

**MOCK TEST PAPER 1**  
**INTERMEDIATE (NEW): 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) C.T. Ltd. manufactures and sells a single product X whose selling price is Rs. 100 per unit and the variable cost is Rs. 60 per unit.

(i) If the Fixed Costs for this year are Rs. 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 Rs. 150 per unit and the variable cost Rs. 100 per unit. The total fixed costs are estimated at Rs. 28,00,000. The sales mix of X : Y would be 5 : 3. COMPUTE the break-even sales in units for both the products.

(b) CALCULATE from the following figures:

(i) Efficiency ratio,

(ii) Activity, Ratio and

(iii) Capacity Ratio:

Budgeted Production	88,000 units
Standard Hours per unit	10
Actual Production	75,000 units
Actual Working Hours	6,00,000

(c) A Ltd. manufactures a product X which requires two raw materials A and B in a ratio of 1:4. The sales department has estimated a demand of 5,00,000 units for the product for the year. To produce one unit of finished product, 4 units of material A is required.

Stock position at the beginning of the year is as below:

Product- X    12,000 units

Material A    24,000 units

Material B    52,000 units

To place an order the company has to spend Rs.15,000. The company is financing its working capital using a bank cash credit @13% p.a.

Product X is sold at Rs.1,040 per unit. Material A and B are purchased at Rs.150 and Rs.200 respectively.

**Required:**

COMPUTE economic order quantity (EOQ):

- (i) If purchase order for the both materials is placed separately.  
 (ii) If purchase order for the both materials is not placed separately.
- (d) A manufacturing company has disclosed a net loss of Rs 2,25,000 as per their cost accounting records for the year ended March 31, 2019. However, their financial accounting records disclosed a net loss of Rs 2,70,000 for the same period. A scrutiny of data of both the sets of books of accounts revealed the following information:

		(Rs)
(i)	Factory overheads under-absorbed	5,000
(ii)	Administration overheads over-absorbed	3,000
(iii)	Depreciation charged in financial accounts	70,000
(iv)	Depreciation charged in cost accounts	80,000
(v)	Interest on investments not included in cost accounts	20,000
(vi)	Income-tax provided in financial accounts	65,000
(vii)	Transfer fees (credit in financial accounts)	2,000
(viii)	Preliminary expenses written off	3,000
(ix)	Over-valuation of closing stock of finished goods in cost accounts	7,000

**Required:**

PREPARE a Memorandum Reconciliation Account.

**[4 × 5 Marks = 20 Marks]**

2. (a) Asian Mfg. Co. has decided to increase the size of the store. It wants the information about the probability of the individual product lines : Lemon, Grapes and Papaya. It provides the following data for the 2018 for each product line:

Particulars	Lemon	Grapes	Papaya
Revenues (Rs.)	79,350	2,10,060	1,20,990
Cost of goods sold (Rs.)	60,000	1,50,000	90,000
Cost of bottles returned (Rs.)	1,200	0	0
Number of purchase orders placed	36	84	36
Number of deliveries received	30	219	66
Hours of shelf stocking time	54	540	270
Items sold	12,600	1,10,400	30,600

Asian Mfg. Co. also provides the following information for the year 2018:

Activity	Description of Activity	Total Costs (Rs.)	Cost Allocation Basis
Bottle returns	Returning of empty bottles to the store	1,200	Direct tracing to product line
Ordering	Placing of orders of purchases	15,600	156 purchase orders
Delivery	Physical delivery and the receipts of merchandise	25,200	315 deliveries
Self- stocking	Stocking of merchandise on store shelves and ongoing restocking	17,280	864 hours of time

Customer support	Assistance provided to customers including bagging and checkout	30,720	1,53,600 items sold
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**Required**

- (i) Asian Mfg. Co. currently allocates store support costs (all costs other than the cost of goods sold) to the product line on the basis of the cost of goods sold of each product line. CALCULATE the operating income and operating income as the percentage of revenue of each product line.
- (ii) If Asian Mfg. Co. allocates store support costs (all costs other than the cost of goods sold) to the product lines on the basis of ABC system, CALCULATE the operating income and operating income as the percentage of revenue of each product line.
- (iii) SHOW a comparison statement. **[10 Marks]**
- (b) APFL Ltd. deals in plumbing materials and also provides plumbing services to its customers. On 12th August, 2019, APFL received a job order for a students' hostel to supply and fitting of plumbing materials. The work is to be done on the basis of specification provided by the hostel owner. Hostel will be inaugurated on 5th September, 2019 and the work is to be completed by 3rd September, 2019. Following are the details related with the job work:

**Direct Materials**

APFL uses a weighted average method for the pricing of materials issues.

