

# Mock Test 10

## Logical Reasoning & Data Interpretation LRDI Set-10

---

Questions 1 to 5 are based on the information below:

### Set 1 – Scientists and Their Specializations

There are 5 scientists: Jane, Stephen, Frances, Andrea, and Venki. Each of them is from a different university: Harvard, MIT, Stanford, Oxford, and King's College. They specialize in different domains: AI, Cloud Networks, DNA Structure, Radioactivity, and Space Technology. Each scientist also has a distinct number of patents: 6, 9, 12, 15, and 18.

The following information is known:

- The scientist who has 12 patents specializes in Space Technology.
- The scientist who has 9 patents specializes in Radioactivity.
- Jane specializes in AI.
- Andrea is from MIT.
- Frances has 15 patents.
- The scientist from Harvard has 18 patents.
- The scientist from Oxford specializes in Cloud Networks.
- The scientist who specializes in DNA Structure is from Stanford.
- The total number of patents of Andrea and the scientist from Harvard is 33.
- The number of patents of the scientists from Harvard, King's College, and Cambridge are in an arithmetic progression.

#### Question 1.

What is the specialization of the scientist having 9 patents?

- A. AI
  - B. Radioactivity
  - C. Cloud
  - D. Space
- 

#### Question 2.

Which of the following can be a specialization of the scientist having 12 patents?

- A. Radioactivity, Molecular Science
  - B. Molecular Science, Space Technology
  - C. Space Technology, AI
  - D. Cloud Networks, DNA Structure
- 

#### Question 3.

What is the name of the scientist who has a specialization in AI?

- A. Stephen
- B. Venki

# Mock Test 10

C. Jane  
D. Andrea

## Question 4.

What is the sum of the total number of patents of Andrea, a scientist from Harvard, and a scientist specializing in cloud networking?

(Enter 1 if the answer cannot be determined.)

## Question 5.

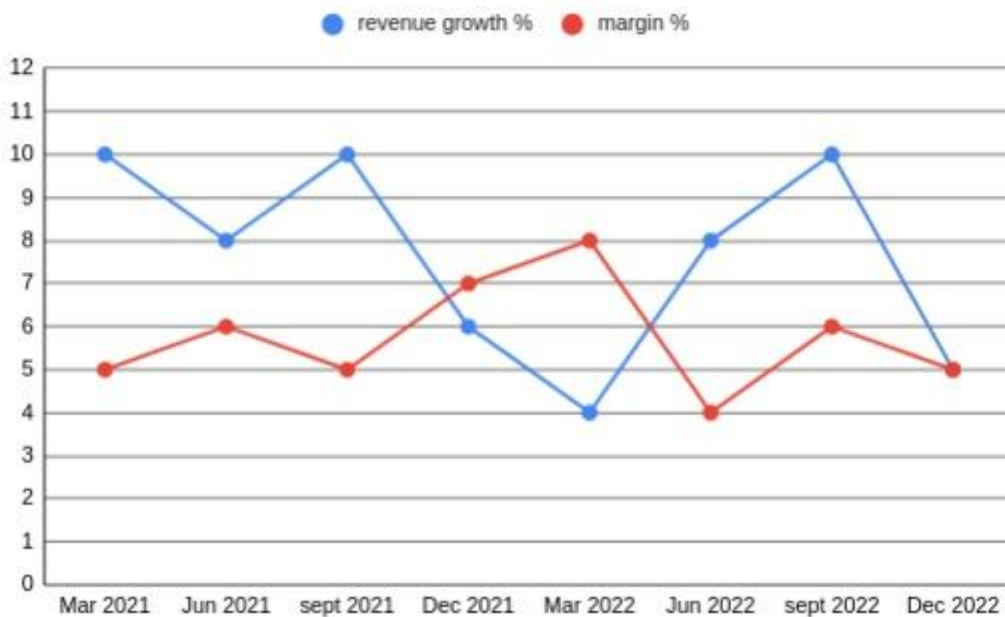
Which of the following is definitely true?

- A. The sum of Venki and Frances's patents is equal to Jane's.
- B. The number of patents of scientists from Harvard, King's College, and Cambridge forms an A.P.
- C. Stephen has more patents than Venki, but Venki has fewer patents than Frances.
- D. Scientist having specialization in AI has the highest number of patents, and the scientist having specialization in space technology has the lowest number of patents.

