.68 | 0.00168 | 1.68 |
| Overheads (WN 4) | 0.350 | 3.50 | 0.035 | 3.50 | 0.0035 | 3.50 |
| **Total Setting up Cost** | **0.518** | **5.18** | **0.0518** | **5.18** | **0.00518** | **5.18** |
| **Total Cost** | **0.948** | **9.48** | **0.4818** | **48.18** | **0.43518** | **435.18** |

**Working Notes:**

| | 10 Components | 100 Components | 1,000 Components |
|---|---|---|---|
| Time taken to produce the Components @ 10 minutes per component | 100 Minutes $or, \frac{100}{60}$ *hours* | 1,000 Minutes $or, \frac{1,000}{60}$ *hours* | 10,000 Minutes $or, \frac{10,000}{60}$ *hours* |
| 1. Machine Operators Wage @ ₹ 0.72 per hour | $\frac{100}{60} x\ 0.72 = Rs.\ 1.20$ | $\frac{1,000}{60} x\ 0.72 = Rs.\ 12$ | $\frac{10,000}{60} x\ 0.72 = Rs.\ 120$ |
| 2. Overheads @ ₹ 1.50 per hour | $\frac{100}{60} x\ 1.50 = Rs.\ 2.50$ | $\frac{1,000}{60} x\ 1.50 = Rs.\ 25$ | $\frac{10,000}{60} x\ 1.50 = Rs.\ 250$ |

**Setting up Cost**

**3.** Machine Operators Wages = 2 hours 20 minutes ×₹ 0.72 = $2\frac{1}{3} \times 0.72 = Rs.\ 1.68$

**4.** Overhead = 2 hours 20 minutes ×₹ 1.50 = $2\frac{1}{3} \times 1.50 = Rs.\ 3.50$

**(b)**

Dr **Contract Account** Cr

| Particulars | ₹ | Particulars | ₹ |
|---|---|---|---|
| To Materials A/c (Purchased) | 1,00,000 | By Materials at Site c/d | 25,000 |
| To Wages A/c | 45,000 | By Cost of Construction c/d | 1,40,000 |
| To Outstanding Wages A/c | 5,000 | | |
| To General Expenses A/c | 10,000 | | |
| To Depreciation on Plant A/c | 5,000 | | |
| | 1,65,000 | | 1,65,000 |
| To Cost of Construction b/d | 1,40,000 | By Work in Progress A/c | |
| To Notional Profit c/d | 80,000 | - Value of Work Certified | 2,00,000 |
| | | - Escalation | 5,000 |
| | | - Cost of Uncertified Work | 15,000 |
| | 2,20,000 | | 2,20,000 |
| To Profit & Loss A/c | 19,512 | By Notional Profit b/d | 80,000 |
| To Work in Progress A/c | | | |
| - Provision for Contingencies | 60,488 | | |
| | 80,000 | | 80,000 |

**Working Notes:**

- Increase in Contract Price due to Escalation in the Prices of Materials and Labour
  Cost of Materials and Labour incurred = 1,00,000 + 45,000 + 5,000 – 25,000
  = ₹1,25,000

  Increase in prices of Materials and Labour by 25%
  So, Cost of Materials and Labour before increase in Prices
  $= 1{,}25{,}000\ x\ \frac{100}{125} = ₹\ 1{,}00{,}000$

  Increase in Contract Price (beyond 5% increase)
  $= \frac{25}{100}\ x\ (1{,}25{,}000 - 1{,}00{,}000\ x\ \frac{105}{100}) = \frac{25}{100}\ x\ (1{,}25{,}000 - 1{,}05{,}000)$ = ₹5,000

- Amount to be transferred to Profit & Loss A/c
  $= \frac{1}{3}\ x\ 80{,}000\ x\ \frac{1{,}50{,}000}{2{,}05{,}000} = ₹19{,}512$

**6. (a)**

**Statement of Equivalent Production**

| Inputs | | Output | | Equivalent Production Units | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Material | | Labour | | Overhead | |
| Items | Units | Items | Units | % Completion | Units | % Completion | Units | % Completion | Units |
| Op. WIP | 200 | Op. WIP | 200 | - | - | 60 | 120 | 60 | 120 |
| Units Introduced | 1,050 | Finished Goods (Introduced & Completed) | 900 | 100 | 900 | 100 | 900 | 100 | 900 |
| | | | 150 | 100 | 150 | 70 | 105 | 70 | 105 |
| | | Cl. WIP | | | | | | | |
| | 1,250 | | 1,250 | | 1,050 | | 1,125 | | 1,125 |

Transfer to Next Process = 1,100 units (given)
Work done on Op. WIP and Completed = 200 units
Work done on units introduced and completed (1,100 – 200) = 900 units

**Statement of Cost per unit**

| Particulars | Amount (₹) | Equivalent Units | Cost per unit (₹) |
|---|---|---|---|
| Material | 1,050 | 1,050 | 1 |
| Labour | 2,250 | 1,125 | 2 |
| Production Overhead | 1,125 | 1,125 | 1 |

**Valuation of Closing Stock**

| Particulars | Units | Cost per unit (₹ ) | Total Cost (₹ ) |
|---|---|---|---|
| Material | 150 | 1 | 150 |
| Labour | 105 | 2 | 210 |
| Production Overhead | 105 | 1 | 105 |
| | | | 465 |

**Process Account**

| Particulars | Units | Rate | Amount (₹) | Particulars | Units | Rate | mount (₹ ) |
|---|---|---|---|---|---|---|---|
| To Opening Stock A/c | 200 | 4 | 800 | By Closing Stock A/c | 150 | $\frac{465}{150} = 3.10$ | 465 |
| To Material A/c | 1,050 | 1 | 1,050 | | | | |
| To Labour A/c | | | 2,250 | By Finished Stock A/c | 1,100 | $\frac{4,760}{1,100} = 4.33$ | 4,760 |
| To Production Overhead A/c | | | 1,125 | | | | |
| | 1,250 | | 5,225 | | 1,250 | | 5,225 |

**(b) Total Distance travelled by 10 bus per month**

= (Distance of route one way × 2) × Number of trips per day × Number of days operating in the month × Number of buses

= 20 × 2 × 3 × 25 × 10 = 30,000 km per month

**Computation of Passenger-Km per month**

$= Total\ Distance\ Travelled\ by\ 10\ bus\ per\ month\ x\ Number\ of\ passenger$

$= 30{,}000\ x\ 40\ =\ 12{,}00{,}000\ passenger - km\ per\ month$

**Computation of Total Cost for 10 bus per month**
**(Excluding Commission of Driver and Conductor)**

| **Particulars** | | **₹** |
|---|---|---|
| **Fixed or Standing Charges** | | **(Cost per month)** |
| Depreciation | $\frac{₹.\ 50{,}000\ x\ 10}{5\ years} \times \frac{1}{12}$ | 8,333.33 |
| Insurance | $\frac{₹\ 50{,}000\ x\ 10\ x\ 3\%}{12}$ | 1,250.00 |
| Tax | $\frac{₹\ 1{,}000\ x\ 10}{12}$ | 833.33 |
| Garage Charges | | 1,000.00 |
| Salary of Drivers | ₹ 150 x 10 | 1,500.00 |

| | | |
|---|---|---|
| Salary of Conductors | ₹ $100\ x\ 10$ | 1,000.00 |
| Cost of Stationery | | 500.00 |
| Salary of Manager | | 2,000.00 |
| Salary of Accountant | | 1,500.00 |
| **Maintenance Charges** | | |
| Repairs | $\frac{₹\ 1,000\ x\ 10}{12}$ | 833.34 |
| **Running Charges** | | |
| Petrol and Oil | $\frac{30,000\ km}{100\ km}\ x$ ₹ 25 | 7,500 |
| | | 26,250.00 |

Let the taking be ₹ $X$

Total Cost (Excluding Commission) + Commission + Profit = Takings

$$or, 26,250 + \frac{10}{100}X + \frac{15}{100}X = X$$

$$or, \frac{75}{100}X = 26,250$$

$$or, X = 35,000$$

$$\therefore \boldsymbol{Takings} = ₹\ \mathbf{35,000}$$

Profit = $15\% \ x\ 35,000 = ₹\ 5,250$

Commission of Driver and Conductor = $10\% \ x\ 35,000 = ₹\ 3,500$

$$\therefore Fare\ per\ passenger - km = \frac{₹.\ 35,000}{1,20,000\ passenger - km} = ₹\ 0.0292$$

$$\approx ₹\ 0.03$$

**7. (a) Fixed production costs absorbed**

| Particulars | ₹ |
|---|---|
| Budgeted fixed production costs | 1,60,000 |
| Budgeted output (normal level of activity 800 units)<br>Therefore, the absorption rate : 1,60,000/800 = `200 per unit | |
| During the first quarter, the fixed production cost absorbed by Boost Would be (220 units × `200) | 44,000 |

**Under / over recovery of overheads during the period**

| Particulars | ₹ |
|---|---|
| Actual fixed production overhead (1/4 of ₹1,60,000) | 40,000 |
| Absorbed fixed production overhead | 44,000 |
| Over-recovery of overheads | 4,000 |

| Particulars | ₹ | ₹ |
|---|---|---|
| Sales revenue (160 units × ₹2,000) : (A) | | 3,20,000 |
| Less : Production costs: | | |
| - Variable cost (220 units × ₹ 800) | 1,76,000 | |
| - Fixed overheads absorbed (220units × ₹ 200) | 44,000 | 2,20,000 |

**Profit for the Quarter (Absorption Costing)**

| Particulars | ₹ | ₹ |
|---|---|---|
| Add :Opening Stock | | ----- |
| Less: Closing Stock ( ₹ 2,20,000/220 units × 60 units) | | (60,000) |
| Cost of Goods sold | | 1,60,000 |
| Less: Adjustment forever-absorption of fixed production overheads | | (4,000) |
| Less: Selling & Distribution Overheads: | | |
| -Variable (160 units× ₹ 400) | 64,000 | |
| - Fixed (1/4$^{th}$ of ₹ 2,40,000) | 60,000 | 1,24,000 |
| Cost of Sales (B) | | 2,80,000 |
| Profit {(A) – (B)} | | 40,000 |

**Profit for the Quarter (Marginal Costing)**

| Particulars | ₹ | ₹ |
|---|---|---|
| Sales revenue (160 units × ₹ 2,000):(A) | | 3,20,000 |
| Less: Production costs:<br>-Variable cost (220 units × ₹ 800) | | 1,76,000 |
| Add: Opening Stock | | ----- |
| Less: Closing Stock (₹ 1,76,000/220 units × 60 units) | | (48,000) |
| Variable cost of goods sold | | 1,28,000 |
| Add: Selling & Distribution Overheads:<br>-Variable (160 units × ₹ 400) | | 64,000 |
| Total Variable Cost (B) | | 1,92,000 |
| Contribution {(C) = (A) – (B)} | | 1,28,000 |
| Less: Fixed Costs:<br>- Production cost<br>- Selling & distribution cost | <br>(40,000)<br>(60,000) | <br><br>(1,00,000) |
| Profit | | 28,000 |

**(b)** **a.** Applying limiting factor analysis to make or buy.

Statement of profitability on which the above decision is to be taken

| | **Component A** | **Component B** | **Component C** |
|---|---|---|---|
| Variable cost of production | 3 | 4 | 6 |
| Outside purchase price | 2 | 6 | 12 |
| Excess (variable cost of production minus buy price) | 1 | -2 | -6 |

Component A should be bought out regardless of any limiting factor since variable cost of production is higher than the outside purchase price.

b. If machine hours are limited to 4,000 hours (Component A is to be bought and thus the in house production of component A is not considered).

| | **Component B** | **Component C** |
|---|---|---|
| Excess cost | 2 | 6 |
| Machine hours per unit | 0.5 | 2 |
| Excess cost per machine hour | ₹ 4 | ₹ 3 |

Component C has the lowest excess cost per limiting factor so it should be bought out.

Check

| | **Component B** | **Component C** |
|---|---|---|
| Units production in 4ooo machine hours | 8000 units | 2000 units |
| Production costs | ₹ 32,000 | ₹14,000 |
| Purchase costs | ₹ 48,000 | ₹ 26,000 |
| Excess cost of purchase | ₹ 16,000 | ₹ 12,000 |

c. If labour hours are limited to 4,000 hours Component A is to be bought and thus the in house production of component A is not considered).

| | **Component B** | **Component C** |
|---|---|---|
| Excess cost | 2 | 6 |
| Labour hours | 3 | 4 |
| Excess cost per labour hour | Rs 0.66 | Rs 1.50 |

Therefore, component B has the lowest excess cost per limiting factor and should be bought out

Check

| | Component B | Component C |
|---|---|---|
| Units production in 4 labour hours | 1333 units | 1000 units |
| Production costs | ₹ 5332 | ₹ 6000 |
| Purchase costs | ₹ 7998 | ₹12000 |
| Excess cost of purchase | ₹ 2666 | ₹ 6000 |

**8. (a)** SQ = Standard Quantity for Actual Output

Material A = $\frac{40}{90} x\ 4{,}18{,}500 = 1{,}86{,}000\ kg$

Material B = $\frac{10}{90} x\ 4{,}18{,}500 = 46{,}500\ kg$

Material C = $\frac{50}{90} x\ 4{,}18{,}500 = 2{,}32{,}500\ kg$

SP = Standard Price per unit

Material A = ₹ 76 Material B = ₹ 50 Material C = ₹ 20

AQ = Actual Quantity used

Material A = 1,95,000 kg Material B = 42,500 kg Material C = 2,25,000 kg

AP = Actual Price per unit

Material A = ₹ 80 Material B = ₹ 52 Material C = ₹ 21

RSQ = Revised Standard Quantity for Actual Input

Material A = $\frac{40}{100} x\ (1{,}95{,}000 + 42{,}500 + 2{,}25{,}000) = \frac{40}{100} x\ 4{,}62{,}500 = 1{,}85{,}000\ kg$

Material B = $\frac{10}{100} x\ 4{,}62{,}500 = 46{,}250\ kg$

Material C = $\frac{50}{100} x\ 4{,}18{,}500 = 2{,}31{,}250\ kg$

i. Material Cost Variance = SQ x SP – AQ x AP

Material A = 1,86,000 x ₹76 – 1,95,000 x ₹80 = ₹ 14,64,000 (A)

Material B = 46,500 x ₹50 – 42,500 x₹ 52 = ₹ 1,15,000 (F)

Material C = 2,32,500 x₹ 20 – 2,25,000 x ₹21 = ₹ 75,000 (A)

= **₹ 14,24,000 (A)**

ii. Material Price Variance = (SP – AP) x AQ

Material A =₹ (76 – 80) x 1,95,000 = ₹ 7,80,000 (A)

Material B = ₹(50 – 52) x 42,500 = ₹ 85,000 (A)

Material C =₹ (20 – 21) x 2,25,000 = ₹ 2,25,000 (A)

**= ₹ 10,90,000 (A)**

iii. Material Usage Variance = (SQ – AQ) x SP
Material A = (1,86,000 – 1,95,000) x ₹76 = ₹ 6,84,000 (A)
Material B = (46,500 – 42,500) x₹ 50 = ₹ 2,00,000 (F)
Material C = (2,32,500 – 2,25,000) x₹ 20 = ₹ 1,50,000 (F)
= **₹ 3,34,000 (A)**

iv. Material Mix Variance = (RSQ – AQ) x SP
Material A = (1,85,000 – 1,95,000) x ₹76 = ₹ 7,60,000 (A)
Material B = (46,250 – 42,500) x ₹50 = ₹ 1,87,500 (F)
Material C = (2,31,250 – 2,25,000) x ₹20 = ₹ 1,25,000 (F)
= **₹ 4,47,500 (A)**

v. Material Yield Variance = (SQ – RSQ) x SP
Material A = (1,86,000 – 1,85,000) x ₹76 = ₹ 76,000 (F)
Material B = (46,500 – 46,250) x ₹50 = ₹ 12,500 (F)
Material C = (2,32,500 – 2,31,250) x₹ 20 = ₹ 25,000 (F)
**= ₹ 1,13,500 (F)**

**(b)**

**KAEHLER CO.LTD**
**Production Budget for the Quarter ended**
**March 2022 and for the month April, 2022**

**(Figures in Units)**

| **Particulars** | **January** | **February** | **March** | **April** |
|---|---|---|---|---|
| Budgeted Sales | 10,800 | 15,600 | 12,200 | 10,400 |
| Add: Closing Inventory | 3,900 | 3,050 | 2,600 | 2,450 |
| | 14,700 | 18,650 | 14,800 | 12,850 |
| Less: Opening Inventory | 2,700 | 3,900 | 3,050 | 2,600 |
| Required Monthly Production | 12,000 | 14,750 | 11,750 | 10,250 |

**KAEHLER CO.LTD.**
**Direct Material Usage and Purchase Budget**
**for the Quarter ended March 2022**

**Material A**

| **Particulars** | **January** | **February** | **March** |
|---|---|---|---|
| Production Requirement – 4 units of Material A for each unit of finished Product | | | |
| Add: Closing Inventory | 48,000 | 59,000 | 47,000 |
| | 29,500 | 23,500 | 20,500 |
| Less : Opening Inventory | 77,500 | 82,500 | 67,500 |
| Budgeted Purchase | 24,000 | 29,500 | 23,500 |
| | 53,500 | 53,000 | 44,000 |

**Material B**

| Particulars | January | February | March |
|---|---|---|---|
| Production Requirement – 5 units of Material B for each unit of finished Product | | | |
| Add: Closing Inventory | 60,000 | 73,750 | 58,750 |
| | 36,875 | 29,375 | 25,625 |
| Less : Opening Inventory | 96,875 | 1,03,125 | 67,500 |
| Budgeted Purchase | 30,000 | 36,785 | 29,375 |
| | 66,875 | 66,250 | 55,000 |

**INTERMEDIATE EXAMINATION** **SET 2**

**MODEL QUESTION PAPER** **TERM – JUNE 2023**

**PAPER - 8**

**COST ACCOUNTING**

**Time Allowed: 3 Hours** **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

Where considered necessary, suitable assumptions may be made and clearly indicated in the answer.

Answer Question No. 1 and any five from Question No. 2, 3, 4, 5, 6, 7 and 8.

## SECTION - A

## (Compulsory)

**1. (a)** Choose the correct answer from the given alternatives (you may write only the Roman numeral and the alphabet chosen for your answer): **[1 × 12 = 12]**

(i) Which of the following statements is/are correct?

1. A materials requisition note is used to record the issue of direct material to a specific job
2. A typical job cost will contain actual costs for material, labour and production overheads, and non- production overheads are often added as a percentage of total production cost
3. The job costing method can be applied in costing batches

A. (1) only
B. (1) and (2) only
C. (1) and (3) only
D. (2) and (3) only

(ii) Cost of idle time arising due to non-availability of raw material is

A. Recovered by inflating the raw material rate.
B. Recovered by inflating the wage rate.
C. Charged to factory overheads.
D. Charged to costing profit and loss account.

(iii) Selling and distribution overheads are absorbed on the basis of

A. Rate per unit.
B. Percentage on works cost.
C. Percentage on selling price of each unit.
D. Any of the above

(iv) What entry will be passed under integrated system for purchase of stores on credit?

A. Dr. Stores
Cr. Creditors

B. Dr. Purchases
Cr. Creditors

C. Dr. Stores Ledger Control A/c
Cr. Creditors

D. Dr. Stores Ledger Control A/c
Cr. General Ledger Adjustment A/c

(v) _____ deals with the principles and methods of determining the production or operation overheads.

A. CAS-3
B. CAS-5
C. CAS-9
D. CAS-16

(vi) Marginal costing technique follows the following basis of classification:

A. Element-wise
B. Function-wise
C. Behaviour-wise
D. Identifiability-wise

(vii) Which of the following is not a potential benefit of using a budget?

A. More motivated managers
B. Enhanced co-ordination of firm activities
C. Improved inter-departmental communication
D. More accurate external financial statements

(viii) Cost Accounting Standard 1 (CAS1) deals with _____

A. Classification of cost
B. In terms of completed units
C. Reference to the job
D. To determine the value of closing inventory

(ix) Equivalent Production refers to production

A. Of items which have high initial costs
B. For classification of cost
C. In terms of completed units
D. To determine the value of closing inventory

(x) One of the major de-merit of a centralized purchase organization
   A. High initial costs
   B. Classification of cost
   C. Reference to the job
   D. To determine the value of closing inventory

(xi) The fixed-variable cost classification has a special significance in the preparation of
   A. Cash budget
   B. Master budget
   C. Flexible budget
   D. Capital budget

(xii) Which of the following closely matches with Just In Time (JIT)
   A. Decision package
   B. Cost of utilities
   C. Production strategy
   A. Replacement method

**(b) State whether the following statements are "True" or "False". [1 × 7 = 7]**

(i) By-products may undergo further processing before sale.

(ii) Materials which can be identified with the given product unit of cost centre is called as indirect materials.

(iii) Increasing Labour Turnover increases the productivity of labour resulting in low costs.

(iv) In case of materials that suffers loss in weight due to evaporation etc. the issue price of the materials is inflated to cover up the losses

**(v)** Penalties and fines are included in cost accounts to determine the cost of production**.**

(vi) Chemical works, soap making and Milk dairy production are examples of process costing.

(vii) Split-off point is a point beyond input factors are commonly used for production of multiple products, which can be either joint products or by-products. After this point, the joint products or by-products gain individual identity.

**(c) Fill in the blanks** **[1 × 6 = 6]**

(i) In standard costs,_____norm is applied as a scale of reference for assessing actual cost to serve as a basis of cost control.

(ii) Material Transfer Note is a_____for transferring the materials from one job to other job.

(iii) One of the disadvantages of overtime working is incurring_____labour cost.

(iv) CAS-2 deals with Cost Accounting Standard on_____determination.

(v) Where the cost and financial accounts are maintained independently of each other, it is indispensable to_____them, as there are differences in the profits of two sets of books.

(vi) The_____is the starting point in preparing the master budget.

## SECTION - B

**(Answer any five questions)**

2. (a) During the second half of 2022, Mr Tandon noted down the electricity consumed in his household along with the Bill amount which was raised by the electricity authority. This he did as he was unable to decipher the unit cost and the Meter rental. He asks Mr Nitin his friend who is also a Cost Accountant to let him know the unit cost of electricity and the meter rental separately. The following is the data as noted by Mr Tandon.

| | **Units** | **Cost** |
|---|---|---|
| July | 400 | ` 1000 |
| August | 500 | ` 1200 |
| September | 600 | ` 1400 |
| October | 700 | ` 1600 |
| November | 800 | ` 1800 |
| December | 900 | ` 2000 |

You, on behalf of Mr Nitin, are required to calculate the unit cost (variable element of the cost) and the Meter rental (fixed element of the cost). You are to use the high –low method for segregation of the total cost. **[7]**

(b) (i) State the objective and scope of Cost Accounting Standard 6 (CAS – 6) on "Material Cost"

(ii) How many cost accounting standards are issued by the Institute of Cost Accountants of India, till date? Also explain the various basis of classification of cost as per CAS – 1,

**(iii)** What are the disclosure norms of overhead as per CAS-3? **[2 + 3 + 3) = 8]**

3. (a) (i) Nikhil LLP buys its annual requirement of 36,000 units in six installments. Each unit cost ` 1 and the ordering cost is ` 25. The inventory carrying cost is estimated at 20% of unit value. Find the total annual cost of the existing inventory policy. How much money can be saved by using EOQ?

(ii) What is scrap? How is it treated in cost accounting? **[5 + 2 = 7]**

(b) (i) What is labour turnover? State the causes of labour turnover? What are the methods of measuring labour turnover?

(ii) In a factory bonus to workman is paid according to Rowan Plan. Time allotted for a job is 40 hours and the normal rate of wages is ` 125 per hour. The factory overhead charges are `50 per hour for the hours taken. The factory cost of a work order, executed by a worker is ` 1,700. The cost of material in each case is ` 1,000.

Calculate the hours of time taken by the workman to complete the work order. **[3 + 5 = 8]**

4. (a) In a certain factory three products are made from different materials by similar process. For a typical period, production costs are as under:

| | **Product A** ` | **Product B** ` | **Product C** ` |
|---|---|---|---|
| Material Used | 1,600 | 2,000 | 800 |
| Direct Labour Cost | 1,200 | 1,000 | 400 |
| Overhead (Actual) | 800 | 650 | 350 |

Overhead is charged to cost of each product at the rate of 25% on prime cost.

Do you see anything wrong in principle in this method of charging overheads? If so, suggest a preferable method. **[7]**

(b) Journalize the following transactions assuming that cost and financial accounts are integrated:

| **Particulars** | **Amount (`)** |
|---|---|
| Raw material purchased | 40,000 |
| Direct materials issued to production | 30,000 |
| Wages paid (30% indirect) | 24,000 |
| Wages charged to production | 16,800 |
| Manufacturing expenses incurred | 19,000 |
| Manufacturing overhead charged to Production | 18,000 |
| Selling and distribution cost | 4,000 |
| Finished products (at cost) | 40,000 |
| Sales | 58,000 |
| Closing stock | Nil |
| Receipts from debtors | 13,800 |
| Payments to creditors | 12,000 |

**[8]**

5. (a) Lotus Inc manufactures the fountain pen called 'Shikhar'. One of the component of the Pen (The Blank) is made entirely in cost centre CC125. In this cost centre CC 125, material cost is ` 6.00 per component and each component takes 10 minutes to produce. The machine operator is paid `72.00 per hour, and machine hour rate is ` 150.00. The setting up of the machine to produce the component 'The Blank' takes 2 hours 20 minutes.

On the basis of this information, prepare a cost sheet showing the production and setting up cost, both in total and per component, assuming that a production batch of:

i. 10 components,

ii. 100 components, and

**iii.** 1,000 components. **[7]**

(b) Deluxe limited undertook a contract for ` 5,00,000 on 1st July 2021. On 30th June 2022 when the accounts were closed, the following details about the contract were gathered:

| Particulars | Amount (` ) |
|---|---|
| Materials purchased | 1,00,000 |
| Wages paid | 45,000 |
| General expenses | 10,000 |
| Plant purchased | 50,000 |
| Materials on hand 30.6.2022 | 25,000 |
| Wages accrued 30.6.2022 | 5,000 |
| Work certified | 2,00,000 |
| Cash received | 1,50,000 |
| Depreciation of Plant | 5,000 |
| Work uncertified | 15,000 |

The above contract contained an escalation clause which read as follows:

"In the event of prices of materials and rates of wages increase by more than 5% the contract price would be increased accordingly by 25% of the rise in the cost of materials and wages beyond 5% in each case".

It was found that since the date of signing the agreement the prices of materials and wage rates increased by 25% the value of the work certify does not take into account the effect of the above clause.

Prepare the Contract Account. **[8]**

6. (a) From the following information compute Equivalent Production and prepare a statement of apportionment of cost, and also prepare Process Account.

| | | |
|---|---|---|
| Work In Progress (Opening) | 200 units @ ` 4 per unit | 100% Material<br>40% Labour and Overheads |
| Units introduced | 1,050 | |
| Transfer to next process | 1,100 units | |
| Closing stock | 150 units | 100% Material<br>70% Labour and Overheads |

The following information is also provided

| | Amount (`) |
|---|---|
| Material Cost | 1,050 |
| Labour | 2,250 |
| Production Overhead | 1,125 |
| Total Cost | 4,425 |

**[8]**

(b) Janata Transport Co. has been given a route 20 km long for running buses. The company has a fleet of 10 buses each costing ` 25,00,000 and having a life of 5 years without any scrap value.

From the following estimated expenditure and other details calculate the bus fare to be charged from each passenger.

| | |
|---|---|
| Insurance charges | 3% p.a. |
| Annual tax for each bus | ` 6,000 |
| Total Garage charges | ` 10,000 p.m. |
| Drivers' salary for each bus per month | ` 15,000 p.m. |
| Conductor's Salary for each bus per month | ` 10,000 p.m. |
| Annual repairs to each bus | ` 12,000 |
| Commission to be shared by the driver and conductor equally: 10% of the takings | |
| Cost of stationery | ` 1,500 p.m. |
| Manager's salary | ` 20,000 p.m. |
| Accountant's salary | ` 10,000 p.m. |
| Petrol and oil | ` 400 per 100 km |

Each bus will make 3 round trips carrying on an average 60 passengers on each trip. The bus will run on an average for 25 days in a month. Assuming 15% profit on takings, calculate, the bus fare to be charged from each passenger. **[7]**

7. (a) VAZIR LLP. produces a single product called the 'Checkmate'. The following figures relate to the 'Checkmate' for the period: 2021 -2022.

| **Activity Level** | **50%** | **100%** |
|---|---|---|
| Sales and production(units) | 400 | 800 |
| | ` | ` |
| Sales | 8,00,000 | 16,00,000 |
| Production costs: | | |
| -Variable | 3,20,000 | 6,40,000 |
| -Fixed | 1,60,000 | 1,60,000 |
| Selling and distribution costs: | | |
| -Variable | 1,60,000 | 3,20,000 |
| -Fixed | 2,40,000 | 2,40,000 |

The normal level of activity for the year is 800 units. Fixed costs are incurred evenly throughout the year, and actual fixed costs are the same as budgeted.

There were no stocks of The Checkmate at the beginning of the year.

In the first quarter 220 units were produced and160 units were sold.

You are required to advice the management on the following issues:

(i) Fixed production costs absorbed by The Checkmate if absorption costing is followed.

(ii) Under/over-recovery of overheads during the period.

(iii) Profit as per absorption costing.

**(iv)** Profit as per marginal costing. **[7]**

(b) A company manufactures three components which it uses in its finished product. The component workshop is currently unable to meet the demand for all components and is considering the possibility of sub-contracting.

| | **Component A (`)** | **Component B (`)** | **Component C (`)** |
|---|---|---|---|
| Variable cost of production | 3 | 4 | 6 |
| Outside purchase price | 2 | 6 | 12 |
| Machine hours per unit | 1 | 0.5 | 2 |
| Labour hours per unit | 2 | 3 | 4 |

Advise the management on the following issues with expressive calculations to support your answer.

a. Components that should be bought out if the company operates at full capacity.

b. Components that should be bought out if production is limited to 4,000 machine hours per week.

**c.** Components that should be bought out if production is limited to 4,000 labour hours per week. **[2 + 3 + 3 = 8]**

8. (a) The following are extracts from the cost records of Milano Inc. which follows a standard cost system. The standard cost in reference to one unit of the products 'TICO' is given as under. As such three materials, namely A, B and C are used in the mix to produce one unit of TICO.

| **Materials** | **Quantity (kg)** | **Price (`)** |
|---|---|---|
| A | 40 | 76 |
| B | 10 | 50 |
| C | 50 | 20 |

The standard input mix is 100 kg and the standard output of the finished product is

90 kg as reflected in the above standard cost card.

For the particular period the actual results were also extracted from the cost records, which is given below.

| Materials | Quantity (kg) | Price (`) per kg |
|---|---|---|
| A | 1,95,000 | 80 |
| B | 42,500 | 52 |
| C | 2,25,000 | 21 |

For the particular period the actual output of TICO is 4,18,500 kg

You, as the cost accountant of the company, are required to analyse material variances and report the same to the manager. **[7]**

(b) A sales budget for the first five months of 2022 is given for a particular product line manufactured by Kaehler Co. Ltd.:

| Month | Budgeted Sales (Units) |
|---|---|
| January | 10800 |
| February | 15600 |
| March | 12200 |
| April | 10400 |
| May | 9200 |

The inventory of finished products at the end of each month is to be equal to 25 per cent of the sales estimate for the next month. On January 1, there were 2700 units of product in hand. No work is in process at the end of any month Each unit of product requires two types of materials in the following quantities:

Material A: 4 units

Material B: 5 units

Material equal to one half of the next month's requirements is to be in hand at the end of each month. This requirement was met on January 1, 2022.

Analyse the above budgeted volumes and determine the quantities of each type of material to be purchased each month for the first quarter of 2022. **[8]**

**INTERMEDIATE EXAMINATION** **SET 1**

**MODEL ANSWERS** **TERM – JUNE 2023**

**PAPER - 8**

**COST ACCOUNTING**

**Time Allowed: 3 Hours** **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

Where considered necessary, suitable assumptions may be made and clearly indicated in the answer.

Answer Question No. 1 and any five from Question No. 2, 3, 4, 5, 6, 7 and 8.

## SECTION - A

## (Compulsory)

**1. (a)**

| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | (x) | (xi) | (xii) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| c | b | b | c | c | d | a | d | a | c | a | c |

**(b)**

| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) |
|---|---|---|---|---|---|---|
| False | False | True | True | True | True | True |

**(c)**

| (i) | (ii) | (iii) | (iv) | (v) | (vi) |
|---|---|---|---|---|---|
| Sunk Cost | Fixed Cost | Capacity | Master budget | Cost Control | Allocation |

## SECTION - B

## (Answer any five questions)

2. (a)

**Cost Sheet**

for the period of six months ending 31st December, 2023

$$\% \text{ of factory overhead to direct wages} = \frac{\text{Factory overheads}}{\text{Direct Wages}} \times 100 = \frac{24,000}{1,20,000} \times 100 = 20\%$$

$$\% \text{ of factory overhead to factory cost} = \frac{\text{Office overheads}}{\text{Factory cost}} \times 100 = \frac{17,640}{2,94,000} \times 100 = 6\%$$

Statement showing the Quotation of price of a Machine

| | ` |
|---|---|
| Materials | 1,250.00 |
| Wages | 750.00 |
| Prime Cost | 2,000.00 |
| Factory overhead (20% on wages) | 150.00 |
| Factory Cost | 2,150.00 |
| Office Overhead (6% on Factory Cost) | 129.00 |
| Total Cost or Cost of Production | 2,279.00 |
| *Profit (25% of total cost) | 569.75 |
| Selling Price | 2,848.75 |

*Profit of 20% on selling price is equal to 25% of total cost.

(b) (i) All expenditures other than those incurred for procurement of material and labour are termed as 'expenses'. Expenses can be classified direct expense or indirect expense. This classification is based on whether the expense is traceable to cost centre or cost unit. Expenses or costs which can be allocated to a cost centre or cost unit are referred as direct expense.

(ii) Paragraph 4.4 of CAS 10 defines direct expenses as expenses relating to manufacture of a product or rendering a service, which can be identified or linked with the cost object other than direct material cost and direct employee cost. It is also important to note that Paragraph 5.1 of CAS 10 states that identification of Direct Expenses shall be based on traceability in an economically feasible manner.

(iii) Any four 'principles of measurement' as mentioned in Para 5 of CAS 10

3. (a)

| | | | |
|---|---|---|---|
| (i) | Re-order quantity | = | $\sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 7,500 \times 12 \times 500}{60 \times 10\%}} = 3,873$ units. |
| (ii) | Re-order level | = | Maximum Re-order Period × Maximum Usage 8 weeks × 750 unit per week = 6,000 units |

| | | | |
|---|---|---|---|
| (iii) | Minimum stock level | = | Re-order Level – {Normal Usage × Normal Reorder Period}<br>6,000 – (500 × 6.5) = 2,750 units |
| (iv) | Maximum stock level | = | Re-order Level + Re-order Quantity – (Minimum Usage × Minimum Re-order Period) 6,000 + 3,873 – (250 × 5) = 8,623 units. |
| (v) | Average stock level | = | $\frac{1}{2}$ (Minimum Stock level + Maximum Stock Level)<br>$\frac{1}{2}$ (2,750 + 8,623) = 5,687 units.<br>Or<br>Minimum Level + $\frac{1}{2}$ Re-order quantity = 2,750 + 1,937<br>= 4,687 units. |

(b) Standard production = 1000 units per

Actual production:

Worker A = 850 units, efficiency level = 850/1000 x 100 = 85%

Worker B = 750 units, efficiency level = 750/1000 x 100 = 75%

Worker C = 950 units, efficiency level = 950/1000 x 100 = 95%

Statement showing total Remuneration of Workers

| Particulars | Worker A (`) | Worker B (`) | Worker C (`) |
|---|---|---|---|
| Normal piece rate wages [`10 per unit] | 850 units x `10 per unit 8500 | 750 units x `10 per unit 7500 | 950 units x `10 per unit 9500 |
| Bonus | `10 x 5 = 50 | -- | `10 x 15 = 150 |
| Dearness pay | 50 | 50 | 50 |
| Total | 8600 | 7550 | 9700 |

*As per the example, bonus will be paid only if the efficiency exceeds 80%. For A and C the efficiency exceeds 80% and hence they will be entitled for a bonus of `10 per percentage exceeding 80%. B will not be entitled for any bonus as his production efficiency does not exceed 80%.

4. (a) In case the service departments in addition to rendering services to the production departments, also render services to other service departments. In other words, the service department, S1 and S2 render services to each other besides rendering services to the production departments. For example, the Canteen Department which is a service department as it caters to the employees from various production departments but the staff of the Maintenance Department (which is also a service department) also enjoys the services of the Canteen. Thus there may be reciprocal arrangements between the service departments. Hence share of overhead expenses of S1 and S2 should be charged to each other along with the production departments. The following method are used under Reciprocal Methods.

- Repeated Distribution Method: - Under this method, services rendered by services departments to the production departments and other services departments are quantified in the form of percentages. The services departments costs are reapportioned to the production departments on the basis of these percentages. The process is repeated again and again till a negligible figure is reached. This method becomes complicated for calculation if the figures are too large.
- Simultaneous Equation Method: - This is an algebraic method in which simultaneous equations are formed and amount of overhead expenses of each service department are found out, by solving the equations. The total expenses thus obtained are then directly transferred to the production departments. This is a non-iterative method and is thus suitable and more accurate.

Solution on the basis of Simultaneous Equation Method (as asked for in the sum)
Let x be the expense of Department S
and y be the expense of Department T

Then $x = ₹8.000 + \frac{1}{5}$ th of y (20% of y)

$Y = ₹3.900 + \frac{1}{10}$ th of x

Putting the value of x we get:

$y = ₹ 13,900 + \frac{1}{10}$ of $(8,000 + \frac{1}{5}$ of y)

Or. $y = ₹ 13.900 + ₹800 + \frac{1}{50} y$

Or, $y = ₹14.700 + \frac{1}{50} y$, or $50 y = 7,35,000 + y$

Or, 50y – y = ` 7,35,000 or, y = ` $\frac{7,35,000}{49}$ = 15,000

Putting the value of y we get

x = Rs 8,000 + $\frac{1}{5}$th of y, or, x = ` 8,000 + $\frac{1}{5}$ of `15,000

or x = ` 8,000 + Rs, 3,000, or x = `11,000

Total expenses of Dept. S = `11,000

Total expenses of Dept. T = `15,000

**Overhead Distribution Summary**

| Particulars | A (`) | B (`) | C (`) | S (`) | T (`) |
|---|---|---|---|---|---|
| Total as per | | | | | |
| Primary Distribution | 25,000 | 31,000 | 28,000 | 8,000 | 13,900 |
| Distribution of Expenses of Dept. S in the ratio 3:2:4:1 | 3,300 | 2,200 | 4,400 | -11,000 | 1,100 |
| Distribution of Expenses of Dept. T in the ratio 8:3:5:4 | 6,000 | 2,250 | 3,750 | 3,000 | -15,000 |
| | 34,300 | 35,450 | 36,150 | --- | --- |

(b) Reconciliation Statement

| Particulars | Amount (`) | Amount (`) |
|---|---|---|
| Profit as per cost accounts | | 2,91,000 |
| Add: | | |
| Over-recovery of selling overheads | 39,000 | |
| Over-valuation of opening stock in cost accounts | 30,000 | |
| Interest earned not recorded in cost a/cs | 7,500 | |
| Rent received not recorded in cost a/cs | 54,000 | |
| Total | | 1,30,500 |
| Total | | 4,21,500 |
| Under recovery of work overheads | 19,000 | |
| Under recovery of administrative overheads | 45,500 | |
| Over-valuation of closing stock in cost a/cs | 15,000 | |
| Bad debts not recorded in cost a/cs | 18,000 | |
| Preliminary expenses written off not recorded in cost a/cs | 36,000 | |
| Total | | 1,33,500 |
| Profit as per Financial Accounts | | 2,88,000 |

5. (a) (i) In order to draw up Job Cost Sheet, the factory overhead rates of different departments and percentage of selling cost will have to be determined first on the basis of previous year's figures as follows:

**Factory Overhead Recovery Rates based on Labour Hours**

Direct Wages ₹ 5.50

Labour Hours 22 hours $\left(\frac{₹\ 5.50}{₹\ 0.25\ per\ hour}\right)$

| | Department A | | Department B | | Department C | |
|---|---|---|---|---|---|---|
| Direct Wages | | ₹ 5,000 | | ₹ 6,000 | | ₹ 4,000 |
| ∴ Labour Hours | $\left(\frac{₹\ 5,000}{₹\ 0.25\ per\ hour}\right)$ | 20,000 | $\left(\frac{₹\ 6,000}{₹\ 0.25\ per\ hour}\right)$ | 24,000 | $\left(\frac{₹\ 4,000}{₹\ 0.25\ per\ hour}\right)$ | 16,000 |
| Factory Overheads | | ₹ 2,500 | | ₹ 4,000 | | ₹ 1,000 |
| Factory Overhead Rate per Labour Hour | $\left(\frac{₹\ 2,500}{20,000}\right)$ | ₹ 0.125 | $\left(\frac{₹\ 4,000}{24,000}\right)$ | ₹ 0.167 | $\left(\frac{₹\ 1,000}{16,000}\right)$ | ₹ 0.063 |

**(ii) Cost Sheet of Previous Year**

| | Amount (₹) |
|---|---|
| Materials Used | 77,500 |
| Direct Wages (A = ₹ 5,000, B = ₹ 6,000, C = ₹ 4,000) | 15,000 |
| *Prime Cost* | 92,500 |
| Factory Overhead (A = ₹ 2,500, B = ₹ 4,000, C = ₹ 1,000) | 7,500 |
| *Factory Cost* | 1,00,000 |
| Selling Overhead | 30,000 |
| *Cost of Sales* | 1,30,000 |

Percentage of Selling Overhead on Works Cost $= \frac{₹\ 30,000}{₹\ 1,00,000} x100 = 30\%$

**(iii) Cost Sheet of the Current Year (Job No. 3286)**

| **Particulars** | | **Amount (₹)** |
|---|---|---|
| Materials | | 12.08 |
| Direct Wages | | |
| - Department A | 10 hours x ₹ 0.25 = ₹ 2.50 | |
| - Department B | 4 hours x ₹ 0.25 = ₹ 1.00 | |
| - Department C | 8 hours x ₹ 0.25 = ₹ 2.00 | 5.50 |
| *Prime Cost* | | 17.58 |
| Factory Overhead | | |
| - Department A | 10 hours x ₹ 0.125 = ₹ 1.25 | |
| - Department B | 4 hours x ₹ 0.167 = ₹ 0.67 | |
| - Department C | 8 hours x ₹ 0.063 = ₹ 0.50 | 2.42 |
| *Factory Cost* | | 20.00 |
| Selling Overhead | ₹ 20 x 30% | 6.00 |
| *Cost of Sales* | | 26.00 |
| Profit (10% x ₹ 26.00) | | 2.60 |
| *Selling Price* | | 28.60 |

(b) Calculation of Cost of Materials Issued to site

| | | ` |
|---|---|---|
| | Materials consumed | 1,65,000 |
| Add: | Materials stolen | 10,000 |
| | Materials returned to stores | 5,000 |
| | Materials in hand (31.12.2017) | 15,000 |
| | | 1,95,000 |

Contract Account
for the year ended 31 Dec. 2022

Dr. Cr.

| | ` | | ` |
|---|---|---|---|
| To Materials issued to site | 1,95,000 | By Materials returned to stores | 5,000 |
| To Direct Expenses | 5,000 | By Insurance claim A/c (Loss of Stock) | 6,000 |
| To Wages | 30,000 | By Profit and Loss A/c | 4,000 |

| | | | |
|---|---|---|---|
| To Works Expenses 20% of wages | 6,000 | By Materials in hand (Stolen ` 10,000-`6.000) | 15,000 |
| To Office Expenses 10% of Works Cost (Note 1) | 21,000 | By Cost of Contract Balancing Figure) | 2,31,000 |
| To Depreciation on Plant (Note 2) | 4,000 | | |
| | 2,61,000 | | 2,61,000 |
| To Cost of Contract b/d | 2,31,000 | By Work in Progress: | |
| To Notional Profit | 80,000 | Work certified | 3,00,000 |
| | | Work uncertified | 11,000 |
| | 3,11,000 | | 3,11,000 |
| To Profit & Loss A/c (Note 3) | 48,000 | By Notional Profit | 80.000 |
| To Profit Reserve | 32,000 | | |
| | 80,000 | | 80.000 |

Working Notes:

1. Calculation of works cost

| | ` |
|---|---|
| Materials consumed | 1,65,000 |
| Add: Direct Wages | 30,000 |
| Direct Expenses | 5,000 |
| Prime Cost | 2,00,000 |
| Add: Works expenses | 6,000 |
| Deprecation | 4,000 |
| | 2,10,000 |

6. (a)

Crushing Process Account

| Particulars | Tons | Amount ₹ | Particulars | Tons | Amount ₹ |
|---|---|---|---|---|---|
| To Copra | 2000 | 1,00,000 | By Copra Sacks | - | 2,000 |
| To Labour | | 10,000 | By Copra Residue | 250 | 5,000 |
| To Sundry Materials | | 4,000 | By Loss in Crushing (Balancing Figure) | 50 | - |
| To Electric Power | | 3,000 | By Transfer to Refining @ ₹ 70 per ton | 1,700 | 1,19,000 |
| To Steam | | 2,000 | | | |
| To Repairs of Machines | | 2,000 | | | |
| To Factory Expenses | | 5,000 | | | |
| | **2000** | **1,26,000** | | **2000** | **1,26,000** |

Refining Process Account

| Particulars | Tons | Amount ₹ | Particulars | Tons | Amount ₹ |
|---|---|---|---|---|---|
| To Crushing Process A/c | 1700 | 1,19,000 | By Sale of by Products | 120 | 5,100 |
| To Labour | | 6,000 | By Loss in Refining Process (Balancing Figure) | 40 | - |
| To Sundry Materials | | 3,000 | | | - |
| To Electric Power | | 2,000 | By Transfer to Finishing @ ₹ 85 per ton | 1,540 | 1,30,900 |
| To Steam | | 2,000 | | | |
| To Repairs of Machines | | 1,000 | | | |
| To Factory Expenses | | 3,000 | | | |
| | **1700** | **1,36,000** | | **1700** | **1,36,000** |

**Finishing Process Account**

| Particulars | Tons | Amount ₹ | Particulars | Tons | Amount ₹ |
|---|---|---|---|---|---|
| To Refining Process A/c | 1540 | 1,30,900 | By Loss in Finishing (Balancing Figure) | 40 | - |
| To Labour | | 4,000 | By Cost of Production Transferred to Finished Oil A/c ₹ 95 per ton | 1,500 | 1,42,500 |
| To Sundry Materials | | 2,000 | | | |
| To Electric Power | | 1,600 | | | |
| To Steam | | 1,500 | | | |
| To Repairs of Machines | | 500 | | | |
| To Factory Expenses | | 2,000 | | | |
| | **1540** | **1,42,500** | | **1,540** | **1,42,500** |
| To Cost of Production of Finished Oil | **1,500** | **1,42,500** | By Total Cost @ ₹ 100 per Ton | **1,500** | **1,50,000** |
| To Cost of Casks | | **7,500** | | | |
| | **1,500** | **1,50,000** | | **1,500** | **1,50,000** |

Working Notes: *Factory overhead of ₹10,000 is apportioned in the ratio of labour cost i.e., 5:3:2.

(b) (i) Calculation of cost per tonne km

**Statement showing computation of total cost per tonne kilometer for carrying finished goods to warehouses**

| Particulars | A | B |
|---|---|---|
| Time for travelling | 40 Min | 60 Min |
| Time for loading | 40 Min | 40 Min |
| Time for unloading | 30 Min | 20 Min |
| | 110 Min | 120 Min |

| | ₹ | ₹ |
|---|---|---|
| Cost of Insurance, wages, tax, etc. [(110/60) × 18] | 33 | |
| [(120/60) × 18] | | 36 |
| Fuel & oil etc. (20 × 2.4) (30 × 2.4) | 48 | 72 |
| Total Cost | 81 | 108 |
| Tonne Kilometers (5 × 10)// (5 × 15) | 50 | 75 |
| Cost per tonne KM | ₹ **1.62** | ₹ **1.44** |

(ii) Composite unit can be calculated in two ways; 'Absolute (weighted average)' basis and 'Commercial (simple average)' basis. - Sometime two measurement units are combined together to know the cost of service or operation. These are called composite cost units. For example, a public transportation undertaking would measure the operating cost per passenger per kilometer.

Examples of Composite units are Ton- km., Quintal- km, Passenger-km., Patient- day etc. Composite unit may be computed in two ways.

- Absolute (Weighted Average) basis
- Commercial (Simple Average) basis.

In both bases of computation of service cost unit, weightage is also given to qualitative factors rather quantitative (which are directly related with variable cost elements) factors alone.

- Weighted Average or Absolute basis – It is summation of the products of qualitative and quantitative factors.
- Simple Average or Commercial basis – It is the product of average qualitative and total quantitative factors. For example, in case of goods transport, Commercial Ton-Km is arrived at by multiplying total distance km., by average load quantity.

In both the example, variable cost is dependent of distance and is a quantitative factor. Since, the weight carried does not affect the variable cost hence and is a qualitative factor.

7. (a)

| Particulars | ₹ | ₹ |
|---|---|---|
| Revenues | | 6,00,000 |
| Deduct variable costs: | | |
| Cost of goods sold | 3,00,000 | |
| Sales commissions | 60,000 | |
| Other operating costs | 30,000 | 3,90,000 |
| Contribution margin | | 2,10,000 |
| Contribution margin percentage = | 210000/600000 | = 0.35 |

| | | | |
|---|---|---|---|
| Incremental revenue | (15% × 600,000) = | 90000 | |
| Incremental contribution margin | (35% × 90,000) | | 31,500 |
| Incremental fixed costs (advertising) | | | 13,000 |
| Incremental operating income | | | 18,500 |

If Mr. Lurvey spends `13,000 more on advertising, the operating income will increase by `18,500, decreasing the operating loss from ` 49,000 to an operating loss of `30,500.

Check (optional)

| Particulars | | ` | ` |
|---|---|---|---|
| Revenues | (115% × 600,000) | | 6,90,000 |
| Cost of goods sold | (50% of sales) | | 3,45,000 |
| Gross margin | | | 3,45,000 |
| Operating costs: | | | |
| Salaries and wages | | 1,70,000 | |
| Sales commissions | (10% of sales) | 69,000 | |
| Depreciation of equipment and fixtures | | 20,000 | |
| Store rent | | 54,000 | |
| Advertising | | 13,000 | |
| Other operating costs: | | | |
| Variable | (30000×690000)÷600000 | 34,500 | |
| Fixed | | 15,000 | 3,75,500 |
| Operating income | | | 30,500 |

(b) (i) Production Budget

| Product | A | B |
|---|---|---|
| Sales | 2000 | 1500 |
| Opening Stock | (100) | (200) |
| Closing Stock (10% x Sales level) | 200 | 150 |
| | 2100 | 1450 |

(ii) Material Usage Budget

| Material Type | X | Y |
|---|---|---|
| (2100 x2) + (1450 x 3) | 8550 | |
| 2100 x1) + (1450 x 4) | | 7900 |

(iii) Material Purchases Budget

| Product | X | Y |
|---|---|---|
| Material Usage Budget | 8550 | 7900 |
| Opening Stock | (300) | (1000) |
| Closing Stock [a] | 850 | 800 |
| | 9100 x ₹10 = ₹ 91000 | 1450 x ₹= ₹ 53900 |

(iv) Labour Budget

| Material Type | X | Y |
|---|---|---|
| (2100 x4) + (1450 x 2) | 11,300 | |
| 2100 x2) + (1450 x 5) | | 11,450 |
| 11,300 x ₹12<br>11,450 x ₹ 8 | ₹ 1,35,600 | <br>₹ 91,600 |

Note:

[a] Material Closing Stock

Material X (2000 x 2 + 1500 x 3) x 10% = 850

Material Y (2000 x 1 + 1500 x 4) x 10% = 850

8. (a) The following calculation are required for a submitting a comprehensive report to Mr Hardik which covers the analysis of the variances calculated.

Working note

*A. Actual hours worked (in actual mix) × Actual rate*

*Skilled – 13 workers × 40 hrs × ` 4.80 per hour = 2496*

*Semi-skilled - 4 workers × 40 hrs × 3.40 per hour = 544*

*Unskilled – 3 workers × 40 hrs × 2.60 per hour = 312*

**3352**

*B. Actual hours worked (in actual mix) × Standard rate*

*Skilled – 13 workers × 40 hrs × ` 5.00 per hour = 2600*

*Semi-skilled - 4 workers × 40 hrs × 3.20 per hour = 512*

*Unskilled – 3 workers × 40 hrs × 2.80 per hour = 336* **3448**

C. *Actual hours worked (in standard mix) × Standard rate*

*Skilled – 10 workers × 40 hrs × ` 5.00 per hour = 2000*

*Semi-skilled - 5 workers × 40 hrs × 3.20 per hour = 640*

*Unskilled – 5 workers × 40 hrs × 2.80 per hour = 560*

**3200**

D. *Actual hours paid (in actual mix) × Standard rate*

*Skilled – 10 workers × 38 hrs × ` 5.00 per hour = 1900*

*Semi-skilled –5 workers × 38 hrs × 3.20 per hour = 608*

*Unskilled – 5 workers × 38 hrs × 2.80 per hour = 532*

**3040**

E. *Standard labour cost for actual yield*

$$\frac{40\ hrs \times (10 \times 5.00\ per\ hr + 4 \times 3.20\ per\ hr + 3 \times 2.60\ per\ hr)}{1000\ units} \times 960\ units = \mathbf{3072}$$

And

*Labour cost variance*

$$= (Actual\ hours\ worked \times Actual\ rate) - Standard\ labour\ cost\ for\ actual\ yield$$
$$= A - E = \mathbf{280}\ (\boldsymbol{A})$$

*Labour rate variance*

$$= (Actual\ hours\ worked \times Actual\ rate) - (Actual\ hours\ worked \times Standard\ rate$$
$$= A - B = \mathbf{96}\ (\boldsymbol{F})$$

*Labour idle time variance*

$$= ((hours\ paid - hours\ worked) \times standard\ direct\ labour\ rate\ per\ hour)$$
$$= C - D = \mathbf{160}\ (\boldsymbol{A})$$

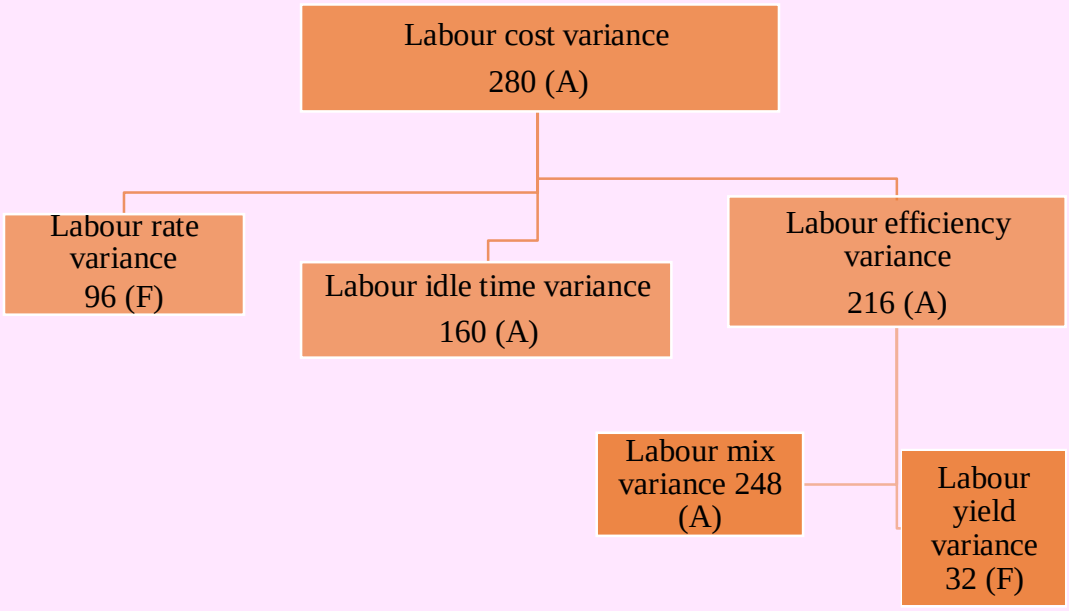
$$Labour\ efficiency\ variance$$
$$= (Actual\ hours\ worked \times Standard\ rate)$$
$$- Standard\ labour\ cost\ for\ actual\ yield$$
$$= B - E = 376\ (A)$$

But idle time variance is to be calculated separately which is recommend.
Thus labour efficiency variance adjusted for idle time variance = 376(A) – 160 (A) = **216 (A)**[1]

Labour mix variance
= ((actual hours for grade – hours for grade based on total labour hours split in standard proportions) × (weighted average cost per hour – standard cost per hour))
= Standard Cost of Standard Mix of Labourers – Standard Cost of Actual Mix of Labourer
= $B - C = \mathbf{248}\ (\boldsymbol{A})$

$$Labour\ yield\ variance$$
$$= (Actual\ yield\ or\ output - Standard\ yield\ or\ output\ for\ actual\ input)$$
$$\times Standard\ cost\ per\ unit$$
$$= D - E = \mathbf{32}\ (\boldsymbol{F})$$

**Reconciliation**




[1]Labour idle time variance is shown separately from efficiency variance as discussed in previous section.

(b)

TRINITY ENGINEERING LTD.

Production Budget for the Quarter ended March 2022 and for the month April, 2022

(Figures in Units)

| Particulars | January | February | March | April |
|---|---|---|---|---|
| Budgeted Sales | 10,800 | 15,600 | 12,200 | 10,400 |
| Add: Opening Inventory | 3,900 | 3,050 | 2,600 | 2,450 |
| | 14,700 | 18,650 | 14,800 | 12,850 |
| Less: Opening Inventory | 2,700 | 3,900 | 3,050 | 2,600 |
| Required Monthly Production | 12,000 | 14,750 | 11,750 | 10,250 |

TRINITY ENGINEERING LTD.

