## INTERMEDIATE EXAMINATION

June 2023

*P–8(CA)*
*Syllabus 2022*

## COST ACCOUNTING

Time Allowed: 3 hours | Full Marks: 100

*The figures in the margin on the right side indicate full marks.*
*Where considered necessary, suitable assumptions may be made and clearly indicated in the answer.*
*Answer Question No. 1 and any five from Question No. 2, 3, 4, 5, 6, 7 and 8.*

### Section-A
### (Compulsory)

**1.** (a) Choose the correct answer from the given four alternatives (You may write only the Roman numeral and Alphabet chosen for your answer): 1×12=12

(i) B Ltd. pays ₹10 per unit royalty to the designer of a product which it manufactures and sells. The royalty charge would be classified in the company's accounts as a

(A) Direct expense
(B) Production overhead
(C) Administrative overhead
(D) Selling overhead

(ii) The sum of direct labour and factory overhead is termed as

(A) Sunk cost
(B) Fixed cost
(C) Conversion cost
(D) Variable cost

(iii) Overtime is

(A) Actual hours being more than normal hours
(B) Actual hours being more than standard hours
(C) Standard hours being more than actual hours
(D) Actual hours being less than standard hours

(iv) Directors' remuneration and expenses form a part of

(A) Production overhead
(B) Administration overhead
(C) Selling overhead
(D) Distribution overhead

(v) Which of the following CAS deals with the principles and methods of determining depreciation and amortization cost?
(A) CAS - 8
(B) CAS - 12
(C) CAS - 14
(D) CAS - 16

(vi) For the purpose of cost sheet preparation, costs are classified based on
(A) Nature
(B) Functions
(C) Relevance
(D) Variability

(vii) Which of the following items should be added to costing profit to arrive at financial profit?
(A) Income tax paid
(B) Over absorption of works overhead
(C) Interest paid on bonds
(D) All of the above

(viii) Which of the following statements is true?
(A) Batch costing is a variant of job costing
(B) Job cost sheet may be used for estimating profit of jobs
(C) Job costing cannot be used in conjunction with marginal costing
(D) In cost plus contracts, the contractor runs a risk of incurring a loss

(ix) Which of the following is an example of by-product?
(A) Curd and butter in a dairy
(B) Mustard seeds and mustard oil
(C) Edible oils and oil cakes
(D) Diesel and petrol in an oil refinery

(x) Standard price of material per kg is ₹ 20, standard usage per unit of production is 5 kg. Actual usage of production of 100 units is 520 kgs, all of which was purchased at the rate of ₹ 22 per kg. Material usage variance is
(A) ₹ 400 (Adverse)
(B) ₹ 400 (Favourable)
(C) ₹ 1,040 (Adverse)
(D) ₹ 1,040 (Favourable)

(xi) Which of the following factors are responsible for change in the break-even point?

(A) Change in fixed cost

(B) Change in variable cost

(C) Change in selling price

(D) All of the above

(xii) Which of the following is not a potential benefit of using a budget?

(A) More motivated managers

(B) Improved inter-departmental communication

(C) Enhanced co-ordination of firm activities

(D) More accurate external financial statements

(b) State whether the following statements are "True" or "False". (You may write only the Roman numeral and whether "True" or "False" without copying the statements into the answer books): [1 × 7 = 7]

(i) Cost unit is anything for which a separate measurement of cost is required.

(ii) Stores Ledger is maintained inside the stores by the store-keeper.

(iii) Continuous stock taking is an essential feature of the perpetual inventory system.

(iv) Travelling expense to the project site is a direct expense.

(v) Cost of idle time arising due to non-availability of raw material is charged to factory overheads.

(vi) Budgetary control facilitate introduction of 'Management by Exception'.

(vii) Costs incurred prior to the split off point are known as "Incremental Costs".

(c) Fill in the blanks (You may write only the Roman numeral and the content filling the blanks): [1 × 6 = 6]

(i) Ticket counter in a Cinema Hall is an example of ___________ centre.

