Concept diagnostic: worked answers

50-minute paper | 50 marks | New fictional teaching situations

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Numerical answers use the assumptions printed in the question paper. The decisions below are models, not scripts to memorise. A different decision can be sound if it uses the data and recognises the risks.

1. Single-answer MCQs [5 marks | about 5 min]

(a) B: ask about a real recent event, not a flattering opinion. (b) C: downloads alone do not establish value, repeat use or viable delivery. (c) C: secondary sale; cash goes to the seller, not the company. (d) A: activity, size, legal form and ambition are separate axes. (e) D: not yet observable is not zero.

2. Multiple-answer MCQs [4 marks | about 4 min]

(a) A and B. A non-convertible debenture is debt. Coupon and principal timing still matter; it does not automatically create ownership. (b) B and D. Programmes have costs and conditions; an application or invitation is neither an award nor available cash.

3. Research and prioritisation [6 marks | about 6 min]

(a) SAM = 20,000 x 30% = 6,000 people. Capacity-based first-year SOM cannot exceed 240 customers (4% of SAM), even if every capacity slot is filled. Capacity and an estimate of reach do not establish willingness to pay or actual conversion. [3]

(b) RICE = Reach x Impact x Confidence / Effort. A = 200 x 2 x 0.50 / 2 = 100. B = 80 x 3 x 0.75 / 1 = 180. B ranks higher under these assumptions. Verify reach, confidence and effort before treating the ranking as robust. [2]

(c) Example: "Tell me about the last time you needed laundry done: what did you do, and what time or money did it cost?" Ask for the actual episode, not a promised future purchase. [1]

4. Retention and economics [8 marks | about 8 min]

(a) Month-3 paying retention fell from 40% to 15%, a 25-percentage-point decline (62.5% relative fall). This comparison contradicts the improvement claim. Reopens measure a different behaviour and cannot replace paying retention. [2]

(b) CAC = Rs 30,000 / 100 = Rs 300. Observed paid-customer-months = 100 + 45 + 25 + 15 = 185. Total observed contribution = 185 x Rs 120 = Rs 22,200. Per originally acquired customer = Rs 222. Ratio to CAC = 222 / 300 = 0.74:1. [3]

Only Rs 222 of the Rs 300 acquisition cost is recovered from observed contribution so far, before fixed overhead. It is NOT full lifetime value: later contributions are unobserved. The record neither proves eventual recovery nor proves no later recovery is possible. [1]

(c) Contribution = Rs 90 - Rs 105 = -Rs 15/order. Every extra order at unchanged economics adds Rs 15 of loss before fixed costs. With Rs 18,000 of fixed costs and negative contribution, no positive sales volume reaches break-even at unchanged economics. Dividing 18,000 by -15 gives -1,200, not a feasible break-even sales target. [2]

From accounts to funding decisions

5. Profit and cash [6 marks | about 6 min]

(a) Profit before tax = 8 - 4 - 2 - 0.3 - 0.1 = Rs 1.60 lakh. Closing cash = 1 + 6 - 3.5 - 2 - 0.1 - 0.8 - 0.2 = Rs 0.40 lakh. Cash fell by Rs 0.60 lakh. [2]

(b) Revenue exceeds collections by Rs 2.0 lakh, so earned revenue is not all in the bank. Variable expense exceeds supplier payments by Rs 0.5 lakh, which helps cash relative to profit. Depreciation reduces profit without a cash payment; equipment and principal payments reduce cash without being full current-month expenses. [2]

Check: profit 1.60 + depreciation 0.30 - (revenue minus collections) 2.00 + (variable expense minus supplier payments) 0.50 - equipment 0.80 - principal 0.20 = cash change -0.60 lakh.

(c) Required cash = 0.70 + 0.20 + 0.10 = Rs 1.00 lakh. Shortage = 1.00 - 0.40 = Rs 0.60 lakh. Example: agree a Rs 0.60 lakh supplier deferral BEFORE the due time, but only with supplier consent, continued safe supply and a dated repayment source. Other defensible actions include confirmed early collection or a bridge with verified cost and downside repayment capacity. A hoped-for invoice receipt is not cash. [2]

6. Dilution, control and investor return [5 marks | about 5 min]

After	Founders	Seed investor	A investor	B investor
Seed	80%	20%	-	-
Series A	60%	15%	25%	-
Series B	48%	12%	20%	20%

(a) Founders: 100% x 0.80 = 80%; 80% x 0.75 = 60%; 60% x 0.80 = 48%. Old percentages multiply by the fraction left after each issuance. Each row sums to 100%. [3]

