

SLA CLAT SECTIONAL TEST — QUANTITATIVE TECHNIQUES Set 1

GENERAL INSTRUCTIONS

- Total Questions: 30 Multiple-Choice Questions (MCQs)
- Total Duration: 30 Minutes
- Marking Scheme:
 - +1 mark for each correct answer
 - -0.25 marks for each wrong answer
 - 0 marks for un-attempted questions

CASELET 1 (Q1–Q6)

Elevate Academy conducted its annual entrance test simultaneously at three campuses — Riverside, Hilltop, and Lakeview — to shortlist candidates for its foundation course. At Riverside, 480 candidates registered, and 65% of them cleared the qualifying cutoff. At Hilltop, 350 candidates registered, of whom 72% cleared the cutoff. At Lakeview, 270 candidates registered, and 60% of them cleared. Riverside's registration this year was itself an improvement: only 400 candidates had registered at Riverside the previous year. Among the Hilltop candidates who cleared the cutoff, 25% were subsequently awarded merit scholarships covering their course fees. Meanwhile, the academy's management had set an overall target of having at least 68% of the total candidates registered across all three campuses clear the cutoff this year, a target used to evaluate the test's difficulty level and to decide whether the cutoff should be revised for the following year.

Source: *Constructed Quantitative Caselet (Illustrative Figures)*

QUESTIONS

Q1. What was the overall percentage of candidates who cleared the cutoff, taking all three campuses together?

- (A) 65.7%
- (B) 67.95%
- (C) 72.6%
- (D) 66%

Q2. By what percentage did Riverside's registration this year increase over the previous year?

- (A) 16.67%
- (B) 20%
- (C) 18.18%
- (D) 7.3%

Q3. How many Hilltop candidates were awarded merit scholarships?

- (A) 50
- (B) 78
- (C) 88
- (D) 63

Q4. The number of Hilltop candidates awarded merit scholarships is what percentage of Hilltop's total registration?

- (A) 18%
- (B) 25%
- (C) 8.7%
- (D) 5.7%

Q5. What was the combined pass percentage of Riverside and Lakeview candidates only (excluding Hilltop)?

- (A) 63.2%
- (B) 66%
- (C) 62.5%
- (D) 43.1%

Q6. How many additional candidates (across all three campuses combined) would have needed to clear the cutoff for the academy to meet its 68% target?

- (A) 24
- (B) 22
- (C) 44
- (D) 11

CASELET 2 (Q7–Q12)

Golden Crust Bakery prepares three signature cakes, each using flour, sugar, and butter mixed in a fixed ratio by weight. A standard batch of Vanilla Delight weighs 10 kg, with flour, sugar, and butter combined in the ratio 5:3:2. A standard batch of Chocolate Fudge weighs 18 kg, mixed in the ratio 4:2:3. A standard batch of Red Velvet weighs 30 kg, mixed in the ratio 6:4:5. For a wedding order, the bakery received a request for 3 batches of Vanilla Delight, 2 batches of Chocolate Fudge, and 1 batch of Red Velvet, all to be delivered together on the same day. The storeroom manager needs to work out exactly how much of each ingredient to draw from stock to fulfil this combined order, and how the requirement shifts if the client later revises the Red Velvet quantity upward, since flour is the ingredient currently in shortest supply at the bakery.

Source: *Constructed Quantitative Caselet (Illustrative Figures)*

QUESTIONS

Q7. What is the total quantity of flour required to fulfil the wedding order as specified?

- (A) 35 kg
- (B) 25 kg
- (C) 43 kg
- (D) 28 kg

Q8. What is the ratio of total sugar to total butter required for the order?

- (A) 28:25
- (B) 25:28
- (C) 43:28
- (D) 21:22

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Q9. If one standard batch of Vanilla Delight and one standard batch of Chocolate Fudge were combined into a single mix, what percentage of that mix would be sugar?

- (A) 26.1%
- (B) 25%
- (C) 28.6%
- (D) 7.3%

Q10. If the client raises the Red Velvet quantity in the order from 1 batch to 2 batches, by how much does the flour requirement increase?

- (A) 13.44 kg
- (B) 24 kg
- (C) 12 kg
- (D) 18 kg

Q11. What percentage of the order's total weight is contributed by the Chocolate Fudge batches?

- (A) 62.5%
- (B) 60%
- (C) 37.2%
- (D) 37.5%

Q12. A separate enquiry asks the bakery for a single quantity of Red Velvet mix, prepared to the same recipe, that must contain exactly 21 kg of sugar. What would the total weight of that mix be?

- (A) 70 kg
- (B) 94.5 kg
- (C) 63 kg
- (D) 78.75 kg

CASELET 3 (Q13–Q18)

Zenith Coaching Institute conducted a mock test across four batches preparing for an entrance examination. Batch A had 20 students who averaged 70 marks, Batch B had 30 students who averaged 65 marks, Batch C had 25 students who averaged 72 marks, and Batch D had 25 students who averaged 78 marks. While compiling the results, the academic coordinator discovered that one student in Batch A had been awarded 40 marks by clerical error; on re-evaluation the answer sheet actually deserved 90 marks, and Batch A's records were corrected accordingly. Separately, five new students joined Batch A after the mock test, having scored an average of 85 marks in a make-up test conducted for latecomers, and their scores were added to Batch A's tally before the institute finalised its combined performance report, which compares the batches individually, in pairs, and as a whole cohort of all four batches together.

Source: *Constructed Quantitative Caselet (Illustrative Figures)*

QUESTIONS

Q13. What was the overall average score of all 100 students across the four batches combined (using the originally stated batch averages)?