(ii) As per the Payment of Bonus Act, 1965, the maximum limit of bonus is _________ per cent of gross earnings.

(iii) Under absorption of overheads means that actual overheads are __________ than absorbed overheads.

(iv) CAS __________ stands for cost of service cost centre.

(v) ____________ is a system for reporting revenue and cost information to the individual responsible for the revenue-causing and/or cost-incurring function.

(vi) Under integrated accounting system, the accounting entry for payment of wages is to debit ___________ and to credit cash account.

**Section – B**

Answer *any five* questions from question numbers 2 to 8.

Each question carries 15 marks. [15 × 5 = 75]

**2.** (a) M/s PQR Ltd. submits the following information on 31st March, 2023:

| **Particulars** | **Amount (₹)** |
|---|---|
| Sales for the year | 55,00,000 |
| Purchases of material for the year | 22,00,000 |
| Direct labour | 13,00,000 |
| Inventories at the beginning of the year— | |
| Finished goods | 1,40,000 |
| Work-in-progress | 80,000 |
| Materials inventory— | |
| At the beginning of the year | 60,000 |
| At the end of the year | 80,000 |
| Inventories at the end of the year— | |
| Work-in-progress | 1,20,000 |
| Finished goods | 1,60,000 |

Factory overheads were 60% of the direct labour cost.
Administration expenses were 5% of sales.
Selling & distribution expenses were 10% of sales.

You are required to prepare a Cost Sheet with all elements. 7

**2.** (b) Explain the following in detail:

(i) What are the various Advantages of Cost Accounting Standards.

(ii) How to determine the Installed Capacity and Normal Capacity of Production Department. (4+4)

**3.** (a) (i) M/s KPM Ltd. buys its annual requirement of 80,000 units of a component 'Alpha' in 10 instalments. Each unit of 'Alpha' costs ₹ 10 and the ordering cost is ₹ 25. The inventory carrying cost per annum is estimated at 20% of unit value of 'Alpha'.

You are asked by the KPM Ltd. to find the total annual cost of the existing inventory policy. Also, how much money can be saved by using Economic Order Quantity (EOQ)? 5

(ii) Distinguish between scrap and spoilage. 2

**3.** (b) M/s Peacock Ltd. is in the process of evaluation of employees' welfare scheme of the company. In this regard, it has selected three workers – K, L, and M to study their wage earnings. The company furnishes the following particulars for the month of April, 2023 as under:

| | K | L | M |
|---|---|---|---|
| (a) Job completed (Units) | 10,000 | 8,000 | 14,400 |
| (b) Out of above output rejected and unsaleable (Units) | 400 | 160 | 1,600 |
| (c) Time allowed for 100 units | 2 Hrs. 36 Min. | 3 Hrs. | 1 Hr. 30 Min. |
| (d) Basic wage rate per hour (₹) | 25 | 40 | 30 |
| (e) Time taken (Hours) | 200 | 216 | 184 |

The normal working hours per month are fixed at 176 hours. Bonus is paid @ 60% of the basic wage rate for gross time worked and gross output produced without deduction for rejected output. The rate of overtime for first 20 hours is paid at time plus 1/3 and for next 20 hours is paid at time plus 1/2.

**From the above information, you are asked by the management to calculate the following for each worker:**

(i) Number of bonus hours and amount of bonus earned;

(ii) Total wages earned including basic wages, overtime premium and bonus;

(iii) Direct wages cost per 100 saleable units. 8

**4.** (a) M/s Lotus Inc. manufactures the fountain pen called 'Pluto'. In the manufacturing of 'Pluto', the overheads were recovered at a pre-determined rate of ₹ 25 per man-day. The other information for the month of April, 2023 is as under:

| | |
|---|---|
| Total factory overheads incurred | ₹ 83,00,000 |
| Man-days actually worked | 2,97,200 |
| Total units manufactured | 80,000 |
| Units sold during the month | 60,000 |
| Incomplete units (60% complete) | 60,000 |

On analysing the reasons, it was found that 40% of the unabsorbed overheads were due to defective planning and the rest were attributable to increased overhead costs.

