Skillshort

Self-Study Preparation Pack

CA INTERMEDIATE

Paper 4: Cost and Management Accounting

Mock Test 2 – Full Paper with Detailed Solutions

ICAI new-scheme pattern: 100 marks · 3 hours · Part I 15 MCQs × 2 marks · Part II Q1 compulsory + any 4 of Q2–Q6 (14 marks each) · Original Skillshort questions

Time: 3 hours | Max marks: 100 | No negative marking | All numbers verified in Python | Solutions follow the paper

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This subject pack has 6 parts

1 Chapter-wise notes

2 Important topics & weightage

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4 Mock tests + solutions

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Prepared by Skillshort for self-study. Original explanations and questions; not an official ICAI/ICMAI/ICSI publication. Items marked VERIFY should be checked against the latest official material.

Part I – Multiple Choice Questions (30 marks)

Instructions: Each MCQ carries 2 marks.

CASE LAW **Case Scenario I – Rudra Castings Ltd. (MCQs 1–5)**

Standard cost per unit: material 5 kg @ ₹20 = ₹100; labour 3 hours @ ₹50 = ₹150; variable overheads 3 hours @ ₹10 = ₹30; fixed overheads 3 hours @ ₹20 = ₹60. Budgeted output 10,000 units (30,000 hours); budgeted fixed overheads ₹6,00,000.

Actual for the month: output **9,500 units**; material **48,000 kg** bought and used at ₹21 (₹10,08,000); labour paid for **29,000 hours** at ₹52 (₹15,08,000), of which **1,000 hours were idle** (abnormal); variable overheads ₹2,90,000; fixed overheads ₹6,20,000.

1. Material price and usage variances are

(a) ₹48,000 (A) and ₹10,000 (A)
(b) ₹47,500 (A) and ₹10,000 (A)
(c) ₹48,000 (A) and ₹10,500 (A)
(d) ₹48,000 (F) and ₹10,000 (F)

2. Labour efficiency variance is

(a) ₹25,000 (A)
(b) ₹25,000 (F) (A)
(c) ₹50,000 (A)
(d) ₹75,000 (F)

3. Labour cost variance is

(a) ₹58,000 (A)
(b) ₹1,08,000 (A)
(c) ₹83,000 (A)
(d) ₹33,000 (A)

4. Variable overhead expenditure variance (based on hours worked) is

(a) ₹10,000 (A)
(b) ₹5,000 (A)
(c) ₹5,000 (F)
(d) ₹20,000 (A)

5. Fixed overhead volume variance is

(a) ₹20,000 (A)
(b) ₹50,000 (A)
(c) ₹40,000 (A)
(d) ₹30,000 (A)

CASE LAW **Case Scenario II – Sahyadri Agro (MCQs 6–10)**

A joint process costs **₹6,16,000** and yields 12,000 kg of product A, 8,000 kg of product B and 1,000 kg of by-product C. At split-off, A sells at ₹30 per kg and B at ₹67.50 per kg. C sells at ₹20 per kg after selling costs of ₹4 per kg; its net realisable value is credited to the joint cost. B can be processed further at a cost of ₹1,20,000 and sold at ₹85 per kg.

6. The net joint cost to be apportioned between A and B is

(a) ₹6,16,000
(b) ₹6,00,000
(c) ₹5,96,000
(d) ₹6,20,000

7. Joint cost apportioned to A on the physical units basis is

(a) ₹3,60,000 (b) ₹2,40,000
(c) ₹3,00,000 (d) ₹4,00,000

8. Joint cost apportioned to B on the sales value at split-off basis is

(a) ₹2,40,000 (b) ₹3,00,000
(c) ₹3,60,000 (d) ₹4,80,000

9. Further processing of B will

(a) Reduce profit by ₹20,000 (b) Increase profit by ₹1,40,000
(c) Increase profit by ₹20,000 (d) Make no difference

10. Profit of A at split-off under the sales value method is

(a) ₹1,20,000 (b) Nil
(c) ₹2,40,000 (d) ₹60,000

11. Maximum usage 400 units per week; lead time 3 to 5 weeks. The re-order level is

(a) 1,200 units (b) 1,600 units
(c) 2,000 units (d) 2,400 units

12. Opening stock 500 units @ ₹20; 5 Jan purchased 1,000 @ ₹22; 10 Jan issued 1,200; 15 Jan purchased 800 @ ₹25; 20 Jan issued 900. Closing stock under the weighted average method is

