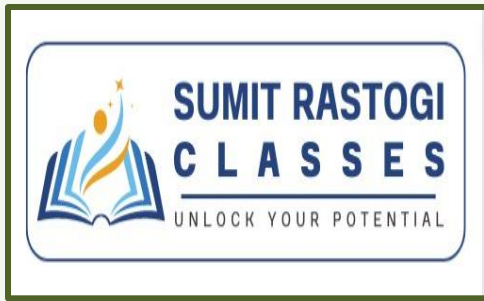




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TEST PAPER – 05

(CHAPTERS COVERED – PROCESS COSTING, JBPB, JOB COSTING & BATCH COSTING)

COST ACCOUNTING

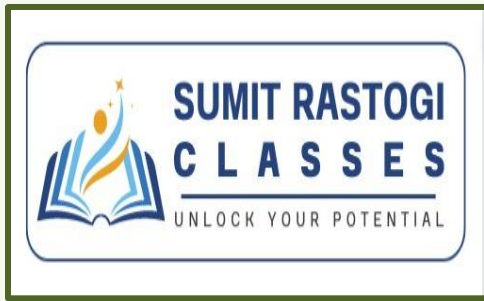
Time Allowed: 3 Hours

Full Marks: 100

**Section A contains Question Number 1. All parts of this question are compulsory.
Working notes should form part of the relevant answer.**

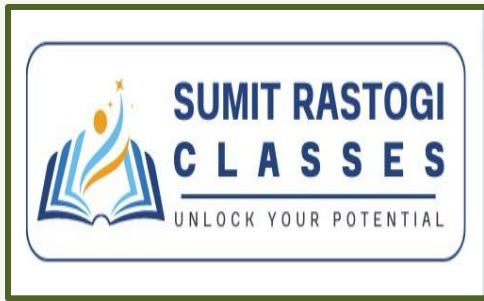
SECTION-A

1. Choose the correct answer from the given alternatives (you may write only the Roman number and the alphabet chosen for your answer) (2×15 = 30 Marks)
 - (i) A company requires 1,00,000 units of an item annually. The cost per unit is ₹ 10. Ordering cost is ₹ 500 per order and inventory carrying cost is 50% per unit per annum. The Economic Order Quantity (EOQ) in this case is _____.
 - (a) 4,470 units
 - (b) 4,472 units
 - (c) 6,420 units
 - (d) 6,472 units
 - (ii) A Chemical process has a normal yield of 90%. In a period, 5000 kgs of material were introduced and there was an abnormal loss of 150 kgs. The quantity of good production is:
 - (a) 4350 kgs
 - (b) 4650 kgs
 - (c) 4500 kgs
 - (d) 4850 kgs
 - (iii) When material used in production being 1,000 units @₹5 per unit of which 100 units scrapped is sold @₹0.50 per unit after incurring additional cost of ₹200, the effective cost per unit will be:
 - (a) ₹5.90
 - (b) ₹5.60
 - (c) ₹5.72
 - (d) ₹6.00



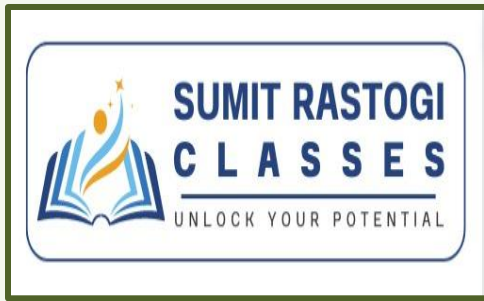
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- (iv) **In process, conversion cost means:**
- (a) Prime cost-plus factory overhead
 - (b) Cost of direct materials, direct labour, direct expenses
 - (c) Direct labour, direct expenses, indirect material, indirect labour, indirect expenses
 - (d) All costs up to the product reaching the consumer, less direct material costs
- (v) **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) 5,380 units
 - (b) 5,680 units
 - (c) 5,700 units
 - (d) 6,800 units
- (vi) **In job costing to record the issue of direct materials to a job which of the following document is used?**
- (a) Purchase requisition
 - (b) Goods receipt note
 - (c) Purchase order
 - (d) Material requisition
- (vii) **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) 720 units
 - (b) 540 units
 - (c) 744 units
 - (d) 760 units
- (viii) **In a process 10000 units are introduced during a period. 10% of input is normal loss. Closing work-in-progress 70% complete is 1500 units. 7500 completed units are transferred to next progress. Equivalent production for the period is:**
- (a) 8500 units
 - (b) 8550 units
 - (c) 9000 units
 - (d) 9550 units



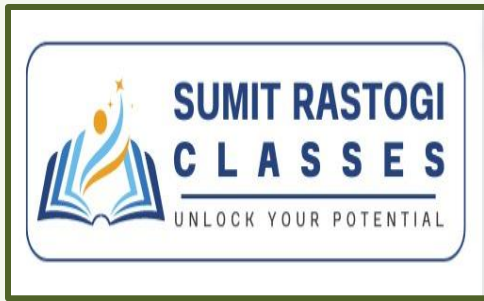
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- (ix) Which of the following is an example of by-product?
- (a) Diesel and petrol in an oil refinery
 - (b) Mustard seeds and mustard oil
 - (c) Curd and butter in a dairy
 - (d) Edible oils and oil cakes
- (x) In a process 4000 units are introduced 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 progress. Equivalent production for the period is:
- (a) 3950 units
 - (b) 3800 units
 - (c) 3600 units
 - (d) 3550 units
- (xi) In a process 2,000 units are introduced during a period. 5% of input is normal loss. Closing work-in-progress 60% complete is 250 units. 1,650 completed units are transferred to next progress. Equivalent production for the period is:
- (a) 1,800 units
 - (b) 1,350 units
 - (c) 1,860 units
 - (d) 2,250 units
- (xii) The most suitable cost system where the products are differ in type of material and work performed is:
- (a) Job Costing
 - (b) Process Costing
 - (c) Batch Costing
 - (d) Operating Costing
- (xiii) Monthly demand of a product is 500 units. Set up cost per batch is ₹60 cost of manufacturing per unit is ₹20. Rate of Interest is 10% p.a. Based on these parameters; the Economic Batch Quantity would be:
- (a) 1000 units
 - (b) 1500 units
 - (c) 500 units
 - (d) 600 units



