

MOCK TEST PAPER –1

INTERMEDIATE: GROUP – I

PAPER – 3: 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.

Question No. 1 is compulsory.

Attempt any **four** questions from the remaining **five** questions.

Working notes should form part of the answer.

Time Allowed – 3 Hours

Maximum Marks – 100

1. Answer the following:

- (a) A company has the following three alternative proposals for conveyance facilities for its sales personnel who has to do substantial traveling, approximately 20,000 kilometers yearly:
- (i) Purchasing and maintaining its own fleet of cars. The average cost of a car is ₹ 7,20,000
 - (ii) Allow the Executive to use their own car and reimburse the expenses @ ₹ 12 per kilometer and also bear insurance costs.
 - (iii) Hire cars from an agency at ₹ 2,16,000 per year per car. The company will have to bear costs of petrol, taxes and tyres.

The following further details are available:

Petrol	₹ 7.20 per km.
Tyre	₹ 0.144 per km.
Taxes	₹ 960 per car per annum
Repairs and maintenance	₹ 0.24 per km.
Insurance	₹ 1,440 per car per annum
Life of the car	5 years with annual mileage of 20,000 km.
Resale value	₹ 96,000 at the end of the fifth year.

WORK OUT the relative costs of three proposals and rank them.

- (b) A manufacturing process yields the following products out of the raw materials introduced in the process:

Main Product X	60% of Raw Materials
By-Product Y	15% of Raw Materials
By Product Z	20% of Raw Materials
Wastage	5% of Raw Materials

Other information is as follows:

- a. Total Cost: Raw Materials 1,000 units of ₹ 9,200; Labour ₹ 8,200; Overheads ₹ 12,000

- b. One unit of product z requires $\frac{1}{2}$ the raw materials required for one unit of product Y, one unit of product X requires $1\frac{1}{2}$ times the raw materials required for product Y.
- c. Product X required double the time needed for production of one unit of Y and one unit of Z.
- d. Product Z requires $\frac{1}{2}$ the time required for the production of one unit of product Y.
- e. Overheads are to be apportioned in the ratio of 6:1:1.

You are required to CALCULATE the total and per unit of cost of each of the products.

- (c) EFF Limited, a construction company, entered into a contract for ₹ 14,50,000 on 1st July, 2021. On 30th June, 2022 when the accounts were closed, the following details were gathered about the contract:

	Amount (₹)
Materials purchased	2,90,000
Wages paid	1,30,500
General expenses	29,000
Materials on hand (30-6-2022)	72,500
Wages accrued (30-6-2022)	14,500
Work certified	5,80,000
Work uncertified	43,500
Cash received	4,35,000

The above contract contained "Escalation clause" which read as follows:

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

It was found that since the date of signing the agreement, the prices of materials and wage rates increased by 25% leading to increase the values from the very beginning. However, the value of the work certified does not take into account the effect of the above clause.

You are required to CALCULATE the 'value of work certified' after taking the effect of 'Escalation Clause' as on 30th June, 2022.

- (d) A company produces a product 'AB' by using two raw materials - 'Material Ae' and 'Material Be' in the ratio of 5:3.

A sales volume of 50,000 kgs is estimated for the month of December by the managers expecting the trend will continue for entire year. The ratio of input and output is 8:5.

Other Information about Raw Material Ae is as follows:

Purchase Price	₹ 150 per kg
Re-order period	2 to 3 days
Carrying Cost	12%

Note: Material Ae is perishable in nature and if not used within 3.5 days of purchase it becomes obsolete.

To place an order for material 'Ae', the company has to incur an administrative cost of ₹ 375 per order. At present, material 'Ae' is purchased in a lot of 7,500 kgs. to avail the discount on purchase. Company works for 25 days in a month and production is carried out evenly.

You are required to CALCULATE:

(i) Economic Order Quantity (EOQ) for Material Ae;

(ii) Maximum stock level for Material Ae.