Direct Material Usage and Purchase Budget for the Quarter ended March 2022

Material A

| Particulars | January (Units) | February (Units) | March (Units) |
|---|---|---|---|
| Production Requirement – 4 units of Material A for each of Finished Product | 48,000 | 59,000 | 47,000 |
| Add: Closing Inventory | 29,500 | 23,500 | 20,500 |
| | 77,500 | 82,500 | 67,500 |
| Less: Opening Inventory | 24,000 | 29,500 | 23,500 |
| | 53,500 | 53,000 | 44,000 |

Material B

| Particulars | January (Units) | February (Units) | March (Units) |
|---|---|---|---|
| Production Requirement – 54 units of Material B for each of Finished Product | 60,000 | 73,750 | 58,750 |
| Add: Closing Inventory | 36,875 | 29,375 | 25,625 |
| | 96,875 | 1,03,125 | 84,375 |
| Less: Opening Inventory | 30,000 | 36,785 | 29,375 |
| | 66,875 | 66,250 | 55,000 |

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# PAPER - 8

# COST ACCOUNTING BIT QUESTIONS


DIRECTORATE OF STUDIES

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# PAPER - 8

## COST ACCOUNTING BIT QUESTIONS


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# PAPER - 8

# Cost Accounting
# Bit Questions

# (I) Choose the correct answer from the given alternatives:

**1) In process, conversion cost means**
- **(a) Cost of direct materials, direct labour, direct expenses**
- **(b) Direct labour, direct expenses, indirect material, indirect labour, indirect expenses**
- **(c) Prime cost plus factory overheads**
- **(d) All costs up to the product reaching the consumer, less direct material costs**

**2) At the economic ordering quantity level, the following is true:**
- **(a) The ordering cost is minimum**
- **(b) The carrying cost is minimum**
- **(c) The ordering cost is equal to the carrying cost**
- **(d) The purchase price is minimum**

**3) When a direct worker is paid on a monthly fixed salary basis, the following is true:**
- **(a) There is no idle time lost.**
- **(b) There is no idle time cost.**
- **(c) Idle time cost is separated and treated as overhead.**
- **(d) The salary is fully treated as factory overhead cost.**

**4) The following is an example of direct expenses as per CAS-10:**
- **(a) Special raw material which is a substantial part of the prime cost.**
- **(b) Travelling expenses to site.**
- **(c) Overtime charges paid to direct worker to complete work before time.**
- **(d) Catalogue of prices of finished products.**

**5) The following is not treated as a manufacturing overhead:**
- **(a) Lubricants**
- **(b) Cotton waste**
- **(c) Apportioned administration overheads**
- **(d) Night shift allowance paid to a factory worker due to general work pressure.**

**6) When you attempt a reconciliation of profits as per Financial Accounts and Cost Accounts, the following is done:**
- **(a) Add the under absorption of overheads in Cost Accounts if you start from the profits as per Financial Accounts.**
- **(b) Add the under absorption of overheads in Cost Accounts if you start from the profits as per Cost Accounts.**
- **(c) Add the over absorption of overheads in Cost Accounts if you start from the profits as per Financial Accounts.**
- **(d) Add the over absorption of overheads in Cost Accounts if you start from the profits as per Cost Accounts.**

**7) Batch Costing is applied effectively in the following situation:**
- **(a) paper manufacturing**
- **(b) drug manufacturing**
- **(c) designer clothes manufacturing**
- **(d) oil refining**

**8) In the context of Contract a/c, work completed and not yet certified will beshown**
- **(a) at cost plus + 2/3rd of the notional profit under 'Completed Work'.**
- **(b) at cost plus notional profit less retention money under 'Completed Work'.**
- **(c) at cost under 'Completed Work'.**
- **(d) at cost under WIP a/c.**

**9) A certain process needed standard labour of 24 skilled labour hours and 30 unskilled labour hours at Rs. 60 and Rs. 40 respectively as the standard labour rates. Actually, 20 and 25 labour hours were used at Rs. 50 and Rs. 50 respectively. Then, the labour mix variance will be**
- **(a) Adverse**
- **(b) Favourable**
- **(c) Zero**
- **(d) Favourable for skilled and unfavourable for unskilled**

**10) If an organization has all the resources it needs for production, then the principal budget factor is most likely to be**
- **(a) non-existing**
- **(b) sales demand**
- **(c) raw materials**
- **(d) labour supply**

**11) Cost Unit of Hospital Industry is**
- **(a) Tonne**
- **(b) Student per year**
- **(c) Kilowatt Hour**
- **(d) Patient Day**

**12) Which of the following is considered as normal loss of material?**
- **(a) Pilferage**
- **(b) Loss due to accident**
- **(c) Loss due to careless handling of material**
- **(d) None of these**

**13) Idle time is**
- **(a) Time spent by workers in factory**
- **(b) Time spent by workers in office**
- **(c) Time spent by workers off their work**
- **(d) Time spent by workers on their job**

**14) Warehouse expense is an example of**
- **(a) Production overhead**
- **(b) Selling overhead**
- **(c) Distribution overhead**
- **(d) None of above**

**15) Which of the following items is not included in preparation of cost sheet?**
- **(a) Carriage inward**
- **(b) Purchase returns**
- **(c) Sales Commission**
- **(d) Interest paid**

**16) Operating costing is applicable to:**
- **(a) Hospitals**
- **(b) Cinemas**
- **(c) Transport undertaking**
- **(d) All of the above**

**17) If sales are Rs. 90,000 and variable cost to sales is 75%. Contribution is**
- **(a) Rs. 21,500**
- **(b) Rs. 22,500**
- **(c) Rs. 23,500**
- **(d) Rs. 67,500**

**18) P/V Ratio will increase if the**
- **(a) There is a decrease in fixed cost**
- **(b) There is an increase in fixed cost**
- **(c) There is a decrease in selling price per unit**
- **(d) There is a decrease in variable cost per unit.**

**19) Difference between standard cost and actual cost is called as**
- **(a) Wastage**
- **(b) Loss**
- **(c) Variance**
- **(d) Profit**

**20) Sales Budget is a-**
- **(a) Expenditure budget**
- **(b) Functional budget**
- **(c) Master budget**
- **(d) None of the above**

**21) Depreciation is a example of-**
- **(a) Fixed Cost**
- **(b) Variable Cost**
- **(c) Semi Variable Cost**
- **(d) None**

**22) Continuous stock taking is a part of-**
- **(a) ABC analysis**
- **(b) Annual stock taking**
- **(c) Perpetual Inventory**
- **(d) None of these**

**23) Cost of idle time arising due to non-availability of raw material is**
- **(a) Charged to costing profit and loss A/c**
- **(b) Charged to factory overheads**
- **(c) Recovered by inflating the wage rate**
- **(d) Ignored**

**24) Over time is**
- **(a) Actual hours being more than normal time**
- **(b) Actual hours being more than standard time**
- **(c) Standard hours being more than actual hours**
- **(d) Actual hours being less than standard time**

**25) The allotment of whole items of cost centres or cost unit is called**
- **(a) Cost allocation**
- **(b) Cost apportionment**
- **(c) Overhead absorption**
- **(d) None of the above**

**26) In Reconciliations Statements Expenses shown only in financial accounts are.**
- **(a) Added to financial profit**
- **(b) Deducted from financial profit**
- **(c) Ignored**
- **(d) Added to costing profit**

**27) Job costing is used in**
- **(a) Furniture making**
- **(b) Repair shops**

(c) Printing press
(d) All of the above

28) In a process 8000 units are introduced during a period. 5% of input is normal loss. Closing work in progress 60% complete is 1000 units. 6600 completed units are transferred to next process. Equivalent production for the period is:
(a) 9000 units
(b) 7440 units
(c) 5400 units
(d) 7200 units

29) If sales are Rs. 150,000 and variable cost are Rs. 50,000. Compute P/V ratio.
(a) 66.66%
(b) 100%
(c) 133.33%
(d) 65.66%

30) Standard cost of material for a given quantity of output is Rs. 15,000 while the actual cost of material used is Rs. 16,200. The material cost variance is:
(a) Rs. 1,200 (A)
(b) Rs. 16,200 (A)
(c) Rs. 15,000 (F)
(d) Rs. 31,200 (A)

31) Selling and distribution overheads are absorbed on the basis of
(a) rate per unit.
(b) percentage on works cost.
(c) percentage on selling price of each unit.
(d) Any of the above

32) What entry will be passed under integrated system for purchase of stores on credit?
(a) Dr. Stores
Cr. Creditors
(b) Dr. Purchases
Cr. Creditors
(c) Dr. Stores Ledger Control A/c
Cr. Creditors
(d) Dr. Stores Ledger Control A/c
Cr. General Ledger Adjustment A/c

33) In a process 800 units are introduced during 2016-17. 5% of input is normal loss. Closing work-in-progress 60% complete is 100 units. 660 completed units are transferred to next process. Equivalent production for the period is
(a) 760 units
(b) 744 units
(c) 540 units
(d) 720 units

34) _____deals with the principles and methods of determining the production or operation overheads.
(a) CAS-3
(b) CAS-5
(c) CAS-9
(d) CAS-16

**35) There is a loss as per financial accounts Rs. 10,600, donations not shown in cost accounts Rs. 6,000. What would be the profit or loss as per cost accounts?**
- **(a) Loss Rs. 16,600**
- **(b) Profit Rs. 16,600**
- **(c) Loss Rs. 4,600**
- **(d) Profit Rs. 4,600**

**36) A hotel having 100 rooms of which 80% are normally occupied in summer and 25% in winter. Period of summer and winter be taken as 6 months each and normal days in a month be assumed to be 30. The total occupied room days will be**
- **(a) 1525 Room days**
- **(b) 18900 Room days**
- **(c) 36000 Room days**
- **(d) None of the above**

**37) A firm has fixed expenses Rs. 90,000, sales Rs. 3,00,000 and profit Rs. 60,000. The P/V ratio of the firm is**
- **(a) 10%**
- **(b) 20%**
- **(c) 30%**
- **(d) 50%**

**38) Marginal costing technique follows the following basis of classification:**
- **(a) Element wise**
- **(b) Function-wise**
- **(c) Behavior-wise**
- **(d) Identifiability-wise**

**39) Which of the following is not a potential benefitsof using a budget?**
- **(a) More motivated managers**
- **(b) Enhanced co-ordination of firm activities**
- **(c) Improved inter-departmental communication**
- **(d) More accurate external financial statements**

**40) Joint Cost is suitable for-**
- **(a) Infrastructure Industry**
- **(b) Ornament Industry.**
- **(c) Oil Industry**
- **(d) Fertilizer Industry**

**41) Which of the following is considered as accounting record?**
- **(a) Bin Card**
- **(b) Bill of material**
- **(c) Store Ledger**
- **(d) None of these**

**42) Time and motion study is conducted by the**
- **(a) Time –keeping department**
- **(b) Personnel department**
- **(c) Payroll department**
- **(d) Engineering department**

**43) Time keeping refers to**
- **(a) Time spent by workers on their job**
- **(b) Time spent by workers in factory**
- **(c) Time spent by workers without work**
- **(d) Time spent by workers on their job**

**44) Royalty paid on sales Rs. 89,000 and Software development charges related to product is Rs. 22,000. Calculate Direct Expenses.**
- **(a) 1,11,100**
- **(b) 1,11,000**
- **(c) 1,11,110**
- **(d) 1,10,000**

**45) Direct Expenses that does not meet the test of materiality can be ——— part of overhead.**
- **(a) Treated**
- **(b) Not treated**
- **(c) All of the these**
- **(d) None of these**

**46) When the amount of under-or-over-absorption is significant, it should be disposed of by**
- **(a) Transferring to costing profit and loss A/c**
- **(b) The use of supplementary rates**
- **(c) Carrying over as a deferred charge to the next accounting year**
- **(d) None of above**

**47) Charging to a cost center those overheads that result solely for the existence of that cost Center is known as**
- **(a) Allocation**
- **(b) Apportionment**
- **(c) Absorption**
- **(d) Allotment**

**48) CAS 21 stands for**
- **(a) Capacity Determination**
- **(b) Joint Cost**
- **(c) Direct Expenses**
- **(d) None of these.**

**49) Standards deals with determination of averages/equalized transportation cost –**
- **(a) CAS 6**
- **(b) CAS 22**
- **(c) CAS 9**
- **(d) CAS 5**

**50) Standards deals with the principles and methods of determining depreciation and amortization cost-**
- **(a) CAS 9**
- **(b) CAS 12**
- **(c) CAS 15**
- **(d) CAS 16**

**51) Integral accounts eliminate the necessity of operating**
- **(a) Cost Ledger control account**
- **(b) Store Ledger control account**
- **(c) Overhead adjustment account**
- **(d) None of the above**

**52) Equivalent production of 1,000 units, 60% complete in all respects, is:**
- **(a) 1000 units**
- **(b) 1600 units**
- **(c) 600 units**
- **(d) 1060 units**

**53) Standard price of material per kg is Rs. 20, standard usage per unit of production is 5 kg. Actual usage of production 100 units is 520 kgs, all of which was purchased at the rate of Rs. 22 per kg. Material cost variance is**

**(a) 2,440 (A)**
**(b) 1,440 (A)**
**(c) 1,440 (F)**
**(d) 2,300 (F)**

**54) Standard cost of material for a given quantity of output is Rs. 15,000 while the actual cost of material used is Rs. 16,200. The material cost variance is:**

**(a) Rs. 1,200 (A)**
**(b) Rs. 16,200 (A)**
**(c) Rs. 15,000 (F)**
**(d) Rs. 31,200 (A)**

**55) The basic difference between a fixed budget and flexible budget is that a fixed budget -**

**(a) is concerned with a single level of activity, while flexible budget is prepared for different levels of activity**
**(b) Is concerned with fixed costs, while flexible budget is concerned with variable costs.**
**(c) is fixed while flexible budget changes**
**(d) None of these.**

**56) Batch Costing is suitable for-**

**(a) Sugar Industry**
**(b) Chemical Industry**
**(c) Pharma Industry**
**(d) Oil Industry**

**57) Cost units of Hospital Industry is-**

**(a) Tonne**
**(b) Student per year**
**(c) Kilowatt Hour**
**(d) Patient Day**

**58) Cost units of Automobile Industry is-**

**(a) Cubic meter**
**(b) Bed Night**
**(c) Number of Call**
**(d) Number of vehicle**

**59) Depreciation is a example of-**

**(a) Fixed Cost**
**(b) Variable Cost**
**(c) Semi Variable Cost**
**(d) None of these**

**60) The most important element of cost is-**

**(a) Material**
**(b) Labour**
**(c) Overheads**
**(d) All of these**

**61) Direct material is a –**

**(a) Adiministration Cost**
**(b) Selling and Distribution cost**
**(c) All of these**
**(d) None of these**

**62) Continuous stock taking is a part of-**
- **(a) ABC analysis**
- **(b) Annual stock taking**
- **(c) Perpetual Inventory**
- **(d) None of these**

**63) Which of the following is considered as accounting record?**
- **(a) Bin Card**
- **(b) Bill of material**
- **(c) Store Ledger**
- **(d) None of these**

**64) In which of the following incentive plan of payment, wages on time basis are not Guaranteed?**
- **(a) Halsey plan**
- **(b) Rowan plan**
- **(c) Taylor's differential piece rate system**
- **(d) Gantt's task and bonus system**

**65) Under the high wage plan, a worker is paid**
- **(a) At a time rate higher than the usual rate**
- **(b) According to his efficiency**
- **(c) At a double rate for overtime**
- **(d) Normal wages plus bonus**

**66) When overtime is required for meeting urgent orders, overtime premium should be**
- **(a) Charged to costing profit and loss A/c**
- **(b) Charged to overhead costs**
- **(c) Charged to respective jobs**
- **(d) Ignored**

**67) Wages sheet is prepared by**
- **(a) Time –keeping department**
- **(b) Personnel department**
- **(c) Payroll department**
- **(d) Engineering department**

**68) Labour turnover is measured by**
- **(a) Number of workers replaced average number of workers**
- **(b) Number of workers left / number in the beginning plus number at the end**
- **(c) Number of workers joining / number in the beginning of the period**
- **(d) All of these**

**69) Over time is**
- **(a) Actual hours being more than normal time**
- **(b) Actual hours being more than standard time**
- **(c) Standard hours being more than actual hours**
- **(d) Actual hours being less than standard time**

**70) Direct Expenses ——— include imputed cost.**
- **(a) Shall**
- **(b) Shall not**
- **(c) None of these**

**71) Example of Direct Expenses.**
- **(a) Rent**

(b) Royalty charged on production
(c) Bonus to employee
(d) None of these

72) A manufacturing Industry produces product P, Royalty paid on sales is Rs. 23,500 and design charges paid for the product is Rs. 1,500. Compute the Direct Expenses.
(a) 25,000
(b) 22,000
(c) 26,500
(d) None of these

73) Packing cost is a
(a) Production of cost
(b) Selling cost
(c) Distribution cost
(d) It may be any or the above

74) Directors remuneration and expenses form a part of
(a) Production overhead
(b) Administration overhead
(c) Selling overhead
(d) Distribution overhead

75) Charging to a cost center those overheads that result solely for the existence of that cost Center is known as
(a) Allocation
(b) Apportionment
(c) Absorption
(d) Allotment

76) Absorption means
(a) Charging or overheads to cost centers
(b) Charging or overheads to cost units
(c) Charging or overheads to cost centers or cost units

77) Which method of absorption of factory overheads do you suggest in a concern which produces only one uniform type of product :
(a) Percentage of direct wages basis
(b) Direct labour rate
(c) Machine hour rate
(d) A rate per units of output

78) When the amount of under-or-over-absorption is significant, it should be disposed of by
(a) Transferring to costing profit and loss A/c
(b) The use of supplementary rates
(c) Carrying over as a deferred charge to the next accounting year
(d) None of above

79) When the amount of overhead absorbed is less than the amount of overhead incurred, It is called
(a) Under- absorption of overhead
(b) Over-absorption of overhead
(c) Proper absorption of overhead

80) Warehouse expense is an example of
(a) Production overhead

(b) Selling overhead
(c) Distribution overhead
(d) None of above

81) Selling and Distribution overhead are absorbed on the basis of
(a) Rate per unit
(b) Percentage on works cost
(c) Percentage on selling price of each unit
(d) Any of these

82) CAS 21 stands for
(a) Capacity Determination
(b) Joint Cost
(c) Direct Expenses
(d) None of these.

83) CAS 13 stands for
(a) Joint Cost
(b) Interest and financing charges
(c) Employee Cost
(d) Cost of Service cost centre

84) Standard deals with the principles and methods of determining the manufacturing Cost of excisable goods-
(a) CAS 12
(b) CAS 15
(c) CAS 22
(d) CAS 2

85) Standards deals with determination of averages/ equalized transportation cost-
(a) CAS 6
(b) CAS 22
(c) CAS 9
(d) CAS 5

86) Which of the following items is not included in preparation of cost sheet?
(a) Carriage inward
(b) Purchase returns
(c) Sales commission
(d) Interest paid

87) Which of the following items is not excluded while preparing a cost sheet?
(a) Goodwill written off
(b) Provision for taxation
(c) Property tax on Factory building
(d) Transfer to reserves
(e) Interest paid

88) Which of the following are direct expenses?
(1) The cost of special designs, drawings or layouts
(2) The hire of tools or equipment for a particular job
(3) Salesman's wages
(4) Rent, rates and insurance of a factory

(a) (1) and (2)
(b) (1) and (3)

**(c) (1) and (4)**
**(d) (3) and (4)**

**89) What is prime cost**
**(a) Total direct costs only**
**(b) Total indirect costs only**
**(c) Total non-production costs**
**(d) Total production costs**

**90) Which of the following is not an element of works overhead?**
**(a) Sales manager's salary**
**(b) Plant manager's salary**
**(c) Factory repairman's wages**
**(d) Product inspector's salary**

**91) In Reconciliations Statements Expenses shown only in financial accounts are.**
**(a) Added to financial profit**
**(b) Deducted from financial profit**
**(c) Ignored**
**(d) Added to costing profit**

**92) In Reconciliations Statements Expenses shown only in cost accounts are.**
**(a) Added to financial profit**
**(b) Deducted from financial profit**
**(c) Ignored**
**(d) Deducted from costing profit**

**93) In Reconciliations Statements, transfers to reserves are.**
**(a) Added to financial profit**
**(b) Deducted from financial profit**
**(c) Ignored**
**(d) Added to costing profit**

**94) In Reconciliations Statements, Incomes shown only in financial accounts are.**
**(a) Added to financial profit**
**(b) Deducted from financial profit**
**(c) Ignored**
**(d) Deducted from costing profit**

**95) In Reconciliations Statements, Closing Stock Undervalued in Financial accounts is**
**(a) Added to financial profit**
**(b) Deducted from financial profit**
**(c) Ignored**
**(d) Added to costing profit**

**96) Integral accounts eliminate the necessity of operating**
**(a) Cost Ledger control account**
**(b) Store Ledger control account**
**(c) Overhead adjustment account**
**(d) None of the above**

**97) What entry will be passed under integrated system for payment to creditors for supplies made?**
**(a) Dr. Creditors**
**Cr. Cash**
**(b) Dr. Creditors**

**Cr. Stores Ledger Control A/c**

**(c) No entry**

**98) The accounting entry in integrated accounts for recording sales will be:**

**(a) Dr. Cost ledger control account**
**Cr. Profit and loss account**
**(b) Dr. Sales account**
**Cr. Profit and Loss A/c**
**(c) Dr. Cash A/c**
**Cr. Sales A/c**

**99) What will be the accounting entry for absorption of factory overhead?**

**(a) Dr. Works in progress control A/c**
**Cr Factory overhead control A/c**
**(b) Dr. Factory overhead**
**Cr. Factory overhead control A/c**
**(c) No entry is required**

**100) Job costing is used in**

**(a) Furniture making**
**(b) Repair shops**
**(c) Printing press**
**(d) All of the above**

**101) In a job cost system, costs are accumulated**

**(a) On a monthly basis**
**(b) By specific job**
**(c) By department or process**
**(d) By kind of material used**

**102) The most suitable cost system where the products differ in type of material and work performed is**

**(a) Operating Costing**
**(b) Job costing**
**(c) Process costing**
**(d) All of these.**

**103) Cost Price is not fixed in case of**

**(a) Cost plus contracts**
**(b) Escalation clause**
**(c) De escalation clause**
**(d) All of the above**

**104) Most of the expenses are direct in**

**(a) Job costing**
**(b) Batch costing**
**(c) Contact costing**
**(d) None of the above**

**105) Cost plus contact is usually entered into those cases where**

**(a) Cost can be easily estimated**
**(b) Cost of certified and uncertified work**
**(c) Cost of certified work, cost of uncertified work and amount of profit transferred to Profit and Loss Accounts.**

**106) Cost of service under operating costing is ascertained by preparing:**
- **(a) Cost sheet**
- **(b) Process account**
- **(c) Job cost sheet**
- **(d) Production account**

**107) Operating costing is applicable to:**
- **(a) Hospitals**
- **(b) Cinemas**
- **(c) Transport undertaking**
- **(d) Allof the above**

**108) If sales are Rs. 90,000 and variable cost to sales is 75%, contribution is**
- **(a) Rs. 21,500**
- **(b) Rs. 22,500**
- **(c) Rs. 23,500**
- **(d) Rs. 67,500**

**109) Variable cost**
- **(a) Remains fixed in total**
- **(b) Remains fixed per unit**
- **(c) Varies per unit**
- **(d) Nor increase or decrease**

**110) If sales are Rs. 150,000 and variable cost are Rs. 50,000. Compute P/V ratio.**
- **(a) 66.66%**
- **(b) 100%**
- **(c) 133.33%**
- **(d) 65.66%**

**111) Marginal Costing technique follows the following basis of classification**
- **(a) Element wise**
- **(b) Function Wise**
- **(c) Behaviour wise**
- **(d) Identifiability wise**

**112) P/V ratio will increase if the**
- **(a) There is an decrease in fixed cost**
- **(b) There is an increase in fixed cost**
- **(c) There is a decrease in selling price per unit.**
- **(d) There is a decrease in variable cost per unit.**

**113) The technique of differential cost is adopted when**
- **(a) To ascertain P/V ratio**
- **(b) To ascertain marginal cost**
- **(c) To ascertain cost per unit**
- **(d) To make choice between two or more alternative courses of action**

**114) Difference between the costs of two alternative is known as the**
- **(a) Variable cost**
- **(b) Opportunity cost**
- **(c) Marginal cost**
- **(d) Differential cost**

**115) Contribution is Rs. 300,000 and sales is Rs. 1,500,000. Compute P/V ratio.**
- **(a) 15%**

(b) 20%
(c) 22%
(d) 17.5%

116) Variable cost to sales ratio is 40%. Compute P/V ratio.
(a) 60%
(b) 40%
(c) 100%
(d) None of the these

117) Fixed cost is 30,000 and P/V ratio is 20%. Compute breakeven point.
(a) Rs. 160,000
(b) Rs. 150,000
(c) Rs. 155,000
(d) Rs. 145,000

118) Excess of actual cost over standard cost is known as
(a) Abnormal effectiveness
(b) Unfavourable variance
(c) Favourable variance
(d) None of these.

119) Difference between standard cost and actual cost is called as
(a) Wastage
(b) Loss
(c) Variance
(d) Profit

120) Standards cost is used
(a) To ascertain the breakeven point
(b) To establish cost-volume profit relationship
(c) As a basis for price fixation and cost control through variance analysis.

121) Standard price of material per kg Rs. 20, standards consumption per unit of production is 5 kg. Standard material cost for producing 100 units is
(a) Rs. 20,000
(b) Rs. 12,000
(c) Rs. 8,000
(d) Rs. 10,000

122) Standard cost of material for a given quantity of output is Rs. 15,000 while the actual cost of material used is Rs. 16,200. The material cost variance is:
(a) Rs. 1,200 (A)
(b) Rs. 16,200 (A)
(c) Rs. 15,000 (F)
(d) Rs. 31,200 (A)

123) For the purpose of Proof, Material Cost Variance is equal to:
(a) Material Usage Variance + Material Mix variance
(b) Material Price Variance + Material Usage Variance
(c) Material Price Variance + Material yield variance
(d) Material Mix Variance + Material Yield Variance

124) Cost variance is the difference between
(a) The standard cost and marginal cost
(b) The standards cost and budgeted cost

(c) The standards cost and the actual cost
(d) None of these

125) Standard price of material per kg is Rs. 20, standard usage per unit of production is 5 kg. Actual usage of production 100 units is 520 kgs, all of which was purchase at the rate of Rs. 22 per kg. Material usage variance is
(a) Rs. 400 (F)
(b) Rs. 400 (A)
(c) Rs. 1,040 (F)
(d) Rs. 1,040 (A)

126) Standard price of material per kg is Rs. 20, standard usage per unit of production is 5 kg. Actual usage of production 100 units is 520 kgs, all of which was purchase at the rate of Rs. 22 per kg. Material cost variance is
(a) 2,440 (A)
(b) 1,440 (A)
(c) 1,440 (F)
(d) 2,300 (F)

127) Standard quantity of material for one unit of output is 10 kgs. @ Rs. 8 per kg. Actual output during a given period is 800 units. The standardquantity of raw material
(a) 8,000 kgs
(b) 6,400 Kgs
(c) 64,000 Kgs
(d) None of these.

128) Budgets are shown in ……. Terms
(a) Qualitative
(b) Quantitative
(c) Materialistic
(d) both (b) and (c)

129) Which of the following is not an element of master budget?
(a) Capital Expenditure Budget
(b) Production Schedule
(c) Operating Expenses Budget
(d) All above

130) Which of the following is not a potential benefit of using a budget?
(a) Enhanced coordination of firm activities
(b) More motivated managers
(c) Improved interdepartmental communication
(d) More accurate external financial statements

131) Which of the following is a long-term budget?
(a) Master Budget
(b) Flexible Budget
(c) Cash Budget
(d) Capital Budget

132) Materials become key factor, if
(a) quota restrictions exist
(b) insufficient advertisement prevails
(c) there is low demand
(d) there is no problem with supplies of materials

**133) The difference between fixed cost and variable cost assumes significance in the preparation of the following budget.**
- **(a) Master Budget**
- **(b) Flexible Budget**
- **(c) Cash Budget**
- **(d) Capital Budget**

**134) The budget that is prepared first of all is**
- **(a) Master budget**
- **(b) Budget, with key factor**
- **(c) Cash Budget**
- **(d) Capital expenditure budget**

**135) Sales budget is a ...**
- **(a) expenditure budget**
- **(b) functional budget**
- **(c) Master budget**
- **(d) None of these**

**136) A flexible budget requires a careful study of**
- **(a) Fixed, semi-fixed and variable expenses**
- **(b) Past and current expenses**
- **(c) Overheads, selling and administrative expenses.**
- **(d) None of these.**

**137) In a process 6,000 units are introduced during a period. 5% of input is normal loss. Closing work-in-process 60% complete is 800 units. 4,900 completed units are transferred to next process. Equivalent production for the period is**
- **(a) 6,800 units**
- **(b) 5,700 units**
- **(c) 5,680 units**
- **(d) 5,380 units**

**138) Which of the following best describes a fixed cost?**
- **(a) It may change in total where such change is unrelated to changes in production.**
- **(b) It may change in total where such change is related to changes in production.**
- **(c) It is constant per unit of change in production.**
- **(d) It may change in total where such change depends on production within the relevant range.**

**139) Z Ltd. is planning to sell 1,00,000 units of product A for Rs. 12.00 per unit. The fixed costs are Rs. 2,80,000. In order to realize a profit of Rs. 2,00,000, what would the variable costs be?**
- **(a) Rs. 4,80,000**
- **(b) Rs. 7,20,000**
- **(c) Rs. 9,00,000**
- **(d) Rs. 9,20,000**

**140) Standard deals with the cost of service cost center is**
- **(a) CAS-9**
- **(b) CAS-13**
- **(c) CAS-16**
- **(d) CAS-22**

**141) The most suitable cost system where the products differ in type of material and work performed is**
- **(a) Process Costing**
- **(b) Batch Costing**
- **(c) Job Costing**
- **(d) Operating Costing**

**142) In a process 10000 units are introduced during a period. 10% of input is normal loss. Closing work-in-process 70% complete is 1500 units. 7500 completed units are transferred to next process. Equivalent production for the period is**
- **(a) 9550 units**
- **(b) 9000 units**
- **(c) 8550 units**
- **(d) 8500 units**

**143) The sales and profit of a firm for the year 2016 are Rs.1,50,000 and Rs.20,000 and for the year 2017 are Rs.1,70,000 and Rs.25,000 respectively. The P/V Ratio of the firm is**
- **(a) 15%**
- **(b) 20%**
- **(c) 25%**
- **(d) 30%**

**144) Standard quantity of material for one unit output is 10 kg @ Rs.8 per kg. Actual output during a given period is 600 units. The standard quantity of material for actual output is**
- **(a) 1200 kg**
- **(b) 6000 kg**
- **(c) 4800 kg**
- **(d) 48000 kg**

**145) Which of the following is a long-term Budget?**
- **(a) Master Budget**
- **(b) Production Budget**
- **(c) Flexible Budget**
- **(d) Capital Budget**

**146) The main purpose of Cost Accounting is**
- **(a) to maximise profit.**
- **(b) to help in inventory valuation.**
- **(c) to help in the fixation of selling price.**
- **(d) to provide information to management for decision making.**

**147) In Reconciliation Statement expenses shown only in financial accounts are**
- **(a) added to financial profit.**
- **(b) added to costing profit.**
- **(c) ignored.**
- **(d) deducted from financial profit.**

**148) Which of the following is a service department?**
- **(a) Refining department**
- **(b) Machining department**
- **(c) Receiving department**
- **(d) Finishing department**

**149) Which of the following items is not included in preparation of cost sheet?**
- **(a) Purchase returns**
- **(b) Carriage inwards**

(c) Sales commission
(d) Interest paid

150) In job costing to record the issue of direct materials to a job which of the following document is used?
(a) Purchase order
(b) Goods receipt note
(c) Material requisition
(d) Purchase requisition

151) In a process 4000 units are introduced during a period. 5% of input is normal loss. Closing work-in-progress 60% complete is 500 units. 3300 completed units are transferred to next process. Equivalent production for the period is
(a) 3550 units
(b) 3600 units
(c) 3800 units
(d) 3950 units

152) Product A generates a contribution to sales ratio of 40%. Fixed cost directly attributable to A amount Rs. 60,000. The sales revenue required to achieve a profit of Rs.15,000 is
(a) Rs 2,00,000
(b) Rs 1,85,000
(c) Rs 1,87,500
(d) Rs 2,10,000

153) During a period 13600 labour hours were worked at a standard rate of Rs. 8 per hour. The direct labour efficiency variance was Rs. 8,800 (Adv). How many standard hours were produced?
(a) 12000 hours
(b) 12500 hours
(c) 13000 hours
(d) 13500 hours

154) Cash Budget of ABC Ltd. forewarns of a short-term surplus. Which of the following would be appropriate action to be taken in such a situation?
(a) Purchase new fixed assets
(b) Repay long-term loans
(c) Write off preliminary expenses
(d) Pay creditors early to obtain a cash discount

155) Costs which are ascertained after they have been incurred are known as
(a) Sunk Costs
(b) Imputed Costs
(c) Historical Costs
(d) Opportunity Costs

156) Prime cost plus variable overheads is known as
(a) Factory Cost
(b) Marginal Cost
(c) Cost of Production
(d) Total Cost

157) In which of thefollowing methods, issue of materials are priced atpre-determined rate?
(a) Specific price method
(b) Standard price method
(c) Inflated price method
(d) Replacement price method

**158) For reducing the labour cost per unit, which of the following factors is the most important?**
- **(a) Low wage rates**
- **(b) Longer hours of work**
- **(c) Higher input-output ratio**
- **(d) Strict control and supervision**

**159) Maximum possible productive capacity of a plant when no operating time is lost is its**
- **(a) Normal capacity**
- **(b) Practical capacity**
- **(c) Theoretical capacity**
- **(d) Capacity based on sales expectancy**

**160) In job costing, which of the following documents is used to record the issue of direct materials to a job?**
- **(a) Goods Receipt Note**
- **(b) Purchase Order**
- **(c) Purchase Requisition Note**
- **(d) Material Requisition Note**

**161) The main purpose of accounting of joint products and by-products is to**
- **(a) determine the profit/loss on each product line.**
- **(b) determine the selling price.**
- **(c) comply with the statutory requirements.**
- **(d) identify the cost and load it on the main product.**

**162) During a period 2560 labour hours were worked at a standard rate of Rs. 7.50 per hour. The direct labour efficiency variance was Rs. 825 (A). How many standard hours were produced?**
- **(a) 2400**
- **(b) 2450**
- **(c) 2500**
- **(d) 2550**

**163) PQR Ltd. manufactures a single product which it sells forRs.40per unit. Fixed cost is Rs. 60,000 per year. The contribution to sales ratio is 40%. PQR Ltd.'s Break Even Point in units is**
- **(a) 3500**
- **(b) 3700**
- **(c) 3750**
- **(d) 4000**

**164) The fixed-variable cost classification has a special significance in the preparation of**
- **(a) Cash budget**
- **(b) Master budget**
- **(c) Flexible budget**
- **(d) Capital budget**

## Answer Key:

**1)** (b) Direct labour, direct expenses, indirect material, indirect labour, indirect expenses
**2)** (c) The ordering cost is equal to the carrying cost
**3)** (b) There is no idle time cost.
**4)** (b) Travelling expenses to site
**5)** (d) Night shift allowance paid to a factory worker due to general work pressure
**6)** (a) Add the under absorption of overheads in Cost Accounts if you start from the profits as per Financial Accounts
**7)** (b) drug manufacturing
**8)** (d) at cost under WIP a/c
**9)** (c) Zero
**10)** (b) sales demand
**11)** (d) Patient Day
**12)** (d) None of these
**13)** (c) Time spent by workers off their work
**14)** (c) Distribution overhead
**15)** (d) Interest paid
**16)** (d) All of the above
**17)** (b)Rs. 22,500
**18)** (d) There is a decrease in variable cost per unit
**19)** (c) Variance
**20)** (b) Functional budget
**21)** (a) Fixed Cost
**22)** (c) Perpetual Inventory
**23)** (a) Charged to costing profit and loss A/c
**24)** (a) Actual hours being more than normal time
**25)** (a) Cost allocation
**26)** (a) Added to financial profit
**27)** (d) All of the above
**28)** (d) 7200 units
**29)** (a) 66.66%
**30)** (a) Rs. 1,200 (A)
**31)** (d) Any of the above
**32)** (c) Dr. Stores Ledger Control A/c
Cr. Creditors
**33)** (d) 720 units
**34)** (a) CAS-3
**35)** (c) Loss Rs. 4,600
**36)** (b) 18900 Room days
**37)** (d) 50%
**38)** (c) Behavior-wise
**39)** (d) More accurate external financial statements
**40)** (c) Oil Industry
**41)** (c) Store Ledger
**42)** (d) Engineering department
**43)** (b) Time spent by workers in factory
**44)** (b) 1,11,000
**45)** (a) Treated
**46)** (b) The use of supplementary rates

**47)** (a) Allocation
**48)** (d) None of these.
**49)** (d) CAS 5
**50)** (d) CAS 16
**51)** (a) Cost Ledger control account
**52)** (c) 600 units
**53)** (b) 1,440 (A)
**54)** (a) Rs. 1,200 (A)
**55)** (a) is concerned with a single level of activity, while flexible budget is prepared for different levels of activity
**56)** (c) Pharma Industry
**57)** (d) Patient Day
**58)** (d) Number of vehicle
**59)** (a) Fixed Cost
**60)** (a) Material
**61)** (d) None of these
**62)** (c) Perpetual Inventory
**63)** (c) Store Ledger
**64)** (c) Taylor's differential piece rate system
**65)** (a) At a time rate higher than the usual rate
**66)** (b) Charged to overhead costs
**67)** (c) Payroll department
**68)** (a) Number of workers replaced average number of workers
**69)** (a) Actual hours being more than normal time
**70)** (b) Shall not
**71)** (b) Royalty charged on production
**72)** (a) 25,000
**73)** (d) It may be any or the above
**74)** (b) Administration overhead
**75)** (a) Allocation
**76)** (b) Charging or overheads to cost units
**77)** (d) A rate per units of output
**78)** (b) The use of supplementary rates
**79)** (a) Under- absorption of overhead
**80)** (c) Distribution overhead
**81)** (d) Any of these
**82)** (d) None of these
**83)** (d) Cost of Service cost centre
**84)** (c) CAS 22
**85)** (d) CAS 5
**86)**(d) Interest paid
**87)**(c) Property tax on Factory building
**88)**(a) (1) and (2)
**89)**(a) Total direct costs only
**90)**(a) Sales manager's salary
**91)**(a) Added to financial profit

**92)**(b) Deducted from financial profit
**93)**(a) Added to financial profit
**94)**(b) Deducted from financial profit
**95)**(a) Added to financial profit
**96)**(a) Cost Ledger control account
**97)**(a)Dr. Creditors
Cr. Cash
**98)**(c) Dr. Cash A/c
Cr. Sales A/c
**99)** (a) Dr. Works in progress control A/c
Cr. Factory overhead control A/c
**100)**(d) All of the above
**101)**(b) By specific job
**102)**(b) Job costing
**103)**(a) Cost plus contracts
**104)**(c) Contact costing
**105)**(b) Cost of certified and uncertified work
**106)**(a) Cost sheet
**107)**(d) All of the above
**108)**(b) Rs. 22,500
**109)**(b) Remains fixed per unit
**110)**(a) 66.66%
**111)**(c) Behaviour wise
**112)**(d) There is a decrease in variable cost per unit
**113)**(d) To make choice between two or more alternative courses of action
**114)**(d) Differential cost
**115)**(b) 20%
**116)**(a) 60%
**117)**(b) Rs. 150,000
**118)**(b) Unfavourable variance
**119)**(c) Variance
**120)**(c) As a basis for price fixation and cost control through variance analysis.
**121)**(d) Rs. 10,000
**122)**(a) Rs. 1,200 (A)
**123)**(b) Material Price Variance + Material Usage Variance
**124)**(c) The standards cost and the actual cost
**125)**(b) Rs. 400 (A)
**126)**(b) 1,440 (A
**127)**(a) 8,000 kgs
**128)**(d) both (b) and (c)
**129)**(b) Production Schedule
**130)**(d) More accurate external financial statements
**131)**(d) Capital Budget
**132)**a) quota restrictions exist
**133)**(b) Flexible Budget
**134)**(b) Budget, with key factor

**135)**(b) functional budget
**136)**(a) Fixed, semi-fixed and variable expenses
**137)**(d) 5,380 units
**138)**(a) It may change in total where such change is unrelated to changes in production
**139)**(b) Rs. 7,20,000
**140)**(b) CAS-13
**141)**(c) Job Costing
**142)**(c) 8550 units
**143)**(c) 25%
**144)**(b) 6000 kg
**145)**(d) Capital Budget
**146)**(d) to provide information to management for decision making
**147)**(a) added to financial profit
**148)**(c) Receiving department
**149)**(d) Interest paid
**150)**(c) Material requisition
**151)**(b) 3600 units
**152)**(c) Rs 1,87,500
**153)**(b) 12500 hours
**154)**(d) Pay creditors early to obtain a cash discount
**155)**(c) Historical Costs
**156)**(b) Marginal Cost
**157)**(b) Standard price method
**158)**(c) Higher input-output ratio
**159)**(c) Theoretical capacity
**160)**(d) Material Requisition Note
**161)**(a) determine the profit/loss on each product line
**162)**(b) 2450
**163)**(c) 3750
**164)**(c) Flexible budget

## (II) Match the following in Column I with the appropriate in Column II:

**1. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | High Inventory Turnover Ratio | A | Works overhead |
| ii. | Job evaluation | B | Opportunity Cost |
| iii. | Salary of Product designers | C | Co-Product |
| iv. | By product value | D | Sales and Production Budget |
| v. | Master Budget | E | Administrative Overhead |
| | | F | P & L Budget |
| | | G | Rationality in wage structure |
| | | H | Efficient use of stock |
| | | I | Purchase cost / Average inventory |
| | | J | Evaluationof employee performance |

**2. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Job Ticket | A | A technique of Inventory Control |
| ii. | Escalation Clause | B | BEP Chart |
| iii. | VED Analysis | C | Contract Costing |
| iv. | Angle of Incidence | D | Labour Cost Plus Factory overhead |
| v. | Conversion Cost | E | A method of time booking |

**3. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Prime Cost | A | CAS 19 |
| ii. | Angle of Incidence | B | Passenger / Kilometer |
| iii. | Operating Cost | C | Direct Cost |
| iv. | Joint Cost | D | Constant |
| v. | Variable Cost per unit | E | Profitability Rate |

**4. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Sunk Cost | A | Costs affected by Decision Making |
| ii. | VED Analysis | B | Inventory Classification and Control |
| iii. | Relevant Cost | C | Not Relevant for Decision Making |
| iv. | FSN Analysis | D | Labour Incentive Method |
| v. | F.W. Taylor | E | Inventory Control Technique |

**5. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Rowan | A | Single Rate of Overhead |
| ii. | JIT System | B | Labour Turnover |
| iii. | Blanker Overhead | C | Capital Structure |
| iv. | Traditional Approach | D | Bonus Plan |
| v. | Separation Method | E | Inventory Control |

**6. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Point Rating System | A | Absorbed in cost of production |
| ii. | JIT System | B | Job Evaluation |
| iii. | Normal Waste | C | EBIT |
| iv. | Operating Income | D | Profitability Index |
| v. | Benefit Cost Ratio | E | Inventory Control |

**7. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Salaries of Directors | A | CAS – 11 |
| ii. | Halsey Plan | B | Dividend Discount Model |
| iii. | John Burr Williams | C | Waste Reduction Incentive |
| iv. | Group Bonus Plan | D | Based on 33 1/3 % of time saved |
| v. | Rowan Plan | E | Indirect labour cost |
| vi. | Cost of new spare net cost of reconditioning old spare. | F | Based on time saved |
| | | G | Based on proportion of time saved to time allowed. |
| | | H | CAS – 12 |

**8. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | EOQ | A | Direct labour |
| ii. | Sunk Cost | B | Inventory Management |
| iii. | Direct worker's contribution to PF | C | Profitability rate |
| iv. | Time and Motion Study | D | Direct Material Cost |
| v. | Primary Packing Material | E | Excluded from Cost |
| vi. | Telephones | F | Labour Incentive Scheme |
| vii. | Angle of Incidence | G | No. of extensions in a department |

**9. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Direct Expenses | A | Overhead |
| ii. | Job Ticket | B | CAS 10 |
| iii. | Step Distribution method | C | A method of time booking |

**10. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Component of cost sheet | A | High initial costs |
| ii. | Objective of Cost Accounting | B | Classification of cost |
| iii. | CAS 1 | C | In terms of completed units |
| iv. | Equivalent Production | D | Reference to the job |
| v. | De-merit of a centralized purchase organization | E | To determine the value of closing inventory |

**11. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Pollution control cost | A | CAS 18 |
| ii. | Joint Cost | B | CAS 2 |

| | | | |
|---|---|---|---|
| iii. | Capacity Determination | C | CAS 10 |
| iv. | Direct Expenses | D | CAS 14 |
| v. | Research and Development Cost | E | CAS 19 |

**12. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Pollution Control Cost | A | CAS 18 |
| ii. | Joint Cost | B | CAS 2 |
| iii. | Capacity Determination | C | CAS 10 |
| iv. | Direct Expenses | D | CAS 14 |
| v. | Research and Development cost | E | CAS 19 |
| vi. | Donations | F | Decision Package |
| vii. | Notional Rent charged to | G | Difference in fixed cost/Difference in contribution per unit. |
| viii. | The method which is followed for evaluation of equivalent production when prices are fluctuating. | H | Average price method |
| ix. | Indifference Point (in unit) | I | Expenses debited only in cost accounts |
| x. | Zero based budgeting | J | Appropriations only in financial accounts |

**13. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Advertisement | A | Value of goods in transit |
| ii. | Credit and Collection | B | Floor area occupied |
| iii. | Ware house Rent | C | A percentage of cash collection |
| iv. | Royalties | D | No. of orders |
| v. | Bad Debts | E | Sales value |
| vi. | Transit Insurance | F | Direct allocation |

**14. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Primary packing materials consumed | A | Not shown in cost sheet but debited to P & L a/c. |
| ii. | Captive power plant expense | B | Forms part of Office and Administrative expenses |
| iii. | Cash discount allowed | C | Forms part of selling expenses |
| iv. | Scrap value of abnormal loss of finished output | D | Treated as part of factory expenses |
| v. | Cost of free samples of products distributed | E | Treated as direct expenses |
| vi. | Depreciation on computer purchased for office | F | Not shown in cost sheet but credited to P & L a/c. |
| vii. | Donations | G | Expenses debited only in the financial accounts. |
| viii. | Interest paid on loan | H | Appropriations only in financial accounts |
| ix. | Notional Rent charged to | I | Expenses debited only in cost accounts |
| x. | Notional Interest on Owner's Capital | J | Income credited only in cost accounts |

**15. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | The contract which provide for payment of actual cost plus an agreed percentage of profit | A | Average price method |
| ii. | In contract costing, the cost unit is | B | Kilowatt |
| iii. | Abnormal loss is transferred to | C | Job Costing |
| iv. | Job costing is used in | D | Normal Output |
| v. | Under Job order cost system, each job is assigned one identifying job. | E | Cost Plus |
| vi. | Cost of normal loss is borne by | F | Per bed |
| vii. | Inherent features of process industry | G | Per contract |
| viii. | The method which is followed for evaluation of equivalent production when prices are fluctuating. | H | Automobile garages |
| ix. | In hospital the cost unit is | I | Costing Profit and Loss Account |
| x. | In electricity companies, the cost unit is | J | Work in Progress |

**16. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Indifference points (in units) | A | Difference in Fixed Cost / Difference in PV ratio |
| ii. | Breakeven point (in value) | B | Fixed Cost / Contribution per unit |
| iii. | Variable cost per unit | C | Total Sales Less BEP Sales |
| iv. | P/V Ratio | D | Marginal Cost |
| v. | Prime Cost + Variable Overhead | E | Fixed Cost / PV Ratio |
| vi. | Breakeven Point (in quantity) | F | Difference in Fixed Cost / Difference in Contribution per unit |
| vii. | Indifference point (in value) | G | Total Contribution / Total Sales x 100 |
| viii. | Shut down point (in Quantity) | H | Avoidable Fixed Cost / PV Ratio |
| ix. | Shut down point (in value) | I | Fixed |
| x. | Margin of Safety | J | Avoidable Fixed Cost / Contribution per unit |

**17. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Direct material yield variance | A | (Standard hour for actual production minus Actual hours) x Standard Rate |
| ii. | Direct labour rate variance | B | (Actual Hours at standard rate of standard gang) minus (Actual Hours at standards Rate of Actual Gang) |
| iii. | Material price variance | C | Management by Exception |
| iv. | Variance Analysis | D | (Standard Rate minus Actual Rate) x Actual hour |
| v. | Direct Labour yield variance | E | (Standard rate x Actual hours paid for) minus (Standard rate x Actual hours worked) |
| vi. | Direct labour efficiency variance | F | (Standard price minus Actual Price) X Actual Quantity |
| vii. | Direct material mix variance | G | (Standard Quantity for actual output X Standard Price) minus (Standard price X |

| | | | |
|---|---|---|---|
| | | | Actual Quantity) |
| viii. | Gang variance | H | Standard cost per unit x (Standard output for actual mix – Actual output) |
| ix. | Ideal time variance | I | (Standard yield for actual Mix minus Actual Yield) x Standard yields Price. |
| x. | Direct material usage variance | J | (Revised Standard Quantity minus Actual Quantity) X Standard Price |

**18. Match the following:**

| | **Column I** | | **Column II** |
|---|---|---|---|
| i. | Master budget denotes the summary of | A | Financial means |
| ii. | A flexible budget takes into the account | B | A specified period |
| iii. | A budget is expressed in terms of | C | Flexible budget |
| iv. | Which budget is prepared for a longer period | D | Master budget |
| v. | Budget is generally prepared for how long | E | Fixed, variable and semi variable costs |
| vi. | Which budget is prepared for more than one level of activity | F | Functional budget |
| vii. | The summary of all functional budgets | G | Principle key factor |
| viii. | Which budget is prepared at first | H | Capital expenditure budget |
| ix. | Which budget shows utilization of liquid cash | I | Decision package |
| x. | Zero based budgeting | J | Cash Budget |

**19. Match the following:**

| | **Column I** | | **Column II** |
|---|---|---|---|
| i. | Imputed costs | A | Cost control technique |
| ii. | FSN analysis | B | Treated as part of factory expenses |
| iii. | Captive power plant expenses | C | Costing Profit and Loss A/c |
| iv. | Abnormal loss is transferred to | D | Process of classifying material |
| v. | Variance analysis | E | Direct allocation |
| | | F | Not involving cash outlay |
| | | G | Management by exception |
| | | H | Decision package |

**20. Match the following:**

| | **Column I** | | **Column II** |
|---|---|---|---|
| i. | Cash discount allowed | A | Joint Cost |
| ii. | Escalation Clause | B | Imputed Cost |
| iii. | CAS – 19 | C | Direct Expenses |
| iv. | Notional Cost | D | Not shown in cost sheet but debited to profit and loss account. |
| v. | Zero base budgeting | E | Sunk cost |
| | | F | Contract Costing |
| | | G | Decision package |
| | | H | Variable Cost |

**21. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Pharma Industry | A | Opportunity Cost |
| ii. | Management by exception | B | Direct Allocation |
| iii. | Assessment of employee with respect to a job | C | Joint Cost |
| iv. | Royalties | D | Batch costing |
| v. | CAS – 19 | E | Merit Rating |
| | | F | Variance Analysis |
| | | G | Job Evaluation |
| | | H | Notional Cost |

**22. Match the following:**

| | Column I | | Column II |
|---|---|---|---|
| i. | Notional cost | A | Replacement method |
| ii. | Labour turnover | B | Cost of utilities |
| iii. | CAS – 10 | C | Production Strategy |
| iv. | Contract Costing | D | Direct expenses |
| v. | CAS – 19 | E | Costing department |
| | | F | Imputed cost |
| | | G | Escalation clause |
| | | H | Decision Package |

# Answer Key:

**Ans:1**

i. **H**
ii. **G**
iii. **A**
iv. **B**
v. **F**

**Ans:2**

i. **E**
ii. **C**
iii. **A**
iv. **B**
v. **D**

**Ans:3**

i. **C**
ii. **E**
iii. **B**
iv. **A**
v. **D**

**Ans:4**

i. **C**
ii. **E**
iii. **A**
iv. **B**

v. **D**

**Ans:5**

i. **D**
ii. **E**
iii. **A**
iv. **C**
v. **B**

**Ans:6**

i. **B**
ii. **E**
iii. **A**
iv. **C**
v. **D**

**Ans:7**

i. **A**
ii. **F**
iii. **B**
iv. **C**
v. **G**
vi. **H**

**Ans:8**

i. **B**
ii. **E**
iii. **A**
iv. **F**
v. **D**
vi. **G**
vii. **C**

**Ans:9**

i. **B**
ii. **C**
iii. **A**

**Ans:10**

i. **D**
ii. **E**
iii. **B**
iv. **C**
v. **A**

**Ans:11**

i. **D**
ii. **E**
iii. **B**
iv. **C**
v. **A**

**Ans:12**

i. **D**
ii. **E**
iii. **B**
iv. **C**
v. **A**

vi. **J**
vii. **I**
viii. **H**
ix. **G**
x. **F**

**Ans:13**

i. **E**
ii. **D**
iii. **B**
iv. **F**
v. **C**
vi. **A**

**Ans:14**

i. **E**
ii. **D**
iii. **A**
iv. **F**
v. **C**
vi. **B**
vii. **H**
viii. **G**
ix. **J**
x. **I**

**Ans:15**

i. **E**
ii. **G**
iii. **I**
iv. **H**
v. **C**
vi. **D**
vii. **J**
viii. **A**
ix. **F**
x. **B**

**Ans:16**

i. **F**
ii. **E**
iii. **I**
iv. **G**
v. **D**
vi. **B**
vii. **A**
viii. **J**
ix. **H**
x. **C**

**Ans:17**

i. **I**
ii. **D**
iii. **F**
iv. **C**
v. **H**
vi. **A**
vii. **J**
viii. **B**

ix. **E**
x. **G**

**Ans:18**

i. **F**
ii. **E**
iii. **A**
iv. **H**
v. **B**
vi. **C**
vii. **D**
viii. **G**
ix. **J**
x. **I**

**Ans:19**

i. **F**
ii. **D**
iii. **B**
iv. **C**
v. **G**

**Ans:20**

i. **D**
ii. **F**
iii. **A**
iv. **B**
v. **G**

**Ans:21**

i. **D**
ii. **F**
iii. **E**
iv. **B**
v. **G**

**Ans:22**

i. **F**
ii. **A**
iii. **D**
iv. **G**
v. **C**

## (III) State whether the following are 'True' or 'False':

1. **Uniform Costing is a unique method of costing to determine costs accurately.**
2. **When overtime wages are incurred due to the general policy of the company arising due to lack of capacity, normal wages are treated as direct labour cost and the premium on overtime wages is treated as factory overheads.**
3. **In marginal and absorption costing, variable factory overhead is treated as direct cost.**
4. **Operation Costing and Operating Costing are interchangeably used for the same technique of costing.**
5. **Standard Costs are costs that are estimated costs that are likely in the future production period.**
6. **A flexible budget is one, which changes from year to year**
7. **Variances are calculated for both material and labour.**
8. **Multiple Costing is suitable for the banking Industry.**
9. **Contact costing is variant of job costing.**
10. **Closing stock of finished goods should be valued on the basis of cost of sales.**
11. **Fixed budget is also known as rigid budget.**
12. **The allocation of joint cost on by-products affects the total profit or loss.**
13. **Job costing is applied only in small concerns.**
14. **For decision making, absorption costing is more suitable than marginal costing.**
15. **Overhead and conversion cost are inter-changeable terms.**
16. **Cost Control and Cost Reductions are one and the same.**
17. **At EOQ Ordering Cost and Carrying Cost are at Minimum and also equal.**
18. **Cost of Concealed Idle Time is charged to Jobs.**
19. **Preliminary expenses in the Balance Sheet is included under Fixed Assets.**
20. **Under the average price method of valuing material issues, a new issue price is determined after each purchase.**
21. **Wages paid for abnormal idle time are added to wages for calculating prime cost.**
22. **Fixed Overheads per unit remains fixed irrespective of volume of output.**
23. **Cost Accounting is defined as technique and process of ascertaining costs.**
24. **Marginal cost is the Prime cost plus Variable Overheads.**
25. **Cost of abnormal idle time is charged to the Product Labour Cost.**
26. **Cost Accounting is not a branch of Financial Accounting.**
27. **Labour Turnover is the change in labour force during a period of time.**
28. **Bincard shows the Quantity of a material at any movement of time.**
29. **Operating Cycle means time required to Produce One Quantity of a Product.**
30. **While working out the EOQ, carrying cost has the element of interest cost. Hence it can be stated that interest cost is treated as part of material cost under CAS—6.**
31. **Normal bad debt is considered as a selling overhead and included in the cost.**
32. **Carriage and Cartage expenses (inward freight) of fuel for a furnace in a factory is treated as direct material cost.**
33. **When under absorption of overheads is corrected by applying supplementary rates, there is no impact in the current period profits due to under absorption as it is corrected and all overheads are charged in the current period.**
34. **Marginal cost per unit remains constant irrespective of the number of units produced within the normal output level.**
35. **M Ltd. provides free service for its cars for the first year of purchase. The cost of this service for M. Ltd. is treated as selling and distribution overhead.**
36. **Danger Level of Inventory should be fixed below the minimum level.**
37. **When the output level is more than the estimated level in a given production period, there is an over absorption of overheads.**
38. **A firm's WIP inventory will not have any element of allocated administration overhead.**
39. **If a project's annual cash flows have positive and negative signs, there will certainly be multiple internal rates of return.**

40. **Royalty based on units produced is considered as direct expenses.**
41. **Ideal standards are achievable in normal course.**
42. **Abnormal Costs are uncontrollable.**
43. **By-products may undergo further processing before sale.**
44. **Materials which can be identified with the given product unit of cost centre is called as indirect materials.**
45. **Increasing Labour Turnover increases the productivity of labour resulting in low costs.**
46. **In case of materials that suffers loss in weight due to evaporation etc. the issue price of the materials is inflated to cover up the losses.**
47. **Penalties and fines are included in cost accounts to determine the cost of production.**
48. **The sum of direct material, direct wages, direct expenses and manufacturing overheads is known as conversion cost.**
49. **CAS -13 is related to "Pollution Control Cost".**
50. **Under Halsey - Weir Plan, bonus equals to 331/3 % of wages of the time saved.**
51. **ABC analysis is not based on the concept of selection inventory management.**
52. **In India, if a worker works for more than 8 hours on any day or for more than 40 hours in a week, he is treated to be engaged in overtime.**
53. **If an expense can be identified with a specific cost unit, it is treated as direct expense.**
54. **CAS 9 is for Direct Expenses as issued by the Cost Accounting Standards Board (CASB) of the Institute of Cost Accountants of India.**
55. **The principal based used for applying factory overhead are: units of production, material cost, direct wages, direct labour hours and machine hours.**
56. **The balancing in costing profit and loss account represents under or over absorption of overheads.**
57. **At breakeven point, contribution available is equal to total fixed cost.**
58. **Standards costing are more profitability employed in job order industries than in process type industries.**
59. **To achieve the anticipated targets, Planning, Co-ordination and Control are the important main tasks of management, achieved through budgeting and budgetary control.**
60. **A flexible budget recognises the difference between fixed, semi-fixed and variable cost and is designed to change in relation to the change in level of activity.**
61. **Differential Cost is the change in the cost due to change in activity from one level to another.**
62. **Cost unit of Hotel industry is student per year.**
63. **Multiple Costing is suitable for the banking Industry.**
64. **Direct Expenses are expenses related to manufacture of a product or rendering of services.**
65. **Profit is result of two varying factors - sales and variable cost.**
66. **Perpetual inventory system enables management to ascertain stock at any time without physical inventory being taken.**
67. **Continuous stock taking is not an essential feature to the perpetual inventory system.**
68. **Bin card is a record of both quantities and value.**
69. **VED analysis is used primarily for control of spare parts.**
70. **Stores ledger is maintained in the stores department.**
71. **Purchase requisition is usually prepared by the storekeeper.**
72. **In centralized purchasing all purchases are made by the purchasing department.**
73. **Weighted average method of pricing issue of materials involves adding all the different prices and dividing by the number of such prices.**
74. **Material returned note is prepared to keep a record of return of surplus materials to stores.**
75. **Under the average price method of valuing material issues, a new issue price is determined after each purchase.**
76. **Waste and Scrap of material have small realization value.**
77. **Slow moving materials have a high turnover ratio.**

78. **Bin card are not the part of accounting records.**
79. **ABC analysis is based on the principle of management by exception.**
80. **Store ledger is maintained inside the stores by store keeper.**
81. **Time recording clocks can be successfully used for recording time of workers in large undertakings.**
82. **Outworkers are those who are sent to sites or customer's premises for performing work.**
83. **Idle time arises only when workers are paid on time basis.**
84. **Personnel department is concerned with proper recruitment, placement and training of workers.**
85. **Wages paid for abnormal idle time are added to wages for calculating prime cost.**
86. **In India, if a worker works for more than 8 hours on any day or for more than 40 hours in a week, he is treated to be engaged in overtime.**
87. **The two principal systems of wage payment are payment on the basis of time and payment on the basis of work done.**
88. **The piece rate system of wage payment cannot be successfully applied where quantity of output can be measured.**
89. **A good system of wage payment should not ensure equal pay for equal work.**
90. **If an expense can be identified with a specific cost unit, it is treated as direct expense.**
91. **Travelling expenses to site is a direct expense.**
92. **Identification of direct expenses shall be based on traceability in an economically feasible manner.**
93. **CAS 9 is for Direct Expenses as issued by the Cost Accounting Standards Board (CASB) of the Institute of Cost Accountants of India.**
94. **Finance Cost shall form part of Direct Expense.**
95. **Departments that assist producing Department indirectly are called service departments.**
96. **Factory overhead cost applied to a job is usually based on a per-determined rate.**
97. **Variable overhead vary with time.**
98. **When actual overhead are more than absorbed overheads, it is known as over-absorption.**
99. **Cash discounts are generally excluded completely from the costs.**
100. **Cost of indirect materials is apportioned to various departments.**
101. **A blanket overhead rate is a single overhead rate computed for the entire factory.**
102. **Under-absorption of overhead means that actual overhead are more than absorbed overhead.**
103. **The principal based used for applying factory overhead are: units of production, material cost, direct wages, direct labour hours and machine hours.**
104. **Allocation, for overhead implies the identification of overhead cost centres to which they relate.**
105. **Total cost = prime cost + All indirect costs.**
106. **Closing stock of work-in-progress should be valued on the basis of prime cost.**
107. **Closing stock of finished goods should be valued on the basis of cost of sales.**
108. **Production cost includes only direct costs related to the production.**
109. **Primary packaging cost is included in distribution cost.**
110. **Notional interest on Owner's capital appears only in financial profit and loss A/c.**
111. **Goodwill written off appears only in cost accounts.**
112. **Overheads are taken on estimated basis in financial accounts.**
113. **Expenses which appears only in financial accounts and not in cost accounts, are Generally notional items.**
114. **Need for Reconciliation arise in case of integrated system of accounts.**
115. **Cost ledger control account makes the cost ledger self balancing.**
116. **Stock ledger contains the accounts of all items of finished goods.**
117. **The purpose of cost control accounts is to control the cost.**
118. **Cost control accounts are prepared on the basis of double entry system.**

**119. The balancing in costing profit and loss account represents under or over absorption of overheads.**
**120. Operating costing is applied to ascertain the cost of products.**
**121. Cost of operating the service is ascertained by preparing job account.**
**122. The problem of equivalent production arises in case of operating costing.**
**123. FIFO methods are followed for evaluation of equivalent production when prices are fluctuating.**
**124. Work in progress is the inherent feature of processing industries.**
**125. Costs incurred prior to the split off point are known as "Joint Costs"**
**126. No distinction is made between Co products and Joint Products.**
**127. Contact costing is variant of job costing.**
**128. In contact costing, the unit of cost is a job.**
**129. Contribution= Sales * P/V ratio.**
**130. Margin of Safety = Profit / P/V ratio**
**131. P/ V ratio remains constant at all levels of activity.**
**132. Marginal Costing follows the behaviour wise classification of costs.**
**133. At breakeven point, contribution available is equal to total fixed cost.**
**134. Breakeven point = Profit / P/V ratio.**
**135. Marginal cost is aggregate of Prime Cost and Variable cost.**
**136. Variable cost remains fixed per unit.**
**137. Contribution margin is equal to Sales – Fixed cost.**
**138. Variable cost per unit is variable.**
**139. Excess of Actual cost over Standards Cost is treated as unfavourable variance.**
**140. Variances are calculated for both material and labour.**
**141. While fixing standards, normal losses and wastages are taken into account.**
**142. Under the system of standard costing, there is no need for variance analysis.**
**143. Standard costing is an ideal name given to the estimate making.**
**144. Standards cost, once fixed cannot be altered.**
**145. Predetermined standards provide a yardstick for the measurement of efficiency.**
**146. Material cost variance and labour cost variance are always equal.**
**147. Fixing standards is the work of industrial engineer or the production people and not of cost accountant.**
**148. Budget is a means and budgetary control is the end result.**
**149. To achieve the anticipated targets, Planning, Co-ordination and Control are the important main tasks of management, achieved through budgeting and budgetary control.**
**150. A key factor or principal factor does not influence the preparation of all other budgets.**
**151. Budgetary control does not facilitate introduction of 'Management by Exception'.**
**152. Generally, budgets are prepared to coincide with the financial year so that comparison of the actual performance with budgeted estimates would facilitate better interpretation and understanding.**
**153. A flexible budget is one, which changes from year to year.**
**154. Sales budget, normally, is the most important budget among all budgets.**
**155. The principal factor is the starting point for the preparation of various budgets.**
**156. A budget manual is the summary of all functional budgets.**
**157. Factory overhead cost applied to a job is usually based on a pre-determined rate.**
**158. CAS-19 deals with the principles and methods of determining the manufacturing cost of excisable goods.**
**159. Cost ledger control account makes the cost ledger self-balancing.**
**160. FIFO method is followed for evaluation of equivalent production when prices are fluctuating.**
**161. Standard costs and budgeted costs are inter-related and inter-dependent.**
**162. Multiple costing is suitable for banking industry.**
**163. There is inverse relationship between batch size and carrying costs.**
**164. Marginal costing follows the identifiability wise classification of costs.**

**165. Bin card is maintained by the costing department.**
**166. CAS-8 deal with the principles and methods of determining the direct expenses.**
**167. FIFO method is followed for evaluation of equivalent production when prices are fluctuating.**
**168. Profit Volume ratio remains constant at all levels of activity.**
**169. The principal factor is the starting point for the preparation of various budgets.**
**170. Overtime premium is directly assigned to cost object.**
**171. In Reconciliation statements, expenses shown only in financial accounts are added to financial profit.**

## Answer Key:

**1.** False
**2.** False
**3.** False
**4.** False
**5.** False
**6.** False
**7.** True
**8.** False
**9.** True
**10.** False
**11.** True
**12.** False
**13.** False
**14.** False
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**19.** False
**20.** True
**21.** False
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**164.**False
**165.**False
**166.**False
**167.**False
**168.**True
**169.**True
**170.**True
**171.**True

## (IV) Fill in the blanks:

1. Profit volume ratio_____with increase in fixed cost (indicate the nature of change).
2. In the graph showing the angle of incidence, when the quantity is zero, the total cost line cuts the costs axis (y axis) at_____. (indicate the value)
3. A process account is credited with value for_____loss when scrap value is zero (indicate the type of loss).
4. When special material is purchased for direct use in a job,_____account is debited in the Integral Accounts System.
5. VED analysis is primarily used for control of _____ (indicate type of material).
6. Administration overheads are usually absorbed as a percentage of _____
7. Variable cost per unit is _____.
8. Bin card shows_____details of materials.
9. Sum of material price variance and material usage variance is equalto _____variance.
10. Contribution earned on Break-even sales equals to_____of the firm.
11. Profit / P/v Ratio = _____
12. Budget is a quantitative and / or a_____statement.
13. Fixed cost per unit_____varies with the no. of units.
14. An activity level of 1000 hours cost is Rs. 10,000 and an activity level for 2000 hours the total cost is Rs. 16,000. The cost at 3000 hours of level of activity is _____
15. _____is must for meaningful inter-firm comparison.
16. Prime Cost is the aggregate of all_____.
17. Store Ledger is maintained by_____department.
18. Distribution of all items of Overheads to Product or Departments is known as _____.
19. The Overtime worked at the request of Customer is treated as_____wages.
20. The excess of Total Cost of production of an article over the direct material cost is known as_____Cost.
21. Charging of identifiable items of Cost to Cost Centers is known as _____
22. The Objective of Wage Incentives is to improve _____
23. Bin Card is maintained by_____department.
24. The total of all Indirect expenditure is called as _____
25. The abnormal idle time cost is charged to_____Account.
26. Stores ledger is maintained by_____department.
27. Interest on capital is an example for_____Cost.
28. Variable overheads are absorbed by products based on_____level of capacity utilization.
29. In a textile factory, yarn is starched before it is made into textile. The cost of starch is _____(give the element of cost).
30. The actual capacity of a manufacturing unit based on temporary sales expectancy is 10,000 units due to lack of orders. The practical capacity is 11,500 units. Then, 1500 units is_capacity.
31. E is an exporter who relinquishes his right to a receivable due at a future date in exchange for immediate cash payment at an agreed discount, passing on all the risks and responsibilities for collecting the debt to B. This arrangement is called _____.
32. In a certain factory, normal capacity was 50000 units. Actual capacity utilization was 52000 units. Fixed production overheads should be absorbed based on _____ capacity.
33. X factory outsources the manufacture of a major component to a contractor. The transportation of the component of X factory's premises is borne by X. This transportation cost will be treated as_____cost (give the element of cost).