Questions 6 to 10 are based on the graphs below:

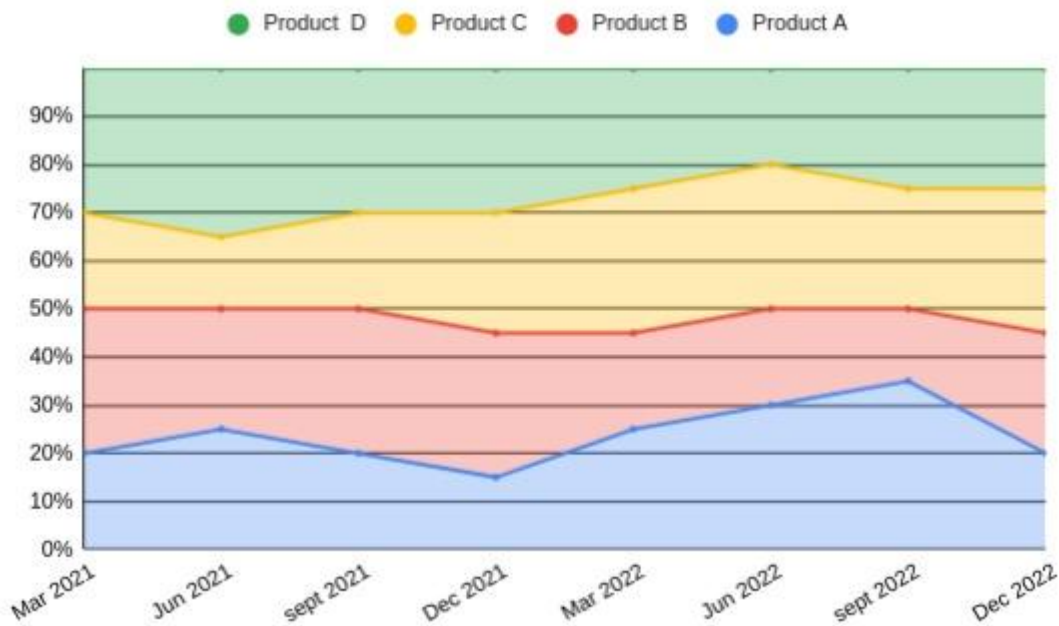
### Set 2 – PQRS Pvt. Ltd. Financial Data

PQRS Pvt. Ltd. generates revenue from the sale of four products: A, B, C, and D.



# Mock Test 10

**Graph 1:** Shows the % growth in revenue and profit margin % (Profit / Revenue) across various quarters from March 2021 to December 2022.



**Graph 2:** Shows the % contribution of each product (A, B, C, D) to the total revenue in each quarter.

(Note: Graphs are assumed as given in the test booklet)

## Question 6.

If the revenue obtained from the sale of Product A in the quarter ending September 2021 is ₹20 crore, find the difference in revenue obtained from Product B and C in the quarter ending March 2022.

- A. ₹11.024 crore
- B. ₹9.084 crore
- C. ₹13.056 crore
- D. ₹15.625 crore

## Question 7.

In the quarter ending in March 2021, if the net revenue generated was ₹92.59 crore, find the difference of total profit made in the next two quarters.

- A. ₹50 lakh
- B. ₹30 lakh
- C. ₹60 lakh
- D. ₹45 lakh

## Question 8.

If a profit of ₹16 crore was made in the quarter ending in March 2022, find the profit made in the quarter ending in June 2022 from the sale of Product D.

Assume profit margins of all four products are the same in June 2022.

- A. ₹1.526 crore
- B. ₹1.814 crore

# Mock Test 10

- C. ₹1.624 crore
  - D. ₹1.728 crore
- 

## Question 9.

In the quarter ending September 2022, the net profit from Products A and B was equal, and similarly for C and D. If the profit from Product C was twice that of Product A, find the profit margin % from the sale of Product D.

- A. 8.4%
  - B. 8%
  - C. 8.7%
  - D. 7.5%
- 

## Question 10.

If the revenue from Product C in the quarter ending December 2022 was ₹31.5 crore, find the difference in revenue between Product B and C in September 2022.

