Skillshort

Self-Study Preparation Pack

CMA INTERMEDIATE

Paper 12: Management Accounting (MA)

Mock Test 2 – Full Paper with Model Answers

ICMAI Syllabus 2022 pattern: 100 marks · 3 hours · Section A – 15 MCQs × 2 (compulsory) · Section B – any 5 of Q2–Q8 (14 marks each) · Original Skillshort questions, numericals verified in Python

Time: 3 hours | Max marks: 100 | No negative marking | Model answers 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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6 Last-week plan & strategy

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.

Section A – Multiple Choice Questions (30 marks)

Q1. Choose the correct option (2 × 15 = 30).

1. Which of the following is a non-value-added activity?
(a) Assembling the product
(b) Moving materials between departments
(c) Designing for the customer
(d) Painting the product

2. Batch-level activities include
(a) Machine running
(b) Set-ups
(c) Plant management
(d) Product design

3. Fixed cost ₹3,00,000; selling price ₹50; variable cost ₹30. Units needed for a profit of ₹1,00,000 are
(a) 15,000
(b) 18,000
(c) 20,000
(d) 25,000

4. If the P/V ratio is 40% and the variable cost is ₹30, the selling price is
(a) ₹42
(b) ₹45
(c) ₹50
(d) ₹75

5. The transfer-pricing method that may pass on the supplier's inefficiencies to the buying division is
(a) Market price
(b) Actual full cost
(c) Negotiated price
(d) Opportunity-cost based

6. Budgetary slack means
(a) Underestimating revenue or overestimating costs in a budget
(b) Unused capacity
(c) A cash surplus
(d) Idle time

7. The time that should be taken to produce one unit at standard performance is the
(a) Actual time
(b) Standard time
(c) Idle time
(d) Clock time

8. Net operating profit after tax ₹40 lakh; capital employed ₹250 lakh; WACC 12%. EVA is
(a) ₹10 lakh
(b) ₹12 lakh
(c) ₹28 lakh
(d) ₹30 lakh

9. A learning curve is most useful when
(a) Production is fully automated
(b) The task is new, repetitive and labour-intensive
(c) Labour turnover is very high
(d) Output is a one-off

10. Unlike a fixed budget, a flexible budget
(a) Ignores fixed costs
(b) Adjusts allowances to actual activity
(c) Is prepared only for sales
(d) Cannot be used for control

11. Standard cost of actual output ₹60,000; budgeted hours 6,000 at ₹10; actual hours 5,800. The labour efficiency variance is

(a) Nil
(b) ₹2,000 (F)
(c) ₹2,000 (A)
(d) ₹4,000 (F)

12. A table showing, for each state, the difference between the best payoff and each act's payoff is a

(a) Payoff table
(b) Regret (opportunity-loss) table
(c) Decision tree
(d) Utility table

13. Payoffs of an act in three equally likely states are 30, 60 and 90. Its Laplace value is

(a) 30
(b) 60
(c) 75
(d) 90

14. A decision-maker using the maximin criterion is

(a) An optimist
(b) A pessimist
(c) Risk-neutral
(d) Indifferent

15. Sales ₹50 lakh, profit ₹5 lakh, capital employed ₹25 lakh. ROI and asset turnover are

(a) 10%, 2 times
(b) 20%, 2 times
(c) 20%, 0.5 times
(d) 10%, 0.5 times

Section A – Answer key with reasons

Q	Ans	Explanation / working
1	(b)	**Material movement** adds cost but no value the customer pays for.
2	(b)	**Set-up** cost varies with the number of batches.
3	(c)	(3,00,000 + 1,00,000) ÷ 20 = **20,000 units**.
4	(c)	Variable cost = 60% of price → 30 ÷ 0.6 = **₹50**.
5	(b)	**Actual cost** transfers inefficiencies; standard cost avoids this.
6	(a)	Managers build **padding** into budgets to make targets easier.
7	(b)	**Standard time**.
8	(a)	40 − 12% × 250 = **₹10 lakh**.
9	(b)	Learning occurs on **new, repetitive, manual** tasks with a stable workforce.
10	(b)	It recasts allowances for **actual activity**, giving meaningful variances.
11	(b)	Standard hours = 6,000; (6,000 − 5,800) × 10 = **₹2,000 (F)**.
12	(b)	**Regret table**.
13	(b)	(30 + 60 + 90) ÷ 3 = **60**.
14	(b)	Maximin picks the best of the **worst** outcomes – pessimistic.
15	(b)	Margin 10% × turnover 2 = **ROI 20%**.

Section B – Descriptive Questions (70 marks)

Answer any five of Questions 2 to 8 (14 marks each). Working notes form part of the answer.

Q2 (a) (7 marks). "The role of the management accountant has changed in the new business world." Explain.

(b) (7 marks). Activity rates: order processing ₹300 per order; delivery ₹500 per delivery; sales visit ₹1,000 per visit. Customer A: revenue ₹5,00,000, gross margin 30%, 100 orders, 60 deliveries, 12 visits. Customer B: revenue ₹3,00,000, gross margin 35%, 40 orders, 20 deliveries, 4 visits. Compute customer profitability and comment.

