CLAT Quantitative Techniques

Sample Paper – 10

Duration: 12 Minutes **Maximum Marks: 12**

Instructions

- This paper contains **12** Multiple Choice Questions (Single Correct Answer), modelled on the Quantitative Techniques section of **CLAT** (Common Law Admission Test).
- Each correct answer carries **+1 mark**. There is **a negative marking of 0.25 marks** for every incorrect answer; unattempted questions carry no penalty.
- The paper has **three data sets**, each giving information as a graph, table, or short passage, followed by **four** questions. Derive the figures from the set and apply elementary mathematics (up to **Class 10** level) to answer.
- CLAT is an offline pen-and-paper (OMR) test with no sectional time limit; attempt this practice paper in one timed sitting of about **12 minutes**.
- Use of calculators, mobile phones, and other electronic gadgets is strictly prohibited; do the arithmetic by hand.

Data Set I

Directions (Q1–Q4): The table below shows the monthly expenditure (in rupees) of the Menon family across four categories in two months. Study it and answer the questions that follow.

Month	Food	Rent	Travel	Savings
April	6000	8000	2000	4000
May	7000	8000	3000	2000

Q1. What was the family's total expenditure in April?

(A) Rs 20000

(B) Rs 22000

(C) Rs 18000

(D) Rs 21000

Q2. In May, what percent of the total monthly expenditure was spent on food?

(A) 30%

(B) 40%

(C) 25%

(D) 35%

Q3. In April, what is the ratio of the rent to the travel expenditure?

(A) 2 : 1

(B) 3 : 1

(C) 4 : 1

(D) 1 : 4

Q4. What is the average monthly rent paid by the family over the two months?

(A) Rs 8000

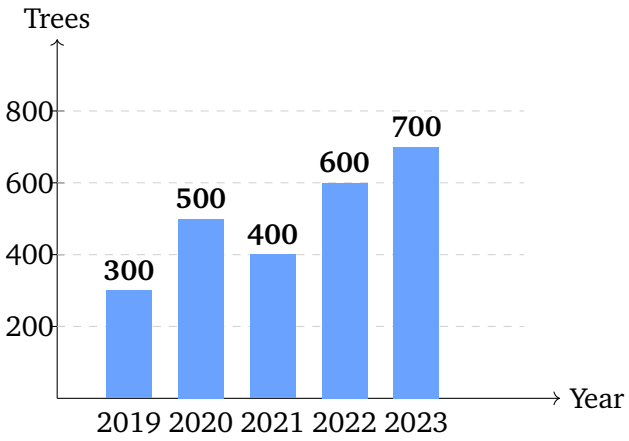
(B) Rs 7000

(C) Rs 8500

(D) Rs 6000

Data Set II

Directions (Q5–Q8): The bar chart below shows the number of trees planted by a town over five years. Study it and answer the questions that follow.



Q5. What is the total number of trees planted by the town over the five years?

(A) 2300

(B) 2400

(C) 2500

(D) 2600

Q6. What is the average number of trees planted per year over the five years?

(A) 450

(B) 500

(C) 550

(D) 480

Q7. The number of trees planted in 2022 is what percent more than the number planted in 2021?

(A) 40%

(B) 33%

(C) 50%

(D) 60%

Q8. What is the ratio of the trees planted in 2019 to those planted in 2023?

(A) 7 : 3

(B) 1 : 2

(C) 2 : 3

(D) 3 : 7

Data Set III

Directions (Q9–Q12): Read the following information carefully and answer the questions that follow.

A taxi driver named Suresh keeps careful records of his work. One day he drove a passenger a distance of **150 km in 2.5 hours**. He has deposited **Rs 6000** in a bank that pays **simple interest at 10% per annum**. On a busy day he earned **Rs 800** from fares while spending **Rs 200** on fuel. Over one month he completed **250 trips**, of which **50** were airport trips.

Q9. What was Suresh's average speed on the 150 km trip?

