CAT DLIR Previous Year Questions 2023 (Slot 1)

Faculty members in a management school can belong to one of four departments – Finance and Accounting (F&A), Marketing and Strategy (M&S), Operations and Quants (O&Q) and Behaviour and Human Resources (B&H). The numbers of faculty members in the F&A, M&S, O&Q and B&H departments are 9, 7, 5 and 3 respectively. Prof. Pakrasi, Prof. Qureshi, Prof. Ramaswamy and Prof. Samuel are four members of the school's faculty who were candidates for the post of Dean of the school. Only one of the candidates was from O&Q. Every faculty member, including the four candidates, voted for the post. In each department, all the faculty members who were not candidates voted for the same candidate. The rules for the election are listed below.

1. There cannot be more than two candidates from a single department.
2. A candidate cannot vote for himself/herself.
3. Faculty members cannot vote for a candidate from their own department

After the election, it was observed that Prof. Pakrasi received 3 votes, Prof. Qureshi received 14 votes, Prof. Ramaswamy received 6 votes and Prof. Samuel received 1 vote. Prof. Pakrasi voted for Prof. Ramaswamy, Prof. Qureshi for Prof. Samuel, Prof. Ramaswamy for Prof. Qureshi and Prof. Samuel for Prof. Pakrasi.

Q. 1) Which two candidates can belong to the same department?

A. Prof. Pakrasi and Prof. Qureshi
B. Prof. Qureshi and Prof. Ramaswamy
C. Prof. Pakrasi and Prof. Samuel
D. Prof. Ramaswamy and Prof. Samuel

Answer: A

Q. 2) Which of the following can be the number of votes that Prof. Qureshi received from a single department?

A. 7
B. 8
C. 6
D. 9

Answer: D

Q. 3) If Prof. Samuel belongs to B&H, which of the following statements is/are true?

Statement A: Prof. Pakrasi belongs to M&S.

Statement B: Prof. Ramaswamy belongs to O&Q

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A. Only statement A
B. Both statements A and B
C. Neither statement A nor statement B
D. Only statement B

Answer: B

Q. 4) What best can be concluded about the candidate from O&Q?

A. It was either Prof. Ramaswamy or Prof. Samuel.
B. It was Prof. Samuel.
C. It was either Prof. Pakrasi or Prof. Qureshi.
D. It was Prof. Ramaswamy.

Answer: A

Q. 5) Which of the following statements is/are true?

Statement A: Non-candidates from M&S voted for Prof. Qureshi.
Statement B: Non-candidates from F&A voted for Prof. Qureshi.

A. Neither statement A nor statement B
B. Both statements A and B
C. Only statement A
D. Only statement B

Answer: D

The schematic diagram below shows 12 rectangular houses in a housing complex. House numbers are mentioned in the rectangles representing the houses. The houses are located in six columns - Column-A through Column-F, and two rows - Row-1 and Row- 2 . The houses are divided into two blocks - Block XX and Block YY. The diagram also shows two roads, one passing in front of the houses in Row-2 and another between the two blocks.
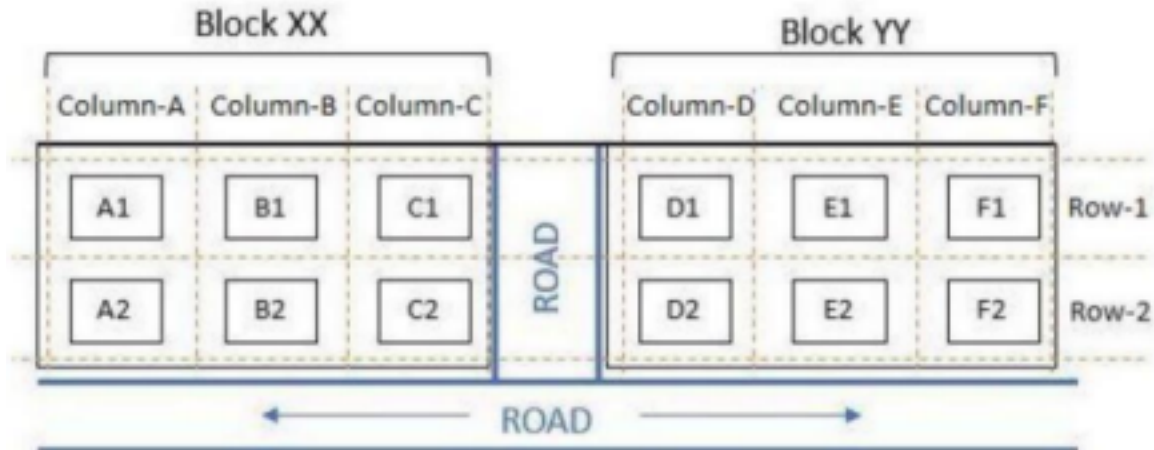
Some of the houses are occupied. The remaining ones are vacant and are the only ones available for sale.