34. In the_____method of pricing material issues, where the prices are falling, profits will rise.
35. In India, commercial papers can be issued in multiples of Rs. _____
36. When raw material is accounted at standard cost, variances due to normal reasons will be treated as_____cost (give the element of cost).
37. Cost of idle time (idle hours x hourly rate) incurred by a worker directly working on a product is treated as_____(give the element of cost).
38. Royalty payable based on the right to sell is treated as _____ (give the element of cost).
39. When time saved is equal to time taken then earnings of a worker under Halsey Plan and Rowan Plan are the _____
40. The difference between actual and absorbed factory overhead is called _____.
41. Under-absorption of_____results in higher amount of profit.
42. Direct Expenses incurred for brought out resources shall be determined at _____.
43. Total cost +Profit =_____.
44. In_____Systems, basis of wages payment is the quantity of work.
45. Current Ratio is the ratio of Current Assets to_____.
46. In standard costs,_____norm is applied as a scale of reference for assessing actual cost to serve as a basis of cost control.
47. Material Transfer Note is a_____for transferring the materials from one job to other job.
48. One of the disadvantages of overtime working is incurring _____labour cost.
49. CAS-2 deals with Cost Accounting Standard on_____determination.
50. Where the cost and financial accounts are maintained independently of each other, it is indispensable to_____them, as there are differences in the profits of two sets of books.
51. Maximum Level = (_____+Re-order Quantity) - (Minimum Consumption Rate × Minimum Re-order Period).
52. CAS-8 deals with the principles and methods of determining the_____.
53. Store Ledger is kept and maintained in_____.
54. In a company there were 1200 employee on the rolls at the beginning of a year and 1180 at the end. During the year 120 persons left services and 96 replacements were made. The labour turnover to flux method is_.
55. Ideal time arises only when workers are paid on _____ basis.
56. Normal idle time costs should be charged to_____while that due to abnormal reasons should be charged to_____.
57. Direct Expenses incurred for brought out resources shall be determined at _____.
58. Direct Expenses incurred lump-sum shall be_____.
59. Overhead incurred Rs. 16,000 and overhead absorbed Rs. 15,300. There is under absorption of _____
60. Under integrated accounting system, the accounting entry for payment of wages is to debit_____and to credit cash.
61. Two principle method of evaluation of equivalent production are _____ and _____.
62. When sales are Rs. 300,000 and variable cost is Rs. 180,000, P/V ratio will be _____
63. Goods Received Note is prepared by the_____.
64. Transfer of surplus material from one job or work order is recorded in _____.
65. _____is discount allowed to the bulk purchaser.
66. _____is a document which records the return of unused materials.
67. In_____systems, twopiece rates are set for each job.
68. The formula for computing wages under time rate is_____.

69. In Halsey plan, a worker gets bonus equal to_____of the time saved.
70. Under Gantt Task and Bonus Plan, no bonus is payable to a worker, if his efficiency is less than_____.
71. Wages sheet is prepared by_____department.
72. Direct Expenses relate to_____or_____.
73. Penalties/ damages paid to statutory authorities'_____be form part of Direct Expenses.
74. A Direct Expenses related to a_____form part of the Prime Cost.
75. Overheads are an aggregate of _____ and _____and_____
76. Example of after sales services are_____and _____
77. Administration overheads are usually absorbed as a percentage of_____.
78. The difference between actual and absorbed factory overhead is called _____.
79. The term used for charging of overheads to cost units is known as _____
80. The difference between practical capacity and the capacity based on sales expectancy is known as_____.
81. The_____rate is computed by dividing the overheads by the aggregate of the productive hours of direct workers.
82. Under or over absorption of overheads arises only when overheads are absorbed by _____.
83. Overhead incurred Rs. 16,000 and overhead absorbed Rs. 15,300. There is under absorption of _____
84. In Absorption Costing_____cost is added to inventory.
85. Prime cost + Overheads = _____
86. _____+Profit = Sales.
87. Direct Material +_____+Direct Expenses=Prime Cost.
88. Salary paid to factory manager is an item of_____.
89. In Reconciliations Statements, Incomes shown only in Financial accounts are _____.
90. In Reconciliations Statements, Expenses shown only in cost accounts are _____.
91. In Reconciliations Statements, overheads Over-Recovered in cost accounts are _____.
92. In Reconciliations Statements, overheads Under Recovered in cost accounts are _____.
93. Notional remuneration to owner is expense debited only in_____.
94. All the transactions relating to materials are recorded through_____.
95. The net balance of_____represents net profit or net loss.
96. WIP ledger contains the accounts of all the_____which are under_____.
97. The two traditional systems of accounting for integration of cost and financial accounts are the_____and the_____.
98. Under integrated accounting system, the accounting entry for payment of wages is to debit_____and to credit cash.
99. Cost of_____loss is not borne by good units.
100. If the actual loss in a process is less than the normal loss, the difference is known as _____.
101. _____Costs are incurred after split off point.
102. The_____product generally has a greater sale value than by product.
103. Statement of cost per unit of equivalent production shows the per unit cost _____.
104. In hospital the cost unit is_____.
105. In electricity companies, the cost unit is_____.
106. The method of costing used in undertaking like gas companies, cinema houses, hospitals etc is known as_____.

107. In motor transport costing two example of fixed cost are_____and _____.
108. Variable cost per unit is _____
109. Marginal cost is the_____of sales over contribution.
110. P/V ratio is the ratio of_____to sales.
111. If variable cost to sales ratio is 60%, P/V ratio is_____.
112. _____+ Variable overhead = Marginal Cost.
113. When sales are Rs. 300,000 and variable cost is Rs. 180,000, P/V ratio will be_____.
114. Variable cost remains_____.
115. Margin of safety is_____.
116. Breakeven point is_____.
117. Contribution margin equals to _____
118. Standard cost is a_____cost.
119. Standard cost when fixed is recorded on_____card.
120. Historical costing uses post period costs while standards costing uses _____costs.
121. Three types of standards are_____.
122. The_____is usually the co-ordinator of the standards committee.
123. Standards cost when fixed are recorded on_____card.
124. Basicallythere are two types of standards viz, a) Basic standards, and _____.
125. When actual cost is less than the standards cost, it is known as _____ variance.
126. Standard Costing is one of the_____techniques.
127. Standard means a criterion or a yardstick against which actual activity can be compared to determine the_____between two.
128. Budgets are_____plans.
129. The key factor in a budget does not remain the_____every year.
130. Cash budget is a part of_____budget.
131. _____budgets are subsidiary to master budget.
132. _____leads to budgeting and budgeting leads to budgetary control.
133. _____Control involves checking and evaluation of actual performance.
134. A budget is a_____to management.
135. The principle budget factor for consumer goods manufacture is normally _____.
136. A budget is a projected plan of action in_____.
137. _____is the process of regulating the action so as to keep the element of cost within the set parameters.
138. CAS____stands for cost of service cost Centre.
139. At_____contribution available is equal to total fixed cost.
140. The document which describes the budgeting organisation, budgeting procedure etc. is known as_____.
141. _____is discount allowed to the bulk purchaser.
142. CAS____stands for cost of utilities.
143. If the actual loss in a process is less than the normal loss, the difference is known as _____.
144. The principal budget factor for consumer goods manufacturer is normally _____.
145. Differential cost is the change in the cost due to change in_____from one level to another.
146. In contract costing, the cost unit is_____.
147. _____costs are historical costs which are incurred in the past.
148. CAS-2 deals with Cost Accounting Standard on_____determination.
149. _____is the summary of all functional budgets.
150. Standard costing is one of the_____techniques.

## Answer Key:

1. is constant
2. Fixed Cost Value
3. Abnormal
4. WIP Control
5. Components or Spare Parts
6. Work Cost
7. Fixed
8. Quantitative
9. material cost
10. Fixed Cost
11. Margin of Safety
12. Financial
13. Inversely
14. Rs. 22,000
15. Uniform Costing
16. direct expenses
17. costing
18. Apportionment/Allocation
19. Direct
20. Conversion
21. Direct Cost
22. Productivity
23. Store Keeper or Stores Personnel
24. Overheads
25. Costing Profit and Loss
26. Costing
27. Opportunity/Notional/Imputed
28. Actual
29. direct material
30. Idle
31. Forfeiting
32. Actual
33. Material
34. LIFO
35. 5 lacs
36. Direct Material
37. Factory overheads or works overhead
38. Selling Overheads or Selling and Distribution Overheads
39. Same
40. Overheads
41. Overhead
42. invoice price
43. Selling Price
44. Piece Rate
45. Current Liabilities
46. Predetermined
47. Document
48. excess (or additional or more or high)
49. capacity
50. reconcile
51. Reorder Level
52. Cost of utilities
53. cost office
54. 9.08

**55.** Time
**56.** Production overhead, Costing P & L A/c
**57.** Invoice Price
**58.** Amortized
**59.** Rs. 700
**60.** Wages Control Account
**61.** FIFO, Average Method
**62.** 40%
**63.** Receiving Department
**64.** Material Transfer Note
**65.** Quantity Discount
**66.** Material Return Note
**67.** Taylors Differential Piece Rate
**68.** Hour worked x Rate per hour
**69.** 50%
**70.** 100%
**71.** Pay Roll
**72.** manufacturing of a product or rendering of service
**73.** shall not
**74.** product
**75.** Indirect Material, Indirect Labour , Indirect Expenses
**76.** Repair and Maintenance , Replacement of components
**77.** Works Cost
**78.** Overheads
**79.** Absorptions
**80.** Idle Capacity
**81.** Direct Labour Hour
**82.** overheads rates
**83.** Rs. 700
**84.** Fixed
**85.** Total Cost
**86.** Cost of Sales
**87.** Direct Wages
**88.** Factory Overhead
**89.** Added to Costing Profit.
**90.** Added to Costing Profit
**91.** Deducted from Costing Profit.
**92.** Added to financial profit.
**93.** Cost Accounts
**94.** Stores Ledger Control Accounts
**95.** Costing Profit and Loss Account
**96.** Jobs, Execution
**97.** Double Entry Method, Third Entry Method
**98.** Control Accounts
**99.** Abnormal
**100.** Abnormal Gain
**101.** Subsequent
**102.** Main
**103.** Element wise
**104.** Per Bed
**105.** Kilowatt
**106.** Operating Cost
**107.** Insurance and Depreciation
**108.** Fixed
**109.** Excess
**110.** Contribution

**111.** 40
**112.** Prime Cost
**113.** 40%
**114.** fixed per unit
**115.** Actual sales – Sales at Break Even Point
**116.** Total Fixed Cost / PV Ratio
**117.** Sales – Variable Cost
**118.** Predetermined
**119.** Standard Cost
**120.** Predetermined
**121.** Current, Basic and Normal Standard
**122.** Cost Accountants
**123.** Standard Cost
**124.** Current Standard
**125.** Favourable
**126.** Cost Control
**127.** Difference
**128.** Action
**129.** Same
**130.** Financial
**131.** Functional
**132.** Forecasting
**133.** Budgetary
**134.** Aid
**135.** Sales, Demand
**136.** Physical units and monetary terms
**137.** Cost Control
**138.** 13
**139.** Break Even point
**140.** Budget Manual
**141.** Quantity Discount / Trade Discount / Cash discount
**142.** 8
**143.** Abnormal gain / Abnormal profit
**144.** Sales Demand / Market Demand / Lack of Demand
**145.** Activity
**146.** per contract
**147.** Sunk
**148.** Capacity
**149.** Master Budget
**150.** Cost Control

# Notes

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Behind every successful business decision, there is always a CMA

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# MCQ

**(CHAPTER WISE)**

**ON**

# COST ACCOUNTING

**For**

## CMA-INTER

**BY**

**SUMIT RASTOGI**
**CMA, B.COM (HONS)**

**SUMIT RASTOGI CLASSES**
**D-223, 3rd FLOOR, LAXMI CHAMBER, LAXMI NAGAR, DELHI-92**

# TOPIC COVERED

# 1. INTRODUCTION TO COST ACCOUNTING

**1. Batch Costing is suitable for-**
- **A.** Sugar Industry
- **B.** Chemical Industry
- **C.** Pharma Industry
- **D.** Oil Industry

**2. Joint Cost is suitable for-**
- **A.** Infrastructure Industry
- **B.** Ornament Industry.
- **C.** Oil Industry
- **D.** Fertilizer Industry

**3. Cost units of Hospital Industry is-**
- **A.** Tonne
- **B.** Student per year
- **C.** Kilowatt Hour
- **D.** Patient Day

**4. Cost units of Automobile Industry is-**
- **A.** Cubic meter
- **B.** Bed Night
- **C.** Number of Call
- **D.** Number of vehicles

**5. Depreciation is an example of-**
- **A.** Fixed Cost
- **B.** Variable Cost
- **C.** Semi Variable Cost
- **D.** None of these

**6. Process costing method is suitable for:**
- **A.** Steel industry
- **B.** Crane manufacturing organization
- **C.** Road roller manufacturing company
- **D.** Transport industry

**7. Which of the following classification is meant for distinction between direct cost and indirect cost?**
- **A.** Function
- **B.** Element
- **C.** Variability
- **D.** Controllability

**8. Which of the following is applicable for Cost Control?**
- **A.** It is related with the future
- **B.** It is a corrective function
- **C.** It ends when the targets are achieved
- **D.** It challenges the standards set

**9. ---------- is anything for which a separate measurement of cost is required.**

**A.** Cost driver
**B.** Cost Centre
**C.** Cost unit
**D.** Cost object

**10. Ticket counter in a Metro station is an example of:**

**A.** Profit centre
**B.** Investment centre
**C.** Cost centre
**D.** Revenue centre

**11. Which of the following is an example of functional classification of cost?**

**A.** Direct labour cost
**B.** Direct material cost
**C.** Factory overhead
**D.** Indirect material cost

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| C | C | D | D | A | A | B | C | D | D | C |

# 2. MATERIAL COST (CAS-6)

**1. Which of the following is considered as normal loss of material?**
- **A.** Pilferage
- **B.** Loss due to accident
- **C.** Loss due to careless handling of material
- **D.** None of these.

**2. The most important element of cost is-**
- **A.** Material
- **B.** Labour
- **C.** Overheads
- **D.** All of these

**3. Direct material is a –**
- **A.** Administration Cost
- **B.** Selling and Distribution cost
- **C.** All of these
- **D.** None of these

**4. Continuous stock taking is a part of-**
- **A.** ABC analysis
- **B.** Annual stock taking
- **C.** Perpetual Inventory
- **D.** None of these

**5. Which of the following is considered as accounting record?**
- **A.** Bin Card
- **B.** Bill of material
- **C.** Store Ledger
- **D.** None of these

**6. Direct material can be classified as**
- **A.** Fixed cost
- **B.** Semi−variable cost
- **C.** Variable cost
- **D.** None of the above

**7. In most of the industries, the most important element of cost is**
- **A.** Labour
- **B.** Overheads
- **C.** Administration Cost
- **D.** Material

**8. In which of following methods of pricing, costs lag behind the current economic values?**
- **A.** Replacement price method
- **B.** Last−in−first out price method
- **C.** First−in−first out price method
- **D.** Weighted average price method

**9. In which of the following methods, issues of materials are priced at pre−determined rate?**

**A.** Replacement price method
**B.** Inflated price method
**C.** Specific price method
**D.** Standard price method

**10. Which of the following methods smoothes out the effect of fluctuations when material prices fluctuate widely?**

**A.** FIFO
**B.** Simple Average
**C.** LIFO
**D.** Weighted average

**11. Under the FSN system of inventory control, inventory is classified based on:**

**A.** Value of items of inventory
**B.** Criticality of the item of inventory for production
**C.** Frequency of items of inventory use
**D.** Volume of material consumption

**12. Materials are issued from one process to another, based on:**

**A.** Bill of Materials
**B.** Material Requisition Note
**C.** Purchase Requisition Note
**D.** Material Transfer Note

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C | A | D | C | C | C | D | C | D | D | C | D |

# 3. EMPLOYEE COST (CAS-7)

**1. In which of the following incentive plan of payment, wages on time basis are not Guaranteed?**
- **A.** Halsey plan
- **B.** Rowan plan
- **C.** Taylor's differential piece rate system
- **D.** Gantt's task and bonus system

**2. Under the high wage plan, a worker is paid**
- **A.** At a time rate higher than the usual rate
- **B.** According to his efficiency
- **C.** At a double rate for overtime
- **D.** Normal wages plus bonus

**3. Cost of idle time arising due to non-availability of raw material is**
- **A.** Charged to costing profit and loss A/c
- **B.** Charged to factory overheads
- **C.** Recovered by inflating the wage rate
- **D.** Ignored

**4. When overtime is required for meeting urgent orders, overtime premium should be**
- **A.** Charged to costing profit and loss A/c
- **B.** Charged to overhead costs
- **C.** Charged to respective jobs
- **D.** Ignored

**5. Wages sheet is prepared by**
- **A.** Time –keeping department
- **B.** Personnel department
- **C.** Payroll department
- **D.** Engineering department

**6. Time and motion study is conducted by the**
- **A.** Time –keeping department
- **B.** Personnel department
- **C.** Payroll department
- **D.** Engineering department

**7. Labour turnover is measured by**
- **A.** Number of workers replaced average number of workers
- **B.** Number of workers left / number in the beginning plus number at the end
- **C.** Number of workers joining / number in the beginning of the period
- **D.** All of these

**8. Idle time is**
- **A.** Time spent by workers in factory
- **B.** Time spent by workers in office
- **C.** Time spent by workers off their work
- **D.** Time spent by workers on their job

**9. Over time is**
- **A.** Actual hours being more than normal time
- **B.** Actual hours being more than standard time
- **C.** Standard hours being more than actual hours
- **D.** Actual hours being less than standard time

**10. Time keeping refers to**

**A.** Time spent by workers on their job
**B.** Time spent by workers in factory
**C.** Time spent by workers without work
**D.** Time spent by workers on their job

**11. Time and motion study is conducted by**

**A.** Personal department
**B.** Time keeping department
**C.** Engineering department
**D.** Payroll department

**12. Labour productivity is measured by comparing**

**A.** Total output with total man−hours
**B.** Added value for the product with total wage cost
**C.** Actual time and standard time
**D.** All of the above

**13. If the time saved is less than 50% of the standard time, then the wages under Rowan and Halsey premium plan on comparison gives:**

**A.** Equal wages under two plans
**B.** More wages to workers under Halsey plan than Rowan plan
**C.** More wages to workers under Rowan plan than Halsey Plan
**D.** None of the above

**14. Idle time is the time under which**

**A.** No productivity is given by the workers
**B.** Full wages are paid to workers
**C.** None of the above
**D.** All of the above

**15. Identify, which one of the following, does not account for increasing labour productivity**

**A.** Motivating workers
**B.** Job satisfaction
**C.** Proper supervision and control
**D.** High labour turnover

**16. Under Taylor's differential piece rate scheme, if a worker fails to complete the task within the standard time, then he is paid**

**A.** 83% of the piece work rate
**B.** 175% of the piece work rate
**C.** 67% of the piece work rate
**D.** 125% of the piece work rate

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | A | A | B | C | D | A | C | A | B | C | D | C | D | D | A |

# 4. DIRECT EXPENSES (CAS-10)

**1. Royalty paid on sales ₹ 89,000 and Software development charges related to product is ₹ 22,000. Calculate Direct Expenses.**

- **A.** 1,11,100
- **B.** 1,11,000
- **C.** 1,11,110
- **D.** 1,10,000

**2 Direct Expenses ---------- includes imputed cost.**

- **A.** Shall
- **B.** Shall not
- **C.** None of these

**3. Direct Expenses does not meet the test of materiality can be ---------- part of part of overhead.**

- **A.** Treated
- **B.** Not treated
- **C.** All of the these
- **D.** None of these

**4. Example of Direct Expenses.**

- **A.** Rent
- **B.** Royalty charged on production
- **C.** Bonus to employee
- **D.** None of these

**5. A manufacturing Industry produces product P, Royalty paid on sales is 23,500 and design charges paid for the product is 1,500. Compute the Direct Expenses.**

- **A.** 25,000
- **B.** 22,000
- **C.** 26,500
- **D.** None of these

## ANSWER:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| B | B | A | B | A |

# 5. OVERHEADS (CAS-3)

**1. The allotment of whole items of cost of centres or cost unit is called**
- **A.** Cost allocation
- **B.** Cost apportionment
- **C.** Overhead absorption
- **D.** None of the above

**2. Packing cost is a**
- **A.** Production of cost
- **B.** Selling cost
- **C.** Distribution cost
- **D.** It may be any or the above

**3. Directors remuneration and expenses form a part of**
- **A.** Production overhead
- **B.** Administration overhead
- **C.** Selling overhead
- **D.** Distribution overhead

**4. Charging to a cost center those overheads that result solely for the existence of that cost Center is known as**
- **A.** Allocation
- **B.** Apportionment
- **C.** Absorption
- **D.** Allotment

**5. Absorption means**
- **A.** Charging or overheads to cost centers
- **B.** Charging or overheads to cost units
- **C.** Charging or overheads to cost centers or cost units

**6. Which method of absorption of factory overheads do you suggest in a concern which Produces only one uniform time of product**
- **A.** Percentage of direct wages basis
- **B.** Direct labour rate
- **C.** Machine hour rate
- **D.** A rate per units of output

**7. When the amount of under-or-over-absorption is significant, it should be disposed of by**
- **A.** Transferring to costing profit and loss A/c
- **B.** The use of supplementary rates
- **C.** Carrying over as a deferred charge to the next accounting year
- **D.** None of above

**8. When the amount of overhead absorbed is less than the amount of overhead incurred, It is called**
- **A.** Under- absorption of overhead
- **B.** Over-absorption of overhead
- **C.** Proper absorption of overhead
- **D.** None of above

**9. Warehouse expense is an example of**

**A.** Production overhead
**B.** Selling overhead
**C.** Distribution overhead
**D.** None of above

**10. Seling and Distribution overhead are absorbed on the basis of**

**A.** Rate per unit
**B.** Percentage on works cost
**C.** Percentage on selling price of each Unit
**D.** Any of these

**11. Primary packing cost is a part of**

**A.** Direct material cost
**B.** Distribution overheads
**C.** Selling overheads
**D.** Production cost

**12. Chairman's remuneration and expenses form part or**

**A.** Administration overhead
**B.** Production overhead
**C.** Distribution overhead
**D.** Selling overhead

**13. Normal capacity of a plant refers to the difference between:**

**A.** Maximum capacity and practical capacity
**B.** Maximum capacity and actual capacity
**C.** Practical capacity and estimated idle capacity as revealed by long term sales trend
**D.** Practical capacity and normal capacity

**14. Find out from the following a scientific and accurate method of factory overhead absorption.**

**A.** Percentage of prime cost method
**B.** Machine hour rate method
**C.** Percentage of direct material cost method
**D.** Percentage of direct labour cost method

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | D | B | A | B | D | B | A | C | D | D | A | C | B |

# 6. COST ACCOUNTING STANDARDS

**1. CAS 21 stands for**

**A.** Capacity Determination
**B.** Joint Cost
**C.** Direct Expenses
**D.** None of these.

**2. CAS 13 stands for**

**A.** Joint Cost
**B.** Interest and financing charges
**C.** Employee Cost
**D.** Cost of Service cost centre

**3. Standard deals with the principles and methods of determining the manufacturing Cost of excisable goods-**

**A.** CAS 12
**B.** CAS 15
**C.** CAS 22
**D.** CAS 2

**4. Standards deals with determination of averages/ equalized transportation cost-**

**A.** CAS 6
**B.** CAS 22
**C.** CAS 9
**D.** CAS 5

**5. Standards deals with the principles and methods of determining depreciation and amortization cost-**

**A.** CAS 9
**B.** CAS 12
**C.** CAS 15
**D.** CAS 16

## ANSWER:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| D | D | C | D | D |

# 7. COST BOOK KEEPING

**1. Which of the following items is not included in preparation of cost sheet?**
- **A.** Carriage inward
- **B.** Purchase returns
- **C.** Sales commission
- **D.** Interest paid

**2. Which of the following items is not excluded while preparing a cost sheet?**
- **A.** Goodwill written off
- **B.** Provision for taxation
- **C.** Property tax on Factory building
- **D.** Transfer to reserves

**3. Which of the following are direct expenses?**
- **1.** The cost of special designs, drawings or layouts
- **2.** The hire of tools or equipment for a particular job
- **3.** Salesman's wages
- **4.** Rent, rates and insurance of a factory
- **A.** (1) and (2)
- **B.** (1) and (3)
- **C.** (1) and (4)
- **D.** (3) and (4)

**4. What is prime cost**
- **A.** Total direct costs only
- **B.** Total indirect costs only
- **C.** Total non-production costs
- **D.** Total production costs

**5. Which of the following is not an element of works overhead?**
- **A.** Sales manager's salary
- **B.** Plant manager's salary
- **C.** Factory repairman's wages
- **D.** Product inspector's salary

**6. For the purpose of Cost Sheet preparation, costs are classified based on:**
- **A.** Functions
- **B.** Variability
- **C.** Nature
- **D.** All of the above

**7. Salary paid to an office supervisor is a part of:**
- **A.** Direct expenses
- **B.** Administration cost
- **C.** Quality control cost
- **D.** Factory overheads

**8. Audit fees paid to cost auditors is part of:**
- **A.** Selling & Distribution cost
- **B.** Production cost
- **C.** Administration Cost
- **D.** Not recorded in the cost sheet

**9. A company has set up a laboratory for testing of products for compliance with standards. Salary of this laboratory stuffs are part of:**

**A.** Direct Expenses
**B.** Quality Control Cost
**C.** Works overheads
**D.** Research & Development Cost

**10. Canteen expenses for factory workers are part of:**

**A.** Administration Cost
**B.** Factory overhead
**C.** Marketing cost
**D.** None of the above

**11. Which of the following does not form part of prime cost:**

**A.** GST Paid on raw materials (input credit can be claimed)
**B.** Cost of transportation paid to bring materials to factory
**C.** Cost of Packing
**D.** Overtime premium paid to workers.

**12. A company pays royalty to State Government on the basis of production, it is treated as:**

**A.** Direct Expenses
**B.** Factory overheads
**C.** Direct Material Cost
**D.** Administration cost

**13. In Reconciliations Statements, Expenses shown only in financial accounts are.**

**A.** Added to financial profit
**B.** Deducted from financial profit
**C.** Ignored
**D.** Added to costing profit

**14. In Reconciliation Statement, Expenses shown only in cost accounts are.**

**A.** Added to financial profit
**B.** Deducted from financial profit
**C.** Ignored
**D.** Deducted from costing profit

**15. In Reconciliation Statement, transfers to reserves are.**

**A.** Added to financial profit
**B.** Deducted from financial profit
**C.** Ignored
**D.** Added to costing profit

**16. In Reconciliation Statement, Incomes shown only in financial accounts are.**

**A.** Added to financial profit
**B.** Deducted from financial profit
**C.** Ignored
**D.** Deducted from costing profit

**17. In Reconciliation Statement, Closing Stock Undervalued in Financial accounts is**

**A.** Added to financial profit
**B.** Deducted from financial profit
**C.** Ignored
**D.** Added to costing profit

**18. Under Non-Integrated accounting system**

**A.** Separate ledgers are maintained for cost and financial accounts
**B.** Same ledger is maintained for cost and financial accounts by accountants
**C.** (a) and (b) both
**D.** None of the above

**19. Under Non-Integrated accounting system, the account made to complete double entry is:**

**A.** Finished goods control account
**B.** Work in progress control account
**C.** Stores ledger control account
**D.** General ledger adjustment account

**20. Under Non-Integrated system of accounting, purchase of raw material is debited to**

**A.** Purchase account
**B.** Material control account/ stores ledger control account
**C.** General ledger adjustment account
**D.** None of the above

**21. When Costing loss is ₹ 5,600, administrative overhead under-absorbed being ₹ 600, the loss as per financial accounts should be**

**A.** ₹ 5,000
**B.** ₹ 5,600
**C.** ₹ 6,200
**D.** None of the above

**22. Which of the following items should be added to costing profit to arrive at financial profit:**

**A.** Income tax paid
**B.** Over-absorption of works overhead
**C.** Interest paid on debentures
**D.** All of the above

**23. Integral accounts eliminate the necessity of operating**

**A.** Cost Ledger control account
**B.** Store Ledger control account
**C.** Overhead adjustment account
**D.** None of the above

**24. What entry will be passed under integrated system for purchase of stores on credit?**

**A.** Dr. Stores
Cr. Creditors
**B.** Dr. Stores Ledger Control A/c
Cr. Creditors
**C.** Dr. Stores Ledger Control A/c
Cr. General Ledger Adjustment A/c

**25. What entry will be passed under integrated system for payment to creditors for supplies made?**

**A.** Dr. Creditors
Cr. Cash
**B.** Dr. Creditors
Cr. Stores Ledger Control A/c
**C.** No entry

**26. The accounting entry in integrated accounts for recording sales will be:**

**A.** Dr. Cost ledger control account
Cr. Profit and Loss account

**B.** Dr. Sales Account
Cr. Profit and Loss A/c

**C.** Dr. Cash A/c
Cr. Sales A/c

**27. What will be the accounting entry for absorption of factory overhead?**

**A.** Dr. Works in progress control A/c
Cr. Factory overhead control A/c

**B.** Dr. Factory overhead
Cr. Factory overhead control A/c

**C.** No entry is required

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | C | A | A | A | A | B | C | B | B | C | A | A | B |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | |
| A | B | A | A | D | B | C | B | A | B | A | C | A | |

# 8. METHODS OF COSTING

**1. Job costing is used in**
- **A.** Furniture making
- **B.** Repair shops
- **C.** Printing press
- **D.** All of the above

**2. In a job cost system, costs are accumulated**
- **A.** On a monthly basis
- **B.** By specific job
- **C.** By department or process
- **D.** By kind of material **used**

**3.The most suitable cost system where the products differ in type of material and work performed is**
- **A.** Operating Costing
- **B.** Job costing
- **C.** Process costing
- **D.** All of these.

**4. Cost Price is not fixed in case of**
- **A.** Cost plus contracts
- **B.** Escalation clause
- **C.** De-escalation clause
- **D.** All of the above

**5. Most of the expenses are direct in**
- **A.** Job costing
- **B.** Batch costing
- **C.** Contact costing
- **D.** None of the above

**6. Cost plus contract is usually entered into those cases where**
- **A.** Cost can be easily estimated
- **B.** Cost of certified and uncertified work
- **C.** Cost of certified work, cost of uncertified work and amount of profit transferred to Profit and Loss Accounts.
- **D.** None of these

**7. In order to determine cost of the products or services, different business firms follow:**
- **A.** Different techniques of costing
- **B.** Uniform Costing
- **C.** Different method of costing
- **D.** Note of the above

**8. In case product produced or jobs undertaken are of diverse nature, the system of costing to be used should be:**
- **A.** Operating Costing
- **B.** Process Costing
- **C.** Job costing
- **D.** None of the above

**9. Job Costing is:**

**A.** Suitable where similar products are produced on mass-scale
**B.** Method of costing used for non-standard and non-repetitive products
**C.** Technique of costing
**D.** Applicable to all industries regardless of the products or services provided

**10. Batch costing is a type of:**

**A.** Direct costing
**B.** Process costing
**C.** Job costing
**D.** Differential costing

**11. Batch Costing is similar to that under job costing except with the difference that:**

**A.** Process becomes a cost unit
**B.** Job becomes a cost unit
**C.** Batch become the cost **unit instead of a job**
**D.** None of the above

**12. Economic batch quantity is that size of the batch of production where:**

**A.** Carrying cost is minimum
**B.** Set-up cost of machine is minimum
**C.** Average cost is minimum
**D.** Both A. and B.

**13. Job costing is similar to that under Batch costing except with the difference that:**

**A.** Batch becomes the cost unit instead of a job
**B.** Job becomes a cost unit
**C.** Process becomes a cost unit
**D.** None of the above

**14. Which of the following documents are used in job costing to record the issue of direct materials to a job**:

**A.** Purchase order
**B.** Purchase requisition
**C.** Goods received note
**D.** Material requisition

**15. Which of the following statements is true**:

**A.** Batch costing is a variant of jobs costing
**B.** Job cost sheet may be used for estimating profit of jobs
**C.** Job costing cannot be used in conjunction with marginal costing
**D.** In cost plus contracts, the contractor runs a risk of incurring a loss

**16. Which of the following statements is true:**

**A.** Job costing can be suitably used for concerns producing any specific product uniformly
**B.** Job costing cannot be used in companies applying standard costing
**C.** Job cost sheet may be prepared to facilitate routing and scheduling of the job
**D.** Neither A. nor B. nor C.

**17. Equivalent production of 1,000 units, 60% complete in all respects, is :**

**A.** 1000 units
**B.** 1600 units
**C.** 600 units
**D.** 1060 units

**18. In a process 8000 units are introduced during a period. 5% of input is normal loss. Closing work in progress 60% complete is 1000 units. 6600 completed units are transferred to next process. Equivalent production for the period is:**

**A.** 9000 units
**B.** 7440 units
**C.** 5400 units
**D.** 7200 units

**19. The type of process loss that should not be allowed to affect the cost of good units is called:**

**A.** Standard loss
**B.** Normal loss
**C.** Abnormal loss
**D.** Seasonal loss

**20. 400 units were introduced in a process in which 40 units is the normal loss. If the actual output is 300 units, then there is:**

**A.** No abnormal gain
**B.** Abnormal loss of 60 units
**C.** No abnormal loss
**D.** Abnormal gain of 60 units

**21. Spoilage that occurs under inefficient operating conditions and is generally controllable is called**

**A.** Normal defectives
**B.** Abnormal spoilage
**C.** Normal spoilage
**D.** None of the above

**22. In which of the following situations an abnormal gain in a process occurs:**

**A.** When normal loss is equal to actual loss
**B.** When the actual output is greater than the planned output.
**C.** When actual loss is more than the expected
**D.** When actual loss is less than the expected loss

**23. The value of abnormal loss is equal to:**

**A.** Total cost of materials
**B.** Total process cost less cost of scrap
**C.** Total process cost less realisable value of normal loss less value of transferred out goods.
**D.** Total process cost less realisable value of normal loss

**24. A process account is debited by abnormal gain, the value is determined as:**

**A.** Equal to the value of goods units less closing stock
**B.** Equal to the value of normal loss
**C.** Cost of good units less realisable value of normal loss
**D.** Cost of goods units less realisable value of actual loss

**25. In sugar manufacturing industry molasses is also produced along with sugar. Molasses may be of smaller value as compared with the value of sugar and is known as:**

**A.** Joint product
**B.** Common product
**C.** By-product
**D.** None of them

**26. Method of apportioning joint costs on the basis of output of each joint product at the point of split-offs is known as:**

**A.** Physical unit method
**B.** Sales value method
**C.** Average cost method
**D.** Marginal cost and contribution method

**27. The main purpose of a accounting of joint products and by-products is to:**

**A.** Determine the replacement cost
**B.** Determine the opportunity cost
**C.** Determine profit or loss on each product line
**D.** None of the above

**28. Under Net realisable value method of apportioning joint costs to joint products, the selling & distribution cost is:**

**A.** Ignored
**B.** Deducted from sales value
**C.** Deducted from further processing cost
**D.** Added to joint cost

**29. Which of the following is an example of by-product:**

**A.** Mustard seeds and mustard oil.
**B.** Diesel and Petrol in an oil refinery
**C.** Edible oils and oil cakes
**D.** Curd and butter in a dairy

**30. Which of following methods can be used when the joint products are of unequal quantity and used for captive consumption:**

**A.** Physical units method
**B.** Net realisable value method
**C.** Technical estimates, using market value of similar goods
**D.** Market value at split-off method

**31. Cost of service under operating costing is ascertained by preparing:**

**A.** Cost sheet
**B.** Process account
**C.** Job cost sheet
**D.** Production account

**32. Operating costing is applicable to:**

**A.** Hospitals
**B.** Cinemas
**C.** Transport undertaking
**D.** All of the above

**33. Composite cost unit for a hospital is:**

**A.** Per day
**B.** Per bed
**C.** Per patient-day
**D.** Per patient

**34. Cost units used in power sector is called:**

**A.** Number of hours
**B.** Number of electric points
**C.** Kilowatt-hour (KWH)
**D.** Kilo meter (K.M)

**35. Absolute Tonne-km. is an example of:**

**A.** Composite unit for bus operation
**B.** Composite unit of transport sector
**C.** Composite unit for oil and natural gas
**D.** Composite unit in power sector

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | B | B | A | C | B | C | C | B | C | C | D | B | D | B | D | C | D |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | |
| C | B | B | D | C | C | C | A | C | B | C | C | A | D | C | C | B | |

# 9. MARGINAL COSTING

**1. The cost of a product under marginal costing system includes:**
- **A.** Prime cost-plus variable overhead
- **B.** Prime cost-plus fixed overhead
- **C.** Prime cost-plus factory overhead
- **D.** Only prime cost

**2. The difference between absorption costing and marginal costing is in regard to the treatment of**
- **A.** Direct materials
- **B.** Fixed overhead
- **C.** Prime cost
- **D.** Variable overhead

**3. Fixed costs are treated as:**
- **A.** Overhead costs
- **B.** Prime costs
- **C.** Period costs
- **D.** Conversion costs

**4. When sales and production (in units) are same then profits under:**
- **A.** Marginal costing is lower than that of absorption costing
- **B.** Marginal costing is higher than that of absorption costing
- **C.** Marginal costing is equal to that of absorption costing
- **D.** None of the above

**5. When sales exceed production (in units) then profit under:**
- **A.** Marginal costing is higher than that of absorption costing
- **B.** Marginal costing is equal to that of absorption costing
- **C.** Marginal costing is lower than that of absorption costing
- **D.** None of the above

**6. Which of the following factors responsible for change in the break-even point?**
- **A.** Change in selling price
- **B.** Change in variable cost
- **C.** Change in fixed cost
- **D.** All of the above

**7. If sales are ₹ 90,000 and variable cost to sales is 75%, contribution is**
- **A.** ₹ 21,500
- **B.** ₹ 22,500
- **C.** ₹ 23,500
- **D.** ₹ 67,500

**8. Variable cost**
- **A.** Remains fixed in total
- **B.** Remains fixed per unit
- **C.** Varies per unit
- **D.** Nor increase or decrease

**9. If sales are ₹ 150,000 and variable cost are ₹ 50,000. Compute P/V ratio.**

**A.** 66.66%
**B.** 100%
**C.** 133.33%
**D.** 65.66%

**10. Marginal Costing technique follows the following basic of classification**

**A.** Element wise
**B.** Function Wise
**C.** Behaviour wise
**D.** Identifiability wise

**11. P/V ratio will increase if the**

**A.** There is a decrease in fixed cost
**B.** There is an increase in fixed cost
**C.** There is a decrease in selling price per unit.
**D.** There is a decrease in variable cost per unit.

**12. The technique of differential cost is adopted when**

**A.** To ascertain P/V ratio
**B.** To ascertain marginal cost
**C.** To ascertain cost per unit
**D.** None

**13. Difference between the costs of two alternative is known as the**

**A.** Variable cost
**B.** Opportunity cost
**C.** Marginal cost
**D.** Differential cost

**14. Contribution is ₹ 300,000 and sales is ₹ 1,500,000. Compute P/V ratio.**

**A.** 15%
**B.** 20%
**C.** 22%
**D.** 17.5%

**15. Variable cost to sales ratio is 40%. Compute P/V ratio.**

**A.** 60%
**B.** 40%
**C.** 100%
**D.** None of the these

**16. Fixed cost is 30,000 and P/V ratio is 20%. Compute breakeven point.**

**A.** ₹ 160,000
**B.** ₹ 150,000
**C.** ₹ 155,000
**D.** ₹ 145,000

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| A | B | C | C | A | D | B | B |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| A | C | D | D | D | B | A | B |

# 10. STANDARD COSTING

**1. Excess of actual cost over standard cost is known as**

**A.** Abnormal effectiveness
**B.** Unfavourable variance
**C.** Favourable variance
**D.** None of these.

**2. Difference between standard cost and actual cost is called as**

**A.** Wastage
**B.** Loss
**C.** Variance
**D.** Profit

**3. Standards cost is used**

**A.** To ascertain the breakeven point
**B.** To establish cost-volume profit relationship
**C.** As a basis for price fixation and cost control through variance analysis.

**4. The cost of the product determined at the beginning of production under standard cost system is known as:**

**A.** Actual cost
**B.** Direct cost
**C.** Pre-determined cost
**D.** Historical cost

**5. The deviation between standard and actual cost is known as**

**A.** Variable cost analysis
**B.** Variance analysis
**C.** Linear trend analysis
**D.** Multiple analysis

**6. From cost control point of view the standard most commonly used is:**

**A.** Expected standard **B.** Theoretical standard
**C.** Normal standard **D.** Basic standard

**7. When more than one material is used in the manufacture of a product, which of the following variances arises:**

**A.** Material yield variance
**B.** Material mix variance
**C.** Material price variance
**D.** Material usage variance

**8. Standard price of material per kg ₹ 20, standards consumption per unit of production is 5 kg. Standard material cost for producing 100 units is**

**A.** ₹ 20,000 **B.** ₹ 12,000
**C.** ₹ 8,000 **D.** ₹ 10,000

**9. Standard cost of material for a given quantity of output is ₹ 15,000 while the actual cost of material used is ₹ 16,200. The material cost variance is:**

**A.** ₹ 1,200 (A)
**B.** ₹ 16,200 (A)
**C.** ₹ 15,000 (F)
**D.** ₹ 31,200 (A)

**10. For the purpose of Proof, Material Cost Variance is equal to:**

**A.** Material Usage Variance + Material Mix variance
**B.** Material Price Variance + Material Usage Variance
**C.** Material Price Variance + Material yield variance
**D.** Material Mix Variance + Material Yield Variance

**11. Cost variance is the difference between**

**A.** The standard cost and marginal cost
**B.** The standards cost and budgeted cost
**C.** The standards cost and the actual cost
**D.** None of these

**12. Standard price of material per kg is ₹ 20, standard usage per unit of production is 5 kg. Actual usage of production 100 units is 520 kgs, all of which was purchase at the rate of ₹ 22 per kg. Material usage variance is**

**A.** ₹ 400 (F)
**B.** ₹ 400 (A)
**C.** ₹ 1,040 (F)
**D.** ₹ 1,040 (A)

**13. Standard price of material per kg is ₹ 20, standard usage per unit of production is 5 kg. Actual usage of production 100 units is 520 kgs, all of which was purchase at the rate of ₹ 22 per kg. Material cost variance is**

**A.** ₹ 2,440 (A)
**B.** ₹ 1,440 (A)
**C.** ₹ 1,440 (F)
**D.** ₹ 2,300 (F)

**14. Standard quantity of material for one unit of output is 10 kgs. @ ₹ 8 per kg. Actual output during a given period is 800 units. The standards quantity of raw material**

**A.** 8,000 kgs
**B.** 6,400 Kgs
**C.** 64,000 Kgs
**D.** None of these

**15. What is the labour rate variance if standard hours for 100 units of output are 400 @ ₹ 2 per hour and actual hours taken are 380 @ ₹ 2.25 per hour?**

**A.** ₹ 120 (adverse)
**B.** ₹ 100 (adverse)
**C.** ₹ 95 (adverse)
**D.** ₹ 25 (favourable)

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| B | C | C | C | B | A | B | D |

| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|
| A | B | C | B | B | A | C |

# 11. BUDGETARY CONTROL

**1. Budgets are shown in Terms**
- **A.** Qualitative
- **B.** Quantitative
- **C.** Materialistic
- **D.** both (b) and (c)

**2. Which of the following is not an element of master budget?**
- **A.** Capital Expenditure Budget
- **B.** Production Schedule
- **C.** Operating Expenses Budget
- **D.** All above

**3. Which of the following is not a potential benefit of using a budget?**
- **A.** Enhanced coordination of firm activities
- **B.** More motivated managers
- **C.** Improved interdepartmental communication
- **D.** More accurate external financial statements

**4. Which of the following is a long-term budget?**
- **A.** Master Budget
- **B.** Flexible Budget
- **C.** Cash Budget
- **D.** Capital Budget

**5. Materials become key factor, if**
- **A.** quota restrictions exist
- **B.** insufficient advertisement prevails
- **C.** there is low demand
- **D.** there is no problem with supplies of materials

**6. The difference between fixed cost and variable cost assumes significance in the preparation of the following budget.**
- **A.** Master Budget
- **B.** Flexible Budget
- **C.** Cash Budget
- **D.** Capital Budget

**7. The budget that is prepared first of all is …**
- **A.** Master budget
- **B.** Budget, with key factor
- **C.** Cash Budget
- **D.** Capital expenditure budget

**8. Sales budget is a**
- **A.** Expenditure budget
- **B.** Functional budget
- **C.** Master budget
- **D.** None of these

**9. When a company wants to prepare a factory overhead budget in which the estimated costs are directly derived from the estimates of activity levels, which of the following budget should be prepared by the company?**

**A.** Flexible budget
**B.** Fixed budget
**C.** Master budget
**D.** R & D budget

**10. Which of the following budgets facilitates classification of fixed and variable costs:**

**A.** Capital expenditure budget
**B.** Flexible budget
**C.** Cash budget
**D.** Raw materials budget

**11. The entire budget organisation is controlled and headed by a senior executive known as:**

**A.** General Manager
**B.** Accountant
**C.** Budget Controller
**D.** None of the above

**12. Which of the following is generally a long-term budget?**

**A.** Cash budget
**B.** Sales budget
**C.** Research and Development budget
**D.** Capital expenditure budget

**13. A flexible budget requires a careful study of**

**A.** Fixed, semi-fixed and variable expenses
**B.** Past and current expenses
**C.** Overheads, selling and administrative expenses.
**D.** None of these.

**14. The basic difference between a fixed budget and flexible budget is that a fixed budget**

**A.** is concerned with a single level of activity, while flexible budget is prepared for different levels of activity
**B.** Is concerned with fixed costs, while flexible budget is concerned with variable costs.
**C.** is fixed while flexible budget changes
**D.** None of these.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| D | B | D | D | A | B | B |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| B | A | B | C | D | A | A |

# TRUE /FALSE

(CHAPTER WISE)

ON

# COST ACCOUNTING

For

## CMA-INTER

BY

**SUMIT RASTOGI**

**CMA, B.COM (HONS)**

**SUMIT RASTOGI CLASSES**

D-223, 3rd FLOOR, LAXMI CHAMBER, LAXMI NAGAR, DELHI-92

# TOPIC COVERED

# 1. INTRODUCTION TO COST ACCOUNTING

**STATE WHETHER THE FOLLOWING STATEMENT IS TRUE (OR) FALSE:**

1. Differential Cost is the change in the cost due to change in activity from one level to another.
2. Cost unit of Hotel Industry is student per year.
3. Multiple Costing is suitable for the banking Industry.
4. Direct Expenses are expenses related to manufacture of a product or rendering of services.
5. Profit is result of two varying factors sales and variable cost.
6. Cost Accounting is not required for a non−profit organisation such as medical hospital.
7. Cost reduction and cost control means the same thing.
8. Notional costs and Imputed costs mean the same thing.
9. Cost Accounting is a branch of Financial Accounting.
10. Opportunity cost is recorded in the costing books of accounts.
11. Conversion costs are recorded as direct cost.
12. All store items such as lubricant oil, cotton waste etc. is regarded as direct material cost

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T | F | F | T | F | F | F | T | F | F | F | F |

# 2. MATERIAL COST (CAS-6)

**STATE WHETHER THE FOLLOWING STATEMENT IS TRUE (OR) FALSE:**

1. Waste and Scrap of material have small realization value.
2. Slow moving materials have a high turnover ratio.
3. Bin card are not the part of accounting records.
4. ABC analysis is based on the principle of management by exception.
5. Store ledger is maintained inside the stores by store keeper.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| F | F | T | T | F |

# 3. EMPLOYEE COST (CAS-7)

**STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE (OR) FALSE:**

1. Direct employee cost shall be presented as a separate cost head in the financial statement.
2. As per the Payment of Bonus Act, 1965 the maximum limit of bonus is 20% of gross earning.
3. Flux method is means for measurement of labour turnover.
4. Is overtime premium is directly assigned to cost object?
5. Idle time represents the wages paid for the time cost during which the workers not work.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| F | T | T | T | T |

# 4. DIRECT EXPENSES (CAS-10)

**STATE WHETHER THE FOLLOWING STATEMENT IS TRUE (OR) FALSE:**

1. If an expense can be identified with a specific cost unit, it is treated as direct expense.
2. Travelling expenses to site is a direct expense.
3. Identification of direct expenses shall be based on traceability in an economically feasible manner.
4. CAS 9 is for Direct Expenses as issued by the Cost Accounting Standards Board (CASB) of the Institute of Cost Accountants of India.
5. Finance Cost shall form part of Direct Expense

## ANSWER:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| T | T | T | F | F |

# 5. OVERHEADS (CAS-3)

**STATE WHETHER THE FOLLOWING STATEMENT IS TRUE (OR) FALSE:**

1. Departments that assist producing Department indirectly are called service departments.
2. Factory overhead cost applied to a job is usually based on a per-determined rate.
3. Variable overhead very with time.
4. When actual overheads are more than absorbed overheads, it is known as over-absorption.
5. Cash discounts are generally excluded completely from the costs.
6. Cost of indirect materials is apportioned to various departments.
7. A blanket overhead rate is a single overhead rate computed for the entire factory.
8. Under-absorption of overhead means that actual overheads are more than absorbed overheads.
9. The principal based used for applying factory overhead are: units of production, material cost, direct wages, direct labour hours and machine hours.
10. Allocation, for overhead implies the identification of overhead cost centres to which they relate.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| T | T | F | F | T | F | F | F | F | T |

# 6. COST ACCOUNTING STANDARDS

**STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE:**

1. CAS 19 stands for Joint Cost.
2. Cost Accounting Standard Board should have minimum three eminant practicing members of the Institute of Cost Accounts of India.
3. Is issue the framework for the Cost Accounting Standard is the function of CASB.
4. CAS 2 stands for classification of cost.
5. The objective of CAS 10 is to bring uniformity and consistency in the period and methods of determining the direct expenses with reasonable accuracy.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| T | F | T | F | T |

# 7. COST BOOK KEEPING

**STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE:**

1. Total cost = prime cost + All indirect costs.
2. Closing stock of work-in-progress should be valued on the basis of prime cost.
3. Closing stock of finished goods should be valued on the basis of cost of sales.
4. Production cost includes only direct costs related to the production.
5. Primary packaging cost is included in distribution cost.
6. Notional interest on Owner's capital appears only in financial profit and loss A/c.
7. Goodwill written off appears only in cost accounts.
8. Overheads are taken on estimated basis in financial accounts.
9. Expenses which appear only in financial accounts and not in cost accounts, are Generally notional items.
10. Need for Reconciliation arise in case of integrated system of accounts.
11. Cost ledger control account makes the cost ledger self-balancing.
12. Stock ledger contains the accounts of all items of finished goods.
13. The purpose of cost control accounts is to control the cost.
14. Cost control accounts are prepared on the basis of double entry system.
15. The balancing in costing profit and loss account represents under or over absorption of overheads.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T | F | F | F | F | F | F | F | F | F | T | T | F | T | F |

# 8. METHODS OF COSTING

**STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE:**

1. Operating costing is applied to ascertain the cost of products.
2. Cost of operating the service is ascertained by preparing job account.
3. The problem of equivalent production arises in case of operating costing.
4. FIFO methods are followed for evaluation of equivalent production when prices are fluctuating.
5. Work in progress is the inherent feature of processing industries.
6. Costs incurred prior to the split off point are known as “Joint Costs”
7. No distinction is made between Co products and Joint Products.
8. Contact costing is variant of job costing.
9. In contact costing, the unit of cost is a job.
10. Job costing is applied only in small concerns.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| F | F | F | F | T | T | F | T | F | F |

# 9. MARGINAL COSTING

**STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE:**

1. Contribution = Sales × P/V ratio.
2. Margin of Safety = Profit / P/V ratio
3. P/ V ratio remains constant at all levels of activity.
4. Marginal Costing follows the behaviour wise classification of costs.
5. At breakeven point, contribution available is equal to total fixed cost.
6. Breakeven point = Profit / P/V ratio.
7. Marginal cost is aggregate of Prime Cost and Variable cost.
8. Variable cost remains fixed per unit.
9. Contribution margin is equal to Sales – Fixed cost.
10. Variable cost per unit is variable.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| T | T | T | T | T | F | F | T | F | F |

# 10. STANDARD COSTING

**STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE:**

1. Excess of Actual cost over Standards Cost is treated as unfavourable variance.
2. Variances are calculated for both material and labour.
3. While fixing standards, normal losses and wastages are taken into account.
4. Under the system of standard costing, there is no need for variance analysis.
5. Standard costing is an ideal name given to the estimate making.
6. Standards cost, once fixed cannot be altered.
7. Predetermined standards provide a yardstick for the measurement of efficiency.
8. Material cost variance and labour cost variance are always equal.
9. Fixing standards is the work of industrial engineer or the production people and not of cost accountant.
10. Standards costing are more profitability employed in job order industries than in process type industries.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| T | T | T | F | F | T | T | F | F | F |

# 11. BUDGETARY CONTROL

**STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE:**

1. Budget is a means and budgetary control is the end result.
2. To achieve the anticipated targets, Planning, Co-ordination and Control are the important main tasks of management, achieved through budgeting and budgetary control.
3. A key factor or principal factor does not influence the preparation of all other budgets.
4. Budgetary control does not facilitate introduction of 'Management by Exception'.
5. Generally, budgets are prepared to coincide with the financial year so that comparison of the actual performance with budgeted estimates would facilitate better interpretation and understanding.
6. A flexible budget is one, which changes from year to year.
7. A flexible budget recognises the difference between fixed, semi-fixed and variable cost and is designed to change in relation to the change in level of activity
8. Sales budget, normally, is the most important budget among all budgets.
9. The principal factor is the starting point for the preparation of various budgets.
10. A budget manual is the summary of all functional budgets.

## ANSWER:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| T | T | F | F | T | F | T | T | T | F |

# FILL IN THE BLANKS

(CHAPTER WISE)

ON

# COST ACCOUNTING

For

## CMA-INTER

BY

**SUMIT RASTOGI**
CMA, B.COM (HONS)

**SUMIT RASTOGI CLASSES**
D-223, 3rd FLOOR, LAXMI CHAMBER, LAXMI NAGAR, DELHI-92

# TOPIC COVERED

# 1. INTRODUCTION TO COST ACCOUNTING

## FILL IN THE BLANKS

1. Differential cost is the change in the cost due to change in _____ from one level to another.
2. Management accounting is primarily concerned with _____.
3. In Cost Accounting stock are valued at _____ only.
4. Profit is the resultant of two varying factors viz _____ and _____.
5. _____ cost are historical costs which are incurred in the past.
6. A responsibility center in which a manager is responsible for costs only is called _____.
7. _____ costs are not considered for decision making because all past costs are not relevant.
8. _____ expenses are not included in the cost sheet.

## ANSWER

(1) activity
(2) management
(3) cost
(4) sales, cost
(5) sunk
(6) Cost Centre
(7) Sunk
(8) Notional

# 2. MATERIAL COST (CAS-6)

## FILL IN THE BLANKS

1. Store Ledger is kept and maintained in _____.
2. Goods Received Note is prepared by the _____.
3. Transfer of surplus material from one job or work order is recorded in _____.
4. _____ is discount allowed to the bulk purchaser.
5. _____ is a document which records the return of unused materials.

## ANSWER

1. Cost department
2. Receiving department
3. Material Transfer Note
4. Quantity Discount
5. Material return Note

# 3. EMPLOYEE COST (CAS-7)

## FILL IN THE BLANKS:

1. In a company there were 1200 employee on the rolls at the beginning of a year and 1180 at the end. During the year 120 persons left services and 96 replacements were made. The labour turnover to flux method is _____ %.
2. In _____ systems, two-piece rates are set for each job.
3. In _____ Systems, basic of wages payment is the quantity of work.
4. The formula for computing wages under time rate is _____.
5. In Halsey plan, a worker gets bonus equal to _____ of the time saved.
6. Under Gantt Task Bonus Plan, no bonus is payable to a worker, if his efficiency is less than _____.
7. Wages sheet is prepared by _____ department.
8. Cost of normal idle time is charged to _____.
9. Idle time arises only when workers are paid on _____ basis.
10. Normal idle time costs should be change to _____ which that due to abnormal reasons should be change to _____.

## ANSWER

1. **9.08,**
2. **Taylor differential piece rate,**
3. **Piece rate,**
4. **Hour worked × rate per hour,**
5. **50%,**
6. **100%,**
7. **Pay Roll Department,**
8. **Factory Overhead,**
9. **Time,**
10. **Factory Overhead & Costing P/L A/c**

# 4. DIRECT EXPENSES (CAS-10)

## FILL IN THE BLANKS:

1. Direct Expenses relating to _____ or _____.
2. Penalties/ damages paid to statutory authorities' _____be form part of Direct Expenses.
3. A Direct Expenses related to a _____ form part of the Prime Cost.
4. Direct Expenses incurred for brought out resources shall be determined at _____.
5. Direct Expenses incurred lump-sum shall be _____.

## ANSWER

1. Manufacture of a product or rendering of service,
2. Shall Not,
3. Product,
4. Invoice Price,
5. Amortized.

# 5. OVERHEADS (CAS-3)

## Fill in the Blanks:

1. Overheads are an aggregate of _____ and _____ and _____.
2. Example of after sales services are _____ and _____.
3. Administration overheads are usually absorbed as a percentage of _____.
4. The difference between actual and absorbed factory overhead is called _____.
5. The term used for charging of overheads to cost units is known as _____.
6. The difference between practical capacity and the capacity based on sales expectancy is known as _____.
7. The _____ rate is computed by dividing the overheads by the aggregate of the productive hours of direct workers.
8. Under or over absorption of overheads arises only when overheads are absorbed by _____.
9. Overhead incurred ₹ 16,000 and overhead absorbed ₹ 15,300. There is under absorption of ₹_____.
10. In Absorption Costing _____ cost is added to inventory.

## ANSWER

1. Indirect material, Indirect Labour and Indirect Expenses,
2. Repair and Maintenance and replacement of Components,
3. Works Cost,
4. under or over absorbed overheads,
5. absorptions,
6. idle capacity,
7. direct labour hour,
8. predetermined overheads rates,
9. ₹ 700,
10. Fixed cost

# 6. COST ACCOUNTING STANDARDS

## FILL IN THE BLANKS:

1. CAS 9 stands for _____.
2. The _____ of the CASB will be nominated by the council of The Institute of Cost Accountants of India.
3. _____ nominees from the regulators like CAG, RBI to the CASB Board.
4. CAS _____ stands for cost of service cost centre.
5. The function of CASB is to assists the members in preparations of uniform _____ under various statues.

