

# CLAT Quantitative Techniques

## Sample Paper – 6

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 number of male and female employees in four departments of a company. Study it and answer the questions that follow.*

Department	Male	Female	Total
Sales	45	15	60
Marketing	30	20	50
IT	50	30	80
HR	25	25	50

- Q1.** What is the total number of employees in the four departments taken together?



- (A) 240
- (B) 230
- (C) 250
- (D) 220

**Q2.** What is the ratio of the total number of male employees to the total number of female employees?

- (A) 3 : 5
- (B) 2 : 1
- (C) 1 : 1
- (D) 5 : 3

**Q3.** What percent of the total employees are female?

- (A) 60%
- (B) 25%
- (C) 37.5%
- (D) 40%

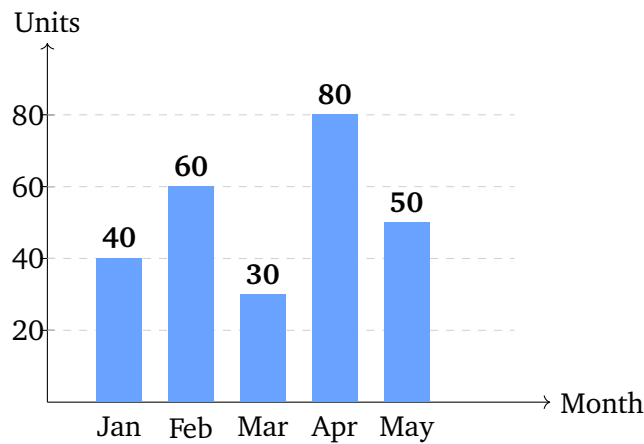
**Q4.** What is the average number of employees per department?

- (A) 55
- (B) 60
- (C) 50
- (D) 65

### Data Set II

*Directions (Q5–Q8): The bar chart below shows the number of units of electricity consumed by a household over five months. Study it and answer the questions that follow.*





- Q5.** What is the total number of units of electricity consumed over the five months?
- (A) 240  
(B) 250  
(C) 280  
(D) 260
- Q6.** The units consumed in April are what percent more than the units consumed in January?
- (A) 50%  
(B) 60%  
(C) 100%  
(D) 80%
- Q7.** What is the ratio of the units consumed in March to the units consumed in May?
- (A) 5 : 3  
(B) 3 : 5  
(C) 1 : 2  
(D) 2 : 3
- Q8.** What is the average number of units consumed per month over the five months?



- (A) 52
- (B) 50
- (C) 55
- (D) 48

### Data Set III

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

A young worker named Arjun cycles to work and also runs a small tools business. On his morning ride he covered **150 km in 3 hours**. He once bought a spare cycle for **Rs 5000** and later sold it for **Rs 6000**. In his shop, out of a batch of **250 tools**, **50** were found to be defective. He also deposited **Rs 6000** in a bank that pays **simple interest at 5% per annum**.

- Q9.** What was Arjun's average speed on the morning ride?
- (A) 50 km/h
  - (B) 45 km/h
  - (C) 60 km/h
  - (D) 40 km/h
- Q10.** What is Arjun's profit percent on the sale of the spare cycle?
- (A) 10%
  - (B) 15%
  - (C) 20%
  - (D) 25%
- Q11.** What percent of the batch of tools was found to be defective?
- (A) 25%
  - (B) 20%
  - (C) 15%
  - (D) 10%



**Q12.** How much simple interest will he earn on his deposit at the end of one year?

(A) Rs 600

(B) Rs 250

(C) Rs 360

(D) Rs 300



**Detailed Solutions**

Q1.

**Solution**

**Concept – reading a table total:** Add the “Total” column, or add all male and all female employees.

**Step 1 – add the department totals:**  $60 + 50 + 80 + 50$ .

**Step 2 – compute:**  $60 + 50 = 110$ ;  $110 + 80 = 190$ ;  $190 + 50 = 240$ .

**Why the other options are wrong:**

- Options B, C, D: 230, 250 and 220 each miss part of a department; the four totals sum to 240.

**Final Answer:** Total = 240 employees  $\Rightarrow$  **A**

**Answer: (A)** [Go Back to Q1](#)

Q2.

**Solution**

**Concept – ratio of two totals:** Add all male, add all female, then reduce.

**Step 1 – total male and female:** Male =  $45 + 30 + 50 + 25 = 150$ . Female =  $15 + 20 + 30 + 25 = 90$ .

**Step 2 – form and reduce the ratio:**  $150 : 90$ ; divide both by 30:  $150 : 90 = 5 : 3$ .

**Why the other options are wrong:**

- Option A (3:5): reverses the order.
- Option B (2:1) and Option C (1:1): would need different totals; here they are 150 and 90.

**Final Answer:** Male : Female =  $5 : 3 \Rightarrow$  **D**

**Answer: (D)** [Go Back to Q2](#)



Q3.

