Mock Test Paper - Series II: April, 2024

Date of Paper: 16 April, 2024

Time of Paper: 10 A.M. to 1 P.M.

INTERMEDIATE: GROUP – II

PAPER – 4: COST AND MANAGEMENT ACCOUNTING

Answers are to be given only in English except in the case of the candidates who have opted for Hindi medium. If a candidate has not opted for Hindi medium his/ her answer in Hindi will not be valued.

Working notes should form part of the answer.

Time Allowed – 3 Hours

Maximum Marks – 100

- 1. The question paper comprises two parts, Part I and Part II.
- 2. Part I comprises Case Scenario based Multiple Choice Questions (MCQs) for 30 marks
- 3. Part II comprises questions which require descriptive type answers for 70 marks.

PART I – Case Scenario based MCQs

Part I is compulsory.

Write the most appropriate answer to each of the following multiple-choice questions by choosing one of the four options given. All questions are compulsory.

 A meeting of the heads of departments of the Arnav Ltd. has been called to review the operating performance of the company in the last financial year. The head of the production department appraised that during the last year the company could operate at 70% capacity level but in the coming financial year 95% capacity level can be achieved if an additional amount of ₹100 Crore on capex and working capital is incurred.

The head of the finance department has presented that during the last financial year the company had a P/V ratio of 40%, margin of safety and the break-even were ₹50 crore and ₹200 crore respectively.

To the reply to the proposal of increasing the production capacity level to 95%, the head of the finance department has informed that this could be achieved if the selling price and variable cost are reduced by 8% and 5% of sales respectively. Fixed cost will also increase by ₹20 crore due to increased depreciation on additional assets. The additional capital will be arranged at a cost of 15% p.a. from a bank.

In the coming financial year, it has been aimed to achieve an additional profit of ₹10 crore over and above the last year's profit after adjusting the interest cost on the additional capital.

The following points is required to be calculated on urgent basis to put the same in the meeting. You being an assistant to the head of finance, has been asked the followings:

- i. What will be the revised sales for the coming financial year?
 - A. ₹ 322.22 Crore
 - B. ₹311.11 Crore
 - C. ₹ 300.00 Crore
 - D. ₹ 324.24 Crore
- ii. What will be the revised break-even point for the coming financial year?
 - A. ₹222.22 Crore
 - B. ₹252.22 Crore
 - C. ₹244.44 Crore
 - D. ₹ 255.56 Crore
- iii. What will be the revised margin of safety for the coming financial year?
 - A. ₹ 100 Crore
 - B. ₹ 58.89 Crore
 - C. ₹ 55.56 Crore
 - D. ₹66.66 Crore
- iv. The profit of the last year and for the coming year are:
 - A. ₹ 50 Crore & ₹95 Crore respectively
 - B. ₹ 20 Crore & ₹ 65 Crore respectively
 - C. ₹ 20 Crore & ₹ 30 Crore respectively
 - D. ₹45 Crore & ₹66.66 Crore respectively
- v. The total cost of the last year and for the coming year are:
 - A. ₹ 230 Crore & ₹292.22
 - B. ₹ 230 Crore & ₹275 Crore
 - C. ₹ 220 Crore & ₹282.22 Crore
 - D. ₹ 220 Crore & ₹292.22 Crore

- $(5 \times 2 = 10 \text{ Marks})$
- 2. K Ltd. is a manufacturer of a single product A. 8,000 units of the product A has been produced in the month of March 2024. At the beginning of the year a total 1,20,000 units of the product-A has been planned for production. The cost department has provided the following estimates of overheads:

Fixed	₹ 12,00,000	Variable	₹ 6,00,000
Semi-Variable	₹ 1,80,000		

Semi-variable charges are considered to include 60 per cent expenses of fixed nature and 40 per cent of variable character.

The records of the production department shows that the company could have operated for 20 days but there was a festival holiday during the month.

The actual cost data for the month of March 2024 are as follows:

Fixed	₹ 1,19,000	Variable	₹ 48,000
Semi-Variable	₹ 19,200		

The cost department of the company is now preparing a cost variance report for managerial information and action. You being an accounts officer of the company are asked to calculate the following information for preparation of the variance report:

- i. What is the amount of variable overhead cost variance for the month of March 2024:
 - A. ₹ 10,200 (A)
 - B. ₹10,400 (A)
 - C. ₹ 10,800 (A)
 - D. ₹10,880 (A)
- ii. What is the amount of fixed overhead volume variance for the month of March 2024:
 - A. ₹9,000 (F)
 - B. ₹9,000 (A)
 - C. ₹21,800 (A)
 - D. ₹ 11,000 (A)
- iii. What is the amount of fixed overhead expenditure variance for the month of March 2024:
 - A. ₹21,520 (A)
 - B. ₹21,500 (A)
 - C. ₹21,400 (A)
 - D. ₹21,480 (A)
- iv. What is the amount of fixed overhead calendar variance for the month of March 2024:
 - A. ₹ 5,400 (A)
 - B. ₹ 5,450 (A)
 - C. ₹ 5,480 (A)
 - D. ₹5.420 (A)
- v. What is the amount of fixed overhead cost variance for the month of March 2024:
 - A. ₹43,320 (A)
 - B. ₹43,300 (A)

- C. ₹43,200 (A)
- D. ₹43,380 (A)
- 3. If the amount of wages under Halsey plan is ₹ 420, total time allowed is 8 hours and the guaranteed time rate is ₹ 60 per hour. What is the total time saved by the worker?
 - A. 2 hours
 - B. 3 hours
 - C. 6 hours
 - D. 3.5 hours
- 4. From the following information, calculate the Total cost of Product A and B using the ABC analysis:

	Product A	Product B
Units	5,000	5,000
Number of purchase orders placed	100	220
Number of deliveries received	70	200
Ordering Cost	₹ 4,00,000	
Delivery Cost	₹ 1,35,000	

- A. A = ₹ 47,500; B = ₹ 1,27,500
- B. A = ₹ 2,67,500; B = ₹ 2,67,500
- C. A = ₹ 1,60,00; B = ₹ 3,75,000
- D. A = ₹ 1,47,500; B = ₹ 1,47,500
- 5. What would be Prime cost from below information?

Direct materials Purchased	:	₹ 75,000
Direct labour	:	₹ 45,000
Direct expenses	:	₹ 15,000
Manufacturing overheads	:	₹ 22,500
Direct materials consumed	:	₹ 67,500

- A. ₹1,35,000
- B. ₹1,27,500
- C. ₹1,57,500
- D. ₹1,50,000
- A product passes through Process-I. Input raw material issued were 8,000 units. Normal loss anticipated was 10% of input with realisable value of ₹ 5 per unit. 7,600 units of output were produced and transferred to next process. If the total cost incurred under Process-I was ₹ 40,000, then amount of abnormal gain/(loss) is:

(5 x 2 = 10 Marks)

(2 Marks)

(2 Marks)

(2 Marks)

- Α. ₹ 2,000
- Β. (₹ 5,000)
- C. (₹ 2,500)
- D. ₹ 3,000
- 7. Find out the most appropriate unit cost from the following information of ZMD Transport Services Ltd. dealing in goods carriage:

Tota	al cost	= ₹ 5,25,000
Km	s. Travelled	= 8,75,000
Ton	nes carries	= 4,000
No.	of Drivers	= 25
No.	of trucks	= 20
Ton	nes Km carried	= 6,55,000
Α.	₹ 0.6	
В.	₹ 0.8	
C.	₹ 21,000	

D. ₹131.25

PART-II – Descriptive Questions (70 Marks)

Question No. 1 is compulsory.

Attempt any four questions out of the remaining five questions.

1. (a) The product of a manufacturing concern passes through two processes A and B and then to finished stock. The details of expenses incurred on the two processes during the year were as under:

	Process A (₹)	Process B (₹)
Materials	40,000	
Labour	40,000	56,000
Overheads	16,000	40,000

On completion, the output of Process A is transferred to Process B at a price calculated to give a profit of 20% on the transfer price and the output of Process B is charged to finished stock at a profit of 25% on the transfer price. The finished stock department realized ₹ 4,00,000 for the finished goods received from Process B.

You are asked to SHOW process accounts and total profit, assuming that there was no opening or closing work-in-progress. (5 Marks)

(2 Marks)

(2 Marks)

- (b) DSM Ltd manufactures speed boats which require propeller TP-M4. The following particulars are collected for the year 2023-24:
 - (i) Annual demand of TP-M4 12,000 units
 - (ii) Cost of placing an order ₹1,200 per order
 - (iii) Cost per unit of TP-M4 is ₹1,740/-
 - (iv) Carrying cost p.a. 12%

The company has been offered a quantity discount of 5 % on the purchase of TP-M4, provided the order size is 6,000 units at a time.

Required to:

- (i) COMPUTE the economic order quantity (EOQ)
- (ii) ADVISE whether the quantity discount offer can be accepted.

(5 Marks)

(c) A skilled worker in Shanu Ltd. is paid a guaranteed wage rate of ₹ 30 per hour. The standard time per unit for a particular product is 4 hours. Sam, a machine-man, has been paid wages under the Rowan Incentive Plan and he had earned an effective hourly rate of ₹ 37.50 on the manufacture of that particular product.

