

INTERMEDIATE EXAMINATION

December 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.

All working notes must form part of the answer.

Where considered necessary, suitable assumptions may be made and clearly indicated in the respective answer. Answer Question No. 1 and any five from Question No. 2, 3, 4, 5, 6, 7 and 8.

SECTION-A

Answer Question No.1, which is compulsory.

- 1. Choose the correct answer from the given alternatives (You may write only the Roman numeral and the alphabet chosen for your answer).** 2×15=30

- (i) Which of the following is applicable for cost control?
- (A) It is a corrective function.
 - (B) It is related with the future.
 - (C) It challenges the standard cost.
 - (D) It ends when the targets are achieved.
- (ii) Under integral accounts, issue of direct material is debited to the following account:
- (A) Purchase account
 - (B) Stores ledger control account
 - (C) Factory overhead control account
 - (D) Work-in-progress control account
- (iii) Product 'X' generates a contribution to sales ratio of 40%. Fixed costs directly attributable to 'X' amounts to ₹ 60,000 per month. The sales required to achieve a monthly profit of ₹ 12,000 will be _____.
- (A) ₹ 1,87,500
 - (B) ₹ 2,00,000
 - (C) ₹ 1,65,000
 - (D) ₹ 1,80,000
- (iv) The most suitable cost system where the products differ in type of materials and work performed is _____.
- (A) Batch Costing
 - (B) Job Costing
 - (C) Process Costing
 - (D) Operating Costing

- (v) Primary packing is a part of _____.
(A) Direct material cost
(B) Production cost
(C) Selling overhead
(D) Distribution overhead
- (vi) Cash Budget of PQR & Co. forewarns of a short-term surplus. Which of the following would be the appropriate action to be taken in such a situation?
(A) Purchase new fixed assets
(B) Repay long-term loans
(C) Pay creditors early to obtain a cash discount
(D) Write-off preliminary expenses
- (vii) The sales amount of Product 'Z' is ₹ 1,00,000. Its variable cost is ₹ 40,000 and fixed cost is ₹ 50,000. The amount of BEP sales will be _____.
(A) ₹ 60,000
(B) ₹ 50,000
(C) ₹ 83,333
(D) ₹ 90,000
- (viii) Which of the following does not form part of prime cost?
(A) Cost of packing
(B) Overtime premium paid to workers
(C) GST paid on raw materials (input credit can be claimed)
(D) Cost of transportation paid to bring materials to factory
- (ix) S & Co., which is using batch costing, provides the following information:
- | | |
|----------------------------------|---------------|
| Annual demand for the components | 4,800 units |
| Setting up cost per batch | ₹ 50 |
| Manufacturing cost per unit | ₹ 100 |
| Carrying cost per unit | 12% per annum |
- On the basis of the above, Economic Batch Quantity of the firm is _____.
(A) 100 units
(B) 200 units
(C) 300 units
(D) 400 units

(x) The method of apportioning joint costs on the basis of output of each joint product at the point of split-off is known as—

- (A) Physical unit method
- (B) Average cost method
- (C) Sales value method
- (D) Marginal cost and contribution method

(xi) In a process 12,000 units are introduced during a period. 5% of input is normal loss. Closing work-in-progress 60% complete is 1,500 units. 9,900 completed units are transferred to next process.

Equivalent production for the period is _____.

- (A) 13,500 units
- (B) 11,160 units
- (C) 8,100 units
- (D) 10,800 units

(xii) Time allowed for a job is 80 hours. A worker takes 68 hours to complete the job. Time rate per hour is ₹ 15.

Total earnings of the worker under the Rowan Bonus Plan is _____.

- (A) ₹ 1,020
- (B) ₹ 1,200
- (C) ₹ 1,173
- (D) ₹ 1,110

(xiii) Following information is available:

Overhead incurred	₹ 3,00,000
Overhead recovered	₹ 2,00,000
Cost of sales	₹ 5,00,000
Finished goods	₹ 4,00,000
Work-in-progress	₹ 3,50,000

From the above, Supplementary Overhead Rate to recover the under-absorbed overhead is _____.

