**1.1 ARRANGEMENTS**

**Introduction to the Topic**

In this type of logic questions, information is provided about a certain number of items or people with information given about their standing or seating or placement.

The arrangements are primarily of two types:

■ Linear Arrangements

■ Circular Arrangements

(includes rectangles, hexagonal, square etc.)

Relevance in CAT

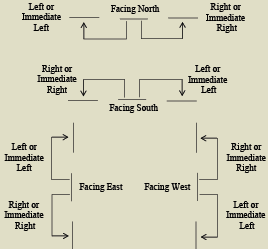
The questions of this topic are having been asked in CAT examination but are not too frequent. These questions have been of all the 3 levels viz. easy, medium and difficult. Easy and medium are easy scoring areas while difficult questions will take time. The difficult questions can sometimes be tricky and hence one has to be extremely careful while solving these questions.

**Linear Arrangement**

Linear sequencing is essentially arranging the items in a sequence (in a single line). Essentially, these questions involve arranging subjects (people or things) according to the given conditions. The arrangement might be sitting, standing or items arranged in a line. The arrangement is done only on one “axis” and hence, the position of the subjects assumes importance here in terms of order like first person, second position etc. The arrangements are sometimes also given with people standing or sitting facing directions such as North, South and East etc.

Let us see some diagrams to understand these kinds of arrangements:

Some Linear Arrangements

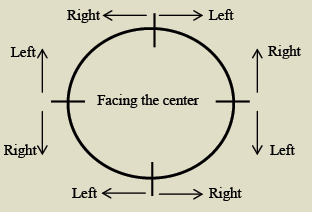


**Circular Arrangement**

Questions on circular arrangement involve seating of people around a table or arrangement of things in a circular manner (for example, different colored beads strung to form a necklace). In case of people sitting around a table, the table could be of any shape – rectangular, square, and circular or any order. The data given in such sets of questions specify the position of some or all of the individuals (or things) in the arrangement. The positions are specified through conditions involving specified persons sitting (or not sitting) opposite each other or a particular person sitting to the right or left of another person, etc. Once you read the data, first draw the shape specified in the data and then draw the slots in the seating arrangement. Finally using the given conditions, fill the slots carefully.

The arrangements in other form/shapes such as square, rectangle, hexagonal etc. also use the fundamentals of circular arrangement

A typical Circular Arrangement



**Example 1:** Six numbered balls are kept on tray with 9 slots to hold the balls. These six balls will form a unique number which will be used to play online lottery. Balls containing numbers 43, 69 and 57 cannot be in any of the corner slots. Balls with number 11 and 43 cannot have any other balls kept on either side of them. There is only 1 empty slot between balls with numbers 43 and 57. Ball with number 08 is kept adjacent to balls with numbers 57 and 16 both. Ball with number 69 is next to the ball placed at the starting corner.

a. Which ball doesn’t have any other ball as its neighbor on either side?

b. Which ball is in the 4th slot?

c. Which slots are empty?

d. How many consecutive slots contain balls?

**Solution:**

There are 9 slots, let us draw the slots with numbers. 1 signifies the starting slot and 9 signifies the last slot.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  | 2 |  | 3 |  | 4 |  | 5 |  | 6 |  | 7 |  | 8 |  | 9 |

43, 69 and 57 cannot occupy the slots number 1 or 9.

11 and 43 should have empty slots on either sides i.e. \_\_\_\_\_\_ 11 \_\_\_\_\_\_ and \_\_\_\_\_\_ 43 \_\_\_\_\_\_.

43 and 57 have one empty slot between them i.e. 43 \_\_\_\_\_\_ 57 OR 57 \_\_\_\_\_\_ 43.

08 has 57 and 16 as it neighbors i.e. 57 08 16 OR 16 08 57.

69 is next to the beginning slot i.e. 69 is in slot 2.

Now we see 57 as a common element, using it we get: 16 08 57 \_\_\_\_\_\_ 43 OR 43 \_\_\_\_\_\_ 57 08 16.