The road adjacency value of a house is the number of its sides adjacent to a road. For example, the road adjacency values of C2, F2, and B1 are 2, 1, and 0, respectively. The neighbour count of a house is the number of sides of that house adjacent to occupied houses in the same block. For example, E1 and C1 can have the maximum possible neighbour counts of 3 and 2, respectively.

The base price of a vacant house is Rs. 10 lakhs if the house does not have a parking space, and Rs. 12 lakhs if it does. The quoted price (in lakhs of Rs.) of a vacant house is calculated as (base price) + 5 × (road adjacency value) + 3 × (neighbour count).
The following information is also known.

1. The maximum quoted price of a house in Block XX is Rs. 24 lakhs. The minimum quoted price of a house in block YY is Rs. 15 lakhs, and one such house is in ColumnE.
2. Row-1 has two occupied houses, one in each block.
3. Both houses in Column-E are vacant. Each of Column-D and Column-F has at least one occupied house.
4. There is only one house with parking space in Block YY.

Q. 6)How many houses are vacant in Block XX?

Answer: 3

Q. 7) Which of the following houses is definitely occupied?

A. D2
B. A1
C. B1
D. F2

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Answer: C

Q. 8) Which of the following options best describes the number of vacant houses in Row-2?

A. Either 2 or 3
B. Exactly 3
C. Exactly 2
D. Either 3 or 4

Answer: A

Q. 9)What is the maximum possible quoted price (in lakhs of Rs.) for a vacant house in Column-E?

Answer: 21

Q. 10) Which house in Block YY has parking space?

A. E2
B. F2
C. E1
D. F1

Answer: C

CAT DLIR Previous Year Questions 2022 (Slot 1)

Adhara, Bithi, Chhaya, Dhanavi, Esther, and Fathima are the interviewers in a process that awards funding for new initiatives. Every interviewer individually interviews each of the candidates individually and awards a token only if she recommends funding. A token has a face value of 2, 3, 5, 7, 11, or 13. Each interviewer awards tokens of a single face value only. Once all six interviews are over for a candidate, the candidate receives a funding that is Rs.1000 times the product of the face values of all the tokens. For example, if a candidate has tokens with face values 2, 5, and 7, then they get a funding of Rs.1000 × (2 × 5 × 7) = Rs.70,000. Pragnyaa, Qahira, Rasheeda, Smera, and Tantra were five candidates who received funding. The funds they received, in descending order, were Rs.390,000, Rs.210,000, Rs.165,000, Rs.77,000, and Rs.66,000. The following additional facts are known:

1. Fathima awarded tokens to everyone except Qahira, while Adhara awarded tokens to no one except Pragnyaa.
2. Rashida received the highest number of tokens that anyone received, but she did not receive one from Esther.
3. Bithi awarded a token to Smera but not to Qahira, while Dhanavi awarded a token to Qahira but not to Smera.

Q.1) How many tokens did Qahira receive?

Answer: 2

Q.2) Who among the following definitely received a token from Bithi but not from Dhanavi?

