

INTERMEDIATE COURSE: GROUP - II**PAPER – 4: COST & MANAGEMENT ACCOUNTING**

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)
3. Part II comprises questions which require descriptive type answers.

PART I – Case Scenario based MCQs (30 Marks)*Part I is compulsory.***(a) CASE SCENARIO – I:**

White Kollars Pvt. Ltd. is a company engaged solely in the manufacture of shirts, which are bought mainly by office goers. Currently, the company sells its products directly to the retailers. In the recent years, sales has steadily declined due to rising competition. The forecast for next year suggests that the current decline in profits is expected to persist.

The management believes that a profit of ₹ 60,00,000 is necessary to ensure an adequate return on capital. Thus, it asked the marketing director to review the marketing policies.

Now, the marketing director submits the following profit and loss account for the last year along with 3 proposals available with him:

(Amount in '000)

Particulars	(₹)	(₹)	(₹)
Sales revenue (50,000 shirts at ₹ 1,500 each)			75,000
Factory cost of goods sold:			
Direct materials	7,500		
Direct labour	26,250		
Variable factory overheads	4,500		
Fixed factory overheads	16,500	54,750	
Fixed Administration overhead		10,500	
Selling and distribution overhead:			
Sales commission (2% of sales)	1,500		
Delivery costs (variable per unit sold)	3,750		
Fixed costs	3,000	8,250	73,500
Profit			1,500

Proposals for upcoming year:

- (i) 10% reduction in selling price which may increase demand by 40%.
- (ii) Selling of 25,000 units to eFlip, an online platform selling products directly to consumers. eFlip would transport the shirts from White Kollars Pvt. Ltd. to its own warehouse. Thus, abolishing the delivery costs and sales commission to be paid for each sale by White Kollars Pvt. Ltd. However, if a suitable price is negotiated, White Kollars Pvt. Ltd. would contribute ₹ 45,00,000 annually towards the online order catalogue cost and provide special packaging at ₹ 75 per shirt.

Remaining units of 25,000 would continue to be sold at ₹ 1,500 each as per existing business.

(iii) 10% price reduction together with an advertising campaign costing ₹ 22,50,000 which may boost sales by 60%.

From the information given above, you are required to FIGURE OUT the following for managerial decision:

i. P/V ratio and Break-even sales (in value) based on the last year accounts would be-

- (A) 40%, ₹ 7,14,28,571
- (B) 42%, ₹ 7,14,28,571
- (C) 40%, ₹ 7,50,00,000
- (D) 42%, ₹ 7,50,00,000

ii. Profit/ (Loss) from proposal (i) would be:

- (A) ₹ 3,38,10,000
- (B) ₹ 3,00,00,000
- (C) ₹ 38,10,000
- (D) ₹ 30,00,000

iii. With respect to proposal (i), how many number of units White Kollars Pvt. Ltd. would need to sell at ₹ 1,350 each to earn a desired profit of ₹ 60,00,000?

- (A) 75,000 units
- (B) 74,534 units
- (C) 62,112 units
- (D) 47,619 units

iv. With respect to proposal (ii), how much selling price per unit be offered to eFlip, that would at least break even on this proposal?

- (A) ₹ 180
- (B) ₹ 660
- (C) ₹ 840
- (D) ₹ 1,020

v. Profit/ (Loss) from proposal (iii) would be:

- (A) ₹ 63,90,000
- (B) ₹ 86,40,000
- (C) ₹ 81,00,000
- (D) (₹ 81,00,000)

[5×2 MARKS=10]

(b) CASE SCENARIO – II:

Sagar Limited, an oil refinery uses Process Costing for determining the cost of each process. Management of Sagar Limited is confused about method of valuation of WIP. They have FIFO and Weighted Average Cost methods under consideration.

Finance manager Mr. Sahil has put forward that Weighted Average Cost method is suitable when there are significant fluctuations in price and quantity. In this method, calculation has to be done at every purchase and it is a complex and time-consuming method.

