

INTERMEDIATE EXAMINATION

June 2023

P-8(CAC)
Syllabus 2016

Cost Accounting

Time Allowed: 3 hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

All Sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.

All working notes must form part of the answer.

Wherever necessary, candidates may make appropriate assumptions and clearly state them in answer.

Section-A

Section A contains Question Number 1. All parts of this question are compulsory.

1. Answer the following questions:

(a) Choose the correct answer from the given alternatives (You may write only the Roman numeral and the alphabet chosen for your answer): 1×10=10

(i) Which one of the following does not account for increasing labour productivity?

- (A) Job satisfaction
- (B) Motivating workers
- (C) Proper supervision and control
- (D) High labour turnover

(ii) Which of the following Standards deals with the principles and methods of determining the manufacturing cost of excisable goods?

- (A) CAS - 5
- (B) CAS - 12
- (C) CAS - 22
- (D) CAS - 15

(iii) Under non-integrated accounting system, the account made to complete double entry is—

- (A) Work-in-progress control account
- (B) Finished goods control account
- (C) Stores ledger control account
- (D) General ledger control account

- (iv) Which of the following items is not included in the preparation of cost sheet?
- (A) Carriage inward
 - (B) Purchase returns
 - (C) Sales commission
 - (D) Interest paid
- (v) Most of the expenses are direct in—
- (A) Job costing
 - (B) Batch costing
 - (C) Contract costing
 - (D) Standard costing
- (vi) Under net realisable value method of apportioning joint costs to joint products, the selling & distribution cost is—
- (A) Ignored
 - (B) Added to joint cost
 - (C) Deducted from sales value
 - (D) Deducted from further processing cost
- (vii) In a process 2,000 units are introduced during a period. 5% of input is normal loss. Closing work-in-process 60% complete is 250 units. 1,650 completed units are transferred to next process. Equivalent production for the period is—
- (A) 2,250 units
 - (B) 1,860 units
 - (C) 1,350 units
 - (D) 1,800 units
- (viii) Standard hours for 100 units of output are 800 @ ₹ 4 per hour and actual hours taken are 760 @ ₹ 4.50 per hour. What is the labour rate variance?
- (A) ₹ 480 (Adverse)
 - (B) ₹ 400 (Adverse)
 - (C) ₹ 380 (Adverse)
 - (D) ₹ 100 (Favourable)

(ix) The P/V Ratio of ABC Ltd. is 40%. The fixed cost is ₹ 32,000 and the variable cost per unit is ₹ 6. Break-even point of the company is—

- (A) ₹ 64,000
- (B) ₹ 80,000
- (C) ₹ 1,28,000
- (D) ₹ 1,60,000

(x) 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) Match the statement in Column I with the most appropriate statement in Column II (You may opt to write only the Roman numeral and the matched alphabet instead of copying contents into the answer books):

1×5=5

Column I		Column II	
(i)	Imputed Cost	(A)	Selling Expenses
(ii)	Replacement Method	(B)	CAS-18
(iii)	Cost of Free Samples	(C)	Labour Turnover
(iv)	Royalties	(D)	Notional Cost
(v)	Budgetary Control	(E)	Decision Package
		(F)	Direct Allocation
		(G)	Management by Exception
		(H)	Break-even Analysis

(c) State whether the following are 'True' or 'False' (You may write only the Roman numeral and whether 'True' or 'False' without copying the statements into the answer books):

1×5=5

- (i) Cost object is anything for which a separate measurement of cost is required.
- (ii) VED analysis is used primarily for control of work-in-progress.

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- (iii) Wages paid for abnormal idle time is added to wages for calculating prime cost.
 - (iv) Expenses which appears only in financial accounts and not in cost accounts are generally notional items.
 - (v) LIFO method is followed for evaluation of equivalent production when prices are fluctuating.
- (d) **Fill in the blanks** (You may write only the Roman numeral and the content filling the blanks): 1×5=5
- (i) Differential cost is the change in the cost due to change in _____ from one level to another.
 - (ii) The objective of CAS _____ is to bring uniformity and consistency in the period and methods of determining the direct expenses with reasonable accuracy.
 - (iii) _____ is a document which contains standing instructions regarding the procedures to be followed at the time of budget preparation.
 - (iv) _____ are the costs of providing two or more products or services whose production could not be segregated for physical reasons.
 - (v) _____ is that part of practical capacity which is not utilised due to factors like temporary lack of orders, bottlenecks and machine breakdown etc.