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- (xiv) The following data are given for an industry using batch costing. Annual consumption of components – 2400 units, setting up cost per batch - ₹100, Manufacturing cost per unit - ₹200, Carrying cost per unit – 6% per annum Economic Batch Quantity would be:
- (a) 250 units
 - (b) 200 units
 - (c) 400 units
 - (d) 300 units
- (xv) In a job cost system, costs are accumulated:
- (a) By kind of material used
 - (b) By department or process
 - (c) On a monthly basis
 - (d) By specific job



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SECTION B

Answer any five questions from question number 2 to 8.

14x5=70

2 (a) (Process Costing) “Super Bite” is a leading product in the confectionery market which is obtained after it has gone through three distinct processes – X, Y and Z. The following information is obtained from cost records of Super Ltd. for the month of July, 2023:

Particulars	Process X	Process Y	Process Z
Input of Raw Material @ ₹ 30 per unit (units)	1,000	-	-
Other Material (₹)	26,000	19,800	29,620
Direct Wages (₹)	20,000	30,000	40,000
Normal loss of input	5%	10%	15%
Output (units)	950	840	750
Sale of scrap per unit (₹)	20	40	50

Total Overheads are 90,000 which are recovered at 100% of wages.

Required: Prepare different process Accounts of the firm for July 2023.

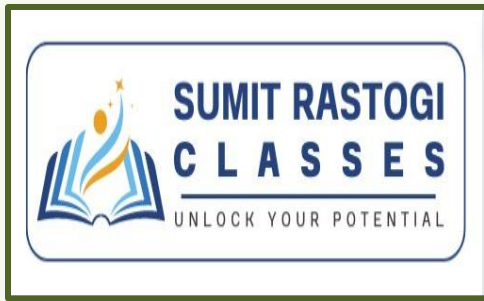
(7 Marks)

2 (b) (Job Costing) A work order of M/s Sky Ltd. has to pass through four different machines (work order for 300 units) of which the machine hour rates are: Machine A - ₹1.50, Machine B - ₹2.50, Machine C - ₹3 and Machine D - ₹3.50. The following expenses have been incurred on the work order: Materials ₹9,000 and Wages ₹2,600.

Machine A has been engaged for 250 hours. Machine B for 150 hours. Machine C for 240 hours and Machine D for 140 hours. After the work order has been completed, material for ₹1,000 was found to be surplus and returned to stores. Office-overheads used to be 40% of works cost but due to increase in cost of administration, there has been a 50% rise in the office overhead expenditure. Further, it is known that 10% of the production will have to be scrapped as not being up to the specification and the sale proceeds of the scrapped output will be only 5% of the cost of sales.

If the Company wants make a profit of 25% on the total cost, find out selling price of a unit of the product.

(7 Marks)



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3 (a) (Batch Costing) A factory has to produce and supply 48,000 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.

- Find out the economic batch size that must be produced to minimize total cost based on the above information.
- 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.
- 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?

(7 Marks)

3 (b) (Process Costing) The following details are extracted from the costing records of EVINIE LTD., an oil mill for the year ended 31st March, 2025. Purchased 2000 tons of copra for ₹1,00,000 and other expenses were as under:

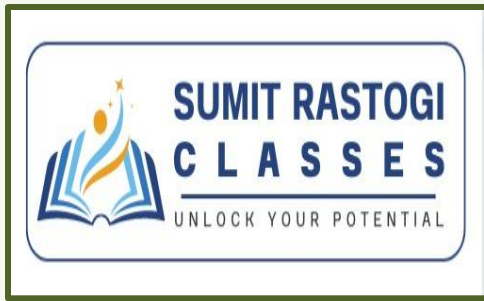
Particulars	Crushing (₹)	Refining (₹)	Finishing (₹)
Cost of Labour	10,000	6,000	4,000
Sundry Material	4,000	3,000	2,000
Electric Power	3,000	2,000	1,600
Steam	2,000	2,000	1,500
Repair of machine	2,000	1,000	500
Cost of casks	-	-	7,500

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.

Realised ₹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, 2025.

(7 Marks)



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4 (a) (Batch Costing) M/s. PQR Ltd. undertakes supply of a component "25" in batches. Every month a fresh batch order is opened against which materials and labour costs are booked at actuals. Overheads are levied at a rate per labour hour. The selling price is contracted at 15 per unit and labour is paid 2 per hour. The company furnishes data for the three months of January, February and March, 2023 as under:

Month	Batch Output (Nos.)	Material Cost (₹)	Labour Cost (₹)	Overheads (₹)	Total Labour Hrs.
January	1,250	6,250	2,500	12,000	4,000
February	1,500	9,000	3,000	9,000	4,500
March	1,000	5,000	2,000	15,000	5,000

REQUIRED: Calculate the Cost and Profit Per Unit of Each Batch Order. (7 Marks)

4 (b) (JPBP) 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 ₹2,37,600.