He also stated that price and quantity of input and output material of Sagar Limited is almost same for whole year; hence FIFO method would be more suitable for the company. He also revealed that in oil refinery industry; FIFO method is preferred over Weighted Average Cost method and switching to FIFO method will save time and money.

He further stated that by using FIFO method closing WIP is valued at current cost and provided the following information:

Opening WIP : 12,000 Units, Total cost ₹ 1,66,200.

Degree of Completion : Material - 100%

Labour and Overhead - 80%

Material introduced: (74,500 Units) ₹ 4,76,465

Direct Labour ₹ 3,70,395

Direct Overhead ₹ 2,96,316

Units Scrapped : 1,900 units Degree of Completion :

Material 100%

Labour and Overhead 70%

Closing WIP : 2,600 units Degree of Completion:

Material 100%

Labour and Overhead 60%

Rest of the units were transferred to next process.

Normal Loss is 2% of total input unit including opening work-in-process. Realizable value of normal loss is ₹ 2 per unit deducted from cost of material introduced.

You are required to calculate the following using FIFO method (MCQs 1 to 5) :

1. Equivalent units of Material and Material cost per unit

- (A) 86,500 units and ₹ 5.50 per unit
- (B) 74,500 units and ₹ 6.39 per unit
- (C) 72,770 units and ₹ 6.50 per unit
- (D) 72,600 units and ₹ 6.56 per unit

2. Equivalent units of labour and overheads and total cost per unit

- (A) 82,490 units and ₹ 8.08 per unit
- (B) 74,079 units and ₹ 9.00 per unit
- (C) 75,290 units and ₹ 8.85 per unit
- (D) 79,790 units and ₹ 8.35 per unit

3. Value of abnormal loss to be shown in process account

- (A) ₹ 2,176.00
- (B) ₹ 2,182.00
- (C) ₹ 2,168.35
- (D) ₹ 1,896.52

4. Value of units transferred to next process

- (A) ₹ 11,10,660
- (B) ₹ 12,75,600
- (C) ₹ 12,51,200
- (D) ₹ 12,72,800

5. Value of closing WIP

- (A) ₹ 31,096
- (B) ₹ 31,044
- (C) ₹ 30,940
- (D) ₹ 28,340

[5×2 MARKS=10]

(c) CASE SCENARIO – III:

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.
- (x) 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

[5×2 MARKS=10]

PART II – Descriptive Questions (70 Marks)

Question No.1 is compulsory. Answer any four questions from the remaining five questions.

1.(a) Job No. 198 was commenced on October 10, 2022 and completed on November 1, 2022. Materials used were ₹ 6,000 and labour charged directly to the job was ₹ 4,000. Other information is as follows:

Machine No. 215 used for 40 hours, the machine hour rate being ₹ 35.

Machine No. 160 used for 30 hours, the machine hour rate being ₹ 40. Six welders worked on the job for five days of 8 hours each: the Direct labour hour per welder is ₹ 20.

General expenses related to production not included for calculating either the machine hour or direct labour hour rate totaled ₹20,000, total direct wages for the period being ₹2,00,000. COMPUTE the works costs for job No. 198.

[5 MARKS]

(b) M/s. Abid Private Limited disclosed a net profit of ₹ 48,408 as per cost books for the year ending 31st March 2019. However, financial accounts disclosed net loss of ₹ 15,000 for the same period. On scrutinizing both the set of books of accounts, the following information was revealed:

Works Overheads under-recovered in Cost Books ₹ 48,600

Office Overheads over-recovered in Cost Books ₹ 11,500

Dividend received on Shares ₹ 17,475

Interest on Fixed Deposits ₹ 21,650

Provision for doubtful debts ₹ 17,800

Obsolescence loss not charged in Cost Accounts ₹ 17,200

Stores adjustments (debited in Financial Accounts) ₹ 35,433

Depreciation charged in Financial accounts ₹ 30,000

Depreciation recovered in Cost Books ₹ 35,000

Prepare a Memorandum Reconciliation Account.