(a) ₹5,000 (b) ₹4,800
(c) ₹4,400 (d) ₹4,266

13. Sales ₹5,00,000 gave a profit of ₹50,000 and sales ₹7,00,000 gave a profit of ₹1,10,000. Fixed costs are

(a) ₹1,50,000 (b) ₹1,00,000
(c) ₹50,000 (d) ₹2,10,000

14. A 50-seat bus makes 2 round trips a day on a 100-km route (each way) for 25 days a month, with average occupancy of 80%. Monthly operating cost is ₹6,00,000. Cost per passenger-km is

(a) ₹1.20 (b) ₹1.50
(c) ₹3.00 (d) ₹0.75

15. Overtime of 40 hours worked to meet a **general pressure of work**: normal rate ₹60 per hour, overtime paid at double rate. The overtime premium of ₹2,400 is charged to

(a) The job on which the overtime was worked
(b) Production overheads
(c) Costing P&L A/c
(d) Administration overheads

Part I – Answer key with reasons

Q	Ans	Explanation / working
1	(a)	MPV = AQ × (SP − AP) = 48,000 × (20 − 21) = **₹48,000 (A)**. MUV = (SQ − AQ) × SP = (47,500 − 48,000) × 20 = **₹10,000 (A)**. MCV = 9,50,000 − 10,08,000 = 58,000 (A) ✓.
2	(b)	Standard hours 9,500 × 3 = 28,500; hours worked 28,000. LEV = (28,500 − 28,000) × 50 = **₹25,000 (F)**.
3	(c)	14,25,000 − 15,08,000 = **₹83,000 (A)** = rate 58,000 A + idle time 50,000 A − efficiency 25,000 F.
4	(a)	28,000 × 10 − 2,90,000 = **₹10,000 (A)**; efficiency (28,500 − 28,000) × 10 = 5,000 F; total VOH cost variance 2,85,000 − 2,90,000 = 5,000 A.
5	(d)	Absorbed 9,500 × 60 = 5,70,000 − budgeted 6,00,000 = **₹30,000 (A)** [efficiency 10,000 F + capacity (28,000 − 30,000) × 20 = 40,000 A]. Expenditure variance = 20,000 A; FOH cost variance = 50,000 A.
6	(b)	NRV of C = 1,000 × (20 − 4) = 16,000; 6,16,000 − 16,000 = **₹6,00,000**.

Q	Ans	Explanation / working
7	(a)	A's share = 12,000/20,000 × 6,00,000 = **₹3,60,000**.
8	(c)	Sales values: A 3,60,000; B 5,40,000; total 9,00,000. B = 5,40,000/9,00,000 × 6,00,000 = **₹3,60,000**.
9	(c)	Incremental revenue 8,000 × (85 − 67.50) = 1,40,000 − further cost 1,20,000 = **+₹20,000**. Joint costs are sunk and irrelevant to this decision.
10	(a)	A's joint cost = 3,60,000/9,00,000 × 6,00,000 = 2,40,000; profit = 3,60,000 − 2,40,000 = **₹1,20,000**. (Sales value method gives both products the same margin – 33.33%.)
11	(c)	ROL = maximum usage × maximum lead time = 400 × 5 = **2,000 units**.
12	(b)	After 5 Jan: 1,500 units ₹32,000 (₹21.333). Issue 1,200 = 25,600; balance 300 = 6,400. Add 800 @ 25 → 1,100 units ₹26,400 (₹24). Issue 900 = 21,600; balance **200 × 24 = ₹4,800**. (FIFO closing would be 200 × 25 = 5,000.)
13	(b)	P/V = Δprofit/Δsales = 60,000/2,00,000 = 30%. Fixed cost = 5,00,000 × 30% − 50,000 = **₹1,00,000** (BEP ₹3,33,333).
14	(b)	Km = 25 × 2 × 2 × 100 = 10,000; passengers 40; passenger-km 4,00,000; 6,00,000/4,00,000 = **₹1.50**.
15	(b)	Overtime premium (40 × ₹60 = ₹2,400) due to a general pressure of work is a **production overhead**; only overtime at a customer's request is charged to the job, and abnormal overtime to Costing P&L.

Part II – Descriptive Questions (70 marks)

Question 1 is compulsory. Answer any four of the remaining five questions. Working notes form part of the answer.

Q1 (a) (5 marks). Annual demand 9,000 units; ordering cost ₹320 per order; price ₹100 per unit; carrying cost 16% p.a. Calculate the EOQ and its total ordering plus carrying cost. The supplier offers a **3% discount** on orders of 1,500 units. Should the offer be accepted?

Q1 (b) (5 marks). For the quarter ended 30 September 2026: workers at the start 1,800 and at the end 2,200; separations 80; replacements 60; new workers engaged for expansion 420. Calculate labour turnover by the separation, replacement, new-recruitment and flux methods, and their annual equivalents.