WHAT could have been his total earnings and effective hourly rate, had he been put on Halsey Incentive Scheme (50%)? (4 Marks)

	Prelimina	ary estim	ates of ex	penses
	Total	(per annum)		
	Total	Machines		
		Р	Q	R
	(₹)	(₹)	(₹)	(₹)
Depreciation	20,000	7,500	7,500	5,000
Spare parts	10,000	4,000	4,000	2,000
Power	40,000			
Consumable stores	10,000	4,000	3,000	3,000
Insurance of machinery	8,000			
Indirect labour	20,000			
Building maintenance expenses	20,000			
Annual interest on capital outlay	60,000	25,000	25,000	10,000
Monthly charge for rent and rates	10,000			
Salary of foreman (per month)	20,000			
Salary of Attendant (per month)	5,000			

2. (a) The following information are available for the three machines of a manufacturing department of KBC Ltd.:

(The foreman and the attendant control all the three machines and spend equal time on them.)

The following additional information is also available:

	Machines		
	Ρ	Q	R
Estimated Direct Labour Hours	1,00,000	1,50,000	1,50,000
Ratio of K.W. Rating	3	2	3
Floor space (sq. ft.)	40,000	40,000	20,000

There are 14 holidays besides Sundays in the year, of which two were on Saturdays. The manufacturing department works 8 hours in a day but Saturdays are half days. All machines work at 85% capacity throughout the year and 2% is reasonable for breakdown.

You are required to :

CALCULATE predetermined machine hour rates for the above machines after taking into consideration the following factors:

- An increase of 15% in the price of spare parts.
- An increase of 25% in the consumption of spare parts for machine 'Q' & 'R' only.
- 20% general increase in wages rates.
- An 10% decrease in the consumption of consumable stores.

(10 Marks)

- (b) Happi Ltd. Produces product RP in batches, management of the Happi Ltd. wants to know the number of batches of product RP to be produced where the cost incurred on batch setup and carrying cost of production is at optimum level.
 (4 Marks)
- 3. (a) Aman International School has a total of 180 students consisting of 6 sections with 30 students per section. The school plans for a picnic around the city during the week-end to places such as Prayag zoo, the Capi Park, Azad planetarium etc. A private transport operator has come forward to lease out the buses for taking the students. Each bus will have a maximum capacity of 50 (excluding 2 seats reserved for the teachers accompanying the students). The school will employ two teachers for each bus, paying them an allowance of ₹ 500 per teacher. It will also lease out the required number of buses. The following are the other cost estimates:

	Cost per student (₹)
Breakfast	50
Lunch	100
Теа	10
Entrance fee at zoo	20

Rent ₹ 6500 per bus.

Special permit fee ₹ 500 per bus.

Block entrance fee at the planetarium ₹ 2500.

Prizes to students for games ₹ 500.

No cost are incurred in respect of the accompanying teachers (except the allowance of $\stackrel{?}{\stackrel{?}{\stackrel{?}{$}}$ 500 per teacher).

You are required to PREPARE:

- (a) A flexible budget estimating the total cost for the levels of 60, 90,120,150 and 180 students. Each item of cost is to be indicated separately.
- (b) COMPARE the average cost per student at these levels.
- (c) WHAT will be your conclusions regarding the break-been level of student if the school proposes to collect ₹ 400 per student?

(10 Marks)

(b) Anju Limited has collected the following data for its two activities. It calculates activity cost rates based on cost driver capacity.

Activity	Cost Driver	Capacity	Cost (₹)
Power	Kilowatt hours	60,000 kilowatt hours	60,00,000
Quality Inspections	Number of Inspections	10,000 Inspections	90,00,000

The company makes three products A, B and C. For the year ended March 31, 20XX, the following consumption of cost drivers was reported:

Product	Kilowatt hours	Quality Inspections
А	10,000	3,500
В	20,000	2,500
С	15,000	3,000

Required:

- (i) PREPARE a statement showing cost allocation to each product from each activity.
- (ii) CALCULATE the cost of unused capacity for each activity.

(4 Marks)

4. (a) The following are the budgeted details are available from the records of a manufacturing company SP Ltd.:

	₹	₹
Direct Materials		2,13,000
Direct Wages:		

Machine Shop (12,000 hours)	63,000	
Assembly Shop (10,000 hours)	48,000	1,11,000
Works Overhead:		
Machine Shop	88,200	
Assembly Shop	51,800	1,40,000
Administrative Overhead		92,800
Selling Overhead		81,000
Distribution Overhead		62,100

You are required to:

- (a) PREPARE a Schedule of Overhead Rates from the figures available stating the basis of overhead recovery rates used under the given circumstances.
- (b) WORK OUT a Cost Estimate for the following job based on overhead calculated on above basis.

Direct Material:	25 kg @ ₹ 17.20/kg
	15 kg @ ₹ 21.00/kg
Direct labour: (On the basis of hourly rate	Machine shop 30 hours
For machine shop and assembly shop)	Assembly shop 42 hours

(8 Marks)

- (b) HOW is slow moving and non-moving item of stores detected and WHAT steps are necessary to reduce such stocks? (4 Marks)
- (c) WHEN is the reconciliation statement of Cost and Financial accounts not required? (2 Marks)
- 5. (a) Following information relate to a manufacturing concern for the year ended 31st March, 2023:

	(₹)
Raw Material (opening)	2,28,000
Raw Material (closing)	3,05,000
Purchases of Raw Material	43,50,000
Freight Inwards	1,20,000
Direct wages paid	12,56,000
Direct wages-outstanding at the end of the year	1,50,000
Factory Overheads	20% of prime cost
Work-in-progress (opening)	1,92,500
Work-in-progress (closing)	1,40,700

Administrative production)	Overheads	(related	to	1,73,000
Distribution Expe	enses			₹ 16 per unit
Finished Stock (opening)- 1,320) Units		6,08,500
Sale of scrap of I	material			7,000

The firm produced 14,350 units of output during the year. The stock of finished goods at the end of the year is valued at cost of production. The firm sold 14,903 units at a price of ₹579 per unit during the year.

PREPARE cost sheet of the firm.

(8 Marks)

(b) A hotel having 20 single rooms is having 80% occupancy in normal season (8 months) and 50% in off- season (4 months) in a year (take 30 days month).

Annual fixed expenses	Amount in ₹
Salary of the staff (excluding room attendant)	15,00,000
Repair & maintenance	12,60,000
Depreciation on building & furniture	12,40,000
Other fixed expenses like dusting, sweeping etc.	13,25,000
	53,25,000
Variable expenses (per guest per day)	
Linen, laundry & security support	80.00
Electricity & other facilities	120.00
Misc. expenses like attendant etc.	300.00
	500.00

Management wishes to make a margin of 25% of total cost.

Required

- (a) CALCULATE the Tariff per room per day.
- (b) CALCULATE the break-even occupancy in normal season (in percentage also) assuming there is 50% occupancy in off-season.

(6 Marks)

- 6. (a) Why is it necessary to reconcile the Profits between the Cost Accounts and Financial Accounts? (5 Marks)
 - (b) DISCUSS the essential features of a good cost accounting system?

(5 Marks)

(c) ENUMERATE the remedial steps to be taken to minimize the labour turnover (4 Marks)

OR

(c) DISCUSS basic assumptions of Cost Volume Profit analysis. (4 Marks)

Mock Test Paper - Series II: August, 2024

Date of Paper: 21st August, 2024

Time of Paper: 2 P.M. to 5 P.M.

INTERMEDIATE: GROUP – II

PAPER – 4: COST AND MANAGEMENT ACCOUNTING

Answers are to be given only in English except in the case of the candidates who have opted for Hindi medium. If a candidate has not opted for Hindi medium his/ her answer in Hindi will not be valued.

Working notes should form part of the answer.

Time Allowed – 3 Hours

Maximum Marks – 100

- 1. The question paper comprises two parts, Part I and Part II.
- 2. Part I comprises Case Scenario based Multiple Choice Questions (MCQs) for 30 marks
- 3. Part II comprises questions which require descriptive type answers for 70 marks.

PART I – Case Scenario based MCQs

Part I is compulsory.

Write the most appropriate answer to each of the following multiple-choice questions by choosing one of the four options given. All questions are compulsory.

Mr. Vikas, a toy importer has understood the importance of manufacturing in India. He is backed up by the new govt. policies that motivate him to manufacture in India. As per the custom department any import made for the manufacturing under "Made in India", custom duty will be refunded upto 80%. Vikas decided not to import toy from China anymore, instead import raw material from Srilanka, for the manufacturing of toys in India. Under an agreement of Govt. Of India with Srilankan Govt., any impo8rt from Srilanka will receive tax benefits.

Vikas ordered material Xendga & material Zenga from Srilanka. Details are given below:-

	Srilankan Rupees (SLR)
Material Xendga (12,000 units * 125 SLR)	15,00,000
Material Zenga (8,000 units * 225 SLR)	<u>18,00,000</u>
Factory cost	33,00,000
Add: Containers cost	2,00,000
Add: Freight upto loading shipment on ship (paid by exporte	r) <u>50,000</u>
F.O.B.	<u>35,50,000</u>

- Ocean Freight is \$ 2,000
- Insurance is \$ 1,500

When shipment reached India, it was unloaded at Chennai port. Vikas requested to put the goods in custom port's warehouse. Vikas due to cash crunch was not in a position to pay custom duty and therefore did not file the bill of exchange (B.O.E.). Custom authorities charged a penalty of INR 15,000.

Finally, after a month Vikas filled B.O.E. and paid custom duty of 20% on CIF value of the shipment. IGST was also applicable @ 18% on the combined value of CIF & custom duty paid.