Also 43 cannot have any neighbor; the above condition is updated as:

16 08 57 \_\_\_\_\_\_ 43 \_\_\_\_\_\_ OR \_\_\_\_\_\_ 43 \_\_\_\_\_\_ 57 08 16

Using the remaining conditions we will get the following final slotting of the balls:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 69 |  | 16 |  | 08 |  | 57 |  |  |  | 43 |  |  |  | 11 |
| 1 |  | 2 |  | 3 |  | 4 |  | 5 |  | 6 |  | 7 |  | 8 |  | 9 |

a. Ball with number 43 has no neighbors on either side.

b. Ball with number 08 is in the 4th slot.

c. Slots 1, 6 and 8 are empty.

d. 4 slots viz. 2, 3, 4 and 5 contain balls continuously.

**Example 2:** Muthu, Swamy, Hassan, Venky, Balaji and Aprajith sit around a circular table. Muthu sits two seats to the left of Hassan. Swamy sits to the right of Hassan. Balaji and Aprajith sit opposite to each other.

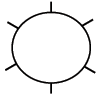
a. Who sits opposite to Venky?

b. Who sits to the rightof Balaji?

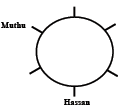
c. Who sits opposite to Muthu?

**Solution:**

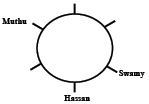
There are six persons sitting on the round table. Let us first fix the table and the seats as follows:



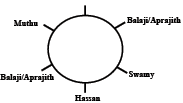
Now Muthu sits two seats to the left of Hassan, we will make Hassan sit at one of the seats and will place Muthu according to him.



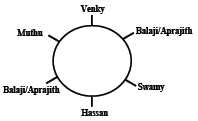
Swamy sits to the right of Hasan.



Balaji and Aprajith sit opposite to each other. Now fixing them we get the following arrangement:



Now there is one place left for Venky. Making him sit at that place we get the final arrangement as follows:



a. From the diagram we can see that Hassan sits opposite to Venky in the above diagram.

b. As we do not know the place of Balaji, hence it can be either Hassan or Venky.

c. Swamy sits opposite to Muthu.

Practice Exercise – Easy

1. P1, P2, P3, P4, P5, P6 and P7 are sitting on a beach in a line facing the east. P3 is immediate right of P4. P2 is at one of the extreme ends and has P5 as his neighbour. P7 is between P5 and P6. P4 is sitting third from the south end. Who are the persons sitting at the extreme ends?

a. P1 and P6 b. P1 and P2 c. P6 and P2 d. P3 and P4

2. P, Q, R, S and T are sitting on a roller coaster ride in a line. P is sitting next to Q, R is sitting next to S, S is not sitting with T who is on left end of the ride. R is on the second position from the right. P is on the right of Q and T. P and R are sitting together. In which position is P sitting?

a. Between Q and S b. Between Q and R

c. Between T and Q d. Between R and T

3. Deepika, Priyanka, Pariniti, Shraddha, Bipasha and Anushka are six actresses standing on a red carpet in a line in an award function. Priyanka is between Anushka and Shraddha. Bipasha is between Deepika and Pariniti. Deepika does not stand next to either Anushka or Shraddha. Pariniti does not stand next to Shraddha. Anushka is standing between which two actors?

a. Priyanka and Pariniti b. Pariniti and Shraddha

c. Deepika and Parinit d. Deepika and Priyanka

**Directions (Q. Nos. 4** – **6):** *Read the following information to answer the questions based on it.*

Seven cars are arranged in a line in an auto exhibition. XUV and EcoSport have one car between them. Vento is to the right of Verna. Santro is to the immediate left of EcoSport.There is one car between Scorpio and Verna. Ciaz is not Vento’s neighbour. Vento and EcoSport have two cars between them. XUV is not displayed at any end position.

4. Which car is second to the left of car Verna?

a. Ciaz b. Santro c. Scorpio d. XUV

5. Which car will be exactly in the middle of the car series so obtained?

a. Scorpio b. Verna

c. EcoSport d. None of these

6. Which pair of the cars is adjacent to the car Santro?

a. Verna and Ciaz b. Vento and XUV

c. XUV and EcoSport d. None of these

**Directions (Q. Nos. 7** – **10):** *Answer the following questions on the basis of the information given below.*

Six building Cyber 1, Cyber 2, Millennium 1, Millennium 2, Sky 1 and Sky 2 are standing in a line on a road in Subhash Place. They are arranged according to their height, the tallest being at the last and the shortest in the front. Sky 2 is between Cyber 1 and Cyber 2. Sky 1 is shorter than Millennium 2 but taller than Millennium 1 who is taller than Cyber 1. There are two building between the two Sky towers. Cyber 1 is not the shortest among them.