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

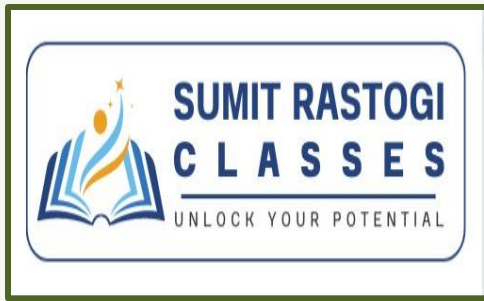
Product/By-Product	M	BI	B2
Sales (₹)	2,00,000	1,20,000	80,000
Cost incurred after separation (₹)	20,000	15,000	10,000
Profit as % on sales	25%	20%	15%

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:

- Prepare a statement showing the apportionment of joint costs to the products (M, B1 and B2)
- 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 ₹1,00,440 without incurring any selling expenses, would you advise its disposal at this stage? Show the workings.

(7 Marks)



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5 (a) (Batch Costing) 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 1.50. The setting up of the machine 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:

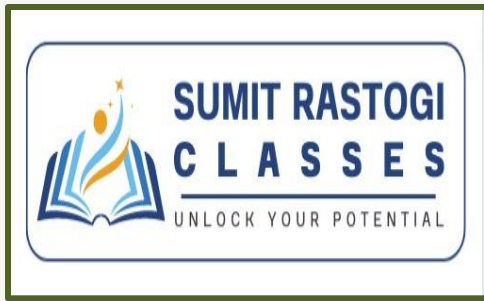
- (i) 10 components,
- (ii) 100 components, and
- (iii) 1000 components are produced. (7 Marks)

5 (b) (Process Costing) A product passes through three processes, A, B and C. 10,000 units at a cost ₹1 were issued to Process A. The other direct expenses were:

Particulars	Process A	Process B	Process C
Sundry Materials	1,000	1,500	1,480
Direct Labour	5,000	8,000	6,500
Direct Expenses	1,050	1,188	1,605

The wastage of Process A was 5% and Process B 4%. The wastage of Process A was sold at ₹0.25 per unit and that of B at ₹0.50 per unit and that of C at ₹1.00 per unit. The overhead charges were 168% of Direct Labour. The Final Product was sold at ₹10.00 per unit fetching a profit of 20% on Sales.

Find out the percentage of Wastage in Process C. (7 Marks)



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6 (a) (JPBP) 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 ₹9,76,640. The output and sales in the year 2018 were as follows:

Products	Output (Gallons)	Sales (₹)	Separate Costs (₹)
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:

- 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.
- 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 @₹18, Q @₹1.50, R@₹10 and S @₹7.80 per gallon.

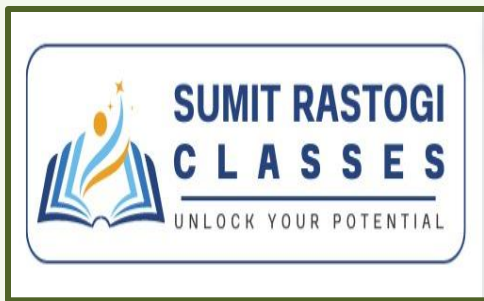
(7 Marks)

6 (b) (Process Costing) 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.

Particulars	Process A	Process B	Process C
Input Raw Material at ₹40/kg (Kg.)	10,000	-	-
Normal Loss on input	5%	5%	5%
Delivered to Next Process (kg)	9,000	8,000	-
Direct Labour Cost	15,000	15,750	13,000
Variable Overhead (% of Direct Labour)	150%	120%	100%
Fixed Overhead (% of Direct Labour)	250%	180%	200%
Finished Stock Held Back (kg.)	400	400	-

Prepare: The Process A/c for each process.

(7 Marks)



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7 (a) (Job Costing) In a factory, following the job Costing Method, an abstract from the work-in-progress, as at 30th September, 2015 were prepared as under:

Job No.	Materials (₹)	Direct Labour Hours	Direct Labour (₹)	Factory overheads Applied (₹)
115	1325	400	800	640
118	810	300	500	400
120	765	250	475	380
	2900		1775	1420

Materials used in October were as follows:

Material Requisition No.	Job No.	Cost (₹)
54	118	300
55	118	425
56	118	515
57	120	665
58	121	910
59	124	720
		3535

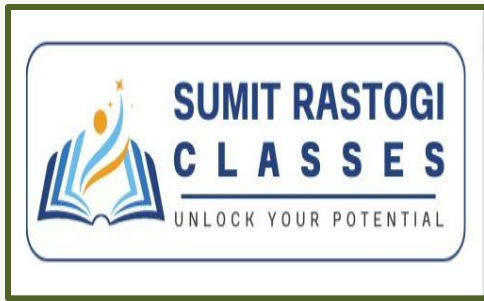
A summary of labour hours deployed during October is as under:

Job No.	No. of Hours Shop A	No. of Hours Shop B
115	25	25
118	90	30
120	75	10
121	65	-
124	20	10
	275	75

Job No.	No. of Hours Shop A	No. of Hours Shop B
Indirect labour:		
Waiting for material	20	10
Machine breakdown	10	5
Idle time	5	6
Overtime	6	5
	316	101

A shop credit slip was issued in October that the Material issued under Requisition No. 54 is returned to Stores for being unsuitable. A Material Transfer Note was issued in October indicating that the material issued under Requisition No. 55 for Job 118 was directed to Job 124. The hourly rate in shop A per labour hour is 3 while at Shop B it is 2 per hour. The factory overhead is applied at the same rate on direct labour as in September. In October, Jobs 115, 118 and 120 were completed. It is practice of the management to put 10% on the factory cost to cover administration and selling overheads and invoicing the job to the customer on a total cost plus 20% basis.