Section-B

Answer any five questions from question numbers 2 to 8. 15×5=75

2. (a) Mohan and Sohan are two workers who produce the same product using the same material. Their normal wage rate is also same. Mohan is paid bonus according to the Rowan Plan, while Sohan is paid bonus according to Halsey Premium Plan. The time allowed to make the product is 1,000 hours. Mohan takes 600 hours while Sohan takes 800 hours to complete the product. The factory overhead rate is ₹ 10 per man-hour actually worked. The factory cost for the product for Mohan is ₹ 72,800 and for Sohan it is ₹ 76,000.

You are required:

- (i) to find the normal rate of wages;
- (ii) to find the cost of materials; and
- (iii) to prepare a statement comparing the factory cost of the products as made by both the workers.

- (b) M/s PQR Engineering Ltd. is having 25 different types of automatic machines in its plant. It furnishes the following information in respect of Machine B for the year 2022-23:

- (i) Cost of the machine ₹ 5,00,000
Life of the machine-10 years Scrap value is Nil
- (ii) Overhead expenses:
Factory rent ₹ 2,00,000 p.a.
Heating and lighting ₹ 1,60,000 p.a.
Supervision ₹ 6,00,000 p.a.
Reserve equipment of Machine B ₹ 20,000 p.a.
Area of the factory 80,000 sq. ft.
Area occupied by Machine B 3,000 sq. ft.
- (iii) Wages of operator is ₹ 240 per day of 8 hours including all fringe benefits. He attends to one machine when it is under set up and two machines while under operation.
- (iv) Estimated production hours 3,600 p.a.
Estimated set up time (hours) 400 p.a.
- (v) Power charges ₹ 2.50 per hour

Required:

Prepare a Schedule of comprehensive machine hour rate and find the cost of the following jobs: 7

	JOB 1120	JOB 1150
Set up time (hours)	80	40
Operation time (hours)	130	160

3. (a) Discuss the objectives and functions of Cost Accounting Standards Board (CASB). 6
- (b) Journalize the following transactions assuming that cost and financial accounts are integrated (Narration is not required.): 9

Particulars	Amount (₹)
Raw material purchased	8,00,000
Direct materials issued to production	6,00,000

Particulars	Amount (₹)
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) M/s Sun (India) Ltd. is an export-oriented unit manufacturing communication equipment of a standard size. It has to send a tender price quotation (in rupee terms) to its foreign buyer in the UK. Company submits the following figures relating to year 2023:

Output: 50,000 units

Expenses Incurred	₹	Expenses Incurred	₹
Local Raw Material Consumed	20,00,000	Excise Duty	4,00,000
Imports of Raw Material (Actual Consumption)	2,00,000	Administrative Office Expenses	4,00,000
Direct Labour in works	17,00,000	Salary of the Managing Director	2,00,000
Direct Expenses	3,00,000	Fees of Directors	40,000
Indirect Labour in works	4,00,000	Expenses on Advertising	3,20,000
Stores and Spare Parts	1,40,000	Selling Expenses	5,00,000
Fuel	3,00,000	Packing and Distribution Expenses	3,40,000
Depreciation on Plant	2,00,000		
Salaries of Works Personnel	2,00,000		

Other information:

- (i) Local raw material now costs 10% more.
- (ii) A profit margin of 20% on sales is maintained.
- (iii) The Government grants subsidy of ₹ 40 per unit of export.