Q3 (a) (7 marks). A special order needs: 1,000 kg of material X (in stock, bought at ₹20, replacement ₹25, no other use, scrap value ₹8); 500 kg of material Y (in regular use, replacement ₹30); 200 labour hours (100 hours of idle paid time are available; the rest needs overtime at ₹60 an hour against a normal ₹40); variable overhead ₹10 a labour hour; fixed overhead absorbed ₹15 a hour. The customer offers ₹40,000. Advise.

(b) (7 marks). Products A, B, C (₹ lakh): sales 5, 3, 2; variable cost 3, 1.8, 1.6; allocated fixed cost 1, 0.6, 0.6, of which ₹0.3 lakh of C's is avoidable. Should C, which shows a loss, be dropped?

Q4 (a) (7 marks). M and N are sold in the ratio 3 : 2 (units). Price ₹50 and ₹80; variable cost ₹30 and ₹50; fixed cost ₹3,60,000. Find the break-even units of each product and break-even sales.

(b) (7 marks). Capacity 10,000 units; the firm works at 80%. Variable cost ₹40 a unit; fixed cost ₹1,60,000. Management wants a profit of 20% on selling price. Find the price at 80% and at 100% capacity and comment.

Q5 (a) (7 marks). Standard for 1,000 units: skilled 400 hours at ₹50, unskilled 600 hours at ₹30. Actual output 1,100 units; skilled 480 hours at ₹52, unskilled 560 hours at ₹30. Compute labour cost, rate, efficiency, mix and yield (sub-efficiency) variances.

(b) (7 marks). Standard variable overhead ₹8 an hour, 2 hours a unit. Output 5,000 units; 10,400 hours; actual variable overhead ₹85,000. Compute the variable-overhead cost, expenditure and efficiency variances.

Q6 (a) (7 marks). Sales (₹ lakh) 2021–2025: 10, 12, 13, 15, 18. Fit a straight-line trend by least squares and forecast 2026 and 2027.

(b) (7 marks). Product P (sales 4,000 units; finished stock opening 400, closing 600) uses 2 kg of A and 1 kg of B; Q (sales 3,000; opening 300, closing 200) uses 1 kg of A and 3 kg of B. Material stocks – A opening 1,000 kg, closing 1,500 kg; B opening 2,000 kg, closing 1,800 kg. Prices: A ₹20, B ₹15 per kg. Prepare production and material purchase budgets.

Q7 (a) (7 marks). A company's net profit after tax is ₹156 lakh; interest ₹40 lakh; tax 25%; capital employed ₹1,200 lakh; WACC 11%. Compute NOPAT and EVA and state two adjustments made to accounting profit in computing EVA.

(b) (7 marks). Explain the four perspectives of the balanced scorecard with two measures each.

Q8 (a) (7 marks). A baker buys cakes at ₹30 and sells at ₹50; unsold cakes are worthless. Daily demand is 10, 20 or 30 cakes with probabilities 0.2, 0.5 and 0.3. Stock options are 10, 20 or 30. Prepare the payoff table; find the best act by EMV, maximax, maximin and minimax regret; and compute EVPI.

(b) (7 marks). State the essential characteristics of a good responsibility-accounting report.

Model Answers – Section B

SOLUTION Q2(a) Changing role of the management accountant

- From **scorekeeper to business partner** – supports strategy, not just reporting.
- **Technology:** ERP, automation and analytics free time from bookkeeping for analysis and forecasting.
- **Strategic cost management:** value-chain analysis, target and life-cycle costing, ABC.
- **Performance management:** balanced scorecard, KPIs, non-financial measures (quality, delivery, customer satisfaction).
- **Risk and control:** enterprise risk, internal control, scenario planning.
- **Sustainability and ESG** reporting and integrated thinking.
- Communication of insight to non-finance managers for faster decisions.

SOLUTION Q2(b) Customer profitability (ABC)

Item (₹)	Customer A	Customer B
Gross margin	1,50,000	1,05,000
Order processing	30,000	12,000
Deliveries	30,000	10,000
Sales visits	12,000	4,000
Customer profit	**78,000**	**79,000**
Profit as % of revenue	15.6%	26.3%

B earns more profit on 40% less revenue because it orders in larger lots and needs fewer deliveries and visits. A should be encouraged to place fewer, larger orders (minimum order size, delivery charges).

SOLUTION Q3(a) Relevant cost of a special order

Item	Basis	₹
Material X 1,000 kg	No other use – scrap value forgone ₹8	8,000
Material Y 500 kg	In regular use – replacement ₹30	15,000
Labour 100 hours	Idle time already paid – sunk	Nil
Labour 100 hours	Overtime ₹60	6,000
Variable overhead	200 × ₹10	2,000
Fixed overhead	Absorbed, not incremental	Nil
Relevant cost		**31,000**

The price of ₹40,000 exceeds the relevant cost → **accept; incremental profit ₹9,000**.

SOLUTION Q3(b) Dropping product C

C's contribution = 2 − 1.6 = ₹0.4 lakh; avoidable fixed cost ₹0.3 lakh. Dropping C loses ₹0.4 lakh of contribution and saves only ₹0.3 lakh → profit **falls by ₹0.1 lakh**. **Do not drop C**; its "loss" of ₹0.2 lakh comes from unavoidable allocated cost.

