

Test Series: October 2019

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 |
|------------------|---|--------|---------------------|

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 12th 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 16th August 2019:

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

On 18th August 2019:

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

On 27th 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 12th August 2019:

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

On 17th August 2019:

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

On 28th 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 30th 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. |
|---------------------------------|-----------|
| Allocated Overhead Costs | |
| Fabrication Department | 15,52,000 |
| Assembly Department | 7,44,000 |
| Stores Department | 2,36,000 |
| Maintenance Department | 1,96,000 |
| Other Overheads | |
| 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:

- (i) PREPARE a table showing the distribution of overhead costs of the two service departments to the two production departments using step method; and
- (ii) CALCULATE the most appropriate overhead recovery rate for each department.
- (iii) 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:

- (i) Overhead Cost Variance
- (ii) Fixed Overhead Cost Variance
- (iii) Variable Overhead Cost Variance
- (iv) Fixed Overhead Volume Variance
- (v) Fixed Overhead Expenditure Variance
- (vi) 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:

- CALCULATE 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]**

- (b) 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]

6. (a) DISCUSS the essential features of a good cost accounting system.
 (b) DISTINGUISH between Bill of Materials and Material Requisition Note.
 (c) DISCUSS the remedial steps to be taken to minimize the labour turnover.
 (d) DISTINGUISH between Job and Batch costing.

[4 × 5 = 20 Marks]