You are asked to compute the FACTORY COST of the completed jobs and their invoice prices. (7 Marks)



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7 (b) (Process Costing) REACON LTD is engaged in process Engineering Industry. During a month 4000 units of input were introduced in Process B at a cost of 20,000. The normal loss was estimated at 10% of input.

The Process Costs were

- Direct Materials ₹10,425,
- Direct Wages ₹20,400 and
- Factory Overhead 50% of Direct Wages.

At the end of the month 3200 units were produced and transferred to C,

500 units were scrapped and realised @ ₹5 per unit.

Scrapped units were 50% processed.

300 units were incomplete and the stage of completion was Material 75%, Wages and Overhead 50%.

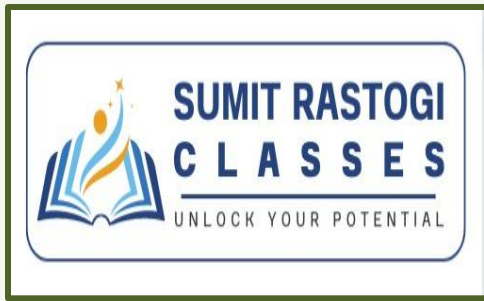
REQUIRED:

- Find out equivalent production, cost per completed unit, value of work- in-progress and
- Prepare Process B account. (7 Marks)

8 (a) Write Short Note on Advantages of Job Costing. (4 Marks)

8 (b) State the accounting treatment of Abnormal Process Loss and Abnormal Process Gain. (5 Marks)

8 (c) Distinguish between Job Costing and Process Costing. (5 Marks)



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ANSWERS OF TEST PAPER - 05

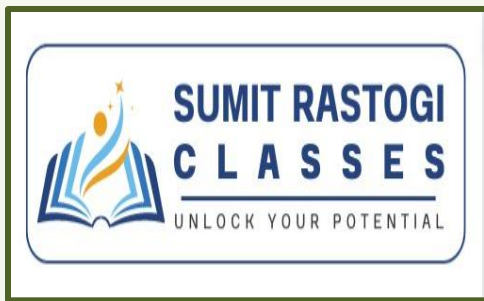
(CHAPTERS COVERED – PROCESS COSTING, JBPB, JOB COSTING & BATCH COSTING)

COST ACCOUNTING

SECTION-A

ANS. 1

- (i)** **(b)** 4,472 units
- (ii)** **(a)** 4,350 kgs
- (iii)** **(c)** ₹5.72
- (iv)** **(c)** Direct Labour, Direct Expenses, Indirect Material, Indirect Labour, Indirect Expenses
- (v)** **(a)** 5380 units
- (vi)** **(d)** Material requisition
- (vii)** **(a)** 720 units
- (viii)** **(b)** 8550 units
- (ix)** **(d)** Edible oils and oil cakes
- (x)** **(c)** 3600 units
- (xi)** **(a)** 1800 units
- (xii)** **(a)** Job Costing
- (xiii)** **(d)** 600 units
- (xiv)** **(b)** 200 units
- (xv)** **(d)** By specific job



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SECTION-B

ANS. 2 (a)

Process X Account

Particulars	Quantity (kg.)	Value (₹)	Particulars	Quantity (kg.)	Value (₹)
To Raw Material	1,000	30,000	By Normal Loss (50 × 20)	50	1,000
To Sundry Material		26,000	By Process Y A/c @ ₹ 100	950	95,000
To Direct Wages		20,000			
To Overheads		20,000			
	1,000	96,000		1,000	96,000

Process Y Account

Particulars	Quantity (kg.)	Value (₹)	Particulars	Quantity (kg.)	Value (₹)
To Process X A/c	950	95,000	By Normal loss (95 × 40)	95	3,800
To Sundry Material		19,800	By Abnormal Loss @ ₹ 200	15	3,000
To Direct Wages		30,000	By Process Z A/c @ ₹ 200	840	1,68,000
To Overheads		30,000			
	950	1,74,800		950	1,74,800

Process Z Account

Particulars	Quantity (kg.)	Value (₹)	Particulars	Quantity (kg.)	Value (₹)
To Process Y	840	1,68,000	By Normal loss (126 × 50)	126	6,300
To Sundry Material		29,620	By Finished Goods @ ₹ 380	750	2,85,000
To Direct wages		40,000			
To Overheads		40,000			
To Abnormal Gain @ ₹ 380	36	13,680			
	876	2,91,300		876	2,91,300

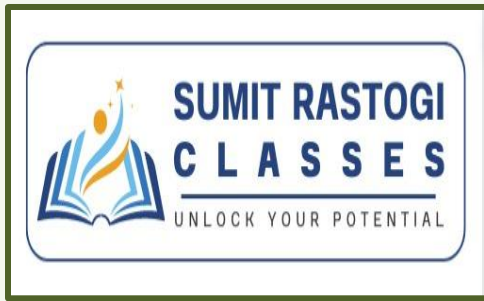
Working Notes:

Cost per unit = (Total Cost – Scrap value to normal loss units) / (Input – Normal loss units)

(1) Cost per unit (process X) = (96,000 – 1,000) / (1,000 – 50) = ₹ 100

(2) Cost per unit (process Y) = (1,76,800 – 3,800) / (950 – 95) = ₹ 200

(3) Cost per unit (process Z) = (2,77,620 – 6,300) / (840 – 126) = ₹ 380



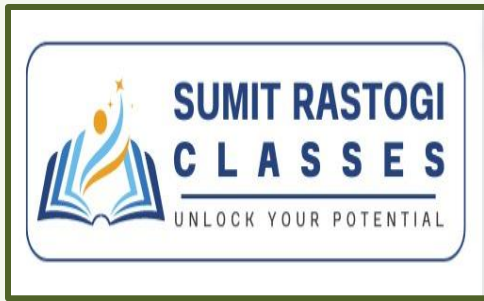
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ANS. 2 (b)