7. What can be said about the position of Sky 1?

a. Between Cyber 1 and Cyber 2

b. Between Cyber 1 and Millennium 1

c. Between Millennium 1 and Millennium 2

d. Just before Millennium 1

8. Which is the tallest building?

a. Cyber 2 b. Millennium 2

c. Sky 2 d. Cyber 1

9. Which is the third tallest building?

a. Sky 1 b. Cyber 1

c. Millennium 2 d. Millennium 1

10. Which is the shortest building?

a. Millennium 1 b. Millennium 2

c. Cyber 2 d. Sky 2

**Directions (Q. Nos. 11** – **15):** *Answer the following questions on the basis of the information given below.*

Nine cricket fans are watching a match in a stadium. Seated in one row they are F1, F2, F3, F4, F5, F6, F7, F8 and F9. F3 is to the right of F4 and at third place to the right of F5. F2 is at one of the end. F8 is immediately next to F6 and F7. F6 is at the third place to the left of F2. F1 is next to left of F6.

11. Who is sitting in the center of the row?

a. F1 b. F4 c. F7 d. F3

12. One end is occupied by F2, who occupies the other end?

a. F9 b. F4 c. F6 d. F5

13. Who are the two neighbors of F6?

a. F7 and F8 b. F1 and F7

c. F3 and F1 d. None of these

14. Which of the following statements is true?

a. F9 and F7 are sitting together.

b. There is one person sitting between F3 and F6.

c. F4 is at one of the extreme ends.

d. F5 is sitting at a seat two places away from F1.

**Directions (Q. Nos. 15** – **19):** *Answer the following questions on the basis of the information given below.*

In a car exhibition, seven cars of seven different companies’ viz. Cadillac, Ambassador, Fiat, Maruti, Mercedes, Bedford and Fargo were displayed in a row, facing east. Cadillac was to the immediate right of Fargo. Fargo was fourth to the right of Fiat. Maruti was between Ambassador and Bedford. Fiat, which was the third to the left of Ambassador, was at one of the ends.

15. Which of the following is the correct position of the Mercedes?

a. Immediate right of Cadillac

b. Immediate left to Bedford

c. Between Bedford and Fargo

d. Fourth to the right of Maruti

16. Which of the following is definitely true?

a. Fargo is between Ambassador and Fiat.

b. Cadillac is to the immediate left of Mercedes

c. Fargo is to the immediate right of Cadillac.

d. None of these

17. Which cars are on the immediate either sides of the Cadillac?

a. Ambassador and Maruti

b. Maruti and Fiat

c. Fiat and Mercedes

d. Mercedes and Fargo

18. Which of the following is definitely true?

a. Maruti is to the immediate left of Ambassador.

b. Bedford is to the immediate left of Fiat.

c. Bedford is at one of the ends.

d. Fiat is second to the right of Maruti

19. Which of the following groups of cars is to the right of Ambassador?

a. Cadillac, Fargo and Maruti.

b. Maruti, Bedford and Fiat.

c. Mercedes, Cadillac and Fargo.

d. Bedford, Cadillac and Fargo.

20. Six persons –Ashwani, Gunjan, Kashish, Subash,

Krishnand Swamy– are seated in six equally spaced chairs around a circular table. Gunjan and Swamy are opposite to each other. Kashish and Krishna are not seated next to Gunjan. Who is sitting between Subhash and Ashwani?

a. Gunjan b. Kashish

c. Krishna d. Cannot be determined

**Directions (Q. Nos. 21** – **25):** *Study the following information carefully to answer the questions below.*

Eight friends Raman, Jatin, Kamal, Pritam, Sujoy, Bakul, Mannan and Honey are sitting around a circle facing the centre. Pritam is between Raman and Sujoy;Bakul is second to the left of Sujoy. Jatin is between Kamal and Mannan. Bakul is between Mannan and Honey only.

