PAPER 8 - COST ACCOUNTING

SUGGESTED ANSWERS

SECTION – A

1.

(i) (B)
(ii) (C)
(iii) (B)
(iv) (B)
(v) (D)
(vi) (B)
(vii) (C)
(viii) (A)
(ix) (C)
(x) (B)
(xi) (C)
(xii) (D)
(xiii) (A)
(xiv) (D)
(xv) (B)

SECTION – B

2. (a)

Cost and Profit Statement as on 31st March, 2025

Particulars	**Amount (₹)**
Materials consumed:	
Opening stock + Purchases - Closing stock	
₹ 80,000 + 34,00,000 –1,30,000	33,50,000
Direct labour	16, 00,000
Prime Cost	49,50,000
Factory Overheads (60% of direct labour cost)	9,60,000
Gross Factory Cost	59,10,000
Add: Opening work-in-progress	1,20,000
Less: Closing work-in-progress	1,80,000
Factory Cost	58,50,000
Cost of Production	58,50,000
Add: Opening stock of finished goods	3,60,000
Less: Closing stock of finished goods	2,20,000

Cost of Goods Sold	59,90,000
Administration overheads (6% of sales)	5,40,000
Selling & distribution expenses (12% of sales)	10,80,000
Cost of Sales	76,10,000
Net Profit (Sales – Cost of Sales)	13,90,000
Sales	90,00,000

2. (b)

(i) Let ₹ *x* be the cost of material and ₹ *y* be the normal rate of wages per hour.

	Vikas	**Shiv**
Material costs (₹)	X	X
Labour costs:		
Time allowed	50	50
Less: Time taken	30	40
Time saved	20	10
Time wages [Time taken × HR]	30y	40y
Add: Bonus	$\frac{30}{50}$ × 20y = 12y	50% of 10y = 5y
Total wages (₹)	42y	45y
Overhead costs (₹)	300	400
Factory costs (₹)	x+ 42y + 300	x+ 45y + 400

Given,

x+ 42y + 300 = 14,560 ……..(1)

x+ 45y + 400 = 15,200 ……..(2)

from (2) – (1), 3y = 540, i.e., y = 180

From (1), x = 14,260 – 42 × 180 = 6,700

Therefore, Material cost = ₹ 6,700 and wages rate per hour = ₹ 180

Amount of Bonus to:

Vikash : 12 × 180 = ₹ 2,160

Shiv: 5 × 180 = ₹ 900

(ii) Comparative statement of factory cost of the product by the two workmen

	Vikas (₹)	**Shiv (₹)**
Material costs	6,700	6,700
Wages	42 × 180 = 7,560	45 × 180 = 8,100
Prime costs	14,260	14,800
Add: Factory overhead @ ₹ 10 per hour	300	400
Factory costs	14,560	15,200

3. (a)

Departmental Distribution Summary

Items	Basis of Apportionment	Total	Production Departments			Service Departments	
			X	Y	Z	Maintenance	Stores
		(₹)	(₹)	(₹)	(₹)	(₹)	(₹)
Indirect Materials	Allocation	85,000	19,000	24,000	4,000	30,000	8,000
Indirect Wages	Allocation	79,000	18,000	22,000	6,000	20,000	13,000
Power & Light	Kilowatt Hours (200 : 220 : 80 : 75 : 25)	1,20,000	40,000	44,000	16,000	15,000	5,000
Depreciation (1 month)	Value of Assets (5 : 6 : 4 : 3 : 2)	40,000	10,000	12,000	8,000	6,000	4,000
Insurance	Value of Assets	20,000	5,000	6,000	4,000	3,000	2,000
Rent & Rates	Area	56,000	16,000	16,000	12,000	8,000	4,000
Meal Charges	No. of Employees	60,000	18,000	24,000	6,000	8,000	4,000
		4,60,000	1,26,000	1,48,000	56,000	90,000	40,000
Maintenance Department		—	45,000	27,000	18,000		
Stores Department		—	16,000	16,000	8,000		
Total Overheads		4,60,000	1,87,000	1,91,000	82,000		

3. (b)

Books of ABC Ltd.
Costing Profit and Loss Account
(For the year ended on 31st March, 2025)