(A) 60 km/h

(B) 50 km/h

(C) 75 km/h

(D) 45 km/h

Q10. How much simple interest will he earn on his deposit at the end of two years?

(A) Rs 600

(B) Rs 1200

(C) Rs 1000

(D) Rs 1500

Q11. On the busy day, what is the ratio of his fuel cost to his fare earnings?

(A) 4 : 1

(B) 1 : 4

(C) 1 : 3

(D) 2 : 5

Q12. What percent of his monthly trips were airport trips?

(A) 25%

(B) 15%

(C) 10%

(D) 20%

Detailed Solutions

Q1.

Solution

Concept – reading a table row and adding values: Read the four category amounts in the April row and add them.

Step 1 – list the April amounts: Food $= 6000$, Rent $= 8000$, Travel $= 2000$, Savings $= 4000$.

Step 2 – add them: $6000 + 8000 = 14000$. $14000 + 2000 = 16000$. $16000 + 4000 = 20000$.

Why the other options are wrong:

- Options B, C, D: Rs 22000, Rs 18000 and Rs 21000 each mis-add one category; the correct sum is Rs 20000.

Final Answer: Total $=$ Rs 20000 $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q1

Q2.

Solution

Concept – percentage of a total: Percent $= \dfrac{\text{part}}{\text{whole}} \times 100$.

Step 1 – find the May total: $7000 + 8000 + 3000 + 2000 = 20000$.

Step 2 – divide the food amount and convert: $\dfrac{7000}{20000} \times 100 = 35\%$.

Why the other options are wrong:

- Options A, B, C: 30%, 40% and 25% do not equal $7000/20000 \times 100$; only 35% does.

Final Answer: Food share $= 35\% \Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q2

Q3.

Solution

Concept – ratio: Write the two quantities and reduce to lowest terms.

Step 1 – write the ratio: April Rent $= 8000$, April Travel $= 2000$, so the ratio is $8000 : 2000$.

Step 2 – reduce: Divide both by 2000: $8000 : 2000 = 4 : 1$.

Why the other options are wrong:

- Options A, B (2:1, 3:1): do not match $8000 : 2000$.
- Option D (1:4): reverses the order.

Final Answer: Ratio $= 4 : 1 \Rightarrow$ C

Answer: (C) Go Back to Q3

Q4.

Solution

Concept – average: Average $= \dfrac{\text{total}}{\text{number of items}}$.

Step 1 – add the two rents: April Rent $= 8000$, May Rent $= 8000$, so the total $= 8000 + 8000 = 16000$.

Step 2 – divide by the number of months: $\dfrac{16000}{2} = 8000$.

Why the other options are wrong:

- Options B, C, D: Rs 7000, Rs 8500 and Rs 6000 do not equal $16000 \div 2$; only Rs 8000 does.

Final Answer: Average rent $=$ Rs 8000 $\Rightarrow$ A

Answer: (A) Go Back to Q4

Q5.

Solution

Concept – reading a bar chart and adding values: Read the height of each bar and add them.

Step 1 – list the yearly plantings: 2019 $= 300$, 2020 $= 500$, 2021 $= 400$, 2022 $= 600$, 2023 $= 700$.

Step 2 – add them: $300 + 500 = 800$. $800 + 400 = 1200$. $1200 + 600 = 1800$. $1800 + 700 = 2500$.

Why the other options are wrong:

- Options A, B, D: 2300, 2400 and 2600 each drop or mis-add one bar; the correct sum is 2500.

Final Answer: Total $= 2500$ trees $\Rightarrow$ C

Answer: (C) Go Back to Q5

Q6.

Solution

Concept – average: Average $= \dfrac{\text{total}}{\text{number of items}}$.

Step 1 – total plantings: From Q5, the total over the five years $= 2500$ trees.

Step 2 – divide by the number of years: $\dfrac{2500}{5} = 500$.