He spent further a sum of INR 12,500 to bring the imported goods to his factory. An inspection was done on the goods and it was found that 5% of the goods were broken. This came to management as a surprise because generally such rate of defects on imports is 8%.

Additional Information:

- Exchange rates:
 - 1) 1 SLR = 0.25 INR
 - 2) 1 USD = 75 INR
- IGST credits are available.
- Containers were refunded at INR 38,000.
- Indian and Srilankan brokers were paid commission by Vikas on factory cost. Indian broker charged 6% whereas Srilankan broker charged 12%.
- CIF (cost, insurance and Freight) includes F.O.B (Free on Board)., Insurance & Ocean freight.

You are required to answer the following 5 questions:

- 1. What is the total cost of shipment to be recorded by Vikas?
 - (a) INR 13,17,000
 - (b) INR 13,04,500
 - (c) INR 13,54,500
 - (d) INR 13,32,500
- 2. What is the absorption rate of total cost per unit of Zenga?
 - (a) INR 90.28
 - (b) INR 84.44
 - (c) INR 93.62
 - (d) INR 85.77
- 3. What is the absorption rate of total cost per unit of Xendga?
 - (a) INR 52.01
 - (b) INR 54.24
 - (c) INR 58.13
 - (d) INR 68.65

- 4. Amount of refundable taxes?
 - (a) INR 4,13,600
 - (b) INR 4,57,600
 - (c) INR 2,20,000
 - (d) INR 2,37,600
- 5. If loss of goods was 9% instead of 5%, what will be the amount that will be charged to statement of profit & loss?
 - (a) INR 13,045
 - (b) INR 19,898.4
 - (c) INR 14,178.4
 - (d) INR 24,045

(5 x 2 = 10 Marks)

Hilfy textiles Ltd. has been a major player in the textile industry, producing highquality polyester mix cotton fabric. The production process is complex and involves multiple stages, including spinning, weaving, quality control, and packaging. The company has been facing challenges in controlling costs and maintaining profitability, mainly due to fluctuating material costs and labor inefficiencies.

To address these challenges, the company's management has decided to implement a **standard costing** system to better manage costs, set benchmarks, and identify variances. The goal is to gain better control over production costs, improve budgeting accuracy, and enhance decision-making.

	Quantity/Time	Rate (₹)	Amount (₹)
Cotton	8,000 m	50.00	4,00,000
Polyester	6,000 m	40.00	2,40,000
Skilled labour	1,000 hours	37.50	37,500
Unskilled labour	800 hours	22.00	17,600

Hilfy textiles Ltd. had prepared the following estimation for the month of April:

Normal loss was expected to be 10% of total input materials and an idle labour time of 5% of expected labour hours was also estimated.

At the end of the month the following information has been collected from the cost accounting department:

The company has produced 14,800 m finished product by using the followings:

	Quantity/Time	Rate (₹)	Amount (₹)
Cotton	9,000 m	48.00	4,32,000
Polyester	6,500 m	37.00	2,40,500
Skilled labour	1,200 hours	35.50	42,600
Unskilled labour	860 hours	23.00	19,780

On the basis of analysis of standard costing system, company's management wants to take actions like supplier negotiation, process optimisation, employee training, etc.

Being the cost manager of the company, you are required to answer the following five requirements of the management:

- 6. Compute Material mix variance and Material Yield Variance
 - (a) ₹ 1430 (A) & 43,200 (F)
 - (b) ₹ 1430 (F) & 43,200 (F)
 - (c) ₹24,000 (A) & 37,500 (F)
 - (d) ₹ 19,300 (A) & 37,500 (F)
- 7. Compute Material Price Variance for supplier negotiation
 - (a) ₹18,000 (A)
 - (b) ₹43,200 (F)
 - (c) ₹ 37,500 (A)
 - (d) ₹37,500 (F)
- 8. Compute Material Cost Variance
 - (a) ₹ 32,500 (F)
 - (b) ₹24,500 (A)
 - (c) ₹79,270 (F)
 - (d) ₹79,270 (A)
- 9. Compute Labour Efficiency Variance and Labour Yield Variance.
 - (a) ₹ 940 (A) & 1,140 (A)
 - (b) ₹ 2,424 (A) & 1,556 (A)
 - (c) ₹ 2,424 (A) & 1,556 (A)
 - (d) ₹ 940 (A) & 1,140 (F)
- 10. Compute Labour Cost Variance.
 - (a) ₹884 (A)
 - (b) ₹1,556 (F)
 - (c) ₹884 (F)
 - (d) ₹1,556 (A)

- $(5 \times 2 = 10 \text{ Marks})$
- 11. A company's fixed costs are ₹ 5,00,000, the selling price per unit is ₹ 200, and the variable cost per unit is ₹100. How many units must the company sell to earn the targeted profit of ₹ 2,00,000?
 - (a) 2,000 units
 - (b) 5,000 units
 - (c) 10,000 units

5

- (d) 7,000 units
- 12. 1200 Kg of a material were input to a process in a period. The normal loss is 8% of input

There is no opening or closing work-in-progress. Output in the period was 1100 Kg. What was the abnormal gain/loss in the period?

- (a) Abnormal gain of 12 Kg
- (b) Abnormal loss of 12 kg
- (c) Abnormal gain of 108 Kg
- (d) Abnormal loss of 4 kg
- 13. ABC Manufacturing allocates its factory overhead costs based on machine hours. The total estimated overhead cost for the year is ₹ 6,00,000, and the company expects to use 30,000 machine hours. During the year, job A used 300 machine hours. What amount of overhead costs should be allocated to this job?
 - (a) ₹4,000
 - (b) ₹6,000
 - (c) ₹10,000
 - (d) ₹8,000
- 14. A factory has a capacity utilization ratio of 85% and its activity ratio is 95%. Which one of the following is the efficiency ratio?
 - (a) 120%
 - (b) 110%
 - (c) 112%
 - (d) 90%
- 15. A company uses batch costing and incurs a setup cost of ₹ 20,000 for a batch of 300 units. If direct materials cost ₹ 20 per unit and direct labor costs ₹ 10 per unit, what is the total cost of the batch?
 - (a) ₹25,000
 - (b) ₹29,000
 - (c) ₹ 32,000
 - (d) ₹7,000

PART-II – Descriptive Questions (70 Marks)

Question No. 1 is compulsory.

Attempt any four questions out of the remaining five questions.

 (a) A skilled worker is paid a guaranteed wage rate of ₹ 150.00 per hour. The standard time allowed for a job is 50 hours. He gets an effective hourly rate of wages of ₹ 180.00 under Rowan Incentive Plan due to saving in time. For the same saving in time, CALCULATE the hourly rate

(2 Marks)

(2 Marks)

(2 Marks)

(2 Marks)

of wages he will get, if he is placed under Halsey Premium Scheme (50%). (5 Marks)

(b) SpeedEx Logistics, established in 2010 and headquartered in Mumbai, India, operates within the transportation and logistics industry as a thirdparty logistics (3PL) provider. The company's fleet consists of 10 trucks, 15 vans, and 5 trailer, each serving distinct purposes. The records of Truck R-40 reveal the following information for July 2024.

Days Maintained	30
Days Operated	25
Total Hours Operated	300
Total Kilometres Covered	2,500
Total Tonnage Carried	
(4 tonne-load per trip, return journey empty 2 round trips per day)	

The following further information is made available:

- A. Operating Costs for the month: Petrol ₹ 400, oil ₹170, Grease ₹ 90,
 Wages to driver ₹ 550, Wages to Worker ₹ 350.
- B. Maintenance Costs for the month: Repair ₹ 170, Overhaul ₹ 60, Tyres ₹ 150, Garage charges ₹ 100.
- C. Fixed Costs for the month based on the estimates for the year: Insurance ₹ 50, Licence, tax etc. ₹ 80, Interest ₹ 40, Other Overheads ₹ 190
- D. Capital costs: Cost of acquisition ₹ 54,000; Residual Value at the end of 5 years life ₹ 36,000.

You are required to CALCULATE:

- (i) cost per days maintained
- (ii) cost per days operated
- (iii) cost per hours operated
- (iv) cost per kilometres covered
- (v) cost per commercial tonne km

(5 Marks)

(c) Alpha Ltd. has an Annual demand from a single customer for 60,000 Covid-19 vaccines. The customer prefers to order in the lot of 15,000 vaccines per order. The production cost of vaccine is ₹ 5,000 per vaccine. The set-up cost per production run of Covid-19 vaccines is ₹ 4,800. The carrying cost is ₹ 12 per vaccine per month.

You are required to:

- (i) FIND the most Economical Production Run.
- (ii) CALCULATE the extra cost that company incurs due to production of 15,000 vaccines in a batch. (4 Marks)

2. (a) As demand for LED light increases, more entrepreneurs are coming into its manufacturing process. eLED Pvt. Ltd. is also one of the recently formed company whose main business is related to LED lights.

The company has extended its hand into various LED products like COB (Chip On Board) LEDs, SMD (Surface Mounted Device) LEDs, RGB LEDs, Flashing LEDs, Miniature LEDs, OLEDs, Filament Bulbs, etc.

However, at the beginning stage, the company has decided to only assemble the products and enter into manufacturing stage at later years.

The details relating to the first process of mounting for the month of August are given below:

Opening Work-in-Process:	31,000 units
Material	₹ 12,40,000
Labour	₹ 2,32,500
Overheads	₹ 6,97,500
Introduction during the process:	5,89,000 units
Material	₹ 2,29,40,000
Labour	₹ 55,64,500
Overheads	₹ 1,66,93,500

The process involve some wastage as well. The management estimated a normal loss of 5% of total input including opening work-in-process which can be sold out for ₹ 20 per unit. However, the workers reported 46,500 units as scrapped in which 100% material was used along with 80% of Labour and overheads.