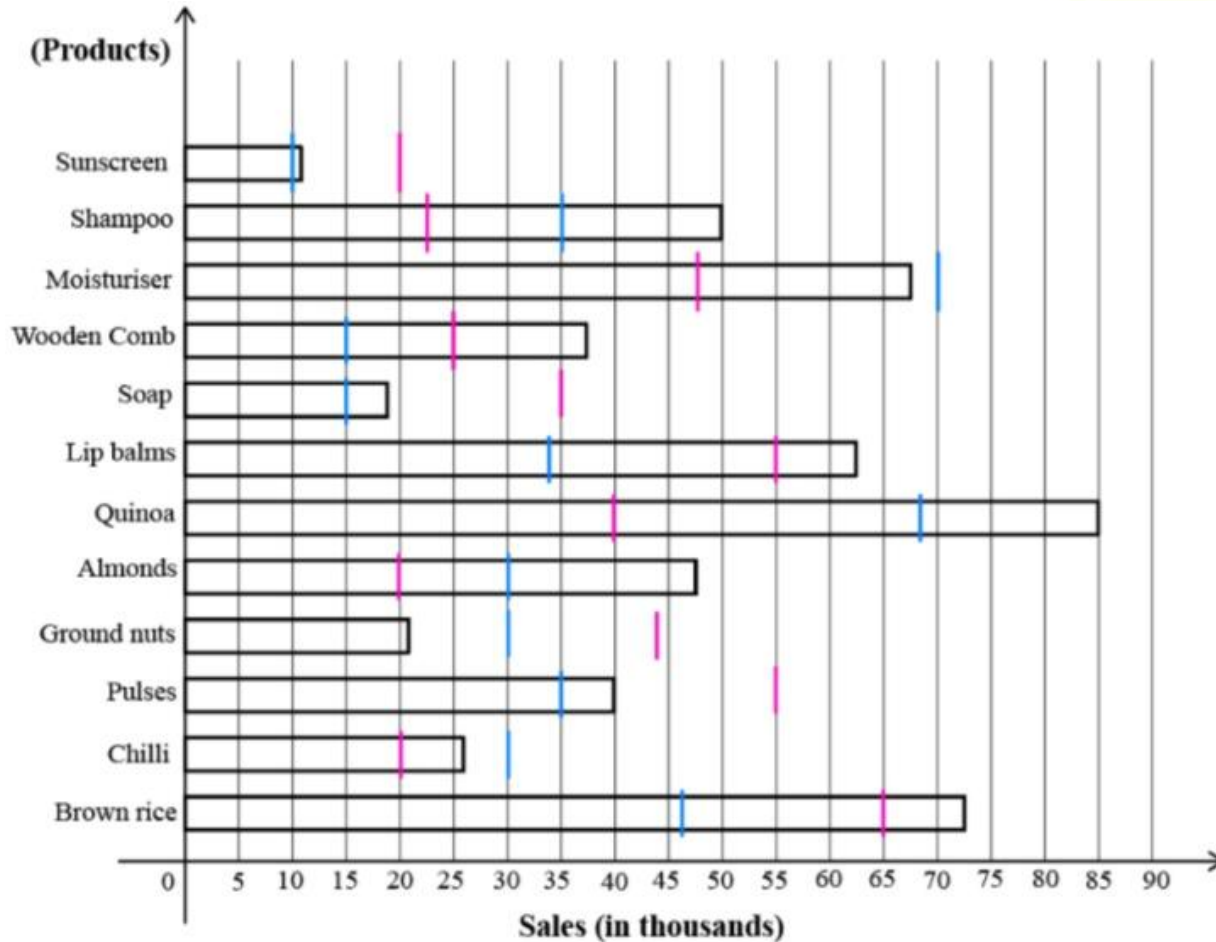
- A. ₹12 crore
  - B. ₹7 crore
  - C. ₹10 crore
  - D. ₹11 crore
- 

Questions 11 to 14 are based on the information below:

### Set 3 – Sales Report of Eco for You

Aravind, an IIMK graduate, started a company "Eco for You" selling eco-friendly vegan products. The company sells two categories of products: **Body Care** (first six products) and **Groceries** (remaining products). The horizontal bars in the diagram represent sales in **May 2023**. The vertical lines in **blue** and **pink** represent sales in **April** and **March** respectively.

# Mock Test 10



## Question 11.

The Incremental Index is calculated for products whose sales increased every month. It is defined as the ratio of the difference between sales in March and April to the sales in March. Which of the following is the correct increasing order of Incremental Index values for such products?

- A. Chilli, Quinoa, Almonds
- B. Chilli, Almonds, Quinoa
- C. Quinoa, Shampoo, Almonds
- D. Almonds, Shampoo, Quinoa

## Question 12.

A graph represents the months of March, April, and May (in order on the X-axis) and sales on the Y-axis for each product. How many products show an inverted V shape?