- (A) ₹ 0.20
- (B) ₹ 0.25
- (C) ₹ 0.08
- (D) ₹ 0.29

(xiv) Which of the following Cost Accounting Standards (CASs) deals with Determination of Average (Equalized) Cost of Transportation?

- (A) CAS-5
- (B) CAS-6
- (C) CAS-9
- (D) CAS-16

(xv) If standard hours for 100 units of output are 800@ ₹ 4 per hour and actual hours taken are 760 @ ₹ 4.50 per hour, then the Labour Rate Variance is _____.

- (A) ₹ 480 (Adverse)
- (B) ₹ 400 (Adverse)
- (C) ₹ 380 (Adverse)
- (D) ₹ 100 (Favourable)

SECTION-B

Answer any five questions from question number 2 to 8.

Each question carries 14 marks

14×5 = 70

2. (a) Sun & Moon Ltd. (SML) is a leading hardware manufacturing startup. It manufactured and sold 200 computers in the year 2022. The summarised Trading and Profit & Loss Account of SML for the year 2022 is as follows:

Total Output (in units) = 200

Particulars	₹	Particulars	₹
To Cost of Material consumed	12,00,000	By Sales	60,00,000
To Direct Wages	18,00,000		
To Manufacturing Charges	7,50,000		
To Gross Profit c/d	22,50,000		
	60,00,000		60,00,000
To Management Expenses	9,00,000	By Gross Profit b/d	22,50,000
To General Expenses	3,00,000		
To Rent, Rates & Taxes	1,50,000		
To Selling Expenses	4,50,000		
To Net Profit	4,50,000		
	22,50,000		22,50,000

The management of SML estimated the following facts for the year 2023:

1. The output and sales will be 300 computers.
2. Price of material will rise by 25% compared to previous year level.
3. Wages per unit will rise by 10%.
4. Manufacturing charges will increase in proportion to the combined cost of material and wages.
5. Selling expenses per unit will remain unchanged.
6. Other expenses will remain unaffected by the rise in output.

Required:

- (i) Prepare a Cost Sheet for the year 2023.
 - (ii) Suggest a Selling Price per unit to earn a profit of 20% on selling price. 7
- (b) The management of Dolphin Ltd. wants to know the profit lost/forgone as a result of labour turnover last year. Last year, sales accounted to ₹ 66,00,000 and the P/V ratio was 20%. The total number of actual hours worked by the direct labour force was 3,45,000. As a result of the delays by the personnel department in filling vacancies due to labour turnover, 75,000 potentially productive hours were lost. The actual direct labour hours included 30,000 hours attributable to training new recruits, out of which half of the hours were unproductive.

The cost incurred consequent on labour turnover revealed on analysis the following:

	(₹)
Settlement cost due to leaving	25,000
Recruitment costs	18,000
Selection costs	20,500
Training costs	16,000

Assume that the potential production lost due to labour turnover could have been sold at prevailing prices.

Required:

Ascertain the profit lost/forgone last year on account of labour turnover. 7

3. (a) ACB Ltd. manufactures product "A", at the rate of 80 pieces per hour. The company has been producing and selling 1,60,000 units annually since last five years. However, during the current year, the company was able to produce 1,46,000 units only. The company's annual fixed overheads for the current year amounted to ₹ 5,84,000. The company works on single shift only at 8 hours per day and 6 days a week. The company had declared 13 holidays. The quarterly preventive maintenance and repairs work involved 77 hours.

Required:

- Calculate the Maximum, Practical, Normal and Actual Capacities for the current year in terms of hours.
- Calculate Idle Capacity Hours.
- Compute Hourly Rate for Recovery of Overhead Rates for each of the capacities computed at (i) above.