[5 MARKS]

- (c) RS Ltd. manufactures and sells a single product X whose selling price is ₹ 100 per unit and the variable cost is ₹ 60 per unit.
- (i) If the Fixed Costs for this year are ₹ 24,00,000 and the annual sales are at 60% margin of safety, CALCULATE the rate of net return on sales, assuming an income tax level of 40%
- (ii) For the next year, it is proposed to add another product line Y whose selling price would be ₹ 150 per unit and the variable cost ₹ 100 per unit. The total fixed costs are estimated at ₹ 28,00,000. The sales mix of X : Y would be 5 : 3. COMPUTE the break-even sales in units for both the products.

[4 MARKS]

2. (a) From the following particulars, you are required to PREPARE monthly cost sheet of Aditya Industries:

	(₹)
Opening Inventories:	
- Raw materials	12,00,000
- Work-in-process	18,00,000
- Finished goods (10,000 units)	9,60,000
Closing Inventories:	
- Raw materials	14,00,000
- Work-in-process	16,04,000
- Finished goods	?
Raw materials purchased	1,44,00,000
GST paid on raw materials purchased (ITC available)	7,20,000
Wages paid to production workers	36,64,000
Expenses paid for utilities	1,45,600
Office and administration expenses paid	26,52,000
Travelling allowance paid to office staffs	1,21,000
Selling expenses	6,46,000

Machine hours worked- 21,600 hours

Machine hour rate- ₹8.00 per hour

Units sold- 1,60,000

Units produced- 1,94,000

Desired profit- 15% on sales

[8 MARKS]

(b) Answer the following:

SMC Company Limited is producing a particular design of toys under the following existing incentive system:

Normal working hours in the week 48 hours

Late shift hours in the week 12 hours

Rate of payment Normal working: ₹ 150 per hour

Late shift: ₹ 300 per hour

Average output per operator for 60 hours per week (including late shift hours): 80 toys.

The company's management has now decided to implement a system of labour cost payment with either the Rowan Premium Plan or the Halsey Premium Plan in order to increase output, eliminate late shift overtime, and reduce the labour cost.

The following information is obtained:

The standard time allotted for ten toys is seven and half hours.

Time rate: ₹ 150 per hour (as usual).

Assuming that the operator works for 48-hours in a week and produces 100 toys, you are required to calculate the weekly earnings for one operator under-

1. The existing Time Rate,
2. Rowan Premium Plan and,
3. Halsey Premium Plan (50%).

[6 MARKS]

3. (a) The sales department of A Limited is analysing the customer profitability for its Product Z. It has decided to analyse the profitability of its five new customers using activity-based costing method. It buys Product Z at ₹ 5,400 per unit and sells to retail customers at a listed price of ₹ 6,480 per unit. The data pertaining to five customers are:

	Customers				
	A	B	C	D	E
Units sold	4,500	6,000	9,500	7,500	12,750
Listed Selling Price	₹6,480	₹6,480	₹6,480	₹6,480	₹6,480
Actual Selling Price	₹6,480	₹6,372	₹5,940	₹6,264	₹5,832
Number of Purchase orders	15	25	30	25	30
Number of Customer visits	2	3	6	2	3
Number of deliveries	10	30	60	40	20
Kilometers travelled per delivery	20	6	5	10	30
Number of expedited deliveries	0	0	0	0	1

After a detailed analysis and computation, the following activities has been identified and respective cost has been calculated:

Activity	Cost Driver Rate
Order taking	₹4,500 per purchase order
Customer visits	₹ 3,600 per customer visit

Deliveries	₹ 7.50 per delivery Km travelled
Product handling	₹ 22.50 per case sold
Expedited deliveries	₹ 13,500 per expedited delivery

You are required to COMPUTE the customer-level operating income of each of five retail customers.

[8 MARKS]

(b) A single product company estimated its quarter-wise sales for the next year as under:

Quarter	Sales (Units)
I	30,000
II	37,500
III	41,250
IV	45,000

The opening stock of finished goods is 6,000 units and the company expects to maintain the closing stock of finished goods at 12,250 units at the end of the year. The production pattern in each quarter is based on 80% of the sales of the current quarter and 20% of the sales of the next quarter. The company maintains this 20% of sales of next quarter as closing stock of current quarter.