**Required:**

You, as a qualified cost accountant, are asked to suggest how would unabsorbed overheads be treated in Cost Accounts? 7

**4.** (b) The following information is available from the financial books of M/s Jyoti Ltd. having a normal production capacity of 60,000 units for the year ended 31st March, 2023:

(i) Sales ₹ 10,00,000 (50,000 units).

(ii) There was no opening and closing stock of finished units.

(iii) Direct material and direct wages costs were ₹ 5,00,000 and ₹ 2,50,000 respectively.

(iv) Actual factory expenses were ₹ 1,50,000 of which 60% are fixed.

(v) Actual administrative expenses were ₹ 45,000 which are completely fixed.

(vi) Actual selling and distribution expenses were ₹ 30,000 of which 40% are fixed.

(vii) Interest and dividends received ₹ 15,000.

**You are required to:**

(a) Find out profit as per financial books for the year ended 31st March, 2023.

(b) Prepare the cost sheet and ascertain the profit as per cost accounts for the year ended 31st March, 2023 assuming that the indirect expenses are absorbed on the basis of normal production capacity.

(c) Prepare a statement reconciling profits shown by financial and cost books. 8

**5.** (a) M/s PQR Ltd. undertakes supply of a component "₹ 25" in batches. Every month a fresh batch order is opened against which materials and labour costs are booked at actuals. Overheads are levied at a rate per labour hour. The selling price is contracted at ₹15 per unit and labour is paid @ ₹ 2 per hour.

The company furnishes data for the three months of January, February and March, 2023 as under:

| Month | Batch Output (Nos.) | Material Cost (₹) | Labour Cost (₹) | Overheads (₹) | Total Labour Hrs. |
|---|---|---|---|---|---|
| January | 1,250 | 6,250 | 2,500 | 12,000 | 4,000 |
| February | 1,500 | 9,000 | 3,000 | 9,000 | 4,500 |
| March | 1,000 | 5,000 | 2,000 | 15,000 | 5,000 |

**Required:**

Calculate the cost and profit per unit of each batch order. 7

**5.** (b) M/s North West Limited undertook a contract for ₹ 5,00,000 on 1st January 2022. The company furnishes the following details for the year ended 31st December 2022:

| | ₹ |
|---|---|
| Materials consumed | 1,65,000 |
| Direct Expenses | 5,000 |
| Wages | 30,000 |
| Materials returned to stores | 5,000 |
| Materials stolen from site | 10,000 |
| Insurance claim admitted | 6,000 |
| Works expenses @ 20% on wages | |
| Office expenses @ 10% on works cost | |
| Materials in hand on 31.12.2022 | 15,000 |
| Cash received to the extent of 90% of works certified | 2,70,000 |
| Cost of work uncertified | 11,000 |

Plant sent to site costing ₹ 60,000 with a scrap value of ₹ 10,000 and its useful life is 5 years. The plant was used on the contract for 146 days.

**You are required to:**

Prepare Contract Account showing therein the cost of materials issued to site and the amount of profit or loss to be transferred to the Profit & Loss Account. 8

**6.** (a) M/s Golden Oil Refinery Ltd. (GORL) produces "Golden" brand oil which passes through three different processes before getting finished oil. The following details are extracted from the costing records of the company for the month of March, 2023:

| | Crushing (₹) | Refining (₹) | Finishing (₹) |
|---|---|---|---|
| Cost of Labour | 5,000 | 3,000 | 2,000 |
| Sundry Material | 2,000 | 1,500 | 1,000 |
| Electric Power | 1,500 | 1,000 | 800 |
| Steam | 1,000 | 1,000 | 750 |
| Repair of Machine | 1,000 | 500 | 250 |
| Cost of Casks and Drums | - | - | 3,750 |

M/s GORL purchased 1,000 tons of copra for ₹ 50,000. Factory overheads for the period were ₹ 5,000 to be apportioned on the basis of wages. 850 tons of crude oil was produced; 770 tons of oil was refined and finally 750 tons of oil was finished for delivery. Realised ₹ 1,000 from sale of sacks; ₹ 2,500 by sale of 125 tons of copra residue and ₹ 2,550 by sale of 60 tons of by-products in refining process.