(Assume 365 days and 52 Sundays during the current year)

7

- (b) Essbee Ltd. maintains Integrated Accounts of Cost and Financial Accounts. **Journalize** the following transactions in the books of the firm:

7

(narration is not required)

Particulars	Amount (₹)
Raw material purchased on credit	8,00,000
Direct materials issued to production	6,00,000
Wages paid (30% indirect)	4,80,000
Wages charged to production	3,36,000
Manufacturing expenses incurred	3,80,000
Manufacturing overhead charged to production	3,60,000
Selling and distribution cost	80,000
Finished products (at cost)	8,00,000
Sales	11,60,000
Receipts from debtors	2,76,000

4. (a) Maxwell Hospital runs a Diabetic Care Centre (DCC) in a hired building. The DCC consists of 50 beds and 10 more beds can be added, if required in emergency. Further information regarding DCC is as under:

Rent per month:	₹ 1,50,000
Supervisors:	2 persons @ ₹ 50,000 per month each
Nurses:	4 persons @ ₹ 30,000 per month each
Ward Boys:	4 persons @ ₹ 6,000 per month each

Doctors were paid ₹ 2,50,000 per month on the basis of number of patients attended and the time spent by them.

Other expenses for the year are as follows:

Repairs (fixed):	₹ 90,000
Food to patients (variable):	₹ 8,80,000
Other services to patients (variable):	₹ 3,00,000
Laundry charges (variable):	₹ 6,00,000
Medicines (variable):	₹ 7,50,000
Other fixed expenses:	₹ 15,00,000
Administration expenses allocated:	₹ 12,00,000

It is estimated that for 150 days in a year, 50 beds are occupied and 40 beds are occupied for 80 days only.

The hospital hired 750 bed days at a charge of ₹ 100 per bed per day to accommodate the flow of patients. However, this does not exceed more than 10 extra beds over and above the normal capacity of 50 beds on any day.

The hospital recovers on an average ₹ 1,500 per day from each patient.

Required to calculate the following:

- Profit for the year.
- Contribution per Patient Day.
- Break Even Point (BEP) for the hospital.

- (b) Mohit is a leading civil contractor who prepares his accounts on 31st March each year. He commenced a Contract No. 225 on 1st July, 2022. The following information is revealed from his costing records on 31st March, 2023:

Particulars	(₹)
Materials Cost	3,85,000
Labour Cost	4,45,600
Foreman's salary	67,300

A machine costing ₹ 2,60,000 remained in use on site for two-fifth of the year. Its working life is estimated at 7 years and final scrap value at ₹ 15,000.

A supervisor is paid ₹ 8,000 per month and has devoted one-half of his time on the contract. All other expenses amount to ₹ 1,36,500. Materials at site on 31st March, 2023 cost ₹ 35,400.

The contract price is ₹ 20,00,000. On 31st March, 2023 two-third of the contract was completed, however, the architect gave certificate only for 50% of the contract price and ₹ 7,50,000 had so far been paid on account.

Required:

Prepare Contract Account and show the amount of profit to be credited to the Profit and Loss Account.

7

5. (a) "Super Bite" is a leading product in the confectionery market which is obtained after it has gone through three distinct processes – X, Y and Z. The following information is obtained from cost records of Super (India) Ltd. for the month of July, 2023:

Particulars	Process X	Process Y	Process Z
Input of raw materials @ ₹ 30 per unit (units)	1,000	—	—
Other materials (₹)	26,000	19,800	29,620
Direct wages (₹)	20,000	30,000	40,000
Normal loss of input	5%	10%	15%
Output (units)	950	840	750
Sale of scrap per unit (₹)	20	40	50

Total overheads are ₹ 90,000 which are recovered at 100% of wages.

Required:

Prepare different Process Accounts of the firm for July 2023.

7

(b) Delta Ltd. furnishes the following information:

The standard mix to produce one unit of product 'R' is as under -

Material X 3 kg @ ₹ 300 per kg

Material Y 4 kg @ ₹ 500 per kg

Material Z 5 kg @ ₹ 400 per kg

During the month of June 2023, 10 units of product 'R' were actually produced and consumption was as under -

Material X 32 kg @ ₹ 350 per kg

Material Y 47.5 kg @ ₹ 550 per kg

Material Z 43.5 kg @ ₹ 360 per kg

Required:

Calculate the following Material Variances:

(i) Material Cost Variance

(ii) Material Price Variance

(iii) Material Quantity Variance

(iv) Material Mix Variance

(v) Material Yield Variance

7

6. New Vistas Ltd. is manufacturing three household products X, Y and Z and selling them in competitive market. The following details regarding current demand, selling price and cost structure are extracted from the records of the company for the year ending March, 2023:

Particulars	X	Y	Z
Expected demand (units)	20,000	24,000	40,000
Selling price per unit (₹)	40	32	20
Variable cost per unit (₹):			
Direct materials (₹ 20/kg.)	12	8	4
Direct labour (₹ 30/hr.)	6	6	3
Variable overheads	4	2	2
Fixed overheads per unit (₹)	10	8	4

The company is frequently affected by acute scarcity of raw material and high labour turnover. During the next year, it is expected to have one of the following situations:

- Raw materials available will be only 24,200 kg.
- Direct labour hours available will be only 10,000 hours.