## ANSWER

1. Packing Material Cost
2. Chairman
3. Four
4. 13
5. Cost Statement

# 7. COST BOOK KEEPING

## FILL IN THE BLANKS:

1. Prime cost + Overheads =_____
2. Total cost + Profit =_____
3. _____+ Profit = Sales.
4. Direct Material + _____+ Direct Expenses = Prime Cost.
5. Salary paid to factory manager is an item of _____.
6. In Reconciliations Statements, Incomes shown only in financial accounts are _____.
7. In Reconciliations Statements, Expenses shown only in cost accounts are _____.
8. In Reconciliations Statements, Under-Recovered overheads in cost accounts are_____.
9. In Reconciliations Statements, Over Recovered overheads in cost accounts are _____.
10. Notional remuneration to owner is expense debited only in _____.
11. All the transactions relating to materials are recorded through _____.
12. The net balance of _____ represents net profit or net loss.
13. WIP ledger contains the accounts of all the _____ which are under _____.
14. The two traditional systems of accounting for integration of cost and financial accounts are the _____ and _____.
15. Under integrated accounting system, the accounting entry for payment of wages is to debit _____ and to credit cash.

## ANSWER

1. **Total cost,**
2. **Selling Price,**
3. **Cost of Sales,**
4. **Direct wages,**
5. **Factory Overhead,**
6. **Added to costing profit,**
7. **Added to costing profit,**
8. **Deducted from costing profit,**
9. **Added to costing profit,**
10. **Cost Accounts,**
11. **Store ledger control accounts,**
12. **Costing profit and loss account,**
13. **Jobs and Execution,**
14. **Double entry method and Third entry method**
15. **Wages control Accounts**

**Third Entry Method:**

Third entry is a variant of integrated accounts. In this case, in the financial books as ordinarily maintained, an account called Cost Ledger Control Account is debited whenever any expenditure relating to costs is incurred. This debit is in addition to the ordinary and usual accounts to be debited.

# 8. METHODS OF COSTING

## Fill in the Blanks:

1. Cost of _____ loss is not borne by good units.
2. If the actual loss in a process is less than the normal loss, the difference is known as _____.
3. _____ Costs are incurred after split off point.
4. The ____ product generally has a greater sale value than by product.
5. Statement of cost per unit of equivalent production shows the per unit cost _____.
6. Two principle methods of evaluation of equivalent production are _____ and _____.
7. In hospital the cost unit is _____.
8. In electricity companies, the cost unit is _____.
9. The method of costing used in undertaking like gas companies, cinema houses, hospitals etc. is known as _____.
10. In motor transport costing two example of fixed cost are _____ and _____.

## ANSWER

1. Abnormal,
2. Abnormal gain,
3. Subsequent,
4. main,
5. Element wise,
6. FIFO and Average method,
7. per bed,
8. Kilowatt,
9. Operating costing,
10. Insurance and Depreciation

# 9. MARGINAL COSTING

## FILL IN THE BLANKS

1. Variable cost per unit is _____.
2. Marginal cost is the _____ of sales over contribution.
3. P/V ratio is the ratio of _____ to sales.
4. If variable cost to sales ratio is 60%, P/V ratio is _____.
5. _____ + Variable overhead = Marginal Cost.
6. When sales are ₹ 300,000 and variable cost is ₹ 180,000, P/V ratio will be _____.
7. Variable cost remains _____.
8. Margin of safety is _____.
9. Breakeven point is _____.
10. Contribution margin equals to _____.

## ANSWER

1. **Fixed/Constant,**
2. **Excess,**
3. **Contribution,**
4. **40%,**
5. **Prime cost,**
6. **40%,**
7. **fixed per unit,**
8. **Actual sales- Sales at breakeven point,**
9. **Total Fixed cost/ P/V ratio,**
10. **Sales – Variable cost.**

# 10. STANDARD COSTING

## FILL IN THE BLANKS

1. Standard cost is a _____ cost.
2. Standard cost when fixed is recorded on _____ card.
3. Historical costing uses post period costs while standards costing uses _____ costs.
4. Three types of standards are _____.
5. The _____ is usually the coordinator of the standards committee.
6. Standards cost when fixed recorded on _____ card.
7. Basically, there are two types of standards viz, a) Basic standards, and _____.
8. When actual cost is less than the standards cost, it is known as _____ variance.
9. Standard Costing is one of the _____ techniques.
10. Standard means a criterion or a yardstick against which actual activity can be compared to determine the _____ between two.

## ANSWER

1. **Predetermined,**
2. **Standard cost,**
3. **Predetermined,**
4. **Basic standard, Current standard and Normal standard,**
5. **Cost Accountants,**
6. **Standard cost,**
7. **Current standard,**
8. **Favourable,**
9. **Cost control,**
10. **difference.**

# 11. BUDGETARY CONTROL

## FILL IN THE BLANKS

1. Budgets are _____ plans.
2. The key factor in a budget does not remain the _____ every year.
3. Cash budget is a part of _____ budget.
4. _____ budgets are subsidiary to master budget.
5. _____ leads to budgeting and budgeting leads to budgetary control.
6. _____ Control involves checking and evaluation of actual performance.
7. The document which describes the budgeting organisation, procedure etc. is known as _____.
8. A budget is a _____ to management.
9. The principle budget factor for consumer goods manufacture is normally _____.
10. A budget is a projected plan of action in _____.

## ANSWER

1. **Action,**
2. **Same,**
3. **Financial,**
4. **Functional,**
5. **Forecasting,**
6. **Budgetary,**
7. **Budget Manual,**
8. **Aid,**
9. **Sales Demand/Market Demand / Lack of Demand**
10. **Physical units & monetary terms**

# MATCHING

(CHAPTER WISE)

ON

# COST ACCOUNTING

For

## CMA-INTER

BY

**SUMIT RASTOGI**
CMA, B.COM (HONS)

**SUMIT RASTOGI CLASSES**
D-223, 3rd FLOOR, LAXMI CHAMBER, LAXMI NAGAR, DELHI-92

# TOPIC COVERED

# 1. INTRODUCTION TO COST ACCOUNTING

## MATCH THE FOLLOWING

| | Column "A" | | Column B |
|---|---|---|---|
| 1 | Historical Cost | A | Specific Situation |
| 2 | Opportunity Cost | B | Student year |
| 3 | Relevant Cost | C | Imputed Cost |
| 4 | Cost unit for education | D | Value of alternative foregone |
| 5 | Notional Cost | E | Sunk cost |

**ANSWER**

**(1) - (E)**
**(2) - (D)**
**(3) - (A)**
**(4) - (B)**
**(5) - (C)**

# 2. MATERIAL COST (CAS-6)

## MATCH THE FOLLOWING

| | Column A | | Column B |
|---|---|---|---|
| 1 | Production Strategy | A | ABC Analysis |
| 2 | Analytical method of stock control | B | JIT |
| 3 | Process of classifying material | C | Control of scrap |
| 4 | Unavoidable residue material | D | Costing department |
| 5 | Store ledger | E | FSN Analysis |

**ANSWER**

**(1) - (B)**
**(2) - (A)**
**(3) - (E)**
**(4) - (C)**
**(5) - (D)**

# 3. EMPLOYEE COST (CAS-7)

## MATCH THE FOLLOWING

| | Column A | | Column B |
|---|---|---|---|
| 1 | Labour turnover | A | 8.33% of Salary |
| 2 | Barth variable sharing plan | B | Work beyond normal working hours |
| 3 | Minimum bonus | C | Merit rating |
| 4 | Overtime Premium | D | Replacement method |
| 5 | Assessment of employee with respect to a job | E | Total Earnings = $R \times \sqrt{SxH}$ |

**ANSWER**

**(1) - (D)**
**(2) - (E)**
**(3) - (A)**
**(4) - (B)**
**(5) - (C)**

# 4. OVERHEADS (CAS-3)

## MATCH THE FOLLOWING

| | Column A | | Column B |
|---|---|---|---|
| 1 | Advertisement | A | Value of goods in transit |
| 2 | Credit and collection | B | Floor area occupied |
| 3 | Warehouse rent | C | A percentage of cash collection |
| 4 | Royalties | D | No. of orders |
| 5 | Bad debts | E | Sales value |
| 6 | Transit insurance | F | Direct allocation |

**ANSWER**

**(1) - (E)**
**(2) - (D)**
**(3) - (B)**
**(4) - (F)**
**(5) - (C)**
**(6) - (A)**

# 5. COST ACCOUNTING STANDARDS

## MATCH THE FOLLOWING

| | Column A | | Column B |
|---|---|---|---|
| 1 | Pollution Control Cost | A | CAS 18 |
| 2 | Joint Cost | B | CAS 2 |
| 3 | Capacity Determination | C | CAS 10 |
| 4 | Direct Expenses | D | CAS 14 |
| 5 | Research and Development Cost | E | CAS 19 |

**ANSWER**

**(1) - (D)**
**(2) - (E)**
**(3) - (B)**
**(4) - (C)**
**(5) - (A)**

# 6. COST BOOK KEEPING

## MATCH THE FOLLOWING

| | Column A | | Column B |
|---|---|---|---|
| 1 | Primary Packing Materials Consumed | A | Not shown in cost sheet but debited to profit & loss account |
| 2 | Captive power plant expense | B | Forms part of office & adm. Expenses |
| 3 | Cash discount allowed | C | Forms part of selling expenses |
| 4 | Scrap value of abnormal loss of finished output | D | Treated as part of factory expenses |
| 5 | Cost of free samples of products distributed | E | Treated as direct expenses |
| 6 | Depreciation on computer purchased for office | F | Not shown in cost sheet but credited to profit & loss account |
| 7 | Donations | G | Expenses debited only in the financial accounts |
| 8 | Interest paid on loan | H | Appropriations only in financial accounts |
| 9 | Notional Rent charged to | I | Expenses debited only in cost accounts |
| 10 | Notional interest on Owner's capital | J | Income credited only in cost accounts |

**ANSWER**

**(1) - (E)**
**(2) - (D)**
**(3) - (A)**
**(4) - (F)**
**(5) - (C)**
**(6) - (B)**
**(7) - (H)**
**(8) - (G)**
**(9) - (J)**
**(10) - (I)**

# 7. METHODS OF COSTING

## MATCH THE FOLLOWING

| | Column A | | Column B |
|---|---|---|---|
| 1 | The contact which provides for payment of actual cost plus an agreed percentage of profit. | A | Average price method |
| 2 | In Contact Costing, the cost unit is | B | Kilowatt |
| 3 | Abnormal loss is transferred to | C | Job costing |
| 4 | Job costing is used in | D | Normal Output |
| 5 | Under job order cost system, each job is assigned one identifying job. | E | Cost Plus |
| 6 | Cost of Normal Loss is borne by | F | Per bed |
| 7 | Inherent features of process industry | G | Per contract |
| 8 | The method which is followed for evaluation of equivalent production when prices are fluctuating. | H | Automobile garages |
| 9 | In hospital, the cost unit is | I | Costing Profit and loss account |
| 10 | In electricity companies, the cost unit is | J | Work in progress |

**ANSWER**

**(1) - (E)**
**(2) - (G**
**(3) - (I)**
**(4) - (H)**
**(5) - (C)**
**(6) - (D)**
**(7) - (J)**
**(8) - (A)**
**(9) - (F)**
**(10) - (B)**

# 8. MARGINAL COSTING

## MATCH THE FOLLOWING

| | Column A | | Column B |
|---|---|---|---|
| 1 | Indifference point (in units) | A | Difference in Fixed Cost / Difference in P/V ratio |
| 2 | Breakeven point (in Value) | B | Fixed Cost / Contribution per unit |
| 3 | Variable cost per unit | C | Total sales less BEP sales |
| 4 | P/V ratio | D | Marginal Cost |
| 5 | Prime cost + Variable overhead | E | Fixed Cost / P/V ratio |
| 6 | Breakeven point (in Quantity) | F | Difference in Fixed Cost / Difference in contribution per unit |
| 7 | Indifference point (in Value) | G | Total contribution / Total Sales Value X 100 |
| 8 | Shut Down point (in Quantity) | H | Avoidable Fixed Cost / P/V Ratio |
| 9 | Shut Down point (in value) | I | Fixed |
| 10 | Margin of Safety | J | Avoidable Fixed Cost/ Contribution per unit |

**ANSWER**

**(1) - (F)**
**(2) - (E)**
**(3) - (I)**
**(4) - (G)**
**(5) - (D)**
**(6) - (B)**
**(7) - (A)**
**(8) - (J)**
**(9) - (H)**
**(10) - (C)**

# 9. STANDARD COSTING

## MATCH THE FOLLOWING

| | Column A | | Column B |
|---|---|---|---|
| 1 | Direct material yield variance | A | (Standard hour for actual production - Actual hours) x Standard Rate |
| 2 | Direct Labour rate variance | B | (Actual Hours at standard rate of standard gang) - (Actual Hours at standards Rate of Actual Gang) |
| 3 | Material price variance | C | Management by Exception |
| 4 | Variance Analysis | D | (Standard Rate minus Actual Rate) x Actual hour |
| 5 | Direct labour yield variance | E | (Standard rate x Actual hours paid for) minus (Standard rate x Actual hours worked) |
| 6 | Direct Labour efficiency variance | F | (Standard price minus Actual Price) X Actual Quantity |
| 7 | Direct material mix variance | G | (Standard Quantity for actual output X Standard Price) minus (Standard price X Actual Quantity) |
| 8 | Gang variance | H | Standard cost per unit x (Standard output for actual mix – Actual output) |
| 9 | Ideal time variance | I | (Standard yield for actual Mix minus Actual Yield) x Standard yields Price. |
| 10 | Direct material usage variance | J | (Revised Standard Quantity minus Actual Quantity) x Standard Price |

**ANSWER**

**(1) - (I)**
**(2) - (D)**
**(3) - (F)**
**(4) - (C)**
**(5) - (H)**
**(6) - (A)**
**(7) - (J)**
**(8) - (B)**
**(9) - (E)**
**(10) - (G)**

# 10. BUDGETARY CONTROL

## MATCH THE FOLLOWING

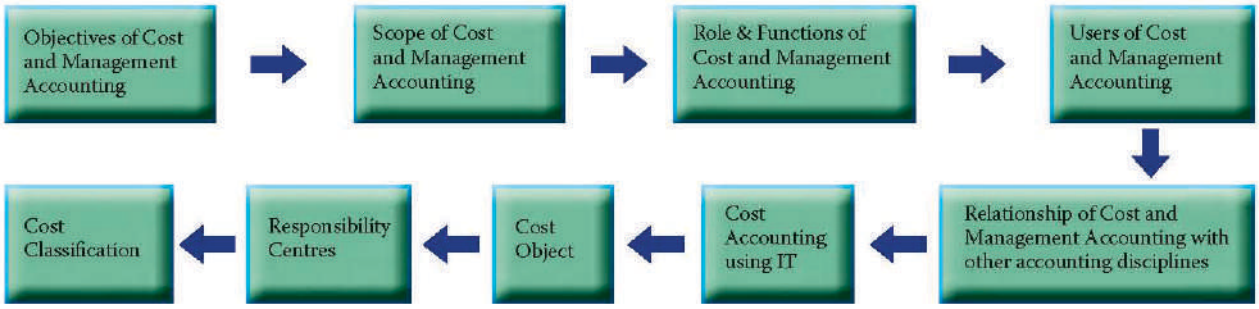
| | Column A | | Column B |
|---|---|---|---|
| 1 | Master budget denotes the summary of | A | Financial means |
| 2 | A flexible budget takes into the account | B | A specified period |
| 3 | A budget is expressed in terms of | C | Flexible Budget |
| 4 | Which budget is prepared for a longer period? | D | Master Budget |
| 5 | Budget is generally prepared for how long | E | Fixed, Variable and Semi Variable costs |
| 6 | Which budget is prepared for more than one level of activity | F | Functional Budget |
| 7 | The summary of all functional budgets. | G | Principle Key factor |
| 8 | Which budget is prepared at first | H | Capital Expenditure Budget |
| 9 | Which budget shows utilisation of liquid cash | I | Decision Package |
| 10 | Zero based budgeting | J | Cash Budget |

**ANSWER**

**(1) - (F)**
**(2) - (E)**
**(3) - (A)**
**(4) - (H)**
**(5) - (B)**
**(6) - (C)**
**(7) - (D)**
**(8) - (G)**
**(9) - (J)**
**(10) - (I)**

# Introduction to Cost and Management Accounting

## Chapter Overview




## Meaning of Terms used in Cost and Management Accounting

First of all, let us discuss the meaning of various terminologies used in Cost and Management Accounting to have a clear understanding about the subject.

| Cost | Costing | Cost Accounting | Cost Accountancy | Management Accounting | Cost Management |
|---|---|---|---|---|---|
| The amount of expenditure incurred on or attributable to a specified article, product or activity. | Costing is defined as the technique and process of ascertaining costs. | It is the process of accounting for cost. | Cost Accountancy has been defined as the application of costing and cost accounting principles, methods and techniques. | Management accounting is the application of the principles of accounting and financial management. | It is an application of management accounting concepts, methods of collections, analysis and presentation of data. |

## Objectives of Cost Accounting

There are many objectives of cost accounting. The main objectives are explained as below. We also need to keep our focus on understanding the difference between Cost Control and Cost Reduction.

**Objectives of Cost Accounting**

- **Ascertainment of Cost:** The main objective of cost and management accounting is accumulation and ascertainment of cost. Costs are accumulated, assigned and ascertained for each cost object.
- **Determination of Selling Price and Profitability:** The cost and management accounting system helps in determination of selling price and thus profitability of a cost object.
- **Cost Control:** Maintaining discipline in expenditure is one of the main objectives of a good cost and management accounting system. It ensures that expenditures are in consonance with predetermined set standard and any variation from these set standards is noted and reported on continuous basis.
- **Cost Reduction:** It may be defined "as the achievement of real and permanent reduction in the unit cost of goods manufactured or services rendered without impairing their suitability for the use intended or diminution in the quality of the product."
- **Assisting management in decision making:** Cost and Management accounting by providing relevant information, assist management in planning, implementing, measuring, controlling and evaluation of various activities.

## Scope of Cost Accounting

We also need to know various scopes of cost accounting. Cost ascertainment and the process of cost accounting are the major scopes. The other scopes are presented.


## Role and Functions of Cost and Management Accounting

### Role of a Cost and Management Accounting system

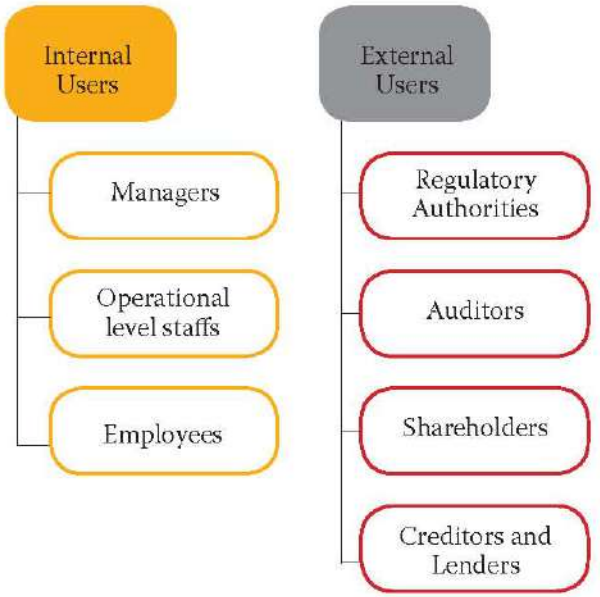
- Provide relevant information to management for decision making
- Assist management for planning, measurement, evaluation and controlling of business activities
- Help in allocation of cost to products and inventories for both external and internal users.

### Functions of Cost and Management Accounting System

- Collection and accumulation of cost for each element of cost
- Assigning costs to cost objects to ascertain cost.
- Sets budget and standards for a particular period or activity beforehand and these are compared with the assigned and ascertained cost.
- Provision of relevant information to the management for decision making.
- To gather data like time taken, wastages, process idleness etc., analyse the data, prepare reports and take necessary actions

## Users of Cost and Management Accounting

Cost and Management Accounting information which are generated or collected are used by various stakeholders. The users of the information can be broadly categorized as below:

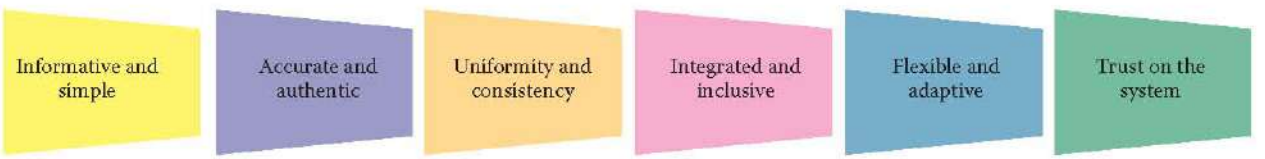



## Relationship of Cost Accounting, Management Accounting, Financial Accounting and Financial Management

There is a close relationship between various disciplines like Cost Accounting, Management Accounting, Financial Accounting and Financial Management. Sometimes these disciplines are interrelated and dependent on each other also.


## Essentials of a good Cost Accounting System

The essential features which a cost accounting system should possess are depicted as below:




## Cost Accounting using Information Technology

With the use of information technology, the cost accounting system gets integrated and automated. The basic features are depicted as below:


## Cost Objects

It is very important to understand the meaning of cost object, cost unit and cost driver. Their meaning alongwith examples are illustrated below.

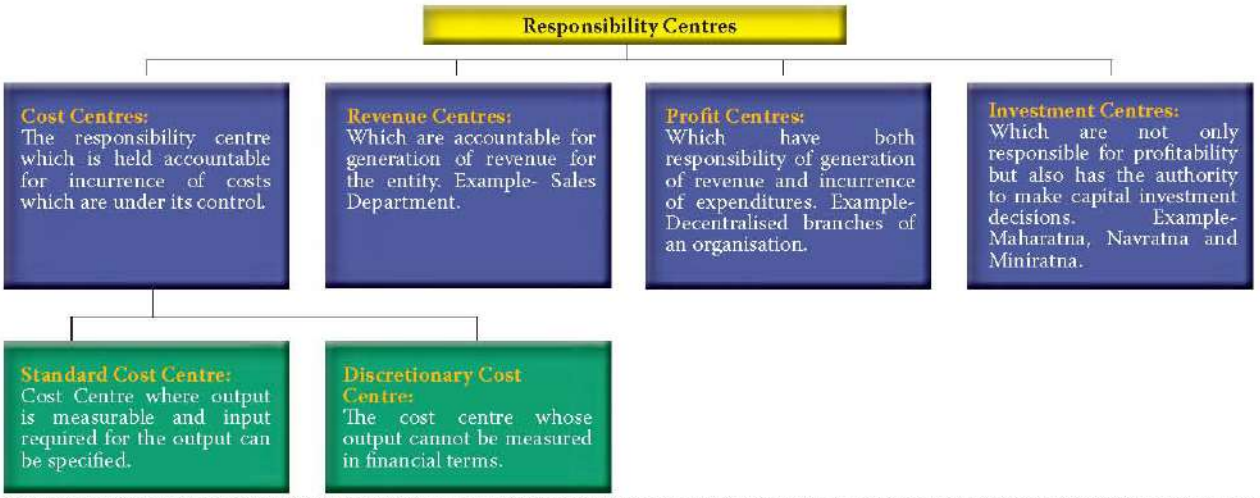
**Cost Object:** Cost object is anything for which a separate measurement of cost is required. Cost object may be a product (book), a service (airline), a project, a customer, a brand category etc.

**Cost Units:** It is a unit of product, service or time (or combination of these) in relation to which costs may be ascertained or expressed. Example for power industry is kilo Watt hour (kWh).

**Cost Drivers:** A Cost driver is a factor or variable which effect level of cost. Example for a purchase department is number of purchase orders.

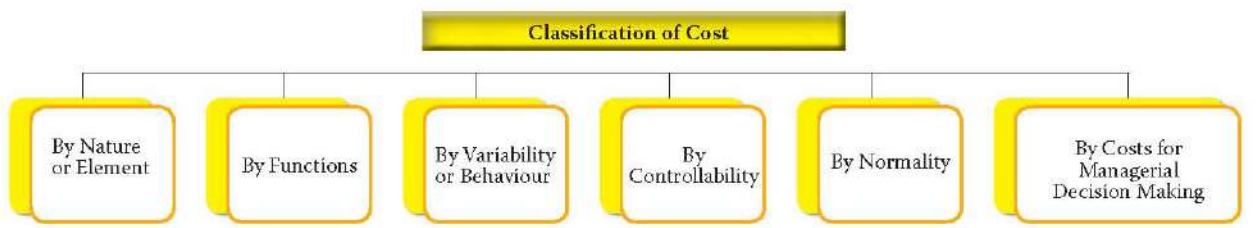
## Responsibility Centres

To have a better control over the organisation, management delegates its responsibilities and authorities to various departments or persons, which are known as responsibility centres. There are four types of responsibility centres as discussed below:

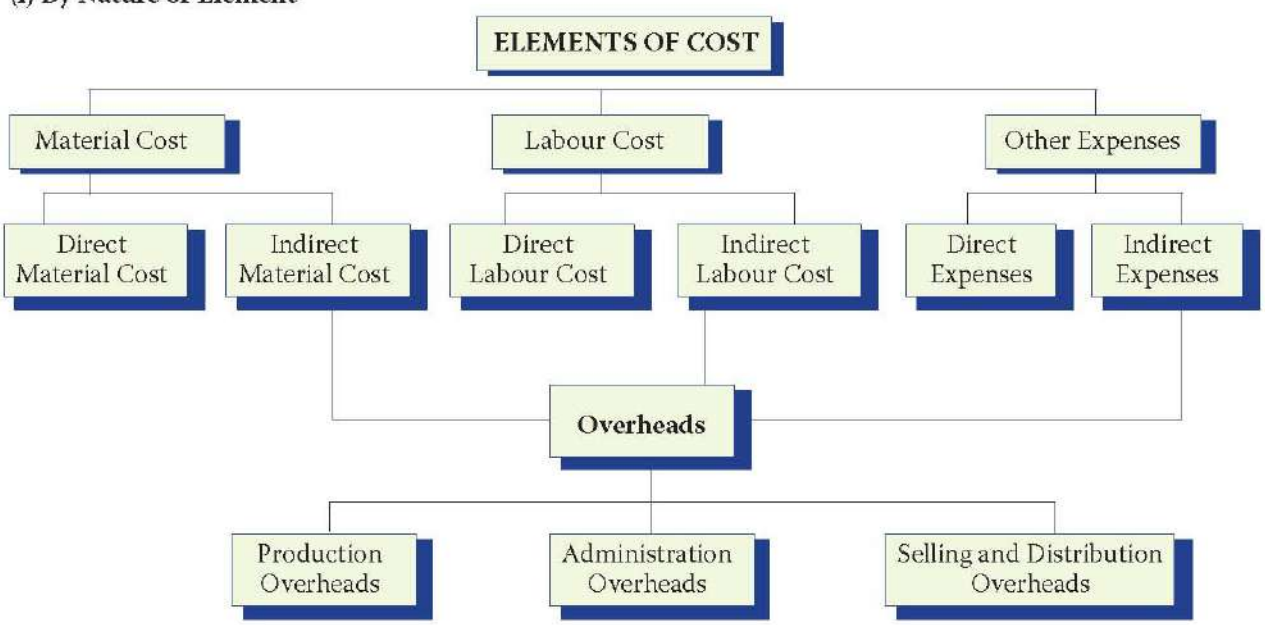



## Classification of Cost

Classification of cost basically means grouping of cost according to their common features. The important ways of classification of cost are illustrated as below:




### (i) By Nature or Element



### (ii) By Functions

- Direct Materials
- Direct Employees (Labours)
- Direct Expenses

→ **Prime Cost**

- Indirect Material
- Indirect Labour
- Indirect Expenses

→ Factory Overheads → **Factory Cost or Works Cost**

→ Administration Overheads → **Cost of Goods Sold**

→ Selling and Distribution Overheads → **Cost of Sales**

### (iii) By Variability or Behaviour


### (iv) By Controllability

**Controllable Costs:** Cost that can be controlled

**Uncontrollable Costs:** Costs which cannot be influenced or controlled

### (v) By Normality

**Normal Cost** - It is the cost which is normally incurred

**Abnormal Cost** - It is the cost which is not normally incurred

### (vi) By Cost for Managerial Decision Making

| | |
|---|---|
| (a) Pre determined Cost | A cost which is computed in advance before production or operations start |
| (b) Standard Cost | A pre-determined cost, which is calculated from managements 'expected standard of efficient operation' and the relevant necessary expenditure |
| (c) Marginal Cost | The amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit |
| (d) Estimated Cost | The expected cost of manufacture, or acquisition, often in terms of a unit of product computed on the basis of information available in advance of actual production or purchase |
| (e) Differential Cost | It represents the change (increase or decrease) in total cost (variable as well as fixed) due to change in activity level, technology, process or method of production, etc. |
| (f) Imputed Costs | These costs are notional costs which do not involve any cash outlay |
| (g) Capitalised Costs | These are costs which are initially recorded as assets and subsequently treated as expenses. |
| (h) Product Costs | These are the costs which are associated with the purchase and sale of goods (in the case of merchandise inventory). |
| (i) Opportunity Cost | This cost refers to the value of sacrifice made or benefit of opportunity foregone in accepting an alternative course of action |
| (j) Out-of-pocket Cost | It is that portion of total cost, which involves cash outflow |
| (k) Shut down Costs | Those costs, which continue to be incurred even when a plant is temporarily shut-down e.g. rent, rates, depreciation, etc |
| (l) Sunk Costs | Historical costs incurred in the past are known as sunk costs. They play no role in decision making in the current period. |
| (m) Absolute Cost | These costs refer to the cost of any product, process or unit in its totality. |
| (n) Discretionary Costs | Such costs are not tied to a clear cause and effect relationship between inputs and outputs. |
| (o) Period Costs | These are the costs, which are not assigned to the products but are charged as expenses against the revenue of the period in which they are incurred. |
| (p) Engineered Costs | These are costs that result specifically from a clear cause and effect relationship between inputs and outputs. |
| (q) Explicit Costs | These costs are also known as out of pocket costs and refer to costs involving immediate payment of cash. Salaries, wages, postage and telegram, printing and stationery, interest on loan etc. |
| (r) Implicit Costs | These costs do not involve any immediate cash payment. |

# Material Cost

## Chapter Overview

**Material Procurement:**
- Bill of Materials
- Material Requisition Note
- Purchase Requisition
- Goods Received Note
- Material Returned Note etc.

→ Valuation of Materials Received

**Material Storage & Records:**
- Bin Cards
- Stores Ledger
- Stock Control Cards etc.

**Inventory Control:**
- Setting of various stock levels
- Economic Order Quantity (EOQ)
- Techniques of Inventory Control etc.

**Valuation of Material Issues:**
- Cost Price methods (FIFO, LIFO etc)
- Average Price methods
- Market Price methods
- Notional Price methods

**Accounting & Control of:**
- Waste, Scrap, Spoilage, Defectives etc.

→ **Consumption of Materials**

## Value at Which Materials are Recorded in Stores Ledger

From the following table we can understand the procedure of calculating total value at which materials are to be recorded in stores ledger.

| Particulars | Amount | Amount |
|---|---|---|
| **Purchase Price** | | XXX |
| ***Additions/ Inclusions:*** | | |
| Insurance charges | XXX | |
| Commission or brokerage | XXX | |
| Freight inward | XXX | |
| Cost of containers | XXX | |
| Wastage due to normal reasons | XXX | |
| Duties and Taxes for which no credit or refund is available | XXX | XXX |
| ***Deduction/ Exclusions:*** | | |
| Discount, Rebate and Subsidy | XXX | |
| Duties and Taxes for which credit or refund is available | XXX | |
| Penalties and charges | XXX | |
| Other expenses not borne | XXX | (XXX) |
| | | **XXX** |

## How Material is Procured?

Material requirement procedure can be understood with the help of the following diagram. We should focus on various documents in general required and also should keep in mind the departments who initiate these documents.

**Bill of Materials**- It is the basic document which is prepared by experts specifying the quality and quantity of materials required to make final goods.

→ **Material Requisition Note**- It is prepared by the department which require materials for processing.

**Purchase Requisition Note**- It is the document which authorise purchase department to purchase the requisitioned materials. Based on this document the purchase department invites proposals or quotations from the vendors.

← **Purchase Order**- After selection of vendor for the materials, the purchase department initiates purchase order for the required quality and quantity.

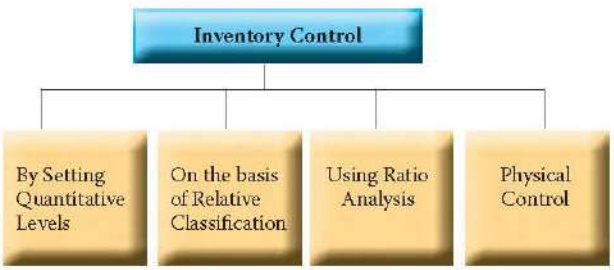
**Goods Received Note (GRN)**- This document is evidence of the receipt of goods from the vendor.

→ **Material Returned Note**- This document is prepared when all or any materials are returned back to vendor.

**Invoice**- This is the bill charged by vendor for the materials. Invoice also shows the duties and taxes to be paid for the purchase of materials. The invoice is the basis for valuation of material in store ledger and books of account.

## How Inventory is Controlled?

Inventory control is the function of ensuring that sufficient inventory is retained to meet all requirements. In inventory control, it is essential to balance between overstock and understock. Various techniques of inventory control are illustrated below:



### (a) Inventory Control- By Setting Quantitative Levels

| | |
|---|---|
| Re-order Stock Level | When to Order |
| Re-order Quantiy/ EOQ | How Much to Order |
| Maximum Stock Level | Upto How much to stock |
| Minimum Stock Level | Atleast How much to keep |
| Average Stock Level | Stock normally kept |
| Danger Stock Level | Kept for emergency requirement |
| Buffer Stock | To meet sudden demand |

**(i) Re-order Stock Level (ROL):** Maximum Consumption × Maximum Re-order Period
Or, ROL = Minimum Stock Level + (Average Rate of Consumption × Average Re-order period)

**(ii) Re-Order Quantity/ Economic Order Quantity (EOQ):**

$$EOQ = \sqrt{\frac{2x \text{ Annual Requirement (A) x Cost per order (O)}}{\text{Carrying Cost per unit per annum (C)}}}$$

**Just in Time (JIT) Inventory Management**

JIT is a system of inventory management with an approach to have a zero inventories in stores. According to this approach material should only be purchased when it is actually required for production.


**(iii) Minimum Stock Level:**
Minimum Stock Level = Re-order Stock Level - (Average Consumption Rate × Average Re-order Period)

**(iv) Maximum Stock Level:**
Maximum Stock Level = Re-order Level + Re-order Quantity - (Minimum Consumption Rate × Minimum Re-order Period)

**(v) Average Inventory Level:**
Average Stock Level = Minimum Stock Level + 1/2 Re-order Quantity
Or
Average Stock Level =

$$\frac{\text{Maximum Stock Level + Minimum Stock Level}}{2}$$

### (b) On the basis of Relative Classification

| | |
|---|---|
| ABC Analysis | On the basis of value and frequency of inventory |
| Fast, Slow and Non Moving (FSN) | On the basis of inventory turnover |
| Vital, Essential and Desirable (VED) | On the basis of importance of inventory |
| High, Medium and Low (HML) | On the basis of price of an item of inventory |

### (c) Using Ratio Analysis

**(i) Input Output Ratio:** Input-output ratio is the ratio of the quantity of input of material to production and the standard material content of the actual output.

**(ii) Inventory Turnover Ratio:**
Inventory Turnover Ratio =

$$\frac{\text{Cost of materials consumed during the period}}{\text{Cost of average stock held during the period}}$$

### (d) Physical Control

**(i) Two Bin System:** Two Bin System is supplemental to the record of respective quantities on the bin card and the stores ledger card.

**(ii) Establishment of system of budgets:** Based on this, inventories requirement budget can be prepared. Such a budget will discourage the unnecessary investment in inventories.

**(iii) Perpetual inventory records and continuous stock verification :**
Perpetual inventory represents a system of records maintained by the stores department in the form of Bin cards and Stores ledger.

**(iv) Continuous Stock Verification:**
The system of continuous stock-taking consists of physical verification of items of inventory.

## Valuation of Material Issue

| Cost Price Methods | Average Price Methods | Market Price Methods | Notional Price Methods |
|---|---|---|---|
| • Specific Price Method<br>• First-in First-out (FIFO) method<br>• Last-in-First-out (LIFO) method<br>• Base Stock Method | • Simple Average Price Method<br>• Weighted Average Price Method | • Replacement Price Method<br>• Realisable Price Method | • Standard Price Method<br>• Inflated Price Method<br>• Re-use Price Method |

Some of the techniques are discussed as follows:

**(i) First-in First-out method (FIFO):** The materials received first are to be issued first when material requisition is received. Materials left as closing stock will be at the price of latest purchases.

**(ii) Last-in First-out method (LIFO):** The materials purchased last are to be issued first when material requisition is received. Closing stock is valued at the oldest stock price.
*(Accounting Standard- 2 and Ind AS-2 do not allow LIFO method for inventory valuation, however, for academic knowledge it may be studied).*

**(iii) Simple Average Method:** Material Issue Price=

$$\frac{\text{Total of unit price of each purchase}}{\text{Total Nos of Purchases}}$$

**(iv) Weighted Average Price Method:** This method gives due weightage to quantities purchased and the purchase price to determine the issue price.

Weighted Average Price =

$$\frac{\text{Total cost of materials in stock}}{\text{Total quantity of materials}}$$

## Normal and Abnormal Loss of Materials

**Loss of Material**

- **Waste:** Portion of basic raw material lost in processing having no recoverable value
- **Scrap:** The incidental material residue coming out of certain manufacturing operations having low recoverable value.
- **Spoilage:** Goods damaged beyond rectification to be sold without further processing.
- **Defectives:** Goods which can be rectified and turned out as good units by the application of additional labour or other services.
- **Obsolescence:** It is the loss in the intrinsic value of an asset due to its supersession.

## Treatment of Loss of Material

**(i) Treatment of Waste**

**Normal-** Cost of normal waste is absorbed by good production units.

**Abnormal-** The cost of abnormal loss is transferred to Costing Profit and loss account.

**(ii) Treatment of Scrap**

**Normal-** The cost of scrap is borne by good units and income arises on account realisable value is deducted from the cost.

**Abnormal-** The scrap account should be charged with full cost. The credit is given to the job or process concerned. The profit or loss in the scrap account, on realisation, will be transferred to the Costing Profit and Loss Account.

**(iii) Treatment of Spoilage**

**Normal-** Normal spoilage (i.e., which is inherent in the operation) costs are included in costs either charging the loss due to spoilage to the production order or by charging it to production overhead so that it is spread over all products.

**Abnormal-** The cost of abnormal spoilage (i.e., arising out of causes not inherent in manufacturing process) is charged to the Costing Profit and Loss Account.

**(iv) Treatment of Defectives:**

**Normal-** The cost less realisable value on sale of defectives are charged to material cost of good production.

**Abnormal-** The material cost of abnormal loss is transferred to costing profit and loss account.

**(v) Treatment of Obsolescence:**

The value of the obsolete material held in stock is a total loss and immediate steps should be taken to dispose it off at the best available price. The loss arising out of obsolete materials on abnormal loss does not form part of the cost of manufacture.

# EMPLOYEE (LABOUR) COST

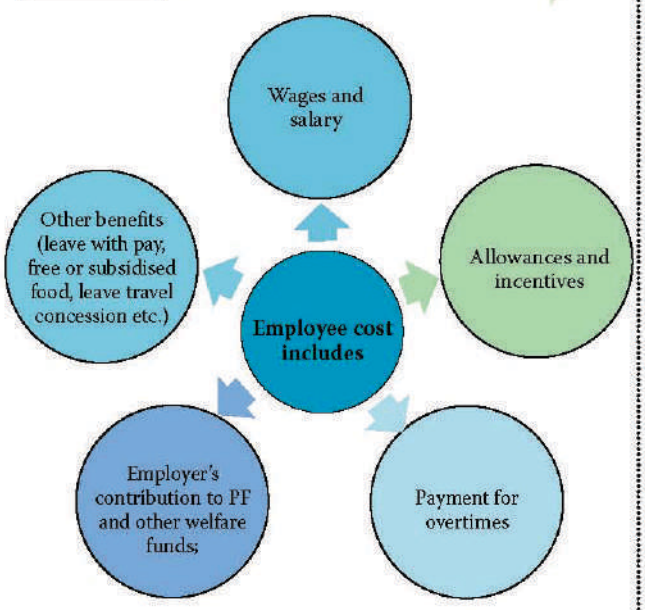
## Points of Discussion

- Meaning of Employee (Labour) Cost
- Wage and Incentives Payment System
- Absorption of Wages
- Control of Employee Cost
- Overtime
- Efficiency Rating Procedures
- Attendance & Payroll Procedures
- Idle Time
- Employee (Labour) Turnover

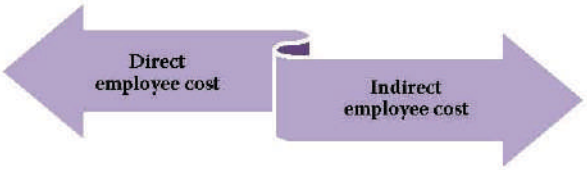
## Meaning of Employee (Labour) Cost

**EMPLOYEE (LABOUR) COST**

- Benefits paid or payable to the employees of an entity, whether permanent, or temporary for the services rendered by them.
- Includes payments made in cash or kind.




## Classification of Employee cost:




| Direct employee cost | Indirect employee cost |
|---|---|
| 1. Cost of employees, directly engaged in the production process. | 1. Cost of employees who are not directly engaged in the production process. |
| 2. Easily identifiable and allocable to cost unit. | 2. Apportioned on some appropriate basis. |
| 3. Varies with the volume of production and has positive relationship with the volume. | 3. May not vary with the volume of production. |

## Employee Cost Control

**EMPLOYEE (LABOUR) COST CONTROL**

- To control over the cost incurred on employees.
- To keep the wages per unit of output as low as possible.
- To give the employees an appropriate compensation and encourage efficiency.

## Factors for the Control of Employee Cost:

- Assessment of manpower requirements.
- Control over time-keeping and time-booking.
- Time and Motion Study.
- Control over idle time and overtime.
- Control over employee turnover.
- Wage and Incentive systems.
- Job Evaluation and Merit Rating.
- Employee productivity.

**Time-keeping:** A record of total time spent by the employees in a factory.

**Objectives of Time Keeping:**

(i) For the preparation of payrolls.
(ii) For calculating overtime.
(iii) For ascertaining employee cost.
(iv) For controlling employee cost.
(v) For ascertaining idle time.
(vi) For disciplinary purposes.
(vii) For overhead distribution.

## Methods of Time-keeping

- **Methods of Time-keeping**
  - **Manual Methods**
    - Attendance Register method
    - Metal Disc/ Token method
  - **Mechanical/ Automated Methods**
    - Punch Card Attendance
    - Biometric Attendance system

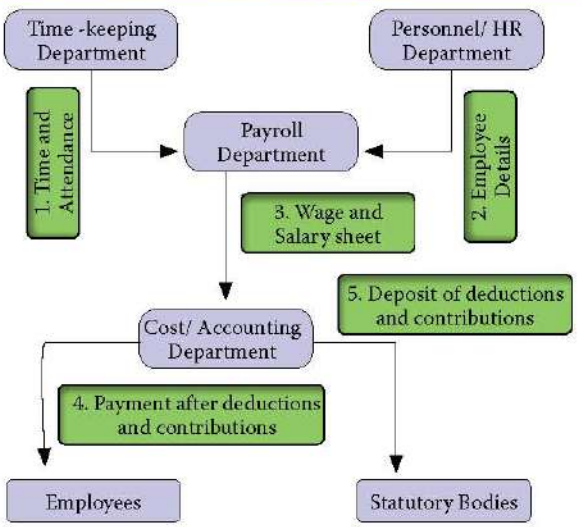
**Time-Booking:** A method wherein each activity of an employee is recorded.

**Objectives of Time Booking:**

(i) To compute the cost of the job or activity.
(ii) To measure efficiency.
(iii) To analyse the variance in time with respect to the standard time.

**For the collection of all such data, a separate record, generally known as Time (or Job) card, is kept.**

## Payroll Procedures of Employees




**Step-1**
- **Attendance and Time details:** *Detailed sheet of number of days or hours worked by each employee as reflected by the time keeping methods are sent to the payroll department.*

**Step-2**
- **List of employees and other details:** *List of employees on roll and the rate at which they will be paid is sent by the personnel/ HR department.*

**Step-3**
- **Computation of wages and other incentives:** *Payroll department prepares pay slip and forward the same to the cost/ accounting department.*

**Step-4**
- **Payment to the employees:** *After all deductions (like PF, ESI, TDS), wages/ salary is paid to the employees.*

**Step-5**
- **Deposit of all statutory liabilities:** *All statutory deduction are paid to the respective statutory bodies & funds.*

## Idle Time

**The time during which no production is carried-out because the worker remains idle but are paid.**

**Normal idle time** | **Abnormal idle time**

**Normal Idle Time: Time which cannot be avoided or reduced in the normal course of business.**

**Causes:**
- *Time lost between factory gate and the place of work,*
- *Interval between one job and another,*
- *Setting up time for the machine,*
- *Normal rest time, break for lunch etc.*

**Treatment of Normal Idle Time**
- Treated as a **part of cost of production.**
- In the case of **direct workers** an allowance for normal idle time is considered while **setting of standard hours** or standard rate.
- In case of **indirect workers**, normal idle time is considered for the **computation of overhead rate.**

**Abnormal Idle Time: Apart from normal idle time, there may be factors which give rise to abnormal idle time.**

**Causes:**

- *Lack of coordination,*
- *Power failure, Breakdown of machines,*
- *Non-availability of raw materials,*
- *Strikes, lockouts, poor supervision, fire, flood etc.*

**Causes further analysed into**

| *Controllable abnormal idle time* | *Uncontrollable abnormal idle time* |
|---|---|
| Time which could have been put to productive use had the management been more alert and efficient. | Time lost which management does not have any control e.g., breakdown of machines, flood etc. |

**Treatment of Abnormal Idle time**

- **Not included in production cost.**
- Shown as a **separate item** in the **Costing Profit and Loss Account.**
- For each category i.e. **controllable and uncontrollable** idle time, the **break-up** of cost due to various factors should be **separately shown.**
- **Management** should aim at **eliminating controllable idle time.**

## Overtime

**Overtime: Work done beyond normal working hours.**

Overtime Payment = Wages paid for overtime at normal rate + Premium (extra) payment for overtime work

**Overtime premium:** Extra amount so paid over the normal rate

| CAUSES | ↔ | TREATMENT |
|---|---|---|
| Urgency of work. | ↔ | Charged to job directly. |
| To make up shortfall in production due to some unexpected development. | ↔ | Treated as overhead cost of the particular cost centre which works overtime. |
| To make up shortfall in production due to some fault of management. | ↔ | If overtime is worked in a department due to the fault of another department, then premium should be charged to the latter department. |
| To take advantage of an expanding market or of rising demand. | ↔ | Overtime worked on account of abnormal conditions such as flood, etc., should be charged to Costing P/L Account. |

## Systems of Wage Payment and Incentives

**System of Wages Payment**

| Time based | Output based | Combination of time and output based | Premium Bonus method | Group bonus scheme | Incentives for indirect workers |
|---|---|---|---|---|---|

### Time based (Time Rate System):

**Workers are paid on time basis i.e. hour, day, week, or month.**

**Wages = Time Worked (Hours/ Days/ Months) × Rate for the time**

### Output Based (Piece Rate System):

**Each operation, job or unit of production is termed a piece.**
**A rate of payment, is fixed for each piece.**
**The wages of the worker depend upon his output and rate of each unit of output.**

**Wages = Number of units produced × Rate per unit**

### Premium Bonus Method:

**The worker is guaranteed his daily wages, if output is below and up to standard.**
**In case the task is completed in less than the standard time, the saved time is shared between the employees and the employer.**

**HALSEY PREMIUM PLAN**

- **A standard time is fixed for each job or process**
- **Worker gets his time rate even if he exceeds the standard time limit, since his day rate is guaranteed.**
- **If job done in less than the standard time, bonus equal to 50 percent of the wages of time saved is paid.**

**Wages = Time taken × Time rate + 50% of time saved × Time rate**

| ADVANTAGES of HALSEY PREMIUM PLAN | DISADVANTAGES of HALSEY PREMIUM PLAN |
|---|---|
| • **Time rate is guaranteed.**<br>• Opportunity for **increasing earnings** by increasing production.<br>• **System is equitable** in as much as the employer gets a **direct return** for his efforts in improving production methods. | • **Incentive is not so strong** as with piece rate system.<br>• **Harder the worker works, the lesser he gets per piece.**<br>• Sharing principle may **not be liked by employees.** |

**ROWAN PREMIUM PLAN**

- Standard time allowance is fixed for performance of a job.
- Bonus is paid if time is saved.
- Bonus is that proportion of the time wages as time saved bears to the standard time.

$$\text{Time taken} \times \text{Rate per hour} + \frac{\text{Time Saved}}{\text{Time Allowed}} \times \text{Time taken} \times \text{Rate per hour}$$

**ADVANTAGES of ROWAN PREMIUM PLAN**

- A worker can **never double his earnings even if there is bad rate setting.**
- Suitable for **encouraging moderately efficient workers.**
- Sharing principle **appeals to the employer** as being equitable.

**DISADVANTAGES of ROWAN PREMIUM PLAN**

- System is a **bit complicated.**
- Incentive is **weak at a high production level where the time saved is more than 50% of the time allowed.**
- Sharing principle is **not generally welcomed by employees.**

## Absorption of Wages

**ELEMENTS OF WAGES**

| Monetary payment | Non-monetary benefits |
|---|---|
| • Basic wages,<br>• Dearness allowance,<br>• Overtime wages,<br>• Production bonus,<br>• Employer's contribution to PF, ESI and other funds,<br>• Leave pay, etc. | • Medical facilities;<br>• Educational and training facilities;<br>• Recreational and sports facilities;<br>• Housing and social welfare; and<br>• Cost of subsidised canteen and co-operative societies, etc. |

## Efficiency Rating Procedures

**If the time taken by a worker on a job ≤ the standard time, then he is rated efficient.**

$$\text{Efficiency in \%} = \frac{\text{Time allowed as per standard}}{\text{Time Taken}} \times 100$$

Need for Efficiency rating:


Factors for increasing Employee productivity:

- **Employing** who possess **right type of skill.**
- Placing the **right** type of **person** to the **right job.**
- **Training** young and old workers by providing right types of opportunities.
- Taking appropriate measures to **avoid** the situation of **excess or shortage of employees.**
- Carrying **out work study for fixation of wages.**

## Employee (Labour) Turnover

**EMPLOYEE TURNOVER** — **Rate of change in the composition of employee force during a specified period measured against a suitable index.**

**Methods to calculate Employee Turnover**

| Replacement Method | Separation Method | Flux Method |
|---|---|---|
| This considers actual replacement of employees irrespective of number of persons leaving the organisation | This considers total number of employees separated | This considers both the number of replacements as well as the number of separations |

$$\text{Replacement method} = \frac{\text{Number of employees Replaced during the period}}{\text{Average number of employees during the period on roll}} \times 100$$

$$\text{Separation method} = \frac{\text{Number of employees Seperated during the period}}{\text{Average number of employees during the period on roll}} \times 100$$

$$\text{Flux method} = \frac{\text{Number of employees Seperated} + \text{Number of employees Replaced during the period}}{\text{Average number Of employees during the period on roll}} \times 100$$

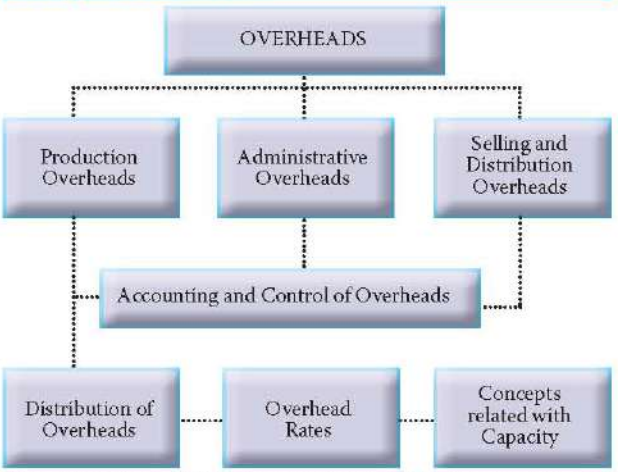
*Or*

$$\frac{\text{No. of Separations} + \text{No. of Accessions (i.e. No. of Replacements} + \text{No. of New Joinings)}}{\text{Average no. of employees during the period on roll}} \times 100$$

**Newly recruited employees are also responsible for changes in the composition or work force, some management accountants feel to take new recruitment for calculating employee turnover. The total number of workers joining, including replacements, is called accessions.**

# Overheads

## Chapter Overview




## Classification of Overheads

Overheads are the expenditure which can not be identified with a particular cost unit. Overheads can be classified as under.

| By Function | By Nature | By Element | By Control |
|---|---|---|---|
| • Factory or Manufacturing or Production Overhead<br>• Office and Administrative Overheads<br>• Selling and Distribution Overheads | • Fixed Overhead<br>• Variable Overhead<br>• Semi-Variable Overheads | • Indirect materials<br>• Indirect employee cost<br>• Indirect expenses | • Controllable costs<br>• Uncontrollable costs |

## Functional Classification of Overheads

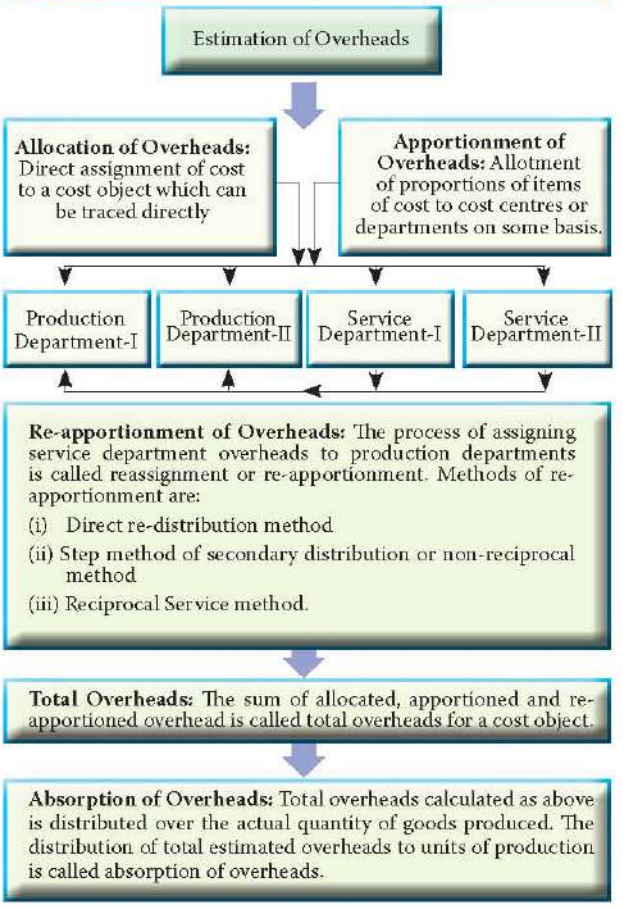
One of the most important ways of classifying overheads is as per their function. As per this classification overheads are classified as under.

**Factory or Manufacturing or Production Overhead** — Indirect cost incurred for manufacturing or production activity in a factory. Manufacturing overhead includes all expenditures incurred from the procurement of materials to the completion of finished product.

**Office and Administrative Overheads** — Expenditures incurred on all activities relating to general management and administration of an organisation. It includes formulating the policy, directing the organisation and controlling the operations of an undertaking which is not related directly to production, selling, distribution, research or development activity or function.

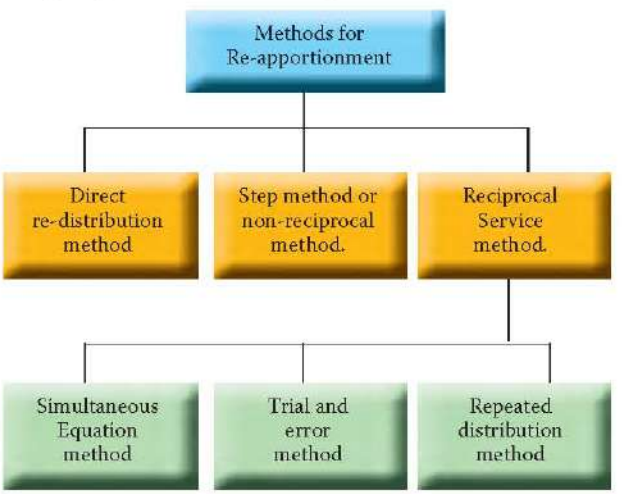
**Selling and Distribution Overheads** — (i) Selling overhead: expenses related to sale of products and include all indirect expenses in sales management for the organisation.
(ii) Distribution overhead: cost incurred on making product available for sale in the market.

## Steps for Distribution of Overheads




## Methods for Re-apportionment of Overheads

The re-apportionment of service department expenses over the production departments may be carried out by using any one of the following methods:



## Methods of Absorbing Overheads to various Products or Jobs

Several methods are commonly employed either individually or jointly for computing the appropriate overhead rate. The more common of these are:

- Percentage of direct materials
- Percentage of prime cost
- Percentage of direct labour cost
- Labour hour rate
- Machine hour rate
- Rate per unit of Output

## Machine hour rate

Machine hour rate implies, cost of running a machine for an hour to produce goods.

**The steps involved in determining of Machine hour rate is as follows:**

Step1: Calculate total of overheads apportioned to a production department.

↓

Step 2: Apportion further these overheads to machines or group of machines in the department.

↓

Step 3: Allocate machine specific costs (directly identifiable with the machine)

↓

Step 4: Estimate total productive hours for the machine

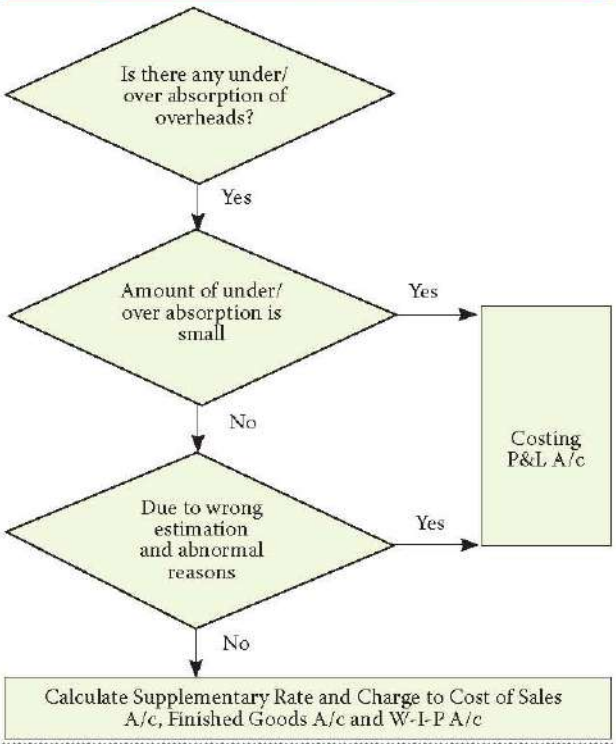
↓

Step 5: Aggregate overheads as apportioned in step-2 and allocated in step-3 and divide it by Estimated total productive hours

↓

The resultant figure is machine hour rate

## Treatment of Under-absorption and Over-absorption of overheads in Cost Accounting




## Types of Overhead Rates

**Normal Rate:** This rate is calculated by dividing the actual overheads by actual base. It is also known as actual rate.

**Pre-determined Overhead Rate:** This rate is determined in advance by estimating the amount of the overhead for the period in which it is to be used.

**Blanket Overhead Rate:** Blanket overhead rate refers to the computation of one single overhead rate for the whole factory.

**Departmental Overhead Rate:** It refers to the computation of one single overhead rate for a particular production unit or department.

## Concepts related with Capacity

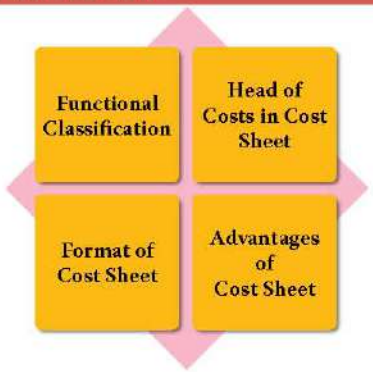
| | |
|---|---|
| **Installed/ Rated capacity** | The maximum capacity of producing goods or providing services. It is also known as theoretical capacity. |
| **Practical capacity** | It is defined as actually utilised capacity of a plant. It is also known as operating capacity. |
| **Normal capacity** | The volume of production or services achieved or achievable on an average over a period under normal circumstances taking into account the reduction in capacity resulting from planned maintenance. |
| **Actual capacity** | Capacity actually achieved during a given period. |
| **Idle capacity** | It is that part of the capacity of a plant, machine or equipment which cannot be effectively utilised in production. |

## Treatment of Certain Items in Cost Accounting

| | |
|---|---|
| **Interest and financing charges** | It includes any payment in nature of interest for use of non- equity funds and incidental cost that an entity incurs in arranging those funds. Interest and financing charges shall be presented in the cost statement as a separate item of cost of sales. |
| **Packing expenses** | Cost of primary packing necessary for protecting the product or for convenient handling, should become a part of cost of production. The cost of packing to facilitate the transportation of the product from the factory to the customer should become a part of the distribution cost. |
| **Fringe benefits** | These indirect benefits stand to improve the morale, loyalty and stability of employees towards the organisation. If the amount of fringe benefit is considerably large, it may be recovered as direct charge by means of a supplementary wage or labour rate; otherwise these may be collected as part of production overheads. |
| **Research and Development Expenses** | If research is conducted in the methods of production, the research expenses should be charged to the production overhead; while the expenditure becomes a part of the administration overhead if research relates to administration. Similarly, market research expenses are charged to the selling and distribution overhead.<br>Development costs incurred in connection with a particular product should be charged directly to that product. Such expenses are usually treated as "deferred revenue expenses," and recovered as a cost per unit of the product when production is fully established. |

# COST SHEET

## Points of Discussion



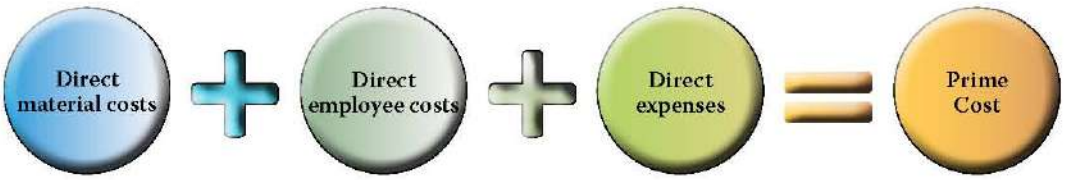

## Functional Classification of Elements of Cost

- Direct Material Cost
- Direct Employee (labour) Cost
- Direct Expenses
- Production/ Manufacturing Overheads
- Administration Overheads
- Selling Overheads
- Distribution Overheads
- Research and Development costs etc.

