

SLA CLAT SECTIONAL TEST — QUANTITATIVE TECHNIQUES Set 1

ANSWER KEY WITH
EXPLANATIONS

CASELET 1 (Q1–Q6)

- Q1. (D)** Total cleared = $312+252+162=726$ over 1100 registered = 66%. (A) wrongly averages the three given percentages unweighted. (B) drops Lakeview and uses only Riverside+Hilltop. (C) uses a rounded total registration of 1000 instead of 1100.
- Q2. (B)** Increase = $480-400=80$; $80/400 \times 100=20\%$. (A) uses this year's 480 as the base instead of last year's 400. (C) uses the average of the two years as the base. (D) uses the three-campus total registration as the base instead of Riverside's own.
- Q3. (D)** Hilltop clearers = 72% of 350 = 252; scholarships = 25% of 252 = 63. (A) misreads the rate as 20% instead of 25%, giving 50.4, rounded to 50. (B) applies 25% to Riverside's clearers instead of Hilltop's. (C) applies 25% to Hilltop's registered strength of 350 instead of its 252 clearers, giving 87.5, rounded to 88.
- Q4. (A)** 63 scholarship recipients $\div$ 350 Hilltop registrants $\times$ 100 = 18%. (B) simply restates the given 25% clearance-to-scholarship rate instead of re-basing it on registration. (C) divides by the total cleared across all three campuses. (D) divides by the full three-campus registration.
- Q5. (A)** Riverside+Lakeview cleared = $312+162=474$ over 750 registered = 63.2%. (B) mistakenly includes Hilltop, giving the overall three-campus rate instead. (C) simply averages the two given percentages without weighting by registration. (D) divides by the full three-campus registration of 1100 instead of 750.
- Q6. (B)** Target = 68% of 1100 = 748; actual cleared = 726; shortfall = 22. (A) understates Hilltop's clearers as 250 instead of 252. (C) misreads the target as 70%. (D) misreads the target as 67%.

CASELET 2 (Q7–Q12)

- Q7. (C)** Flour per batch: VD 5 kg, CF 8 kg, RV 12 kg; order flour = $3(5)+2(8)+1(12)=43$ kg. (A) uses only 1 Chocolate Fudge batch instead of 2. (B) adds the per-batch figures without multiplying by the batches ordered. (D) totals butter instead of flour by mistake.
- Q8. (B)** Sugar = $3(3)+2(4)+1(8)=25$ kg; Butter = $3(2)+2(6)+1(10)=28$ kg, giving 25:28. (A) inverts the

ratio. (C) uses flour:butter instead of sugar:butter. (D) forgets to scale the Chocolate Fudge quantities by its 2 batches.

- Q9. (B)** VD's batch has 3 kg sugar, CF's has 4 kg; combined mix = 7 kg sugar in 28 kg = 25%. (A) averages the two recipes' own sugar shares (30%, 22.2%) instead of weighting by batch weight. (C) gives butter's share, not sugar's. (D) divides by the order's 96 kg instead of the 28 kg mix.
- Q10. (C)** One extra Red Velvet batch adds 12 kg of flour ($6/15 \times 30$), so total flour rises from 43 to 55 kg. (A) applies the order's overall flour share to the extra 30 kg. (B) gives the flour for both Red Velvet batches after the revision (2×12) rather than the increase caused by the second. (D) uses 10, not 15, as the ratio's total parts.
- Q11. (D)** Chocolate Fudge weight = $2 \times 18=36$ kg of 96 kg total = 37.5%. (A) computes the complementary share instead. (B) divides Chocolate Fudge's weight by the other two cakes' combined weight instead of the total. (C) uses Chocolate Fudge's flour quantity over total flour instead of weight over total weight.
- Q12. (D)** Red Velvet's recipe puts sugar at 4 of its 15 parts, so a mix carrying 21 kg of sugar weighs $21 \times 15/4 = 78.75$ kg. (A) applies Vanilla Delight's 3-in-10 sugar share instead ($21 \times 10/3$). (B) applies Chocolate Fudge's 2-in-9 share ($21 \times 9/2$). (C) reads butter's 5 parts as sugar's ($21 \times 15/5$).

CASELET 3 (Q13–Q18)

- Q13. (B)** Combined total = $1400+1950+1800+1950=7100$ across 100 students; $7100/100=71$. (A) is the unweighted average of the four batch averages, ignoring batch sizes. (C) omits Batch D from the calculation. (D) omits Batch B from the calculation.
- Q14. (C)** Batch C+D total = $1800+1950=3750$ across 50 students; $3750/50=75$. (A) uses Batch B's strength of 30 in place of Batch C's 25, giving $(2160+1950)/55 = 74.7$. (B) divides by all 100 students instead of the 50 in Batches C and D. (D) folds Batch A into the pair, giving $(1400+1800+1950)/70 = 73.6$.
- Q15. (D)** Correcting the error alone: $1400-40+90=1450$ over 20 students = 72.5. (A) adds the corrected 90 without first removing the erroneous 40. (B) removes the 40 but forgets to add back the 90. (C) uses the correct total but divides by 21 students instead of 20.
- Q16. (C)** Adding only the five latecomers to Batch A's original tally: $(1400+5 \times 85)/25=1825/25=73$. (A) adds

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them correctly but forgets to update the denominator to 25. (B) mistakenly adds the latecomers to the corrected total (1450) instead of the original. (D) adds the latecomers' average of 85 directly instead of their total contribution of 425.