Required:

Calculate Net Profit of the company in each of the above situations.

14

7. (a) Easy Walk Ltd. produces and sells a single product. Sales budget for calendar year 2022 by quarters is as under:

Quarters	First	Second	Third	Fourth
No. of units to be sold	40,000	48,000	60,000	72,000

The year is expected to open with an inventory of 12,000 units of finished products and close with inventory of 16,000 units. Production is customarily scheduled to provide for 70% of the current quarter's sales demand plus 30% of the following quarter demand. The budgeted selling price per unit is ₹ 40 and variable cost per unit is ₹ 35. Fixed Overheads are ₹ 4,40,000 which are evenly distributed throughout the year.

Required:

- (i) **Prepare** Quarterly Production Budget for the year. 7
- (ii) **Calculate** in which quarter of the year company is expected to achieve Break Even Point (BEP). 7
- (b) Write answers of the following:
- (i) Objectives and Functions of Cost Accounting Standards Board. 7
- (ii) Scope of CAS – 4 on Cost of Production for Captive Consumption. 7
8. (a) What is a Responsibility Centre? What are different types of Responsibility Centres? 4
- (b) What is Bill of Materials? What are basic purposes of preparing a Bill of Materials? 5
- (c) What is Overtime Wages as per CAS – 7? How do you treat overtime wages in Cost Accounts as per CAS-7? 5
-

PAPER – 8 : COST ACCOUNTING

SUGGESTED ANSWERS

SECTION - A

1.

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

SECTION – B

2. (a)

Estimated Cost Sheet for the Year 2023

Particulars	Total Cost	Cost per Unit ₹
Direct Material	22,50,000	7,500
Direct Labour	<u>29,70,000</u>	<u>9,900</u>
Prime Cost	52,20,000	17,400
Factory Overhead	<u>13,05,000</u>	<u>4,350</u>
Factory Cost	65,25,000	21,750
Office Overhead	<u>13,50,000</u>	<u>4,500</u>
Cost of Production	78,75,000	26,250
Selling & Distribution Overhead	<u>6,75,000</u>	<u>2,250</u>
Total Cost	85,50,000	28,500
Profit	<u>21,37,500</u>	<u>7,125</u>
Selling Price	<u>1,06,87,500</u>	<u>35,625</u>

2. (b)

Total Profit Forgone as a result of Labour Turnover ₹ 3,79,500

3. (a)

(i) Different Capacities

- Maximum Capacity: = 2,920 hours
- Practical Capacity: = 2,092 hours
- Normal Capacity = 2,000 hours
- Actual capacity = 1,825 hours

(ii) & (iii) Computation of Hourly Rate for Recovery of Overhead Rates for Each of Capacities

Particulars of capacity	Base capacity hours	Capacity utilized (hours)	Idle capacity hours	Fixed overhead (₹)	Fixed overhead rate per hours (₹)
Maximum	2,920	1,825	1,095	5,84,000	200.00
Practical	2,092	1,825	267	5,84,000	279.16
Normal	2,000	1,825	175	5,84,000	292.00
Actual	1,825	1,825	-	5,84,000	320.00

3. (b)