5,42,500 units were transferred for next process of soldering.

Some units were still in process and thus, shifted for the next month process of mounting. With 100% material used along with 80% labour and overheads, 31,000 units were shifted.

Following the average method of inventory, you are required to PREPARE:

- (i) Statement of cost showing cost per equivalent unit
- (ii) Statement of distribution cost
- (iii) Process Account (Mounting)
- (iv) Normal Loss Account and Abnormal Loss Account. (10 Marks)
- (b) EXPLAIN the Usefulness/Suitability of ABC. (4 Marks)
- 3. (a) A company manufactures and sells a product, the price of which is controlled by the Government. Raw material required for this product is also made available at a fixed controlled price. The following figures have been called for the previous two accounting years of the company:

	Year- I	Year- II
Quantity Sold (tones)	1,26,000	1,44,000
Price per tone	₹ 185	₹ 185
	(₹ In t	housands)
Sales Value	23,310	26,640
Raw Materials	11,340	12,960
Direct Labour	1,512	1,872
Factory, Administration and Selling Expenses	9,702	11,232
Profit	756	576

During the year II direct labour rates increased by 8 ¹/₃%. Increases in factory, administration and selling expenses during the year were ₹ 8,10,000 on account of factors other than the increased quantities produced and sold. The managing director desires to know, what quantity if they had produced and sold would have given the company the same net profit per tonne in Year II as it earned during the Year I Advise him. (7 Marks)

(b) ABC Ltd is engaged in producing electronic equipments. It has furnished following details related to its products produced during a month:

	Units	Amount (₹)
Opening stock	10,000	5,00,00,000
Purchases	4,90,000	25,20,00,000
Closing stock	17,500	85,00,000
Works-in-progress		
Opening	20,000	1,20,00,000
Closing	10,000	60,50,000
Direct employees' wages, allowances etc.		5,50,50,000
Primary packaging cost (per unit)		140
R&D expenses & Quality control expenses		1,90,00,000
Guards' salaries		20,00,000
Directors' salaries		60,00,000
Consumable stores, depreciation on plant related to factory overhead		3,42,00,000
Product inspection (before primary packaging)		22,00,000
Rearrangement design of factory machine		75,00,000

Administrative overheads related to production	3,45,00,000
Selling expenses	3,94,50,000
Royalty paid for production	3,10,50,000
Cost of web-site (for online sale) maintenance	60,75,000
Gifts & Snacks	30,50,000
GST (credit allowed)	5,50,00,000
AMC cost of CCTV	10,00,000
Hiring of cars for the transportation of employees and guests	25,00,000
Audit and Legal Fees	29,00,000
Secondary packaging cost (per unit)	20

Distribution of the following costs:

Guard's salaries to Factory, Office and Distribution in the ratio 7: 2:1.

Hiring of cars is only for selling and distribution

AMC of CCTV to Factory, Office and Selling in the ratio 6 : 2 : 2.

The company paid EPF of 12% over above basic pay. However, Guards will not receive any incentive or EPF.

It has lucky draws every month giving the first prize of $\stackrel{\texttt{T}}{\underbrace{}}$ 1,00,000; 2nd prize of $\stackrel{\texttt{T}}{\underbrace{}}$ 50,000, 3rd prize of $\stackrel{\texttt{T}}{\underbrace{}}$ 20,000 and three consolation prizes of $\stackrel{\texttt{T}}{\underbrace{}}$ 10,000 each to customers buying the product.

It also sponsors a television programme every week at a cost of ₹ 20,00,000 per month.

The hiring of cars attracts GST under RCM @5% without credit.

There was a normal scrap of 2,000 units of direct material which realized ₹ 350 per unit. The entire finished product was sold at a profit margin of 25% on sales.

You are required to PREPARE a cost sheet

(7 Marks)

4. Allurgy Ltd. is into metallic tools manufacturing. It has four production departments. The work performed in every department is fairly uniform, thus the manager of the company created a policy to recover the production overheads of the entire company by adopting a single blanket rate.

Departments	Direct Materials (₹)	Direct Wages (₹)	Factory Overheads (₹)	Direct Labour Hours	Machine Hours
Budget:					
Operating	64,35,000	7,92,000	35,64,000	1,98,000	7,92,000

The relevant data for a month are given below:

Assembly	11,73,000	24,15,000	9,66,000	6,90,000	69,000
Quality Control	5,10,000	10,50,000	4,20,000	3,00,000	30,000
Packing	9,90,000	6,93,000	12,37,500	4,95,000	_
Actual:	-	-	-	_	_
Operating	77,22,000	9,50,400	38,61,000	2,37,600	9,50,400
Assembly	9,38,400	18,63,000	5,79,600	6,21,000	75,900
Quality Control	4,08,000	8,10,000	2,52,000	2,70,000	33,000
Packing	11,88,000	8,91,000	13,36,500	5,94,000	_

Additional details relating to one of the jobs during the month are also provided below:

Job No. 157

Departments	Direct Materials (₹)	Direct Wages (₹)	Direct Labour Hours	Machine Hours
Operating	11,880	2,376	594	1,782
Assembly	4,140	2,484	828	207
Quality Control	1,800	1,080	360	90
Packing	2,970	594	396	-

During Quality Control phase of this particular Job, the company incurred certain additional expenditure of ₹ 495 on direct wages as there were certain production that was not as perfect as the saleable product. The defective units were normal in nature and after rectification have been brought to the required degree of perfection.

The company adds 25% on the factory cost to cover administration overheads and profit.

You are required to figure out the following:

- (a) COMPUTE the overhead absorption rate as per the blanket rate based on the percentage of total factory overheads to total factory wages and determine the selling price of the Job No. 157. (1 + 2 = 3 Marks)
- (b) The new manager thinks that the machinery is used to a varying degree in the different departments. Thus, it is not appropriate to follow one blanket rate for the whole company. Therefore, suggest an alternative method of absorption of the factory overheads and CALCULATE the overhead rates based on the method so suggested. (4 Marks)
- (c) DETERMINE the selling price of Job 157 based on the overhead rates calculated in (b) above. (3 Marks)
- (d) CALCULATE the department-wise under or over recovery of overheads based on the company's current policy and the method suggested in (b) above.
 (4 Marks)

	(₹)
Opening Stock:	
Finished goods 545 units	48,250
Work-in-process	38,000
01.04.2023 to 31.03.2024	
Raw materials consumed	5,00,000
Direct Labour	4,20,000
Factory overheads	3,56,000
Administration overheads	2,10,000
Stores Adjustment debited in financial Account	50,000
Dividend paid	98,000
Bad Debts	16,000
Selling and Distribution Overheads	84,000
Income tax paid	34,000
Interest received	42,000
Sales 14,250 units	13,96,500
Closing Stock: Finished goods 460 units	44,500
Work-in-process	36,200

5. (a) The financial books of a company reveal the following data for the year ended 31st March, 2024:

The cost records provide as under:

- Factory overheads are absorbed at 60% of direct wages.
- Administration overheads are recovered at 20% of factory cost.
- Selling and distribution overheads are charged at ₹ 6 per unit sold.
- > Opening Stock of finished goods is valued at ₹ 90 per unit.
- The company values work-in-process at factory cost for both Financial and Cost Profit Reporting.

Required:

- (i) Prepare statements for the year ended 31st March, 2024 show
 - the profit as per financial records
 - the profit as per costing records.
- (ii) Present a statement reconciling the profit as per costing records with the profit as per Financial Records (7 Marks)
- (b) PPP Ltd. is currently operating at 80% of its capacity producing 80,000 units. For the past two years, the production is increasing by 10% of its capacity consistently. The cost details are as follows:

	Year 3	Year 2	Year 1 (Current year)
	(₹)	(₹)	(₹)
Direct Materials	12,00,000	14,00,000	16,00,000
Direct Labour	6,00,000	7,00,000	8,00,000
Factory Overheads	3,20,000	3,40,000	3,60,000
Selling Overheads	3,40,000	3,80,000	4,20,000
Administrative Overheads	<u>1,60,000</u>	<u>1,60,000</u>	<u>1,60,000</u>
	26,20,000	29,80,000	33,40,000

The company is planning for 90% capacity level for next year.

Additional information:

Due to increase in demand of the raw material, the distributor is expected to increase the price by 10% from the next year.

At the beginning of the current year, the dispute occurred between workers and employees regarding wages which lead them to go on strike. Later on, they settled for 20% increase in wages from next year.

Following increases in overhead cost are expected for next year:

5%
10%
10%
15%
15%

Profit is estimated @ 25% on total cost.

You are required to PREPARE flexible budget for the next year at 90% level of capacity.

Also ascertain profit and contribution.

(7 Marks)

- 6. (a) Management of Tillu manufacturing co. is thinking of installing a costing system its company. What practical DIFFICULTIES management will expect and how management will OVERCOME the same? (5 Marks)
 - (b) Anju Ltd. is engaged in production of butter. While producing butter buttermilk is also produced. Buttermilk is identified as by-product of butter. What is the TREATMENT of buttermilk in the cost accounts of Anju Ltd. (5 Marks)
 - (c) Fixed budgets are very simple to understand and less time consuming, however, only flexible budgets are more realistic and practicable because it gives due consideration to behaviour of revenue and cost at different levels of activity. But still there are certain demerits of both the budgets. NARRATE the same. (4 Marks)

OR

(c) DISCUSS the objectives of time keeping & time booking. (4 Marks)

Mock Test Paper - Series I: July, 2024

Date of Paper: 1st August, 2024

Time of Paper: 2 P.M. to 5 P.M.