21. Who is Fourth to the right of Jatin?

a. Honey b. Pritam

c. Raman d. None of these

22. In which of the following pairs, second person is to the immediate left of the first person?

a. Honey, Sujoy b. Pritam, Raman

c. Jatin, Mannan d. None of these

23. Which of the following is definitely true?

a. Pritam is second to the right of Honey

b. Raman is third to the right of Sujoy

c. Kamal is to the immediate right of Jatin

d. Sujoy is to the immediate left of Kamal

24. Who is the immediate left of Sujoy?

a. Pritam b. Raman c. Honey d. Bakul

25. Who is third to the right of Mannan?

a. Sujoy b. Raman c. Kamal d. Pritam

Practice Exercise – Medium

1. There are six houses in a row. Red has Green and Blue as neighbors. White has Orange and Yellow as neighbors. Orange’s house is not next to Green or Blue and Yellow is not next to Blue. Which houses are the next door neighbors of green?

a. Red and Green b. Red and Blue

c. Yellow and Red d. None of the above

**Directions (Q. Nos. 2** – **4):** *Answer the following questions on the basis of the information given below.*

Seven varsity basketball players (A, B, C, D, E, F and G) are to be honoured at a special luncheon. The players will be seated on the dias in a row. A and G have to leave the luncheon early and so must be seated at the extreme right. B will receive the most valuable player’s trophy and so must be in the centre to facilitate presentation. C and D are bitter rivals and, therefore must be seated as far apart as possible.

2. Which can’t be seated at either end?

a. C b. D c. F d. G

3. Which of the following pair cannot be seated together?

a. B and D b. C and F c. D and G d. E and A

4. Which of the following pair cannot occupy the seats on either side of B?

a. F and D b. D and E c. E and C d. C and G

**Directions (Q. Nos. 5** – **7):** *These questions are based on the information given below:*

Five doctors are standing in a queue. One of the two doctors at the extreme ends is a ENT doctor and the other is a Ortho. An Eye doctor is standing to the right of a Surgeon. A Heart doctor is to the left of the Ortho.

5. Counting from the left, the Heart doctor is at which place?

a. First b. Second

c. Third d. None of these

6. Which of the following is in the middle of the queue?

a. ENT doctor b. Eye doctor

c. Surgeon d. Ortho

7. If Eye doctor and the Ortho exchange their positions, and also the Heart doctor and the Surgeon, then who will be standing to the left of Surgeon?

a. Heart doctor b. Ortho

c. ENT doctor d. Eye doctor

8. Eight females F1, F2, F3, F4, F5, F6, F7 and F8 sit around a circular table, not necessarily in the same order. F2 and F4 sit neither adjacent to F3 nor opposite to F3. F1 sits in between F5 and F4, and F6 sits in between F2 and F8. Which of the following is definitely true?

a. F8 sits in between F3 and F5.

b. F2 sits in between F1 and F7.

c. F3 sits opposite F7.

d. None of these

9. Each team out of the three teams T1 and T4, T2 and T6, T3 and T5 sit along the side of a triangular table, not necessarily in that order. T4 sits to the immediate right of T6 and T3 sits to the immediate right of T1. Who among the following have the same number of persons between them as those between T1 and T6?

a. T4 and T5 b. T5 and T6 c. T1 and T2 d. T3 and T6

10. There are eight books kept one over the other. Two books are on Organizational Behavior, two books are on TOM, three books on Industrial Relations and one book is on Economics. Counting from the top, the second, fifth and sixth books are on Industrial Relations. Two books on Industrial Relations are between two books on TOM. One book of Industrial Relations is between two books on Organizational Behavior while the book above the book of Economics is a book of TOM. Which book is the last book from the top?

a. Economics b. TQM

c. Industrial d. Organizational Behavior

11. Six persons Ratan, Anna, Mount, Alaghri, Hassan and Rajni are sitting in two rows, three in each row.Hassan is not at the end of any row. Alaghri is second to the left of Rajni. Mount, the neighbour of Hassan, is sitting diagonally opposite to Alaghri.Anna is the neighbour of Rajni. Which of the following are in one of the two rows?