Q17. (C) Highest average is Batch D's 78, lowest is Batch B's 65; difference = 13. (A) mistakenly treats Batch A (70) as the lowest. (B) compares Batch C with Batch B instead of Batch D. (D) compares Batch D with Batch C instead of Batch B.

Q18. (B) Combined A&B average = $3350/50=67$, combined C&D average = $3750/50=75$, so I is correct. II: $78-72=6$, correct. III: Batch A+C total = $1400+1800=3200$ across 45 students = 71.1, which does not exceed 71.5, so III is false: Batch C's larger size lifts the pair above the midpoint of 71, but not as far as 71.5. Hence I and II only.

CASELET 4 (Q19–Q24)

Q19. (A) Single equivalent discount for 25% then 8% is $1-(0.75 \times 0.92)=31\%$. (B) applies only the first 25% discount and ignores the second. (C) averages the two discounts instead of compounding them (16.5%). (D) simply adds the two discounts ($25+8=33\%$).

Q20. (A) $SP = 1800 \times 0.75 \times 0.92 = 1242$; profit = 42; profit% = $42/1200 \times 100 = 3.5\%$. (B) uses the SP after only the first 25% discount ($150/1200=12.5\%$). (C) computes profit as a percentage of the marked price instead of cost price ($42/1800=2.3\%$). (D) mistakes the second successive discount (8%) itself for the profit percentage.

Q21. (C) $SP=1200 \times 0.85=1020$; profit = 220; profit% = $220/800 \times 100 = 27.5\%$. (A) uses the discount amount (180) instead of the actual profit amount. (B) computes profit as a percentage of the marked price instead of cost price. (D) mistakes the 15% discount itself for the profit percentage.

Q22. (B) $SP=2500 \times 0.72=1800$; loss = 200; loss% = $200/2000 \times 100 = 10\%$. (A) computes the loss as marked price minus selling price instead of cost price minus selling price. (C) mistakes the 28% discount itself for the loss percentage. (D) computes the loss percentage relative to the marked price instead of the cost price.

Q23. (D) Combined profit% = $62/4000 \times 100 = 1.55\%$, below the toaster's 27.5%, so A is true. R is factually true ($SP ₹1,800$ against $CP ₹2,000$ is indeed a loss), but it does not explain A: even at breakeven on the air fryer, the combined figure would still be only

$262/4000 \times 100 = 6.55\%$, far under 27.5%, because the mixer's modest 3.5% margin already keeps the average well below the toaster's.

Q24. (A) For 5% profit, desired $SP=2000 \times 1.05=2100$; required discount = $(2500-2100)/2500 \times 100 = 16\%$. (B) treats the 5% profit as a margin on the selling price rather than on the cost price. (C) assumes the discount is simply 28% minus the current 10% loss and desired 5% profit. (D) uses the cost price as the base instead of the marked price.

CASELET 5 (Q25–Q30)

Q25. (D) Truck time = $450/75=6$ hours. (A) divides by the bus's 50 km/h instead of the truck's 75 km/h. (B) uses the car's 420 km distance instead of the truck's 450 km. (C) divides by the car's 84 km/h instead of the truck's 75 km/h.

Q26. (B) First 294 km at 84 km/h takes 3.5 h; final 126 km at the reduced 63 km/h takes 2 h; total = 5.5 h. (A) ignores the speed reduction entirely. (C) applies the reduced speed to the whole 420 km journey. (D) swaps the legs, applying the reduced speed to the first 294 km instead of the last 126 km.

Q27. (B) At 3 hours the car is still within its first 294 km leg (still at 84 km/h); combined with the truck's 75 km/h, they separate at 159 km/h, covering 477 km. (A) wrongly assumes the car had already slowed. (C) uses 4 hours instead of 3. (D) subtracts speeds instead of adding them.

Q28. (A) 200 km at 50 km/h takes 4 h, plus a 1-hour break, plus the remaining 150 km at 50 km/h taking 3 h: total = 8 h. (B) wrongly assumes the remaining distance was also 200 km instead of 150 km. (C) subtracts the break from the travel time instead of adding it. (D) ignores the rest stop entirely.

Q29. (C) Bus reaches 200 km at 4 h. Car covers 294 km in 3.5 h, then 0.5 h more at reduced 63 km/h = 31.5 km, so 325.5 km by $t=4$ h. (A) stops at the car's first leg (294 km). (B) uses 84 km/h for all 4 hours, ignoring the slowdown. (D) applies 63 km/h to the whole 4 hours.

Q30. (D) The truck takes $450/75 = 6$ hours; the 1-hour halt leaves only 5 running hours for 350 km, so the bus must hold 70 km/h. (A) divides 350 by the full 6 hours, ignoring the halt. (B) uses the truck's 450 km instead of the bus's 350 km. (C) is the bus's average speed over its actual 8-hour journey, halt included.