Q1 (c) (4 marks). Normal capacity 10,000 units; production 10,000 units; sales 8,000 units at ₹100. Variable cost ₹60 per unit; fixed production overheads ₹2,00,000. No opening stock. Calculate profit under absorption and marginal costing and reconcile the difference.

Q2 (a) (8 marks). Vardhan Furniture makes 4,000 chairs a month at 80% capacity. Costs: materials ₹60, labour ₹40, variable overheads ₹20 per chair; semi-variable overheads ₹1,20,000 per month at 80% (60% fixed); fixed overheads ₹2,00,000. Find the selling price per chair to earn **20% on sales** (i) at 80% capacity and (ii) at 100% capacity, where material prices fall by 5% because of bulk buying.

Q2 (b) (6 marks). Prepare a job cost sheet and quote a price for Job 47 with profit of **25% on selling price**: direct materials ₹24,000; Dept A 80 hours @ ₹100 (overheads ₹150 per labour hour); Dept B 50 hours @ ₹120 (overheads 80% of labour cost); administration overheads 20% of works cost.

Q3 (a) (8 marks). Process Y (FIFO): opening WIP 2,000 units (materials 100%, conversion 40%) ₹72,000; units introduced 18,000; completed and transferred 17,000; closing WIP 3,000 units (materials 100%, conversion 60%). Costs: materials ₹3,60,000; conversion ₹5,04,000. There are no losses. Prepare the statement of equivalent production, cost per unit and evaluation.

Q3 (b) (6 marks). Gati Logistics runs a 10-tonne truck on a 200-km route. It goes with full load and returns with 50% load, making 20 round trips a month. Monthly costs: driver ₹30,000; cleaner ₹15,000; depreciation ₹25,000; insurance ₹5,000; maintenance ₹21,000; diesel ₹90 per litre at 5 km per litre. Calculate the cost per tonne-km and freight per tonne-km to earn 20% on freight.

Q4 (a) (9 marks). Ishaan Ltd. sells A and B in the ratio 60 : 40 (sales value). P/V ratios: A 40%, B 25%. Fixed costs ₹3,40,000. (i) Find the composite P/V ratio and break-even sales. (ii) Profit at total sales of ₹15,00,000. (iii) If the mix changes to 40 : 60, find the new BEP and profit at ₹15,00,000. Comment.

Q4 (b) (5 marks). At 60% capacity (6,000 units) overheads are: variable ₹1,80,000; semi-variable ₹1,00,000 (40% fixed); fixed ₹80,000. Prepare a flexible overhead budget at 60%, 80% and 100% with the overhead rate per unit.

Q5 (a) (8 marks). Departments X (machine-intensive) and Y (labour-intensive): budgeted overheads X ₹5,00,000 (10,000 machine hours; 2,000 labour hours), Y ₹3,20,000 (8,000 labour hours). Job J-9 uses Dept X 20 machine hours (4 labour hours) and Dept Y 30 labour hours. (i) Compute overheads on J-9 using departmental rates and a blanket labour-hour rate. (ii) Actual: X ₹5,30,000 for 10,400 machine hours; Y ₹3,10,000 for 8,200 labour hours. Find the under/over-absorption and state its treatment.

Q5 (b) (6 marks). Pass journal entries in cost books (non-integrated system): materials purchased on credit ₹2,00,000; materials issued to production ₹1,50,000; wages paid ₹1,00,000 (direct ₹80,000, indirect ₹20,000); factory overheads incurred ₹60,000; factory overheads absorbed ₹75,000; finished goods completed ₹2,90,000; transfer of under/over-absorbed factory overheads.

Q6 (a) (5 marks). Distinguish between integrated and non-integrated accounting systems.

Q6 (b) (5 marks). State the essentials of a good wage incentive scheme.

Q6 (c) (4 marks). Explain the perpetual inventory system and its advantages.

OR

Q6 (c) (4 marks). Explain the treatment of normal and abnormal spoilage in cost accounts.

Solutions – Part II

SOLUTION Q1 (a) EOQ and discount decision

C = 16% × 100 = ₹16. EOQ = √(2 × 9,000 × 320/16) = √3,60,000 = **600 units**; 15 orders.

Particulars	At EOQ (600)	At 1,500 units
Purchase cost	9,000 × 100 = 9,00,000	9,000 × 97 = 8,73,000
Ordering cost	15 × 320 = 4,800	6 × 320 = 1,920
Carrying cost	300 × 16 = 4,800	750 × 15.52 = 11,640
Total	**9,09,600**	**8,86,560**

Accept the discount – saving ₹23,040. (Carrying cost is 16% of the discounted price ₹97 = ₹15.52.)