Calculation of Selling Price

Particulars	Amount (₹)	Amount (₹)
Material used (9,000-1,000)		8,000
Direct wages		2,600
Prime Cost		10,600
Works Overhead based on Machine Hours		
Machine A 250 x 1.5	375	
Machine B 150 x 2.5	375	
Machine C 240 x 3.0	720	
Machine D 140 x 3.5	490	1,960
Works Cost		12,560
Office Overheads (40% of Works Cost + 50%)		7,536
		20,096
Less: Scrap (5% x 10% x 20,096)		(100)
Total Cost		19,996
Add: 25% Profit on Cost		4,999
Total Selling Price		24,995

: Selling Price per unit = 24,995/300 = ₹83.32



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ANS. 3 (a)

(i) Storage cost per unit = $2 \times 12 = 24$

EBQ = Optimum production run (batch) size

$$= (2 \times \text{Set-Up Cost} \times \text{Annual Demand} / \text{Annual Storage Cost Per Unit})^{1/2}$$

$$= (2 \times 3600 \times 48,000 / 24)^{1/2}$$

$$= \mathbf{3,795 \text{ units (Approx.)}}$$

(ii) Since Batch size is exceeding 1000, dye has to be replaced for each run and so cost of Dye should be added to set-up cost and revised EBQ should be calculated.

$$\text{Revised Set-up Cost} = 3,600 + 1,200 = 4,800$$

Revised EBQ = Optimum production run (batch) size

$$= (2 \times \text{Set-Up Cost} \times \text{Annual Demand} / \text{Annual Storage Cost Per Unit})^{1/2}$$

$$= (2 \times 4,800 \times 48,000 / 24)^{1/2}$$

$$= \mathbf{4,382 \text{ units (Approx.)}}$$

(iii) Calculation of total cost:

Batch Size 3,795 units

$$\text{No. of Set-ups} = 48,000 / 3,795 = 13 \text{ (Approx.)}$$

$$\text{Set-up cost} = 13 \times 3,600 = 46,800$$

$$\text{Carrying Cost} = 24 \times 3,795 \times 1/2 = 45,540$$

$$\text{Total relevant Cost} = 92,340$$

Batch Size 4382 units

$$\text{No. of Set-ups} = 48,000 / 4,382 = 11 \text{ (Approx.)}$$

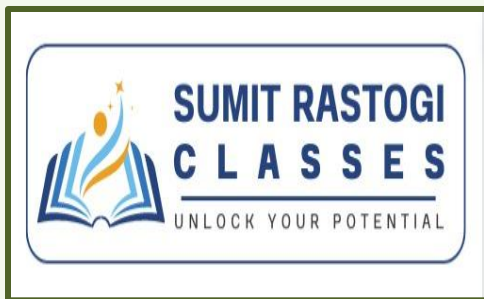
$$\text{Set-up cost} = 11 \times 4,800 = 52,800$$

$$\text{Carrying Cost} = 24 \times 4,382 \times 1/2 = 52,584$$

$$\text{Total relevant Cost} = 1,05,384$$

$$\text{Savings in (i) over (ii)} = 13,044.$$

Note: Students may take No. of set-ups in fraction and calculate the values accordingly, it shall be acceptable for exam purpose.



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ANS. 3 (b)

Crushing Process Account

Particulars	Tons	Value (₹)	Particulars	Tons	Value (₹)
To Copra	2,000	1,00,000	By Copra Sacks		2,000
To Labour		10,000	By Copra Residue	250	5,000
To Sundry Material		4,000	By Loss in Crushing (b/f)	50	
To Electric power		3,000	By Transfer to Refining Process @₹70	1,700	1,19,000
To Steam		2,000			
To Repairs of machine		2,000			
To Factory Expenses		5,000			
	2,000	1,26,000		2,000	1,26,000

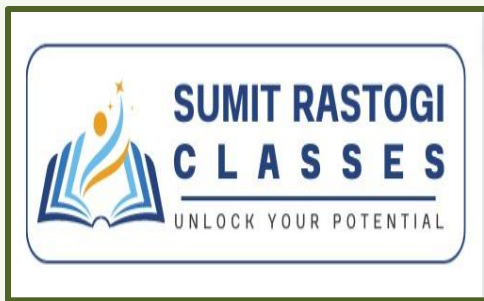
Refining Process Account

Particulars	Tons	Value (₹)	Particulars	Tons	Value (₹)
To Crushing Process	1,700	1,19,000	By Sale of by-product	120	5,100
To Labour		6,000	By Loss in Crushing (b/f)	40	
To Sundry Material		3,000	By Transfer to Finishing Process @₹85	1,540	1,30,900
To Electric Power		2,000			
To Steam		2,000			
To Repairs of machine		1,000			
To Factory Expenses		3,000			
	1,700	1,36,000		1,700	1,36,000

Finishing Process Account

Particulars	Tons	Value (₹)	Particulars	Tons	Value (₹)
To Refining Process	1,540	1,30,900			
To Labour		4,000	By Loss in Crushing (b/f)	40	-
To Sundry Material		2,000			
To Electric power		1,600	By Total Cost @₹100	1,500	1,50,000
To Steam		1,500			
To Repairs of machine		500			
To Factory Expenses		2,000			
To Cost of casks		7,500			
	1,540	1,50,000		1,540	1,50,000