a. Alaghri, Anna and Rajni

b. Mount, Hassanand Anna

c. Ratan, Hassanand Rajni

d. Rajni, Anna and Mount

**Directions (Q. Nos. 12** – **15):** *These questions are based on the information given below:*

In a BCCI function to honor players Khan, Singh, Gambhir, Chopra and Kaif are sitting in a circle. The group comprises a spinner, swinger and a pacer. The pacer is sitting between the swinger and his wife Chopra. Gambhir, the spinner is married to Kaif, who is the sister of Singh. The swinger is seated to the right of Gambhir. Both the ladies are not cricketers and Singh is not married.

12. What is the relationship of Khan to Singh?

a. Brother b. Uncle

c. Brother in law d. Cannot be determined

13. Khan is sitting to the right of:

a. The Spinner b. Spinner’s wife

c. Chopra d. Cannot be determined

14. Who is the pacer?

a. Singh b. Khan

c. Gambhir d. Cannot be determined

15. Who in the group is/are married?

a. Swinger b. Pacer

c. Spinner and Pacer d. Swinger and Spinner

**Directions (Q. Nos. 16** – **20):** *These questions are based on the information given below:*

Six people are sitting on the ground in a hexagonal shape. The hexagon’s vertices are marked as A, B, C, D, E and F but not in any order. However, all the sides of the hexagon are of same length. D is not adjacent to C or E; B and C are adjacent; F is in the middle of D and C.

16. If one neighbor of A is D, then who is the other one?

a. B b. C c. E d. F

17. Who is standing opposite to E?

a. F b. B c. D d. C

18. Who is at the same distance from D as E is from D?

a. B b. F c. C d. D

19. Which of the following is not a correct neighboring pair?

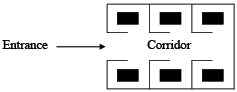
a. B & F b. C & F c. D & F d. A & E

20. Which of the following is a correct group of neighbors?

a. A, F, B b. B, C, F c. D, A, B d. F, A, E

Practice Exercise – Difficult

**Directions (Q. Nos. 1** – **4):** *Answer the questions on the basis of the information given below.*



The plan above shows an office block for six officers, A, B, C, D, E and F. Both B and C occupy offices to the right of corridor (as one enters the office block) and A occupies an office to the left of the corridor. E and F occupy offices on opposite sides of the corridor but their offices do not face each other. The offices of C and D face each other. E does not have a comer office. F’s office is further down the corridor than A’s, but on the same side.

1. If E sits in his office and faces the corridor, whose office is to his left?

a. A b. B c. C d. D

2. Whose office faces A’s office?

a. B b. C c. D d. E

3. Who is/are F’s neighbour(s)?

a. A only b. A and D c. C only d. B and C

4. D was heard telling someone to go further down the corridor the last office on the right. To whose room was he trying to direct that person?

a. A b. B

c. C d. Cannot be determined

**Directions (Q. Nos. 5** – **8):** *Read the following information carefully and answer the questions given below:*

I. Eight plants Abelia, Berrya, Cadia, Danae, Echium, Ficus,

Garrya and Haastiaare planted adjacent to one another in two different rows with four plants in each row, all facing North.

II. No plant of whose name start with consecutive letter is either adjacent or opposite to each other.

III. Abelia and Berrya are the plants located at the end of two different rows.

IV. Cadia is just left of Echium and is located in the same row

in which Abelia is located.

V. Ficus is just left of Berrya.

5. Which plant is opposite to Abelia?

a. Danae b. Ficus

c. Haastia d. Cannot be determined

6. Which plant is diagonally opposite to Danae?

a. Berrya b. Haastia

c. Garrya d. Cannot be determined

7. Which plant is opposite to Cadia?

a. Ficus b. Haastia

c. Berrya d. Cannot be determined

8. Which plant/s is/are adjacent to Haastia?

a. Cadia b. Ficus and Danae

c. Berrya and Ficus d. Cannot be determined

**Directions (Q. Nos. 9** – **13):** *Read the following information carefully and then answerthe questions given below:*

I. In a 5 star hotel there are ten rooms numbered 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309 and 1310 are situated adjacent to one another in two different rows. Doors of the rooms of one row open into the doors of the rooms of another row.