**Required:**

Prepare Process Accounts for the month of March, 2023. 7

**6.** (b) M/s Hotel Kings Highway has a capacity of 200 single rooms and 50 double rooms. The average occupancy of both single and double rooms is expected to be 80% throughout the year of 365 days. The rent for double room has been fixed at 150% of the rent of a single room. The costs are as under:

**Variable costs:**

Single rooms ₹440 each per day
Double rooms ₹700 each per day

**Fixed costs:**

Single rooms ₹240 each per day
Double rooms ₹500 each per day

**Required:**

Calculate the rent chargeable for single and double rooms per day in such a way that the hotel earns a margin of safety of 20% on rent of rooms. 8

**7.** (a) M/s Alpha Ltd. manufactures a single product and has the following data for the year 2022:

| | |
|---|---|
| Selling price per unit | ₹ 200 |
| Direct material cost per unit | ₹ 54 |
| Direct wages per unit | ₹ 40 |
| Fixed overheads | ₹ 1,90,000 |
| Variable overheads | 50% of direct wages |
| Trade discount | 5% |

M/s Alpha Ltd. approaches you as a qualified cost accountant and asks you to:

1. Advise the Profit Volume Ratio of the company.
2. Critically assess the Break-even Sales (in units and in ₹).
3. Evaluate the Margin of Safety (in ₹ and as % of sales).
4. Recommend the Net profit if sales are 10% and 20% above the Break-even Volume. 7

**7.** (b) Mr. Lurvey is an umbrella manufacturer and marks an average Net Profit of ₹ 5 per piece on a selling price of ₹ 28.60 by producing and selling 12,000 pieces or 60% of the capacity. His cost of sales is—

| **Particulars** | ₹ |
|---|---|
| Direct material | 7.00 |
| Direct wages | 2.50 |
| Works overheads (50% fixed) | 12.50 |
| Sales overheads (25% variable) | 1.60 |

During the current year, he intends to produce the same number but anticipates that fixed charges will go up by 10% while direct labour rate and material will increase by 8% and 6% respectively but he has no option of increasing the selling price.

Under this situation, he obtains an offer for further 20% of the capacity. Mr. Lurvey approaches you as a cost accountant and asks you to ADVISE the minimum price per unit for acceptance the offer if he wants to ensure an overall profit of ₹ 70,000. 8

**8.** (a) M/s Picaso Inc. is a company which follows standard costing system. The details regarding the composition and the weekly wage rates of labour force engage on Job No. "XP – 25".

Which is scheduled to be completed in 30 weeks are as follows:

| Category of Workers | Standard | | Actual | |
|---|---|---|---|---|
| | No. of workers | Weekly Wage Rate per worker (₹) | No. of Workers | Weekly Wage Rate per worker (₹) |
| Skilled | 75 | 60 | 70 | 70 |
| Semi-skilled | 45 | 40 | 30 | 50 |
| Unskilled | 60 | 30 | 80 | 20 |

The work on the Job is actually completed in 32 weeks.

You, as the cost accountant of the company, are asked to ANALYSE the following Labour Variances and report the same to the manager:

(i) Labour Cost Variance

(ii) Labour Rate Variance

(iii) Labour Efficiency Variance

(iv) Labour Revised Efficiency Variance

(v) Labour Mix Variance 7

**8.** (b) M/s Jolly Ltd. manufactures product X and product Y during the year ending on 31st March 2023. It is expected to sell 7,500 kg of product X and 37,500 kg of product Y @ ₹ 60 and ₹ 32 per kg. respectively.