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



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ANS. 4 (a)

Calculation of Overhead Rate per Hour

Month	Overheads (₹)	Total labour Hours	Overhead per labour hour (₹)
January	12,000	4,000	$12,000/4,000 = 3$
February	9,000	4,500	$9,000/4,500 = 2$
March	15,000	5,000	$15,000/5,000 = 3$

Calculation of Cost and Profit for each batch order

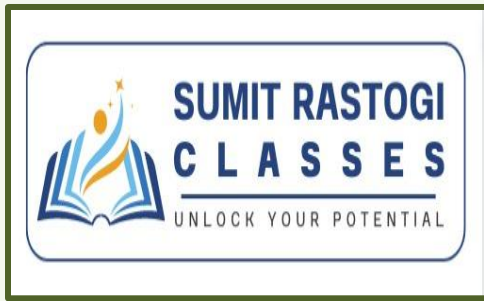
Particulars	Months (₹)		
	January	February	March
Material	6,250	9,000	5,000
Labour	2,500	3,000	2,000
Overheads	3,750 (1,250 × 3)	3,000 (1,500 × 2)	3,000 (1,000 × 3)
Total Cost	12,500	15,000	10,000
Cost per Unit	$12,500/1,250 = 10$	$15,000/1,500 = 10$	$10,000/1,000 = 10$
Selling Price per unit	15	15	15
Profit per unit	5	5	5

Working Note: Hours worked for each batch:

January = $2,500/2$ = 1,250 hours

February = $3,000/2$ = 1,500 hours

March = $2,000/2$ = 1,000 hours



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ANS. 4 (b)

Statement of Apportionment of Joint Cost

Particulars	Total (₹)	M (₹)	B1 (₹)	B2 (₹)
Sales Value After Further Processing	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 Expenses [10% of 3,14,000 in 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 Allocation	2,37,600	1,23,720	68,440	45,440

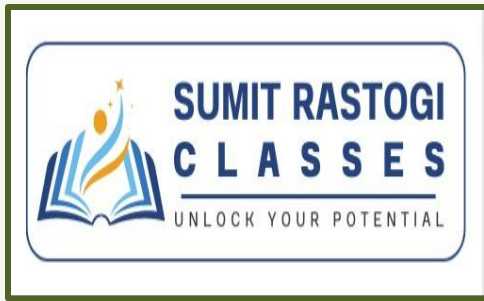
By product B1

profit after separation = ₹24,000

Profit before separation = ₹1,00,440 - ₹68,440 = ₹32,000

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

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



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ANS. 5 (a)

Cost Sheet Component 'Citipride'

Particulars	Batch Size					
	10 Components		100 Components		1000 Components	
Setting-up Costs:						
• Operator's wages (2.5 hours × ₹0.72 per hour)	1.80	0.180	1.80	0.0180	1.80	0.00180
• Overheads (2.5 hours × ₹1.50 per hour)	3.75	0.375	3.75	0.0375	3.75	0.00375
Total (A)	5.55	0.555	5.55	0.0555	5.55	0.00555
Production Costs:						
• Material Costs (₹0.06 per component)	0.60	0.06	6.00	0.06	60.00	0.06
• Operator's wages (per component (10 minutes @ ₹0.72 per hour = 0.12)	1.20	0.12	12.00	0.12	120.00	0.12
• Overheads (per component (10 minutes @ ₹1.50 per hour = 0.25)	2.50	0.25	25.00	0.25	250.00	0.25
Total (B)	4.30	0.430	43.00	0.430	430.00	0.430
Total cost (A+B)	9.85	0.985	48.55	0.4855	435.55	0.4355

ANS. 5(b)

	<u>A</u>	<u>B</u>	<u>C</u>
① Input CPU	10000 unit ₹ 1	→ ₹ 10000 MC	
② Normal loss	5%	4%	③ ?
③ Scrap value (PU)	₹ 0.25	₹ 0.50	₹ 1
④ DLC	₹ 5000 × 168%	₹ 8000 × 168%	₹ 6500 × 168%
Factory OH	₹ 8400	₹ 13440	₹ 10920
⑤ SPPU - PPU CPU =	$\frac{CI - SV \text{ of NL}}{\text{Input} - NL - WL}$	$\frac{CI - SV \text{ of NL}}{\text{Input} - NL - WL}$	$\frac{CI - SV \text{ of NL}}{\text{Input} - NL - WL}$
			10 10 × 20% = 2 8

Sol

Process - A MC			Process - B MC		
Particulars	Unit	₹	Particulars	Unit	₹
To MC @ 1 PU	10000	10000	By N. Loss (5%)	500	125
To SM	-	1000	@ ₹ 0.25 PU		
To DLC	-	5000			
To DE	-	1050			
To FE (WM)	-	8400	By Process-B MC	9500	25325
		(5000 × 168%)	@ ₹ 2.66579		
	10000	25450		10000	25450

$$CPU = \frac{CI - SV \text{ of NL}}{\text{Input} - NL - WL} = \frac{25450 - 125}{10000 - 500 - 0} = \frac{25325}{9500} = ₹ 2.66579$$

Dr. Process-B A/c 9500 X 4% Cr

Particulars	Units	₹	Particulars	Units	₹
To Process-A A/c	9500	25325	By N.Loss (4%)	380	190
To SM	-	1500	@ ₹0.50 PU		
To DLC	-	8000			
To DE	-	1188			
To FE	-	13440	By Process-C A/c	9120	49263
			@ ₹5.40164		
	9500	49453		9500	49453

$$CPU = \frac{CI - SV \text{ of NL}}{Input - NL - WL} = \frac{49453 - 190}{9500 - 380 - 0} = \frac{49263}{9120} = 5.40164$$