Required:

Prepare a statement showing tender price per unit to be submitted to the UK buyer. 8

- (b) M/s Ultra Modern Ltd. produces a product 'R' by three distinct processes before it is ready for sale. Company submits the following details for the year 2022:

Particulars	Processes		
	A	B	C
(i) Input of raw materials @ ₹ 40 per kg. (kgs.)	20,000	—	—
(ii) Normal loss of input	5%	5%	5%
(iii) Delivered to next process (kgs.)	18,000	16,000	—
(iv) Total direct labour cost (₹)	30,000	31,500	26,000
(v) Variable overhead of direct labour	150%	120%	100%
(vi) Fixed overhead of direct labour	250%	180%	200%
(vii) Finished stock held back (kgs.)	800	800	—

Required:

Prepare Process Accounts and workout the selling price per kg. of product 'R' if the management decides to earn a profit of 25% over its total cost. 7

5. (a) M/s Trans India Transport Company is running 5 buses between two towns which are 60 kms. away. Seating capacity of each bus is 40 passengers. The following information is obtained from its books for the month of January, 2023:

Particulars	₹
Wages of drivers, conductors and cleaners	80,000
Salaries of office and supervisory staff	25,000
Diesel, oil and other lubricants	60,000
Repairs and maintenance	12,000
Taxes, insurance etc.	20,000
Depreciation of buses	35,000
Interest and other charges	20,000

Actual passengers carried were 80% of the seating capacity. All the 5 buses ran on all the days of the month. Each bus made two to and fro sound trip per day.

Required:

Prepare the Operating Cost Statement and determine the cost per passenger km. for each bus. 8

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- (b) M/s Goyal Brothers accepted a contract for the construction of a building for ₹ 10,00,000. Construction work started on 1st July, 2022 and the firm usually closes its books of accounts for the year on 31st March of each year. The contractee agreed to pay 90% of work certified as certified by the architect. During the first year, the amount spent was as follows:

Particulars	₹
Material and stores	1,20,000
Labour charges	1,50,000
Plant issued	30,000
Salaries and other expenses	90,000
Plant at site (Year end)	20,000
Material at site (Year end)	5,000
Work certified	4,00,000
Work uncertified	15,000

Further Information:

- (i) Materials costing ₹ 6,000 was damaged during the year.
- (ii) A Supervisor who devotes one-half of his time on the contract has an outstanding salary for 2 months. He is paid @ ₹ 4,000 per month.
- (iii) A special machine was hired for the contract for 4 months @ ₹ 500 per month.

Required:

Prepare Contract Account in the books of the firm. Also show the amount of profit that can be transferred reasonably to the profit and loss account.

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6. (a) M/s Moon Light Ltd. produces three products A, B and C and furnishes the following information for the year 2022-23:

Particulars	Products		
	A	B	C
Selling Price per unit (₹)	500	375	250
Profit Volume Ratio	12%	20%	40%
Raw Material content as a % of Variable Cost	50%	50%	50%
Maximum Market Demand (units)	22,000	20,000	12,000

Fixed costs are estimated at ₹ 20 lakhs. The firm uses same raw material in all the three products. Raw material is in 'Short Supply'. The firm has a quota for the supply of raw materials of the value of ₹ 61 lakhs for the year 2022-23 for the production of three products to meet sales demand.

Required:

Determine the optimal product mix and ascertain the maximum profit therefrom. 8

- (b) M/s PQR Ltd. is a leading manufacturer of product 'Alpha'. For the year 2022-23, it budgets for a production of 5 lakh units at a variable cost of ₹ 40 each. The fixed costs are ₹ 40 lakhs. The selling price is fixed to yield a profit of 25% on cost.

Calculate the following:

(i) P/V Ratio and Break-Even Point.

(ii) If the selling price is reduced by 20%, ascertain:

(a) The effect of price reduction on the P/V Ratio and BEP.