The direct materials A, B and C are mixed in the proportion of 4:4:2 in the manufacture of Product X and in the proportion of 3:5:2 in the manufacture of product Y. The actual and budget inventories for the year are as follows:

| Particulars | Opening Stock (kg) | Expected closing stock (kg) | Anticipated Cost per kg (₹) |
|---|---|---|---|
| Material A | 3,000 | 2,400 | 10 |
| Material B | 2,500 | 5,800 | 8 |
| Material C | 16,000 | 17,300 | 6 |
| Product X | 1,500 | 2,000 | - |
| Product Y | 3,000 | 3,500 | - |

**Required:**

Prepare the Production Budget and Materials Budget showing the purchase cost of materials for the year ending 31st March, 2023. 8

## SUGGESTED ANSWERS TO QUESTIONS
## SECTION – A

**1. (a)**

| | |
|---|---|
| (i) | (A) |
| (ii) | (C) |
| (iii) | (A) |
| (iv) | (B) |
| (v) | (D) |
| (vi) | (B) |
| (vii) | (B) |
| (viii) | (B) |
| (ix) | (C) |
| (x) | (A) |
| (xi) | (D) |
| (xii) | (D) |

**1. (b)**

| | |
|---|---|
| (i) | False |
| (ii) | False |
| (iii) | True |
| (iv) | True |
| (v) | False |
| (vi) | True |
| (vii) | False |

**1. (c)**

| | |
|---|---|
| (i) | Revenue |
| (ii) | 20 |
| (iii) | More |
| (iv) | 13 |
| (v) | Responsibility Accounting |
| (vi) | Wages Control Account |

## SECTION – B

**2. (a)**

| Particulars | Amount (₹) |
|---|---|
| Cost of Sales | 50,25,000 |
| Sales | 55,00,000 |
| Net Profit (Sales-COS) | 4,75,000 |

**2. (b)**

**(i) Advantages of Cost Accounting Standards:**

a) Providing a structured approach to measurement of cost in manufacturing process or service Industry.

b) Integrating, harmonizing, and standardizing cost accounting principles and practices.

c) Providing guidance to users to achieve uniformity and consistency in classification, measurement, assignment, and allocation of costs to products and services.

d) Arriving at the basis of computing the cost of products, activity, or service where required by legal or regulatory bodies.
e) Enabling practicing members to make use of Cost Accounting Standards in the attestation of General Purpose Cost Statements.
f) Assisting in clear and uniform understanding of all the related issues by various user organisations, government bodies, regulators, research agencies, and academic institutions.

**(ii) <u>Determination of Installed Capacity:</u>**

Installed capacity is usually determined based on –

a) Technical specifications of facility
b) Technical evaluation
c) Capacities of individual or interrelated production or operation centres
d) Constrains or capacity of critical machines or equipment
e) Number of shifts or machine hours or man hours.

**<u>Determination of Normal Capacity:</u>**

Normal capacity is determined after suitable adjustments to the Installed Capacity. The adjustments May be of the following nature –

a) Time lost due to scheduled preventive or planned maintenance
b) Number of shifts or machine hours or man hours
c) Holidays, normal shut down days, normal idle time
d) Normal time lost in batch change over.

**3. (a)**

**(i)**

Total Cost of existing Policy = **₹ 8,08,250**
Total Cost of EOQ Policy **= ₹ 8,02,828**
Saving by using the EOQ = **₹ 5,422 (approx.)**

**<u>(ii) Distinction between Scrap and Spoilage:</u>**

The distinction between scrap and spoilage is that while normal scrap arises mostly as a result of the processing of materials, spoilage occurs due to some defect in operations or materials which may or may not be inherent in the manufacturing process or operation. Further, scrap has always a relatively low but some definite value, but the value of spoilage may range from low, if it is a waste, to comparatively high values if the spoilage is to be sold as seconds. Spoilage involves not only the loss of material but also labour and manufacturing overheads.