SOLUTION Q1 (b) Labour turnover

Average workers = (1,800 + 2,200)/2 = 2,000. Check: 1,800 − 80 + 60 + 420 = 2,200 ✓

Method	Quarter	Annual equivalent (× 4)
Separation = 80/2,000	4%	16%
Replacement = 60/2,000	3%	12%
New recruitment = 420/2,000	21%	84%
Flux = (80 + 60)/2,000	7%	28%
Flux incl. new recruits = (80 + 60 + 420)/2,000	28%	112%

Annual equivalent = quarterly rate × 4 (four quarters in a year).

SOLUTION Q1 (c) Absorption vs marginal costing

Absorption cost per unit = 60 + 2,00,000/10,000 = ₹80. **Absorption profit** = 8,000 × (100 − 80) = **₹1,60,000** (no under-absorption as production = normal capacity).

Marginal profit = 8,000 × 40 − 2,00,000 = **₹1,20,000**.

Difference ₹40,000 = closing stock 2,000 units × fixed overhead ₹20 carried forward in stock under absorption costing.

SOLUTION Q2 (a) Price per chair

Semi-variable: fixed 60% × 1,20,000 = 72,000; variable 48,000/4,000 = ₹12 per chair.

Particulars	80% (4,000) ₹	100% (5,000) ₹
Materials (₹60; ₹57 at 100%)	2,40,000	2,85,000
Labour (₹40)	1,60,000	2,00,000
Variable overheads (₹20)	80,000	1,00,000
Semi-variable – fixed	72,000	72,000
Semi-variable – variable (₹12)	48,000	60,000
Fixed overheads	2,00,000	2,00,000
Total cost	**8,00,000**	**9,17,000**
Cost per chair	200.00	183.40
Profit (20% on sales = 25% on cost)	50.00	45.85
Selling price per chair	**250.00**	**229.25**

SOLUTION Q2 (b) Job cost sheet – Job 47

Particulars	₹
Direct materials	24,000
Direct labour – A (80 × 100)	8,000
Direct labour – B (50 × 120)	6,000
Prime cost	**38,000**
Overheads – A (80 × 150)	12,000
Overheads – B (80% × 6,000)	4,800
Works cost	**54,800**
Administration overheads (20%)	10,960
Cost of the job	**65,760**
Profit (25% on price = 1/3 of cost)	21,920
Price quoted	**87,680**

SOLUTION Q3 (a) FIFO process costing

Started and finished = 17,000 − 2,000 = 15,000 units.

Equivalent units	Materials	Conversion
Opening WIP completed (2,000; 0% / 60%)	–	1,200
Started and finished	15,000	15,000
Closing WIP (3,000; 100% / 60%)	3,000	1,800
Total	**18,000**	**18,000**
Cost (current period)	3,60,000	5,04,000
Cost per EU	**₹20**	**₹28**

Evaluation	₹
Opening WIP – cost b/f	72,000
Opening WIP – completion (1,200 × 28)	33,600
Started and finished (15,000 × 48)	7,20,000
Transferred out (17,000 units)	**8,25,600**
Closing WIP (3,000 × 20 + 1,800 × 28)	**1,10,400**

Check: 72,000 + 3,60,000 + 5,04,000 = 9,36,000 = 8,25,600 + 1,10,400 ✓

SOLUTION Q3 (b) Truck cost per tonne-km

Km per month = 20 × 400 = 8,000; diesel 8,000/5 = 1,600 litres × 90 = ₹1,44,000.

Tonne-km per round trip = 200 × 10 + 200 × 5 = 3,000; per month = **60,000 tonne-km**.

Cost	₹
Driver and cleaner	45,000
Depreciation and insurance	30,000
Maintenance	21,000
Diesel	1,44,000
Total	**2,40,000**

Cost per tonne-km = 2,40,000/60,000 = **₹4.00**. Freight to earn 20% on freight = 4/0.80 = **₹5.00 per tonne-km**.

SOLUTION Q4 (a) Composite break-even

(i) Composite P/V = 60% × 40% + 40% × 25% = **34%**; BEP = 3,40,000/0.34 = **₹10,00,000** (A ₹6,00,000; B ₹4,00,000).

(ii) Profit at ₹15,00,000 = 15,00,000 × 34% − 3,40,000 = **₹1,70,000**.

(iii) New mix 40 : 60 – P/V = 40% × 40% + 60% × 25% = **31%**; BEP = 3,40,000/0.31 = **₹10,96,774**; profit = 15,00,000 × 31% − 3,40,000 = **₹1,25,000**.