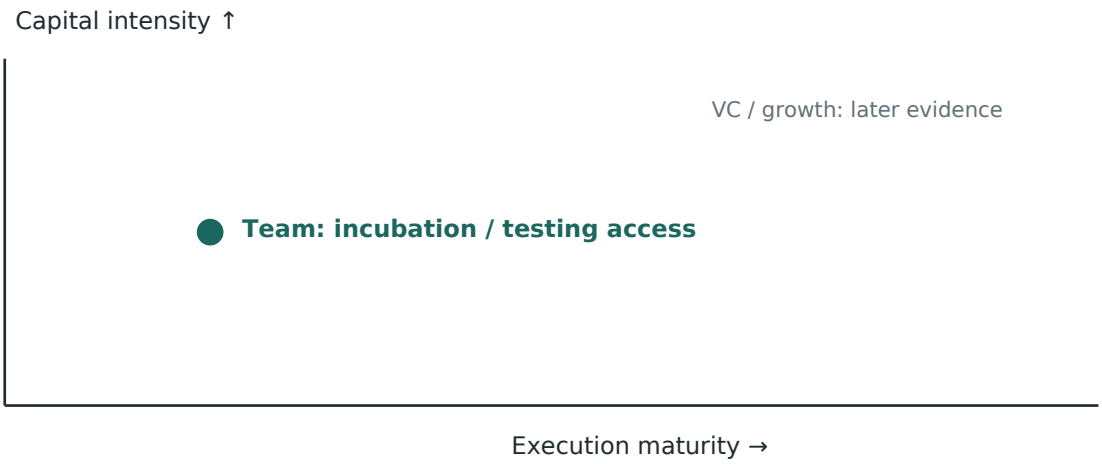
(b) No. The signed budget veto gives the Series A investor a specific control right. Voting percentage alone does not show who can approve that budget; inspect the agreement and the board/voting rules. This does not prove the investor controls every decision. [1]

(c) Gross proceeds = 6% x Rs 100 crore = Rs 6 crore. Gross multiple = 6 / 2 = 3.0x. This ignores fees, taxes and time value, as requested. [1]

Match support to the actual blocker

7. Support-capital map [5 marks | about 5 min]

(a) Horizontal axis: execution maturity, increasing to the right. Vertical axis: capital intensity, increasing upwards. Place the prototype/no-verified-outcomes team toward the low-maturity side; show a need for technical testing resources. Incubation is the defensible support route. No exact numeric coordinate is implied by a Rs 12 lakh request. [3]



(b) The specialist incubator supplies the missing lab and pilot permissions; pitch coaching does not fix those blockers. Compare time, equity, IP/data rights, fees and the actual access before joining. A next milestone could be a safely completed buyer pilot with measured customer outcome and a paid follow-on commitment. Funding is conditional, not guaranteed. [2]

The related Capital Fit map uses commercial/technical evidence horizontally and capital needed vertically. Low evidence does not become VC-ready merely because the cheque needed is large. This is the reasoning behind the choice, not an extra required drawing.

8. Cash breach and graveyard mechanism [6 marks | about 6 min]

Quarter	Opening + funding - outflow	Closing cash, Rs lakh
Q1	20 + 10 - 15	15
Q2	15 + 60 - 30	45
Q3	45 + 0 - 35	10

(a) Q1 closes at Rs 15 lakh; Q2 at Rs 45 lakh; Q3 at Rs 10 lakh. Revenue rises each quarter, but Q3 consumes Rs 35 lakh of cash with no new funding. [3]

Read the cash clock, then design proof

8. Cash breach and warning, continued

(b) Q4 monthly outflow = 60 / 3 = Rs 20 lakh. Runway = 10 / 20 = 0.5 month after Q4 begins. It cannot complete Q4 without a cash shortfall; the full-quarter deficit is Rs 50 lakh. [1]

(c) Series A / Q2 is a strong answer: immediately after receiving Rs 60 lakh, the plan still consumes Rs 30 lakh in Q2 and another Rs 35 lakh in Q3, leaving only Rs 10 lakh against Q4's Rs 60 lakh requirement. Review expansion while bargaining time remains, rather than relying on the unreceived Series B. Q1 is also defensible as an earlier warning: its Rs 15 lakh closing cash cannot fund the Rs 30 lakh Q2 outflow without the stipulated round. The warning is not itself insolvency. [1]

(d) Revenue growth does not establish collection timing, positive contribution or enough cash to meet obligations. Funding is not guaranteed. The graveyard mechanism is spending and operational expansion outrunning proof and cash: attractive sales can coexist with a funding-dependent engine. No company name or date is required. [1]

9. Journey, experiment and readiness [5 marks | about 5 min]

(a) 100 qualified visitors → 60 requests → 40 confirmed bookings → 24 on-time repairs → 8 eligible repeat bookers. Circle confirmation → fulfilment: only 24 / 40 = 60% of confirmed promises were fulfilled on time. This is distinct from the 40 / 60 booking-confirmation conversion, and from 8 / 24 = 33.3% eligible repeat booking. [2]

(b) One possible test: add technician availability checks and reconfirmation before issuing a booking confirmation. Operations lead owns a 14-day test on the current campus, with at least 30 confirmed bookings. Primary metric: on-time fulfilled repairs / confirmed bookings. Precommit success at >=90% with no safety incident; <90% means do not expand and investigate no-shows. Fewer than 30 confirmations means insufficient evidence, not an automatic pass. Keep AI recommendations out of scope. [2]

A stronger next test can compare the change with a comparable/randomly allocated group if safe and feasible. A before/after improvement alone does not prove causation. Thresholds here are proposed management rules, not universal benchmarks.

(c) Iterate on current-campus reliability and pause geographic expansion. Sixteen broken confirmed promises are a delivery/trust failure; new features do not repair it. Change the expansion decision only after reliable fulfilment is repeated with a fresh eligible cohort, viable contribution and a funded cash plan. Pivot is not forced by these data: a correctable delivery bottleneck is not proof the core problem is false. [1]

What to carry forward

Evidence before claims. A valid denominator before a percentage. Cash timing before a growth commitment. The right support before the biggest cheque. A precommitted decision rule before the experiment.