Opening stock of materials as on 12<sup>th</sup> August 2019:

- 15mm GI Pipe, 12 units of 15 feet size @ Rs.600 each
- 20mm GI Pipe, 10 units of 15 feet size @ Rs.660 each
- Other fitting materials, 60 units @ Rs. 26 each
- Stainless Steel Faucet, 6 units @ Rs. 204 each
- Valve, 8 units @ Rs. 404 each

Purchases:

On 16<sup>th</sup> August 2019:

- 20mm GI Pipe, 30 units of 15 feet size @ Rs. 610 each
- 10 units of Valve @ Rs. 402 each

On 18<sup>th</sup> August 2019:

- Other fitting materials, 150 units @ Rs. 28 each
- Stainless Steel Faucet, 15 units @ Rs. 209 each

On 27<sup>th</sup> August 2019:

- 15mm GI Pipe, 35 units of 15 feet size @ Rs.628 each
- 20mm GI Pipe, 20 units of 15 feet size @ Rs.660 each
- Valve, 14 units @ Rs. 424 each

Issues for the hostel job:

On 12<sup>th</sup> August 2019:

- 20mm GI Pipe, 2 units of 15 feet size
- Other fitting materials, 18 units

On 17<sup>th</sup> August 2019:

- 15mm GI Pipe, 8 units of 15 feet size
- Other fitting materials, 30 units

On 28<sup>th</sup> August 2019:

- 20mm GI Pipe, 2 units of 15 feet size
- 15mm GI Pipe, 10 units of 15 feet size
- Other fitting materials, 34 units
- Valve, 6 units

On 30<sup>th</sup> August:

- Other fitting materials, 60 units
- Stainless Steel Faucet, 15 units

**Direct Labour:**

Plumber: 180 hours @ Rs. 50 per hour (includes 12 hours overtime)

Helper: 192 hours @ Rs.35 per hour (includes 24 hours overtime)

Overtimes are paid at 1.5 times of the normal wage rate.

**Overheads:**

Overheads are applied @ Rs. 13 per labour hour.

**Pricing policy:**

It is company's policy to price all orders based on achieving a profit margin of 25% on sales price.

**You are required to**

- (a) CALCULATE the total cost of the job.
- (b) CALCULATE the price to be charged from the customer. **[10 Marks]**

3. (a) V Ltd. produces and markets a very popular product called 'X'. The company is interested in presenting its budget for the second quarter of 2019.

The following information are made available for this purpose:

- (i) It expects to sell 50,000 bags of 'X' during the second quarter of 2019 at the selling price of Rs. 900 per bag.
- (ii) Each bag of 'X' requires 2.5 kgs. of a raw – material called 'Y' and 7.5 kgs. of raw – material called 'Z'.
- (iii) Stock levels are planned as follows:

Particulars	Beginning of Quarter	End of Quarter
Finished Bags of 'X' (Nos.)	15,000	11,000
Raw – Material 'Y' (Kgs.)	32,000	26,000
Raw – Material 'Z' (Kgs.)	57,000	47,000
Empty Bag (Nos.)	37,000	28,000

- (iv) 'Y' cost Rs.120 per Kg., 'Z' costs Rs.20 per Kg. and 'Empty Bag' costs Rs.80 each.
- (v) It requires 9 minutes of direct labour to produce and fill one bag of 'X'. Labour cost is

Rs.50 per hour.

- (vi) Variable manufacturing costs are Rs.45 per bag. Fixed manufacturing costs Rs.30,00,000 per quarter.
- (vii) Variable selling and administration expenses are 5% of sales and fixed administration and selling expenses are Rs.20,50,000 per quarter.

**Required**

- (i) PREPARE a production budget for the said quarter.
- (ii) PREPARE a raw – material purchase budget for ‘Y’, ‘Z’ and ‘Empty Bags’ for the said quarter in quantity as well as in rupees.
- (iii) COMPUTE the budgeted variable cost to produce one bag of ‘X’.
- (iv) PREPARE a statement of budgeted net income for the said quarter and show both per unit and total cost data. **[10 Marks]**
- (b) V Ltd. manufactures luggage trolleys for airports. The factory, in which the company undertakes all of its production, has two production departments- ‘Fabrication’ and ‘Assembly’, and two service departments- ‘Stores’ and ‘Maintenance’.

The following information have been extracted from the company’s budget for the financial year ended 31st March, 2019:

Particulars	Rs.
<b>Allocated Overhead Costs</b>	
Fabrication Department	15,52,000
Assembly Department	7,44,000
Stores Department	2,36,000
Maintenance Department	1,96,000
<b>Other Overheads</b>	
Factory rent	15,28,000
Factory building insurance	1,72,000
Plant & machinery insurance	1,96,000
Plant & Machinery Depreciation	2,65,000
Subsidy for staffs’ canteen	4,48,000

Direct Costs	Rs.	Rs.
Fabrication Department:		
Material	63,26,000	
Labour	<u>8,62,000</u>	71,88,000
Assembly Department:		
Material	1,42,000	
Labour	13,06,000	14,48,000

The following additional information is also provided:

	Fabrication Department	Assembly Department	Stores Department	Maintenance Department
Floor area (square meters)	24,000	10,000	2,500	3,500

Value of plant & machinery (Rs.)	16,50,000	7,50,000	75,000	1,75,000
No. of stores requisitions	3,600	1,400	---	---
Maintenance hours required	2,800	2,300	400	---
No. of employees	120	80	38	12
Machine hours	30,00,000	60,000		
Labour hours	70,000	26,00,000		

**Required:**

- PREPARE a table showing the distribution of overhead costs of the two service departments to the two production departments using step method; and
- CALCULATE the most appropriate overhead recovery rate for each department.
- Using the rates calculated in part (ii) above, CALCULATE the full production costs of the following job order:

**Job number IGI2019**

Direct Materials	Rs. 2,30,400
Direct Labour:	
Fabrication Department	240 hours @ Rs. 50 per hour
Assembly Department	180 hours @ Rs. 50 per hour
Machine hours required:	
Fabrication Department	210 hours
Assembly Department	180 hours

**[10 Marks]**

4. (a) In a manufacturing company the standard units of production of the year were fixed at 1,20,000 units and overhead expenditures were estimated to be:

Fixed	Rs. 12,00,000;	Variable	Rs. 6,00,000;
Semi-Variable	Rs. 1,80,000		

Actual production during the April, 2019 of the year was 8,000 units. Each month has 20 working days.

During the month there was one public holiday. The actual overheads amounted to:

Fixed	Rs. 1,10,000;	Variable	Rs. 48,000
Semi-variable	Rs. 19,200		

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

CALCULATE the followings:

- Overhead Cost Variance
- Fixed Overhead Cost Variance
- Variable Overhead Cost Variance
- Fixed Overhead Volume Variance
- Fixed Overhead Expenditure Variance
- Calendar Variance.

**[10 Marks]**

- (b) From the following data of A Ltd., CALCULATE (i) Material Consumed; (ii) Prime Cost and (iii) Cost of production.

		Amount (Rs.)
(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 manufacturing process	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

[10 Marks]

5. (a) SLS Infrastructure builds and operates a 110 k.m. long highway on the basis of Built-Operate-Transfer (BOT) model for a period of 25 years. A traffic assessment has been carried out to estimate the traffic flow per day. The details are as below:

Sl. No.	Type of vehicle	Daily traffic volume
1.	Two wheelers	44,500
2.	Car and SUVs	3,450
3.	Bus and LCV	1,800
4.	Heavy commercial vehicles	816

The following is the estimated cost of the project:

Sl. no.	Activities	Amount (Rs. in lakh)
1	Site clearance	170.70
2	Land development and filling work	9,080.35
3	Sub base and base courses	10,260.70
4	Bituminous work	35,070.80
5	Bridge, flyovers, underpasses, Pedestrian subway, footbridge, etc.	29,055.60

6	Drainage and protection work	9,040.50
7	Traffic sign, marking and road appurtenance	8,405.00
8	Maintenance, repairing and rehabilitation	12,429.60
9	Environmental management	982.00
	Total Project cost	1,14,495.25

An average cost of Rs.1,120 lakh has to be incurred on administration and toll plaza operation. On the basis of the vehicle specifications (i.e. weight, size, time saving etc.), the following weights has been assigned to the passing vehicles:

Sl. No.	Type of vehicle	
1.	Two wheelers	5%
2.	Car and SUVs	20%
3.	Bus and LCV	30%
4.	Heavy commercial vehicles	45%

**Required:**

- CACULATE the total project cost per day of concession period.
- COMPUTE toll fee to be charged for per vehicle of each type, if the company wants to earn a profit of 15% on total cost.

**[Note:** Concession period is a period for which an infrastructure is allowed to operate and recovers its investment] **[10 Marks]**

- In an Oil Mill, four products emerge from a refining process. The total cost of input during the quarter ending March 2019 is Rs.22,20,000. The output, sales and additional processing costs are as under:

Products	Output in Litres	Additional processing cost after split off (Rs.)	Sales value (Rs.)
A	8,000	6,45,000	25,87,500
B	4,000	1,35,000	2,25,000
C	2,000	–	90,000
D	4,000	22,500	6,75,000

In case these products were disposed-off at the split off point that is before further processing, the selling price per litre would have been:

A (Rs.)	B (Rs.)	C (Rs.)	D (Rs.)
225.00	90.00	45.00	112.50

PREPARE a statement of profitability based on:

- If the products are sold after further processing is carried out in the mill.
  - If they are sold at the split off point. **[10 Marks]**
- DISCUSS the essential features of a good cost accounting system.
  - DISTINGUISH between Bill of Materials and Material Requisition Note.
  - DISCUSS the remedial steps to be taken to minimize the labour turnover.
  - DISTINGUISH between Job and Batch costing. **[4 × 5 = 20 Marks]**