

Prime CAT 13 2022 DILR

Directions for questions 25 to 28: Answer the questions on the basis of the information given below.

The healthy foods start-up that started in 2019 is to present its business model in Shark Tank India Season 2. This start-up has opened online outlets in 3 states: Delhi, Maharashtra and Karnataka. The products are categorized under three main domains - Frozen Food (FRO), Snacks (SK) and Ready2Eat (R2E). An accountant has been asked to prepare a summary of sales amounts for 2019, 2020 and 2021 for presentation purposes. He has collected partial information and prepared the following table.

Product Domain	Sales Amount (In Rs. Lakh)								
	Delhi			Maharashtra			Karnataka		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Frozen Foods (FRO)					108				96
Snacks (SK)	102	90	98	78	82	100	70	80	64
Ready2Eat (R2E)		100		80			54		72

- (i) The sales amounts in the R2E domain were the same for Delhi and Maharashtra in 2021.
- (ii) The sales amounts in the R2E domain were the same for Maharashtra and Karnataka in 2020.
- The sales amounts in the R2E domain from 2019 to 2021 for Delhi and Maharashtra each followed the Arithmetic Progression.
- (iii) The sum of the sales amounts of SK domain in three states increased by the same amount as the sum of the sales amounts of R2E domain from 2020 to 2021.
- (iv) The sales amounts in the FRO domain of Delhi and Maharashtra increased by the same amount in 2020 from 2019 as total sales amounts of Delhi in SK domain in 2021 from 2020.
- (v) The total sales amounts of the three states in FRO domain increased by Rs. 70 lakhs from 2019 to 2020 and further decreased by Rs. 167 lakhs from 2020 to 2021.
- (vi) The sales amounts in the FRO domain was the same for Delhi and Maharashtra in 2021.
- This sales amount matched the sales amount in the FRO domain for Karnataka in 2019.
- (vii) In one of the years, in FRO domain, Maharashtra had the sales amount of Rs.90 lakhs.

Q 1. What was the sales amount (in Rs. lakhs) of Delhi in FRO domain in 2020?

Q 2. In which states were the total sales amounts the highest in 2020 and 2021, respectively, across all domains?

- 1) Delhi and Karnataka
- 2) Delhi and Delhi
- 3) Maharashtra and Delhi
- 4) Delhi and Maharashtra

Q 3. What was the increase in total sales amount (in Rs. lakhs) in the R2E domain from 2020 to 2021, across all states?

Q 4. Among all the 9 domains (i.e., the 3 domains in each of the 3 cities), what was the maximum percentage increase (to the nearest integer) in sales amount from 2019 to 2021?

- 1) 28
- 2) 44
- 3) 48
- 4) 33

Directions for questions 29 to 32: Answer the questions on the basis of the information given below.

In an 8×8 chessboard a queen placed anywhere can attack another piece if the piece is present in the same row, or in the same column or in any diagonal position in any possible 4 directions, provided there is no other piece in between in the path from the queen to that piece. Similarly, a bishop placed anywhere can attack another piece in any diagonal position in the possible 4 directions and a rook placed anywhere can attack another piece placed in the same row or column, provided there is no piece placed in its path. The columns are labeled A to H (from left to right) and the rows are numbered 1 to 8 (from top to bottom). The position of a piece is given by the combination of column and row labels. For example, position B3 means that the piece is in the Bth column and 3rd row.

Q 5. If the queen is placed at B5, a rook at A8 and a bishop is placed at F4, then in how many positions on the chess board can the opponent's piece be placed such that it is safe from the attack from these three?

- 1) 29
- 2) 25
- 3) 22
- 4) 21

Q 6. If the queen is placed at G4, a bishop is placed at B6 and a rook at D2, then the opponent's pawn is definitely unsafe in which of the following positions?

- 1) F8
- 2) H5
- 3) E7
- 4) B3

Q 7. If the queen, rook and bishop are placed at adjacent positions in the same row on the board, then what is the maximum percentage (approximately) of the board that can be covered?

- 1) 52%
- 2) 61%
- 3) 66%
- 4) 64%

Q 8. If the queen, bishop and rook are placed as far away from each other as possible and make a right triangle, then in which of the following positions are the opponent's pieces safe?

- 1) F3, B6, H1
 - 2) G6, C2, F4
 - 3) D5, E3, A7
 - 4) H8, D7, A3
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Directions for questions 33 to 36: Answer the questions on the basis of the information given below.

Five passengers — Jatin, Kamal, Lalit, Mohit and Niraj — are traveling by Sky Air flight from Chennai to Mumbai. Each one has opted for at least one of the three available add-ons - in-flight food, window seat and extra leg-space. None of the passengers has any add-on that is not one of these three.

It is also known that:

- (i) Jatin has opted for a window seat and extra leg-space.
- (ii) Jatin and Kamal have no add-ons in common.
- (iii) Jatin and Lalit have at least one add-on in common.
- (iv) Lalit has opted for a greater number of add-ons than Kamal.
- (v) Lalit and Niraj have no add-ons in common.
- (vi) Mohit has opted for more add-ons than Jatin.