INTERMEDIATE: GROUP – II

PAPER – 4: COST AND MANAGEMENT ACCOUNTING

Answers are to be given only in English except in the case of the candidates who have opted for Hindi medium. If a candidate has not opted for Hindi medium his/ her answer in Hindi will not be valued.

Working notes should form part of the answer.

Time Allowed – 3 Hours

Maximum Marks – 100

- 1. The question paper comprises two parts, Part I and Part II.
- 2. Part I comprises Case Scenario based Multiple Choice Questions (MCQs) for 30 marks
- 3. Part II comprises questions which require descriptive type answers for 70 marks.

PART I – Case Scenario based MCQs

Part I is compulsory.

Write the most appropriate answer to each of the following multiple-choice questions by choosing one of the four options given. All questions are compulsory.

Tropic Pvt Ltd was engaged in the business of manufacturing Product P. The product P required 2 units of Material R. The company intends to sell 24,000 units of Product P and does not wish to retain any closing stock. However the opening stock of Product P is 4,000 units. Raw Material R has to be procured after considering the opening stock of R amounting to 10,000 units. The technical team further confirms that the yield in the course of manufacture of Product P is 80% of the input.

The company presently procures its annual requirement of materials on a quarterly basis from its regular supplier enjoying a discount of 2.5% on the invoice price of the material of ₹ 20 per unit. Every time the company places orders for Material R, it incurs ₹ 125 for each of the order placed. The company also has taken a rented warehouse for storing material R and the annual cost of storage is ₹ 10 per unit. The company appointed Mr. T a Chartered Accountant to review the cost of inventory and provide measures of improvement of cost. After reviewing the material purchase and consumption pattern, Mr. T suggested that the implementation of Wilson's EOQ would be beneficial to the company. He emphasized that the change in the quantity ordered would result in reduction of inventory carrying costs.

Mr. T further reviewed the labour costing and identified that the employees were paid overtime wages to ensure timely completion of projects. Overtime wages comprised of daily wage and 100% of daily wages as overtime premium. Based on the cost record it was understood that every month had 180 hours of regular working hours which was remunerated at ₹ 200 per hour and Overtime of 20 hours which was remunerated at ₹ 400 per hour. Mr. T suggested that the above time taken may be considered as standard and a scheme of Incentive be introduced to reduce overtime cost. He further indicated that Rowan scheme of incentive be used to measure performance and the improved productivity per hour would be 125 units per hour.

In this regard, address the following queries in line with the suggestions provided by Mr. T to Tropic Pvt Ltd.

- 1. The annual requirement of Material R to meet the target sales of 24,000 units of Product P is:
 - (a) 48,000 units
 - (b) 60,000 units
 - (c) 40,000 units
 - (d) 50,000 units
- 2. The ordering quantity as per the current inventory policy and the proposed Wilson's Economic order quantity of Material R are:
 - (a) Order Quatity as per the current inventory policy 10,000 units & Economic Order Quantity – 1,000 units
 - (b) Order Quantity as per the current inventory policy 15,000 units & Economic Order Quantity 1,225 units
 - (c) Order Quantity as per the current inventory policy 12,000 units & Economic Order Quantity – 1,095 units
 - (d) Order Quantity as per the current inventory policy 12,500 units & Economic Order Quantity – 1,118 units
- 3. The net savings to inventory cost on migration from the current inventory policy to the Wilson's Economic Order Quantity policy would be:
 - (a) Savings from EOQ as compared to current discount policy ₹ 26,820
 - (b) Savings from EOQ as compared to current discount policy ₹20,500
 - (c) Savings from EOQ as compared to current discount policy ₹ 33,253
 - (d) Savings from EOQ as compared to current discount policy ₹ 25,546

- 4. Incentive payable under the Rowan Incentive scheme amounts to:
 - (a) ₹7,500
 - (b) ₹6,400
 - (c) ₹ 6,000
 - (d) ₹8,000
- 5. The savings in labour cost achieved by implementation of incentive scheme over the overtime payments amounts to:
 - (a) ₹9,600
 - (b) ₹5,600
 - (c) ₹8,000
 - (d) ₹3,200

$(5 \times 2 = 10 \text{ Marks})$

XYZ Manufacturing Pvt. Ltd. is a prominent company in the electric appliances industry, known for producing a diverse range of high-quality products. The company has built a reputation for reliability and innovation in the manufacturing of household appliances, including fans, mixers, and heaters. XYZ Manufacturing Pvt. Ltd. is dedicated to delivering products that meet the needs of its customers while adhering to the highest standards of quality and performance.

The company operates a state-of-the-art factory that is fully equipped with advanced machinery and technology to ensure efficient and consistent production. The factory operates 25 days a month, running multiple shifts to meet the growing demand for its products. The company have spare capacity to additional orders. Each product type—fans, mixers, and heaters—undergoes a meticulous manufacturing process that includes assembly, quality testing, and packaging.

Cost Category	Amount (₹)
Fixed Costs (per month)	
Factory Rent	₹ 3,00,000
Depreciation	₹ 2,00,000
Administrative Expenses	₹ 1,00,000
Salaries	₹ 4,00,000
Total Fixed Costs	₹ 10,00,000
Number of units produced per month	10,000 units
(Note: Last month there was an additional special order of 2000 units which resulted in higher production)	
Selling price per unit	₹ 1,500

Additional Info: Raw Materials include Copper, Plastic, and Other Materials. The per unit cost of Copper is ₹ 80 more than the cost of Plastic, while the cost of Other Materials is twice that of Plastic. And the total Raw Material Cost per unit is ₹ 210 more than the combined cost of Copper & Plastic.

The Labour Hour Rate is ₹ 100 per hour. The total labour hours used in the last month were 36,000 Hours. The Utilities Cost per unit is ₹ 100, and the Packaging Cost per unit is ₹ 50. Being a finance manager of the company, you are required to answer the following:

- 6. Calculate the contribution margin per unit.
 - (a) ₹550
 - (b) ₹600
 - (c) ₹650
 - (d) ₹700
- 7. Determine the break-even point in sales revenue.
 - (a) ₹31,28,593
 - (b) ₹25,85,153
 - (c) ₹27,27,025
 - (d) ₹27,05,983
- 8. If the company wants to achieve a target profit of ₹ 5,00,000, what should be the sales volume (in units)?
 - (a) 2,000 units
 - (b) 2,727 units
 - (c) 2,750 units
 - (d) 3,000 units
- 9. What would be the impact on the break-even point if the variable cost per unit increases by 10%?
 - (a) 2,178 units
 - (b) 2,198 units
 - (c) 2,248 units
 - (d) 2,258 units
- 10. Calculate the margin of safety in percentage if the company sells 4,000 units if the variable cost per unit increases by 10%
 - (a) 44.85%
 - (b) 42.55%
 - (c) 45.05%
 - (d) 45.75%
- 11. A FMCG company has an annual demand of 50,000 units for its specific product whose setting up cost per batch is ₹ 10,000 and carrying cost per unit per month is ₹ 1. What is the Economic Batch Quantity?

(5 x 2 = 10 Marks)

- (a) 7,071 units
- (b) 10,000 units
- (c) 12,641 units
- (d) 9,129 units
- 12. A furniture company uses premium wood for sofa. Standard quantity of premium wood per sofa is 5 sq. ft. Standard price per sq. ft. of premium wood is ₹ 10. Actual production of sofa is 1,000. Premium wood actually used is 5,300 sq. ft. Actual purchase price of premium wood per sq. ft. is ₹ 10. What is material cost variance?
 - (a) ₹3,000 (A)
 - (b) ₹4,300 (A)
 - (c) ₹7,300 (A)
 - (d) ₹5,300 (F)
- 13. One of Pintu Company's cost pools is parts administration. The budgeted overhead cost for that cost pool was ₹ 4,00,000 and the expected activity was 4,000 part types. The actual overhead cost for the cost pool was ₹ 4,20,000 at an actual activity of 5,000 part types. The activity rate for that cost pool was:
 - (a) ₹80 per part type
 - (b) ₹100 per part type
 - (c) ₹105 per part type
 - (d) ₹84 per part type
- 14. A truck carrying 10 tons of goods over 200 kilometres per day for 26 days in a month. The ton kms applicable is -
 - (a) 52,000
 - (b) 20,000
 - (c) 5200
 - (d) 260
- 15. Standard hours required for doing a work is 100 hours and budgeted hours is 120 hrs while the same work is actually completed by workers in 110 hrs. You are required to calculate the activity ratio:
 - (a) 109.09%
 - (b) 83.33%
 - (c) 90.90%
 - (d) 110%

(2 Marks)

(2 Marks)

(2 Marks)

(2 Marks)

(2 Marks)

PART-II – Descriptive Questions (70 Marks)

Question No. 1 is compulsory.

Attempt any **four** questions out of the remaining **five** questions.