SOLUTION Q4(a) Multi-product break-even

Contribution per mix (3 M + 2 N) = 3 × 20 + 2 × 30 = ₹120. Break-even mixes = 3,60,000 ÷ 120 = 3,000.

Break-even units: **M 9,000; N 6,000**. Break-even sales = 9,000 × 50 + 6,000 × 80 = **₹9,30,000**.

SOLUTION Q4(b) Pricing at different capacity

Item	80% (8,000 units)	100% (10,000 units)
Variable cost per unit	40	40
Fixed cost per unit	20	16
Total cost per unit	60	56
Price (cost ÷ 0.8)	**75**	**70**

Higher capacity use spreads fixed cost; at full capacity the firm can cut the price to ₹70 and still earn 20% on sales – useful in a competitive market.

SOLUTION Q5(a) Labour mix and yield variances

Standard hours for 1,100 units: skilled 440, unskilled 660. Actual hours 1,040 in standard ratio 40 : 60 → revised standard hours 416 and 624.

Variance	Working	₹
Cost	41,800 − 41,760	40 (F)
Rate	(50 − 52) × 480	960 (A)
Efficiency	(440 − 480) × 50 + (660 − 560) × 30	1,000 (F)
Mix (gang)	(416 − 480) × 50 + (624 − 560) × 30	1,280 (A)
Yield (sub-efficiency)	(440 − 416) × 50 + (660 − 624) × 30	2,280 (F)

Checks: mix + yield = efficiency; rate + efficiency = cost.

SOLUTION Q5(b) Variable-overhead variances

Standard VOH = 5,000 × 2 × 8 = 80,000. Cost variance = 80,000 − 85,000 = **₹5,000 (A)**. Expenditure = 10,400 × 8 − 85,000 = **₹1,800 (A)**. Efficiency = (10,000 − 10,400) × 8 = **₹3,200 (A)**.

SOLUTION Q6(a) Least squares trend

Year	x	y	xy	x^2
2021	−2	10	−20	4
2022	−1	12	−12	1
2023	0	13	0	0
2024	1	15	15	1
2025	2	18	36	4
Total	0	68	19	10

a = 68 ÷ 5 = 13.6; b = 19 ÷ 10 = 1.9 → y = 13.6 + 1.9x (origin 2023). Forecast 2026 (x = 3) = **₹19.3 lakh**; 2027 (x = 4) = **₹21.2 lakh**.

SOLUTION Q6(b) Production and purchase budgets

Production: P = 4,000 + 600 − 400 = **4,200**; Q = 3,000 + 200 − 300 = **2,900** units.

Item	Material A (kg)	Material B (kg)
For P	8,400	4,200
For Q	2,900	8,700
Usage	11,300	12,900
Add closing stock	1,500	1,800
Less opening stock	1,000	2,000
Purchases (kg)	**11,800**	**12,700**
Price	₹20	₹15
Purchases (₹)	**2,36,000**	**1,90,500**

Total purchase budget **₹4,26,500**.

SOLUTION Q7(a) EVA

NOPAT = 156 + 40 × (1 − 0.25) = **₹186 lakh**. Capital charge = 11% × 1,200 = 132. **EVA = ₹54 lakh** – value created above the cost of all capital.

Adjustments: capitalise R&D and brand-building spend and amortise it; add back non-cash provisions and goodwill amortisation; treat operating leases as capital; exclude non-operating income VERIFY.

SOLUTION Q7(b) Balanced scorecard

Perspective	Question	Measures
Financial	How do we look to shareholders?	ROI, EVA, revenue growth, cost per unit
Customer	How do customers see us?	Market share, satisfaction score, retention
Internal business process	What must we excel at?	Cycle time, defect rate, on-time delivery
Learning and growth	Can we keep improving?	Training hours, employee retention, new products launched

SOLUTION Q8(a) Payoff table (₹; payoff = 50 × cakes sold − 30 × cakes stocked)

Stock \ Demand	10 (0.2)	20 (0.5)	30 (0.3)	EMV	Max regret
10	200	200	200	200	400
20	−100	400	400	**300**	**300**
30	−400	100	600	150	600

- **EMV:** stock 20 (₹300). **Maximax:** stock 30 (₹600). **Maximin:** stock 10 (₹200). **Minimax regret:** stock 20 (maximum regret ₹300; regrets 300/0/200 against 0/200/400 and 600/300/0).
- EV with perfect information = 0.2 × 200 + 0.5 × 400 + 0.3 × 600 = 420 → **EVPI = 420 − 300 = ₹120** a day.

SOLUTION Q8(b) Good responsibility report

- Shows only items the manager **controls**; uncontrollable items separately, if at all.
- Compares actual with a **flexible budget** and highlights significant variances (exception principle).
- **Timely** and regular; frequency suits the level of management.
- **Simple and clear**, with detail reducing as reports go up the hierarchy.
- Gives reasons and suggested action; includes non-financial measures where relevant.
- Consistent in format so that trends are visible.