II. Guests checked into different rooms are engaged in different professions Cricketer, Footballer, Businessman, CEO, VP, Gambler, Media Barron, Lawyer, Doctor and Actor but not in this order.

III. Rooms with odd numbers are situated opposite to the rooms with even numbers. And no two rooms with even numbers and no two rooms with odd numbers are adjacent to each other.

IV. Room no. 1308 is occupied by a guest having profession footballer and his room is to the extremeleft of one row.

V. Room no. 1304 and 1306 are not in the row of Room no. 1308 and any of the rooms numbered 1304, 1306, 1302 are not in the middle of the row.

VI. The guest engaged in profession lawyer lives in room no.

1305 and his room is not situated in the row in which room no. 1306 is situated.

VII. Guest related to profession businessman has an odd numbered room and resides in the row in which the person having profession footballer resides but both are not adjacent to each other.

VIII. VP’s and gambler’s rooms are adjacent to Room no. 1306. However, gambler’s room is not adjacent to Room no. 1304.

IX. Cricketer’s and actor’s rooms are in the same row.

X. CEO’s room is even numbered and is diagonally opposite to Room no. 1301.

XI. Room no. 1306 is second left from its own row.

XII. No two rooms here consecutive numbers on them and media barron’s room is neither opposite to VP’s room nor adjacent to it.

9. What is the number of room of the guest related to profession businessman?

a. 1310 b. 1307

c. 1302 d. Cannot be determined

10. What is the number of room in which VP resides?

a. 1307 b. 1308

c. 1309 d. Cannot be determined

11. Who lives just opposite to Room no. 1305?

a. Actor b. Cricketer

c. Gambler d. Cannot be determined

12. Which room is opposite to room number 1302?

a. 1303 b. 1309

c. 1301 d. Cannot be determined

13. Which of the following statement is not correct?

a. Actor and businessman are not in the same row.

b. Cricketer lives either in room no. 1306 or 1304.

c. VP’s room is adjacent to actor’s room.

d. All of the above correct.

**Directions (Q. Nos. 14** – **17):** *Study the following information to answer the questions given below:*

I. Eight glasses are arranged G1, G2, G3, G4, G5, G6, G7 and G8 are around a square table – two on each side.

II. There are three melamine and they are not placed next to each other. Rest is borosil glasses.

III. G6 is between G8 and G2.

IV. G3 is between G5 and G2.

V. G4, a melamine, is second to the left of G6.

VI. G2, a borosil, is placed opposite to G1, a melamine.

VII. There is a melamine between G2 and G5.

14. Who among the following are the three melamines?

a. G1, G4 and G6 b. G1, G3 and G6

c. G3, G4 and G1 d. Cannot be determined

15. Which of the following is true about G6?

a. G6 is a borosil

b. G6 is a melamine

c. Type of G6 cannot be determined

d. Position of G6 cannot be determined

16. Who among the following is to the immediate left of G2?

a. G3  b. G6

c. G5 d. Cannot be determined

17. How many glasses are placed between G7 and G2?

a. One b. Two

c. Three d. Cannot be determined

18. Each of the six people - A, B, C, D, E and F – have majored in different subjects among Marketing, Finance, HR, Operations, Sales and General Management and all of them sat around a circular table. Finance major is to the right of A and opposite to the General Management major. A is sitting opposite to the Sales major, who is sitting between C and the HR major. D is sitting opposite to the Operations major. The subject with which A is associated is

a. Marketing b. General Management

c. Operations d. Cannot be determined

19) P1, P2, P3, P4, P5 and P6 are the six corners of a table which has six sides, not necessarily in the same order. Persons L1, L2, L3, L4, L5 and L6 are sitting along the sides joining the corners, not necessarily in that order. P4 is to the right of P1 and P3 is to the left of P5. L1 is sitting opposite to L5 and to the immediate right of L6. L4 is sitting between the corners P1 and P5 and is opposite to L3. If L6 is sitting between P3 and P6, then who sits between P2 and P4?

a. L1 b. L5

c. L3 d. Cannot be determined

**Directions (Q. Nos. 20** – **22):** *These questions are based on the data given below.*

Ramesh, Kiran, Mohit, Rahul, Ajay and Sakshi are sitting around a hexagonal table in a library studying a book each. The book in their hands is of different subjects from amongst - Tamil, GK, English, Social Studies, Maths and Science - not necessarily in that order. Further, it is known that Ramesh sits opposite to Kiran, who sits to the immediate left of the person holding the English subject book, who sits two places away from the person holding the Maths subject book. Rahul sits two places away from the person holding the Science subject book and sits opposite to the person holding the Maths subject book. Mohit and Sakshi sit next to each other.