## Question 13.

Approximately, grocery sales are how much percentage greater than body care products in March?

- A. 14.29%
- B. 11.96%
- C. 18.73%
- D. 21.82%

# Mock Test 10

## Question 14.

Which of the following has the minimum absolute value?

- A. % change in shampoo sales from April to May
  - B. % change in wooden comb sales from March to April
  - C. % change in groundnut sales from March to May
  - D. % change in soap sales from March to May
- 

## Set 4 – Family Logic Puzzle

There are five families, each consisting of a husband, a wife, and either a son or a daughter.

The husbands are: **Rakesh, Girish, Manikant, Prakash, and Mukesh**

The wives are: **Radha, Sushma, Sonali, Madhuri, and Jaya**

The kids are: **Golu, Sonu, Miku, Rachel, and Rony**

The following information is known:

1. In exactly **four families**, the names of **exactly two members** start with the same alphabet.
  2. **Manikant** and **Jaya** are not married to each other, and Manikant has a **daughter**.
  3. Out of the five kids, **only two are boys**. **Jaya** is the mother of **Miku**.
  4. **Sushma** is not married to **Girish**, and **Madhuri** is not married to **Manikant**.
  5. In **Sushma's** family and **Sonali's** family, **none of the other family members' names start with 'S'**.
  6. **Sonali's daughter is Golu**. **Sonu is a boy**.
  7. **Rony and Rachel are of different genders**.
- 

## Question 15.

Who is the father of Miku?

- A. Prakash
  - B. Girish
  - C. Mukesh
  - D. Cannot be determined
- 

## Question 16.

Who is the wife of Rakesh?

- A. Sonali
  - B. Sushma
  - C. Radha
  - D. Jaya
- 

## Question 17.

Who among the following is a boy?

- A. Rony
- B. Rachel

# Mock Test 10

- C. Golu
  - D. Cannot be determined
- 

## Question 18.

Which of the following pairs represents a husband and wife?

- A. Prakash – Radha
  - B. Rakesh – Jaya
  - C. Girish – Sonali
  - D. Mukesh – Madhuri
- 

Questions 19 to 22 are based on the information below:

---

## Set 5 – Chessboard and Piece Attack Logic

Consider an 8x8 chessboard where the following rules apply:

- **Queen:** Can move any number of squares vertically, horizontally, or diagonally (in all 8 directions), provided there is no piece in between. A Queen can **attack** any piece that lies in any of those reachable squares.
- **Knight:** Moves in an “L” shape — two squares in one direction (vertical or horizontal), then one square perpendicular to that. Knights **can jump over** other pieces and **can attack** any piece that lies in a reachable square by such a move.

The columns are labelled **a to h** (left to right) and the rows are numbered **1 to 8** (bottom to top).  
For example, **position d4** means column ‘d’ and row 4.

---

## Question 19.

Suppose a Queen and a Knight are placed on a chessboard. If the Queen is placed at **e4**, in how many squares can the Knight be placed such that both pieces are **safe from attacking each other**?

- A. 33
  - B. 35
  - C. 29
  - D. 28
- 

## Question 20.

A Queen is placed at **b7**. What is the **maximum number of Knights** that can be placed on the chessboard such that:

- No Knight attacks another Knight
- No Knight is attacked by the Queen

- A. 12
  - B. 20
  - C. 16
  - D. 24
-

# Mock Test 10

## Question 21.

Three Queens are placed at **b5**, **e8**, and **f5**. What is the **maximum number of Knights** that can be placed on the board such that **each Knight can attack at least one Queen**?

- A. 10
  - B. 13
  - C. 16
  - D. 15
- 

## Question 22.

If Knights are placed at positions **a3**, **b7**, **c2**, **e2**, **g5**, and **h7**, then **which Queen position** results in the **maximum number of Knights being under attack**?

- A. e4
  - B. e3
  - C. e7
  - D. d3
-



# Mock Test 10

## Answer Key

1. (b)
2. (b)
3. (c)
4. 27
5. (d)
6. (a)
7. (a)
8. (d)
9. (b)
10. (c)
11. (d)
12. 2
13. (c)
14. (b)
15. (d)
16. (b)
17. (d)
18. (c)
19. (d)
20. (d)
21. (d)
22. (c)