## Cost Heads in a Cost Sheet

- Prime Cost
- Cost of Production
- Cost of Goods Sold
- Cost of Sales

## Prime Cost:

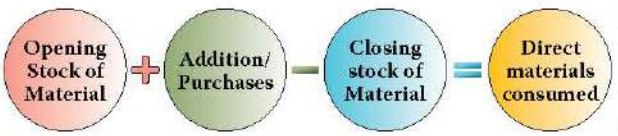



**Direct Material Cost** → Cost of direct material consumed* e.g.
- Cost of material
- Freight inwards
- Insurance
- Trade discounts or rebates (to be deducted)
- Duties & Taxes (if ITC is not available/ availed).

**Direct Employee Cost** → Payments to the employees engaged in the production of goods and provision of services e.g.
- Wages and salary
- Allowances and incentives
- Payment for overtime
- Bonus/ ex-gratia
- Employer's contribution to PF, ESI & funds
- Other benefits (medical, leave with pay, LTC).

**Direct Expenses** → Expenses other than direct material cost and direct employee cost e.g.
- Power & fuel
- Royalty paid
- Hire charges
- Fee for technical assistance
- Amortised cost of moulds, patterns, patents
- Other expenses directly related with the production of goods.

*



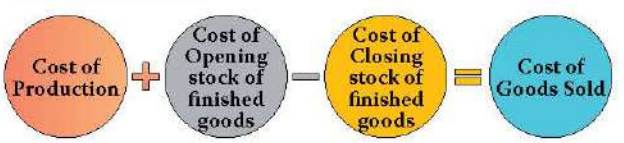

## Cost of Production:


| | |
|---|---|
| Prime Cost | xxxx |
| Add: Factory Overheads* | xxx |
| Gross Works Costs | xxxx |
| Add: Opening stock of Work-in-process | xxx |
| Less: Closing stock of Work-in-process | (xxx) |
| Factory or Works Costs | xxxx |
| Add: Quality Control Cost | xxx |
| Add: Research & Development cost (Process related) | xxx |
| Add: Administrative Overheads related with production | xxx |
| Less: Credit for recoveries (miscellaneous income) | (xxx) |
| Add: Packing Cost (Primary packing) | xxx |
| Cost of Production | xxxx |

* Factory Overheads (Works / production / manufacturing overheads) includes-

| | | |
|---|---|---|
| Consumable stores and spares | Depreciation | Lease rent of production assets |
| Repair and maintenance of plant and machinery, factory building | Indirect employees cost related with production activities | Drawing and Designing department cost |
| Insurance of plant and machinery, factory building, stock of raw material & WIP | Amortised cost of jigs, fixtures, tooling | Service department cost such as Tool Room, Engineering & Maintenance, Pollution Control |

## Cost of Goods Sold:




## Cost of Sales:

| | |
|---|---|
| Cost of Goods Sold | xxxx |
| Add: Administrative Overheads (General) | xxx |
| Add: Selling Overheads | xxx |
| Add: Packing Cost (secondary) | xxx |
| Add: Distribution Overheads | xxx |
| Cost of Sales | xxxx |

**Examples:**

| Administrative Overheads (General) | Selling Overheads | Packing Cost (secondary) | Distribution Overheads |
|---|---|---|---|
| Depreciation and maintenance of, office building, furniture etc. | Salary and wages related with sales department | Packing material that enables to store, transport, and make the product marketable. | Salary and wages of employees engaged in distribution of goods |
| Salary of administrative employees, accountants, etc. | Rent, depreciation, maintenance related with sales department | | Transportation and insurance costs related with distribution |
| Rent, rates & taxes | Advertisement, maintenance of website for online sales, market research etc. | | Depreciation, hire charges, maintenance and other operating costs related with distribution. |
| Insurance, lighting, office expenses | | | |
| Indirect materials- printing and stationery, office supplies etc. | | | |
| Legal charges, audit fees, meeting expenses etc. | | | |

## Cost Sheet- Specimen Format

| | Particulars | Total Cost (₹) | Cost per unit (₹) |
|---|---|---|---|
| 1. | Direct materials consumed: | | |
| | Opening Stock of Raw Material | xxx | |
| | **Add:** Additions / Purchases | xxx | |
| | **Less:** Closing stock of Raw Material | (xxx) | |
| | | xxx | xxx |
| 2. | Direct employee (labour) cost | xxx | |
| 3. | Direct expenses | xxx | |
| 4. | **Prime Cost (1+2+3)** | xxx | xxx |
| 5. | **Add:** Works / Factory Overheads | xxx | |
| 6. | Gross Works Cost (4+5) | xxx | |
| 7. | **Add:** Opening Work in Process | xxx | |
| 8. | **Less:** Closing Work in Process | (xxx) | |
| 9. | **Works / Factory Cost (6+7-8)** | xxx | xxx |
| 10. | **Add:** Quality Control Cost | xxx | |
| 11. | **Add:** Research and Development Cost | xxx | |
| 12. | **Add:** Administrative Overheads (relating to production activity) | xxx | |
| 13. | **Less:** Credit for Recoveries / Scrap/By-Products / misc. income | (xxx) | |
| 14. | **Add:** Packing cost (primary) | xxx | |
| 15. | **Cost of Production (9+10+11+12-13+14)** | xxx | xxx |
| 16. | **Add:** Opening stock of finished goods | xxx | |
| 17. | **Less:** Closing stock of finished goods | (xxx) | |
| 18. | **Cost of Goods Sold (15+16-17)** | xxx | xxx |
| 19. | **Add:** Administrative Overheads (General) | xxx | |
| 20. | **Add:** Marketing Overheads : | | |
| | Selling Overheads | xxx | |
| | Distribution Overheads | xxx | |
| 21. | **Cost of Sales (18+19+20)** | xxx | xxx |

**Treatment of various items of cost in Cost Sheet:**

| | |
|---|---|
| **Abnormal costs** | • Any abnormal cost, where it is material and quantifiable, shall not form part of cost of production or acquisition or supply of goods or provision of service. |
| **Subsidy/ Grant/ Incentives** | • Reduced from the cost objects to which such amount pertains. |
| **Penalty, fine, damages, and demurrage** | • Does not form part of cost. |
| **Interest and other finance costs** | • Not included in cost of production.<br>• Shall be presented in the cost statement as a separate item of cost of sales. |

## Advantages of Cost Sheet

- **Provides the total cost figure as well as cost per unit of production.**
- **Helps in cost comparison.**
- **Facilitates preparation of cost estimates required for submitting tenders.**
- **Provides sufficient help in arriving at the figure of selling price.**
- **Facilitates cost control by disclosing operational efficiency.**

# UNIT & BATCH COSTING

## Points of Discussion

- Methods of Costing
  - Unit Costing
    - Meaning
    - Process of Cost Accumulation and Calculation
  - Batch Costing
    - Meaning
    - Process of Cost Accumulation and Calculation
    - Determination of Economic Batch Quantity (EBQ)
    - Difference between Job and Batch Costing

## UNIT COSTING

### Meaning of Unit Costing

**UNIT COSTING**

- where the output produced is identical and each unit of output requires identical cost.
- also known as single or output costing.
- applied in industries like PAPER, CEMENT, STEEL WORKS, MINING, BREWERIES ETC.

Here, costs are collected and analysed element wise and then total cost per unit is ascertained as follows:

$$\text{Cost per unit} = \frac{\text{Total cost of production}}{\text{No. of units produced}}$$

## COST COLLECTION PROCEDURE IN UNIT COSTING

**Collection of Materials Cost**

- It is collected from Material Requisition notes.
- Accumulated material cost is then posted in cost accounting system.

**Collection of Employees (labour) Cost**

- **Direct employee cost:** It is collected from job time cards or sheets.
- The time booked/ recorded is valued at appropriate rates and entered in the cost accounting system.
- **Indirect employee costs:** These are collected from the payrolls books and posted against standing order or expenses code numbers in the overhead expenses ledger.

**Collection of Overheads**

- These are collected under suitable standing orders numbers, and selling and distribution overheads against cost accounts numbers.
- Total expenses so collected are apportioned to service and production departments on some suitable basis.
- The expenses of service departments are finally transferred to production departments.
- The total overhead of production departments is then applied to products on some realistic basis, e.g. machine hour; labour hour etc.

## TREATMENT OF SPOILED AND DEFECTIVE WORK

**Loss due to normal reasons**

- Actual number of defectives is **within the normal limit** → Cost of rectification or loss will be **charged to the entire output**
- Number of defective units substantially **exceeds the normal limits** → Cost of rectification or loss beyond normal limits are **written off in Costing Profit and Loss Account**

**Loss due to abnormal reasons**

- Cost of rectification and loss is treated as abnormal cost and is **written off as loss in Costing Profit and Loss Account.**

# BATCH COSTING

## Meaning of Batch Costing

**BATCH COSTING**

- is a type of specific order costing where articles are manufactured in predetermined lots, known as batch.
- the cost object for cost determination is a batch for production.
- example PEN MANUFACTURING INDUSTRY

A batch consists of certain number of units which are PROCESSED SIMULTANEOUSLY. Under this method of manufacturing, the inputs are accumulated in the assembly line till it reaches minimum batch size. Soon after a batch size is reached, all inputs in a batch is processed for further operations.

## COSTING PROCEDURE IN BATCH COSTING

| | |
|---|---|
| Material cost | On the basis of material requisitions for the batch. |
| Labour cost | Multiplying the time spent on the batch by direct workers as ascertained from time cards or job tickets. |
| Overheads | Absorbed on some suitable basis like machine hours, direct labour hours etc. |

## ECONOMIC BATCH QUANTITY (EBQ)

Primarily, the total production cost under batch production comprises of two main costs, namely,

**Machine Set Up Costs** + **Inventory holding costs**

Balancing Machine set up cost and Inventory holding cost

Higher lot size

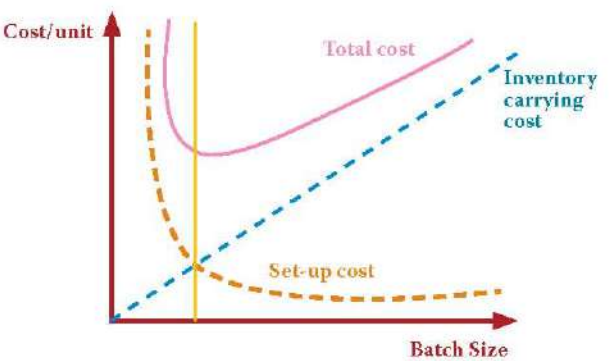
- **Set up cost** may decline due to lesser number of set ups.
- But units in inventory will go up leading to **higher holding costs**

- **Lower inventory holding costs.**
- But **higher set up costs** due to high number of set ups.

Lower lot size

**ECONOMIC BATCH QUANTITY (EBQ)**

- It is the size of a batch where total cost of set-up and holding costs are at minimum.




## Determination of EBQ

By calculating the total cost for a series of possible batch sizes and checking which batch size gives the minimum cost.

Mathematical formula:

$$EBQ = \sqrt{\frac{2DS}{C}}$$

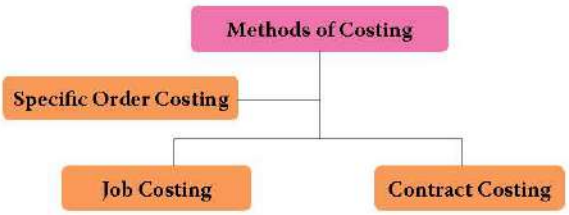
Where, D = Annual demand for the product
S = Setting up cost per batch
C = Carrying cost per unit of production

## DIFFERENCE BETWEEN JOB AND BATCH COSTING

| Sr. No | Job Costing | Batch Costing |
|---|---|---|
| 1 | Used for **non-standard and non- repetitive products** produced as per customer specifications and against specific orders. | **Homogeneous products** produced in a continuous production flow in lots. |
| 2 | **Cost determined for each Job.** | **Cost determined in aggregate** for the entire Batch and then arrived at on per unit basis. |
| 3 | Jobs are different from each other and independent of each other. **Each Job is unique.** | Products produced in a batch are homogeneous and **lack of individuality.** |

# JOB AND CONTRACT COSTING

## POINTS OF DISCUSSION




# JOB COSTING

## MEANING OF JOB COSTING

**JOB COSTING**

- It is applicable where the work consists of separate contracts, jobs or batches, each of which is authorised by specific order or contract.
- Industry example: PRINTING; FURNITURE; HARDWARE; SHIP-BUILDING; HEAVY MACHINERY; INTERIOR DECORATION.

## PRINCIPLES OF JOB COSTING

- **Analysis and ascertainment of cost of each unit of production**
- **Control and regulate cost**
- **Determine the profitability**

## PROCESS OF JOB COSTING

- Prepare a **separate cost sheet** for each job
- Disclose cost of **materials** issued for the job
- **Employee costs** incurred (on the basis of bill of material and time cards respectively)
- When job is completed, **overhead charges** are added for ascertaining total expenditure

## SUITABILITY OF JOB COSTING

- **When jobs are executed for different customers according to their specifications.**
- **When no two orders are alike and each order/ job needs special treatment.**
- **Where the work-in-progress differs from period to period on the basis of the number of jobs in hand.**

## JOB COST CARD/ SHEET

**JOB COST CARD/ SHEET**

A cost sheet where,
- quantity of materials issued,
- hours spent by different class of employees,
- amount of other expenses and share of overheads

are recorded.

## Format of Job Cost Sheet:

**JOB COST SHEET**

Description: _____ Job No.: _____
Blue Print No.: _____ Quantity: _____
Material No.: _____ Dateofdelivery: _____
Reference No.: _____ Date commenced: _____
Datefinished: _____

| Date | Reference | Details | Material | Labour | Overhead |
|---|---|---|---|---|---|
| | | | | | |
| | | Total | | | |

| *Summary of costs* | *Estimated (₹)* | *Actual (₹)* |
|---|---|---|
| Direct material cost | | |
| Direct wages | | |
| Production overhead | | |
| PRODUCTION COST | | |
| Administration and Selling & Distribution Overheads | | |
| TOTAL COST | | |
| PROFIT/LOSS | | |
| SELLING PRICE | | |

For the job _____
Units produced _____
Cost/unit _____
Remarks _____
Prepared by: _____
Checked by: _____

## COLLECTION OF COSTS FOR A JOB

### Materials cost

- Traced to and identified with specific job or work order
- Posted to individual job cost sheets or cards in the work-in-progress ledger
- If the surplus material is utilised on some other job, instead of being returned to the stores first, a material transfer note is prepared

### Labour cost

- Booked against specific jobs in the job time cards or sheets
- Posted to the appropriate job cost card or sheet in work-in-progress ledger


*Image source: https://www.dreamstime.com/job-costing-text-paper-sheet-chart-dice-spectacles-pen-laptop-blue-yellow-push-pin-wooden-table-business-banking-image97229655*

### Overheads

- Manufacturing overheads are collected under suitable standing order numbers
- Selling and distribution overheads are collected against cost accounts numbers
- Total overhead expenses are apportioned to service and production departments on some suitable basis.
- The expenses of service departments are finally transferred to production departments.
- The total production overhead is then applied to products on some realistic basis.

## SPOILED AND DEFECTIVE WORK

**Meaning**

- **Spoiled work:** It is the quantity of production that has been totally rejected and cannot be rectified.
- **Defective work:** It refers to production that is not as perfect as the saleable product but is capable of being rectified

**Treatment**

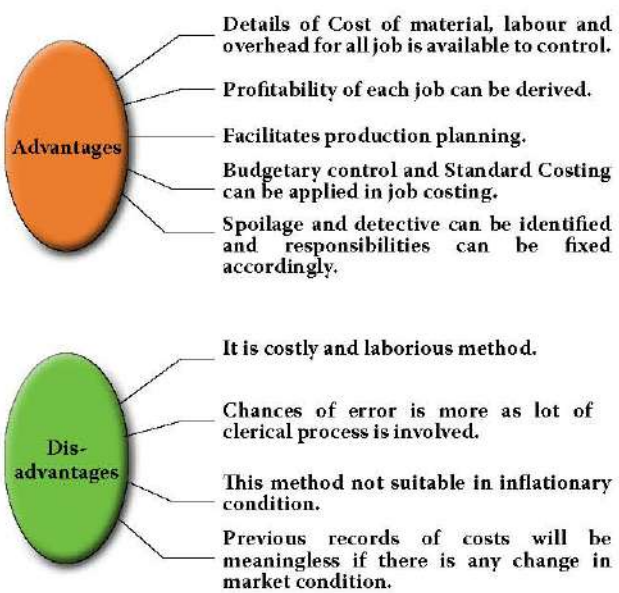
- Where a percentage of defective work is ALLOWED in a particular batch AS IT CANNOT BE AVOIDED. → The cost of rectification will be charged to the whole job and spread over the entire output of the batch
- Where defect is DUE TO BAD WORKMANSHIP. → The cost of rectification shall be written off as a loss being an abnormal cost
- Where defect is due to the inspection department WRONGLY ACCEPTING INCOMING MATERIAL OF POOR QUALITY → Cost of rectification will be charged to the department and will not be considered as cost of manufacture of the batch

## ACCOUNTING OF COSTS FOR A JOB

| | | |
|---|---|---|
| 1. | **For purchase of materials** | |
| | Stores Ledger Control A/c | Dr. |
| | To Cost Ledger Control A/c | |
| 2. | **For the value of direct materials issued to jobs** | |
| | Work-in-Process Control A/c | Dr. |
| | To Stores Ledger Control A/c | |
| 3. | **For return of direct materials from jobs** | |
| | Stores Ledger Control A/c | Dr. |
| | To Work-in-Process Control A/c | |
| 4. | **For return of materials to suppliers** | |
| | Cost Ledger Control A/c | Dr. |
| | To Stores Ledger Control A/c | |
| 5. | **For indirect materials** | |
| | Factory Overhead Control A/c | Dr. |
| | To Stores Ledger Control A/c | |
| 6. | **For wages paid** | |
| | Wages Control A/c | Dr. |
| | To Cost Ledger Control A/c | |

| | | |
|---|---|---|
| 7. | **For direct wages incurred on jobs** | |
| | Work-in-Process Control A/c | Dr. |
| | To Wages Control A/c | |
| 8. | **For indirect wages** | |
| | Factory Overhead Control A/c | Dr. |
| | To Wages Control A/c | |
| 9. | **For any indirect expense paid** | |
| | Factory Overhead Control A/c | Dr. |
| | To Cost Ledger Control A/c | |
| 10. | **For charging overhead to jobs** | |
| | Work-in-Process Control A/c | Dr. |
| | To Factory Overhead Control A/c | |
| 11. | **For the total cost of jobs completed** | |
| | Cost of Sales A/c | Dr. |
| | To Work-in-Progress Control A/c | |
| 12. | **The balance of Cost of Sales A/c is transferred to Costing Profit and Loss A/c;** For such transfer | |
| | Costing Profit and Loss A/c | Dr. |
| | To Cost of Sales A/c | |
| 13. | **For the sales value of jobs completed** | |
| | Cost Ledger Control A/c | Dr. |
| | To Costing Profit and Loss A/c | |

## ADVANTAGES AND DISADVANTAGES OF JOB COSTING




## DIFFERENCE BETWEEN JOB COSTING AND PROCESS COSTING

| Job Costing | Process Costing |
|---|---|
| A Job is carried out by specific orders. | Process of producing the product has a continuous flow and the product produced is homogeneous. |
| Costs determined for each job. | Costs are compiled on time basis i.e., for each process or department. |
| Each job is separate and independent. | Products lose their individual identity. |
| Each job has a number and costs are collected against the same job number. | The unit cost of process is an average cost for the period. |
| Costs are computed when a job is completed. | Costs are calculated at the end of the cost period. |
| More managerial attention is required for effective control. | Control here is comparatively easier. |

# CONTRACT COSTING

## MEANING OF CONTRACT COSTING

**CONTRACT COSTING**

- It is a form of specific order costing where job undertaken is relatively large and normally takes period longer than a year to complete.
- Adopted by the contractors engaged in contracts like CONSTRUCTION OF BUILDING, ROAD, BRIDGE, ERECTION OF TOWER ETC.

## FEATURES OF CONTRACT COSTING

| | | |
|---|---|---|
| Work in contract is ordinarily carried out at the site of the contract. | Separate account is usually maintained for each contract. | Bulk of the expenses incurred are considered as direct. |
| Number of contracts undertaken by a contractor at a time is usually few. | Indirect expenses mostly consist of office expenses, stores and works. | Cost unit in contract costing is the contract itself. |

## TERMS USED IN CONTRACT COSTING

(i) Work-in-Progress

**Work-in-Progress**

The contract which is not complete at the reporting date. It includes:

- Cost of work completed (certified and uncertified)
- Cost of work not yet completed
- Amount of estimated/ notional profit

### (ii) Cost of Work Certified or Value of Work Certified

Expert, based on his assessment, certifies the work completion in terms of percentage of total work.
Cost or value of certified portion is calculated and is known as Cost of work certified or Value of work certified respectively.

(a) Value of Work Certified = Value of Contract × Work certified (%)
(b) Cost of Work Certified = Cost of work to date – (Cost of work uncertified + Material in hand + Plant at site)

### (iii) Cost of Work Uncertified

Cost of the work carried out but not certified by the expert.

Always shown at cost price.

The cost of Work Uncertified may be ascertained as follows:

| | (₹) | (₹) |
|---|---|---|
| Total cost to date | | xxx |
| *Less:* Cost of work certified | xxx | |
| Material in hand | xxx | |
| Plant at site | xxx | xxx |
| Cost of work uncertified | | xxx |

### (iv) Progress Payment

Progress payment = Value of work certified – Retention money – Payment to date

### (v) Retention Money

Retention Money = Value of work certified – Payment actually made

### (vi) Cash Received

Cash received = Value of work certified – Retention money

### (vii) Notional Profit

Notional profit = Value of work certified – (Cost of work to date – Cost of work not yet certified)

### (viii) Estimated Profit

Estimated Profit = Contract price – Estimated total cost

### SPECIMEN OF CONTRACT ACCOUNT (with few items)

The cost of Work Uncertified may be ascertained as follows:

| | Particulars | (₹) | | Particulars | (₹) |
|---|---|---|---|---|---|
| To | Materials | xxx | By | Plant at site c/d | xxx |
| " | Wages | xxx | " | Work-in-progress c/d: | xxx |
| " | Direct expenses | xxx | | - Work certified | xxx |
| " | Indirect expenses | xxx | | - Work uncertified | xxx |
| " | Plant and Machinery | xxx | " | Costing P&L A/c (b/f) (If Loss) | xxx |
| " | Cost of Sub-Contract | xxx | | | |
| " | Costing P&L A/c (b/f) (If Profit) | xxx | | | |
| | | XXX | | | XXX |

## COST PLUS CONTRACT

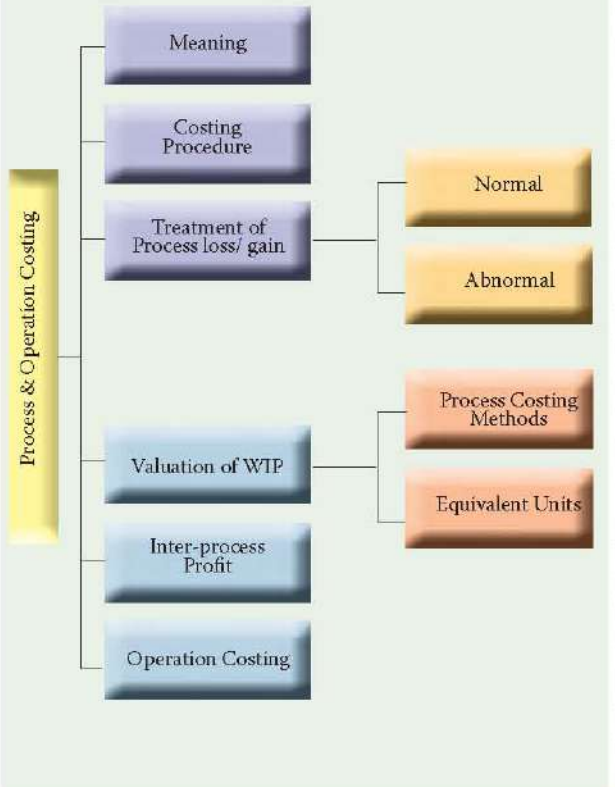
**Cost- Plus Contract** — When the value of the contract is determined by adding an agreed percentage of profit to the total cost.

## ADVANTAGES AND DISADVANTAGES OF COST PLUS CONTRACT

| ADVANTAGES | DISADVANTAGES |
|---|---|
| • Contractor is assured of a fixed percentage of profit.<br>• Useful when work to be done is not definitely fixed at the time of making the estimate.<br>• Contractee can ensure himself about 'the cost of the contract' as he is empowered to examine the books and documents of the contractor. | • Contractor may not have any inducement to avoid wastages and effect economy in production to reduce cost. |

# Process and Operation Costing

## Chapter Overview




## Meaning of Process Costing

Process Costing is a method of costing used in industries where the material has to pass through two or more processes for being converted into a final product. It is defined as "a method of Cost Accounting whereby costs are charged to processes or operations and averaged over units produced".

This can be understood with the help of the following diagram:


## Costing Procedure in Process Costing

**Materials:** Each process for which the materials are used, are debited with the cost of materials consumed on the basis of the information received from the Cost Accounting department.

**Employee Cost (Labour)** - Each process account should be debited with the labour cost or wages paid to labour for carrying out the processing activities. Sometimes the wages paid are apportioned over the different processes after selecting appropriate basis.

**Direct expenses** - Each process account should be debited with direct expenses like depreciation, repairs, maintenance, insurance etc. associated with it.

**Production Overheads**- These expenses cannot be allocated to a process. The suitable way out to recover them is to apportion them over different processes by using suitable basis.

## Steps in Process Costing

Step-1: Analyse the Physical Flow of Production Units

↓

Step-2: Calculate Equivalent Units for each Cost Elements

↓

Step-3: Determine Total Cost for each Cost Element

↓

Step-4: Compute Cost Per Equivalent Unit for each Cost Element

↓

Step-5: Assign Total Costs to Units Completed and Ending WIP

## Treatment of Normal, Abnormal Loss and Abnormal Gain

| Normal Process Loss | Abnormal Process Loss | Abnormal Process Gain/ Yield |
|---|---|---|
| • The cost of normal process loss in practice is absorbed by good units produced under the process. The amount realised by the sale of normal process loss units should be credited to the process account. | • The cost of an abnormal process loss unit is equal to the cost of a good unit. The total cost of abnormal process loss is credited to the process account from which it arises.<br>• Total cost of abnormal process loss is debited to costing profit and loss account. | • The process account under which abnormal gain arises is debited with the abnormal gain and credited to abnormal gain account which will be closed by transferring to the Costing Profit and Loss account. |

## Valuation of Work-in-process

The valuation of work-in-process presents a good deal of difficulty because it has units under different stages of completion from those in which work has just begun to those which are only a step short of completion.

### (i) Equivalent Units

Equivalent units or equivalent production units, means converting the incomplete production units into their equivalent completed units. Under each process, an estimate is made of the percentage completion of work-in-process with regard to different elements of costs, viz., material, labour and overheads.

The formula for computing equivalent completed units is:

$$\text{Equivalent completed units} = \left(\begin{array}{c}\text{Actual number of units in}\\ \text{the process of manufacture}\end{array}\right) \times \left(\begin{array}{c}\text{Percentage of}\\ \text{Work completed}\end{array}\right)$$

| Input Details | Units | Output Particulars | Units | Equivalent Units | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Material | | Labour | | Overhead | |
| | | | | % | Units | % | Units | % | Units |
| | | | a | b | c= a×b | d | e=a×d | f | g=a×f |
| Opening W-I-P | xxx | Opening W-I-P* | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| Unit Introduced | xxx | Finished output** | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| | | Normal loss*** | xxx | - | - | - | - | - | - |
| | | Abnormal loss/ Gain**** | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| Total | | Closing W-I-P | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| | xxx | Total | xxx | | xxx | | xxx | | xxx |

* Equivalent units for Opening W-I-P is calculated only under FIFO method. Under the Average method, it is not shown separately.

**Under the FIFO method, Finished Output = Units completed and transferred to next process less Opening WIP. Under Average method, Finished Output = Units completed and transferred.

***For normal loss, no equivalent unit is calculated.

****Abnormal Gain/ Yield is treated as 100% complete in respect of all cost elements irrespective of percentage of completion.

### (ii) Methods for valuation of work-in-process

| | |
|---|---|
| Under this method the units completed and transferred include completed units of opening work-in-process and subsequently introduced units. Proportionate cost to complete the opening work-in-process and that to process the completely processed units during the period are derived separately. | Under this method, the cost of opening work-in-process and cost of the current period are aggregated and the aggregate cost is divided by output in terms of completed units. |

## Inter Process Profit

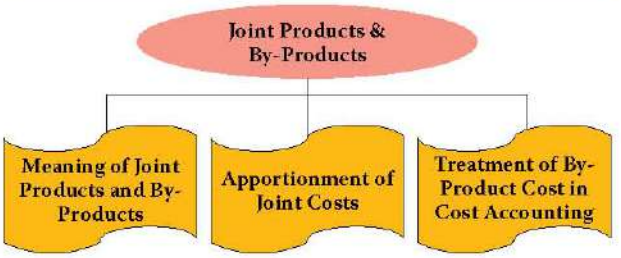
In some process industries the output of one process is transferred to the next process not at cost but at market value or cost plus a percentage of profit. The difference between cost and the transfer price is known as inter-process profits.

## Operation Costing

This product costing system is used when an entity produces more than one variant of final product using different materials but with similar conversion activities. Which means conversion activities are similar for all the product variants but materials differ significantly. Operation Costing method is also known as Hybrid product costing system as materials costs are accumulated by job order or batch wise but conversion costs i.e. labour and overheads costs are accumulated by department, and process costing methods are used to assign these costs to products.

# JOINT PRODUCTS AND BY PRODUCTS

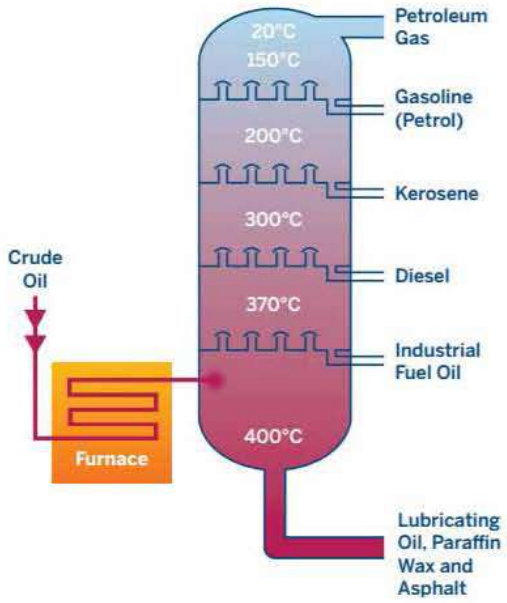
## POINTS OF DISCUSSION




## MEANING OF JOINT PRODUCTS AND BY-PRODUCTS

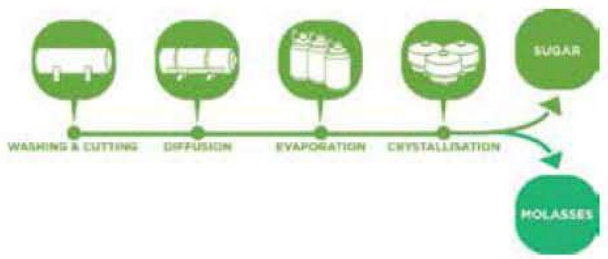
| | |
|---|---|
| Joint Products* | Two or more products separated in the course of same processing operation. |
| By-Products# | Products recovered from-<br>• material discarded in main process.<br>• production of some major products. |

*OIL INDUSTRY PRODUCING JOINT PRODUCTS using crude petroleum like gasoline, fuel oil, lubricants, paraffin, asphalt, kerosene etc.




Petroleum Refining Processes[1]

# MOLASSES IS PRODUCED AS A BY-PRODUCT in the process of sugar manufacturing




Sugar Manufacturing Process[2]

Point at which products are separated from the main product is known as SPLIT-OFF POINT.

## DISTINCTION BETWEEN JOINT PRODUCTS AND BY-PRODUCTS

| JOINT PRODUCTS | BY-PRODUCTS |
|---|---|
| • Equal importance.<br>• Produced simultaneously. | • Small economic value.<br>• Incidental to the main product. |

[1] Image source: https://www.cmegroup.com/education/courses/introduction-to-refined-products/a-look-into-the-refining-process.html
[2] Image source: http://www.sustainablesugar.eu/molasses

## CO-PRODUCTS

CO-PRODUCTS

Joint products and co-products are used synonymously, but a **distinction is there**.

Co-products are the two or more products which are **contemporary but** do **not** emerge necessarily **from the same material in the same process**.

For instance,

**wheat and gram** produced in two separate farms with separate processing of cultivation are co-products.

**Timber boards** made from different trees are co-products.

## METHODS OF APPORTIONMENT OF JOINT COST TO JOINT PRODUCTS

- Methods for apportioning joint cost
  - Physical Units Method
  - Net Realisable Value at split-off point
  - Using Technical Estimates
  - Other methods
    - Market value at the point of separation
    - Market value after further processing
    - Average unit cost method
    - Contribution margin method

## Physical Units Method:

Joint costs here are apportioned on the basis of some **physical base, such as weight, numbers etc.**

## Net Realisable Value at Split-off Point Method:

Joint costs here are apportioned on the basis of **Net Realisable Value at Split-off Point.**

NET REALISABLE VALUE AT SPLIT-OFF POINT

- sales value of joint products after processing
- (−) Estimated profit margins
- (−) Selling and distribution expenses
- (−) Post split- off costs

## Using Technical Estimates:

This method is used WHEN-

Result obtained by above methods does not match with the resources consumed by joint products, or;

Realisable value of the joint products are not readily available.

## Other Methods:

### (i) Market value at the point of separation

Useful method where further processing costs are incurred disproportionately.

To determine the apportionment of joint costs over joint products, a multiplying factor is determined as follows:

$$\text{Multiplying factor: } \frac{\text{Joint Cost}}{\text{Total Sales Revenue}} \times 100$$

*Alternatively,* joint cost may be apportioned in the ratio of sales values of different joint products.

### (ii) Market value after further processing

Basis of apportionment of joint cost is the total sales value of finished products.

Use of this METHOD IS UNFAIR WHERE-

Further processing costs after the point of separation are disproportionate, or;

All the joint products are not subjected to further processing.

### (iii) Average Unit Cost Method

$$\text{Average unit cost} = \frac{\text{Total process cost (up to the point of separation)}}{\text{Total units of joint product produced}}$$

*Physical unit method also follows the same steps of calculation as followed under Average unit cost method, ultimately giving the same outcome.*

### (iv) Contribution Margin Method

Joint costs segregated into two parts:

- Variable
- Fixed

**Variable costs**

| Apportioned on the basis of units produced (average method or physical quantities) | In case products are further processed after point of separation, then all variable cost incurred be added to the variable costs determined earlier. |
|---|---|

Total variable cost is arrived which is deducted from their respective sales values to **ascertain their contribution.**

**Fixed costs**

Thereafter, fixed costs are **apportioned** over the joint products **on the basis of the contribution ratios.**

## METHODS OF APPORTIONMENT OF JOINT COST TO BY-PRODUCTS

Methods for apportioning joint cost

- Net Realisable Value method
- Standard cost in Technical Estimates
- Comparative price
- Re-use basis

## Net Realisable Value method:

| No further processing required | Further processing required |
|---|---|
| Realisation on the disposal of the by-product deducted from the total cost of production. | Additional expenses so incurred be deducted from the total value realised from the sale of the by-product. |
| | Only the net realisations be deducted from the total cost of production to arrive at the cost of production of the main product. |

## Standard cost in Technical Estimates:

This method may be adopted where by-product is not saleable.

It may be valued at standard costs.

Standard cost may be determined by averaging costs recorded in the past and making technical estimates of the number of units of original raw material going into the main product and the number forming the by-product; or by adopting some other consistent basis.

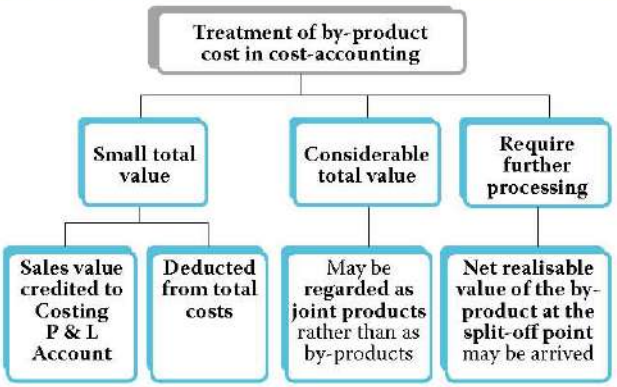
## Comparative price:

| Value of by-product is ascertained with reference to the price of - | |
|---|---|
| Similar material, or; | Alternative material |

## Re-use basis:

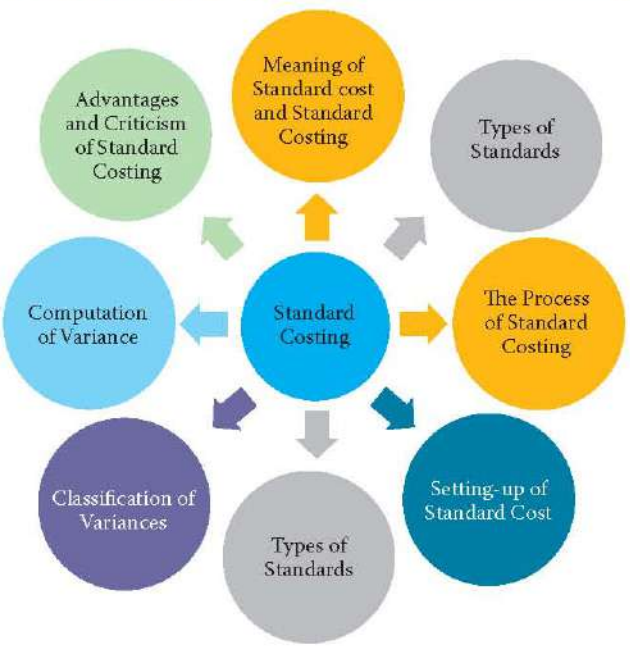
| Sometimes, by-product may be of such a nature that it can be reprocessed in the same process as part of the input of the process. | |
|---|---|
| In that case, value put on by-product should be same as that of the materials introduced into the process. | However, if the by-product can be put into an earlier process only, the value should be the same as for the materials introduced into the process. |

## TREATMENT OF BY-PRODUCT COST IN COST-ACCOUNTING



# Standard Costing

## Chapter Overview




## What is a Standard or Standard Cost?

Standard cost is defined in the CIMA Official Terminology as "the planned unit cost of the product, component or service produced in a period. The standard cost may be determined on a number of bases. The main use of standard costs is in performance measurement, control, stock valuation and in the establishment of selling prices."

## Types of standards

There are various types of standard which are illustrated below:

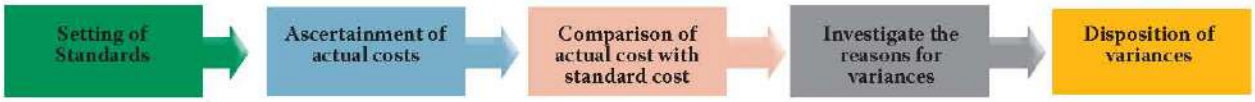
**Ideal Standards:** The level of performance attainable when prices for material and labour are most favourable, when the highest output is achieved with the best equipment and layout and when the maximum efficiency in utilisation of resources results in maximum output with minimum cost.

**Normal Standards:** These are standards that may be achieved under normal operating conditions.

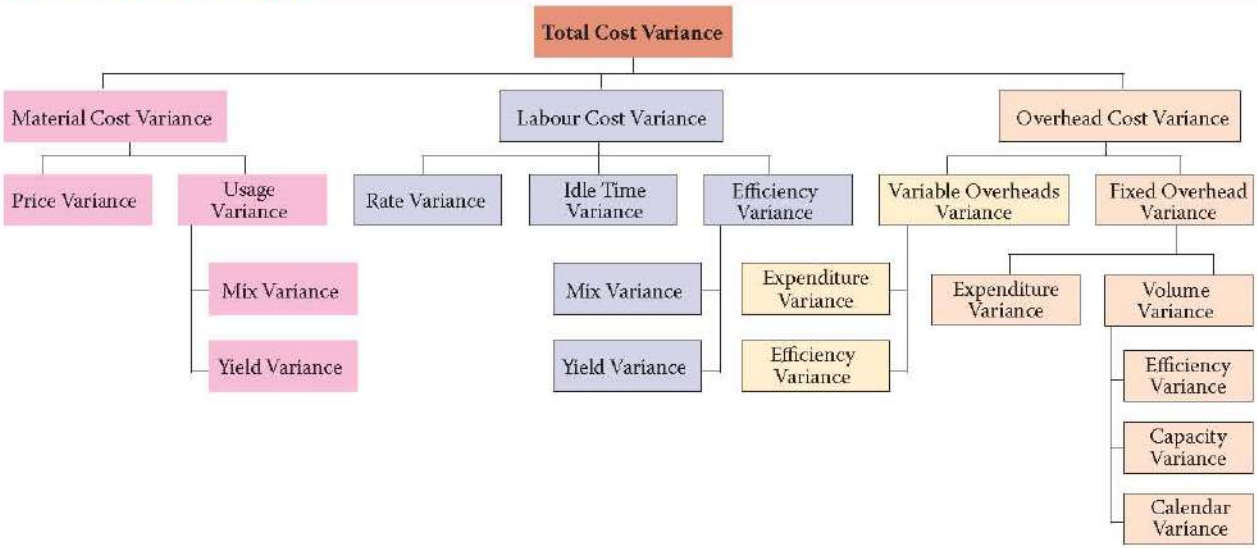
**Basic or Bogey Standards:** These standards are used only when they are likely to remain constant or unaltered over a long period.

**Current Standards:** These standards reflect the management's anticipation of what actual costs will be for the current period.

## Process followed in Standard Costing




## Variances at a Glance




## Variance Analysis

### (i) Material Cost Variance

**Material Cost Variance**

[Standard Cost – Actual Cost]

(The difference between the Standard Material Cost *of the actual production volume* and the Actual Cost of Material)

[(SQ × SP) – (AQ × AP)]

**Material Price Variance**

[Standard Cost of Actual Quantity – Actual Cost]

(The difference between the Standard Price and Actual Price for the Actual Quantity Purchased)

[(SP – AP) × AQ]

*Or*

[(SP × AQ) – (AP × AQ)]

**Material Usage Variance**

[Standard Cost of Standard Quantity for Actual Production – Standard Cost of Actual Quantity]

(The difference between the Standard Quantity *specified for actual production* and the Actual Quantity *used*, at Standard Price)

[(SQ – AQ) × SP]

*Or*

[(SQ × SP) – (AQ × SP)]

**Material Mix Variance**

[Standard Cost of Actual Quantity in Standard Proportion – Standard Cost of Actual Quantity]

(The difference between the Actual Quantity *in standard proportion* and Actual Quantity *in actual proportion*, at Standard Price)

[(RSQ – AQ) × SP]

*Or*

[(RSQ × SP) – (AQ × SP)]

**Material Yield Variance**

[Standard Cost of Standard Quantity for Actual Production – Standard Cost of Actual Quantity in Standard Proportion]

(The difference between the Standard Quantity *specified for actual production and Actual Quantity in standard proportion*, at Standard Purchase Price)

[(SQ – RSQ) × SP]

*Or*

[(SQ × SP) – (RSQ × SP)]

## (ii) Labour Cost Variances

**Labour Cost Variance**

[Standard Cost – Actual Cost]

(The difference between the Standard Labour Cost and the Actual Labour Cost *incurred for the production achieved)*

[(SH × SR) – (AH* × AR)]

| Labour Rate Variance | Labour Idle Time Variance | Labour Efficiency Variance |
|---|---|---|
| [Standard Cost of Actual Time – Actual Cost] (The difference between the Standard Rate per hour and Actual Rate per hour for the Actual Hours paid) [(SR – AR) × AH*] *Or* [(SR × AH*) – (AR × AH*)] | [Standard Rate per Hour x Actual Idle Hours] (The difference between the Actual Hours *paid* and Actual Hours *worked* at Standard Rate) [(AH* – AH#) × SR] *Or* [(AH* × SR) – (AH# × SR)] | [Standard Cost of Standard Time for Actual Production – Standard Cost of Actual Time] (The difference between the Standard Hours *specified for actual production* and Actual Hours *worked* at Standard Rate) [(SH – AH#) × SR] *Or* [(SH × SR) – (AH# × SR)] |

| Labour Mix Variance Or Gang Variance | Labour Yield Variance Or Sub-Efficiency Variance |
|---|---|
| [Standard Cost of Actual Time Worked in Standard Proportion – Standard Cost of Actual Time Worked] (The difference between the Actual Hours worked in standard proportion and Actual Hours worked in actual proportion, at Standard Rate) [(RSH – AH#) × SR] *Or* [(RSH × SR) – (AH# × SR)] | [Standard Cost of Standard Time for Actual Production – Standard Cost of Actual Time *Worked* in Standard Proportion] (The difference between the Standard Hours specified for actual production and Actual Hours worked in standard proportion, at Standard Rate) (SH – RSH) × SR *Or* (SH × SR) – (RSH × SR) |

## (iii) Variable Overhead Variances

**Variable Overhead Cost Variance**

(Standard Variable Overheads for Production – Actual Variable Overheads)

| Variable Overhead Expenditure (Spending) Variance | Variable Overhead Efficiency Variance |
|---|---|
| (Standard Variable Overheads for Actual Hours#) *Less* (Actual Variable Overheads) [(SR – AR) × AH#] *Or* [(SR × AH#) – (AR × AH#)] | (Standard Variable Overheads for Production) *Less* (Standard Variable Overheads for Actual Hours#) [(SH – AH#) × SR] *Or* [(SH × SR) – (AH# × SR)] |

## (iv) Fixed Overhead Variances

**Fixed Overhead Cost Variance**

(Absorbed Fixed Overheads) *Less* (Actual Fixed Overheads)

| Fixed Overhead Expenditure Variance | Fixed Overhead Volume Variance |
|---|---|
| (Budgeted Fixed Overheads) *Less* (Actual Fixed Overheads) *Or* (BH × SR) – (AH × AR) | (Absorbed Fixed Overheads) *Less* (Budgeted Fixed Overheads) *Or* (SH × SR) – (BH × SR) |

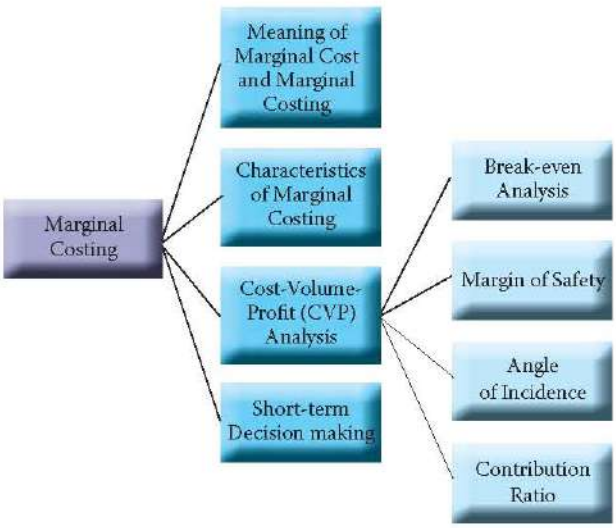
| Fixed Overhead Capacity Variance | Fixed Overhead Calendar Variance | Fixed Overhead Efficiency Variance |
|---|---|---|
| SR (AH – BH) *Or* (AH × SR) – (BH × SR) | Std. Fixed Overhead rate per day (Actual no. of Working days – Budgeted Working days) | SR (AH – SH) *Or* (AH × SR) – (SH × SR) |

AH* - Actual Hours paid

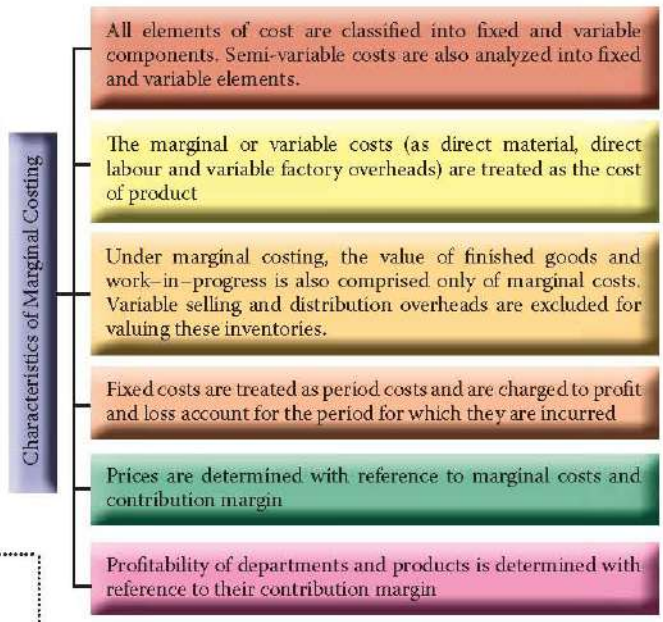
AH# - Actual Hours worked

# Marginal Costing

## Chapter Overview

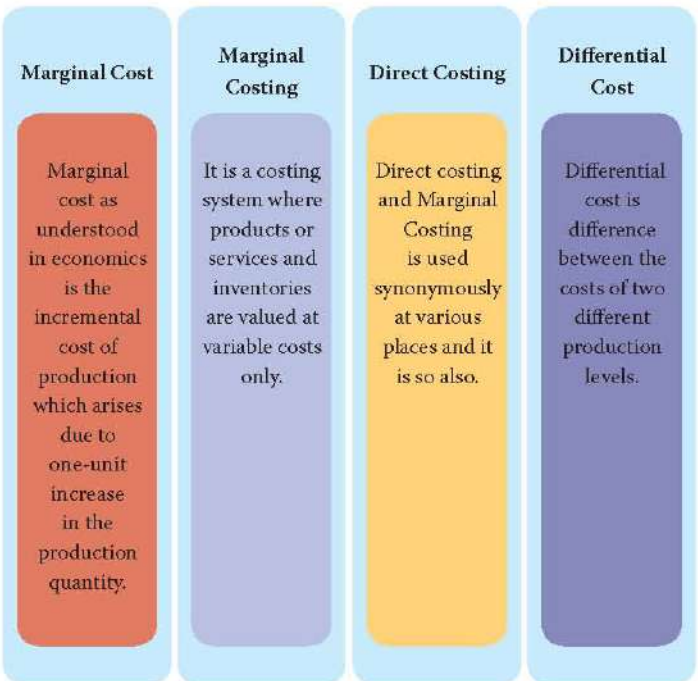



## Characteristics of Marginal Costing




## Meaning of Terms

In order to understand the concept of marginal costing, let us first define various terminology associated with marginal costing.




## Computation of Contribution and Profit under Marginal Costing

For the determination of cost of a product/ service under marginal costing, costs are classified under variable and fixed. All the variable costs are part of product and fixed costs are charged against contribution margin.

### Cost and Profit Statement under Marginal Costing

| | Amount (Rs) | Amount (Rs) |
|---|---|---|
| Revenue | | xxx |
| **Product Cost:** | | |
| - Direct Materials | xxx | |
| - Direct employee (labour) | xxx | |
| - Direct expenses | xxx | |
| - Variable manufacturing overheads | xxx | |
| **Product (Inventoriable) Costs** | xxx | (xxx) |
| Product Contribution Margin | | xxx |
| - Variable Administration overheads | xxx | |
| - Variable Selling & Distribution overheads | xxx | (xxx) |
| **Contribution Margin** | | xxx |
| **Period Cost:** | | |
| Fixed Manufacturing expenses | xxx | |
| Fixed non-manufacturing expenses | xxx | (xxx) |
| Profit/ (loss) | | xxx |

## Advantages of Marginal Costing

There are many advantages of marginal costing, some of them are discussed below.


## Cost-Volume-Profit (CVP) Analysis

It is a managerial tool showing the relationship between various ingredients of profit planning viz., cost, selling price and volume of activity.

## Marginal Cost Equation

Marginal Cost Equation = S -V = C = F ± P

**Marginal Cost Statement**

| | (₹) |
|---|---|
| Sales (S) | xxxx |
| Less: Variable Cost (V) | xxxx |
| Contribution (C) | xxxx |
| Less: Fixed Cost (F) | xxxx |
| Profit/ Loss (P) | xxxx |

## Profit Volume Ratio or P/V ratio

This ratio shows the proportion of sales required to cover fixed cost and profit. P/V ratio is calculated as below:

(a) $P/V\ Ratio = \frac{Contribution}{Sales} \times 100$

(b) When two years' data is given, P/V Ratio

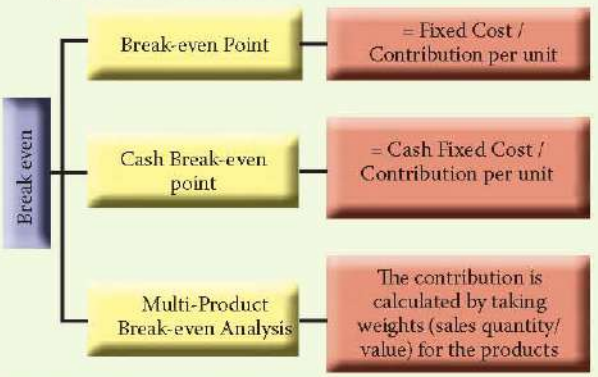
$= \frac{Change\ in\ contribution/\ Profit}{Change\ in\ sales} \times 100$

## Break-Even Analysis

Break-even analysis is a generally used method to study the CVP analysis. This technique can be explained in two ways.

(i) In narrow sense it is concerned with computing the break-even point.

(ii) In broad sense this technique is used to determine the possible profit/loss at any given level of production or sales.




## Angle of Incidence

This angle is formed by the intersection of sales line and total cost line at the break-even point. This angle shows the rate at which profit is earned once the break-even point is reached. The wider the angle the greater is the rate of earning profits. A large angle of incidence with a high margin of safety indicates extremely favourable position

## Margin of Safety

This is the difference between the expected level of sales and break even sales (no profit, no loss). The larger is the margin of safety higher is the profit and vice versa.

**Variations of Basic Marginal Cost Equation and other formulae**

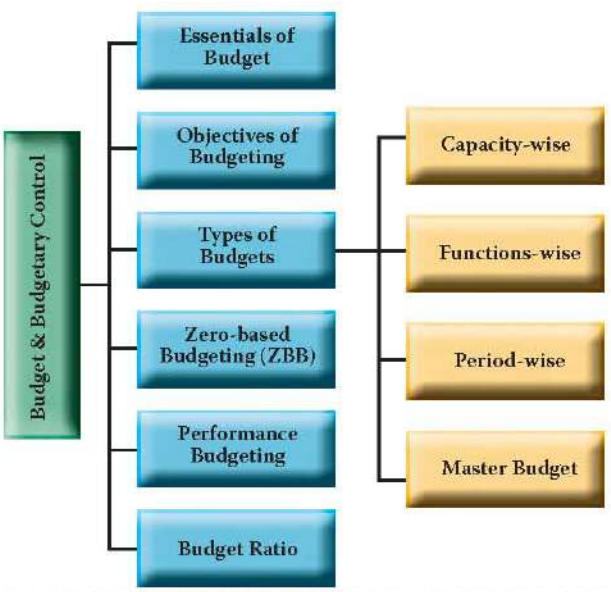
| | |
|---|---|
| i. | Sales – Variable cost = Fixed cost + Profit / Loss |
| | By multiplying and dividing L.H.S. by S |
| ii. | $\frac{S(S-V)}{S} = F + P$ |
| iii. | S x P/V Ratio = F + P or Contribution $(P/V\ Ratio = \frac{S-V}{S} \times 100)$ |
| iv. | BES x P/V Ratio = F (∵ at BEP Profit is zero ) |
| v. | $BES = \frac{Fixed\ cost}{P/V\ Ratio}$ |
| vi. | $P/V\ Ratio = \frac{Fixed\ cost}{BES}$ |
| vii | S x P/V Ratio = Contribution (Refer to iii) |

| | |
|---|---|
| viii. | $\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sale}} \times 100$ |
| ix. | (BES + MS) × P/V Ratio = Contribution (Total sales = BES + MS) |
| x. | (BES × P/V Ratio) + (MS × P/V Ratio) = F + P |
| | By deducting (BES × P/V Ratio) from L.H.S. and F from R.H.S. in (x) above, we get: |
| xi. | M.S. × P/V Ratio = P |
| xii. | $\text{P/V Ratio} = \frac{\text{Change in profit}}{\text{Change in sales}} \times 100$ |
| xiii. | $\text{P/V Ratio} = \frac{\text{Change in contribution}}{\text{Change in sales}} \times 100$ |

| | |
|---|---|
| xiv. | $\text{Profitability} = \frac{\text{Contribution}}{\text{Key factor}}$ |
| xv. | $\text{Margin of Safety} = \text{Total Sales} - \text{BES} \text{ or } \frac{\text{Profit}}{\text{P/V Ratio}}$ |
| xvi. | BES = Total Sales – MS |
| xvii. | $\text{Margin of Safety Ratio} = \frac{\text{Total sales} - \text{BES}}{\text{Total Sales}}$ |

# Budget & Budgetary Control

## Chapter Overview




## Definition and Terminology

Let us first define various important terminologies used in budget and budgetary control.

| Budget | Budgeting | Budgetary control |
|---|---|---|
| Quantitative expression of a plan for a defined period of time | Coordinating the combined intelligence of an entire organisation into a plan of action based on past performance | The establishment of budgets relating to the responsibilities of executives of a policy and the continuous comparison of the actual with the budgeted results, either to secure by individual action the objective of the policy or to provide a basis for its revision |

## Essentials of Budget

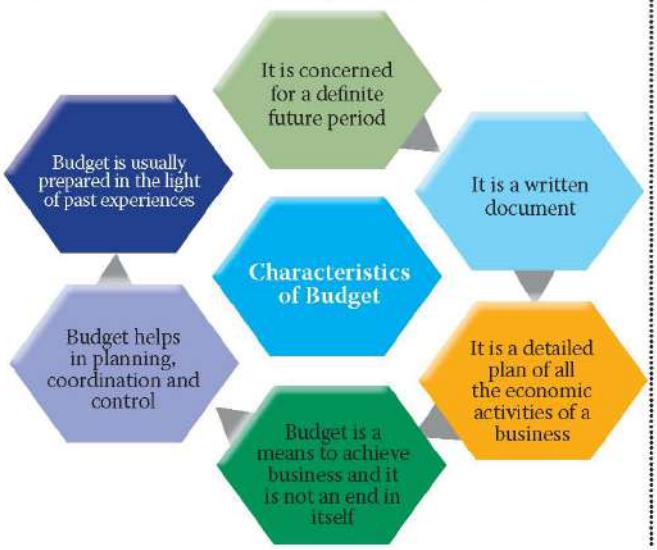
Essential elements of budget are illustrated below:

**Essential elements of a budget**

| | | | | | |
|---|---|---|---|---|---|
| Organisational structure must be clearly defined | Setting of clear objectives and reasonable targets | Budgets are prepared for the future periods based on expected course of actions | Budgets are updated for the events that were not kept into the mind while establishing budgets | Budgets should be quantifiable and master budget should be broken down into various functional budgets. Budgets should be monitored periodically | Budgetary performance needs to be linked effectively to the reward system |

## Characteristics of Budget

Main characteristics of budget are as below:



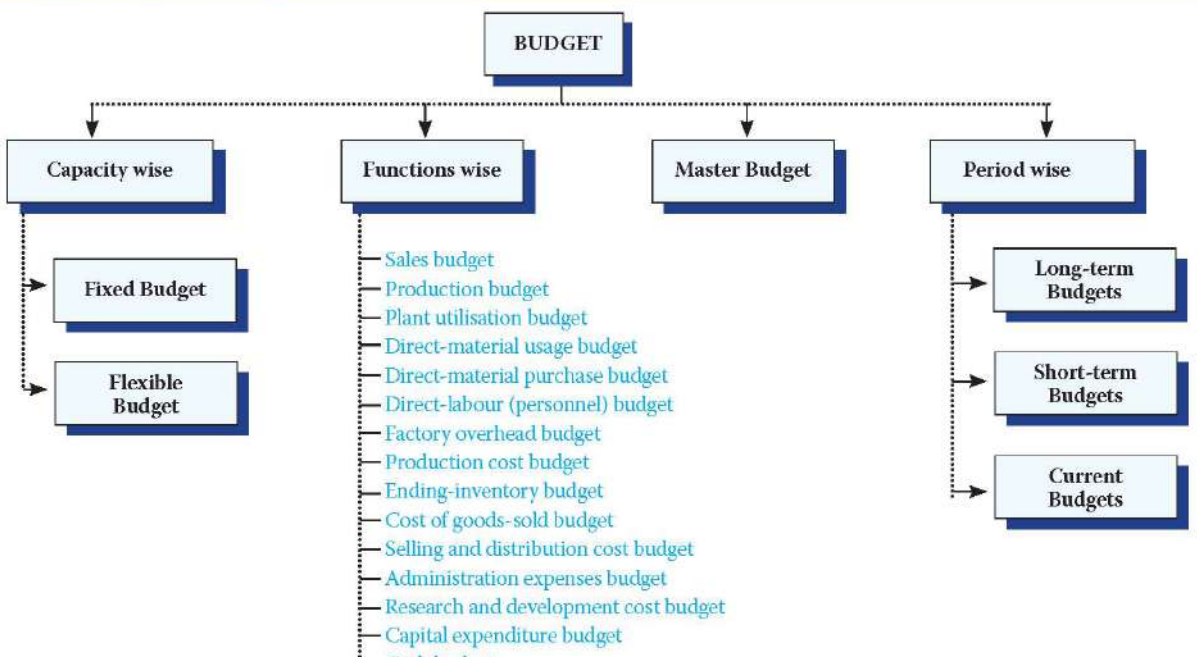

## Objectives of Budgeting

The objective of budgeting begins with planning and ends with controlling. Once the planning is done, they can be used for directing and controlling operations so that the stated targets in planning are achieved.