Journal Entries

		Dr	Cr.
Particulars		Amount (₹)	Amount (₹)
Material Control A/C	Dr.	8,00,000	
To Creditors A/C			8,00,000
Work in Progress Cont. A/C	Dr.	6,00,000	
To Material Control A/C			6,00,000
Wages Control A/C	Dr.	4,80,000	
To Cash A/C			4,80,000
Factory Overhead Control A/C	Dr.	1,44,000	
To Wages Control A/C			1,44,000
Work in Progress Control A/C	Dr.	3,36,000	
To Wages Control A/C			3,36,000
Factory Overhead Control A/C	Dr.	3,80,000	
To Cash A/C			3,80,000
Work in Progress Control A/C	Dr.	3,60,000	
To Factory Overhead Control A/C			3,60,000
S & D O.H. Control A/C	Dr.	80,000	
To Cash A/C			80,000
Cost of Sales A/C	Dr.	80,000	
To S & D O.H. Control A/C			80,000
Finished goods Control A/C	Dr.	8,00,000	
To WIP Control A/C			8,00,000
Debtors A/C	Dr.	11,60,000	
To Profit & Loss A/C			11,60,000
Cash A/C	Dr.	2,76,000	
To Debtors A/C			2,76,000

4. (a)

- (i) Profit for the year = ₹ 40,52,000
(ii) Contribution Per Patient Day: = ₹ 1,010.48
(iii) Break Even Point (BEP): = 7,440 Patient Days

4. (b)

Contract Account
(For the year ended 31st March, 2023)

Particulars	₹	Particulars	₹
To Materials Cost	3,85,000	By Materials at site	35,400
To Labour Cost	4,45,600	By Balance c/d	10,49,000
To Foreman's Salary	67,300		
To Supervisor's Salary	36,000		
To Depreciation on Machine	14,000		
To Other Expenses	1,36,500		
	10,84,400		10,84,400
To Balance b/d	10,49,000	By Work-in-Progress:	12,62,250
To Notional Profit c/d	2,13,250		
	12,62,250		12,62,250
To Profit & Loss a/c	1,06,625	By Notional Profit b/d	2,13,250
To Work-in-Progress a/c	1,06,625		
	2,13,250		2,13,250

5. (a)**Process X Account**

Dr.			Cr.		
Particulars	Units	₹	Particulars	Units	₹
To Input of raw materials	1,000	30,000	By Normal wastage	50	1,000
To Other Materials		26,000	By Process Y A/c	950	95,000
To Direct Wages		20,000			
To Overheads		20,000			
	1,000	96,000		1,000	96,000

Process Y Account

Dr.			Cr.		
Particulars	Units	₹	Particulars	Units	₹
To Process X A/c	950	95,000	By Normal Wastage	95	3,800
To Other materials		19,800	By Abnormal Wastage	15	3,000
To Direct wages		30,000	By Process Z A/c	840	1,68,000
To Overheads		30,000			
	950	1,74,800		950	1,74,800

Process Z Account

Dr.			Cr.		
Particulars	Units	₹	Particulars	Units	₹
To Process Y A/c	840	1,68,000	By Normal Wastage	126	6,300
To Other materials		29,620	By Finished stock A/c	750	2,85,000
To Direct wages		40,000			
To Overheads		40,000			
To Abnormal gain	36	13,680			
	876	2,91,300		876	2,91,300

5. (b)

- (i) Material Cost Variance = ₹ 3,985 (A)
- (ii) Material Price Variance = ₹ 2,235 (A)
- (iii) Material Quantity Variance = ₹ 1,750 (A)
- (iv) Material Mix Variance = ₹ 525(A)
- (v) Material Yield Variance = ₹ 1,225(A)

6.

Situation (a):

Net Profit = ₹ 4,70,000

Situation (b):

Net Profit = ₹ 4,08,000

7. (a)

(i) Quarterly Production Budget:

First	Second	Third	Fourth
42,400	51,600	63,600	66,400

- (ii) Break Even Point (BEP) = 88,000 units
Break Even Point will be achieved in Second quarter.

7. (b)

(i) **Objectives and Functions of CASB:**

The objectives of the CASB are to develop high quality Cost Accounting Standards to enable the management to take informed decisions and to enable regulators to function more effectively by integrating harmonizing and standardizing Cost Accounting Principles and Practices.

The following are the functions of the CASB:

- (a) To issue the framework for the Cost Accounting Standards.
- (b) To equip the Cost and Management Accounting professionals with better guidelines on Cost Accounting Principles.
- (c) To assist the members in preparation of uniform cost statements under various statutes.
- (d) To provide from time-to-time interpretations on Cost Accounting Standards.
- (e) To issue application guidance relating to particular standard.