Particulars	Amount (₹)	Particulars	Amount (₹)
To Materials (5,48,000–12,800)	5,35,200	By Sales	12,00,000
To Direct wages (3,02,000–7,200)	2,94,800		
Prime Cost	8,30,000		
To Factory overheads (20% of Prime Cost)	1,66,000		
Works Cost	9,96,000		
To Administration overheads (24,800×3)	74,400		
Cost of Production	10,70,400		
(–)Closing stock (10,70,400×800/24,800)	34,529		
Cost of Goods Sold	10,35,871		
To Selling & distribution overheads (24,000×4)	96,000		
Cost of Sales	11,31,871		
To Profit b/f	68,129		
	12,00,000		12,00,000

Reconciliation Statement

Particulars		Amount (₹)	Amount (₹)
Profit as per Cost Accounts			68,129
Add :	Dividend excluded in cost accounts	3,600	
	Over absorption of factory overheads [1,66,000– (1,66,000-4,000)]	4,000	
	Over absorption of selling & distribution overheads (96,000–90,000)	6,000	13,600
			81,729
Less :	Under absorption of administration overheads (76,480–74,400)	2,080	
	Over valuation of finished stock in cost records (34,529 – 32,000)	2,529	
	Preliminary expenses not included in cost records	12,000	16,609
	Net Profit as per Financial Accounts		65,120

4. (a)

Machine Shop No. XYZ-II
(Component 'Diamond')

(i)	**Batch size: 100 components**	Total Batch cost (₹)	Cost per component (₹)
	Setting up costs:		
	Wages (3 hours @ ₹ 12 per hour)	36	
	Machine expenses (3 hours @ ₹ 72 per hour)	216	
		252	2.52
	Production Costs:		
	Material (100 @ ₹10)	1,000	
	Wages (100 units × 6 minutes × ₹ 12/60)	120	
	Machine expenses (100 units × 6 min. × ₹ 72/60)	720	
	Total Production Cost	1,840	18.40
	Total Setting up and Production Costs	2,092	20.92
(ii)	**Batch size: 150 components**		
	Setting up Costs	252	1.68
	Production Costs:		
	Material (150 @ ₹10)	1,500	
	Wages (150 × 6 × ₹12/60)	180	
	Machine expenses (150 × 6 × ₹72/60)	1,080	
	Total Production Cost	2,760	18.40
	Total Setting up and Production Costs	3,012	20.08
(iii)	**Batch size: 200 Components**		
	Setting up costs	252	1.26
	Production Costs:		
	Material (200 @ ₹10)	2,000	
	Wages (200 ×6 × ₹12/60)	240	
	Machine expenses (200×6× ₹72/60)	1,440	
	Total Production Cost	3,680	18.40
	Total Setting up and Production Costs	3,932	19.66

4. (b)

PQR Ltd.'s Contract Account
(at the end of 1st year on 31st March, 2024)

Particulars	₹	Particulars	₹
To Materials Used	7,87,500	By Work-in-Progress	18,75,000
To Wages Paid	4,50,000	(16,87,500*100/90)	
To Overhead Expenses	1,12,500		
To Notional Profit c/d	5,25,000		
	18,75,000		18,75,000
To Profit & Loss A/c (₹ 5,25,000*1/3*90%)	1,57,500	By Notional Profit b/d	5,25,000
To Work-in-Progress (Reserve)	3,67,500		
	5,25,000		5,25,000

Contractee's Account

Particulars	₹	Particulars	₹
To Balance c/d	16,87,500	By Bank A/c	16,87,500
	16,87,500		16,87,500

PQR Ltd.'s Contract Account
(On completion of contract in the 2nd year on 31st March, 2025)

Particulars	₹	Particulars	₹
To Work-in-Progress (18,75,000 - 3,67,500)	15,07,500	By Contractee's A/c	45,00,000
To Materials Used	11,25,000		
To Wages Paid	9,00,000		
To Overhead Expenses	2,25,000		
To Profit & Loss A/c (Transfer)	7,42,500		
	45,00,000		45,00,000

Contractee's Account

Particulars	₹	Particulars	₹
To Contract A/c	45,00,000	By Balance b/d	16,87,500
		By Bank A/c	26,25,000
		By Balance c/d	1,87,500
	45,00,000		45,00,000

5. (a)

Apportionment of Joint Expenses

Particulars	X (₹)	Y (₹)
Sales Value (Given)	32,000	48,000
Less: Estimated profit on sales	6,400	14,400
Total Cost of Sales	25,600	33,600
Less: Post-separation cost	9,600	14,400
Selling Expenses	6,400	9,600
Pre-Separation cost of X and Y	9,600	9,600