[1] Qahira
[2] Tantra
[3] Pragnyaa
[4] Rasheeda

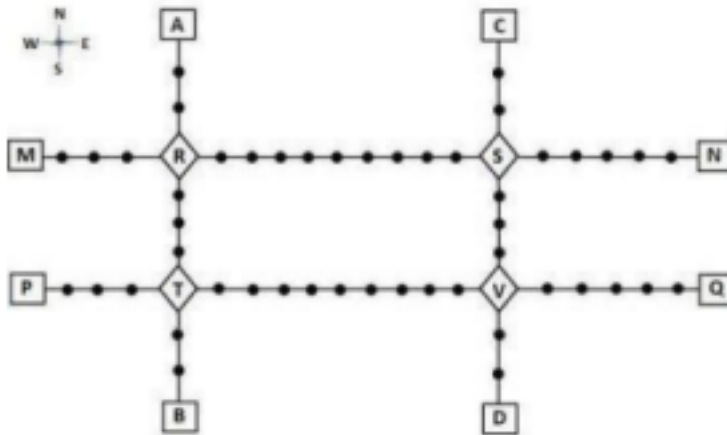Q.3) How many tokens did Chhaya award?

Answer: 3

Q.4) How many tokens did Smera receive?

Answer: 3

Q.5) Which of the following could be the amount of funding that Tantra received?

(a) Rs. 66,000
(b) Rs. 165,000

[1] Both (a) and (b)
[2] Neither (a) nor (b)

Answer: 2

Given above is the schematic map of the metro lines in a city with rectangles denoting terminal stations (e.g. A), diamonds denoting junction stations (e.g. R) and small filled-up circles denoting other stations. Each train runs either in east-west or north-south direction, but not both.

All trains stop for 2 minutes at each of the junction stations on the way and for 1 minute at each of the other stations. It takes 2 minutes to reach the next station for trains going in east-west direction and 3 minutes to reach the next station for trains going in north-south direction. From each terminal station, the first train starts at 6 am; the last trains leave the terminal stations at midnight. Otherwise, during the service hours, there are metro service every 15 minutes in the north-south lines and every 10 minutes in the east-west lines. A train must rest for at least 15 minutes after completing a trip at the terminal station, before it can undertake the next trip in the reverse direction. (All questions are related to this metro service only. Assume that if someone reaches a station exactly at the time a train is supposed to leave, (s)he can catch that train.)

Q.6) If Hari is ready to board a train at 8:05 am from station M, then when is the earliest that he can reach station N?
[1] 9:01 am
[2] 9:11 am
[3] 9:13 am
[4] 9:06 am

Answer: 2

Q.7) If Priya is ready to board a train at 10:25 am from station T, then when is the earliest that she can reach station S?

[1] 11:12 am
[2] 11:07 am
[3] 11:22 am
[4] 11:28 am

Answer: 1

Q.8) Haripriya is expected to reach station S late. What is the latest time by which she must be ready to board at station S if she must reach station B before 1 am via station R?

[1] 11:35 pm
[2] 11:43 pm
[3] 11:49 am
[4] 11:39 pm

Answer: 4

Q.9)What is the minimum number of trains that are required to provide the service on the AB line (considering both north and south directions)?

Answer: 8

Q.10)What is the minimum number of trains that are required to provide the service in this city?

Answer: 48

CAT DILR Previous Year Questions 2022 (Slot 1)

The management of a university hockey team was evaluating performance of four women players - Amla, Bimla, Harita and Sarita for their possible selection in the university team for next year. For this purpose, the management was looking at the number of goals scored by them in the past 8 matches, numbered 1 through 8. The four players together had scored a total of 12 goals in these matches. In the 8 matches, each of them had scored at least one goal. No two players had scored the same total number of goals. The following facts are known about the goals scored by these four players only. All the questions refer only to the goals scored by these four players.

1. Only one goal was scored in every even numbered match.
2. Harita scored more goals than Bimla.
3. The highest goal scorer scored goals in exactly 3 matches including Match 4 and Match 8.
4. Bimla scored a goal in Match 1 and one each in three other consecutive matches. 5. An equal number of goals were scored in Match 3 and Match 7, which was different from the number of goals scored in either Match 1 or Match 5.
6. The match in which the highest number of goals was scored was unique and it was not Match 5.

Q.11) How many goals were scored in Match 7?

[1] Cannot be determined
[2] 1
[3] 3
[4] 2

Answer: 2

Q.12)Which of the following is the correct sequence of goals scored in matches 1, 3, 5 and 7?