## Advantages of Budgetary Control System

There are many advantages of budgetary control system, and some of the them are illustrated below:


## Classification of Budget



## Definition of different types of Budget

| | |
|---|---|
| **Functional Budgets** | Budgets which relate to the individual functions in an organisation are known as Functional Budgets. For example, purchase budget; sales budget; production budget; plant-utilisation budget and cash budget. |
| **Master Budget** | It is a consolidated summary of the various functional budgets. It serves as the basis upon which budgeted P & L A/c and forecasted Balance Sheet are built up. |
| **Long-term Budgets** | The budgets which are prepared for periods longer than a year are called long-term budgets. Such budgets are helpful in business forecasting and forward planning. Capital expenditure budget and Research and Development budget are examples of long-term budgets. |
| **Short-term Budgets** | Budgets which are prepared for periods less than a year are known as short-term budgets. Cash budget is an example of short-term budget. Such types of budgets are prepared in cases where a specific action has to be immediately taken to bring any variation under control, as in cash budgets. |
| **Basic Budgets** | A budget which remains unaltered over a long period of time is called basic budget. |
| **Current Budgets** | A budget which is established for use over a short period of time and is related to the current conditions is called current budget. |
| **Fixed Budget** | According to CIMA official terminology, "a fixed budget, is a budget designed to remain unchanged irrespective of the level of activity actually attained". |
| **Flexible Budget** | According to CIMA official terminology, "a flexible budget is defined as a budget which, by recognizing the difference between fixed, semi-variable and variable costs is designed to change in relation to the level of activity attained." |

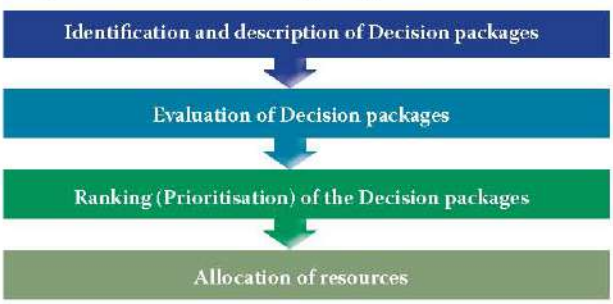
## Differences between Fixed Budget and Flexible Budget

| Sl. no. | Fixed Budget | Flexible Budget |
|---|---|---|
| 1. | It does not change with actual volume of activity achieved. Thus it is known as rigid or inflexible budget | It can be re-casted on the basis of activity level to be achieved. Thus it is not rigid. |
| 2. | It operates on one level of activity and under one set of conditions. It assumes that there will be no change in the prevailing conditions, which is unrealistic. | It consists of various budgets for different levels of activity. |
| 3. | Here as all costs like - fixed, variable and semi-variable are related to only one level of activity, so variance analysis does not give useful information. | Here, analysis of variance provides useful information as each cost is analysed according to its behaviour. |
| 4. | If the budgeted and actual activity levels differ significantly, then the aspects like cost ascertainment and price fixation do not give a correct picture. | Flexible budgeting at different levels of activity facilitates the ascertainment of cost, fixation of selling price and tendering of quotations. |
| 5. | Comparison of actual performance with budgeted targets will be meaningless specially when there is a difference between the two activity levels. | It provides a meaningful basis of comparison of the actual performance with the budgeted targets. |

## Zero- Based Budgeting (ZBB)

It is defined as 'a method of budgeting which requires each cost element to be specifically justified, although the activities to which the budget relates are being undertaken for the first time, without approval, the budget allowance is zero.'

### Stages in Zero-based budgeting




## Performance Budgeting

A performance budget is one which presents the purposes and objectives for which funds are required, the costs of the programmes proposed for achieving those objectives, and quantitative data measuring the accomplishments and work performed under each programme.

### Steps in Performance Budgeting

## Budget Ratio

Budget ratios provide information about the performance level, i.e., the extent of deviation of actual performance from the budgeted performance and whether the actual performance is favourable or unfavourable.

**The following ratios are usually used by the management to measure development from budget**

### Efficiency Ratio

This ratio may be defined as standard hours equivalent of work produced expressed as a percentage of the actual hours spent in producing the work.

### Standard Capacity Employed Ratio

This ratio indicates the extent to which facilities were actually utilized during the budget period.

### Level of Activity Ratio

This may be defined as the number of standard hours equivalent to work produced expressed as a percentage of the budget of standard hours.

### Capacity Usage Ratio

This is the relationship between the budgeted number of working hours and the maximum possible number of working hours in a budget period.

### Calendar Ratio

This ratio may be defined as the relationship between the number of working days in a period and the number of working days as in the relative budget period.


**Budget Ratios:**

(i) **Efficiency Ratio** = $\frac{\text{Standard Hours}}{\text{Actual Hours}} \times 100$

(ii) **Activity Ratio** = $\frac{\text{Standard Hours}}{\text{Budgeted Hours}} \times 100$

(iii) **Calendar Ratio** = $\frac{\text{Available working days}}{\text{Budgeted working days}} \times 100$

(iv) **Standard Capacity Usage Ratio** = $\frac{\text{Budgeted Hours}}{\text{Max. possible hours in the budgeted period}} \times 100$

(v) **Actual Capacity Usage Ratio** = $\frac{\text{Actual Hours worked}}{\text{Max. possible working hours in a period}} \times 100$

(vi) **Actual Usage of Budgeted Capacity Ratio** = $\frac{\text{Actual working Hours}}{\text{Budgeted Hours}} \times 100$

# BASIC COSTING

**1.** **_____is anything for which a separate measurement is required.**
- **(a)** Cost unit
- **(b)** Cost object
- **(c)** Cost driver
- **(d)** Cost centre

**2.** **Which of the following is true about Cost Control?**
- **(a)** It is a corrective function
- **(b)** It challenges the set standards
- **(c)** It ends when targets achieved
- **(d)** It is concerned with future

**3.** **Cost units used in power sector is:**
- **(a)** Kilo meter (K.M)
- **(b)** Kilowatt-hour (kWh)
- **(c)** Number of electric points
- **(d)** Number of hours

**4.** **Processes Costing method is suitable for**
- **(a)** Transport sector
- **(b)** Chemical industries
- **(c)** Dam construction
- **(d)** Furniture making

**5.** **Distinction between direct cost and indirect cost is an example of classification**
- **(a)** By Element
- **(b)** By Function
- **(c)** By Controllability
- **(d)** By Variability

**6.** **The advantage of using IT in Cost Accounting does not include:**
- **(a)** Integration of various functions
- **(b)** Stock needs to be reconciled with Goods Received Note
- **(c)** Reduction in multicity of documents
- **(d)** Customised reports can be prepared.

**7.** **A taxi provider charges minimum ₹80 thereafter ₹ 12 per kilometer of distance travelled, the behaviour of conveyance cost is:**
- **(a)** Fixed Cost
- **(b)** Semi-variable Cost
- **(c)** Variable Cost
- **(d)** Administrative cost.

**8.** **A Ltd. has three production department, and each department has two machines,which of the following cannot be treated as cost centre for cost allocation:**

**(a)** Machines under the production department
**(b)** Production departments
**(c)** Both Production department and machines
**(d)** A Ltd.

**9.** **Which of the following is an example of functional classification of cost:**

**(a)** Direct Material Cost
**(b)** Fixed Cost
**(c)** Administrative Overheads
**(d)** Indirect Overheads.

**10.** **Ticket counter in a Railway Station is an example of**

**(a)** Cost Centre
**(b)** Revenue Centre
**(c)** Profit Centre
**(d)** Investment Centre

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.** | **(b)** | **2.** | **(c)** | **3.** | **(b)** | **4.** | **(b)** | **5.** | **(a)** | **6.** | **(b)** |
| **7.** | **(b)** | **8.** | **(d)** | **9.** | **(c)** | **10.** | **(b)** | | | | |

# MATERIAL COST

1. **Direct material can be classified as**
   - **(a)** Fixed cost
   - **(b)** Variable cost
   - **(c)** Semi-variable cost.
   - **(d)** Prime Cost

2. **In most of the industries, the most important element of cost is**
   - **(a)** Material
   - **(b)** Labour
   - **(c)** Overheads
   - **(d)** Administration Cost

3. **Which of the following is considered to be the normal loss of materials?**
   - **(a)** Loss due to accidents
   - **(b)** Pilferage
   - **(c)** Loss due to breaking the bulk
   - **(d)** Loss due to careless handling of materials.

4. **In which of following methods of pricing, costs lag behind the current economic values?**
   - **(a)** Last-in-first out price
   - **(b)** First-in-first out price
   - **(c)** Replacement price
   - **(d)** Weighted average price

5. **Continuous stock taking is a part of**
   - **(a)** Annual stock taking
   - **(b)** Perpetual inventory
   - **(c)** ABC analysis.
   - **(d)** Bin Cards

6. **In which of the following methods, issues of materials are priced at pre-determined rate?**
   - **(a)** Inflated price method
   - **(b)** Standard price method
   - **(c)** Replacement price method
   - **(d)** Market price method.

7. **When material prices fluctuate widely, the method of pricing that gives absurd results is**
   - **(a)** Simple average price
   - **(b)** Weighted average price
   - **(c)** Moving average price
   - **(d)** Inflated price.

**8.** **When prices fluctuate widely, the method that will smooth out the effect of fluctuations is**

**(a)** Simple average
**(b)** Weighted average
**(c)** FIFO
**(d)** LIFO

**9.** **Under the FSN system of inventory control, inventory is classified on the basis of:**

**(a)** Volume of material consumption
**(b)** Frequency of usage of items of inventory
**(c)** Criticality of the item of inventory for production
**(d)** Value of items of inventory

**10.** **Materials are issued to and from one process to another, on the basis of:**

**(a)** Material Transfer Note
**(b)** Material Requisition Note
**(c)** Bill of Materials
**(d)** Purchase Requisition Note

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | (b) | 2. | (a) | 3. | (c) | 4. | (b) | 5. | (b) | 6. | (b) |
| 7. | (a) | 8. | (b) | 9. | (b) | 10. | (b) | | | | |

# EMPLOYEE COST

1. **Idle time is the time under which-**
   - **a)** Full wages are paid to workers
   - **b)** No productivity is given by the workers
   - **c)** Both (a) and (b)
   - **d)** None of the above

2. **Cost of idle time due to non- availability of raw material is-**
   - **a)** Charged to overhead costs
   - **b)** Charged to respective jobs
   - **c)** Charged to costing profit and loss account
   - **d)** None of the above

3. **Time and motion study is conducted by-**
   - **a)** Time keeping department
   - **b)** Personal department
   - **c)** Payroll department
   - **d)** Engineering department

4. **Identify, which one of the following, does not account for increasing labour productivity-**
   - **a)** Job satisfaction
   - **b)** Motivating workers
   - **c)** High labour turnover
   - **d)** Proper supervision and control

5. **Labour turnover is measured by**-
   - **(a)** Number of persons replaced/ average number of workers
   - **(b)** Numbers of persons separated / number of workers at the beginning of the year
   - **(c)** (Number of persons replaced + number of persons separated) / (number of persons at the beginning + the number of persons at the end of the year)
   - **(d)** None of the above

6. **Labour productivity is measured by comparing-**
   - **(a)** Actual time and standard time
   - **(b)** Total output with total man-hours
   - **(c)** Added value for the product with total wage cost
   - **(d)** All of the above

7. **Employee cost includes-**
   - **a)** Wages and salaries
   - **b)** Allowances and incentives
   - **c)** Payment for overtime
   - **d)** All of the above

**8.** **If the time saved is less than 50% of the standard time, then the wages underRowan and Halsey premium plan on comparison gives-**

**a)** More wages to workers under Rowan plan than Halsey plan
**b)** More wages to workers under Halsey plan than Rowan plan
**c)** Equal wages under two plans
**d)** None of the above

**9.** **Standard time of a job is 60 hours and guaranteed time rate is ₹ 0.30 per hour. What is the amount of wages under Rowan plan if job is completed in 48 hours?**

**a)** ₹ 16.20
**b)** ₹ 17.28
**c)** ₹ 18.00
**d)** ₹ 14.40

**10.** **Important factors for control of employee cost can be-**

**a)** Time and Motion Study
**b)** Control over idle time and overtime
**c)** Control over employee turnover
**d)** All of the above

**11.** **Out of the following methods attendance is marked by recognizing an employeebased on physical and behavioural traits-**

**a)** Punch Card Attendance method
**b)** Bio- Metric Attendance system
**c)** Attendance Register method
**d)** Token Method

**12.** **If overtime is required for meeting urgent orders, the overtime premium should be charged as-**

**a)** Respective job
**b)** Overhead cost
**c)** Costing P& L A/c
**d)** None of above

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.** | **(c)** | **2.** | **(c)** | **3.** | **(d)** | **4.** | **(c)** | **5.** | **(a)** | **6.** | **(d)** |
| **7.** | **(d)** | **8.** | **(a)** | **9.** | **(b)** | **10.** | **(d)** | **11.** | **(b)** | **12.** | **(a)** |

# OVERHEADS COSTING

1. **"Fixed overhead costs are not affected in monetary terms during a given period by a change in output". But this statement holds good provided:**
   - **(a)** Increase in output is not substantial
   - **(b)** Increase in output is substantial
   - **(c)** Both (a) and (b)
   - **(d)** None of the above

2. **The concept of 'idle capacity of plant' as used in cost accounting is its:**
   - **(a)** Best capacity for normal production
   - **(b)** Capacity used for standard setting
   - **(c)** Theoretical maximum capacity
   - **(d)** Capacity below which production should not fall

3. **The allotment of whole items of cost-to-cost centres or cost units is called:**
   - **(a)** Overhead absorption
   - **(b)** Cost apportionment
   - **(c)** Cost allocation
   - **(d)** None of the above

4. **Primary packing cost is a part of:**
   - **(a)** Direct material cost
   - **(b)** Production Cost
   - **(c)** Selling overheads
   - **(d)** Distribution overheads

5. **Director's remuneration and expenses form part of:**
   - **(a)** Production overhead
   - **(b)** Administration overhead
   - **(c)** Selling overhead
   - **(d)** Distribution overhead

6. **Which of the following is not the classification of overhead based on its functionality?**
   - **(a)** Production overhead
   - **(b)** Administration overhead
   - **(c)** Fixed overhead
   - **(d)** Selling overhead

7. **Bad debt is an example of:**
   - **(a)** Distribution overhead
   - **(b)** Production overhead
   - **(c)** Selling overhead
   - **(d)** Administration overhead

**8. Normal capacity of a plant refers to the difference between:**

**(a)** Maximum capacity and practical capacity
**(b)** Practical capacity and normal capacity
**(c)** Practical capacity and estimated idle capacity as revealed by long term sales trend.
**(d)** Maximum capacity and actual capacity

**9. The difference between actual factory overhead and absorbed factory overhead willbe usually at the minimum level, provided pre- determined overhead rate is based on:**

**(a)** Maximum capacity
**(b)** Direct labour hours
**(c)** Machine hours
**(d)** Normal capacity

**10. Identify among the following a scientific and accurate method of factory overhead absorption:**

**(a)** Percentage of direct material cost method
**(b)** Percentage of direct labour cost method
**(c)** Percentage of prime cost method
**(d)** Machine hour rate method.

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | (a) | 2. | (c) | 3. | (c) | 4. | (b) | 5. | (b) | 6. | (c) |
| | | 7. | (c) | 8. | (c) | 9. | (d) | 10 | (d) | | |

# COST SHEET

1. **Generally, for the purpose of cost sheet preparation, costs are classified onthe basis of:**
   - **(a)** Functions
   - **(b)** Variability
   - **(c)** Relevance
   - **(d)** Nature

2. **Which of the following does not form part of prime cost:**
   - **(a)** Cost of packing
   - **(b)** Cost of transportation paid to bring materials to factory
   - **(c)** GST paid on raw materials (input credit cannot be claimed)
   - **(d)** Overtime premium paid to workers.

3. **A Ltd. received an order, for which it purchased a special frame formanufacturing, it is a part of:**
   - **(a)** Direct Materials
   - **(b)** Direct expenses
   - **(c)** Factory Overheads
   - **(d)** Administration Overheads

4. **Salary paid to plant supervisor is a part of**
   - **(a)** Direct expenses
   - **(b)** Factory overheads
   - **(c)** Quality control cost
   - **(d)** Administration cost

5. **Depreciation of director's laptop is treated as a part of:**
   - **(a)** Administration Overheads
   - **(b)** Factory Overheads
   - **(c)** Direct Expenses
   - **(d)** Research & Development cost.

6. **A manufacture has set-up a lab for testing of products for compliance with standards, salary of this lab staffs are part of:**
   - **(a)** Works overheads
   - **(b)** Quality Control Cost
   - **(c)** Direct Expenses
   - **(d)** Research & Development Cost.

7. **Audit fees paid to auditors is part of:**
   - **(a)** Administration Cost
   - **(b)** Production cost
   - **(c)** Selling & Distribution cost
   - **(d)** Not shown in cost sheet.

**8.** **Salary paid to factory store staff is part of:**

**(a)** Factory overheads
**(b)** Production Cost
**(c)** Direct Employee cost
**(d)** Direct Material Cost.

**9.** **Canteen expenses for factory workers are part of:**

**(a)** Factory overhead
**(b)** Administration Cost
**(c)** Marketing cost
**(d)** None of the above.

**10.** **A company pays royalty to State Government on the basis of production, itis treated as:**

**(a)** Direct Material Cost
**(b)** Factory Overheads
**(c)** Direct Expenses
**(d)** Administration cost.

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | (a) | 2. | (a) | 3. | (b) | 4. | (b) | 5. | (a) | 6. | (b) |
| 7. | (a) | 8. | (a) | 9. | (a) | 10. | (c) | | | | |

# COST ACCOUNTING SYSTEMS

1. **Under the Non-integrated accounting system**
   - **(a)** Same ledger is maintained for cost and financial accounts byaccountants
   - **(b)** Separate ledgers are maintained for cost and financial accounts
   - **(c)** (a) and (b) both
   - **(d)** None of the above

2. **Notional costs**
   - **(a)** May be included in Integrated accounts
   - **(b)** May be included in Non-integrated accounts
   - **(c)** Cannot be included in Non-integrated accounts
   - **(d)** None of the above

3. **Under Non-integrated accounting system, the account made to completedouble entry is**
   - **(a)** Stores ledger control account
   - **(b)** Work in progress control account
   - **(c)** Finished goods control account
   - **(d)** General ledger adjustment account

4. **Integrated systems of accounts are maintained**
   - **(a)** In separate books of accounts for costing and financial accountingpurposes
   - **(b)** In same books of accounts
   - **(c)** Both (a) & (b)
   - **(d)** None of the above

5. **Under Non-integrated system of accounting, purchase of raw material isdebited to which account**
   - **(a)** Material control account / stores ledger control account
   - **(b)** General ledger adjustment account
   - **(c)** Purchase account
   - **(d)** None of the above

6. **Under Non-integrated accounts, if materials worth ` 1,500 are purchased fora special job, then which account will be debited:**
   - **(a)** Special job account / work in process account
   - **(b)** Material control account
   - **(c)** Cost control account
   - **(d)** None of the above

**7. Which account is to be debited if materials worth ` 500 are returned to vendorunder Non-integrated accounts:**

**(a)** Cost ledger control account
**(b)** Finished goods control account
**(c)** WIP control account
**(d)** None of the above

**8. Which of the following items is included in cost accounts?**

**(a)** Notional rent
**(b)** Donations
**(c.)** Transfer to general reserve
**(d)** Rent receivable

**9. When costing loss is ₹ 5,600, administrative overhead under-absorbed being ₹ 600, the loss as per financial Accounts should be**

**(a)** ₹ 5,600
**(b)** ₹ 6,200
**(c)** ₹ 5,000
**(d)** None of the above

**10. Which of the following items should be added to costing profit to arrive atfinancial profit?**

**(a)** Over-absorption of works overhead
**(b)** Interest paid on debentures
**(c)** Income tax paid
**(d)** All of the above

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | (b) | 2. | (c) | 3. | (d) | 4. | (b) | 5. | (a) | 6. | (a) |
| 7. | (a) | 8. | (a) | 9. | (b) | 10. | (a) | | | | |

# UNIT & BATCH COSTING

**1.** **Different businesses in order to determine cost of their product or service offering follow:**
- **(a)** Different methods of Costing
- **(b)** Uniform Costing
- **(c)** Different techniques of costing
- **(d)** None of the above

**2.** **In order to determine cost of the product or service, following are used:**
- **(a)** Techniques of costing like Marginal, Standard etc.
- **(b)** Methods of Costing
- **(c)** Comparatives
- **(d)** All of the above

**3.** **Unit Costing is applicable where:**
- **(a)** Product produced are unique and no 2 products are same
- **(b)** Dissimilar articles are produced as per customer specification
- **(c)** homogeneous articles are produced on large scale
- **(d)** Products made require different raw materials

**4.** **In case product produced or jobs undertaken are of diverse nature, thesystem of costing to be used should be:**
- **(a)** Process costing
- **(b)** Operating costing
- **(c)** Job costing
- **(d)** None of the above

**5.** **Job Costing is:**
- **(a)** Applicable to all industries regardless of the products or servicesprovided
- **(b)** Technique of costing
- **(c)** Suitable where similar products are produced on mass scale
- **(d)** Method of costing used for non- standard and non- repetitive products.

**6.** **The production planning department prepares a list of materials and stores required for the completion of a specific job order, this list is known as:**
- **(a)** Bin card
- **(b)** Bill of material
- **(c)** Material requisition slip
- **(d)** None of the above

**7.** **Batch costing is a type of:**
- **(a)** Process costing
- **(b)** Job Costing
- **(c)** Differential costing
- **(d)** Direct costing

**8.** **Batch costing is similar to that under job costing except with the difference that a:**

**(a)** Job becomes a cost unit.
**(b)** Batch becomes the cost unit instead of a job
**(c)** Process becomes a cost unit
**(d)** None of the above

**9.** **The main points of distinction between job and contract costing includes:**

**(a)** Length of time to complete.
**(b)** Big jobs
**(c)** Activities to be done outside the factory area
**(d)** All of the above

**10.** **Economic batch quantity is that size of the batch of production where:**

**(a)** Average cost is minimum
**(b)** Set-up cost of machine is minimum
**(c)** Carrying cost is minimum
**(d)** Both (b) and (c)

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | (a) | 2. | (b) | 3. | (c) | 4. | (c) | 5. | (d) | 6. | (b) |
| 7. | (b) | 8. | (b) | 9. | (d) | 10. | (d) | | | | |

# JOBS AND CONTRACT COSTING

**1. In case product produced or jobs undertaken are of diverse nature, the system of costing to be used should be:**

**a)** Process costing
**b)** Operating costing
**c)** Job costing
**d)** None of the above

**2. The production planning department prepares a list of materials and stores required for the completion of a specific job order this list is known as:**

**(a)** Bin card
**(b)** Bill of material
**(c)** Material requisition slip
**(d)** None of the above

**3. Job costing is similar to that under Batch costing except with the differencethat**

**a)** Job becomes a cost unit.
**b)** Batch becomes the cost unit instead of a job
**c)** Process becomes a cost unit
**d)** None of the above.

**4. The main points of distinction between job and contract costing includes:**

**a)** Length of time to complete
**b)** big jobs
**c)** Activities to be done outside the factory area
**d)** All of the above

**5. In job costing which of the following documents are used to record theissue of direct material to a job':**

**a)** Goods received note
**b)** Material requisition
**c)** Purchase order
**d)** Purchase requisition

**6. Which of the following would best describe the characteristics of contractcosting:**

(i) homogeneous products;
(ii) customer driven production;
(iii) short period of time between the commencement and completion ofthe cost unit
**(a)** (i) and (ii) only
**(b)** (ii) and (iii) only
**(c)** (i) and (iii) only
**(d)** (ii) only

**7.** **The most suitable cost system where the products differ in type of materials and work performed is :**

**a)** Job Costing
**b)** Process Costing
**c)** Operating Costing
**d)** None of these.

**8.** **Which of the following statements is true:**

**a)** Job cost sheet may be used for estimating profit of jobs.
**b)** Job costing cannot be used in conjunction with marginal costing.
**c)** In cost plus contracts, the contractor runs a risk of incurring a loss.
**d)** None of these.

**9.** **Which of the following statements is true:**

**a)** In job costing method, a cost sheet is prepared for each job.
**b)** A production order is an order received from a customer for particularjobs.
**c)** in contract costing, the contract which is complete up to one fourth of the total contract, one-fourth of the profit should be transferred to Profit & Loss Account.
**d)** In contract costing profit of each contract is computed when the contract is completed.

**10.** **Which of the following statements is true:**

**a)** Job cost sheet may be prepared for facilitating routing and schedulingof the job
**b)** Job costing can be suitably used for concerns producing uniformly any specific product
**c)** Job costing cannot be used in companies using standard costing
**d)** Neither (a) nor (b) nor (c)

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.** | **(c)** | **2.** | **(b)** | **3.** | **(a)** | **4.** | **(d)** | **5.** | **(b)** | **6.** | **(d)** |
| **7.** | **(a)** | **8.** | **(a)** | **9.** | **(a)** | **10.** | **(d)** | | | | |

# PROCESS COSTING

1. **The type of process loss that should not be allowed to affect the cost ofgood units is:**
   **(a)** Abnormal loss
   **(b)** Normal loss
   **(c)** Seasonal loss
   **(d)** Standard loss

2. **200 units were introduced in a process in which 20 units is the normal loss.If the actual output is 150 units, then there is:**
   **(a)** No abnormal loss
   **(b)** No abnormal gain
   **(c)** Abnormal loss of 30 units
   **(d)** Abnormal gain of 30 units

3. **100 units are processed at a total cost of ₹ 160, normal loss is 10%, & scrap units are sold @ ₹ 0.25 each. If the output is 80 units, then the value of abnormal loss is:**
   **(a)** ₹ 2.50
   **(b)** ₹ 16
   **(c)** ₹ 17.50
   **(d)** ₹ 17.75

4. **When average method is used in process costing, the opening inventorycosts are:**
   **a)** Subtracted from the new costs
   **b)** added to the new costs
   **c)** Kept separate from the costs of the new period
   **d)** Averaged with other costs to arrive at total cost

5. **Spoilage that occurs under inefficient operating conditions and is ordinarily controllable is called:**
   **(a)** Normal spoilage
   **(b)** Abnormal spoilage
   **(c)** Normal defectives
   **(d)** None of the above

6. **An abnormal gain in a process occurs in which of the following situations?**
   **(a)** When the actual output is greater than the planned output.
   **(b)** When actual loss is more than the expected.
   **(c)** When actual loss is less than the expected loss
   **(d)** When normal loss is equal to actual loss.

7. **The value of abnormal loss is equal to:**
   **(a)** Total cost of materials
   **(b)** Total process cost less realizable value of normal loss
   **(c)** Total process cost less cost of scrap
   **(d)** Total process cost less realizable value of normal loss - value of transferred out goods.

**8.** **Inter-process profit is calculated, because:**
**(a)** a process is a cost centre
**(b)** each process has to report profit
**(c)** the efficiency of the process is measured
**(d)** the wages of employees are linked to the process profitability.

**9.** The Cost of each process comprises the cost of:
**(a)** Material cost
**(b)** Labour cost
**(c)** Factory overhead
**(d)** All of the above

**10.** **A process account is debited by abnormal gain, the value is determined as:**
**(a)** Equal to the value of normal loss
**(b)** Cost of good units less realizable value of normal loss
**(c)** Cost of good units less realizable value of actual loss
**(d)** Equal to the value of good units less closing stock

**11.** **Lean Labs develops 55mm film using a four-step process that moves progressively through four departments. The company specializes in overnight service and has the largest drug store chain as its primary customer. Currently, direct labor, direct materials, and overhead are accumulated by departments.**
**The cost accumulation system that best describes the system Lean Labs isusing is:**
**(a)** Operation costing.
**(b)** Activity-based costing.
**(c)** Job-order costing.
**(d)** Process costing.

**12.** **When compared with normal spoilage, abnormal spoilage**:
**(a)** Arises more frequently from factors that are inherent in themanufacturing process.
**(b)** Is given the same accounting treatment as normal spoilage.
**(c)** Is generally thought to be more controllable by purchase department than production department.
**(d)** Is not typically influenced by the "tightness" of production standards.

**13.** **Assume 550 units were worked on during a period in which a total of 500 good units were completed. Normal loss consisted of 30 units; abnormal loss 20 units. Total production costs were ₹ 2,200. The company accounts for abnormal spoilage separately on the income statement as loss due to abnormal loss. Normal loss is not accounted for separately. What is the cost of the good units produced?**
**(a)** ₹ 2,080
**(b)** ₹ 2,115
**(c)** ₹ 2,200
**(d)** ₹ 2,332

**14.** **A Limited uses process costing systems and inspects its goods post manufacturing. An engineer noticed on May 30 the following:**

| | |
|---|---|
| **Good units completed** | **15,000** |
| **Normal loss (units)** | **300** |
| **Abnormal loss (units)** | **100** |

**Unit costs were:**

| | |
|---|---|
| **Material** | **₹ 2.50** |
| **Conversion costs (Labour & overheads)** | **₹ 6.00** |

**The number of units that company would transfer to its finished goods stock and the related cost of these units are:**

**(a)** 15,000 units transferred at a cost of ₹ 127,500
**(b)** 15,000 units transferred at a cost of ₹ 130,050
**(c)** 15,000 units transferred at a cost of ₹ 135,000
**(d)** 15,300 units transferred at a cost of ₹ 130,050

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.** | **(a)** | **2.** | **(c)** | **3.** | **(c)** | **4.** | **(b)** | **5.** | **(b)** | **6.** | **(c)** |
| **7.** | **(d)** | **8.** | **(c)** | **9.** | **(d)** | **10.** | **(b)** | **11.** | **(d)** | **12.** | **(d)** |
| **13.** | **(b)** | **14.** | **(b)** | | | | | | | | |

# JOINT PRODUCT AND BY PRODUCTS

**1.** **In sugar manufacturing industries molasses is also produced along with sugar. Molasses may be of smaller value as compared with the value of sugar and is known as:**

**(a)** Common product
**(b)** By- product
**(c)** Joint product
**(d)** None of them

**2.** **Method of apportioning joint costs on the basis of output of each joint product at the point of split off is:**

**(a)** Sales value method
**(b)** Physical unit method
**(c)** Average cost method
**(d)** Marginal cost and contribution method

**3.** **In the Net realisable value method, for apportioning joint costs over thepoint products, the basis of apportionment makes use of:**

**(a)** Selling price per unit of each of the joint products
**(b)** Selling price multiplied by units sold of each of the joint products
**(c)** Sales value of each joint product less further processing costs ofindividual products
**(d)** Both (b) and (c)

**4.** **The main purpose of accounting of joint products and by- products is to:**

**(a)** Determine the opportunity cost
**(b)** Determine the replacement cost
**(c)** Determine profit or loss on each product line
**(d)** None of these

**5.** **Under net realizable value method of apportioning joint costs to joint products, the selling & distribution cost is:**

**(a)** Added to joint cost
**(b)** Deducted from further processing cost
**(c)** Deducted from sales value
**(d)** Ignored

**6.** **Which of the following is a co-product:**

**(a)** Diesel and Petrol in an oil refinery
**(b)** Edible oils and oil cakes
**(c)** Curd and butter in a dairy
**(d)** Mustard oil and Sunflower oil in an oil processing company.

**7. Which of the following is an example of by-product**

**(a)** Diesel and Petrol in an oil refinery
**(b)** Edible oils and oil cakes
**(c)** Curd and butter in a dairy
**(d)** Mustard seeds and mustard oil.

**8. Which of following method can be used when the joint products are of unequal quantity and used for captive consumption:**

**(a)** Technical estimates, using market value of similar goods
**(b)** Net Realisable value method
**(c)** Physical Units method
**(d)** Market value at split-off method.

**9. Which of the following statement is not correct in relation to Co-products:**

**(a)** Co-products may also have joint products
**(b)** Costing for co-products is done according to process costing method
**(c)** Co-products do not have any by-products
**(d)** Co-products are treated as a separate cost object for costing purpose.

**10. When a by-product does not have any realisable value, the cost of by-product is:**

**(a)** Transferred to Costing Profit & Loss A/c
**(b)** By-product cost is borne by the good units
**(c)** By-product cost is ignored
**(d)** By-product cost is determined taking value of similar goods

**11. SG Ltd manufactures two products from a joint milling process. The two products developed are Mine support (MS) and Commercial building (CB). A standard production run incurs joint costs of ₹ 1,00,000 and results in 60,000 units of MS and 90,000 units of CB. Each MS sells for ₹ 200 per unit,and each CB sells for ₹ 450 per unit. Assuming no further processing work is done after the split-off point, the amount of joint cost allocated to Commercial building (CB) on a physical quantity allocation basis would be:**

**(a)** ₹ 60,000.
**(b)** ₹ 1,80,000.
**(c)** ₹ 2,25,000.
**(d)** ₹ 1,20,000.

**12. For the purpose of allocating joint costs to joint products, the sales priceat point of sale, reduced by cost to complete after split-off, is assumed tobe equal to the:**

**(a)** Joint costs
**(b)** Sales price less a normal profit margin at point of sale
**(c)** Net sales value at split off
**(d)** Total costs.

**13.** **Kay Company manufactures two hair care lotions, L and S, out of a joint process. The joint costs incurred are ₹ 6,30,000 for a standard production run that generates 1,80,000 gallons of L and 1,20,000 gallons of S. L sells for ₹ 240 per gallon, and S sells for ₹390 per gallon.**
**If additional processing costs beyond the split-off point are ₹ 140 per gallon for L and ₹ 90 per gallon for S, the amount of joint cost of each production run allocated to L on a physical-quantity basis is:**

**(a)** ₹ 340,000.
**(b)** ₹ 378,000.
**(c)** ₹ 232,000.
**(d)** ₹ 580,000.

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | (b) | 2. | (b) | 3. | (d) | 4. | (c) | 5. | (c) | 6. | (d) |
| 7. | (b) | 8. | (a) | 9. | (c) | 10. | (b) | 11. | (a) | 12. | (c) |
| 13. | (b) | | | | | | | | | | |

# SERVICE COSTING

**1. Composite cost unit for a hospital is:**
- **(a)** Per patient
- **(b)** Per patient-day
- **(c)** Per day
- **(d)** Per bed

**2. Cost of diesel and lubricant is an example of:**
- **(a)** Operating cost
- **(b)** Fixed charges
- **(c)** Semi-variable cost
- **(d)** None of the above

**3. Cost units used in power sector is:**
- **(a)** Kilo meter (K.M)
- **(b)** Kilowatt-hour (kWh)
- **(c)** Number of electric points
- **(d)** Number of hours

**4. Absolute Tonne-km. is an example of:**
- **(a)** Composite units in power sector
- **(b)** Composite unit of transport sector
- **(c)** Composite unit for bus operation
- **(d)** Composite unit for oil and natural gas

**5. Depreciation is treated as fixed cost if it is related to**:
- **(a)** Activity level
- **(b)** Related with machine hours
- **(c)** Efflux of time
- **(d)** None of the above

**6. Jobs undertaken by IT & ITES organizations are considered as**:
- **(a)** Project
- **(b)** Batch work
- **(c)** Contract
- **(d)** All the above

**7. In Toll Road costing, the repetitive costs include:**
- **(a)** Maintenance cost
- **(b)** Annual operating costs
- **(c)** None of the above
- **(d)** Both (a) and (b)

**8.** **BOT approach means:**

**(a)** Build, Operate and Transfer
**(b)** Buy, Operate and Transfer
**(c)** Build, Operate and Trash
**(d)** Build, Own and Trash

**9.** **Pre-product development activities in insurance companies, include:**

**(a)** Processing of Claim
**(b)** Selling of policy
**(c)** Provision of conditions
**(d)** Policy application processing

**10.** **Which of the following costing method is not appropriate for costing of educational institutes:**

**(a)** Batch Costing
**(b)** Activity Based Costing
**(c)** Absorption Costing
**(d)** Process Costing

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | (b) | 2. | (a) | 3. | (b) | 4. | (b) | 5. | (c) | 6. | (a) |
| 7. | (a) | 8. | (a) | 9. | (c) | 10. | (d) | | | | |

# STANDARD COSTING

**1. Under standard cost system the cost of the product determined at the beginning of production is its:**

**(a)** Direct cost
**(b)** Pre-determined cost
**(c)** Historical cost
**(d)** Actual cost

**2. The deviations between actual and standard cost is known as**:

**(a)** Multiple analysis
**(b)** Variable cost analysis
**(c)** Variance analysis
**(d)** Linear trend analysis

**3. The standard which is attainable under favourable conditions is:**

**(a)** Theoretical standard
**(b)** Expected standard
**(c)** Normal standard
**(d)** Basic standard

**4. The standard most suitable from cost control point of view is:**

**(a)** Normal standard
**(b)** Theoretical standard
**(c)** Expected standard
**(d)** Basic standard

**5. Overhead cost variances are:**

**(a)** The difference between overheads recovered on actual output - actual overhead incurred.
**(b)** The difference between budgeted overhead cost and actual overhead cost.
**(c)** Obtained by multiplying standard overhead absorption rate with the difference between standard hours for actual output and actual hours worked.
**(d)** None of the above

**6. Which of the following variance arises when more than one material is used in the manufacture of a product:**

**(a)** Material price variance
**(b)** Material usage variance
**(c)** Material yield variance
**(d)** Material mix variance

**7.** **If standard hours for 100 units of output are 400 @ ₹ 2 per hour and actual hours take are 380 @ ₹ 2.25 per, then the labour rate variance is:**

**(a)** ₹ 95 (adverse)
**(b)** ₹ 100 (adverse)
**(c)** ₹ 25 (favourable)
**(d)** ₹ 120 (adverse)

**8.** **Controllable variances are best disposed-off by transferring to:**

**(a)** Cost of goods sold
**(b)** Cost of goods sold and inventories
**(c)** Inventories of work–in–progress and finished goods
**(d)** Costing profit and loss account

**9.** **Idle time variance is obtained by multiplying:**

**(a)** The difference between standard and actual hours by the actual rate of labour per hour
**(b)** The difference between actual labour hours paid and actual labour hours worked by the standard rate
**(c)** The difference between standard and actual hours by the standard rate of per hour
**(d)** None of the above.

**10.** **Basic standards are:**

**(a)** Those standards, which require high degree of efficiency and performance.
**(b)** Average standards and are useful in long term planning.
**(c)** Standards, which can be attained or achieved
**(d)** Assuming to remain unchanged for a long time.

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.** | **(b)** | **2.** | **(c)** | **3.** | **(a)** | **4.** | **(c)** | **5.** | **(a)** | **6.** | **(d)** |
| **7.** | **(a)** | **8.** | **(d)** | **9.** | **(b)** | **10.** | **(d)** | | | | |

# MARGINAL COSTING

**1. Under marginal costing the cost of product includes:**
- **(a)** Prime costs only.
- **(b)** Prime costs and variable overheads.
- **(c)** Prime costs and fixed overheads.
- **(d)** Prime costs and factory overheads.

**2. Reporting under marginal costing is accomplished by:**
- **(a)** Treating all costs as period costs.
- **(b)** Eliminating the work-in-progress inventory account.
- **(c)** Matching variable costs against revenue and treating fixed costs asperiod costs.
- **(d)** Including only variable costs in income statement.

**3. Period costs are:**
- **(a)** Variable costs.
- **(b)** Fixed costs.
- **(c)** Prime costs.
- **(d)** Overheads costs.

**4. When sales and production (in units) are same then profit under:**
- **(a)** Marginal costing is higher than that of absorption costing.
- **(b)** Marginal costing is lower than that of absorption costing.
- **(c)** Marginal costing is equal to that of absorption costing.
- **(d)** None of the above.

**5. When sales exceed production (in units) then profit under:**
- **(a)** Marginal costing is higher than that of absorption costing.
- **(b)** Marginal costing is lower than that of absorption costing.
- **(c)** Marginal costing is equal than that of absorption costing.
- **(d)** None of above.

**6. The main difference between marginal costing and absorption costing is regarding the treatment of:**
- **(a)** Prime cost.
- **(b)** Fixed overheads.
- **(c)** Direct materials.
- **(d)** Variable overheads.

**7. Under profit volume ratio, the term profit:**
- **(a)** Means the sales proceeds in excess of total costs.
- **(b)** Here means the same thing as is generally understood
- **(c)** Is a misnomer, it in fact refers to contribution i.e. (sales revenue - variable costs).
- **(d)** None of the above.

**8.** **Factors which can change the break-even point:**

**(a)** Change in fixed costs.
**(b)** Change in variable costs.
**(c)** Change in the selling price.
**(d)** All of the above.

**9.** **If P/V ratio is 40% of sales then what about the remaining 60% of sales:**

**(a)** Profit.
**(b)** Fixed cost.
**(c)** Variable cost.
**(d)** Margin of safety.

**10.** **The P/V ratio of a product is 0.60 and profit is ₹ 9,000. The margin of safety is:**

**(a)** ₹ 5,400
**(b)** ₹ 15,000
**(c)** ₹ 22,500
**(d)** ₹ 3,600

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.** | **(b)** | **2.** | **(c)** | **3.** | **(b)** | **4.** | **(c)** | **5.** | **(a)** | **6.** | **(b)** |
| **7.** | **(c)** | **8.** | **(d)** | **9.** | **(c)** | **10.** | **(b)** | | | | |

# BUDGETARY CONTROL

**1.** **If a company wishes to establish a factory overhead budget system in which estimated costs can be derived directly from estimates of activity levels, it should prepare a:**

**(a)** Master budget
**(b)** Cash budget
**(c)** Flexible budget
**(d)** Fixed budget

**2.** **The classification of fixed and variable cost is useful for the preparation of:**

**(a)** Master budget
**(b)** Flexible budget
**(c)** Cash budget
**(d)** Capital budget

**3.** **Budget manual is a document:**

**(a)** Which contains different type of budgets to be formulated only.
**(b)** Which contains the details about standard cost of the products to bemade.
**(c)** Setting out the budget organization and procedures for preparing abudget including fixation of responsibilities, formats and recordsrequired for the purpose of preparing a budget and for exercising budgetary control system.
**(d)** None of the above

**4.** **The budget control organization is usually headed by a top executive whois known as:**

**(a)** General manager
**(b)** Budget director/budget controller
**(c)** Accountant of the organization
**(d)** None of the above

**5.** **"A favourable budget variance is always an indication of efficientperformance". Do you agree, give reason?**

**(a)** A favourable variance indicates, saving on the part of the organization hence it indicates efficient performance of the organization.
**(b)** Under all situations, a favourable variance of an organization speaks about its efficient performance.
**(c)** A favourable variance does not necessarily indicate efficient performance, because such a variance might have been arrived at bynot carrying out the expenses mentioned in the budget.
**(d)** None of the above.

**6.** **A budget report is prepared on the principle of exception and thus-**

**(a)** Only unfavourable variances should be shown
**(b)** Only favourable variance should be shown
**(c)** Both favourable and unfavourable variances should be shown
**(d)** None of the above

**7.** **Purchases budget and materials budget are same:**

**(a)** Purchases budget is a budget which includes only the details of all materials purchased

**(b)** Purchases budget is a wider concept and thus includes not only purchases of materials but also other item's as well

**(c)** Purchases budget is different from materials budget; it includes purchases of other items only

**(d)** None of the above

**8.** **Efficiency ratio is:**

**(a)** The extent of actual working days avoided during the budget period

**(b)** Activity ratio/ capacity ratio

**(c)** Whether the actual activity is more or less than budgeted activity

**(d)** None of the above

**9.** **Activity Ratio depicts:**

**(a)** Whether actual capacity utilized exceeds or falls short of the budgeted capacity

**(b)** Whether the actual hours used for actual production were more or less than the standard hours

**(c)** Whether actual activity was more or less than the budgeted capacity

**(d)** None of the above

**10.** **Which of the following is usually a short-term budget?**

**(a)** Capital expenditure budget

**(b)** Research and development budget

**(c)** Cash budget

**(d)** Sales budget

## Answers to the MCQs based Questions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | (c) | 2. | (b) | 3. | (c) | 4. | (b) | 5. | (c) | 6. | (c) |
| 7. | (b) | 8. | (b) | 9. | (c) | 10. | (c) | | | | |

# SUMIT RASTOGI CLASSES

## BASIC COSTING

- **Costing, Cost Accounting and Cost Accountancy**

1. **Costing -** It is a technique and Process of ascertaining cost.
2. **Cost Accounting –** It is the Process of Accounting for cost which begins with the incurrence of cost and ends with the control of cost
3. **Cost Accountancy** - It is a technique of preparation and presentation of information for the purpose of managerial decision making.

- **OBJECTIVES OF COST ACCOUNTING**

1. **Ascertainment of cost:** The primary objective of costing accounting is to ascertain the cost of various products, jobs, services, etc.
2. **Determination of selling price:** Cost accounting provides detailed information about the composition of total cost for determination of the selling price of the product or service.
3. **Cost control:** Cost control is one of the important functions of cost accounting. Cost control aims at improving efficiency by controlling and reducing cost.
4. **Help in preparation of financial and other statements:** A fully developed cost accounting system progress and finished goods. This facilitates the preparation of financial and other statements.

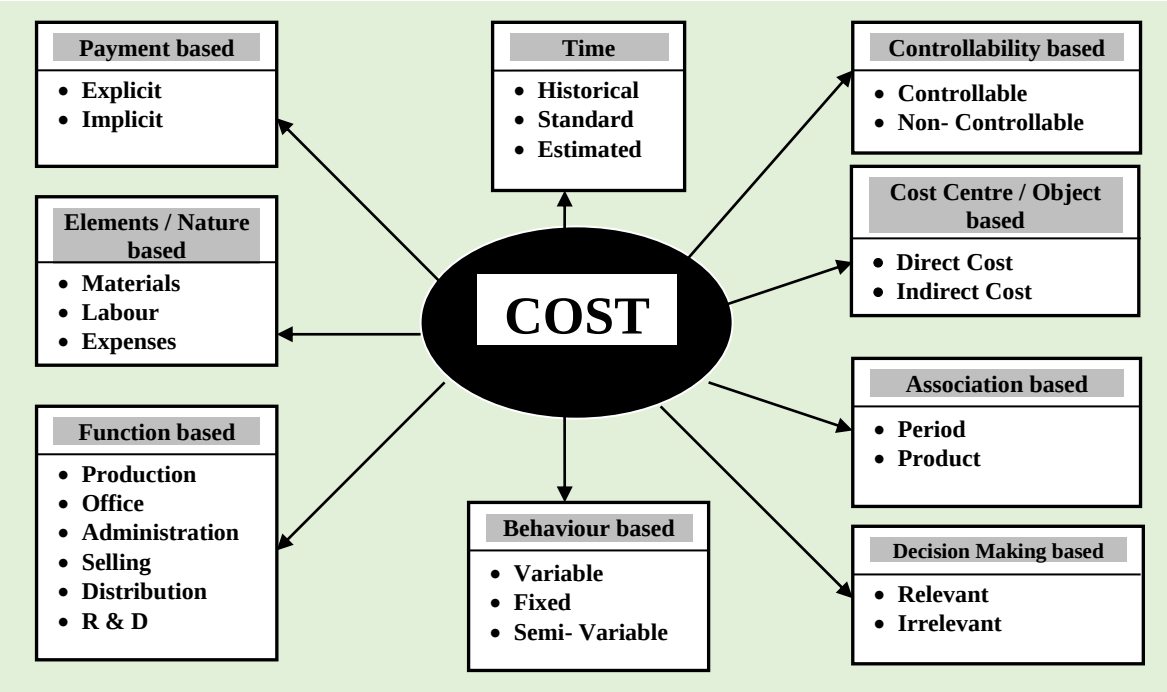
- **ADVANTAGES OF COST ACCOUNTING**

1. Supplies detailed cost information
2. Helps in price fixation
3. Reveals profitable and unprofitable activities
4. Reveals idle capacity
5. Helps in decision making
6. Helps in formulating policies
7. Assists in controlling costs
8. Provides a check on the accuracy of financial accounting
9. Facilitates cost comparison
10. Helps in inventory control

- **Cost control and Cost reduction**

| Cost Control | Cost Reduction |
|---|---|
| 1. Cost control aims at maintaining the costs in accordance with the established standards. | 1. Cost reduction is concerned with reducing costs. It challenges all standards and endeavours to improvise them continuously |
| 2. Cost control seeks to attain lowest possible cost under existing conditions. | 2. Cost reduction recognises no condition as permanent, since a change will result in lower cost. |
| 3. In case of cost control, emphasis is on past and present | 3. In case of cost reduction, it is on present and future. |
| 4. Cost control is a preventive function | 4. Cost reduction is a corrective function. It operates even when an efficient cost control system exists. |
| 5. Cost control ends when targets are achieved. | 5. Cost reduction has no visible end and is a continuous process. |

## CLASSIFICATION OF COST




***Classification According to Traceability to Cost Object:***

**(i) Direct Costs:** These are those costs which are incurred for and may be conveniently identified with, a particular cost unit, process or department. Cost of raw materials used, wages of machine operators are common examples.

**(ii) Indirect Costs:** These costs cannot be conveniently identified with a particular cost unit, process of department. These are general costs and incurred for the benefit of a number of cost units or cost centre. Examples are rent, repairs, depreciation, managerial salaries, coal, lubricating oil, wages of foreman, etc.

***Classification According to Cost Behaviour or Variability:***

**(i) Fixed Costs:** These costs remain fixed in 'total' and do not increase or decrease with the volume of production but the fixed cost 'per unit' increases when the volume of production decreases, and vice versa.

**(ii) Variable Costs:** These costs change in proportion to the volume of production. In other words, when volume of output increases, total variable cost also increases, and vice versa. But the variable cost per unit remains fixed.

**(iii) Semi-variable or Semi-fixed Costs:** These costs are partly fixed and partly variable. A semi-variable cost has often a fixed element below which it will not fall at any level of output and the variable element changes either at a constant rate or in lumps.

**Classification into Product Costs and Period Costs:**

| S.N | Particulars | Product cost | Period cost |
|---|---|---|---|
| 1. | Definition | This cost is a part of Production cost | This cost is incurred on time basis. |
| 2. | Inventory valuation | This is included in inventory valuation | This is not included in inventory valuation. |
| 3. | Examples | Cost of raw material, direct wages, Dep. on plant etc. | S&D cost, Dep. on office Assets etc. |

**Classification According to Controllability:**

**(i) Controllable Costs:** These are the costs which may be directly regulated at a given level of management authority. Variable costs are generally controllable by department heads. For example, cost of raw material may be controlled by purchasing in larger quantities.

**(ii) Uncontrollable Costs:** These are those costs which cannot be influenced by the action of a specified member of an enterprise. Fixed costs are generally uncontrollable. For example, it is very difficult to control costs like factory rent, managerial salaries, etc.

**Classification According to Payment:**

(i) **Out of Pocket Costs/Explicit Cost:** Out of Pocket costs are those which involve cash outlay as against those costs which do not require cash payment. Example - Material cost is an out of pocket cost while depreciation is not an out of Pocket cost.

(ii) **Imputed cost/Implicit Cost:** These are notional costs which are not actually incurred. Example - When a building is owned then no rent paid. This notional rent or the rental value of such a building is an imputed cost which is used for decision making purpose.

**Classification According to Decision making:**

(i) **Irrelevant cost -** Cost that don't change the decision is Irrelevant cost.

(ii) **Relevant cost -** Cost that can change the decision is Relevant cost.

- **Opportunity costs -** The opportunity cost is the monetary amount associated with the next best use of the resource or the potential benefit that is given up when one alternative is selected over another.
- **Sunk costs -** Sunk costs have already been incurred and cannot be changed now or in the future. They should be ignored when making decisions.


- **Capitalized Cost** the Cost which generates enduring benefits and helps in revenue generation over more than one accounting period, is called Capitalized Cost. These Costs are written off in the calculation of cost of a product or service over several accounting periods.
- **Cost Ascertainment and Cost Estimation**

***Cost ascertainment*** is the computation of actual costs after they have been incurred. It refers to the methods and process employed in ascertaining costs. Costs are ascertained by using principles of different methods of costing such as job costing, process costing, unit costing, etc.

***Cost estimation*** is the process of determining in advance the cost of a product, job, order or service. Thus, estimated cost is a futuristic concept. In cost estimation, an allowance is generally made for anticipated fluctuations in the prices of elements of cost, i.e. materials, labour and overheads.

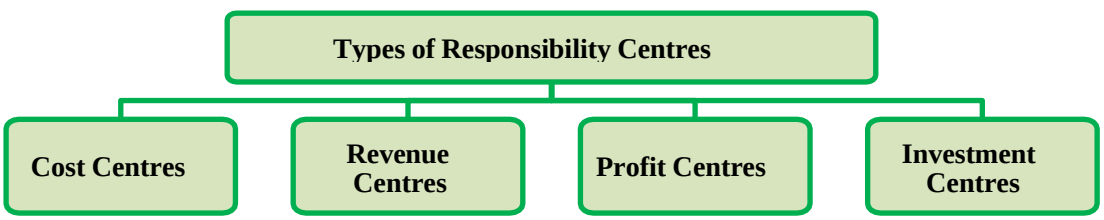
- **Distinguish between Fixed overheads and Variable overheads**

**Fixed Overhead** These are the expense which remains constant at all the levels of activity. This statement is true only in case of short term. In long term they are also variable e.g. rent of building, Managerial Remuneration's. Fixed overheads are generally indirect to the units produced but may be direct to any department or plan.

**Variable Overheads** These are often called as marginal cost. It is called variable because it varies with variation in the level of production. It always changes in totality and remains constant per unit. Example: Material Cost, Labour Cost etc

- **Responsibility Centres**

To have a better control overthe organisation, management delegates its responsibility and authority to various departments or persons. These departments or persons are known as **responsibility centres** and are held responsible for performance in terms of expenditure, revenue, profitability and return on investment.



- **Cost Centre** *C.I.M.A.,* England, has defined the term *cost centre* as "***a location*** **(production department, sales area)*, person* (foreman, store keeper) *, or item of equipment* (a machine, a delivery van) or group of these for which costs may be ascertained and used for the purpose of cost control**." Cost centres are of two types viz., Personal and Impersonal Cost Centre.
  - **A Personal Cost Centre** is one which consists of a person or group of persons
  - **An Impersonal cost centre** consists of a location or an item of equipment (or group of these).

**In manufacturing concern there are two main types of cost centres:**

**(i) Production Cost Centre:** It is a cost centre where raw material is handled for conversion into finished product. Here both direct and indirect expenses are incurred. Machine shops, welding shops and assembly shops are examples of production cost centres.

**(ii) Service Cost Centre:** It is a Cost centre which serves as an ancillary unit and renders services to a production centre. Power house, Stores services centres, repair shop, Plant maintenance centres are examples of service cost centres.

- **Revenue Centres** ***The responsibility centres which are accountable for generation of revenue for the entity***. Sales Department for example, is responsible for achievement of sales target and revenue generation. Though, revenue centres do not have control on expenditures it incurs but sometimes expenditures related with selling activities like commission to sales person etc. are incurred by revenue centres.

- **Profit Centres** ***These are the responsibility centres which have both responsibility of generation of revenue and incurrence of expenditures.*** Since, managers of profit centres are accountable for both costs as well as revenue, profitability is the basis for measurement of performance of these responsibility centres. Examples of profit centres are decentralised branches of an organisation.

- **Investment Centres** ***These are the responsibility centres which are not only responsible for profitability but also have the authority to make capital investment decisions.*** The performance of these responsibility centres are measured on the basis of Return on Investment (ROI) besides profit. Examples of investment centres are Maharatna, Navratna and Miniratna companies of Public Sector Undertakings of Central Government.

- **Difference between a Cost Centre and a Profit Centre**

**(i)** A cost centre is created for accounting convenience for ascertainment and control of cost. A profit centre is created because of decentralisation of business operations.

**(ii)** A cost centre is not autonomous whereas a profit centre is autonomous.

**(iii)** A cost centre does not have target cost which must be achieved. Efforts are made in the cost centre to minimise the costs. A profit centre has a profit target and enjoys authority to adopt such policies as would help in achieving its target.

- **Cost Allocation and Cost Absorption**

**Cost allocation**: It is defined as the process of allotment or identification or assignment of whole items to cost centre or costs units. Thus, the charging of direct cost to a cost centre or a cost unit is the process of allocation of costs.

**Cost absorption**: It is the process of absorbing all indirect costs (or Overheads) allocated or apportioned over particular cost centre or production deptt. by the units produce.

- **Direct Expenses/Chargeable expenses**

Direct Expenses: Expenses relating to manufacture of a product or rendering a service, which can be identified or linked with the cost object other than direct material cost and direct employee cost.
Examples of Direct Expenses are

1. Royalties Charged on Production
2. Royalties Charged on Sales
3. Job Charges
4. Hire Charges of Specific Equipment for Use of Specific Job
5. Cost Of Special Designs or Drawings for a Job
6. Software Services Specifically Required for a Job
7. Travelling Expenses to site for a specific job

- **Example of unit of cost against each industry**

| Industry | Unit of cost |
|---|---|
| 1. Nursing Home | Per Bed / Per week / Per day |
| 2. Road transport | Per Ton Kilometer /Per Mile |
| 3. Steel | Per Ton |
| 4. Coal | Per Unit |
| 5. Bicycles | Each Unit |
| 6. Bridge construction | Each Contract |
| 7. Interior Decoration | Each Job |
| 8. Advertising | Each Job |
| 9. Furniture | Each Unit |
| 10. Sugar company | Per Quintal/Tonne |
| 11. Toy making | Per batch |
| 12. Cement | Per Ton or per Bag |
| 13. Radio | Per Radio or per batch |
| 14. Bicycle | Per Bicycle |
| 15. Ship building | Per Ship |
| 16. Hospital | Per Bed per day or Per patient per day |
| 17. Brewing | Barrel |
| 18. Brick-making | 1,000 bricks |
| 19. Coal mining | Tonne |
| 20. Electricity | Kilowatt-hour (kWh) |
| 21. Engineering | Contract, job |
| 22. Oil | Barrel, Tonne, Litre |
| 23. Hotel/Catering | Room/meal |
| 24. Professional services | Chargeable hour, job, contract |
| 25. Education | Course, enrolled student, successful student |
| 26. Hospitals | Patient day |
| 27. Credit control | Accounts maintained |
| 28. Selling | Customer call, value of sales, orders taken |
| 29. Materials storage/handling | Requisition unit issued/received, material movement, value issued/received |
| 30. Automobile | Number of vehicles |
| 31. Cable | Metres / kilometres |
| 32. Chemicals / Fertilizers | Litre / Kilogram / tonne |
| 33. Gas | Cubic Metre |
| 34. Personnel administration | Personnel record |
| 35. Telecom | Number of Calls |
| 36. BPO Service | Accounts handled |
| 37. Professional Service | Chargeable Hours |
| 38. Transport | Tonne-Kilometre, Passenger-Kilometre |

- **Essential features of a good Cost Accounting System**

1. It should be simple and easy to operate
2. Input data should be Accurate
3. The relevant data only should be used
4. Management should have faith in costing system and should provide help as far as possible
5. Executives should also provide these useful services in developing a good costing system.
6. It should be cost effective
7. System should be smoothly and effectively implemented.

- **Define Explicit cost and Implicit cost**

**Explicit Costs -**

1. It involves immediate cash payment.
2. It is also known as out-of-Pocket Cost.
3. Explicit cost can easily be measured and identified.
4. It is recorded in books of Accounts.
5. The purpose of explicit cost is Accounting, reporting, control of cost and decision making
6. Examples of explicit cost are wages, salaries advertisement marketing distribution etc.

**Implicit Costs -**

1. Implicit cost does not require immediate cash payment.
2. This cost cannot be easily measured
3. Such costs are not recorded in Books of Accounts.
4. Such cost is used for decision making like asset replacement make, or buy.
5. Examples of such costs are Interest on own capital, Rent of own building salary

- **Discretionary costs**: Such costs are not tied to a clear cause and effect relationship between inputs and outputs. They arise from periodic decisions regarding the maximum outlay to be incurred. Examples are – advertising, public relations, training etc.