(4 × 5 Marks = 20 Marks)

2. (a) The details regarding a product manufactured by the company for the last one week are as follows:

Standard cost (per unit)

Direct materials 10 units @ ₹ 22.50 ₹ 225

Direct wages 5 hours @ ₹ 120 ₹ 600

Total: ₹ 825

Actual (for whole activity):

Direct materials ₹ 96,525

Direct wages ₹ 2,44,860

Analysis of variances:

Direct materials:

Price ₹ 8,775 (Adverse)

Usage ₹ 5,625 (Favourable)

Direct wages (labour):

Efficiency ₹ 5,400 (Adverse)

You are required to CALCULATE:

(i) Material Cost variance

(ii) Actual output units

(iii) Actual price of material per unit

(iv) Actual Wages rate per labour hour

(v) Labour rate variance

(vi) Labour Cost variance

(10 Marks)

(b) PS Limited is a manufacturing company and is operating at 75% capacity utilization. The PV ratio at this level of activity is 40%.

The flexible budget drafted by the company for two levels of activity is given below:

	Capacity utilization (75 %)	Capacity utilization (100 %)
	Amount in ₹ (Lakhs)	Amount in ₹ (Lakhs)
Direct materials	180	240
Direct wages	120	160
Power and fuel	12	16
Repairs and maintenance	18	21
Consumables	21	28
Supervision	20	20
Indirect labour	36	42
Administrative expenses	21	21

Selling expenses	18	18
Depreciation	54	54

You are required to:

- i. CALCULATE the profit earned by PS Limited at 75% level of activity.
 - ii. CALCULATE the break-even level of activity. **(10 Marks)**
3. (a) XYZ Ltd. is manufacturer of medicines. It carries on production operation in two processes. The material first passes through Process I, where Medicine 'X' is produced. Following data are given for the month October, 2022:

Opening work-in-progress quantity (Material 100% and conversion 50% complete)	(in Liter)	12,000
Material input quantity	(in Liter)	60,000
Work completed quantity	(in Liter)	40,000
Closing work-in-progress quantity (Material 100% and conversion 80% complete)	(in Liter)	15,000
Opening work-in-progress cost		
Material cost	(in ₹)	1,75,000
Processing cost	(in ₹)	1,40,000
Material input cost	(in ₹)	7,70,000
Processing cost	(in ₹)	8,35,000

Normal process loss is 15% of material input. It has no realizable value.

Any quantity of Medicine 'X' can be sold for ₹ 42.50 per Liter. Alternatively, it can be transferred to Process II for further processing and then sold as Medicine 'XYZ' for ₹ 50 per Liter. Further materials are added in Process II, which yield 1.25 Liter of Medicine 'XYZ' for every Liter of Medicine 'X' of Process I. Out of the 40,000 Liter of work completed in Process I, 10,000 Liter are sold as Medicine 'X' and 30,000 Liter are passed through Process II for sale as Medicine 'XYZ'.

The monthly costs incurred in Process II (other than the cost of Medicine 'X') are:

Input	30,000 Liter of Medicine 'X'
Materials Cost	₹ 2,75,000
Processing Costs	₹ 2,50,000

You are required to:

- (i) PREPARE Statement of Equivalent production and determine the cost per Liter of Medicine 'X' in Process I, using the weighted average cost method.
 - (ii) Company is mulling over the option to sell the 30,000 Liter of Medicine 'X' at Process-I without processing it further in Process-II. WILL IT BE beneficial for the company over the current pattern of processing 30,000 Liter in process-II? **(10 Marks)**
- (b) The following information pertains to A Limited for the year 1st April 2021 to 31st March 2022:

Particulars	Amount (₹)
Sales	50,00,000
Direct labour	10,50,000
Administrative overheads (relating to production activity)	1,50,000
Selling expenses	2,50,000

Inventory details are as follows:

	As on 1 st April 2021 (Amount in ₹)	As on 31 st March 2022 (Amount in ₹)
Raw materials	5,00,000	6,30,000
Finished goods	9,80,000	10,50,000
Work in Progress	6,00,000	8,00,000

Additional Information:

- Direct labour would be 175% of works overheads.
- Cost of goods sold would be ₹ 6,900 per unit
- Selling expenses would be ₹ 500 per unit.

You are required to PREPARE a cost sheet for the year ended 31st March, 2022 showing:

- Value of material purchased
- Prime cost
- Works cost
- Cost of production
- Cost of goods sold
- Cost of Sales
- Profit earned

(viii) Profit as a percentage of sales

(10 Marks)

4. (a) Archika Tyre Manufacturing Private Limited has four workers Ram, Shyam, Mohan & Kundan who are paid wages on the basis of ₹ 100 per day, ₹ 120 per day, ₹ 130 per day & ₹ 2500 per month respectively.