**3. (b)**

| **Particulars** | **Workers** | | |
|---|---|---|---|
| | **K** | **L** | **M** |
| Bonus Hours | 60 | 24 | 32 |
| Amount of Bonus (₹) | 900 | 576 | 576 |
| Total Wages (₹) | 6,116.67 | 9,882.67 | 6,176 |
| Direct Wages Cost per 100 Saleable units (₹) | 63.72 | 126.05 | 48.25 |

**4. (a)**

**Under Absorption** = **₹ <u>8,70,000</u>**
Supplementary Overhead Rate = **₹ 7.50 per unit**

**<u>So, unabsorbed overheads will be absorbed as under:</u>**

| | |
|---|---|
| Cost of Goods Sold | = ₹ 4,50,000 |
| Closing Stock of Finished Goods | = ₹ 1,50,000 |
| Work in Progress | = ₹ 2,70,000 |
| | **= ₹ 8,70,000** |

**4. (b)**

**(a)** Profit as per financial books ₹ 40,000

**(b) Cost Sheet for the Year ended 31st March, 2023**

| | ₹ |
|---|---|
| Cost of Sales | 9,50,500 |
| Profit | 49,500 |
| Sales | 10,00,000 |

**(c) Reconciliation Statement**

| | ₹ | ₹ |
|---|---|---|
| **Profit as per Cost Accounts** | | 49,500 |
| Add: Interest and Dividends received only credited in Financial Accounts | | 15,000 |
| Sub-total | | 64,500 |
| Less:<br>Factory Expenses under – charged in Cost Accounts<br>Administrative Expenses under charged in Cost Accounts<br>Selling and Distribution Expenses under charged in Cost Accounts | <br>15,000<br>7,500<br>2,000 | <br><br><br>24,500 |
| **Profit as per Financial Accounts** | | 40,000 |

**5. (a)**

**Statement Showing Cost and Profit per unit of each Batch Order**

| | **January** | **February** | **March** |
|---|---|---|---|
| **Total Cost** | **12,500** | **15,000** | **10,000** |
| Profit per unit | 5.00 | 5.00 | 5.00 |
| Cost per unit | 10.00 | 10.00 | 10.00 |

**5. (b)**

Cost of Materials issued to site ₹ 1,95,000

Profit transferred to profit and loss A/c ₹ 48,000

Total of Contract A/c Dr./ Cr. ₹ 3,11,000

**6. (a)**

| | |
|---|---|
| Total of Crushing Process Account Dr. / Cr. | ₹ 63,000 |
| Transfer to Refining | ₹ 59,500 |
| Total of Refining Process Account Dr. / Cr. | ₹ 68,000 |
| Transfer to finishing | ₹ 65,450 |
| Cost of Production of Finishing Oil | ₹ 71,250 |
| Total Cost | ₹ 75,000 |

**6. (b)**

Rent per day per single room = **₹ 890.91**
Rent per day per double room = **₹ 1,336.37**

**7. (a)**

1. Profit/Volume Ratio = 40%
2. Break Even-Sales (in units) = 2,500 units
   Break-Even Sales (in ₹) = ₹ 4,75,000
3. Margin of Safety (in value) = ₹ 47,500 and ₹ 95,000
   Margin of Safety (as % of sale) = 9.09% and 16.67%
4. Net Profit = ₹ 19,000 and ₹ 38,000

**7. (b)**

Minimum price per units for the offer = **₹ 23.365**

**8. (a)**

(i) Labour Cost Variance = ₹ 13,000 (A)
(ii) Labour Rate Variance = ₹ 6,400 (A)
(iii) Labour Efficiency Variance = ₹ 6,600 (A)
(iv) Labour Revised efficiency Variance = ₹ 16,200 (A)
(v) Labour Mix Variance = ₹ 9,600 (F)

**8. (b)**

**Production Budget (Kg.)**

Product X = 8,000
Product Y = 38,000

**Materials Budget (Kg.)**

Material A = 14,000
Material B = 25,500
Material C = 10,500

**Total Purchase Cost = ₹ 4,07,000**