Why the other options are wrong:

- Options A, C, D: 450, 550 and 480 do not equal $2500 \div 5$; only 500 does.

Final Answer: Average $= 500$ trees per year $\Rightarrow$ B

Answer: (B) Go Back to Q6

Q7.

Solution

Concept – percentage increase: Percent increase $= \dfrac{\text{increase}}{\text{original}} \times 100$, with 2021 as the original.

Step 1 – find the increase: $2022 = 600$, $2021 = 400$, so the increase $= 600 - 400 = 200$.

Step 2 – divide by the 2021 value and convert to percent: $\dfrac{200}{400} \times 100 = 50\%$.

Why the other options are wrong:

- Option A (40%): mis-reads the base.
- Option B (33%): divides by 600 instead of the original 400.
- Option D (60%): does not match $200/400 \times 100$.

Final Answer: Increase $= 50\% \Rightarrow \boxed{C}$

Answer: (C) Go Back to Q7

Q8.

Solution

Concept – ratio: Write the two quantities and reduce to lowest terms.

Step 1 – write the ratio: $2019 = 300$, $2023 = 700$, so the ratio is $300 : 700$.

Step 2 – reduce: Divide both by 100: $300 : 700 = 3 : 7$.

Why the other options are wrong:

- Option A (7:3): reverses the order.
- Options B, C: 1:2 and 2:3 do not match $300 : 700$.

Final Answer: Ratio $= 3 : 7 \Rightarrow \boxed{D}$

Answer: (D) Go Back to Q8

Q9.

Solution

Concept – average speed: Speed $= \dfrac{\text{distance}}{\text{time}}$.

Step 1 – put in the values: Distance $= 150$ km, time $= 2.5$ hours.

Step 2 – divide: $\dfrac{150}{2.5} = 60$ km/h.

Why the other options are wrong:

- Options B, C, D: 50, 75 and 45 km/h do not equal $150 \div 2.5$; the speed is 60 km/h.

Final Answer: Speed $= 60$ km/h $\Rightarrow \boxed{A}$

Answer: (A) Go Back to Q9

Q10.

Solution

Concept – simple interest: $\text{SI} = \dfrac{P \times R \times T}{100}$.

Step 1 – put in the values: $P = 6000$, $R = 10$, $T = 2$.

Step 2 – compute: $\dfrac{6000 \times 10 \times 2}{100} = \dfrac{120000}{100} = 1200$.

Why the other options are wrong:

- Option A (Rs 600): that is the interest for one year, not two.
- Options C, D: Rs 1000 and Rs 1500 do not match the formula.

Final Answer: Interest = Rs 1200 $\Rightarrow$ B

Answer: (B) Go Back to Q10

Q11.

Solution

Concept – ratio: Write the two quantities and reduce to lowest terms.

Step 1 – write the ratio: Fuel cost $= 200$, fare earnings $= 800$, so the ratio is $200 : 800$.

Step 2 – reduce: Divide both by 200: $200 : 800 = 1 : 4$.

Why the other options are wrong:

- Option A (4:1): reverses the order.
- Options C, D: 1:3 and 2:5 do not match $200 : 800$.

Final Answer: Fuel : Earnings $= 1 : 4 \Rightarrow$ B

Answer: (B) Go Back to Q11

Q12.

Solution

Concept – percentage of a total: $\text{Percent} = \dfrac{\text{part}}{\text{whole}} \times 100$.

Step 1 – identify part and whole: Airport trips $= 50$, total trips $= 250$.

Step 2 – compute: $\dfrac{50}{250} \times 100 = 20\%$.

Why the other options are wrong:

- Options A, B, C: 25%, 15% and 10% do not equal $50/250 \times 100$; the airport share is 20%.

Final Answer: Airport trips $= 20\% \Rightarrow$ D

Answer: (D) Go Back to Q12

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	D	3	C	4	A	5	C
6	B	7	C	8	D	9	A	10	B
11	B	12	D						