- **Distinguish between Financial Accounting and Cost Accounting**

| Basis | Financial Accounting | Cost Accounting |
|---|---|---|
| **Objective** | It provides information about the financial performance of an entity. | Ascertainment of cost for the purpose of cost control and decision making. |
| **Nature** | It classifies records, present and interprets transactions in monetary terms. | It classifies, costs records, present, and interprets it in a significant manner. |
| **Recording of data** | It records Historical data. | It makes use of both historical and pre-determined costs. |
| **Users of information** | The users of financial accounting statements are shareholders, creditors, financial analysts and government and its agencies, etc. | The cost accounting information is generally used by internal management. But sometimes regulatory authorities also. |
| **Analysis of cost and profit** | It shows profit or loss of the organization either segment wise or as a whole. | It provides the cost details for each cost object i.e. product, process, job, operation, contracts, etc. |
| **Time period** | Financial Statements are prepared usually for a year. | Reports and statements are prepared as and when required. |
| **Presentation of information** | A set format is used for presenting financial information. | In general, no set formats for presenting cost information is followed. |

- **Define cost object and give three examples**

**Cost Object**: It can be anything for which separate calculation or measurement of cost is required. E.g. product, service, process, activity, machine, deptt, programme, project etc.

| | |
|---|---|
| **Product** | Smart phone, Tablet computer, SUV Car, Book etc. |
| **Service** | An airline flight from Delhi to Mumbai, Concurrent audit assignment, Utility bill payment facility etc. |
| **Project** | Metro Rail project, Road projects etc. |
| **Activity** | Quality inspection of materials, Placing of orders etc. |
| **Process** | Refinement of crudes in oil refineries, melting of billets or ingotsin rolling mills etc. |
| **Department** | Production department, Finance & Accounts, Safety etc. |

# RECONCILIATION

**Q.1 Why is it necessary to reconcile the Profits between Cost Accounts and Financial Accounts?**

**Ans.: The reasons for difference in profit shown by financial accounts and profit shown by cost accounts are summarized below:**

1. There are certain items which appear in financial books only and are not recorded in cost accounting books such as:
   - **a) Examples of charges which appear only in financial books are:**
     1. Loss on sale of fixed assets and investments.
     2. Interest on bank loan, mortgage etc.
     3. Expenses relating to the issue and transfer of shares and debentures like stamps duty expenses; discount on shares and debentures, etc.
     4. Penalties and fines.
     5. Amounts written off, goodwill, preliminary expenses, underwriting commission, debentures discounts, etc.
     6. Income Tax.
   - **b) Examples of incomes which are recorded in the financial books only are:**
     1. Profit on the sale of investments and fixed assets.
     2. Interest received on investments and bank deposits.
     3. Dividend received on investment in shares.
     4. Fees received on issue and transfer of shares etc.
     5. Rental income
   - **c) Items of appropriation of profit: I) dividends; ii) Transfer to general reserve or any other fund of accumulated profit.**

     The items included in (c) will not affect net profit shown as per financial books. If, however, financial profit after appropriation is taken, adjustments in respect of appropriation items will have to be carried for reconciling financial profit with profit shown by cost accounts.
2. In cost accounts, overheads are generally absorbed on the basis of a predetermined overhead rate, whereas in financial accounts actual expenditure on overheads is recorded, this will also cause a difference between the figures of profit shown under financial and cost accounts.
3. Different methods of valuation of closing stock adopted in cost and financial accounts will also cause a difference in the results shown by the two sets of books. In financial accounts the method generally followed is cost or market price, whichever is less whereas in cost accounts different methods of pricing of material issues such as LIFO, FIFO, average etc. are used.
4. Use of different methods of depreciation is also responsible for the variation of profit shown by two sets of books. In financial accounts, depreciation may be charged according or written down value method where in cost accounts it may be charged on the basis of the life of the machine.
5. Abnormal items not included in cost accounts also cause a difference in profit. If such items of expenses are included, cost ascertained will not be correct.

**Q. 2 When is the reconciliation statement of Cost and Financial accounts not required?**

**Ans:** Circumstances where reconciliation statement can be avoided - When the Cost and Financial Accounts are integrated - there is no need to have a separate reconciliation statement between the two sets of accounts. Integration means that the same set of accounts fulfill the requirement of both i.e., Cost and Financial Accounts.

**Q.3 List the Financial expenses which are not included in cost.**

**Ans:-** Financial expenses which are not included in cost accounting are as follows:

- Interest on debentures and deposit
- Gratuity, Pension
- Bonus of Employee
- Income Tax, Preliminary Expenses
- Discount on issue of Share
- Underwriting Commissions.

## Q. 4 ITEMS EXCLUDED FROM COST SHEET

**(a) Purely financial incomes:**

1. Rent receivable
2. Interest on investments
3. Brokerage, commission, or/and discount received
4. Dividends received
5. Interest on bank deposits
6. Capital profits i.e., profits on the sale of capital assets like plant and machinery
7. Transfer fees received (It is the fees charged by the company for transferring its shares. Public companies cannot charge transfer fee.)

**(b) Purely financial Expenses:**

1. Discount on bonds, debentures, etc.
2. Expenses on transfer of company's office
3. Capital losses
4. Damages payable
5. Cash discount
6. Penalties and fines
7. Interest on bank loan, debentures, mortgages, etc.
8. Amount written off goodwill, preliminary expenses, underwriting commission, discount on debentures, etc.
9. Appropriation to sinking fund
10. Transfer to general/specific reserves
11. Dividends paid
12. Taxes on income and profits
13. Cost of abnormal idle time.
14. Cost of abnormal wastage of materials
15. Loss by fire, Loss by theft

# MATERIAL COSTING

- **MATERIALS** refer to the tangible, physical input used in relation to production. Materials may be classified into direct materials and indirect materials. An item of material is considered as direct if it satisfies the following conditions**:**
  1. There is a direct relationship between the material cost and the finished product.
  2. Such relationship is capable of being expressed or quantified.
  3. Such expression or quantification achieves control purpose. Therefore, insignificant or immaterial relationship and quantification are ignored**.**

- **MATERIAL CONTROL** Material Control is the systematic control on procurement, storage and usage of materials with a view to maintaining even flow of materials and avoiding at the same time the excessive investment in inventories.

- **OBJECTIVES OF SYSTEM OF MATERIAL CONTROL**
  1. Minimising interruption in production process
  2. Optimisation of Material Cost
  3. Reduction in Wastages
  4. Adequate Information
  5. Completion of order in time

- **PURCHASE REQUISITIONS**

**Purchase requisition** is a form used for making a formal request to the purchasing department to purchase materials**.**
This form is usually filled up by the store-keeper for regular materials and by the assistant in the production planning or technical department for special materials. It should be signed and approved by a responsible official e.g. works manager, in addition to the one originating it**.**
The following conditions should have been fulfilled in order to initiate the purchase procedure**:**

**1)** The item of material should be included in the standard list of the purchase department as "Regular Item". If a new item is required, suitable sanction and approval shall be obtained.
**2)** The stock of the item should have reached the re-order level. This is the level at which action can be taken to initiate the purchase procedure.
**3)** There should be proper co-ordination between purchases, stores and production departments in this regard.

- **ELEMENTS OF MATERIAL CONTROL**
  **(a)** Purchasing of materials
  **(b)** Receiving of materials
  **(c)** Inspection of materials
  **(d)** Storage of materials
  **(e)** Issuing materials
  **(f)** Maintenance of inventory records
  **(g)** Stock audit

- **BILL OF MATERIAL**

**a)** Bill of Material is a complete schedule of parts and materials required for a particular order prepared by the Drawing Office and issued by it together with necessary blue prints of drawings.
**b)** It is prepared by the Engineering / Planning Department in a standard form, in quadruplicate to be used as:
  **1) Stores department:** for verification against requests for issue of materials.
  **2) Cost account department:** for accounting of standard cost.
  **3) Production control department:** for control purposes.
  **4) Engineering or planning department:** for record, reference and control purposes.

- **MATERIAL REQUISITION NOTE**

**MRN** is the document for issue of materials from stores to production departments. It is the voucher of authority as regard issue of materials for use in the factory or in any of its departments. **MRN are made out in triplicate to be used by:**

**1)** Storekeeper –for issuing materials.
**2)** Cost department to account for cost thereof.
**3)** The department requiring the material for control purposes.

Where material list has been prepared: MRN can be prepared by the production department. Such requisition can be either for the whole of all specified materials or in different lots, drawn up to the limit specified in the list.

- **DIFFERENCE BETWEEN BILL OF MATERIALS AND MATERIAL REQUISITION NOTE**

| Bill of Materials | Material Requisition Note |
|---|---|
| 1. It is the document prepared by the engineering or planning dept. | 1. It is prepared by the production or other consuming department. |
| 2. It is a complete schedule of component parts and raw materials required for a particular job or work order. | 2. It is a document asking Store- keeper to issue materials to theconsuming department. |
| 3. It often serves the purpose of a material requisition as it shows the complete schedule of materials required for a particular job i.e., it can replace material requisition. | 3. It cannot replace a bill ofmaterials. |
| 4. It can be used for the purpose of quotations. | 4. It is useful in arriving historical cost only. |
| 5. It helps in keeping a quantitative control on materials drawn through material requisition. | 5. It shows the material actually drawn from stores. |

- **PURCHASE REQUISITION**

Purchases Requisition is a request made to the Purchase Department to procure materials of given description and of the required quality and quantity within a specified period. It is a formal request and it authorizes the Purchase Department to issue a Purchase Order to secure materials intended for periodic requirements of a given material or materials to provide guidance to the Purchase Department to estimate the future requirements in order to secure maximum purchase benefits in the form of higher discount and better credit terms.

This form is ***prepared by storekeeper for regular items*** and ***by the departmental head for special materials not stocked as regular items***.

**The Purchase Requisition is prepared in three copies. Original** will be sent to Purchase department; **Duplicate** copy will be retained by the indenting (request initiating) department and **the triplicate** will be sent to approver for approving the purchase requisition.

- **DISTINGUISH BETWEEN BIN CARD AND STORES LEDGER**

| Basis | Bin card | Stores ledger |
|---|---|---|
| **Maintenance** | Bin card is maintained ***by Store Keeper.*** | Stores ledger is maintained ***by Cost Department.*** |
| **Nature** | It is the stores recording document. | It is an accounting record. |
| **Information** | It contains ***only*** **Quantitative** information in respect of their receipts, issue and balance. | It contains **both Quantitative and Value** information in respect of their receipts, issue and balance. |
| **Time of recording** | In bin card, entries ***are made at the time when transaction takes place***. | In store ledger, entries ***are made only after the transaction has taken place***. |
| **Recording** | Bin card records each transaction. | Stores ledger records the same information in a summarized form. |
| **Inter departmental transfer** | Inter departmental transfer of materials ***does not appear***. | Inter departmental transfer of materials ***appear*** here. |

- **INVENTORY CONTROL** as *"The function of ensuring that sufficient goods are retained in stock to meet all requirements without carrying unnecessarily large stocks."* **Management may adopt the following basis for inventory control:**
  1. **By Setting QuantitativeLevels**
  2. **On The Basis of Relative Classification**
  3. **Using Ratio Analysis**
  4. **Physical Control**

**1. BY SETTING QUANTITATIVE LEVELS**

| | | |
|---|---|---|
| **a)** | Re-order Stock Level | When to Order |
| **b)** | Re-order Quantity/ EOQ | How Much to Order |
| **c)** | Maximum Stock Level | Up to How much to stock |
| **d)** | Minimum Stock Level | At least How much to stock |
| **e)** | Average Stock Level | Stock normally kept |
| **f)** | Danger Stock Level | Kept for emergency requirement |

| Level | Formula | Significance |
|---|---|---|
| Re-Order Level (ROL) | Maximum Usage Rate X Maximum Time<br>[or]<br>Safety Stock + Lead Time Consumption | • Level at which the next purchase procedure must be initiated by preparing Purchase Requisition.<br>• Level to maintain sufficient stock cushion to meet most efficient production facilities and requirements. |
| Minimum Level | Re-Order Level — (Avg. Usage X Average Time) | • Lowest quantity of inventory to be maintained at all times to avoid stock—out situations.<br>• Minimum Investment in raw material inventory.<br>• Level to follow—up on the status on the purchase requisition previously made at the Re—Order Level. |
| Maximum Level | ROL + ROQ — [Minimum Usage X Minimum Time] | • Maximum or upper limit on investment in raw material inventory. Hence, it is the level beyond which raw materials should not be piled up. |
| Average Level | 1/2 X (Maximum Level + Minimum Level)<br>[or]<br>Minimum Level + 1/2 of ROQ | Arithmetic average of maximum and minimum used in determining value of stocks for —<br>• Stock Insurance purposes.<br>• Submission of Stock Statements to Bank<br>• Preparation of Interim Financial Statements |
| Danger Level | Average Usage X Emergency Time | • Level at which emergency purchase action is made to replenish stocks up to minimum level.<br>• Level at which stocks are issued only on "most needed" or "priority" basis. |

## ECONOMIC ORDER QUANTITY:

**EOQ** refers to the quantity to be purchased every time so as to minimize the total of two types of costs associated with purchase. The size of the order for which both ordering and carrying cost are minimum is known as economic order quantity. *Wilson's formula for calculating EOQ*

**EOQ = $(2AO/C)^{1/2}$**
**A = Annual requirement of raw materials (units)**
**O = Ordering cost per order.**
**C = Carrying cost per unit of raw material per annum.**

## ASSUMPTIONS FOR EOQ FORMULA

**1)** Annual requirements of raw material are pre-determined and fixed.
**2)** Buying cost per order is proportional for every additional order. It is fixed and known in advance.
**3)** Carrying cost per unit per annum is fixed and known in advance.
**4)** Raw materials are available uniformly throughout the year.
**5)** Production schedule is uniform throughout the year.
**6)** Cost per unit of the raw material is constant.
**7)** Lead time is zero.
**8)** Minimum stock level is zero.
**9)** There are no transportation costs.

## FACTORS TO BE CONSIDERED WHILE COMPUTING EOQ

**(a) Ordering Costs:** The term 'Ordering Costs" refer to the costs incurred for acquiring inputs. These costs include
**(i)** Cost of placing an order
**(ii)** Cost of transportation
**(iii)** Cost of receiving goods
**(iv)** Cost of inspecting goods
**(v)** Cost of handling materials
**(vi)** Follow up cost

**(b) Carrying Costs:** The term Carrying Costs refer to the costs incurred in maintaining a given level of inventory. These costs include–
**(i)** Cost of Storage space
**(ii)** Cost of holding materials
**(iii)** Cost of rent & insurance
**(iv)** Cost of deterioration or obsolescence
**(v)** Cost of store staff
**(vi)** Interest of the locked-up capital

## 2. ON THE BASIS OF RELATIVE CLASSIFICATION

**a) ABC analysis**
**b) Fast, Slow and Non-moving items (FSN)**
**c) Vital, Essential and Desirable (VED)**

### ABC ANALYSIS

**ABC Analysis** is an ***analytical method of stock control*** which aims at concentrating efforts on those items where attention is needed most. It is based on the concept *that a small number of the* ***items in inventory may typically represent the bulk money value of the total materials used in production process,*** while a relatively ***large number of items may present a small portion of the money value of stores used*** resulting in a small number of items be subjected to greater degree of continuous control.

***Under this system, the items are divided into three categories according to their importance in terms of value and frequency of replenishment during a period.***

**For Example**
***In the making of aircraft,*** Cryogenic Engines involving high costs will be monitored closely while cost of tires, nuts and bolts etc. will be given lesser attention.

**(i) 'A' Category:** *This category of* ***items consists of only a small percentage i.e., about 10% of the total items handled by the stores but require heavy investment about 70% of inventory value,*** **because of their high prices or heavy requirement or both**. Items under this category can be ***Controlled Effectively*** by using a regular system which ensures neither over-stocking nor shortage of materials for production. Such a system plans its total material requirements by making budgets. The stocks of materials are controlled by fixing certain levels like maximum level, minimum level and re-order level.

**(ii) 'B' Category:** *This category of* ***items is relatively less important; they may be 20% of the total items of material handled by stores. The percentage of investment required is about 20% of the total investment in inventories.*** In the case of these items, as the sum involved is **moderate**, the same degree of control as applied in 'A' category of items is not warranted. The orders for the items, belonging to this category may be placed after reviewing their situation periodically.

**(iii) 'C' Category:** ***This category of items does not require much investment; it may be about 10% of total inventory value but they are nearly 70% of the total items handled by store.*** For these categories of items, ***there is no need of exercising constant control***. Orders for items in this group may be placed either after six months or once in a year, after ascertaining consumption requirements. In this case the objective is to economies on ordering and handling costs.

### ADVANTAGES OF ABC ANALYSIS:

1. Closer and stricter control of those items which represent a major portion of total stock value is maintained.
2. Investment in inventory can be regulated and funds can be utilised in the best possible manner. 'A' class items are ordered as and when need arises, so that the working capital can be utilised in a best possible way.
3. With greater control over the inventories, savings in material cost will be realised.
4. It helps in maintaining enough safety stock for 'C' category of items.
5. Scientific and selective control helps in the maintenance of high stock turnover ratio

### FAST, SLOW AND NON-MOVING ITEMS (FSN)

Under this system, inventories are controlled by classifying them **on the basis of frequency of usage**. The classification of items into these three categories depends on the nature and managerial discretion. A threshold range on the basis of inventory turnover is decided and classified accordingly.

**a) Fast Moving-** This category of items are placed nearer to store issue point and the stock is reviewed frequently for making of fresh orders.
**b) Slow Moving-** This category of items are stored little far and stock is reviewed periodically for any obsolescence. and may be shifted to Non-moving category.
**c) Non-Moving-** This category of items are kept for disposal. This category of items is reported to the management and an appropriate provision for loss may be created.

- **VED Analysis** VED stands for Vital, Essential and Desirable- analysis is used primarily for control of spare parts. The spare parts can be classified in to three categories i.e Vital, Essential and Desirable- keeping in view the criticality to production.

**Vital:** The spares, stock-out of which even for a short time will stop the production for quite some time, and where in the stock-out cost is very high are known as Vital spares. For a car Assembly Company, Engine is a vital part, without the engine the assembly activity will not be started.

**Essential:** The spares or material absence of which cannot be tolerated for more than few hours or a day and the cost of lost production is high and which is essential for production to continue are known as Essential items. For a car assembly company 'Tyres' is an essential item, without fixing the tyres the assembly of car will not be completed.

**Desirable:** The Desirable spares are those parts which are needed, but their absence for even a week or more also will not lead to stoppage of production. For example, CD player, for a car assembly company

- **JUST IN TIME (JIT) INVENTORY MANAGEMENT**

JIT is a system of inventory management with an approach to have **zero inventories in stores**. According to this approach material should *only be purchased when it is actually required for production.*
***JIT is based on two principles***
**1.** Produce goods only when it is required and
**2.** the products should be delivered to customers at the time only when they want.

**Advantages of JIT Purchasing**:
**a.** It results in considerable savings in material handling expenses.
**b.** It results in savings in factory space.
**c.** Investment in raw materials & WIP is substantially reduced.
**d.** Last quantity discounts can be obtain & paperwork is reduced because of using of blanket long-term orders to fewer suppliers instead of purchase orders.
**e.** JIT purchasing are now attempting to extend daily deliveries to as many areas as possible so that the goods spend less time in warehouse or on store shelf before they are exhausted.

## 3. USING RATIO ANALYSIS

- **Input- Output Ratio:** Inventory control can also be exercised by the use of input- output ratio analysis. **Input- output ratio is the ratio of the quantity of input of material to production and the standard material content of the actual output**.
This type of ratio analysis enables comparison of actual consumption and standard consumption, thus indicating whether the usage of material is favourable or adverse.

- **Inventory Turnover Ratio:** Computation of inventory turnover ratios for different items of material and comparison of the turnover rates provides a useful guidance for measuring inventory performance. ***High inventory turnover ratio indicates that the material in the question is a fast moving one. A low turnover ratio indicates over-investment and locking up of the working capital in inventories*.**

**FORMULA:**
- **Inventory turnover ratio = Cost of Raw M aterial Consumed / Average Stock of Raw Material**

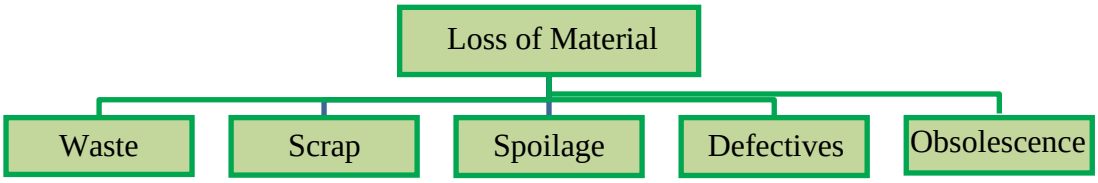
- **Average no. of days of Inventory holding = 365 DAYS / Inventory Turnover Ratio**

By comparing the number of days in the case of two different materials, it is possible to know which is fast moving and which is slow moving. On this basis, attempt should be made to reduce the amount of capital locked up, and prevent over-stocking of the slow-moving items.

## 4. PHYSICAL CONTROL

- **Two Bin System:**
- **Establishment of system of budgets**
- **Perpetual inventory System**
- **Continuous Stock System**

## TYPES OF LOSS OF MATERIAL




- **Waste:** The portion of raw material which is lost during storage or production and discarded. The waste may or may not have any value.

**Treatment of Waste**
**Normal-** Cost of normal waste is absorbed by good production units.
**Abnormal-** The cost of abnormal loss is transferred to Costing Profit and loss account.

- **Scrap:** The materials which are discarded and disposed-off without further treatment. Generally, scrap has either no value or insignificant value. Sometimes, it may be reintroduced into the process as raw material.

**Treatment of Scrap**
**Normal-** The cost of scrap is borne by good units and income arises on account of realisable value is deducted from the cost.
**Abnormal**- The scrap account should be charged with full cost. The credit is given to the job or process concerned. The profit or loss in the scrap account, on realisation, will be transferred to the Costing Profit and Loss Account.

- **Spoilage:** It is the term used for materials which are badly damaged in manufacturing operations, and they cannot be rectified economically and hence taken out of the process to be disposed off in some manner without further processing.

**Treatment of Spoilage**
**Normal**- Normal spoilage (i.e., which is inherent in the operation) costs are included in costs, either by charging the loss due to spoilage to the production order or by charging it to the production overhead so that it is spread over all the products.
Any value realised from spoilage is credited to production order or production overhead account, as the case may be.
**Abnormal-** The cost of abnormal spoilage (i.e., arising out of causes not inherent in manufacturing process) is charged to the Costing Profit and Loss Account. When spoiled work is the result of rigid specification, the cost of spoiled work is absorbed by good production while the cost of disposal is charged to production overhead.

- **Defectives:** It signifies those units or portions of production which do not meet the quality standards. Defectives arise due to sub-standard materials, bad- supervision, bad-planning, poor workmanship, inadequate-equipment and careless inspection.

The defectives which can be re-made as per the quality standard by using additional materials are known as reworks. Reworks include repairs, reconditioning and refurbishing.
Defectives which cannot be brought up to the quality standards are known as rejects. The rejects may either be disposed- off or re-cycled for production process.

**Treatment of Defectives:**
**Normal-** An amount equal to the cost less realisable value on sale of defectives are charged to material cost of good production.
**Abnormal-** Material Cost of abnormal defectives are not included in material cost but treated as loss after giving credit to the realisable value of such defectives. The material cost of abnormal loss is transferred to costing profit and loss account.

# PROCESS COSTING

## Process Costing

It is a costing method used where it is not possible to identify separate units of production, or jobs, usually because of the continuous nature of the production processes involved**.**

**The following are features of process costing which make it different from job or batch costing.**

***(a)*** The output of one process becomes the input to the next until the finished product is made in the final process.

***(b)*** The continuous nature of production in many processes means that there will usually be closing work in progress which must be valued. In process costing it is not possible to build up cost records of the cost per unit of output or the cost per unit of closing stock because production in progress is an indistinguishable homogeneous mass.

***(c)*** There is often a loss in process due to spoilage, wastage, evaporation and so on.

***(d)*** Output from production may be a single product, but there may also be a by-product (or by-products) and/or joint products.

**Process costing is suitable in following manufacturing industries:**
**1) Paper, 2) Sugar, 3) Shoes, 4) Paint, 5) Food, 6) Chemicals, and 7) Rubber**

## Equivalent Production

***Equivalent Production:*** In process industries, production is continuous basis and at the end of accounting period, there is some production which is semi finished or incomplete. Such incomplete production is known as work-in-progress. Such work-in-progress is valued in terms of equivalent production. Equivalent production is calculated in terms of equivalent units with the help of following formula**:**

***Equivalent Units*** **= (Units of WIP) X (Percentage of work completed)**

**Suppose,** closing work in progress is 200 units, which is 75% complete in respect of material, labour and overheads, it is equivalent to 200 units X 75% = 150 completed units**.**

## Define Normal loss, Abnormal loss and Abnormal gain? Explain their accounting treatment.

***Normal Loss:*** Such loss is unavoidable and estimated in advance on the basis of past experience and technical specifications. If such loss fetches no value, it is recorded at nil amounts at the credit side of process account. If such loss fetches some value, the value is credited to the process account**.**

***Abnormal Loss:*** Any loss caused by unexpected or abnormal conditions is considered as abnormal loss. It is credited to the process account at the amount calculated as follows**: (Units of Abnormal Loss) X (Cost per Unit)**

**Where Cost per Unit** $= \dfrac{\text{Normal Cost of Normal Output}}{\text{Normal Output}}$

***Abnormal Gain:*** If actual process loss is than the estimated normal loss, the difference is the abnormal gain; it is debited to process account at the amount calculated as follows**: (Units of Abnormal Gain) X (Cost per unit)**

## Distinguish between Job Costing and Process Costing

1) **In Job costing,** production is against specific orders**, whereas in Process Costing,** production of homogenous goods is continuous**.**
2) **In Job costing,** cost are collected and accumulated for each job separately**. In Process Costing,** costs are collected and accumulated process-wise.
3) **In Job costing,** cost computation is done after completion of job**. In Process Costing,** cost computation is done at the end of each period**.**
4) **In Job costing,** there are usually no transfers from one job to another unless there is some surplus work**. In Process Costing,** the product moves from one process to another.
5) **In Job costing,** proper control is comparatively difficult as each job has different characteristics**, whereas in process costing,** the control is comparatively easy because there is standard and continuous production**.**

# CONTRACT COSTING

- **Contract Costing:** Contract or Terminal Costing involves ascertainment of costs of contract. It is one form of application of principles of job costing**.**

- **Parties Involved: The parties to a contract are:**
  - **Contractor:** One who undertakes and executes work under a contract
  - **Contractee:** One for whom work is undertaken

- **Value of Work Certified**

  - As per the prevailing business practices in contract activity, it is customary for the contractor to raise periodical bills on the Contractee. Such bills are raised on the basis of architect's or surveyor's certificates stating the extent and value of work completed.
  - Hence, that portion of the work which has been completed by the Contractor and certified by the Architect / Surveyor is called as Work Certified.
  - Value of work certified constitutes income on the Contract and is credited to the Contract Account and debited to Work in Progress Account (if the contract is in progress) or to Contra tee's Account (if the contract is completed)

- **Cost of Work Uncertified**

  - It represents the cost of work, which has been carried out by the contractor but is not certified by the architect.
  - It constitutes the work completed from the date of the earlier certification till the end of the accounting year. For example, if the architect had certified the work-performed up to 15th March, then the cost of work done from 16th March to 31st March (being end of the financial year) constitutes work uncertified.
  - It is always shown at cost price.
  - **The cost of uncertified work may be ascertained as follows:**

| Particulars | Amount |
|---|---|
| **Total cost to date** | **xx** |
| **Less: Cost of work certified** | **xx** |
| **Material in hand** | **xx** |
| **Plant at site** | **xx** |
| **Cost of Work Uncertified** | **xxx** |

**Note:**

- Value of Work Certified and Cost of Work Uncertified constitutes income on a contract and is credited to the Contract Account.
- Value of Work Certified includes profit element while cost of work certified does not.

- **Progress Payments (Cash Received):**
  - Payments received by the Contractors as the contract is in progress are called Progress payments or Running Payments.
  - Such payments are released by the Contractee on the basis of Architect's Certificates and as per the terms of the Contract.
  - Generally, the entire amount of work certified is not fully paid. A percentage of the amount due (called Retention Money) is retained and only the balance is paid to the Contractor.

- **Retention Money:**

  - **The amount withheld while making progress payments is called Retention Money.**
  - **Retention Money = Value of Work Certified Less Progress Payments.**
  - **Retention Money is withheld for the following purposes:**

1. To ensure completion of entire contract and compliance with the terms of the Contract
2. To act as security for any defective work, which may be discovered later within guarantee period?
3. To meet repair costs arising due to defective work in case contractor does not rectify it at his cost.
4. To provide a safeguard against the risk of loss due to faulty workmanship

## Notional Profit

- Actual Profit on a Contract can be ascertained only after it is entirely completed. However, for recognition of profits during the course of contract, the concept of Notional Profit is used.
- Notional Profit is the excess of the Income till date over Expenditure till date on a contract.
- It can be ascertained as under:

| Particulars | Amount |
|---|---|
| Value of Work Certified | xx |
| Add: Cost of Work Uncertified | xx |
| Less: Cost incurred till date | xx |
| **Notional Profit** | **xx** |

## What do you mean by Cost plus Contract? What are its advantages and disadvantages?

**Meaning:**

A Cost-plus Contract is one where the contract price is ascertained by adding a percentage of profit to the total cost of the work. Such type of contracts is entered into when estimation of the contract cost with reasonable accuracy is not possible due to unstable conditions of prices of material, labour services, etc.

**Advantages:**

- The Contractor is assured of a fixed percentage of profit. There is no risk of incurring any loss on the contract.
- It is useful especially when the work to be done is not definitely fixed at the time of making the estimate.
- Contractee can ensure himself about the cost of the contract, as he is empowered to examine the books and documents of the contractor to ascertain the accuracy of the costs.

**Disadvantages**

- There is no inducement to the Contractor to avoid wastages and effect economy in production to reduce cost.
- The Contractee may not know the actual cost of contract till its completion, unlike a fixed price contract where his outflow is predetermined.

## What are the rules for recognition of profit on incomplete contracts?

| Description | Percentage of Completion | Profit to be recognised and transferred to P & L Account |
|---|---|---|
| **Initial Stages** | **Less than 25%** | **NIL** |
| **Work Performed but not substantial** | **Up to or more than 25% but less than 50%** | **1/3 x Notional profit x $\frac{\text{Cash received}}{\text{Work certified}}$** |
| **Substantially Completed** | **Up to or more than 50% but less than 90%** | **2/3 X Notional profit X $\frac{\text{Cash received}}{\text{Work certified}}$** |
| **Almost completed** | **Up to or more than 90% but not fully complete** | **Profit is recognised on the basis of Estimated Total Profit** |
| **Fully completed** | **100%** | **Profit X $\frac{\text{Cash received}}{\text{Work certified}}$** |

**Notes:**

***a)*** Percentage of Completion = $\frac{\text{Value of Work Certified X 100}}{\text{Contract Price}}$

***b)*** If there is a loss at any stage, *i. e.* irrespective of percentage of completion, the same should be fully transferred to the P& L A/c.

***c)*** For fully complete contracts, the balance portion of profit is recognised only upon receipt of retention money.

***d)*** If percentage (%) of completion corresponds to the upper or lower limit specified above lower of profits shall be recognised based on conservation / prudence.

- **What do you mean by Escalation Clause?**

**Meaning:**

- In Fixed Price Contracts, the contract price is fixed and pre-determined. If there is an increase in prices of materials, rates of labour etc. during the period of execution of a contract; the total contract Costs may rise and the Contractor's profit may be reduced.
- This increase in prices may induce the Contractor to use materials of lower quality and price in order to maintain his profit margin on the contract.
- To overcome such a situation, the agreement generally contains a stipulation that the Contract
- Price will be increased by an agreed amount or percentage, if the prices of materials, wages etc rise beyond a particular limit. Such a stipulation is called Escalation Clause.

**Accounting Treatment:**

- The amount of reimbursement due should be determined by reference to the Escalation Clause.
- The amount due from the Contractee's should be recorded by means of the following Journal Entry:

**Contractee's Account Dr.**
**To Contract Account**

# OVERHEAD COSTING

## Basis of Apportionment

| S. No. | Common Expense | Basis of Apportionment |
|---|---|---|
| 1 | Rent or Building Maintenance | Floor Area occupied |
| 2 | Factory Lighting Expenses | Number of Light Points or Floor Area occupied |
| 3 | Depreciation of assets | Value of assets |
| 4 | Insurance of assets | Value of assets |
| 5 | Power for machines | HP Rating or (HP Rating X Machine Hours operated) |
| 6 | Indirect Wages | Direct Wages |
| 7 | Supervision | Time Spent **or** Number of Employees **or** Direct Wages |
| 8 | Material Handling Expenses | Value of Materials consumed |
| 9 | Carriage Outwards | Volume of units sold, weight etc. |
| 10 | Misc. Production Expenses | Direct Wages |
| 11 | Fire Insurance of Building | Floor Area occupied |
| 12 | Rent | Floor Area occupied |
| 13 | Delivery Expenses | Volume or distance or weight |
| 14 | Purchase Department Expenses | Number of purchase orders or value of purchases |
| 15 | Credit Department Expenses | Value of Credit Sales |
| 16 | Personnel Department Expenses | Number of Employees |
| 17 | General Administration Expenses | Works Cost |
| 18 | Advertisement | Sales |
| 19 | Sales Assistants Salaries | Time Devoted for various products |
| 20 | Sales Commission | Sales (Actual) |

## Redistribution of service department cost

**Let A and B be Production Departments; X and Y be service departments**

| Assumption | Relationship | Method used |
|---|---|---|
| **Service Departments do Not serve one another** | **X serves A, B<br>Y serves A, B<br>X does not serve Y and vice-versa** | **Direct Distribution Method** |
| **One Service Department serves the other; but does not take back services in return** | **X serves Y, A and B<br>Y serves A and B only (not X)<br>X serves Y; but Y does not serve X** | **Step Ladder Method<br>or<br>Non-Reciprocal Method** |
| **Service Departments serve one another** | **X serves Y, A and B<br>Y serves X, A and B<br>-** | **Reciprocal Method**<br>• **Repeated Redistribution**<br>• **Simultaneous Equation** |

## Machine Hour Rate Method

This method of absorption of overheads is applicable where work is performed per-dominantly by machines. Machine Hour Rate means the cost of running a machine for one hour. This rate is calculated by dividing the amount of factory overheads apportioned to a machine by the number of machine hours. The hourly machine rate is computed fro all types of machines used in the manufacturing process because a single machine rate to cover the entire factory is unsuitable in view of the variety of machines being used.

**Computation of Machine Hour Rate**

**(i)** The total overheads of the department (both allocated and apportioned) are apportioned to different machine used in the department on some suitable basis.

**(ii)** Specific overheads like power, depreciation, etc. are directly allocated to the machine.

**(iii)** The overheads relating to the machine are divided between (a) Fixed or Standing Charged and (b) Variable Charges.

Fixed charges are those which remain fixed irrespective of the use of the machine (e.g. supervision salary, rent, insurance, etc.). The variable charges (i.e. power, depreciation, repairs and maintenance, etc.) vary with the use of the machine.

**(iv)** The effective working hours of the machine are estimated in advance.

**(v)** The overheads pertaining to the machine are divided by effective machine hours to arrive at the Machine Hours Rate.

- **What do you mean by the term under/over absorption of production overhead? How does it arise? How is it treated in cost account?**

**(a) Production Overheads** are usually applied to production on the basis of predetermined rates. The pre-determined rates may be based on estimated costs. The amount of expenses actually incurred and the amount of overhead applied to production will seldom be the same. Some difference is inevitable**.**
If the actual expenses fall short of the amount applied to production, there is said to be an over absorption of production overheads. If the actual expense exceeds the amount applied to production, there is a case of under absorption.

**(b) The under/over absorption of overheads arise due to the following reasons:**

**(1)** Error in estimating overhead expenses.
**(2)** Error in estimating the level of production.
**(3)** Unanticipated changes in methods of production.
**(4)** Seasonal fluctuations in the overhead expenses from period to period.

**(c) Treatment of under/over absorption in Cost Accounts**

**Under/over absorbed overheads may be treated in Cost Accounts by adopting the following methods:**

**(i) Use of supplementary rates:** In case, the amount of under or over absorbed over-heads is large the cost of the jobs may be adjusted by means of a supplementary rate The supplementary rate here is determined by dividing the amount of under or over absorbed overhead by the actual base.

Under – absorption of overheads is set right by increasing the rate of overhead absorption to the extent of supplementary rate. Whereas in the case of Over- absorption of overheads, the rate of overhead absorption is reduced to the extent of supplementary rate.

**(ii) Write off to Costing Profit and Loss Account:** When the amount of under-or-over absorbed overheads is small the simple method is to write it off to the Costing Profit and Loss Account.

**(iii) Absorption in the accounts of subsequent years:** The amount of under or over absorbed overheads may be carried over as a deferred charge of deferred credit to the next accounting year. This may be done by transferring the amount either to a Suspense or Overhead Reserve Account.

- **What is blanket overhead rate?**

**Ans:** Blanket overhead rate is one single overhead absorption rate for the whole factory. It may be computed by using the following formulae:

$$\textbf{Blanket overhead rate} = \frac{\text{Overhead costs for the whole factory}}{\text{* Total units of the selected base}}$$

**The selected base can be the total output; total labour hours; machine hours.**

- **Discuss the agreement in favour of and against inclusion of '*Interest on Capital*' in Cost Accounts. State your views in this regard.**

**Argument in favour of inclusion:**

Just as wages are the reward of labour, in a similar manner interest is reward of capital. As we include wages in costs, so should interest be included.

**1.** Interest is paid on the borrowed capital and is included in accounts. On the same reasoning, interest on owned capital should also be included in costs.
**2.** Unless interest is included in cost, profits are overstated.
**3.** It is necessary to include interest if comparisons are to be made between different processes and operations.
**4.** Where machines replace, a true comparison of the cost of old and new methods cannot be made unless the interest is included as a measure of the hire of asset.

**Arguments against inclusion:**
**Those who oppose its inclusion in costs do so because of the following reasons:**

1. Interest being reward of capital is an economic concept. It should not be applied to costing. Profit is in fact the remuneration of capital and no charge is made in costs for this.
2. Interest is an internal matter of pure finance and should be treated as an appropriation of profits and excluded from costs.
3. Comparisons can be made by including interest on capital but without introducing it into cost accounts. Inclusions of interest in cost accounts create unnecessary complications.
4. It is difficult to determine the amount of capital employed as well as the fair rate of interest to be charged.
5. Inclusion of interest inflates the value of work-in-progress and finished stock in hand which implies an anticipation of income to that extent.

**Theoretically speaking, in principle, inclusion of interest is sound, but on the ground of expediency and practical difficulties, it should be excluded from cost accounts.**

- **What is 'Idle Capacity '? How should this be treated in cost accounts?**

**Idle Capacity:** It is that part of the practical capacity which cannot be utilised due to lack of demand, non availability of materials, skilled labour, shortage of power, fuel or supplies, seasonal nature of product and lower sales expectancy. Idle capacity in fact is the difference between the practical capacity and the capacity based on sales expectancy. In brief, idle capacity is unused capacity of a plant, equipment or department which cannot be used gainfully. It usually arises due to factors which the management of a business concern considers beyond its control.

- **Treatment of Idle Capacity in cost accounts:**

**Idle capacity costs may be normal or abnormal. These costs may be treated in the following ways in cost accounts.**

1. **Normal Idle capacity cost** due to unavoidable reasons may be included in works overheads and be absorbed into the cost of production either by inflating the overhead rate or by means of a supplementary overhead rate.
2. **Abnormal Idle Capacity cost** due to avoidable reasons such as lack of proper planning and control should be charged to costing profit and loss account.

- **Explain Single and Multiple Overhead Rates**

**Ans: Single overhead rate: It is one single overhead absorption rate for the whole factory. It may be computed as follows:**

$$\textbf{Single overhead rate} = \frac{\text{Overhead costs for the entire factory}}{\text{Total quantity of the base selected}}$$

- **The base can be total output, total labour hours, total machine hours, etc.**
- **The single overhead rate may be applied in factories which produces only one major product on a continuous basis. It may also be used in factories where the work performed in each department is fairly uniform and standardized**.

**Multiple overhead rates:** It involves computation of separate rates for each production department, service department, cost center and each product for both fixed and variable overheads. It may be computed as follows**:**

$$\textbf{Multiple overhead rate} = \frac{\text{Overhead cost}}{\text{Corresponding Base}}$$

**Under multiple overhead rates**, jobs or products are charged with varying amount of factory overheads depending on the type and number of departments through which they pass. However, the number of overhead rates which a firm may compute would depend upon two opposing factors viz. the degree of accuracy desired and the clerical cost involved.

- **How will you treat the following items in Cost Accounts :**

1. **Cost of Packing.**
2. **Bad Debts.**
3. **Research and Development.**
4. **Sales production Expenses.**
5. **Drawing Office Cost.**
6. **Obsolescence of Fixed Assets.**
7. **Fringe Benefits.**
8. **Directors' fees and salaries.**
9. **Inspection costs.**
10. **Data Processing cost.**

***Ans.:***

**i) Cost of Packing**

Ordering or primary which is necessary for the production and convenient handling of the product, e.g. ink cannot be sold without a container. The cost of such packing is treated as manufacturing cost.

**A.** Cost of packing which facilities transportation of product to distant places and in protecting those against damage or loss in transit is treated as distribution cost. If each article packed separately packing cost is direct otherwise it is treated as overhead.

**B.** Fancy packing meant to attract customers is a form of an advertisement, the cost is treated as an advertisement expense and selling overhead.

**ii) Bad Debts:**

Some accountants are of the option that bad debts are financial losses and thus excluded from cost accounts. If, however, bad debts are included in cost, it should be treated as selling overhead and may be apportioned to various amounts of bad debts which are of exceptional nature should not be included in cost accounts.

**iii) Research and Development Costs:**

The following are the various methods of treating these costs in accounts:

**(a)** Charging off to costs of current period as revenue expenditure. This method is usually used when such amount is not very heavy.

**(b)** Charging off to costs over a number of years. When benefits of research and development are to be derived over a period of two/three years, it is usually treated as deferred revenue expenditure and recovered over a period of two or three years.

**(c)** Transfer to costing profit and loss account. The research and development costs are written off to Profit and Loss Account of the period in which expenditure is incurred. This method is particularly suitable

**(d)** When research and development prove unsuccessful and does not produce any tangible results.

**iv) Sales Promotion Expenses (Advertisement):**

Advertisement for sales promotion is a selling overhead. When advertisement is for individual products, it should be allocated to the products concerned. On the other hand, when a common advertisement is for more than one product, the cost should be apportioned on the basis of sales turnover or any other suitable basis. Heavy advertisements, the benefits of which is derived over years, should be deferred and charged to the goods sold in the future periods. The cost of advertisement of a permanent nature should be entering, e.g., permanent neon sign.

**v) Drawing Office Cost:**

This is a service department cost and apportioned to production departments on the basis of technical estimates of services rendered or any other suitable basis, like number of drawings made, man hours or some other basis.

**vi) Obsolescence of Fixed Assets:**

It means diminution in the intrinsic value of asset due to its suppression at an earlier date than was foreseen.
While fixing the normal depreciation rate, the risk of obsolescence should be taken into account. The loss on account of obsolescence is generally charged to Closing Profit and Loss Account.

**vii) Fringe benefits:**

Industrial workers usually enjoy certain benefits in addition to their wages, salaries and other allowances. These benefits, known as fringe benefits, are costs incurred by the employers which are not related to the quantity of work done by workers. Fringe Benefits include canteen benefits, maternity leave pay, holiday pay, retiring benefits like pension and gratuity, medical employer's contribution to provident fund, bonus, etc.
The cost of these benefits is allocated to various departments of cost enter , or alternatively apportionment is made on the basis of wages paid or the number of workers. In case the cost of such benefits in each accounting period is not uniform.

**viii) Director Fees and Salaries:**

In case of companies, director's fees and salaries constitutes an important part of the administration overheads. Director fees and salaries are treated in one of the following ways:

**a)** These are treated as a separate item of cost and shown in the cost as such. In this method administration overheads are absorbed as a percentage of works costs.

**b)** Under the second method, director's fees and salaries may be apportioned to production, selling and distribution functions on an equitable basis.

**c)** Thirdly, director's fees may be transferred to costing Profit and Loss Account at the end of the accounting period.

**ix) Inspection Cost:**

Inspection department is a service department and its total cost is apportioned to production departments on the basis of services rendered. The time spent by the staff of Inspection Department in each department is an appropriate basis for this purpose.

**x) Data Processing Unit:**

Data Processing is a service activity. Thus, this cost should be apportioned to various departments like production, administration and sales on the basis of relative service rendered to various departments. The various basis of distribution may be:

a) Number of cards punched and processed
b) Number of reports processed
c) Man hours or computer hours
d) Standard percentages, etc.

# JOINT PRODUCT & BY-PRODUCT

## *Meaning of Joint Product*

When two or more products are simultaneously produced from common set of inputs by a single process. Which are indistinguishable from each other up to the point of separation, are called Joint Products.

**CIMA defines Joint Product as "Two or more products separated in processing each having a sufficiently high sale value to merit recognition as a Main Product".** The relative sales values would be an indication of Joint Products; simultaneous production is the important feature, but the ultimate products not being capable for identification until the split-off point is reached.

| Industry | Joint Products |
|---|---|
| **1. Oil refining** | **Petrol, Diesel, liquid petroleum gas, kerosene, paraffin, and lubricants.** |
| **2. Meat processing** | **Meat, hides, bones, grease,** |
| **3. Mining** | **Several metals from the same ore e.g. iron, copper, silver etc.** |
| **4. Coal gas** | **Coke, tar, and Sulphate of ammonia** |
| **5. Sheep rearing** | **Meat, wool, hides.** |

## Meaning of Joint Costs

The point at which joint products become separately identifiable is called the split-off point or separation point. The production costs incurred for the processing are called Separable or Further processing cost.

**CIMA defines Joint Cost as** 'the costs of providing two or more products or services whose production could not, for physical reasons, be segregated.

Joint costs are those costs, which are common to the processing of joint products or by products up to the point of separation. In other words, Joint costs are allocable to two or more products produced from same raw material of the same process. Such joint cost is known as Joint product costs.

## Meaning of By-Product

A by-product is a secondary product, which incidentally results from the manufacture of main product and also from the same process. A by-product is a product which arises incidentally in the production of the main products and which has a relatively small sales value compared with the main products.

CIMA defines by-product as 'output of some value produced incidentally in manufacturing something else (main Product)'. The distinguishing feature of by-product is its relatively low sales value in comparison to the main products. Like joint products, a by-product may need further processing after the point of separation before it is saleable.

## Difference between joint products and by-products

1. Joint products are the products of equal economic importance, while by-products are of lesser economic importance.
2. Joint products are produced from same input and process whereas by-products are produced from wastage, scrap or discarded material of the main process.
3. Joint products are not produced incidentally but by-products emerge incidentally also.
4. Joint products have significant impact on total cost at the point of separation, whereas by-products have little impact on total cost.

## ACCOUNTING FOR JOINT PRODUCTS

(1) ***Average unit method:*** Under this method, total cost up to the point of separation is ascertained and it is divided by total units produced to get average cost per unit of production. This method can be used only when resultant products are expressed in terms of same unit. When the units are not comparable, the method cannot be used.

(2) ***Physical unit method*****:** Under this method, a physical base like raw material weight in physical output quantity is taken as basis for apportioning the pre-separation cost to joint products**.**

(3) **Survey Method:** When this method is used joint products are multiplied by their weight factors prior to allocation of joint costs to individual joint products**.**

(4) **Standard Cost Method:** If standard costing is in operation, it may be possible to apportion the joint costs on the basis of standard cost set for the respective joint products. It has the advantage of measuring efficiency or of processes in producing joint products**.**

**(5)** ***Contribution Margin Method:*** When this method is used, joint costs are divided in two categories, i.e. Variable and fixed. The variable costs are applied on the basis of units produced or other physical quantities and fixed cost on the basis of contribution made by the various products. Contribution is a term of Marginal Costing. It has been defined in detail in that chapter. For the purpose of present discussion, it should suffice to say that contribution is the difference between sales and variable cost

**(6)** ***Market value Method:*** *Some* cost accountants hold the view, that market value method is the most common method of apportionment of joint costs up to the split-off point. The rationale underlying this approach is that product with the higher sales value should be allocated a larger proportion of the joint costs than the products with the lower sales value. In other words. The joint costs are, apportioned to individual joint products according to the ability of the latter to absorb joint costs**.**

***(a) Market value at the point of separation***

Under this method, the market value of the individual joint products at the time of separation (split off point) is ascertained and the joint cost is apportioned in the ratio. Which the total sales value of each joint products bears to the total selling value of the joint products taken together. Certain authors have suggested that market price of individual product at split-off point should be taken as basis.

**(b)** ***Net Realisable Value Method***

When this method is used, Sales value of Individual joint product is reduced by the following:

**1.** Estimated profit margin.
**2.** Selling and distribution expenses, If any.
**3.** Cost of processing after the split-off point.

The resultant figure represents the net realizable value at Split off point. This should be taken as the basis for apportionment of joint cost among joint products.

# Labour Cost

- **Direct Labour Cost**

The labour cost incurred on the employees who are engaged directly in making the product, their work can be identified clearly in the process of converting the raw materials into finished product is called direct labour cost. For example, wages paid to the workers engaged in machining department, fabrication department, assembling department etc.

- **Time Keeping and Time Booking**

**Time keeping** is the marking of the attendance of a worker when he comes to and leaves the factory. It is recording of time of arrival and departure at the factory gate. Number of methods is used in time keeping and with the advancement of technology; the computers are also being used for time recording and analysis. The person who looks after time keeping is called 'Time Keeper' and his place of work is called 'Time Office'. The time records are the basic data used for calculation of salaries and wages, overtime premiums.

**Time booking** is the recording of time spent within the working day upon different Jobs. It is the keeping record of particulars of work done, or time spent on each job, process operation etc. The time booking is the marking of in and out time on each job attended by the worker. The workers will mark the time in the designated document and it countersigned by the supervisor. It is used to ascertain the labour time spent on each Job, and analysis of idle time, labour cost of various Jobs and Products. The time booked is used to evaluate the performance of labour by comparing actual time booked with standard or budgeted time.

- **Job evaluation**

**Job evaluation** is a procedure designed to rank jobs on a formal basis and to measure the worth of a Job for compensation purposes in relationship to other Jobs. It requires written detailed description of work operations encompassed by each job. The descriptions are used to rate Jobs according to such facts as skill, responsibility, effort and conditions. The ratings employed to group particular jobs into labour grades with associated pay brackets. It is basically a control procedure established to prevent wage inequities. It is an analysis of cost of human effort and its resultant payoff to an organization.

**Advantages**

1. It simplifies wage administration by bringing uniformity in wage rates.
2. A more rational wage and salary structure is set up by making an objective ranking of Jobs and simplifies wage administration.
3. It is reasonably effective within an organization at ranking Jobs, particularly low-level ones.
4. The new Jobs will be brought into the wage structure at the level indicated by the relative worth of existing Jobs.
5. It helps in drawing clear lines of authority and responsibility for administrative convenience.

- **Merit rating**

**Merit rating** is concerned with the evaluation of individual employee. It is a technique used to rate an employee's performance to assist in determining whether a person should receive a merit award, promotion, demotion etc. In merit rating an individual worker certain characteristics like attendance, co-operation, discipline, acceptance of responsibility, integrity, honesty, intelligence, skill etc., are assessed to measure the worth of individual worker.

- It is an evaluation of individual performance on the Job in terms of Job requirements.
- It is an assessment of individual performance on systematic basis and the scope for bias is eliminated while evaluation.
- It provides a scientific basis for determining fair wages for each worker based on his ability and performance.

- **Requisites of good wage incentive Plan**

1. It should be simple to understand by the workers and should enable them to calculate their earnings.
2. It should be simple to administer and reduce clerical work.
3. It should be capable of using computers for increase in speed of calculations.
4. It should be introduced only after full consultation and agreement with the workers and unions.
5. It should act as a motivational scheme.
6. It should guarantee the minimum day wages.
7. It should be ensured to operate for a long period.
8. The incentive should be paid as quickly as possible after the completion of the work.
9. The incentives should relate to the efforts and efficiency of the workers.
10. The abnormal factors should not affect the earnings of the workers.
11. The incentives should be paid only on good production units and discouragement for defective work.
12. It should minimize labour turnover and absenteeism.

## Labour Turnover

**Labour turnover** is the movement of people into and out of the organization. It is usually convenient to measure it by recording movements out of the firm on the assumption that a new employee eventually replaces leaves. The term separation is used to denote an employee who leaves for any reason; Labour turnover is the rate of change in the number of employees of a concern during a definite period. Labour turnover studies are helpful in manpower planning. Just as the high reading on a clinical thermometer is a sign to the physician that something is seriously wrong with the human organism, so is a high index of labour turnover rate a warning to management that something is wrong with the health of the organization. A high turnover rate may mean poor personnel policies, poor supervisory practices or poor company policies. Too lower a rate of turnover can also be a danger signal.

## Measurement of Labour Turnover

**The following formulae are in common use for measuring labour turnover.**

$$\text{Labour turnover rate (Separation rate)} = \frac{\text{Number of Separations}}{\text{Average number employed}} \times 100$$

$$\text{Labour turnover rate (Replacement rate)} = \frac{\text{Number of Employees Replaced}}{\text{Average number employed}} \times 100$$

$$\text{Labour turnover rate (Flux rate)} = \frac{\text{Number of Joining + No. of Separations}}{\text{Average number employed}} \times 100$$

## Causes of Labour Turnover

**High labour turnover may be traced to the following causes, which may be broadly classified under avoidable and unavoidable causes.**

**(a) Avoidable causes:**

1. Dissatisfaction with wages and rewards
2. Dissatisfaction with working conditions
3. Dissatisfaction with personnel policies
4. Lack of transport facilities, accommodation, medical and other facilities and lack of amenities like recreational centers, schools etc.
5. Dissatisfaction with working hours, overtime, layoff, strikes, lockouts, etc.
6. Bad relation with co-warders, superiors and unsatisfactory personnel management, union disputes.
7. Dissatisfaction with the job

**(b) Unavoidable causes:**

1. Personal betterment
2. Family circumstances
3. Climatic conditions
4. Community conditions & Health conditions
5. Marriage (in case of women)
6. Retirement and death
7. Migratory nature of workers
8. Redundancy due to seasonal changes, shortage of materials and other resources, slack of business, lack of planning and foresight of higher management.

**Treatment of cost of labour turnover –** In most of the companies, the cost of labour turnover forms part of overhead. When costs are divided into "Preventive costs" and "Replacement costs", preventive costs are charged to departments in proportion to labour strength. Replacement costs may be directly charged to product or it may also be treated like preventive costs. It does not appeal to reason to charge the replacement cost to a particular department, particularly when replacement arises due to short sighted policy of management.

- **Remedial steps to minimize labour turnover: The following remedial steps are useful in minimizing labour turnover.**

1. **Exist interview:** An interview may be arranged with each outgoing employee, to ascertain the reasons of his leaving the organization**.**
2. **Job analysis and evaluation:** Before recruiting workers, job analysis and evaluation may be carried out to ascertain the requirements of each job**.**
3. **Scientific system of recruitment, selection, placement and promotion:** The organization should adopt the use of scientific system of recruitment, selection, placement and promotion of an employee within the organization.
4. **Use of Committee:** Issues like control over workers, handling their grievances etc. may be dealt by a committee, comprising of members from management and workers**.**

- **Idle Time**

In the production process, lost time may occur for several reasons. The idle time is the difference between hours paid and hours worked. Where the workers are paid on time basis, the idle time is the difference between the time for which the workers were paid and that which they actually spent on production process. It is the labour time paid for but not utilized in production.

- **Causes of the Idle Time:**

**(a) Causes of Normal idle time:**

1. Traveling time from one Job or department to another
2. The distance covered between the factory gate and the department actual place of work
3. Elapse of time between finishing job and starting another Job.
4. Time spent to overcome fatigue
5. Tea and lunch breaks
6. Machine or Job setting up time etc**.**

**(b) Causes of abnormal idle time:**

1. Temporary lack of work
2. Machine breakdown
3. Power failures
4. Shortage of raw materials
5. Waiting for tools
6. Waiting for Jobs due to unplanned production
7. Stoppage of work due to managerial policy decisions
8. Strikes, Lockouts, Floods, earthquakes etc.

**ACCOUNTING TREATMENT OF IDLE TIME**

**(a) Normal Idle Time –** The wages paid for the normal idle time period is treated as production overhead and absorbed into cost of product by adopting an absorption rate. The normal idle time in tool setting etc. can be charged at inflated rate. Jobs are charged at inflated rate**.**

**(b) Abnormal Idle Time –** The wages paid for the abnormal idle time can be avoided by taking proper care and caution. It is not treated as part of cost and excluded from cost accounts and it is, straight away debited to Costing Profit and Loss account**.**

- **OVERTIME PREMIUM**

**Overtime premium** is paid to the workers for the extra time worked than the normal working hours specified in the Factories Act, 1948 or work agreement with the union. The extra time is paid at a higher rate than the normal time rate, for example, if a worker works beyond 8 hours in a day or 48 hours in a week, he is paid with double the wages for the extra time worked.

The overtime wages consist of two elements**:**

**(i) Normal wages for extra time and**

**(ii) Additional wages paid for the overtime worked.**

**THE ACCOUNTING TREATMENT OF OVERTIME PREMIUM**

- Overtime hours at the normal rate are treated as direct labour cost and charged to production on the same basis as time worked during normal hours but the premium paid during the overtime period is not a direct charge against production but is recovered as production overhead through overhead recovery rate.
- Where the overtime is worked on a specific Job to meet the time schedules or to carry out specific rush orders for which extra price is recovered, than the entire labour cost can be charged as direct labour to that Job.
- If overtime wages paid due to negligence or delay of worker of a particular department, it may be charged to the concerned department.
- If the overtime premium is paid due to abnormal causes, it should be charged to Costing Profit and Loss account.

## TYPES OF INCENTIVE SYSTEMS

### Halsey Premium Plan

| | |
|---|---|
| **1. Features** | **The main features of Halsey Premium plan are as follows:**<br>(a) Standard time is fixed for each work<br>(b) It guarantees the hourly wages to workers for the actual time taken.<br>(c) Bonus is paid if the time is saved (i.e. when actual time is less than the standard time).<br>**(d)** Bonus is equal to 50% of the time wages of time saved**.** |
| **2. Computation of Total Earnings** | **Actual Time Taken × Time Rate + 50% x Time saved × Time Rate** |
| **3. Advantages** | (a) It is easy to understand and simple to operate.<br>(b) It guarantees the hourly wages to workers for the actual taken time.<br>**(c)** It provided an incentive for an efficient worker who completes his work in less than the standard time |

### Rowan Plan

| | |
|---|---|
| **1. Features** | **(a) Standard time is fixed for each work**<br>**(b) It guarantees the hourly wages to workers for the actual time taken.**<br>**(c) Bonus is paid if the time is saved (i.e. actual time is less than the standard time).**<br>**(d) Bonus is that proportion of the time wages of time saved bears to the standard time.** |
| **2. Computation of Total Earnings** | **Actual Time × Time Rate +** $\frac{Time Saved}{Time Allowed}$ **× Actual Time × Time Rate** |
| **3. Advantage** | **It guarantees the hourly wages to workers for the actual time taken.** |

### COMPARISON BETWEEN HALSEY PLAN AND ROWAN PLAN

| Time Saved | Bonus, Earning per Hour and Labour cost per unit |
|---|---|
| **(a) When time saved is less than 50% of standard time** | **Bonus, Rate of increase in per hour earning and Labour cost per unit are higher in Rowan plan than Halsey Plan.** |
| **(b) When time saved is 50% of standard time** | **labour cost per unit will be same** |
| **(c) When time saved is more than 50% of standard time** | **Bonus, Rate of increase in per hour earning, and labour cost per unit is higher in Halsey Plan than Rowan Plan.** |

## TAYLOR'S DIFFERENTIAL PIECE RATE SYSTEM

| | |
|---|---|
| **1. Features** | **(a)** Standard time is fixed for each work.<br>**(b)** Two-piece rate are fixed- (i) a lower rate (i.e. 80% of normal piece rate) for the worker who produces below the standard output (ii) a higher rate (i.e. 120% of normal piece rates) for the worker who produces standard output or more than the standard output.<br>Note: Some authors also use 83% and 125% of the normal piece rates as lower and higher rates respectively. |
| **2. Computation of Total Earnings** | |
| **Worker** | **Total Earnings** |
| **(a) For worker who produces less than the standard output** | **Actual output × Normal piece Rate × 80%** |
| **(b) For worker who produces less than the standard output** | **Actual output × Normal piece Rate × 120%** |
| **4. Advantages** | **(a)** It is simple to understand and easy to operate<br>**(b)** It provides incentive to efficient workers<br>**(c)** It helps the employer not increase the production by offering higher rates to more efficient workers<br>**(d)** It helps the employer to reduce the overhead cost per unit because of increased production. |
| **5. Disadvantages** | **(a)** It penalizes very severely the inefficient workers because a slight reduction in output may result in a larger reduction in their earnings.<br>**(b)** It does not guarantee the hourly wages and this insecurity affects the morale of worker<br>**(c)** Labour cost will differ between two levels of performance because of two different rates.<br>**(d)** Higher and lower rates may be the source of conflict among the workers<br>**(e)** Employer – Employee relations may also be standard if the standard is put at a high level. |

## Gantt Task and Bonus System

| | |
|---|---|
| **1. Features** | **(a) It is combination of time rate, piece rate and bonus plan.**<br>**(b) Standard time is fixed for each work.**<br>**(c) It guarantees the day wages to the worker**<br>**(d) Three rates of payments are fixed as follows.** |
| **2. Computation of Total Earnings** | |
| **Worker** | **Total Earnings** |
| **(a) For worker who produces less than the standard output** | **Actual Hours × Time Rate per hour** |
| **(b) For worker who produces Standard output only** | **(Actual Hours × Time Rate per Hour) × 120%** |
| **(c) For worker who produces more than the standard** | **= (Actual output × Piece Rate × 120%** |

## EMERSON'S EFFICIENCY SYSTEM

| | |
|---|---|
| **1. Features** | **(a)** Standard time is fixed for each work<br>**(b)** It guarantees the day wages to the worker.<br>**(c)** Bonus is paid if the level of efficiency attained exceeds 66 $\frac{2}{3}$ %<br>**(d)** It uses 32 different rates of bonus (up to 20% Basic wages)<br>**(e)** Above 100% level of efficiency bonus of 20% of basic wages plus 1% for each 1% increase in level of efficiency is provided. |
| **2. Computation of Total Earnings** | |
| **Level of Efficiency Earning under Emerson's Efficiency Scheme** | |
| **Up to 66 $\frac{2}{3}$ %** | Only Guaranteed Time Wages |
| **Above 66 $\frac{2}{3}$ % and up to 100 %** | (Actual Hour Worked × Time Rate Per Hour) + An increase in bonus according to degree of efficiency on the basis of Step Bonus Rates which can go upto 20% of Basic Wages For example, at 80% level of efficiency. Rate of Bonus is 4% |
| **Above 100 %** | (Actual Hour Worked × Time Rate Per Hour) + Bonus @20 % of Basic Wages + additional Bonus @ 1 % for each 1 % increase in efficiency. |
| **4. Advantages** | **(a)** It is simple to understand and easy to operate<br>**(b)** It guarantees the day wages to the worker and then provides security<br>**(c)** It provides incentives even for those workers whose level of efficiency exceeds 66 2/3 % but does not exceed 100%.<br>**(d)** It provides additional incentive for those workers whose level of efficiency exceeds 100%. |
| **5. Disadvantages** | **(a)** The incentive is quite small to attract very efficient and ambitious workers<br>**(b)** It does not provide any incentive for those whose level of efficiency is upto 66 $\frac{2}{3}$ % |

# OPERATING COSTING

- **Define Operating Costing?**

There are various undertakings which provides or renders services to their customers e.g. Airways, Railways, Hospitals, Transport, electricity, etc. All these industries are interested in ascertaining the cost of providing a service, so that they can decide upon the amount to be charged for providing the service. Operating costing is the technique adopted to calculate the cost of providing a service.