1. (a) From the following data of Meta Ltd., CALCULATE Cost of production:

		Amount (₹)
(i)	Repair & maintenance paid for plant & machinery	9,80,500
(ii)	Insurance premium paid for inventories	26,000
(iii)	Insurance premium paid for plant & machinery	96,000
(iv)	Raw materials purchased	64,00,000
(v)	Opening stock of raw materials	2,88,000
(vi)	Closing stock of raw materials	4,46,000
(vii)	Wages paid	23,20,000
(viii)	Value of opening Work-in-process	4,06,000
(ix)	Value of closing Work-in-process	6,02,100
(x)	Quality control cost for the products in	86,000
(xi)	Research & development cost for improvement in production process	92,600
(xii)	Administrative cost for:	
	 Factory & production 	9,00,000
	- Others	11,60,000
(xiii)	Amount realised by selling scrap generated during the manufacturing process	9,200
(xiv)	Packing cost necessary to preserve the goods for further processing	10,200
(xv)	Salary paid to Director (Technical)	8,90,000
(xvi)	Expenses paid for pollution control and engineering & maintenance	22,000

(5 Marks)

(b) A manufacturing company has disclosed net loss of ₹ 48,700 as per their cost accounting records for the year ended 31st March, 2024. However their financial accounting records disclosed net profit of ₹ 30,400 for the same period. A scrutiny of data of both the sets of books of accounts revealed the following informations:

		₹
(i)	Factory overheads under absorbed	30,500
(ii)	Administrative overheads over absorbed	65,000

(iii)		Depreciation charged in financial accounts	2,25,000
(iv)		Depreciation charged in cost accounts	2,70,000
(v)		Income-tax provision	52,400
(vi)		Transfer fee (credited in financial accounts)	10,200
(vii)		Obsolescence loss charged in financial accounts	20,700
(viii)		Notional rent of own premises charged in cost accounts	49,000
(ix)		Value of opening stock:	
	(a)	in cost accounts	1,38,000
	(b)	in financial accounts	1,15,000
(x)		Value of closing stock:	
	(a)	in cost accounts	1,22,000
	(b)	in financial accounts	1,12,500

PREPARE a Memorandum Reconciliation Account by taking costing loss as base. (5 Marks)

(c) A job can be executed either through workman A or B. A takes 32 hours to complete the job while B finishes it in 30 hours. The standard time to finish the job is 40 hours.

The hourly wage rate is same for both the workers. In addition workman A is entitled to receive bonus according to Halsey plan (50%) sharing while B is paid bonus as per Rowan plan. The works overheads are absorbed on the job at ₹ 7.50 per labour hour worked. The factory cost of the job comes to ₹ 2,200 irrespective of the workman engaged.

FIND out the hourly wage rate and cost of raw materials input. Also SHOW cost against each element of cost included in factory cost.

(4 Marks)

- 2. (a) PQR Company Ltd. provides the following information relating to Process-P:
 - (i) Opening Work-in-progress NIL
 - (ii) Units Introduced 45,000 units @ ₹10 per unit
 - (iii) Expenses debited to the process:
 - Direct material ₹ 65,500 Labour ₹ 90,800
 - Overhead ₹ 1,80,700
 - (iv) Normal loss in the process 2% of Input

(v)	Work-in progress	-	1800 units
	Degree of completion		
	Materials	-	100%
	Labour	-	50%
	Overhead	-	40%
(vi)	Finished output	-	42,000 units

(vii) Degree of completion of abnormal loss:

Materials	-	100%
Labour	-	80%
Overhead	-	60%

(viii) Units scrapped as normal loss were sold at ₹ 5 per unit.

(ix) All the units of abnormal loss were sold at ₹ 2 per unit.

You are required to PREPARE:

- Statement of equivalent production.
- Statement showing the cost of finished goods, abnormal loss and closing balance of work-in-progress.
- Process-P account and abnormal loss account. (10 Marks)
- (b) EXPLAIN the treatment of following items in cost sheet.
 - (i) Credit for Recoveries
 - (ii) Packing Cost (primary)
 - (iii) Joint Products and By-Products
 - (iv) Quality Control Cost

(4 Marks)

 (a) A company manufactures one main product (MN) and two by-products AB and PQ. For the month of January 2024, following details are available:

Total Cost upto separation Point ₹ 2,12,400

	MN	AB	PQ
Cost after separation	-	₹ 35,000	₹ 24,000
No. of units produced	4,000	1,800	3,000
Selling price per unit	₹100	₹ 40	₹ 30
Estimated net profit as percentage to sales value	-	20%	30%
Estimated selling expenses as percentage to sales value	30%	15%	15%

There are no beginning or closing inventories.

PREPARE statement showing:

- (i) Allocation of joint cost; and
- (ii) Product-wise and overall profitability of the company for January 2024. (6 Marks)
- (b) A mini-bus, having a capacity of 32 passengers, operates between two places - 'A' and 'B'. The distance between the place 'A' and place 'B' is 30 km. The bus makes 10 round trips in a day for 25 days in a month. On an average, the occupancy ratio is 70% and is expected throughout the year.

The details of other expenses are as under:

	Amount (₹)
Insurance	15,600 Per annum
Garage Rent	2,400 Per quarter
Road Tax	5,000 Per annum
Repairs	4,800 Per quarter
Salary of operating staff	7,200 Per month
Tyres and Tubes	3,600 Per quarter
Diesel: (one litre is consumed for every	/ 5 km) 13 Per litre
Oil and Sundries	22 Per 100 km run
Depreciation	68,000 Per annum

Passenger tax @ 22% on total taking is to be levied and bus operator requires a profit of 25% on total taking.

PREPARE operating cost statement on the annual basis and find out the cost per passenger kilometer and one way fare per passenger.

(8 Marks)

- 4. (a) The following particulars refer to process used in the treatment of material subsequently, incorporated in a component forming part of an electrical appliance:
 - (i) The original cost of the machine used (Purchased in June 2023) was ₹ 10,000. Its estimated life is 10 years, the estimated scrap value at the end of its life is ₹ 1,000, and the estimated working time per year (50 weeks of 44 hours) is 2,200 hours of which machine maintenance etc., is estimated to take up 200 hours.

No other loss of working time expected. Setting up time, estimated at 100 hours, is regarded as productive time. (Holiday to be ignored).

- Electricity used by the machine during production is 16 units per hour at cost of a 9 paisa per unit. No current is taken during maintenance or setting up.
- (iii) The machine required a chemical solution which is replaced at the end of week at a cost of ₹ 20 each time.
- (iv) The estimated cost of maintenance per year is ₹ 1,800.
- (v) Two attendants control the operation of machine together with five other identical machines. Their combined weekly wages, insurance and the employer's contribution to holiday pay amount ₹ 120.
- (vi) Departmental and general works overhead allocated to this machine for the current year amount to ₹ 3,000.

You are required to CALCULATE the machine hour rate of operating the machine. (6 Marks)

Ŧ

x

(b) Anju Limited produces a product 'Pect' which is sold in a 10 Kg. packet. The standard cost card per packet of 'Pect' are as follows:

	`
Direct materials 10 kg @ ₹ 45 per kg	450
Direct labour 8 hours @ ₹ 50 per hour	400
Variable Overhead 8 hours @ ₹ 10 per hour	80
Fixed Overhead	<u>200</u>
	1,130

Budgeted output for the third quarter of a year was 10,000 Kg. Actual output is 9,000 Kg.

Actual cost for this quarter are as follows :

	۲
Direct Materials 8,900 Kg @ ₹ 46 per Kg.	4,09,400
Direct Labour 7,000 hours @ ₹ 52 per hour	3,64,000
Variable Overhead incurred	72,500
Fixed Overhead incurred	1,92,000

You are required to CALCULATE:

- (i) Material Usage Variance
- (ii) Material Price Variance
- (iii) Material Cost Variance
- (iv) Labour Efficiency Variance
- (v) Labour Rate Variance

- (vi) Labour Cost Variance
- (vii) Variable Overhead Cost Variance
- (viii) Fixed Overhead Cost Variance

(8 Marks)

5. (a) Bicon Ltd. manufactures two products using two types of materials and one grade of labour. Shown below is an extract from the company's working papers for the next month's budget:

	Product - A	Product-B
Budgeted sales (in units)	2,400	3,600
Budgeted material consumption per unit (in kg):		
Material-X	5	3
Material-Y	4	6
Standard labour hours allowed per unit of product	3	5

Material-X and Material-Y cost ₹ 4 and ₹ 6 per kg and labours are paid ₹ 25 per hour. Overtime premium is 50% and is payable, if a worker works for more than 40 hours a week. There are 180 direct workers.

The target productivity ratio (or efficiency ratio) for the productive hours worked by the direct workers in actually manufacturing the products is 80%. In addition the non-productive down-time is budgeted at 20% of the productive hours worked.

There are four 5-days weeks in the budgeted period and it is anticipated that sales and production will occur evenly throughout the whole period.

It is anticipated that stock at the beginning of the period will be:

Product-A	400 units
Product-B	200 units
Material-X	1,000 kgs.
Material-Y	500 kgs.

The anticipated closing stocks for budget period are as below:

Product-A	4 days sales
Product-B	5 days sales
Material-X	10 days consumption
Material-Y	6 days consumption
Required:	

CALCULATE the Material Purchase Budget and the Wages Budget for the direct workers, showing the quantities and values, for the next month.

