

- C is between A and D.
  - F is at one end.
- Arrange them and Justify your answer. (8)

(b) Pointing to a man, Rina said, "He is the son of my grandfather's only son".

- (i) How is the man related to Rina?
- (ii) Draw the family tree. (7)

7. (a) (i) In how many ways can the letters of the word "LEVEL" be arranged?  
 (ii) Find the probability of getting exactly one head when two coins are tossed. (8)

(b) A man walks 10 km north, then 6 km east, then 10 km south.

- (i) How far is he from starting point?
- (ii) In which direction? (7)

May-2026

**B.Sc. (AM) - II SEMESTER**

**Quantitative Reasoning (AEC-108-V)**

Time : 3 Hours]

[Max. Marks : 75

*Instructions :*

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

**PART-A**

1. (a) A man can complete a work in 12 days. How many days will he take to complete 25% of the work? (1.5)
- (b) A shopkeeper gives a discount of 10% on an article marked at ₹800. Find the selling price. (1.5)
- (c) Find the compound interest on ₹1000 at 10% per annum for 2 years. (1.5)
- (d) In a class, 60% are boys. If total students are 50, how many girls are there? (1.5)
- (e) A sum of ₹5000 is invested in a partnership in the ratio 2:3. Find the share of each partner. (1.5)
- (f) Identify the conclusion : "All-engineers are graduates. Ram is an engineer." (1.5)

- (g) Define the term Premise in critical reasoning. (1.5)
- (h) If A is the brother of B and B is the sister of C, what is A to C? (1.5)
- (i) In a row of students, Ravi is 5th from the left and 6th from the right. How many students are there in total? (1.5)
- (j) In a certain code, CAT is written as DBU. How is DOG written in that code? (1.5)

### PART-B

2. (a) A can complete a piece of work in 12 days and B in 18 days. They work together for 4 days.
- (i) How much work is completed?
- (ii) How many more days are required to finish the remaining work? (8)
- (b) A trader marks an article 40% above cost price. He gives a discount of 10% on the marked price.
- (i) Find the profit percentage.
- (ii) If cost price is ₹ 500, find the selling price. (7)
3. (a) A train 180 m long is running at 72 km/h. (8)
- (i) How long will it take to cross a platform 120 m long?
- (ii) How long will it take to cross a man standing on the platform?
- (b) Find the difference between compound interest and simple interest on ₹ 10,000 at 8% per annum for 2 years. (7)

4. (a) The average of 30 students is 40 marks. If the teacher's marks are included, the average becomes 41.
- (i) Find the teacher's marks.
- (ii) If 5 students leave and their average was 35, find the new average. (8)
- (b) In a company, total employees are 600. (7)
- Marketing – 25%
- HR – 15%
- Sales – 30%
- Production – 20%
- Others – 10%
- (i) Find number of employees in each department.
- (ii) Find difference between Sales and HR employees.
5. (a) **Statement :** "The company should reduce prices to increase sales."
- (i) Identify the assumption.
- (ii) Write two possible inferences. (8)
- (b) Arrange the following logically :
- A. He prepared well for the exam.
- B. Ravi wanted to secure good marks.
- C. He studied day and night.
- D. He finally topped the class.
- Also explain the logic of arrangement. (7)
6. (a) Six persons A, B, C, D, E and F are sitting in a row.
- A is to the left of B.