

BLOGS

Sectional Test on Quantitative Techniques for CLAT UG [Part 21]

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The Quantitative Techniques section of the CLAT UG typically comprises 10–14 questions, making up 10–12% of the total paper. It evaluates data interpretation skills through passage-based sets on ratios, percentages, and basic algebra, demanding accuracy, logic, and time efficiency including quick calculations.

1. The average of 30 numbers is 52. If the average of 12 numbers is 48 and that of another 10 numbers is 55, find the average of the remaining numbers.

- a) 51
- b) 52
- c) 54.25
- d) 57

2. A sum amounts to ₹8,400 in 2 years and ₹9,600 in 4 years at simple interest. Find the rate of interest per annum.

- a) 8.33%
- b) 10%
- c) 12.7%
- d) 18%

3. The ratio of two numbers is 8 : 11 and their HCF is 9. Find the difference between the numbers.

- a) 18
- b) 27
- c) 36
- d) 45

4. A train covers a distance of 360 km. If its speed were increased by 15 km/h, it would take 1 hour less. Find the original speed.

- a) 45 km/h
- b) 60 km/h
- c) 72 km/h
- d) 90 km/h

5. If the cost price of 24 articles equals the selling price of 20 articles, find the profit percentage.

- a) 15%
- b) 20%
- c) 25%
- d) 30%

6. A number is increased by 50%, then decreased by 20%, and then increased by 25%. What is the net percentage change?

- a) 40% increase
- b) 45% increase
- c) 50% increase
- d) 35% increase

7. A box contains 6 red, 5 blue, and 9 green balls. Two balls are drawn without replacement. Find the probability that both are green.

- a) $\frac{18}{95}$
- b) $\frac{36}{95}$
- c) $\frac{72}{190}$
- d) $\frac{9}{38}$

8. Milk and water are mixed in the ratio 4 : 3. If 21 litres of water are added, the ratio becomes 4 : 6. Find the original quantity of the mixture.

- a) 49 L
- b) 63 L
- c) 70 L
- d) 84 L

9. Two numbers are in the ratio 9 : 13 and their sum is 484. Find the smaller number.

- a) 162
- b) 180
- c) 198
- d) 216

10. A boat travels 40 km downstream in 2 hours and 30 km upstream in 3 hours. Find the speed of the stream.

- a) 2 km/h
- b) 3 km/h
- c) 4 km/h
- d) 5 km/h

11. The length of a rectangle increases by 40% and breadth decreases by 20%. Find the percentage change in area.

- a) 8% increase
- b) 12% increase
- c) 10% decrease
- d) No change

12. The average of 20 numbers is 60. If three numbers 70, 80, and 90 are removed, find the new average.

- a) 55
- b) 56
- c) 57
- d) 58

13. A trader marks his goods 60% above cost price and allows successive discounts of 10% and 20%. Find the profit percentage.

- a) 12%
- b) 15.2%
- c) 18%
- d) 20%

14. If the radius of a circle increases by 25%, find the percentage increase in its area.

- a) 50%
- b) 56.25%
- c) 60%
- d) 62.5%

15. The present ages of A and B are in the ratio 7 : 9. After 6 years, the ratio becomes 4 : 5. Find A's present age.

- a) 21
- b) 28
- c) 35
- d) 42

Answers

1. Correct Answer: C

$$\text{Total} = 30 \times 52 = 1560$$

$$12 \rightarrow 576, 10 \rightarrow 550$$

$$\text{Remaining} = 1560 - 1126 = 434$$

$$\text{Numbers left} = 8$$

$$\text{Average} = 434/8 = \mathbf{54.25}$$

2. Correct Answer: A

$$\text{Difference} = 9600 - 8400 = 1200 \text{ (for 2 years)}$$

$$1 \text{ year interest} = 600$$

$$\text{Principal} = 8400 - (2 \times 600) = 7200$$

$$\text{Rate} = (600 \times 100)/7200 = \mathbf{8.33\%}$$

3. Correct Answer: B

$$\text{Numbers} = 8 \times 9 = 72, 11 \times 9 = 99$$

$$\text{Difference} = 99 - 72 = \mathbf{27}$$

4. Correct Answer: B

$$360/x - 360/(x+15) = 1$$

$$\text{Solve} \rightarrow x = \mathbf{60 \text{ km/h}}$$

5. Correct Answer: B

$$\text{CP of 24} = \text{SP of 20}$$

$$\text{SP/CP} = 24/20 = 1.2$$

$$\text{Profit} = \mathbf{20\%}$$

6. Correct Answer: C

$$100 \rightarrow 150$$

$$150 \rightarrow 120$$

$$120 \rightarrow 150$$

$$\text{Final} = 150$$

$$\text{Increase} = \mathbf{50\%}$$

7. Correct Answer: A

$$(9/20) \times (8/19) = 72/380 = \mathbf{18/95}$$

8. Correct Answer: B

$$\text{Water increase} = 3 \text{ parts} = 21$$

$$1 \text{ part} = 7$$

$$\text{Total parts} = 9$$

$$\text{Mixture} = 9 \times 7 = \mathbf{63 \text{ L}}$$

9. Correct Answer: C

$$\text{Total parts} = 22 \rightarrow 1 \text{ part} = 22$$

$$\text{Smaller} = 9 \times 22 = \mathbf{198}$$

10. Correct Answer: D

$$\text{Downstream} = 40/2 = 20$$

$$\text{Upstream} = 30/3 = 10$$

$$\text{Stream} = (20 - 10)/2 = \mathbf{5 \text{ km/h}}$$

11. Correct Answer: B

$$\text{Area factor} = 1.4 \times 0.8 = 1.12$$

$$\text{Increase} = \mathbf{12\%}$$

12. Correct Answer: B

$$\text{Total} = 20 \times 60 = 1200$$

$$\text{Removed} = 70 + 80 + 90 = 240$$

Remaining = 960

Average = $960/17 = 56.47 \approx 56$

13. Correct Answer: B

CP = 100

MP = 160

After 10% → 144

After 20% → 115.2

Profit = **15.2%**

14. Correct Answer: B

Area $\propto r^2$

$(1.25)^2 = 1.5625$

Increase = **56.25%**

15. Correct Answer: B

Let ages = 7x, 9x

$(7x+6)/(9x+6) = \frac{4}{5}$

Solve → x = 4

A = $7 \times 4 = 28$