- **Distinguish between Operating Costing & Operation Costing.**

**Operating Costing:** It is a method of costing applied by undertakings which provide service rather than production of commodities. Like unit costing and process costing, operating costing is thus a form of operation costing**.**

The emphasis under operating costing is on the ascertainment of cost of rendering services rather than on the cost of manufacturing a product. It is applied by transport companies, gas and water works, electricity supply companies, canteens, hospitals, theatres, school etc. Within an organisation itself certain departments too are known as service departments which provide ancillary services to the production departments. For example, maintenance department; power house; boiler house; canteen; hospital; internal transport.

**Operation Costing:** It is defined as the refinement of process costing. It is concerned with the determination of the cost of each operation rather than the process. In those industries where a process consists of distinct operations, the method of costing applied or used is called operation costing. Operation costing offers better scope for control. It facilitates the computation of unit operation cost at the end of each operation by dividing the total operation cost by total input units. It is the category of the basic costing method, applicable, where standardized goods or services result from a sequence of repetitive and more or less continuous operations, or processes to which costs are charged before being averaged over the units produced during the period. The two costing methods included under this head are process costing and service costing**.**

- **Explain Absolute and Commercial Tonne – kms.**

**(a) Absolute tonne – km:** Applying the concept of weighted average, it means the sum total of tonne-kms., arrived at by multiplying various distances by respective load quantities carried.

**(b) Commercial tonne-kms:** Applying the concept of simple average, it is derived by multiplying the total kms. travelled by the average tonnes loaded.

**Examples of Simple Cost Unit**

| | Nature of service | Cost unit |
|---|---|---|
| (1) | Taxi | Per – km. |
| (2) | Hiring of a complete vehicle | Per – Km. |
| (3) | Course in a college | Per Student |
| (4) | Buffet Lunch/Dinner | Per guest. |
| (5) | Tea in a canteen | Per cup of tea |

**Examples of composite cost unit**

| | Nature of Service | Cost unit |
|---|---|---|
| (1) | Bus or train-journey | Per passenger-km. |
| (2) | Goods Carriage | Per tonne – km. |
| (3) | Hotel | Per room per day |
| (4) | Hospital | Per bed per day |
| (5) | Cinema / Circus | Per seat per Show. |

# Integrated and Non-Integrated Accounting

## Integrated Accounting System

Integrated Accounting System is a system of accounting whereby cost and financial accounts are kept in the same set of books. Such a system will have to afford full information required for Costing as well as for Financial Accounts. In other words, information and data should be recorded in such a way so as to enable the firm to ascertain the cost (together with the necessary analysis) of each product, job, process, operation or any other identifiable activity. For instance, purchases are analysed by nature by nature of material and its end-use. Purchases account is eliminated and direct postings are made to Stores Control Account, Work-in-Progress account, or Overhead Account Payroll is straightway analysed into direct labour and overheads. It also ensures the ascertainment of marginal cost, variances, abnormal losses and gains. In fact, all information that management requires from a system of Costing for doing its work properly is made available. The integrated accounts give full information in such a manner so that the profit and loss account and the balance sheet can be prepared according to the requirements of law and the management maintains full control over the liabilities and assets of its business.

## Essential pre-requisites of Integrated Accounting System are as follows

1. The management's decision about the extent of integration of the two sets of books. Some concerns find it useful to integrate up to the stage of factory cost while other prefer full integration of the entire accounting records.
2. A suitable coding system must be made available so as to serve the accounting purposes of financial and cost accounts.
3. An agreed routine, with regard to the treatment of provision for accruals, prepaid expenses, other adjustment necessary for preparation of interim accounts.
4. Perfect coordination should exist between the staff responsible for the financial and cost aspects of the accounts and an efficient processing of accounting documents should be ensured.
5. Under this system there is no need for a separate cost ledger. Of course, there will be a number of subsidiary ledgers; in addition to the useful Customers' Ledger and the Bought Ledger, there will be: (a) Stores Ledger; (b) Stock Ledger and (c) Job Ledger.

## Advantages of Integrated Accounting System

1. Since there is one set of accounts, thus there is one figure of profit. Hence the question of reconciliation of costing profit and financial profit does not arise.
2. There is no duplication of recording of entries and efforts in the separate set of books.
3. Costing data are available from books of original entry and hence no delay is caused in obtaining information.
4. The operation of the system is facilitated with the use of mechanized accounting.
5. Complete analysis of cost and sales are kept.
6. Complete details of all receipts and payments in cash are kept.
7. Complete details of all assets and liabilities are kept and this system does not use notional account to represent impersonal accounts.

## Non- Integrated Accounting System

- Non-integrated accounting system is a system is a system in which two different sets of accounting records are maintained for financial accounting & cost accounting purpose. This system is also known as "Cost Ledger Accounting System".
- The cost accounts are maintained in double entry book- keeping as in the case of financial accounts.
- The non-integrated system of accounting is followed in the following situations when:
  1. Principal Ledgers are to be maintained in costing deptt.
  2. Principle accounts are to be maintained.
  3. Journal entries are to be passed in cost accounts.

- **Difference between Non-Integral System and Integral System**

| Basis of Distinction | Non-integral System | Integral System |
|---|---|---|
| No. of Sets of Books | Two separate sets of books are maintained. | Only one set of books is maintained. |
| Cost Ledger | Is maintained | Is not maintained |
| Control Accounts | Accounts are opened in the Cost Ledger. | Accounts are opened in the General Ledger. |
| Profit/Loss | There are two figures of profit/loss. | There is only one figure of profit/loss. |
| Reconciliation | Reconciliation is needed. | There is no need for reconciliation. |
| Balances of Overheads Control A/c | Are transferred to Costing Profit & Loss Account. | Are transferred to Profit & Loss Account. |
| Economical | It is expensive due to duplication of work. | It is economical because it avoids the duplication of work. |

# MARGINAL COSTING

- **Marginal Cost:** It means total variable cost comprising prime cost and variable overheads. *According to the Institute of Cost and Management Accountants, London,* Marginal Cost is "The amount at any given volume of output by which aggregate costs change if the volume of output is increased of decreased by one unit".

- **Marginal Costing:** In marginal costing, total cost is segregated into variable cost and fixed cost. First of all, contribution is calculated with the help of following equations:

  **Contribution = Selling Price – Variable Cost**

  **After calculating contribution, we can calculate profit as follows:**

  **Profit = Contribution – Fixed Cost.**

  Marginal Costing assumes that only variable cost is the production cost and fixed cost is the period cost which has to be incurred regardless of the volume of output.

- **Contribution:** The difference between the selling price and the variable cost is contribution. For example, if S.P. per unit is Rs.18 and V.C. per unit is Rs.1, we get contribution per unit of Rs. (18 – 12) = Rs.6.

- **Differential Cost:** It means the increase or decrease in total cost that result from adoption of an alternative course of action. This type of cost can either be the incremental cost or decremental cost. Incremental cost means the increase in costs due to increase in level of production and decremental cost means the decrease in costs due to decrease in level of production.

- **CVP Analysis:** Profits of an undertaking depends on a large number of factors. Following three factors are considered to be the most important factors:
  - **Cost of Manufacture**
  - **Volume of Sales**
  - **Profit**

  The analysis of cost, volume and profit is important for profit planning, cost control and decision-making. This analysis is also of special help in the preparation of flexible budget which indicates cost and profit at various levels of activity**.**

- **P/V Ratio:** This ratio shows the relationship between contribution and sales and is expressed in percentage.

  P/V Ratio is calculated as follows**:**

$$\frac{\text{Contribution}}{\text{Sales}} \times 100$$

  **Where contribution = Sales – Variable cost Or Fixed Cost + Profit**

- **B.E.P. (Break Even Point):** It refers to that point where total cost is equal to Total Revenue, i.e. it is a point of no profits no loss. This is the minimum point of production where total costs are recovered. It is calculated as follows:

  In Units =

$$\frac{\text{Total Fixed Cost}}{\text{Contribution per unit}}$$

  In Value

$$\frac{\text{Total Fixed Cost}}{\text{P/V Ratio}}$$

- **Discuss the limitation of Marginal costing**

  **(1)** Marginal costing is based on an unrealistic assumption that all costs can be segregated into fixed & variable costs.

  **(2)** Marginal costing does not provide any yardstick for evaluation of performance.

  **(3)** Marginal costing produces unrealistic profit/loss because fixed overheads are excluded from stock valuation.

  **(4)** Contribution in marginal costing is not a fool-proof indicator of profitability.

  **(5)** Marginal costing can correctly assess profitability on a short-term basis only.

- **Importance of Marginal Costing**

**(i)** Marginal costing is a useful total of profit planning. If guides the management about the probability of earning profit at various levels of production & sales.

**(ii)** Marginal costing is very valuable in decision making. It provides information to management in making decisions like make or buy, selling price fixation, exporting decision etc.

**(iii)** Valuation of costing stock at variable cost under marginal costing is considered better than valuation of stock at total cost. Under Marginal Costing, no part of the fixed cost is carried forward to next year in the form of stock.

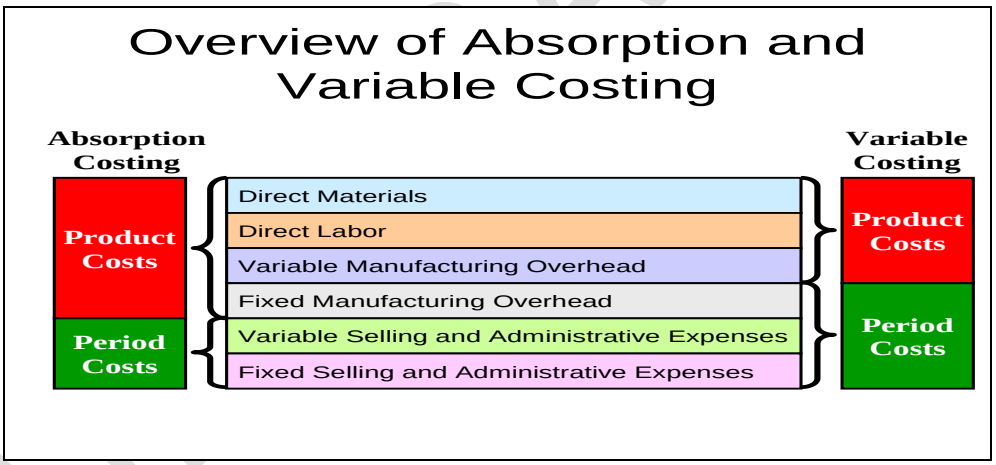
**(iv)** Marginal costing provides the management with useful Techniques like break even Analysis, P/V Ratio, Margin of safety etc.

**(v)** Marginal costing does away with the problem of under or over absorption of fixed overheads because fixed overheads are transferred to costing P & L A/c

**(vi)** Marginal costing is a simple technique to operate because it avoids the complexities of apportionment of fixed cost on arbitrary basis.

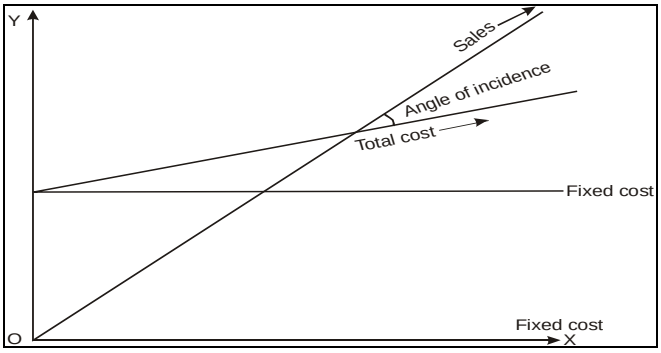
- **Distinguish between Absorption Costing & Marginal Costing.**

| Absorption Costing | Marginal Costing |
|---|---|
| **1.** Total cost (both fixed & variable) is charged to the cost of products. | **1.** Only variable cost is charged to products. |
| **2.** Fixed cost is included in the cost of products. | **2.** Fixed cost is not included in the cost of products. It is transferred to costing P&L A/c |
| **3.** Opening & closing stocks are valued at total cost which includes both fixed & variable cost. | **3.** Stocks are valued only at variable cost. |
| **4.** Profitability is measured by profit. | **4.** Profitability is judged by the contribution. |




- **Angle of Incidence:**

**Angle of incidence** is an angle formed by the intersection of total cost lien & total Revenue line in a break-even chart. Larger angle of incidence is a sing of higher profitability & a lower angle is a sing of lower profitability. **It is shown as follows: –**

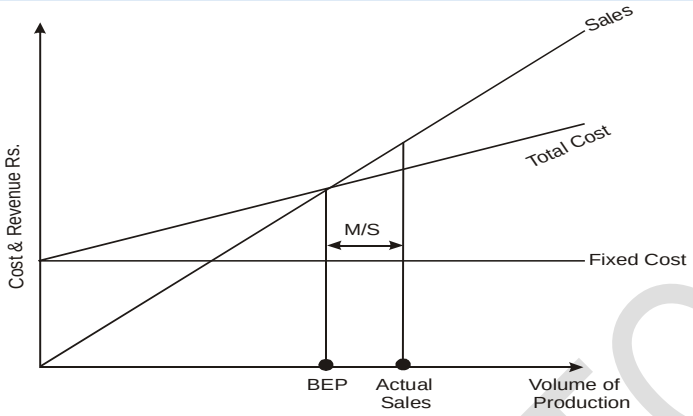


- **Margin of Safety (MS)**

**It is the difference between actual sales & Break even point. It is expressed as follows: Margin of safety = Actual sales – B.E. Point**

Larger the of safety, the more sound is the position of the business in respect of profit earning. This means that larger MS indicates larger amount of profit & lower MS means lower profits. MS has a direct relation to profit.

**It is expressed as follows: Margin of Safety × P/V Ratio = Profit**




- **What do you understand by Key factor? Give two examples of it.**

**Key factor –** The CIMA defines a Key Factor as "the factor which, at a particular time, or over a period, will limit the activities of an undertaking. Management has to prepare a plan after taking into consideration the constraints, if any, about the utilization of various resources so that the profit can be maximized. These constraints are known as limiting factor or key factor.

**Example 1:** If raw material is the key factor and its availability is limited to particular quantity and the company is manufacturing three products A, B & C in such cases contribution per unit of kg is calculated to decide which product is manufactured first.

**Example 2:** If machine hours is the key factor. Than we should calculate contribution per machine hour to maximize our profit.

# BUDGETARY CONTROL

- **Define budget and budgetary control. State the advantages of budgetary control in an organization.**

Budget is a written plan covering projected activities of a firm for a defined period of time, expressed in quantitative terms. According to C.I.M.A. England Terminology, a budget is "a financial and/or quantitative statement, prepared and approved prior to a defined period of time, of the policy to be purchased during the period for the purpose of attaining a given objective."

*Budgetary Control is a system* which uses budget as a means of planning and controlling. According to C.I.M.A. England, Terminology budgetary control is 'the establishment of budgets relating to the responsibilities of executive to the requirements of a policy, and the continuous comparison of actual with the budgetary results, either to secure by individual action the objectives of that policy or to provide a basis for its revision**.'**

- **Advantages of Budgetary Control**

1. There is a planned approach to expenditure and financing of the business.
2. Budgetary control combines the ideas of different levels of management in the preparation of the budget.
3. A budget provides an incentive whenever it is set on attainable results.
4. It directs capital expenditure in the most profitable channels.
5. The budget of cash receipts and expenditure ensures sufficient working capital and other resources for the efficient operation of the business.
6. Budgeting co-ordinates the activities of the various departments and functions by setting their limits and goals.

- **limitations of budgetary control**

1. The budget plan is based on estimates. The strength or weakness of a budgetary control system depends to a large extent on the accuracy with which estimates are made.
2. A budgetary programme must be continuously adapted to fit changing circumstances. Normally, it takes several years to attain a reasonably good system of budgetary control.
3. Execution of a budget will not occur automatically. All levels of management must participate enthusiastically in the programme for the realization of budgetary goals.
4. No budgetary system will eliminate the necessity for superior executive ability in every major business decision. In other words, budgeting does not take the place of management, but rather it is a tool management.
5. It is essential that there must be some co-relation between the cost of the system and the benefits derived from it. It is quite common to find that operation of budgeting becomes so costly that small concern cannot afford to adopt.

- **What is zero base budgeting?**

Zero Base Budgeting (ZBB) is a new concept in preparation of budgets. In ZBB, instead of taking previous year's figures as the base, every item has to justify its inclusion in the budget. ZBB is defined as a system whereby each budget item, regardless of whether it is new or existing, must be justified in its entirely each time a new budget is prepared. Under ZBB there is continuous re-evaluation of the activities of the organization to ascertain that activities are absolutely necessary for the organization**.**

- **Advantage of ZBB**

1. In ZBB all activities included in the budget are justified on cost benefit consideration which promotes more effective allocation of resources.
2. ZBB discards the attitude of accepting the current position in favour of an attitude of questioning and challenging each item of budget.
3. It is an educational process and can promote a management team of talented and skillful people which lend to promptly respond to changes in the business environment.
4. It is an educational identification of inefficient and unnecessary activities and avoids wasteful expenditure**.**

- **Essentials of an effective budgetary control system**

1. **Co-operation of Top Management:** Budgeting must have complete co-operation of the top management**.**
2. **Maximum Profit:** The ultimate object of releasing maximum profit should always be kept upper most**.**
3. **Budget Committee:** A budget committee should be established consisting of the budget director, chief executive officer and executives of various departments of the organization**.**
4. **Constant Vigilance:** Effective system of budgeting requires that periodic reports comparing budget and the actual result should be prepared promptly**.**
5. **Reasonably Attainable Goods:** Budget figures should be realistic and represent reasonably attainable goals**.**
6. **Adequate Accounting System:** The accounting system in the business should be adequate such as to hold each part of the organization to its responsibilities**.**

## Classification of Budgets

**1. Functional Budget**

Functional Budget is one which relates to functions of a business. For example, production budget relating to the manufacturing function. Functional Budgets are prepared for each function and they are subsidiary to Master budget to the business. The various types of the functional Budgets to be prepared will vary according to the size and nature of the business**.**

**Types of functional Budgets**

**(a)** Sales Budget
**(b)** Production Budget
**(c)** Material Usage Budget
**(d)** Material Purchase Budget
**(e)** Direct labour Budget
**(f)** Overhead Budget
**(g)** Cash Budget
**(h)** Master Budget

**2. Master Budget**

It is consolidated summary of the various functional Budgets. It serves as the basis upon which Budgeted P&L a/c and forecasted balance sheet are built-up.

**3. Long term Budget**

The Budgets which are prepared for periods longer than a year are called long term budget. Such Budgets are helpful in Business forecasting and forward planning. Capital expenditure Budget and Research and Development Budget are the examples of long-term Budgets**.**

**4. Short term Budget**

Budgets which are prepared for period less than a year are known as short term budgets. Cash Budget is an example of short-term Budget.

**5. Basic Budget**

A budget which remains unaltered over a long period of time is called basic budget**.**

**6. Current Budget**

A budget which is established for use over a short period of time and is related to the current conditions is called current budget.

**7. Fixed Budget**

**According to CIMA London "**A Fixed Budget is a Budget designed to remain unchanged irrespective of the level of activity actually attained**." It is used as an effective tool of cost control.**

**The main features of a fixed Budget are as follows**

1. It is prepared for one fixed level of Activity.
2. It does not change with the change in the level of Activity.
3. Expenses are not classified into fixed, variable and semi-variable

**8. Flexible Budget**

**According to CIMA London "**A Flexible Budget is a Budget which, by recognizing the difference between fixed semi-variable and variable cost is designed to change in relation to the level of activity attained**". Flexible Budget represents the amount of expenses that is reasonably necessary to achieve each level of output specified.**

**The main features of a Flexible Budget**

1. It is prepared for different levels of Activity
2. It change with the change in the level of Activity
3. Expenses are classified in to fixed, variable and semi-variable.

## State the circumstances in which flexible budgets are used.

***1.*** Those companies should use flexible budgeting which keep on introducing new products or make frequent changes in the product design. In such companies it is rather difficult to forecast sales with accuracy.
***2.*** Industries with seasonal fluctuations in sales and/or production like ice cream, soft drinks, etc. should also use flexible budgets.
***3.*** Industries which are more prone to changes in fashion, like ready made garments should also use flexible budgets.

- **Explain three control ratios used for performance evaluation**

**(1) Capacity Ratio**

This ratio expresses the relation between actual hours & Budgeted hours. It is calculated by the following formula.

**Capacity Ratio =** $\frac{\text{Actual Hours}}{\text{Budgeted Hours}} \times 100$

**(2) Efficiency Ratio** This ratio shows the standard hours equivalent to the work produced expressed as a % of actual hours spent in production. Its formula is as follows:

**Efficiency Ratio:** $\frac{\text{Standard hours for actual production}}{\text{Actual hours}} \times 100$

**(3) Activity Ratio** This ratio shows the standard hours equivalent to the work produced expressed as a % of budgeted standard hours. It is calculated by the following formula:

**Activity Ratio =** $\frac{\text{Standard hours for actual production}}{\text{Budgeted hours}} \times 100$

# STANDARD COSTING

- **Difference between BUDGETARY CONTROL AND STANDARD COSTING.**

| Budgetary Control | Standard Costing |
|---|---|
| *1.* Budgetary control is concerned with the operation of the business as a whole and hence it is more extensive. | *1.* Standard costing is related with the control of expenses and hence it is more intensive. |
| *2.* Budget is a projection of financial accounts | *2.* Standard cost is the projection of cost accounts. |
| *3.* It does not necessarily involve standardization | *3.* It requires standardization of products. |
| *4.* Budget control can be adopted in part also. | *4.* It is not possible to operate this system in parts. |
| *5.* Budget can be operated without standards. | *5.* Standard costing cannot exist without budgets. |

- **Limitations of Standard Costing**

1. The system may not be appropriate to the business.
2. The staff may not be capable of operating the system.
3. A business may not revise standards to keep pace with the frequent changes in manufacturing conditions. Firms may avoid revising standards as it is a costly affair.
4. Inaccurate and unreliable standards cause misleading results.
5. Inhalation of the standard costing system is a costly affair and small firms cannot afford it.
6. Standard costing is expensive and unsuitable in job order industries manufacturing non-standardized products.

- **Advantages of Standard Costing**

1. Effective cost control
2. Help in planning
3. Provides incentives
4. Fixing prices and formulating policies
5. Facilities delegation of authority
6. Facilities co-ordination
7. Eliminates wastes
8. Valuation of stocks
9. Economical and simple

# COST ACCOUNTING (PAPER-8)

## SHORT NOTES of ALL MTP

1. COST UNIT
2. DIFFERENCE BETWEEN FINANCIAL ACCOUNTING AND COST ACCOUNTING
3. ECONOMIC ORDER QUANTITY
4. ADVANTAGES OF MARGINAL COSTING (ANY FIVE)
5. DIRECT MATERIAL COST
6. OBJECTIVES OF COST ACCOUNTING
7. DISCLOSURE REQUIREMENTS AS PER CAS-10 (LIMITED REVISION 2017)
8. REQUISITES OF A GOOD COST ACCOUNTING SYSTEM
9. COST CENTRE
10. LIMITATIONS OF COST ACCOUNTING SYSTEM
11. COST ACCOUNTING STANDARD ON PACKING MATERIAL COST
12. STANDARD COSTING VS BUDGETARY CONTROL
13. COST CONTROL VS. COST REDUCTION
14. COST ABSORPTION
15. JUST-IN-TIME (JIT)
16. CONVERSION COST
17. PERIODICAL STOCK VERIFICATION
18. ACCOUNTING TREATMENT OF SCRAP
19. PERFORMANCE BUDGETING
20. COST CENTRE
21. LIMITATIONS OF COST ACCOUNTING SYSTEM
22. COST ACCOUNTING STANDARD ON PACKING MATERIAL COST
23. STANDARD COSTING VS BUDGETARY CONTROL
24. DIFFERENCE IN PROFIT UNDER MARGINAL COSTING & ABSORPTION COSTING
25. REPLACEMENT COST
26. COST ACCOUNTING STANDARD ON COST OF SERVICE COST CENTRE
27. DIFFERENCE BETWEEN MERIT RATING AND JOB EVALUATION
28. RESEARCH AND DEVELOPMENT OVERHEADS
29. DIFFERENTIATE BETWEEN OPERATION COST & OPERATING COST
30. DIFFERENCE BETWEEN JOINT PRODUCTS AND CO-PRODUCTS
31. DIFFERENCE BETWEEN JOB EVALUATION AND MERIT RATING
32. RESPONSIBILITY ACCOUNTING

33. DIFFERENCE IN PROFIT UNDER MARGINAL COSTING & ABSORPTION
34. LIST OF THREE ITEMS INCLUDED AND TWO ITEMS EXCLUDED UNDER THE COST ACCOUNTING STANDARDS FOR DIRECT EXPENSES AS PER CAS-10
35. HOW WOULD YOU TREAT OVERTIME IN COST RECORDS AS PER CAS-7
36. COST CONTROL VS COST REDUCTION
37. OBJECTIVES OF COST ACCOUNTANCY
38. ADVANTAGES OF PERPETUAL INVENTORY SYSTEM
39. REPLACEMENT COST
40. LIMITATION OF STANDARD COSTING
41. "COST ACCOUNTING AND MANAGEMENT ACCOUNTING ARE INTER-DEPENDENT."DO YOU AGREE, DISCUSS.
42. ADVANTAGES OF COST CONTROL
43. WHAT IS RESPONSIBILITY ACCOUNTING? ALSO STATE THE PRINCIPLES OF RESPONSIBILITY ACCOUNTING

# Answer

## 1. COST UNIT

Cost Unit is a device for the purpose of breaking up or separating costs into smaller sub divisions attributable to products or services. Cost unit can be defined as a 'Unit of product or service in relation to which costs are ascertained'. The cost unit is thenarrowest possible level of cost object. It is the unit of quantity of product, service of time (or combination of these) in relation to which costs may be ascertained or expressed. We may, for instance, determine service cost per tonne of steel, per tonne -kilometer of a transport service or per machine hour. Sometimes, a single order or contract constitutes a cost unit which is known as a job. A batch which consists of a group of identical items and maintains its identity through one or more stages orproduction may also be taken as a cost unit. A few examples of cost units are given below:

| Industry/Product | Cost Unit |
|---|---|
| Automobile | Number of vehicles |
| Cable | Metres/Kilometres |
| Cement | Tonne |
| Chemicals/Fertilizers | Litre/kilogram/tonne |
| Gas | Cubic Metre |
| Power -Electricity | Kilowatt Hour |
| Transport | Tonne-Kilometre, Passenger -Kilometre |
| Hospital | Patient Day |
| Hotel | Bed Night |
| Education | Student year |
| Telecom | Number of Calls |
| BPO Service | Accounts handled |
| Professional Service | Chargeable Hours |

## 2. DISTINCTION BETWEEN FINANCIAL ACCOUNTING AND COST ACCOUNTING

| FINANCIAL ACCOUNTING | COST ACCOUNTING |
|---|---|
| **1.** It provides the information about the business in a general way. i.e., Profit and Loss Account, Balance Sheet of the business to owners and other outside partners. | **1.** It provides information to the management for proper planning,operation, control and decision making. |
| **2.** It classifies records and analyses the transactions in a subjective manner, i.e. according to the nature of expense. | **2.** It records the expenditure in an objective manner, i.e., according to the purpose for which the costs areincurred. |
| **3.** It lays emphasis on recording aspect without attaching any importance to control. | **3.** It provides a detailed system of control for materials, labour and overhead costs with the help of standard costing and budgetary control. |
| **4.** It reports operating results and financial position usually at the end ofthe year. | **4.** It gives information through costreports to management as and when desired. |
| **5.** Financial Accounts are accounts ofthe whole business. They are independent in nature. | **5.** Cost Accounting is only a part of the financial accounts and discloses profit or loss of each product, job or service. |
| **6.** Financial Accounts records all the commercial transactions of the business and include all expenses i.e. manufacturing, Office, Selling etc. | **6.** Cost Accounting relates to transactions connected with manufacturing of goods and services, means expenses whichenter into production. |

## 3. ECONOMIC ORDER QUANTITY (EOQ)

The total costs of a material usually consist of Buying Cost + Total Ordering Cost + Total Carrying Cost. Economic Order Quantity is 'The size of the order for which both ordering and carrying cost are minimum'.

**Ordering Cost:** The costs which are associated with the ordering of material. It includescost of staff posted for ordering of goods, expenses incurred on transportation,inspection expenses of incoming material etc.

**Carrying Cost:** The costs for holding the inventories. It includes the cost of capital invested in inventories. Cost of storage, Insurance etc.

The assumptions underlying the Economic Ordering Quantity (EOQ): The calculation ofeconomic order of material to be purchased is subject to the following assumptions: -

**(a)** Ordering cost per order and carrying cost per unit per annum are known and theyare fixed.

**(b)** Anticipated usage of material in units is known.

**(c)** Cost per unit of the material is constant and is known as well.

**(d)** The quantity of material ordered is received immediately i.e lead time is Zero.

**The famous mathematician 'R M WILSON' derived the formula used for determining the size of order for each purchase at minimum ordering and carrying costs, which is as below**

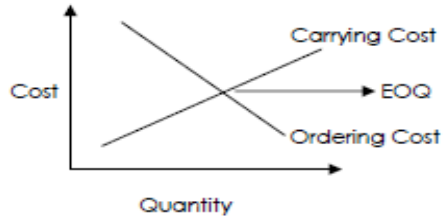
**Economic Ordering Quantity = $(2XAXO/C)^{1/2}$**

A = Annual demand /Consumption

O = Ordering Cost per order

C = Carrying Cost per unit per annum.

**Graphical representation of EOQ:**




## 4. ADVANTAGES OF MARGINAL COSTING

**(a)** Marginal costing system is simple to operate than absorption costing because theydo not involve the problems of overhead apportionment and recovery.

**(b)** Marginal costing avoids, the difficulties of having to explain the purpose and basis of overhead absorption to management that accompany absorption costing.Fluctuations in profit are easier to explain because they result from cost volume interactions and not from changes in inventory valuation.

**(c)** It is easier to make decisions on the basis of marginal cost presentation s, e.g.,marginal costing shows which products are making a contribution and which are failing to cover their avoidable (i.e., variable) costs. Under absorption costing the relevant information is difficult to gather, and there is the added danger that management may be misled by reliance on unit costs that contain an element of fixed cost.

**(d)** Marginal costing is essentially useful to management as a technique in cost analysis and cost presentation. It enables the presentation of data in a manner useful to different levels of management for the purpose of controlling costs.Therefore, it is an important technique in cost control.

**(e)** Future profit planning of the business enterprises can well be carried out by marginal costing. The contribution ratio and marginal cost ratios are very useful toascertain the changes in selling price, variable cost etc. Thus, marginal costing is greatly helpful in profit planning.

## 5. DIRECT MATERIAL COST

Direct material cost can be defined as **'The Cost of material which can be attributed to acost object in an economically feasible way'.** Direct materials are those materials which canbe identified in the product and can be conveniently measured and directly charged to the product. Thus, these materials directly enter the product and form a part of the finished product. For example, timber in furniture making, cloth in dress making, bricks in building ahouse. The following are normally classified as direct materials: -

**(a)** All raw materials, like jute in the manufacture of gunny bags, pig iron in foundry and fruitsin canning industry.

**(b)** Materials specifically purchased for a specific job, process or order, like glue for bookbinding, starch powder for dressing yarn.

**(c)** Parts or components purchased or produced, like batteries for transistor-radios.

**(d)** Primary packing materials like cartons, wrappings card-board boxes, etc.

## 6. OBJECTIVES OF COST ACCOUNTING

**(a)** To ascertain the Costs under different situations using different techniques andsystems of costing

**(b)** To determine the selling prices under different circumstances

**(c)** To determine and control efficiency by setting standards for Materials, Labourand Overheads

**(d)** To determine the value of closing inventory for preparing financial statements ofthe concern

**(e)** To provide a basis for operating policies which may be determination of Cost Volume relationship, whether to close or operate at a loss, whether to manufacture or buy from market, whether to continue the existing method of production or to replace it by a more improved method of production etc.

## 7. DISCLOSURE REQUIREMENTS AS PER CAS-10 (LIMITED REVISION 2017)

**The cost statement shall disclose the following items of Direct Expenses as per CAS-10**

**(a)** The basis of distribution of direct expenses to cost objects / cost units.

**(b)** Quantity and rates of items of direct expenses as applicable.

**(c)** Where direct expenses are accounted at standard cost the price and usagevariance.

**(d)** Direct expenses representing procurement of resources and expenses incurred in connection with resources gene rated.

**(e)** Direct expenses paid or payable to related parties.

## 8. REQUISITES OF A GOOD COST ACCOUNTING SYSTEM ARE AS FOLLOWS

**(a)** The cost accounting system should be simple and practical. It should be able to meet the requirements of the organisation.

**(b)** The da ta and information used by the cost accounting system should be authentic and accurate enough to present accurate reporting in order to facilitate the management for taking right decisions.

**(c)** There is a need for uniformity and consistency in classifying, treating and reporting cost data and information so that it can facilitate comparability of the results of the system.

**(d)** With a view to ensuring clarity of the results there should be integration of the cost accounting system with financial accounting, operation research, statistics, taxation etc.

**(e)** The cost accounting system should have enough flexibility in order to accommodate necessary amendments and modifications for the purpose of incorporating changes in technical, regulatory and other requirements.

## 9. COST CENTRE

CIMA defines a cost center as "a location, a person, or an item of equipment (or a group of them) in or connected with an undertaking, in relation to which costs ascertained and used for the purpose of cost control". The determination of suitable cost centers as wellas analysis of cost under cost centers is very helpful for periodical comparison and controlof cost. In order to obtain the cost of product or service, expenses should be suitably

Segregated to cost center. The manager of a cost center is held responsible for control of cost of his cost center. The selection of suitable cost centers or cost units for which costs are to be ascertained in an undertaking depends upon a number of factors such as organization of a factory, condition of incidence of cost, availability of information, requirements of costing and management policy regarding selecting a method from various choices. Cost center may be production cost centers operating cost centers orprocess cost centers depending upon the situation and classification.

Cost centers are of two types-Personal and Impersonal Cost Centre. A personal cost center consists of person or group of persons. An impersonal cost center consists of alocation or item of equipment or group of equipment's.

## 10. LIMITATIONS OF COST ACCOUNTING SYSTEM

Like any other system of accounting, Cost Accountancy is not an exact science but anart which has developed through theories and accounting practices based on reasoningand commonsense. Many of the theories cannot be proved nor can they be disproved.They grownup in course of time to become conventions and accepted principles of CostAccounting. These principles are by no means static, they are changing from day to dayand what is correct today may not hold true in the circumstances tomorrow Large number of Conventions, Estimates and Flexible factors: No cost can be said to beexact as they incorporate a large number of conventions, estimations and flexible factors such as :-

**a.** Classification of costs into its elements.

**b.** Materials issue pricing based on average or standard costs.

**c.** Apportionment of overhead expenses and their allocation to cost units/centres.

**d.** Arbitrary allocation of joint costs.

**e.** Division of overheads into fixed and variable.

Cost Accounting lacks the uniform procedures and formats in preparing the cost information of a product/ service. Keeping in view this limitation, all Cost Accounting results can be taken as mere estimates.

## 11. CAS-9: COST ACCOUNTING STANDARD ON PACKING MATERIAL COST

This standard deals with the principles and methods of determining the Packing Material Cost. This standard deals with the principles and methods of classification, measurement and assignment of Packing Material Cost, for determination of the cost of product, andthe presentation and disclosure in Cost Statements. Packing Materials for the purpose of this standard are classified into primary and secondary packing materials.

### Objective

The objective of this standard is to bring uniformity and consistency in the principles and methods of determining the packing material cost with reasonable accuracy.

### Scope

This standard should be applied to cost statements, which require classification, measurement, assignment, presentation and disclosure of Packing Material Costincluding those requiring attestation.

## 12. STANDARD COSTING VS BUDGETARY CONTROL

**The difference may be summarized as follows:**

- A system of Budgetary Control may be operated even if no Standard Costing systemis in use in the concern.
- While standard is a unit concept, budget is a total concept.
- Budgets are the ceilings or limits of expenses above which the actual expenditure should not normally rise; if it does, the planned profits will be reduced. Standards are minimum targets to be attained by actual performance at specified efficiency.
- Budgets are complete in as much as they are framed for all the activities and functions of a concern such as production, purchase, selling and distribution, research and development, capital utilisation, etc. Standard Costing relates mainly to the function of production and the related manufacturing costs.
- A more searching analysis of the variances from standards is necessary than in thecase of variations from the budget.
- Budgets are indices, adherence to which keeps a business out of difficulties. Standards are pointers to further possible improvements

## 13. COST CONTROL VS. COST REDUCTION

Both Cost Reduction and Cost Control are efficient toolsof management but their concepts and procedure are widely different. The differencesare summarized below:

| Point | Cost Control | Cost Reduction |
|---|---|---|
| **(a)** | Cost Control represents efforts made towards achieving target or goal. | Cost Reduction represents the achievement in reduction of cost. |
| **(b)** | The process of Cost Control is to set up a target, ascertain the actual performance and compare it with the target, investigate the variances, and take remedial measures. | Cost Reduction is not concern with maintenance of performance according to standard. |
| **(c)** | Cost Control assumes the existence of standards or norms which are not challenged. | Cost Reduction assumes the existence of concealed potential savings in standards or norms which are therefore subjected toa constant challenge with a view to improvement by bringing out savings. |
| **(d)** | Cost Control is a preventive function. Costs are optimized before they are incurred. | Cost Reduction is a corrective function. It operates even when an efficient cost control system exists. There is room for reduction in the achieved costs under controlled conditions. |
| **(e)** | Cost Control lacks dynamic approach. | Cost Reduction is a continuous process ofanalysis by various methods of all the factors affecting costs, efforts and functions in an organization. The main stress is upon the why of a thing and the aim is to have continual economy in costs. |

## 14. COST ABSORPTION

Ultimately the indirect costs or overhead as they are commonly known, will have to bedistributed over the final products so that the charge is complete. This process is known ascost absorption, meaning thereby that the costs absorbed by the production during theperiod. Usually any of the following methods are adopted for cost absorption – DirectMaterial Cost Percentage (ii) Direct Lab our Cost Percentage (iii) Prime Cost Percentage (iv) Direct Lab our Hour Rate Method (v) Machine Hour Rate, etc. The basis should be selected after careful maximum accuracy of Cost Distribution to various production units. The basis should be reviewed periodically and corrective action whatever neededshould be taken for improving upon the accuracy of the absorption.

## 15. JUST-IN-TIME

Just in time (JIT) is a production strategy that strives to improve a business return oninvestment by reducing in-process inventory and associated carrying costs. Inventory is seen as incurring costs, or waste, instead of adding and storing value, contrary to traditional accounting. In short, the Just-in-Time inventory system focuses on "the right material, at the right time, at the right place, and in the exact amount" without the safetynet of inventory.

**The advantages of Just-in-Time system are as follows:-**

- Increased emphasis on supplier relationships. A company without inventory does not want a supply system problem that creates a part shortage. This makes supplier relationships extremely important.
- Supplies come in at regular intervals throughout the production day. Supply is synchronized with production demand and the optimal amount of inventory is on hand at any time. When parts move directly from the truck to the point of assembly, the need for storage facilities is reduced.
- Reduces the working capital requirements, as very little inventory is maintained.
- Minimizes storage space.
- Reduces the chance of inventory obsolescence or damage.

## 16. CONVERSION COST

This term is defined as the sum of direct wages, direct expenses and overhead costs of converting raw material to the finished products or converting a material from one stage of production to another stage. In other words, it means the total cost ofproducing an article less the cost of direct materials used. The cost of indirect materials and consumable stores are included in such cost. The compilation of conversion cost is useful in a number of cases. Where cost of direct materials is of fluctuating nature, conversion cost is used to cost control purpose or for any other decision making. In contracts/ jobs where raw materials are on account of the buyer's conversion cost takes the place of total cost in the books of the producer. Periodic comparison/review of the conversion cost may give sufficient insight as to the level of efficiency with which the pro duction unit is operating.

## 17. PERIODICAL STOCK VERIFICATION

This system envisages physical stock verification at a fixed date/period during the year. Generally, under this system the activity takes place at the end of the accounting period or a date close to such date. Usually, the system is opened in the following manner: -

(i) A period of 5/7 days, depending on the magnitude of the work is chosen during which all the items under stock are verified physically and such period is known as 'cut-off'period. During this period there are no movements of stock items and neither 'receipts' nor are 'issues permitted.

(ii) The items are physically counted/measured depending on their nature and are noteddown in records which are signed by the auditors if they are present in stock verification.

(iii) The bin cards balances are also checked and initiated. Generally, the physical balances and bin card balances of various items should be same unless shortage / excesses are there or the recording/ balancing in the cards are incorrect.

(iv) After the physical verification is completed, work sheets are countersigned by thego down supervisors and the stock verified.

(v) Thereafter reconciliation statement is prepared item wise where the physicalbalances and bin card balance s are different.

(vi) Then the balance as per bin cards and as per stores ledger is also compared andnecessary adjustments are made to show the correct position of stock at the year end.

(vii) Finally, the shortages/excess statement is prepared by the concerned departmentsand are placed before the higher management for their approval for adjustments.

## 18. ACCOUNTING TREATMENT OF SCRAP

(i) **Sales Credited to Revenue:** In this method, the scrap is not cost and its value does not, therefore, appear separately in the Cost Accounts. Only a quantitative record of the scrap returned to storeroom from the shops is maintained and the sale value realized from time to time is credited to the Profit and Loss Account as miscellaneous revenue.

(ii) **Credit to Overhead:** In this method and in the following method the scrap is assigned a cost. The cost is usually the sale value of the scrap less selling and distribution costs. If the scrap has no ready market but has only utility or use value, and is taken as a credit to Manufacturing overhead. The effect of this credit is to reduce the overhead recovery rate. When predetermined overhead rates are in use, it is more expedient to credit an estimated allowance for the scrap instead of the amount of actual scrap.

(iii) **Credit to Jobs:** The scrap is assigned a cost and is traced to the job which yielded the scrap. This affords a reasonable amount of credit to the jobs and widely different.

(iv) **Transfer to Other Jobs:** Scrap arising in one job may be issued for utilization in another job. Such transfers of scrap from one job to another should be affected through Material Transfer Notes. Alternatively, scrap may be returned to store room and subsequently issued to another job for utilization. The latter method is more appropriate when some further processing is required on the scrap before it can be utilized for other jobs**.**

## 19. PERFORMANCE BUDGETING

**(a)** Performance Budgeting is synonymous with Responsibility Accounting which means thus the responsibility of various levels of management is predetermined in terms of output orresult keeping in view the authority vested with them. The main concepts of such a system are enumerated below:

**(b)** It is based on a classification of managerial level for the purpose of establishing a budget for each level. The individual in charge of that level should be made responsible and held accountable for its performance over a given period of time.

**(c)** The starting point of the performance budgeting system rests with the organisation chart in which the spheres of jurisdiction have been determined. Authority leads to the responsibility for certain costs and expenses which are forecast or present in the budget with the knowledge of the manager concerned.

**(d)** The costs in each individual's or department t's budget should be limited to the cost controllable by him.

**(e)** The person concerned should have the authority to bear the responsibility.

## 20. COST CENTRE

*CIMA defines a cost centre as "a location, a person, or an item of equipment (or a groupof them) in or connected with an undertaking, in relation to which costs ascertained and*

*used for the purpose of cost control"*. The determination of suitable cost centers as well asanalysis of cost under cost centers is very helpful for periodical comparison and control of cost. In order to obtain the cost of product or service, expenses should be suitably segregated to cost center. The manager of a cost center is held responsible for control ofcost of his cost center. The selection of suitable cost centers or cost units for which costs are to be ascertained in an undertaking depends upon a number of factors such as organization of a factory, condition of incidence of cost, availability of information,requirements of costing and management policy regarding selecting a method from various choices. Cost center may be production cost centers operating cost centers orprocess cost centers depending upon the situation and classification.

In a manufacturing concern, the cost centers generally follow the pattern or layout of the departments or sections of the factory and accordingly, there are two main types of cost centers as below: -

(i) **Production Cost Centre:** These centers are engaged in production work i.e engaged in converting the raw material into finished product, for example Machine shop, welding shops...etc

(ii) **Service Cost Centre:** These centres are ancillary to and render service to productioncost centres, for example Plant Maintenance, Administration...etc. The number of cost centres and the size of each vary from one undertaking to anotherand are dependent upon the expenditure involved and the requirements of the Management for the purpose of control.

## 21. LIMITATIONS OF COST ACCOUNTING SYSTEM

Like any other system of accounting, Cost Accountancy is not an exact science but anart which has developed through theories and accounting practices based on reasoning and commonsense. Many of the theories cannot be proved nor can they be disproved.They grownup in course of time to become conventions and accepted principles of Cost Accounting. These principles are by no means static, they are changing from day to day and what is correct today may not hold true in the circumstances tomorrow.

Large number of Conventions, Estimates and Flexible factors: No cost can be said to be exact as they incorporate a large number of conventions, estimations and flexible factors such as:-

(i) Classification of costs into its elements.
(ii) Materials issue pricing based on average or standard costs.
(iii) Apportionment of overhead expenses and their allocation to cost units/centres.
(iv) Arbitrary allocation of joint costs.
(v) Division of overheads into fixed and variable.

Cost Accounting lacks the uniform procedures and formats in preparing the cost information of a product/ service. Keeping in view this limitation, all Cost Accountingresults can be taken as mere estimates.

## 22. COST ACCOUNTING STANDARD ON PACKING MATERIAL COST

This standard deals with the principles and methods of determining the Packing Material Cost. This standard deals with the principles and methods of classification, measurement and assignment of Packing Material Cost, for determination of the cost of product, andthe presentation and disclosure in Cost Statements. Packing Materials for the purpose of this standard are classified into primary and secondary packing materials.

The objective of this standard is to bring uniformity and consistency in the principles andmethods of determining the packing material cost with reasonable accuracy.

This standard should be applied to cost statements, which require classification, measurement, assignment, presentation and disclosure of Packing Material Cost includingthose requiring attestation.

## 23. STANDARD COSTING VS BUDGETARY CONTROL

Despite the similarity in the basic principles of Standard Costing and Budgetary Control, the two systems vary in scope and in the matter of detailed techniques. The differencemay be summarized as follows:

1. A system of Budgetary Control may be operated even if no Standard Costing system isin use in the concern.
2. While standard is a unit concept, budget is a total concept.
3. Budgets are the ceilings or limits of expenses above which the actual expenditure should not normally rise; if it does, the planned profits will be reduced. Standards are minimum targets to be attained by actual performance at specified efficiency.
4. Budgets are complete in as much as they are framed for all the activities and functions of a concern such as production, purchase, selling and distribution, research and
5. Development, capital utilization, etc. Standard Costing relates mainly to the function of production and the related manufacturing costs.
6. A more searching analysis of the variances from standards is necessary than in the case of variations from the budget.
7. Budgets are indices, adherence to which keeps a business out of difficulties. Standards are pointers to further possible improvements.

## 24. DIFFERENCE IN PROFIT UNDER MARGINAL & ABSORPTION COSTING

(a) **No opening and closing stock:** In this case, profit/loss under absorption and marginal costing will be equal.

(b) **When opening stock is equal to closing stock:** In this case, profit/loss under two approaches will be equal provided the fixed cost element in both the stocks is same amount.

(c) **When closing stock is more than opening stock:** In other words, when production during a period is more than sales, then profit as per absorption approach will be more than that by Marginal approach. The reason behind this difference is that a part of fixed overhead included in closing stock value is carried forward to next accounting period.

(d) **When opening stock is more than the closing stock:** In other words when production is less than the sales, profit shown by marginal costing will be more than that shown by absorption costing. This is because a part of fixed cost from the preceding period is added to the current year's cost of goods sold in the form of opening stock.

## 25. REPLACEMENT COST

Replacement cost is the cost of an asset in the current market for the purpose of replacement. Replacement cost is used for determining the optimum time of replacement of an equipment or machine in consideration of maintenance cost of the existing one and its productive capacity. This is the cost in the current market of replacing an asset. For example, when replacement cost of material or an asset is being considered, it means that the cost that would be incurred if the material or the asset was to be purchased at the current market price and not the cost, at which it was actually purchased earlier, should be take into account.

## 26. COST ACCOUNTING STANDARD ON COST OF SERVICE COST CENTRE

This standard deals with the principles and methods of determining Cost of Service Cost Centres. This standard deals with the principles and methods of classification, measurement and assignment of Cost of Service Cost Centre, for determination of the cost of product or service, and the presentation and disclosure in Cost Statements.

**Objective**

The objective of this standard is to bring uniformity and consistency in the principles and methods of determining the Cost of Service Cost Centre with reasonable accuracy.

**Scope**

The standard should be applied to the preparation & presentation Cost Statements, which require classification, measurement and assignment, of Cost of Service Cost Centres including those requiring attestation. It excludes Utilities and Repairs & Maintenance Services dealt with in CAS-8 and CAS-12 respectively.

## 27. DIFFERENCE BETWEEN THE MERIT RATING AND JOB EVALUATION

(a) Job Evaluation is the assessment of the relative worth of jobs within a businessenterprise and Merit Rating is the assessment of the employees with respect to a job.

(b) Job Evaluation helps in establishing a rational wage and salary structure. On theother hand, Merit Rating helps in fixing fair wages for each worker in terms of his competence and performance.

(c) Job Evaluation brings uniformity in wages and salaries while Merit Rating aims at providing a fair rate of pay for different workers on the basis of their performance.

## 28. RESEARCH AND DEVELOPMENT OVERHEADS

Research Cost is defined as the cost of searching for new or improved products, new applications of material, or new or improved methods, process, systems or services. In the modern days, firms spend heavily on Research and Development. Expenses incurred on research and development is known as Research and Development Overheads.

**Research may be of the following types:**

(i) Pure or basic research to gain general know-how regarding the production or market, not directed towards any particular product.

(ii) Applied research which applies the basic knowledge in practice. i.e., improvement of existing products, new process, exploring of new products, improved measures of safety, etc.

(iii) Development cost is the cost of the process which begins with the implementation of the decision to use scientific or technical knowledge to produce a new or improved product or to employ a new or improved method, process, system, etc. and ends with the commencement of formal production of that product by that method. Development starts where the research ends. Development cost is the expenditure incurred for putting the results of research on a practical commercial basis.

## 29. DIFFERENTIATE BETWEEN OPERATION COST & OPERATING COST

### Operation Cost:

Operation cost is the cost of a specific operation involved in a production process or business activity. The cost unit in this method is the operation, instead of process. When the manufacturing method of a concern consists of a number of distinct operations, operating costing is suitable.

### Operating Cost:

Operating cost is the cost incurred in conducting a business activity. It refers to the cost of concerns which do not manufacture any product but which provide services. Industries and establishments like power house, transport and travel agencies, hospitals, schools etc. which undertake services rather than the manufacture of products, ascertain operating costs. The cost units used are Kilo Watt Hour (KWH), Passenger Kilometre and Bed in the Hospital etc.

## 30. DIFFERENCE BETWEEN JOINT PRODUCTS AND CO-PRODUCTS

Joint products are frequently confused with co-products. However, there is significant difference between the two, the former being indivisible and the latter divisible. Common costs are allocable among products or services performed because each of the products or services could have been obtained separately. Therefore, any shared cost of obtaining themcan be meaningfully allocated on the basis of relative usage of the common facilities. For example, the cost of fuel or power may be allocated to products basedon production volumes and metered usage. Co-products do not always arise from the same operation or raw materials and the quantity of co-products is within the control of manufacturer. Thus, different quantities of car, jeep and trucks can be produced in car manufacturing industry according to the need of the concern.

## 31. DIFFERENCE BETWEEN JOB EVALUATION AND MERIT RATING

| Job Evaluation | Merit Rating |
|---|---|
| Job Evaluation is the assessment of relative worth of jobs in a business | Merit rating is the assessment of Relative worth of the man behind the job. |
| Job Evaluation rated the jobs. | Merit rating rates the employees. |
| The objective of job evaluation is to set up a rational wage and salary structure. | Merit rating provides a scientific basis for determining fair wages for each worker based on his ability and performance |
| Job Evaluation simplifies wage administration by rationalizing and bringing uniformity in the wage rates | Merit rating helps in determining fair rate of pay to different workers on the basis of their relative performances. |

## 32. RESPONSIBILITY ACCOUNTING

It is a system of accounting that recognizes various responsibility centers throughout the organization and reflects the plans and actions of each of these centers by assigning particular revenues and costs of the one having the pertinent responsibility.

It is a system in which the person holding the supervisory posts as president, function head, foreman, etc. are given a report showing the performance of the company or department or section as the case may be. The report will show the data relating to operational results of the area and the items of which he is responsible for control.

Responsibility accounting follows the basic principles of any system of cost control and standard costing. It differs only in the sense that it lays emphasis on human beings and fixes responsibilities for individuals. It is based on the belief that control canbe exercised by human beings, so responsibilities should be fixed for individuals.

**Principles of Responsibility Accounting:**

(i) A target is fixed for each department or responsibility center.
(ii) Actual performance is compared with the target.
(iii) The variances from plan are analyzed so as to fix the responsibility.
(iv) Corrective action is taken by higher management and is communicated

## 33. DIFFERENCE IN PROFIT UNDER MARGINAL & ABSORPTION COSTING

- **No opening and closing stock:** In this case, profit/loss under absorption and marginal costing will be equal.
- **When opening stock is equal to closing stock:** In this case, profit/loss under two approaches will be equal provided the fixed cost element in both the stocks is same amount.
- **When closing stock is more than opening stock:** In other words, when production during a period is more than sales, then profit as per absorption approach will be more than that by Marginal approach. The reason behind this difference is that a part of fixed overhead included in closing stock value is carried forward to next accounting period.
- **When opening stock is more than the closing stock:** In other words when production is less than the sales, profit shown by marginal costing will be more than that shown by absorption costing. This is because a part of fixed cost from the preceding period is added to the current year's cost of goods sold in the form of opening stock.

## 34. ITEMS INCLUDED AND EXCLUDED UNDER CAS-10

1. Any expense directly related to a cost center or cost object, not being material or labour.
2. Cost of patents, royalty payments
3. Hire charges of special machinery or plantCost of special patterns, designs or tools.
4. Experimental costs and expenditure in connection with models and pilot schemes Architects, surveyors and other consultants' fees
5. Travelling expenses to sites
6. Inward charges and freight charges on special material

**Exclusions:**

1. A direct expense which cannot be economically traced to the cost object or cost unit. Portion unamortized out of a lump sum, to be amortized later over its utility period.
2. Finance cost incurred in connection with any self-generated or procured resources shall not form part of the direct expenses
3. Any subsidy, grant or incentive or any amount received or receivable with respect to any direct expense shall be reduced
4. Penalties/damages paid to statutory authorities shall not form part of the direct expenses.

## 35. TREATMENT OF OVERTIME IN COST RECORDS

As per CAS-7, Overtime Premium shall beassigned directly to the cost object or treated as overheads depending on the economic feasibility and specific circumstances requiring such overtime.

When overtime is worked due to exigencies or urgencies of the work, the basic/normal payment is treated as Direct Labour Cost and charged to Production or cost unit on which the worker is employed. Whereas the amount of premium (extra amount) is treated as overhead.

If overtime is spent at the request of the customer, then the entire amount (including over time premium) is treated as direct wages and should be charged to the job.

When the overtime is worked due to lack of capacity as general policy of the company then the total amount paid is treated as direct wages which is computed at the estimated rate based on the figures of the previous years.

Overtime worked on account of the abnormal conditions such as flood, earthquake, etc., should not be charged to cost, but to Costing Profit and Loss Account if integrated accounts are maintained.

It will thus be seen that overtime involves payment of increased wages and should be resorted to only when extremely essential.

## 36. COST CONTROL VS COST REDUCTION

| Cost Control | Cost Reduction |
|---|---|
| 1. Cost Control represents efforts made towards achieving target or goal. | 1. Cost Reduction represents the achievement in reduction of cost. |
| 2. The process of Cost Control is to set up a target, ascertain the actual performance and compare it with the target, investigatethe variances, and take remedial measures. | 2. Cost Reduction is not concern with maintenance of performance according to standard. |
| 3. Cost Control assumes the existence of standards or norms which are not challenged. | 3. Cost Reduction assumes the existence of concealed potential savings in standards or norms which are therefore subjected to a constant challenge with a view to improvement by bringing out savings. |
| 4. Cost Control is a preventive function. Costs are optimized before they are incurred. | 4. Cost Reduction is a corrective function. It operates even when an efficient cost control system exists. There is room for reduction in the achieved costs under controlledconditions. |
| 5. Cost Control lacks dynamic approach. | 5. Cost Reduction is a continuous process of analysis by various methods of all the factors affecting costs, efforts and functions in an organization. The main stress is upon the why of a thing and the aim is to have continual economy in costs. |

## 37. OBJECTIVES OF COST ACCOUNTING

1. To ascertain the Costs under different situations using different techniques and systems ofcosting
2. To determine the selling prices under different circumstances
3. To determine and control efficiency by setting standards for Materials, Labour and Overheads
4. To determine the value of closing inventory for preparing financial statements of theconcern
5. To provide a basis for operating policies which may be determination of Cost Volumerelationship, whether to close or operate at a loss, whether to manufacture or buy from market, whether to continue the existing method of production or to replace it by a more improved method of production etc.

## 38. ADVANTAGES OF PERPETUAL INVENTORY SYSTEM

1. The system obviates the need for the physical checking of all items of stock and stores at the end of the year.
2. It avoids the dislocation of the routine activities of the organisation including productionand dispatch.
3. A reliable and detailed check on the stores is maintained.
4. Errors, irregularities and loss of stock through other methods are quickly detached and through necessary action recurrence of such things in future is minimized.
5. As the work is carried out systematically and without undue haste the figures are readily available.
6. Actual stock can be compared with the authorized maximum and minimum levels, thus keeping the stocks within the prescribed limits. The disadvantages of excess stocks are avoided and capitalized up in stores materials cannot exceed the budget.
7. The recorder level of various items of stores are readily available thus facilitating the workof procurement of stores.
8. For monthly or quarterly financial statements like Profit and Loss Account and Balance Sheet the stock figures are readily available and it is not necessary to have physical verification of the balances.

## 39. REPLACEMENT COST

Replacement cost is the cost of an asset in the current market for the purpose of replacement. Replacement cost is used for determining the optimum time of replacement ofan equipment or machine in consideration of maintenance cost of the existing one and its productive capacity. This is the cost in the current market of replacing an asset. For example,when replacement cost of material or an asset is being considered, it means that the cost that would be incurred if the material or the asset was to be purchased at the current marketprice and not the cost, at which it was actually purchased earlier, should be take into account.

## 40. LIMITATIONS OF STANDARD COSTING

1. Establishment of standard costs is difficult in practice.
2. In course of time, sometimes even in a short period the standards become rigid.
3. Inaccurate, unreliable and out of date standards do more harm than benefit.
4. Sometimes, standards create adverse psychological effects. If the standard is set at high level, its non-achievement would result in frustration and build-up of resistance.
5. Due to the play of random factors, variances cannot sometimes be properly explained, and it is difficult to distinguish between controllable and non-controllable expenses.
6. Standard costing may not sometimes be suitable for some small concerns. Where production cannot be carefully scheduled, frequent changes in production conditions resultin variances. Detailed analysis of all of which would be meaningless, superfluous and costly.
7. Standard costing may not, sometimes, be suitable and costly in the case of industries dealing with non-standardized products and for repair jobs which keep on changing in accordance with customer's specifications.
8. Lack of interest in standard costing on the part of the management makes the system practically ineffective. This limitation, of course, applies equally in the case of any other system which the management does not accept wholeheartedly.

## 41. "COST ACCOUNTING AND MANAGEMENT ACCOUNTING ARE INTER-DEPENDENT."DO YOU AGREE, DISCUSS.

**Cost Accounting:** In cost accounting, primary emphasis is on cost and it deals with its collection, analysis, relevance, interpretation and presentation for various problems of management.

**Management Accounting:** It utilizes the principles and practices of financial accounting and cost accounting in addition to other management techniques for efficient operations of a concern. It widely uses different techniques from various branches of knowledge like Statistics,Mathematics, Economics, Law and Psychology to assist the management in its task ofmaximizing profits or minimizing losses. The main thrust in management accounting is towards determining policy and formulating plans to achieve desired objectives of management.

## 42. THE ADVANTAGES OF COST CONTROL ARE MAINLY AS FOLLOWS

1. Achieving the expected return on capital employed by maximising or optimizing profit
2. Increase in productivity of the available resources
3. Reasonable price of the customers
4. Continued employment and job opportunity for the workers
5. Economic use of limited resources of production
6. Increased credit worthiness
7. Prosperity and economic stability of the industry

## 43. RESPONSIBILITY ACCOUNTING

It is a system of accounting that recognizes various responsibility centers throughout the organization and reflects the plans and actions of each of these centers by assigning particular revenues and costs of the one having the pertinent responsibility.

It is a system in which the person holding the supervisory posts as president, function head, foreman, etc. are given a report showing the performance of the company or department or section as the case may be. The report will show the data relating to operational results of the area and the items of which he is responsible for control. Responsibility accounting follows the basic principles of any system of cost control and standard costing. It differs only in the sense that it lays emphasis on human beings and fixes responsibilities for individuals. It is based on the belief that control can be exercised by human beings, so responsibilities should be fixed for individuals.

**Principles of Responsibility Accounting:**

- ✓ A target is fixed for each department or responsibility center.
- ✓ Actual performance is compared with the target.
- ✓ The variances from plan are analyzed so as to fix the responsibility.
- ✓ Corrective action is taken by higher management and is communicated