- (f) To propagate the Cost Accounting Standards and to persuade the users to adopt them in the preparation and presentation of general purpose cost statements.
- (g) To persuade the Government and appropriate authorities to enforce Cost Accounting Standards, to facilitate the adoption thereof, by industry and corporate entities in order to achieve the desired objectives of standardization of Cost Accounting Practices.
- (h) To educate the users about the utility and need for compliance of Cost Accounting Standards.

(ii) Scope of CAS – 4:

This statement on Cost of Production for Captive Consumption should be applied to cost statements which require classification, measurement, assignment, presentation and disclosure of related cost for determination of the following under the relevant provisions of GST Act/Rules:

- Determination of cost of production of goods,
- Determination of cost of acquisition of goods,
- Determination of cost of supply of goods,
- Determination of cost of provision/supply of services, and
- Determination of value of supply of goods or services as per open market value or as per goods or services of like kind and quality.

8. (a)

Responsibility Centre:

CIMA official terminology defines responsibility centre as departmental or organisational function whose performance is the direct responsibility of a specific manager. Responsibility centre refers to a particular segment or unit of an organisation for which a particular manager, employee, or department is held responsible and accountable for its business goals and objectives. It refers to the part of company where a manager has authority and responsibility. A responsibility centre is a functional entity within a business that tends to have its own goals and objectives, policies and procedures, thereby giving managers specific responsibility for revenues, expenses incurred, funds invested, etc.

Types of Responsibility Centres:

- (i) **Cost Centre** – Under this center, the manager is held responsible only for the costs, including a production department, maintenance department, human resource department, etc.
- (ii) **Profit Centre** – Under this center, the manager is responsible for all costs and revenues. Here, the manager would have all the responsibility to make decisions that would affect both the revenue and costs.
- (iii) **Revenue Centre**–This segment is primarily responsible for attaining sales revenue. The performance of this center is evaluated by comparing the actual revenue attained with the budgeted revenue.
- (iv) **Investment Centre** – Apart from looking into the profits, this center looks into returns on the funds invested in the group's operations. Thus, investment center is also a profit center with additional responsibilities for capital investment and possibly for financing, and whose performance is measured by its return on investment.

8. (b)

Bill of Material:

Bill of Material is a complete schedule of parts and materials required for a particular order prepared by the drawing office and issued together with necessary blue prints of drawings. For standard products, printed copies of material bill are kept with blank spaces for any special details of modification to be filled in for a particular job/order. The schedule details everything, even to bolts and nuts, sizes and weights.

Purpose of Bill of Material:

- (i) It provides a quantitative estimate of budget of material required for a given job, process or operation which might be used for control purposes.
- (ii) It substitutes material requirements and expedite issue of materials.
- (iii) The store keeper can draw up a program of material purchases and issue for a given period.
- (iv) It provides the basis for charging material cost to the respective job/process.

8. (c)**Overtime Wages / Overtime Premium:**

As per CAS -7, the overtime and overtime premium is defined as, “Overtime is the time spent beyond the normal working hours which is usually paid at a higher rate than the normal time rate. The extra amount payable beyond the normal wages and salaries for beyond the normal working hours is called Overtime Premium”. Hence, payment of overtime consists of two elements, viz., the normal (i.e., usual) amount and the extra payment, i.e., the premium.

Treatment of Overtime in Cost Records:

As per CAS-7, overtime premium shall be assigned directly to the cost object or treated as overheads depending on the economic feasibility and specific circumstances requiring such overtime.

- When overtime is worked due to exigencies or urgencies of the work, the basic/normal payment is treated as Direct Labour Cost and charged to production or cost unit on which the worker is employed. Whereas the amount of premium (extra amount) is treated as overhead.
 - When overtime is spent at the request of the customer, the entire amount (including overtime premium) is treated as direct wages and is charged to the job.
 - When overtime is worked due to lack of capacity as general policy of the company, then the total amount paid is treated as direct wages which is computed at the estimated rate based on the figures of the previous years.
 - Overtime worked on account of the abnormal conditions such as flood, earthquake, etc., should not be charged to cost, but to Costing Profit and Loss Account if integrated accounts are maintained.
-