20) What must be the subject of the book with Ajay?

a. Science b. Maths

c. English d. Tamil

21) If the person holding the Social Studies subject book sits opposite to the person holding the Tamil subject Book, then which statement among the following can be true?

a. Rahul is not holding a GK subject book.

b. Sakshi holds the Science subject book.

c. Mohit holds the Science subject book.

d. Mohit holds Maths subject book.

22) If the person holding the Tamil book is sitting opposite to

the person holding the Maths book, then which of the following can be true?

a. Rahul is holding a Tamil GK book.

b. Sakshi holds the Science book.

c. Mohit holds the GK book.

d. All of the above can be true.

**Directions (Q. Nos. 23** – **27):** *These questions are based on the data given below.*

Six boys –B1, B2, B3, B4, B5 and B6 – each have different marks

in exam - 42, 48, 46, 43, 45 and 47, are sitting around a table in six equi-spaced chairs. B2 is opposite to the boy who got 43 marks. B6 is opposite to the boy who got 48 marks. B3 is to the right of the boy who got 42 marks and opposite the boy who got 45 marks. B5 is between the boys who got 43 marks and 47 marks and is not 45 marks. B4 is opposite the boy who got 47 marks.

23) Which of the following statements is true?

I. The boys who got 48 marks and 43 marks are either next to each other or opposite to each other.

II. The boys who got 42 marks and 43 marks are either next to each other or opposite to each other.

III. The boys who got 46 marks and 45 marks are always next to each other.

IV. The boys who got 46 marks and 42 marks are either opposite to each other or are next to each other.

a. Only I and II b. Only III

c. Only III and IV d. All are true

24) If B3 is opposite to B2, then the boy who is between the boys who got 48 marks and 45 marks.

a. B1 b. B3 c. B2 d. B6

25) If B6 is got 43 marks in exam, then who got 48 marks?

a. B1 b. B2 c. B5 d. B4

26) If B5 got 42 marks in exam, then who got 46 marks?

a. B2 b. B6 c. B1 d. B4

27) If B3 got 43 marks in exam, then who is between B5 and B4?

a. B3 b. B1 c. B2 d. B6

**Directions (Q. Nos. 28** – **32):** *These questions are based on the data given below.*

There are two circular tables in a room. Six CAT Aspirant–C1, C2, C3, C4, C5 and C6 – are sitting at one table and six MAT Aspirants–M1, M2, M3, M4, M5 and M6– are sitting at the other table. All CAT aspirants know Tamil and All MAT aspirants know Telgu. C1 and C4 are sitting opposite to each other. C2 and C5 are sitting opposite each other. C3 sits to the right of C4. C2 is the only person who can translate Tamil to Telgu; C3 is the only person who can translate Telgu to Tamil, and none of them does the vice-versa, unless so stated. C5 and C6 sit adjacent to each other. Also, M1 sits opposite M4; M5 sits to the right of M6 and M6 sits opposite M3. M2 and M4 sit adjacent to M3. On the table, any person can talk to another person, only as stated below. The only conversations that took place are as given below:

C1 spoke to C2; C2 to M6; M6 to C3; M6 to M5; M5 to M4; M4 to C4; C4 to M2; M2 to M1; C3 to C4; C4 to C5; C6 to C1; M1 to M6; and C5 to C6.

The conversations are one-sided i.e., C1 spoke to C2 implies that C1 is the speaker and C2 is the listener and not vice-versa.