Working: Joint Expenses of GPT= ₹1,36,000-(9,600+ 9,600) = ₹ 1,16,800

Comparative Profit and Loss Statement

Particulars	GPT (₹)	X (₹)	Y (₹)	Total (₹)
1. Sales	3,28,000	32,000	48,000	4,08,000
2. Cost of sales:				
Pre-Separation cost	1,16,800	9,600	9,600	1,36,000
Post-Separation cost	-	9,600	14,400	24,000
Selling Expenses	65,600	6,400	9,600	81,600
Total Cost of Sales	1,82,400	25,600	33,600	2,41,600
3. Profit (1)-(2)	1,45,600	6,400	14,400	1,66,400

Working: Selling Expenses of Product GPT = 20%*3,28,000 = ₹ 65,600

5. (b)

Product	Actual Production (units)	Units per St. Hr.	Standard Hrs. (for actual output)
X	48,000	10	4,800
Y	76,000	8	9,500
Total = 14,300			

(i) Direct Labour Rate Variance = (SR – AR) * AT
= (₹ 0.50 – 0.60) * 15,000 = ₹ 1,500 (A)

(ii) Direct Labour Idle Time Variance = Abnormal Idle Time * SR
= 750 Hours * ₹ 0.50 = ₹ 375 (A)

Working Note: Calculation of Abnormal Idle Time –
Unbudgeted holidays = 700 Hours
Machine breakdown (500 * 1/10) = 50 Hours
Total = 750 Hours

(iii) Direct Labour Efficiency Variance = (ST – AT excluding abnormal idle time) * SR
= (14,300 – 14,250) * ₹ 0.50 = ₹ 25 (F)

(iv) Direct Labour Total Variance:
Standard Cost - 14,300 Hours @ ₹ 0.50 = ₹ 7,150
Actual Cost - 15,000 Hours @ ₹ 0.60 = ₹ 9,000
Direct Labour Total Variance = ₹ 1,850 (A)

6.

Calculation of Present Contribution and Profit

Present variable cost per unit:	**Amount in ₹**
Raw materials	20.00
Conversion cost	15.00
Dealer's margin	5.00
Total	= 40.00

Contribution per unit = Selling price – Variable cost
= ₹ 50 – 40 = ₹ 10

Total Contribution = ₹ 10 * 1,50,000 units = ₹ 15,00,000

In both the suggestions, fixed cost remains unchanged. Therefore, the present profit of ₹ 7,00,000 (i.e. ₹ 15,00,000 – 8,00,000) can be maintained by having the total contribution at the present level i.e. ₹ 15,00,000.

(i) Reducing Selling Price by 4%:

New Selling price = ₹ 48 (₹ 50 - ₹ 2)
New Dealer's margin = ₹ 4.80 (10% of ₹ 48)
New Variable cost = ₹ 39.80 (₹ 20 + 15 + 4.80)
New Contribution per unit = ₹ 8.20 (₹ 48 – 39.80)

Sales (in units) required to maintain present level of profit:
= Total Contribution / Contribution Per Unit
= ₹ 15,00,000 / ₹ 8.20 = 1,82,927 units

Alternative Solution: Assumption that Dealer's Margin remains ₹ 5 per unit.

New Selling price = ₹ 48 (₹ 50 - ₹ 2)
Dealer's margin = ₹ 5
Variable cost = ₹ 40 (₹ 20 + 15 + 5)
New Contribution per unit = ₹ 8 (₹ 48 – 40)

Sales (in units) required to maintain present level of profit:
= Total Contribution / Contribution Per Unit
= ₹ 15,00,000 / ₹ 8 = 1,87,500 units

(ii) Increasing Dealer's Margin by 20%:

New Dealer's margin = ₹ 6 (₹ 5 + 20% of ₹ 5)
New Variable cost = ₹ 41 (₹ 20 + 15 + 6)
New Contribution per unit = ₹ 9 (₹ 50 – 41)

Sales (in units) required to maintain present level of profit:
= Total Contribution / Contribution Per Unit
= ₹ 15,00,000 / ₹ 9 = 1,66,667 units

Recommendation:

The Man Ltd. should accept the second suggestion because in this case, company earns the same level of contribution/profit by selling less number of units.