(b) The number of units required to be sold at the reduced selling price to obtain an increase of 10% over the budgeted profit. 7

7. (a) M/s RST Limited has recently adopted standard costing and furnishes the following information:

The standard mix to produce one unit of Product X is as under:

Material P 2 kg @ ₹ 20 per kg

Material Q 3 kg @ ₹ 25 per kg

Material R 4 kg @ ₹ 15 per kg

During the month of March, 2023, total 20 units of Product X were actually produced and consumption of material was as under:

Material P 35 kg @ ₹ 22 per kg

Material Q 60 kg @ ₹ 24 per kg

Material R 90 kg @ ₹ 16 per kg

Required:

Calculate the following Material Variances:

(i) Material Cost Variance

(ii) Material Price Variance

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- (iii) Material Quantity Variance
- (iv) Material Mix Variance
- (v) Material Revised Quantity Variance
- (vi) Material Yield Variance
- (Calculate up to 2 decimal points)

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- (b) Following are the summarised revenue and expenditure figures of Sarathi Ltd. for the month of March to August, 2022:

Month	Sales (₹)	Purchases (₹)	Wages (₹)	Expenses (₹)
March	13,00,000	8,00,000	2,40,000	1,00,000
April	14,00,000	9,60,000	3,00,000	1,00,000
May	15,00,000	9,00,000	3,00,000	1,20,000
June	16,00,000	9,60,000	3,60,000	1,20,000
July	16,40,000	8,00,000	3,60,000	1,60,000
August	17,80,000	10,00,000	4,00,000	1,60,000

The following further information is available:

- (i) 10% Purchases and sales are on cash basis.
- (ii) Advance payment of income tax in August, 2022 is ₹ 2,20,000.
- (iii) Plant purchased and price to be paid in June, 2022 is ₹ 1,00,000.
- (iv) Time lag:

Credit sales	2 months
Credit purchases	1 month
Wages	½ month
Expenses	½ month

Required:

Prepare a Cash Budget for 3 months starting on 1st June, 2022 when cash balance is ₹ 2,50,000.

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8. Answer *any three* out of the following four questions:

5×3=15

- (a) What is the role of a Cost Accountant in a manufacturing organisation?
 - (b) What is the scope of cost accounting?
 - (c) Discuss the advantages of a Centralized Stores System.
 - (d) Write a brief note on Responsibility Accounting with its basic principles.
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SUGGESTED ANSWERS TO QUESTIONS
SECTION - A

1. (a)

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

1. (b)

- (i) (D)
- (ii) (C)
- (iii) (A)
- (iv) (F)
- (v) (G)

1. (c)

- (i) True
- (ii) False
- (iii) False
- (iv) False
- (v) True

1. (d)

- (i) Activity
- (ii) CAS – 10
- (iii) Budget Manual
- (iv) Joint Costs
- (v) Idle Capacity

2. (a)

- (i) Normal Rate of Wages = ₹ 20
- (ii) Material Cost = ₹ 50,000
- (iii) Factory cost of products as made by the two workers:
Mohan = ₹ 72,800
Sohan = ₹ 76,000

2. (b)

Machine Hour Rate when Machine is in Operation	= ₹ 45.764
Machine Hour Rate when Machine under setup	= ₹ 58.264
Total Cost of the Job:	
Job 1120	= ₹ 10,610.44
Job 1150	= ₹ 9,652.80

3. (a)

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 statement.
- 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.

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 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)

Tender Price Per Unit ₹ 156.

4. (b)

Total of Process A Account	Dr./ Cr.	₹ 9,50,000
Transfer to Process B		₹ 9,00,000
Total of Process B Account	Dr./ Cr.	₹ 10,26,000
Transfer to Process C		₹ 9,60,000
Total of Process C Account	Dr./ Cr.	₹ 10,64,000
Cost per kg. =		₹ 70
Selling Price per kg. =		₹ 87.50

5. (a)

Operating Cost Statement
(For the month of January, 2023)

Particulars	₹
Total operating charges	2,52,000
Effective Passenger kms.	11,90,400
Cost per passenger km.	0.21

5. (b)

Total Contract A/c	Dr./ Cr.	₹ 4,46,000
Profit Transferred to Profit and Loss A/c		₹ 15,000

6. (a)

Optimal Product Mix:

Product A	10,000 units
Product B	20,000 units
Product C	12,000 units
Maximum Profit	₹ 13,00,000

6. (b)