- (A) 71.25
- (B) 71
- (C) 68.7
- (D) 73.6

Q14. What is the combined average of Batch C and Batch D students taken together?

- (A) 74.7
- (B) 37.5
- (C) 75
- (D) 73.6

Q15. Considering only the clerical correction (and not the arrival of the five latecomers), what is Batch A's revised average?

- (A) 74.5
- (B) 68
- (C) 69.05
- (D) 72.5

Q16. Considering only the arrival of the five latecomers, averaging 85 marks, added directly to Batch A's original tally (and not the clerical correction), what is Batch A's revised average?

- (A) 91.25
- (B) 75
- (C) 73
- (D) 59.4

Q17. What is the difference between the highest batch average and the lowest batch average among the four originally stated figures?

- (A) 8
- (B) 7
- (C) 13
- (D) 6

Q18. Consider the following statements based on the data: I. The combined average of Batch A and Batch B is lower than the combined average of Batch C and Batch D. II. Batch D's average exceeds Batch C's average by exactly 6 marks. III. Using the originally stated batch figures, the combined average of Batch A and Batch C taken together exceeds 71.5 marks. Which of the statements is/are correct?

- (A) II and III only
- (B) I and II only
- (C) I, II and III
- (D) I only

CASELET 4 (Q19–Q24)

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Bright Electronics stocked three appliances for its festive season sale. A mixer grinder, bought at a cost price of ₹1,200, was marked up to a marked price of ₹1,800 and sold after two successive discounts of 25% and 8% applied one after the other. A toaster, bought at a cost price of ₹800, was marked at ₹1,200 and sold after a single discount of 15%. An air fryer, bought at a cost price of ₹2,000, was marked at ₹2,500 and sold after a steeper discount of 28%, intended to clear old stock before a new model's launch, though this left the shop making a loss on that particular item. The store manager wants to assess how the mixer grinder's two successive discounts compare to a single equivalent discount, how each appliance performed individually, how all three items performed together, and what discount the air fryer would instead have needed to turn its loss into a modest profit.

Source: *Constructed Quantitative Caselet (Illustrative Figures)*

QUESTIONS

Q19. What single discount percentage is equivalent to the mixer grinder's two successive discounts of 25% and 8%?

- (A) 31%
- (B) 25%
- (C) 16.5%
- (D) 33%

Q20. What profit percentage did Bright Electronics earn on the mixer grinder after both discounts were applied?

- (A) 3.5%
- (B) 12.5%
- (C) 2.3%
- (D) 8%

Q21. What profit percentage did Bright Electronics earn on the toaster after its single discount?

- (A) 22.5%
- (B) 18.3%
- (C) 27.5%
- (D) 15%

Q22. What loss percentage did Bright Electronics incur on the air fryer at its actual selling price?

- (A) 35%
- (B) 10%
- (C) 28%
- (D) 8%

Q23. Assertion (A): The overall profit percentage earned by Bright Electronics on the three appliances taken together is lower than the profit percentage earned on the toaster alone. Reason (R): The air fryer's 28% discount left its selling price below its cost price, so it was sold at a loss.

- (A) Both A and R are true, and R is the correct explanation of A.

(B) A is false, but R is true.

(C) A is true, but R is false.

(D) Both A and R are true, but R is not the correct explanation of A.

Q24. What discount percentage would the air fryer have instead needed (on its marked price) to yield a 5% profit rather than a loss?

- (A) 16%
- (B) 15.8%
- (C) 13%
- (D) 20%

CASELET 5 (Q25–Q30)

Three vehicles operated by Comet Travels leave the same toll plaza at the same time, each bound for a different destination. A car covers a distance of 420 km; it travels at a constant speed of 84 km/h until its final 126 km, where traffic forces it to reduce speed by 25% for the remainder of the journey. A bus covers a distance of 350 km at a constant speed of 50 km/h, but halts for a 1-hour break at a rest stop once it has covered 200 km, before resuming at the same speed for the rest of the route. A truck covers a distance of 450 km at a constant, unbroken speed of 75 km/h. The car and the truck happen to travel in exactly opposite directions from the toll plaza. The dispatch office wants to compare how long each vehicle actually takes to reach its destination, and how the interruptions faced by the car and the bus affect their journey times relative to a run without any interruption.

Source: *Constructed Quantitative Caselet (Illustrative Figures)*

QUESTIONS

Q25. How long does the truck take to complete its 450 km journey?

- (A) 9 hours
- (B) 5.6 hours
- (C) 5.36 hours
- (D) 6 hours

Q26. What is the total time taken by the car to complete its 420 km journey, given the speed reduction for the final 126 km?

- (A) 5 hours
- (B) 5.5 hours
- (C) 6.67 hours
- (D) 6.17 hours

Q27. What is the distance between the car and the truck after 3 hours, given that they travel in exactly opposite directions from the toll plaza?

- (A) 414 km
- (B) 477 km
- (C) 636 km

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(D) 27 km

Q28. What is the total time taken by the bus to complete its journey, including the 1-hour rest stop?

- (A) 8 hours
- (B) 9 hours
- (C) 6 hours
- (D) 7 hours

Q29. The bus begins its 1-hour rest stop at the moment it completes 200 km. How far has the car travelled by that same moment?

- (A) 294 km
- (B) 336 km
- (C) 325.5 km
- (D) 252 km

Q30. The dispatch office wants the bus to reach its destination in the same total time that the truck takes for its own journey, with the bus's 1-hour rest stop left unchanged. What constant running speed would the bus have to maintain?

- (A) 58.33 km/h
- (B) 90 km/h
- (C) 43.75 km/h
- (D) 70 km/h