(7 Marks)

(b) Icecold a FMCG Company manufactures and sells three flavors of ice cream:

Dark chocolate, Chocolate, and Butterscotch. The batch size for the ice cream is limited to 1,000 ice cream based on the size of the fridge and ice cream molds owned by the company. Based on budgetary projections, the information listed below is available:

	<u>Dark chocolate</u>	<u>Chocolate</u>	<u>Butterscotch</u>
Projected sales in units	500,000	800,000	600,000
PER UNIT data:			
Selling price	₹ 80	₹ 75	₹ 60
Direct materials	₹ 20	₹ 15	₹ 14
Direct labor	₹4	₹2	₹2
Hours per 1000-unit ba	atch:		
Direct labor hours	20	10	10
Fridge hours	1	1	1
Packaging hours	0.5	0.5	0.5

Total overhead costs and activity levels for the year are estimated as follows:

<u>Activity</u>	Overhead costs	Activity levels
Direct labor		2,400 hours
Fridge	₹ 2,10,00,000	1,900 fridge hours
Packaging	₹ 1,50,00,000	950 packaging hours
	₹ 3,60,00,000	

Required:

- a. With the help of ABC system, for the Chocolate ice cream:
 - 1. Compute the activity-cost-driver rate
 - 2. Compute the estimated overhead costs per thousand ice cream.
 - 3. Compute the estimated operating profit per thousand ice cream.
- b. With the help of traditional system (with direct labor hours as the overhead allocation base), for the Chocolate ice cream, compute the estimated operating profit per thousand ice cream. (7 Marks)
- 6. (a) EXPLAIN the types of responsibility centres. (5 Marks)
 - (b) EXPLAIN the efficiency rating procedures of the employees. (5 Marks)
 - (c) WHAT are the essential pre-requisites for integrated accounts?(4 Marks)

OR

(d) WHAT are the principles of estimation of costs and benefits? (4 Marks)

Mock Test Paper - Series I: March, 2024

Date of Paper: 12 March, 2024

Time of Paper: 2 P.M. to 5 P.M.

INTERMEDIATE: GROUP - II

PAPER – 4: COST AND MANAGEMENT ACCOUNTING

Answers are to be given only in English except in the case of the candidates who have opted for Hindi medium. If a candidate has not opted for Hindi medium his/ her answer in Hindi will not be valued.

Working notes should form part of the answer.

Time Allowed – 3 Hours

Maximum Marks – 100

- 1. The question paper comprises two parts, Part I and Part II.
- 2. Part I comprises Case Scenario based Multiple Choice Questions (MCQs) for 30 marks
- 3. Part II comprises questions which require descriptive type answers for 70 marks.

PART I – Case Scenario based MCQs

Part I is compulsory.

Write the most appropriate answer to each of the following multiple-choice questions by choosing one of the four options given. All questions are compulsory.

1. Arnav Ltd. manufactures chemical solutions used in paint and adhesive products. Chemical solutions are produced in different processes. Some of the processes are hazardous in nature which may results in fire accidents.

At the end of the last month, one fire accident occurred in the factory. The fire destroyed some of the paper files containing records of the process operations for the month.

You being an associate to the Chief Manager (Finance), are assigned to prepare the process accounts for the month during which the fire occurred. From the documents and files of other sources, following information could be retrieved:

Opening work-in-process at the beginning of the month was 500 litres, 80% complete for labour and 60% complete for overheads. Opening work-in-process was valued at ₹ 2,78,000.

Closing work-in-process at the end of the month was 100 litres, 20% complete for labour and 10% complete for overheads.

Normal loss is 10% of input (fresh) and total losses during the month were 800 litres partly due to the fire damage.

Output transferred to finished goods was 3,400 litres.

Losses have a scrap value of ₹ 20 per litre.

All raw materials are added at the commencement of the process.

The cost per equivalent unit is ₹ 660 for the month made up as follows:

Raw Material ₹ 300 Labour ₹ 200 Overheads ₹ 160

The company uses FIFO method to value work-in-process and finished goods. The following information are required for managerial decisions:

- i. How much quantity of raw material introduced during the month?
 - A. 4,300 Litres
 - B. 3,500 Litres
 - C. 4,200 Litres
 - D. 3,800 Litres
- ii. The Quantity of normal loss and abnormal loss are:
 - A. Normal loss- 380 litres & Abnormal loss- 420 litres
 - B. Normal loss- 350 litres & Abnormal loss 450 litres
 - C. Normal loss- 430 litres & Abnormal loss 370 litres
 - D. Normal loss- 420 litres & Abnormal loss 380 litres.
- iii. Value of raw material added to the process during the month is:
 - A. ₹10,10,000
 - B. ₹10,33,600
 - C. ₹10,18,400
 - D. ₹10,20,000
- iv. Value of labour and overhead in closing Work-in-process are:
 - A. ₹4,000 & ₹1,600 respectively
 - B. ₹20,000 & ₹16,000 respectively
 - C. ₹16,000 & ₹9,000 respectively
 - D. ₹13,200 & ₹6,600 respectively
- v. Value of output transferred to finished goods is:
 - A. ₹22,57,200
 - B. ₹20,06,400
 - C. ₹22,44,000
 - D. ₹19,27,200

(5 x 2 = 10 Marks)

2. M Ltd. is producing a single product and may expand into product diversification in next one to two years. M Ltd. is amongst a labour-intensive company where majority of processes are done manually. Employee cost is a major cost element in the total cost of the company. The company conventionally uses performance parameters Earnings per manshift (EMS) to measure cost paid to an employee for a shift of 8 hours, and Output per manshift (OMS) to measure an employee's output in a shift of 8 hours.

The Chief Manager (Finance) of the company has emailed you few information related to the last month. The email contains the following data related to the last month:

During the last month, the company has produced 2,34,000 tonnes of output. Expenditures for the last months are:

- (i) Raw materials consumed ₹ 50,00,000
- (ii) Power consumed 13,000 Kwh @ ₹ 8 per Kwh to run the machines for production.
- (iii) Diesels consumed 2,000 litres @ ₹ 93 per litre to run power generator used as alternative or backup for power cuts.
- (iv) Wages & salary paid ₹ 6,40,00,000
- (v) Gratuity & leave encashment paid ₹ 64,20,000
- (vi) Hiring charges paid for HEMM- ₹ 30,00,000. HEMM are directly used in production.
- (vii) Hiring charges paid for cars used for official purpose ₹ 66,000
- (viii) Reimbursement of diesel cost for the cars ₹ 22,000
- (ix) The hiring of cars attracts GST under RCM @5% without credit.
- Maintenance cost paid for weighing bridge (used for weighing of final goods at the time of dispatch) – ₹ 12,000
- (xi) AMC cost of CCTV installed at weighing bridge (used for weighing of final goods at the time of dispatch) and factory premises is ₹ 8,000 and ₹ 18,000 per month respectively.
- (xii) TA/ DA and hotel bill paid for sales manager- ₹ 36,000
- (xiii) The company has 1,800 employees works for 26 days in a month.

You are asked to calculate the followings:

- i. What is the amount of prime cost incurred during the last month:
 - A. ₹7,54,20,000
 - B. ₹7,57,10,000
 - C. ₹7,56,06,000
 - D. ₹7,87,10,000

- ii. What is the total and per shift cost of production for last month:
 - A. ₹7,87,10,000 and ₹336.37 respectively
 - B. ₹7,87,10,000 and ₹1,681.84 respectively
 - C. ₹7,87,28,000 and ₹1,682.22 respectively
 - D. ₹7,87,28,000 and ₹336.44 respectively
- iii. What is the value of administrative cost incurred during the last month:
 - A. ₹92,400
 - B. ₹88,000
 - C. ₹1,48,400
 - D. ₹1,44,000
- iv. What is the value of selling and distribution cost and total cost of sales:
 - A. ₹ 36,000 & ₹ 7,88,76,400 respectively
 - B. ₹56,000 & ₹7,88,76,400 respectively
 - C. ₹ 36,000 & ₹ 7,88,72,000 respectively
 - D. ₹56,000 & ₹7,88,72,000 respectively
- v. What is the value EMS and OMS for the last month:
 - A. ₹1,504.70 & 5 tonnes respectively
 - B. ₹1,367.52 & 5 tonnes respectively
 - C. ₹1,504.70 & 4.37 tonnes respectively
 - D. ₹ 1,367.52 & 4.37 tonnes respectively (5 x 2 = 10 Marks)
- The wages budget for the last period was based on a standard repair time of 30 minutes per unit and a standard wage rate of ₹ 50 per hour. The actual data for the last period are as follows:

Number of units = 30,000

Labour rate variance = 7,500 (A)

Labour efficiency variance = Nil

From the information find out the actual rate of wages per unit

- A. ₹50
- B. ₹25.50
- C. ₹50.50
- D. ₹25.25

(2 Marks)

4. The following extract is taken from the overhead budget of X:

Budgeted activity	50%	75%
Budgeted overhead (₹)	30,00,000	40,00,000

What would be the budgeted overhead for 60% level of activity:

- A. ₹ 32,00,0000
- B. ₹34,00,000
- C. ₹ 30,00,000
- D. ₹36,00,000
- 5. Which of the following statements relating to Zero Based Budgeting (ZBB) is false:
 - A. It is a method of budgeting whereby all activities are re-evaluated each time a budget is formulated.
 - B. ZBB attempts to eliminate unnecessary expenditure being retained in budgets.
 - C. It is probably the least time consuming and least costly approach to budgeting.
 - D. It requires that budgets are built up from scratch. (2 Marks)
- 6. Based on the data below, what is the amount of the overhead under-/overabsorbed?

Budgeted overhead – ₹ 5,25,000

Budgeted machine hours- 17,500

Actual machine hours- 17,040

Actual overheads- ₹ 5,20,000

- A. 5,000 under-absorbed
- B. 8,800 under-absorbed
- C. 8,800 over-absorbed
- D. 5,000 over-absorbed
- 7. A customer has been ordering 80,000 caps during the year. It is estimated that it costs ₹ 1 as inventory holding cost per cap per month and that the set up cost per run of cap manufacture is ₹ 3,500

What is optimum run size of cap manufacture?