The opening stock of raw materials in the beginning of the year is 10,000 kg. and the closing stock at the end of the year is required to be maintained at 5,000 kg. Each unit of finished output requires 2 kg. of raw materials.

The company proposes to purchase the entire annual requirement of raw materials in the first three quarters in the proportion and at the prices given below:

Quarter	Purchase of raw materials % to total annual requirement in quantity	Price per kg. (₹)
I	30%	2
II	50%	3
III	20%	4

The value of the opening stock of raw materials in the beginning of the year is ₹ 20,000. You are required to PREPARE the following for the next year, quarter wise:

- Production budget (in units).
- Raw material consumption budget (in quantity).
- Raw material purchase budget (in quantity and value).
- Priced stores ledger card of the raw material using First in First out method.

[6 MARKS]

4. (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.

[9 MARKS]

(b) Explain Build-Operate-Transfer (BOT) approach and classify the following expenses in Capital Cost or Operating and Maintenance Cost for Toll Roads : 2+3=5

- (i) Land acquisition
- (ii) Interest expenses incurred for servicing term loans
- (iii) Material and Labour
- (iv) Toll Collection Expenses
- (v) Contingency Allowance
- (vi) Periodic painting cost of railings etc.

[5 MARKS]

5. (a) Shanu Ltd has calculated a predetermined overhead rate of ₹ 22 per machine hour for its Quality Check (QC) department. This rate has been calculated for the budgeted level of activity and is considered as appropriate for absorbing overheads. The following overhead expenditures at various activity levels had been estimated:

Total overheads	Number of machine hours
₹ 3,38,875	14,500
₹ 3,47,625	15,500
₹ 3,56,375	16,500

You are required to:

- (i) CALCULATE the variable overhead absorption rate per machine hour.
- (ii) CALCULATE the estimated total fixed overheads.
- (iii) CALCULATE the budgeted level of activity in machine hours.
- (iv) CALCULATE the amount of under/over absorption of overheads if the actual machine hours were 14,970 and actual overheads were ₹ 3,22,000.
- (v) STATE the arguments for and against using departmental absorption rates as opposed to a single or blanket factory wide rate.

[7 MARKS]

- (b) ABC Ltd. is a well-known company for producing baby care products. The company produces and sells two variants of organic shampoo for children: "Baby Rose" and "Baby Lily". The sales and cost data for both products are provided below:

Particulars	Baby Rose	Baby Lily
Current demand and Sales (Number of bottles)	4,000	3,000
Production Capacity (Number of bottles)	7,500	6,000
Selling Price per bottle (₹)	600	750
Variable Costs per bottle :		
– Direct Materials (₹ 20 Per litre)	160	200
– Other Variable Costs	270	350

The fixed costs amount to ₹ 5,00,000 and ₹ 4,50,000 for Baby Rose and Baby Lily respectively. The Production Manager has informed that 1,00,000 litres of material is available for production. A dealer has approached the company and proposed to purchase both products at the existing selling prices, which are to be produced by utilizing the remaining unused material. However, he has insisted that all the bottles must be packed with eco-friendly packaging, which will result in an additional cost of ₹ 10 per bottle for the company. Presently, the company is not using eco-friendly material for packing of bottles.

Required:

Prepare a detailed statement showing the overall contribution and profit of the company after acceptance of the dealer's proposal.

[7 MARKS]

6. (a) As a consultant hired by a manufacturing company, HOW would you go about assessing the critical factors for designing and implementing a cost accounting system? (5 Marks)

(b) As a consultant, a client has approached you to set up a budgetary control system in their organization. WHAT sequential steps would you follow to design, implement, and monitor the system? (5 Marks)

(c) You are managing the inventory for a manufacturing company and notice that certain items in the store are not being utilized frequently, leading to increased holding costs. HOW would you identify slow-moving and non-moving items, and WHAT strategies would you implement to minimize such stocks effectively? (4 Marks)

OR

(c) DISCUSS in brief three main methods of allocating support departments costs to operating departments.

(4 Marks)