28) If C3 wants to send a message to M1, then how many persons must the message pass through? (excluding the first and the last)

a. 1 b. 6

c. 10 d. None of these

29) If the person sitting to the right of C1 wants to send a message to the person sitting to the left of M2, then the message has to pass through how many persons? (excluding the first and the last)

a. 1 b. 5

c. 7 d. None of these

30) If the order of conveying messages is reversed at both the tables (i.e., “C1 speaks to C2” now becomes “C2 speaks to C1”, and so on) and also C2 and C3 exchange their interpretory skills, then which of the following must be true?

a. C1 can send a message to M5 involving only 2 persons.

b. The person sitting to the right of C6 can send a message to the person sitting to the left of M2, by involving only five persons.

c. The person sitting to the right of C3, on the same table, can translate Tamil into Telgu.

d. The maximum number of persons involved in the longest message in this new arrangement is more than that in the previous arrangement.

31) If the person sitting to the right of C2 wants to send a message to the person sitting two places to the left of C4, then what is the maximum number of people involved between them? (excluding the two people)

a. 11 b. 10

c. 4 d. None of these

32) If every person is allowed to speak to the person who sits opposite to him directly, then what is the least number of persons involved in passing a message from C3 to M1? (excluding the two people)

a. 6 b. 3

c. 7 d. None of these

**Directions (Q. Nos. 33 to 37):** *These questions are based on the following data.*

Eight friends, Neeraj, Gaurav, Anshul, Sunil, Anoop, Ashu, Jai and Jitendar are sitting around a circular table, playing a game of cards. They belong to two different teams T1 and T2. No two persons of the same team sit in adjacent seats.

I. Neeraj sits neither opposite to Sunil nor to Jitendar but is sitting in between Anshul and Jai.

II. Gaurav sits neither opposite to Neeraj nor to Jai but is sitting in between Ashu and Sunil.

III. Gaurav and Jitendar belong to team T1 and Sunil sits opposite to Anoop.

IV. Neeraj scored 12 points more than Sunil, who scored 13 points more than Ashu, who scored 14 points more than Anoop. Gaurav scored 3 times as that of Jai, who scored same that of Anshul, who scored four times that of Jitendar.

33) Who are the members of team T1?

a. Neeraj, Sunil, Ashu and Anoop

b. Gaurav, Jitendar, Anshul and Anoop

c. Gaurav, Sunil, Jitendarand Jai

d. Gaurav, Jitendar, Anshul and Jai

34) If only one person sits between Anshul and Jitendar, then who among the following could be that person?

a. Gaurav b. Ashu

c. Anoop d. Sunil

35) If Anoop and Jitendar scored one point each, then which team wins the game, given that the team with the minimum points wins the game?

a. Team T1

b. Team T2

c. Both teams scored the same points

d. Cannot be determined

36) If the person sitting between Neeraj and Sunil scored 28 points and the person sitting between Anshul and Jai scored 55 points, then which team wins the game and by what margin, given that the team with the minimum points wins the game?

a. T1 wins by 2 points. b. T2 wins by 3 points.

c. T2 wins by 4 points. d. None of these

37) If team T2 scores 92 points and team T1 scores 105 points, then which among the following is definitely true?

a. Jitendar scores 2 points less than Anoop.

b. Gaurav scores twice as many points as Ashu.

c. Neeraj scores three points less than Jai.

d. Sunil scores one point more than Jai.

**Directions (Q. Nos. 38** – **40):** *Answer the following questions based on the Statements given below.*

I. There are three houses on each side of the road.

II. These six houses are labeled as P, Q, R, S, T and U

III. The houses are of different colours namely Red, Blue, Green, Orange, Yellow and White

IV. The houses are of different heights

V. T the tallest house, is exactly opposite to the Red coloured house

VI. The shortest house is exactly opposite to the Green coloured house

VII. U the Orange coloured house is located between P and S.

VIII. R the Yellow coloured house is exactly opposite to P.

IX. Q the Green coloured house is exactly opposite to U.

X. P the White coloured house is taller than R, but shorter than S and Q.

38) What is the colour of the house diagonally opposite to the Yellow coloured house?

a. White b. Blue

c. Red d. None of these

39) Which is the second tallest house?

a. P b. S

c. Q d. Cannot be determined

40) What is the colour of the tallest house?

a. Red b. Blue

c. Green d. None of these