Dr. Process-C A/c Cr

Particulars	Units	₹	Particulars	Units	₹
To Process-B A/c	9120	49263	By N.Loss	x	x
To SM	-	1480	@ ₹1 PU		
To DLC	-	6500			
To DE	-	1605			
To FE	-	10920	By Finished Stock A/c	9120-x	69768-x
		(6500 X 168%)			
	9120	69768		9120	69768

Assume: NL in Process C be x Unit

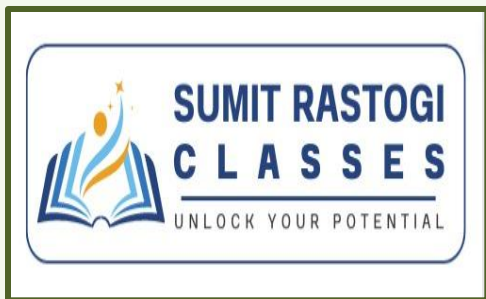
$$\therefore CPU \Rightarrow \frac{8}{1} = \frac{69768-x}{9120-x}$$

$$(9120-x) \times 8 = (69768-x) \times 1$$

$$72960 - 8x = 69768 - x$$

$$-8x + x = 69768 - 72960$$

$$-7x = -3192 \Rightarrow x = \frac{3192}{7} = 456$$



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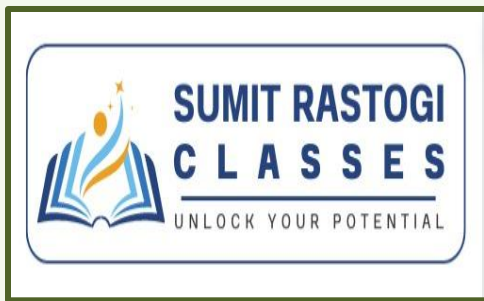
ANS. 6 (a)

Statement showing Profit after Further Processing

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

Statement showing Profit at split off point

Particulars	P	Q	R	S	Total
Sales Qty (at split off)	50,000	10,000	5,000	8,000	73,000
Selling Price per unit at split off (₹)	18	1.50	10	7.80	-
Sales at Split off (₹)	9,00,000	15,000	50,000	62,400	10,27,400
Joint Cost (on the basis on NRV)	8,63,280	8,720	43,600	61,040	9,76,640
Profits	36,720	6,280	6,400	1,360	50,760



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ANS. 6 (b)

Process A Account

Particulars	Quantity (Kg.)	Value (₹)	Particulars	Quantity (Kg.)	Value (₹)
To Raw Material	10,000	4,00,000	By Normal loss	500	-
To Direct labour		15,000	By Abnormal loss	100	5,000
To Variable Overhead		22,500	By Transfer to process B	9,000	4,50,000
To Fixed Overhead		37,500	By Closing Stock	400	20,000
	10,000	4,75,000		10,000	4,75,000

$$\text{Cost Per kg} = (\text{Total Cost} - \text{Scrap value of normal loss units}) / (\text{Input} - \text{Normal loss units})$$

$$= (4,75,000 - 0) / (10,000 - 500) = 4,75,000/9,500 = ₹50$$

Process B Account

Particulars	Quantity (Kg.)	Value (₹)	Particulars	Quantity (Kg.)	Value (₹)
To Transfer from process A	9,000	4,75,000	By Normal loss	450	-
To Direct labour		15,750	By Abnormal loss	150	9,000
To Variable Overhead		18,900	By Transfer to process C	8,000	4,80,000
To Fixed Overhead		28,350	By Closing Stock	400	24,000
	9,000	5,13,000		9,000	5,13,000

$$\text{Cost Per kg} = (\text{Total Cost} - \text{Scrap value of normal loss units}) / (\text{Input} - \text{Normal loss units})$$

$$= (5,13,000 - 0) / (9,000 - 450) = 5,13,000/8,550 = ₹60$$

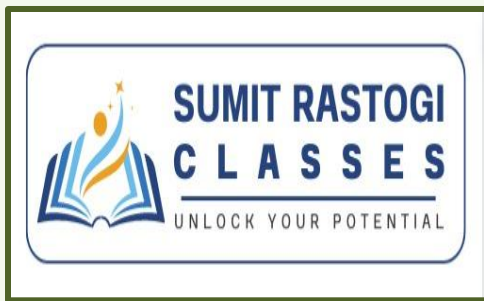
Process C Account

Particulars	Quantity (Kg.)	Value (₹)	Particulars	Quantity (Kg.)	Value (₹)
To Process B A/c	8,000	4,80,000	By Normal loss	400	-
To Direct labour		13,000	By Transfer to finished stock	7,600	5,32,000
To Variable Overhead		13,000			
To Fixed Overhead		26,000			
	8,000	5,32,000		8,000	5,32,000

$$\text{Cost Per kg} = (\text{Total Cost} - \text{Scrap value of normal loss units}) / (\text{Input} - \text{Normal loss units})$$

$$= (5,32,000 - 0) / (8,000 - 400) = 5,32,000/7,600 = ₹70$$

Selling Price = 70 + 20% profit on works cost = 70 + 14 = ₹84 per kg



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ANS. 7 (a)