Standard working days in a week are six of 8 hours per day. For the month of October 2022, there was only one holiday other than Sunday for which no payment was made to employees except Kundan who was paid for full month. Sundays are considered paid holidays i.e. employees are paid for Sunday also even there is no working on that day. Provident fund contribution is 8% of monthly wages by employer and employee each. ESI contribution is 5% of monthly wages by employer and 4% of monthly wages by employee.

On the basis of above information, you are required to CALCULATE (regarding the month of October 2022):

- Amount of net wages receivable by each employee from the employer.
- What is the total amount of Provident Fund required to be deposited by employer?
- What is the total amount of ESI required to be deposited by employer?
- What is the total labour cost to employer?
- If total material cost is ₹ 20,000 for October 2022 and overheads are charged equal to labour cost, calculate total cost for the month.

(10 Marks)

- (b) A firm has a total capacity of producing 1,00,000 units of an item. The budgeted expenses at this level of activity are as under:

	Per unit (₹)
Direct Materials	650
Direct Wages	325
Direct Expenses	125
Variable overheads	50
Fixed Production Overheads	25
Selling and Distribution Overheads (20% fixed)	25
Administrative Expenses (100% fixed)	<u>60</u>
Total	<u>1,260</u>

The selling price is ₹ 1,750 per unit and is anticipated to remain constant.

You are required to PREPARE a flexible budget, on the basis of marginal costing, for 60,000 and 75,000 units of output level showing the profit and P/V Ratio. **(10 Marks)**

5. (a) A work-shop has 8 identical machines operated by 6 operators. The machine cannot work without an operator wholly engaged on it. The original cost of all the 8 machines works out to ₹ 64,00,000. The following particulars are furnished for a six months' period:

Normal available hours per operator	1,248
Absenteeism (without pay) hours per operator	18
Leave (with pay) hours per operator	20
Normal unavoidable idle time-hours per operator	10
Production bonus estimated	10% on wages
Power consumed	₹ 80,500
Supervision and Indirect Labour	₹ 33,000
Lighting and Electricity	₹ 12,000
Average rate of wages per day of 8 hours per operator	₹ 200

The following particulars are given for a year:

Insurance	₹ 7,20,000
Sundry work Expenses	₹ 1,00,000
Management Expenses allocated	₹ 10,00,000
Depreciation	10% on the original cost

Repairs and Maintenance (including consumables): 5% of the value of all the machines.

Prepare a statement showing the comprehensive machine hour rate for the machine shop.

(10 Marks)

- (b) SMD Limited manufactures four products namely A, B, C and D using the same production and process facilities. The company has been following conventional method of costing and wishes to shift to activity-based costing system.

The data pertaining to four products are:

Product	Units produced	Material per unit (₹)	Labour hours per unit	Machine hours per unit
A	1,500	140	1	3
B	2,500	90	3	2
C	10,000	180	2	6
D	6,000	150	1.5	4

The following activity volumes are associated to the production process for the relevant period -

	Number of Inspections	Number of Material Movements	Number of set-ups
A	200	15	100
B	250	20	125
C	900	100	600
D	650	85	400

The cost data also states that:

- Direct Labour cost: ₹ 60 per hour
- Machine hour rate: ₹ 280 per hour
- Production overheads are absorbed on machine hour basis.
- For activity-based costing, a thorough, analysis of the production process revealed that:

Costs relating to set-ups and inspection bears the equal percentage while costs relating to machinery accounts for 20% of the production overhead.

Costs relating to material handling stands at 50% of costs relating to machinery.

You are required to:

- Prepare a statement showing the unit costs and total costs of each product using the absorption costing method.
- Prepare a statement showing the unit costs and total costs of each product using activity-based costing system. **(10 Marks)**

6. Answer **any four** of the following:

- LIST OUT cost unit examples of following service industry:
Hospital, Electricity Supply service, Cinema, Canteen, Hotels
- LIST OUT five purely financial expenses that are included only in Financial Accounts.
- DESCRIBE Unit Costing. WHAT kind of industries follow this method of costing?
- WRITE DOWN the corresponding cost drivers related to the following activity cost pools:
Inspecting and testing costs, Setting-up machines cost, Machining costs, Supervising Costs, Ordering and Receiving Materials cost
- BRIEF the treatment of following while calculating purchase cost of material:
Trade Discount, Cash Discount, Penalty, Insurance charges, Commission paid.

(4 × 5 =20 Marks)