**Solution**

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

**Step 1 – identify part and whole:** Female = 90, total employees = 240.

**Step 2 – compute:**  $\frac{90}{240} \times 100 = 37.5\%.$

**Why the other options are wrong:**

- Option A (60%): that is the male share, not the female share.
- Options B, D: 25% and 40% do not equal  $90/240 \times 100$ ; the female share is 37.5%.

**Final Answer:** Female = 37.5%  $\Rightarrow$

[Go Back to Q3](#)

Q4.

**Solution**

**Concept – average:**  $\text{Average per department} = \frac{\text{total employees}}{\text{number of departments}}.$

**Step 1 – use the total:** Total = 240 employees (from Q1) across 4 departments.

**Step 2 – divide:**  $\frac{240}{4} = 60.$

**Why the other options are wrong:**

- Options A, C, D: 55, 50 and 65 do not equal  $240 \div 4$ ; only 60 does.

**Final Answer:** Average = 60 employees per department  $\Rightarrow$

[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 monthly units:** Jan = 40, Feb = 60, Mar = 30, Apr = 80, May = 50.

**Step 2 – add them:**  $40 + 60 = 100.$   $100 + 30 = 130.$   $130 + 80 = 210.$   $210 + 50 = 260.$



**Why the other options are wrong:**

- Options A, B, C: 240, 250 and 280 each drop or mis-add one bar; the correct sum is 260.

**Final Answer:** Total = 260 units  $\Rightarrow$

**Answer: (D)** [Go Back to Q5](#)

**Q6.**

### Solution

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

**Step 1 – find the increase:** April = 80, January = 40, so the increase =  $80 - 40 = 40$ .

**Step 2 – divide by the January value and convert to percent:**  $\frac{40}{40} \times 100 = 100\%$ .

**Why the other options are wrong:**

- Options A, B (50%, 60%): use a wrong base or a wrong increase.
- Option D (80%): divides by April (80) instead of the original January (40) after mis-scaling.

**Final Answer:** Increase = 100%  $\Rightarrow$

**Answer: (C)** [Go Back to Q6](#)

**Q7.**

### Solution

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

**Step 1 – write the ratio:** Mar = 30, May = 50, so the ratio is 30 : 50.

**Step 2 – reduce:** Divide both by 10: 30 : 50 = 3 : 5.

**Why the other options are wrong:**

- Option A (5:3): reverses the order.
- Options C, D: 1:2 and 2:3 do not match 30 : 50.

**Final Answer:** Ratio = 3 : 5  $\Rightarrow$



**Answer: (B)** [Go Back to Q7](#)

Q8.

### Solution

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

**Step 1 – total units:** From Q5, the total over the five months = 260 units.

**Step 2 – divide by the number of months:**  $\text{Average} = \frac{260}{5} = 52$  units.

**Why the other options are wrong:**

- Options B, C, D: 50, 55 and 48 do not equal  $260 \div 5$ ; only 52 does.

**Final Answer:** Average = 52 units per month  $\Rightarrow$  **A**

**Answer: (A)** [Go Back to Q8](#)

Q9.

### Solution

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

**Step 1 – put in the values:** Distance = 150 km, time = 3 hours.

**Step 2 – divide:**  $\frac{150}{3} = 50$  km/h.

**Why the other options are wrong:**

- Options B, C, D: 45, 60 and 40 km/h do not equal  $150 \div 3$ ; the speed is 50 km/h.

**Final Answer:** Speed = 50 km/h  $\Rightarrow$  **A**

**Answer: (A)** [Go Back to Q9](#)

Q10.

### Solution

**Concept – profit percent:**  $\text{Profit}\% = \frac{\text{selling price} - \text{cost price}}{\text{cost price}} \times 100$ .

**Step 1 – find the profit:** Profit = 6000 – 5000 = 1000.



**Step 2 – divide by cost and convert:**  $\frac{1000}{5000} \times 100 = 20\%$ .

**Why the other options are wrong:**

- Options A, B, D: 10%, 15% and 25% do not equal  $1000/5000 \times 100$ ; the profit is exactly 20%.

**Final Answer:** Profit = 20%  $\Rightarrow$

**Answer: (C)** [Go Back to Q10](#)

**Q11.**

### Solution

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

**Step 1 – identify part and whole:** Defective = 50, batch = 250.

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

**Why the other options are wrong:**

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

**Final Answer:** Defective = 20%  $\Rightarrow$

**Answer: (B)** [Go Back to Q11](#)

**Q12.**

### Solution

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

**Step 1 – put in the values:**  $P = 6000, R = 5, T = 1$ .

**Step 2 – compute:**  $\frac{6000 \times 5 \times 1}{100} = \frac{30000}{100} = 300$ .

**Why the other options are wrong:**

- Option A (Rs 600): that is the interest for two years, not one.
- Options B, C: Rs 250 and Rs 360 do not match the formula.

**Final Answer:** Interest = Rs 300  $\Rightarrow$



**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	B	5	D
6	C	7	B	8	A	9	A	10	C
11	B	12	D						