Comment: the shift towards the lower-margin product B raises the BEP by ₹96,774 and cuts profit by ₹45,000. Sales effort should focus on A.

SOLUTION Q4 (b) Flexible overhead budget

Variable ₹30 per unit; semi-variable: fixed 40,000 + variable 60,000/6,000 = ₹10 per unit.

Particulars	60% (6,000)	80% (8,000)	100% (10,000)
Variable overheads (₹30)	1,80,000	2,40,000	3,00,000
Semi-variable – fixed	40,000	40,000	40,000
Semi-variable – variable (₹10)	60,000	80,000	1,00,000
Fixed overheads	80,000	80,000	80,000
Total	**3,60,000**	**4,40,000**	**5,20,000**
Rate per unit	**₹60**	**₹55**	**₹52**

SOLUTION Q5 (a) Departmental vs blanket rates

Departmental rates: X = 5,00,000/10,000 = ₹50 per machine hour; Y = 3,20,000/8,000 = ₹40 per labour hour.

Blanket rate = 8,20,000/(2,000 + 8,000) labour hours = ₹82 per labour hour.

Job J-9	Departmental	Blanket
Dept X	20 MH × 50 = 1,000	–
Dept Y	30 LH × 40 = 1,200	–
Total labour hours 34 × 82	–	2,788
Overheads charged	**2,200**	**2,788**

The blanket rate over-charges J-9 by ₹588 because it ignores that X is machine-intensive.

(ii) X: absorbed 10,400 × 50 = 5,20,000 vs actual 5,30,000 → **under-absorbed ₹10,000**. Y: absorbed 8,200 × 40 = 3,28,000 vs actual 3,10,000 → **over-absorbed ₹18,000**.

Treatment: if small or due to abnormal factors – transfer to Costing P&L A/c. If large and due to wrong estimates – adjust through a **supplementary rate** across cost of sales, finished goods and WIP. Carry forward only within a year in seasonal businesses.

SOLUTION Q5 (b) Journal entries – non-integrated system

#	Entry	Dr ₹	Cr ₹
1	Stores Ledger Control A/c Dr / To Cost Ledger Control A/c	2,00,000	2,00,000
2	WIP Control A/c Dr / To Stores Ledger Control A/c	1,50,000	1,50,000
3a	Wages Control A/c Dr / To Cost Ledger Control A/c	1,00,000	1,00,000
3b	WIP Control A/c Dr 80,000; Factory OH Control A/c Dr 20,000 / To Wages Control A/c	1,00,000	1,00,000
4	Factory OH Control A/c Dr / To Cost Ledger Control A/c	60,000	60,000
5	WIP Control A/c Dr / To Factory OH Control A/c	75,000	75,000
6	Finished Goods Control A/c Dr / To WIP Control A/c	2,90,000	2,90,000
7	Costing P&L A/c Dr / To Factory OH Control A/c (under-absorbed: 80,000 – 75,000)	5,000	5,000

SOLUTION Q6 (a) Integrated vs non-integrated accounts

Basis	Integrated	Non-integrated
Ledgers	One set of books for cost and financial records	Separate cost ledgers and financial ledgers
Reconciliation	Not needed	Needed between cost and financial profit
Personal and real accounts	Maintained	Replaced by Cost Ledger Control A/c
Profit	Single profit figure	Two profits that differ
Cost and effort	Economical, avoids duplication	Duplication of entries

SOLUTION Q6 (b) Essentials of a good incentive scheme

(1) Simple to understand and calculate; (2) fair to both employer and employees, with standards set by time and motion study; (3) guaranteed minimum wage; (4) incentive paid promptly and linked directly to effort; (5) no ceiling that kills motivation, but quality safeguards; (6) agreed with workers or unions; (7) not frequently changed; (8) low cost of operation; (9) supports quality and safety.

SOLUTION Q6 (c) Perpetual inventory system

A system of recording stores balances **after every receipt and issue** (bin cards + stores ledger), combined with **continuous stock verification** of a few items every day so that every item is checked several times a year.

Advantages: stock is available without a physical stock-take for interim accounts; discrepancies and losses are found quickly; overstocking and stock-outs are controlled; it has a moral check on staff; insurance claims and stock values are easier to establish.

SOLUTION Q6 (c) OR Normal and abnormal spoilage

Normal spoilage (inherent in the process): its cost (less scrap value) is absorbed by good units – charged to production overheads or spread over good production. **Abnormal spoilage** (avoidable, due to carelessness or accidents): its cost is charged to the **Costing P&L A/c**. In job costing, spoilage due to a customer's change of specification is charged to that job.