[1] 4, 1, 2, 1
[2] 5, 1, 0, 1
[3] 3, 2, 1, 2
[4] 3, 1, 2, 1

Answer: 1

Q.13)Which of the following statement(s) is/are true?

Statement-1: Amla and Sarita never scored goals in the same match.
Statement-2: Harita and Sarita never scored goals in the same match.

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[1] Both the statements
[2] Statement-1 only
[3] None of the statements
[4] Statement-2 only

Answer: 1

Q.14)Which of the following statement(s) is/are false?

Statement-1: In every match at least one player scored a goal.
Statement-2: No two players scored goals in the same number of matches.

[1] Statement-2 only
[2] Statement-1 only
[3] None of the statements
[4] Both the statements

Answer: 3

Q.15) If Harita scored goals in one more match as compared to Sarita, which of the following statement(s) is/are necessarily true?

Statement-1: Amla scored goals in consecutive matches.
Statement-2: Sarita scored goals in consecutive matches.

[1] None of the statements
[2] Statement-1 only
[3] Both the statements
[4] Statement-2 only

Answer: 20

CAT 2021 Slot 1 Paper DILR Section

A journal plans to publish 18 research papers, written by eight authors (A, B, C, D, E, F, G, and H) in four issues of the journal scheduled in January, April, July and October. Each of the research papers was written by exactly one of the eight authors. Five papers were scheduled in each of the first two issues, while four were scheduled in each of the last two issues. Every author wrote at least one paper and at most three papers. The total number of papers written by A, D, G and H was double the total number of papers written by the other four authors. Four of the authors were from India and two each were from Japan and China. Each author belonged to exactly one of the three areas — Manufacturing, Automation and Logistics. Four of the authors were from the Logistics area and two were from the Automation area. As per the journal policy, none of the authors could have more than one paper in any issue of the journal. The following facts are also known.

1. F, an Indian author from the Logistics area, wrote only one paper. It was scheduled in the October issue.
2. A was from the Automation area and did not have a paper scheduled in the October issue.
3. None of the Indian authors were from the Manufacturing area and none of the Japanese or Chinese authors were from the Automation area.
4. A and H were from different countries, but had their papers scheduled in exactly the same issues.
5. C and E, both Chinese authors from different areas, had the same number of papers scheduled. Further, E had papers scheduled in consecutive issues of the journal but C did not.
6. B, from the Logistics area, had a paper scheduled in the April issue of the journal.
7. B and G belonged to the same country. None of their papers were scheduled in the same issue of the journal.
8. D, a Japanese author from the Manufacturing area, did not have a paper scheduled in the July issue.
9. C and H belonged to different areas.

Q. 1) What is the correct sequence of number of papers written by B, C, E and G, respectively?

[1] 1, 2, 2, 3
[2] 1, 3, 3, 1
[3] 3, 1, 1, 3 [
4] 1, 2, 2, 1

Answer: 1

Q. 2) How many papers were written by Indian authors?

Answer: 8

Q. 3) Which of the following statement(s) MUST be true?

Statement A: Every issue had at least one paper by author(s) from each country. Statement B: Every issue had at most two papers by author(s) from each area.
[1] Both the statements
[2] Only Statement B
[3] Only Statement A
[4] Neither of the statements

Answer: 3

Q. 4) Which of the following statements is FALSE?

[1] Every issue had at least one paper by author(s) from Automation
area. [2] Every issue had exactly one paper by a Chinese author.
[3] Every issue had exactly two papers by authors from Logistics area.
[4] Every issue had exactly two papers by Indian authors.

Answer: 3

Q. 5) Which of the following statements is FALSE?

[1] There were exactly two papers by authors from Manufacturing area in the January
issue. [2] There was exactly one paper by an author from Manufacturing area in the April
issue. [3] There was exactly one paper by an author from Logistics area in the October
issue. [4] There were exactly two papers by authors from Manufacturing area in the July
issue.

Answer: 4

Q. 6) Which of the following is the correct sequence of number of papers by authors from
Automation, Manufacturing and Logistics areas, respectively?

[1] 6, 5, 7
[2] 6, 6, 6
[3] 6, 7, 5
[4] 5, 6, 7

Answer: 1