7. (a)

Production Budget for the year ending 31st March, 2025

Particulars	Product – R	Product – S
Sales	30,000	1,50,000
Add: Closing stock	2,800	4,700
	32,800	1,54,700
Less: Opening stock	1,800	4,200
Production (kg)	31,000	1,50,500

Materials Purchase Budget

(For the year ending 31st March, 2025)

Particulars	X	Y	Z	Total
Materials required for product-R in the ratio of 4:4:2	12,400	12,400	6,200	31,000
Materials required for product-S in the ratio of 3:5:2	45,150	75,250	30,100	1,50,500
Total requirement	57,550	87,650	36,300	
Add: Closing stock	3,600	7,500	24,500	
	61,150	95,150	60,800	
Less: Opening stock	4,500	4,000	22,000	
Purchases (kg)	56,650	91,150	38,800	
Cost per kg	20	16	12	
Total Purchase Cost (₹)	11,33,000	14,58,400	4,65,600	= ₹30,57,000

7. (b)

Direct Expenses:

As per CAS–10, Direct Expenses are the 'Expenses relating to manufacture of a product or rendering a service, which can be identified or linked with the cost object other than direct material cost and direct employee cost.'

General Principles of Measurement:

(i) Emphasizes traceability for identification of Direct Expenses.

(ii) Details the determination of Direct Expenses for bought-out resources, other than those incurred for such resources, and one-time payments.

(iii) Addresses amortization of lump-sum expenses based on estimated output or benefit.

(iv) Stresses materiality, excluding finance costs from Direct Expenses, and avoiding imputed costs.

(v) Discusses treatment of standard costs, variances, subsidies, abnormal portions, penalties, and recoveries.

8. (a)

Essentials of a Good Cost Accounting System:

(i) Cost accounting system should be tailor made, practical, simple and capable of meeting the requirement of a business concern.

(ii) The data to be used by the cost accounting system should be accurate, otherwise it may distort the output of the system.

(iii) Necessary co-operation and participation of executives from various departments of the concern is essential for developing a good system of cost accounting.

(iv) The cost of installing and operating the system should not be too high and ultimately pass the cost-benefit analysis test.

(v) The system of costing should not sacrifice the utility by introducing meticulous and unnecessary details.
(vi) A carefully phased programme should be prepared by using network analysis for the introduction of the system.
(vii) Management should have a faith in the costing system and should also provide a helping hand for its development and success.

8. (b)

Meaning of ABC Analysis:

ABC Analysis, also known as Pareto Analysis, is a technique used in inventory management to categorize items based on their significance.

ABC analysis is named after the Pareto Principle, which states that roughly 80% of the effects come from 20% of the causes. In the context of inventory management, it means that a small percentage of items often contribute to a significant portion of the total value.

Under ABC analysis, the materials stocked may be classified into a number of categories according to their importance, i.e., their value and frequency of replenishment during a period. The first category (also known as group 'A' items) may consist of only a small percentage of total items handled but combined value may be a large portion of the total stock value. The second category, naming it as group 'B' items, may be relatively less important. In the third category, consisting of group 'C' items, all the remaining items of stock may be included which are quite large in number but their value is not high.

Advantages of ABC Analysis (Any Three):

(i) Closer and stricter control of those items which represent a major portion of total stock value is maintained.
(ii) Investment in inventory can be regulated and funds can be utilized in the best possible manner. 'A' class items are ordered as and when need arises, so that the working capital can be utilized in a best possible way.
(iii) With greater control over the inventories, savings in material cost can be realised.
(iv) It helps in maintaining enough safety stock for 'C' category items.
(v) Scientific and selective control helps in the maintenance of high stock turnover ratio.

8 (c)

Objectives of CAS-8:

The objective of this Standard (CAS-8) is to bring uniformity and consistency in the principles and methods of determining the cost of utilities with reasonable accuracy.

Scope of CAS-8:

CAS-8 is applied to cost statements which require classification, measurement, assignment, presentation and disclosure of cost of utilities including those requiring attestation.

For determining the cost of production to arrive at an assessable value of excisable utilities used for captive consumption, CAS-4 on Cost of Production for captive Consumption shall apply. This standard shall not be applicable to the organisations primarily engaged in generation and sale of utilities. This standard does not cover issues related to the ascertainment and treatment of carbon credits, which shall be dealt with in a separate standard.