- (i) BEP (in units) = 2,00,000 units
P/V Ratio = 33.33%
- (ii)
- (a) New BEP (in units) = 5,00,000 units
New P/V Ratio = 16.67%
- (b) Sales (units) required = 13,25,000 units

7. (a)

- (i) Material Cost Variance = ₹ 150 (A)
- (ii) Material Price Variance = ₹ 100 (A)
- (iii) Material Quantity Variance = ₹ 50 (A)
- (iv) Material Mix Variance = ₹ 47.25 (F)
- (v) Material Revised Quantity Variance = ₹ 97.25 (A)
- (vi) Material Yield Variance = ₹ 98(A)

7. (b)

Cash Budget of Sarathi Ltd.
(for June to August, 2022)

Particulars	June (₹)	July (₹)	August (₹)
Cash Balance	2,50,000	2,14,000	2,84,000
Receipts:	14,20,000	15,14,000	16,18,000
Total Receipts	16,70,000	17,28,000	19,02,000
Total Payments	14,56,000	14,44,000	15,80,000
Cash Balance	2,14,000	2,84,000	3,22,000

8.**(a) Role of Cost Accountant in a Manufacturing Concern:**

- (i) To analyze various elements of cost of production/services such as material, labour, overhead expenses etc.
- (ii) To introduce appropriate costing methods in the organization so as to facilitate management with knowledge of cost of production/services for managerial decision-making.
- (iii) To determine the cost of the new product/service in order to facilitate management in arriving at the correct pricing decision.
- (iv) To determine the feasibility and profitability of various project proposals considered by the management.
- (v) To analyze variances against standards by reasons to enable concerned department to initiate corrective action.
- (vi) Collection and collation of extraneous information for management to compare the company's performance with that of peers and the industry for better appreciation and decision-making.

(b) Scope of Cost Accountancy:

Scope of cost accountancy is very wide and includes the following:

- (i) **Cost Ascertainment:** The main objective of cost accounting is to find out the cost of product/services rendered with reasonable degree of accuracy.
- (ii) **Cost Accounting:** It is the process of accounting for cost which begins with recording of expenditure and ends with preparation of statistical data.
- (iii) **Analysis of Cost:** It is the process of locating the factors responsible for difference in actual cost from the budgeted costs and fixing up of responsibility for differences in cost. It provides better cost management and helps in taking strategic decisions.
- (iv) **Cost Control:** It is the process of regulating the action so as to keep the element of cost within the set parameters.
- (v) **Cost Reports:** This is the ultimate function of cost accounting. These reports are primarily prepared for use by the management of different levels. Cost reports helps in planning and control, performance appraisal and managerial decision-making.

(c) Advantages of a Centralized Stores System:

- (i) Better control can be exercised over stores because all stores are housed in one department. The risk of obsolescence of stores can be minimized.
- (ii) The economy of staff-experts, or clerical, floor space, records and stationery are available.
- (iii) Better supervision is certainly possible.
- (iv) Obsolescence of the stores items can be kept under strict vigil and control.
- (v) Centralized material handling system can be put into operation thus further economizing on space, personnel and equipment.
- (vi) Investment in stocks can be minimized.

(d) Responsibility Accounting:

Responsibility accounting is a system of accounting that recognizes various responsibility centres throughout the organization and reflects the plans and actions of each of these centres by assigning particular revenues and costs to the one having the pertinent responsibility. It is also called profitability accounting and activity accounting.

Responsibility accounting is a system in which the person holding the supervisory posts as president, function head, foreman, etc. are given a report showing the performance of the company or department or section as the case may be. The report will show the data relating to operational results of the area and the items of which he is responsible for control. Responsibility accounting follows the basic principles of any system of cost control like budgetary control and standard costing. It differs only in the sense that it lays emphasis on human beings and fixes responsibilities for individuals. It is based on the belief that control can be exercised by human beings, so responsibilities should be fixed for individuals.

Principles of responsibility accounting are as follows:

- (i) A target is fixed for each department or responsibility centre.
 - (ii) Actual performance is compared with the target.
 - (iii) The variances from plan are analysed so as to fix the responsibility.
 - (iv) Corrective action is taken by higher management and is communicated.
-