Q 9. If Lalit has a combination of add-ons different from any of the other passengers, then which one of the following statements must be true?

- 1) Lalit has opted for in-flight food.
 - 2) Lalit has opted for extra leg-space.
 - 3) Kamal and Niraj have opted for exactly the same add-ons.
 - 4) Mohit and Niraj have opted for exactly the same add-ons.
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Q 10. The passengers in which one of the following pairs must have exactly one add-on in common?

- 1) Jatin and Lalit
 - 2) Jatin and Niraj
 - 3) Kamal and Lalit
 - 4) Mohit and Niraj
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Q 11. If another passenger, Rohit has opted for exactly two of the three add-ons, then he cannot have all of the add-ons of

- 1) Both Jatin and Kamal
 - 2) Both Lalit and Niraj
 - 3) Both (1) and (2)
 - 4) Both Kamal and Lalit
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Q 12. If the costs of in-flight food, window seat and extra leg-space are Rs.450, Rs.350 and Rs.250 respectively, then which of the following statements is **definitely** false?

- 1) Lalit pays Rs.100 less than the amount paid by Kamal and Niraj together.
- 2) The ratio of the amounts paid by Jatin and Lalit is 1 : 1.
- 3) Lalit pays double the amount that Niraj pays.

4) Jatin pays exactly double the amount paid by Niraj.

Directions for questions 37 to 40: Answer the questions on the basis of the information given below.

Recently 5 released Bollywood movies have most of their gross collection from 5 states of India mainly from Bihar, Madhya Pradesh, Maharashtra, Rajasthan and Utter Pradesh. The five movies released in the month are Benshah, Khuj, Koochi, Roofan and Timi. The total collection of these movies in the five states is Rs. 500 crores. Table-1 given below shows the state wise percentage collection and Table-2 given below shows the percentage collection from different movies in the states.

Table - 1

State	Bihar	Madhya Pradesh	Maharashtra	Rajasthan	Utter Pradesh
Percentage collection	16%	20%	19%	25%	20%

Table - 2

State	Movie				
	Benshah	Khuj	Koochi	Roofan	Timi
Bihar	10%	25%	19%	21%	25%
Madhya Pradesh	30%	25%	12%	17%	16%
Maharashtra	10%	20%	16%	18%	36%
Rajasthan	18%	13%	30%	6%	33%
Utter Pradesh	25%	20%	12%	21%	22%

Q 13. The highest grossing movie from Rajasthan is how much (in Rs. crores) more than the highest grossing movie from Bihar?

Q 14. A movie is said to be Hit if its collection is more than Rs.100 crores from all the five states. How many movies will be definitely Hit of the given movies?

Q 15. If occupancy rate is 50% across all the states and number of Cinema hall seats in Bihar, Madhya Pradesh, Maharashtra, Rajasthan and Utter Pradesh are in ratio 1 : 1 : 2 : 3 : 3 respectively, then which state has the highest average ticket price? (Assume the movies collection is for same period and all movies were screened equally in a day.)

- 1) Madhya Pradesh
- 2) Maharashtra
- 3) Bihar
- 4) Uttar Pradesh

Q 16. If the ratio of ticket prices for the movies Benshah, Khuj, Koohi, Roofan and Timi are 3 : 2 : 5 : 3 : 6 respectively, then for which movie has the lowest number of movie goers?

- 1) Timi
 - 2) Roofan
 - 3) Koohi
 - 4) Benshah
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Directions for questions 41 to 44: Answer the questions on the basis of the information given below.

During a year, seven friends – Anuj, Babli, Charan, Deepak, Eric, Fatah and Geeta visited 7 different Indian cities – Agra, Bhopal, Chennai, Delhi, Jaipur, Kolkata and Mumbai in 7 different months – January, February, March, July, September, November and December. Following is the additional information given about their visits:

- (i) Anuj, who visited Bhopal, did not visit in March.
- (ii) Geeta, who visited in September, did not visit Chennai.
- (iii) Charan, who visited in December, visited either Jaipur or Mumbai.
- (iv) The person who visited Agra, visited in January while the person who visited in November, did not visit Chennai.
- (v) Babli, who visited Delhi, visited neither in March nor in February.
- (vi) Deepak, who visited in November, did not visit Kolkata.

Q 17. Who visited in the month of February?

- 1) Babli
 - 2) Anuj
 - 3) Fatah
 - 4) Either (1) or (2)
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Q 18. Which city did Deepak visit?

- 1) Chennai
 - 2) Mumbai
 - 3) Jaipur
 - 4) Either (2) or (3)
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Q 19. For how many persons is it possible to uniquely determine the city they visited?

Q 20. Which of the following persons visited Agra?

- 1) Fatah
- 2) Either Eric or Fatah

3) Eric

4) Geeta