Calculation of Selling Price of the Job

Job No.	115	118	120
	₹	₹	₹
Costs in September:			
Material	1325	810	765
Labour	800	500	475
Overheads	640	400	380
Total (A)	2765	1710	1620
Costs in October:			
Material	-	515	665
Labour	125	330	245
(25 × 3) + (25 × 2)			
(90 × 3) + (30 × 2)			
(75 × 3) + (10 × 2)			
Overheads applied (80% of labour)	100	264	196
Total (B)	225	1109	1106
Total Factory Cost (A+B)	2990	2819	2726
Administrative Overheads 10%	299	281.90	272.60
	3289	3100.90	2998.60
Profit 20%	657.80	620.18	599.72
Selling Price	3946.80	3721.08	3598.32

Working Notes:

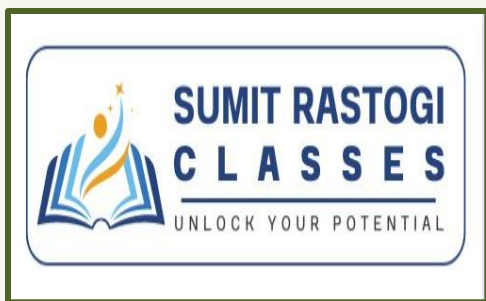
(1) MR No. 54 was returned and MR No. 55 was directed to Job 124, so MR No. 56 is only taken for material used in Job 118.

(2) Overhead recovery rates in September:

$$\text{Job 115} = 640 \times 100/800 = 80\%$$

$$\text{Job 118} = 400 \times 100/500 = 80\%$$

$$\text{Job 120} = 380 \times 100/475 = 80\%$$



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ANS. 7 (b)

Statement of Equivalent Production

Input	Particulars	Output	Equivalent Production					
			Material I		Material II		Material II	
			%	Units	%	Units	%	Units
4,000	Completed & T/F to process C	3,200	100	3,200	100	3,200	100	3,200
	Normal Loss	400	-	-	-	-	-	-
	Abnormal Loss	100	100	100	50	50	50	50
	Closing WIP	300	100	300	75	225	50	150
4,000	Total	4,000		3,600		3,475		3,400

Statement of Cost

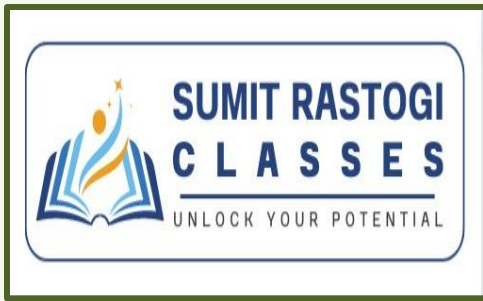
Elements of Cost	Amount (₹)	Equivalents Units	Cost Per Unit (₹)
Material I (20,000-2,000)	18,000	3,600	5
Material II	10,425	3,475	3
Wages	20,400	3,400	6
Factory Overheads (50% × 20,400)	10,200	3,400	3
Total	59,025		17

Statement of Evaluation

Elements of Cost	Cost Per Unit (₹)	Work-in-Progress		Abnormal Loss	
		Units	Cost (₹)	Units	Cost (₹)
Material I	5	300	1,500	100	500
Material II	3	225	675	50	150
Wages	6	150	900	50	300
Factory Overheads	3	150	450	50	150
Total	17		3,525		1,100

Process B Account

Particulars	Units	Value (₹)	Particulars	Units	Value (₹)
To Material I	4,000	20,000	By Normal Loss (400 × 5)	400	2,000
To Material II		10,425	By Abnormal Loss	100	1,100
To Wages		20,400	By T/F to Process C @ ₹17	3,200	54,400
To Factory Overheads		10,200	By Work-In-Progress	300	3,525
	4,000	61,025		4,000	61,025



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ANS. 8 (a) ADVANTAGES OF JOB COSTING:

- Accurate information is available regarding the cost of the job completed and profit generated from the same.
- Proper records are maintained regarding the material labour and overhead so that the costing system is built-up.
- Useful cost data is generated from the point of view of management for proper control and analysis.
- Performance analysis with other jobs is possible by comparing the data of various jobs. But each job completed may be different from the other.
- If standard costing system is in use, the actual cost of job can be compared with the standard to find out any deviation between the two.
- Some jobs are priced on the basis of cost - plus basis. In such cases a profit margin is added in the cost of the job. In such situation, a customer will be willing to pay the price, if the cost-data is reliable job costing helps in maintaining this reliability and the data made available becomes credible.

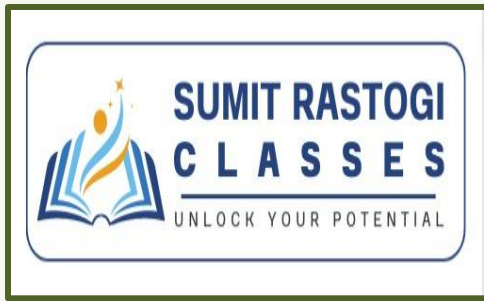
ANS. 8 (b) TREATMENT OF ABNORMAL LOSS & ABNORMAL GAIN:

➤ **ABNORMAL LOSS:**

- If the units lost in the production process are more than the normal loss, the difference between the two is the abnormal loss.
- The relevant process account is credited and abnormal loss account is debited with the abnormal loss valued at full cost of finished output.
- The amount realized from sale of scrap of abnormal loss units is credited to the abnormal loss account and the balance in the abnormal loss account is transferred to costing profit and loss account.

➤ **ABNORMAL GAIN:**

- If the actual production units are more than the anticipated units after deducting the normal, loss, the difference between the two is known as abnormal gain.
- The valuation of abnormal gain is done in the same manner like that of the abnormal loss.
- The units and the amount are debited to the relevant process account and credited to the Abnormal Gain Account.



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ANS. 8 (c) 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 is 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.**