- A. 12 runs
- B. 10 runs
- C. 15 runs
- D. 7 runs

(2 Marks)

(2 Marks)

(2 Marks)

PART-II – Descriptive Questions (70 Marks)

Question No. 1 is compulsory.

Attempt any **four** questions out of the remaining **five** questions.

1. P Ltd. manufactures two products called 'X' and 'Y'. Both products use a common raw material Z. The raw material Z is purchased @ ₹ 72 per kg from the market. The company has decided to review inventory management policies for the forthcoming year.

The following forecast information has been extracted from departmental estimates for the year ended 31st March 2025 (the budget period):

	Product X	Product Y
Sales (units)	28,000	13,000
Finished goods stock increase by year-end	320	160
Post-production rejection rate (%)	4	6
Material Z usage (per completed unit, net of wastage)	5 kg	6 kg
Material Z wastage (%)	10	5

Additional information:

- Usage of raw material Z is expected to be at a constant rate over the period.
- Annual cost of holding one unit of raw material in stock is 11% of the material cost.
- The cost of placing an order is ₹ 15,600 per order.
- The management of P Ltd. has decided that there should not be more than 40 orders in a year for the raw material Z.

Required:

- (a) (i) Prepare Production budget for Products X and Y (in units) for the year ended 31st March 2025.
 - (ii) Calculate the Economic Order Quantity for Material Z (in kgs).

(3+2=5 Marks)

- (b) Prepare Purchases budget for Material Z (in kgs and value) for the year ended 31st March 2025. (5 Marks)
- (c) If there is a sole supplier for the raw material Z in the market and the supplier do not sale more than 4,000 kg. of material Z at a time. Keeping the management purchase policy and production quantity mix into consideration, calculate the maximum number of units of Product X and Y that could be produced. (4 Marks)

2. (a) Chiku Transport Service is a Delhi based national goods transport service provider, owning four trucks for this purpose. The cost of running and maintaining these trucks are as follows:

Particulars	Amount
Diesel cost	₹ 19.20 per km.
Engine oil	₹ 4,200 for every 13,000 km.
Repair and maintenance	₹ 36,000 for every 10,000 km.
Driver's salary	₹ 24,000 per truck per month
Cleaner's salary	₹ 15,000 per truck per month
Supervision and other general expenses	₹ 14,000 per month
Cost of loading of goods	₹ 180 per Metric Ton (MT)

All four trucks were purchased for ₹ 30 lakhs with an estimated life of 7,20,000 km each.

During the next month, it is expecting 6 bookings, the details are as follows:

SI. No.	Journey	Distance in km	Weight- Up (in MT)	Weight- Down (in MT)
1.	Delhi to Kochi	2,700	14	6
2.	Delhi to Guwahati	1,890	12	0
3.	Delhi to Vijayawada	1,840	15	0
4.	Delhi to Varanasi	815	10	0
5.	Delhi to Asansol	1,280	12	4
6.	Delhi to Chennai	2,185	10	8
	Total	10,710	73	18

Required

- (i) Calculate the total absolute Ton-km for the vehicles. (3 Marks)
- (ii) Calculate the cost per ton-km.

(6 Marks)

 (b) S & Sons, an unregistered supplier under GST, purchases material from V Ltd. which is a GST registered supplier. The following information is available for one lot of 5,000 units of material purchased:

₹ 5,00,000
@ 10% on listed price
18% (9% CGST + 9% SGST)
@ 10%

(Will be given only if payment is made within 30 days.)

Toll Tax paid	₹ 1,800
Freight and Insurance	₹ 36,000
Demurrage paid to transporter	₹ 5,000
Commission and brokerage on purchases	₹ 10,000
Amount deposited for returnable containers	₹ 30,000
Amount of refund on returning the container	₹ 26,000
Other Expenses	@ 2% of total cost

5% of material shortage is due to normal reasons.

The payment to the supplier was made within 21 days of the purchases.

You are required to calculate cost per unit of material purchased by S & Sons. (5 Marks)

- 3. (a) What are the important ledgers to be maintained under non-integrated accounting system in the Cost Accounting? (4 Marks)
 - (b) The following particulars have been compiled in respect of three workers, which are under consideration of the management.

	I	П	III
Actual hours worked	380	100	540
Hourly rate of wages (in ₹)	40	50	60
Productions in units:			
- Product X	210	-	600
- Product Y	360	-	1350
- Product Z	460	250	-
Standard time allowed per unit of each product is:			
	Х	Y	Z
Minutes	15	20	30

For the purpose of piece rate, each minute is valued at ₹ 1/-

You are required to calculate the wages of each worker under:

- (i) Guaranteed hourly rate basis
- Piece work earning basis, but guaranteed at 75% of basic pay (Guaranteed hourly rate if his earnings are less than 50% of basic pay.)
- (iii) Premium bonus basis where the worker received bonus based on Rowan scheme. (10 Marks)

(a) AB Ltd produces a single product V2 and sells it at a fixed price of ₹ 2,050 per unit. The production and sales data for first quarter of the year 2023-24 are as follows:

	April	Мау	June
Sales in units	4,200	4,500	5,200
Production in units	4,600	4,400	5,500

Actual/budget information for each month was as follows:

Direct materials	4 kilograms at ₹ 120 per kilogram
Direct labour	6 hours at ₹ 60 per hour
Variable production overheads	150% of direct labour
Fixed production overheads	₹ 5,00,000
Fixed selling overheads	₹ 95,000

There was no opening inventory at the start of the quarter. Fixed production overheads are budgeted at ₹ 60,00,000 per annum and are absorbed into products based on a budgeted normal output of 60,000 units per annum.

Required:

- (i) Prepare a profit statement for each of the three months using absorption costing principles.
- (ii) Prepare a profit statement for each of the three months using marginal costing principles.
- (iii) Present a reconciliation of the profit or loss figures given in your answer to (i) and (ii). (10 Marks)
- (b) PQ Ltd. sells bottles and currently is trying to find out the profitability of opening another store which will have the following expenses and revenues:

	Amount per piece (₹)
Selling Price	600
Variable costs:	
Material cost	410
Salesmen's commission	60
Total variable cost	470
Annual fixed expenses are:	(₹)
- Rent	6,00,000
- Office and administrative expenses	20,00,000
- Advertising	8,00,000
- Other fixed expenses	2,00,000

Calculate the annual break-even point in units and in value. Also determine the profit or loss if 35,000 units of bottles are sold. (4 Marks)

5. (a) SARA Ltd. has furnished the following standard cost data per' unit of production:

Material 15 kg @ ₹ 15 per kg.

Labour 6 hours @ ₹ 5 per hour

Variable overhead 6 hours @ ₹ 12 per hour.

Fixed overhead ₹ 4,50,000 per month (Based on a normal volume of 30,000 labour hours.)

The actual cost data for the month of August 2023 are as follows:

Material used 65,000 kg at a cost of ₹ 9,85,000.

Labour paid ₹ 1,40,000 for 31,500 hours worked.

Variable overheads ₹ 3,60,200

Fixed overheads ₹ 4,70,000

Actual production 4,800 units.

CALCULATE:

- (i) Material Cost Variance.
- (ii) Labour Cost Variance.
- (iii) Fixed Overhead Cost Variance.
- (iv) Variable Overhead Cost Variance.

(6 Marks)

(b) The following budgeted information relates to Pinku Ltd. for the year 2024:

	Products		
	Α	В	С
Production and Sales (units)	1,00,000	80,000	60,000
	(₹)	(₹)	(₹)
Selling price per unit	90	180	140
Direct cost per unit	50	90	95
	Hours	Hours	Hours
Machine department	3	4	5
(machine hours per unit)			
Assembly department	6	4	3
(direct labour hours per unit)			

The estimated overhead expenses for the year 2024 will be as below:

Machine Department ₹73,60,000

Assembly Department₹ 55,00,000

Overhead expenses are apportioned to the products on the following basis:

Machine Department On the basis of machine hours

Assembly DepartmentOn the basis of labour hours

After a detailed study of the activities the following cost pools and their respective cost drivers are found:

Cost Pool	Amount (₹)	Cost Driver	Quantity
Machining services	64,40,000	Machine hours	9,20,000 hours
Assembly services	44,00,000	Direct labour hours	11,00,000 hours
Set-up costs	9,00,000	Machine set-ups	9,000 set-ups
Order processing	7,20,000	Customer orders	7,200 orders
Purchasing	4,00,000	Purchase orders	800 orders

As per an estimate the activities will be used by the three products:

	Products		
	Α	В	С
Machine set-ups	4,500	3,000	1,500
Customer orders	2,200	2,400	2,600
Purchase orders	300	350	150

Prepare a product-wise profit statement using Activity-based method.

(8 Marks)

- 6. (a) EXPLAIN the treatment of over and under absorption of overheads in cost accounts. (5 Marks)
 - (b) "Technology has played a significant role in cost accounting enabling business to automate their process."

EXPLAIN the impact of Information Technology in Cost Accounting in the light of above statement. (5 Marks)

(c) As per the controllability, cost can be classified as controllable & uncontrollable costs. How will you DIFFERENTIATE them? (4 Marks)

OR

 (d) How apportionment of joint costs upto the point of separation amongst the joint products using market value at the point of separation and net realizable value method is done? DISCUSS. (4 Marks)