

ANALYTICAL PUZZLES

5. We have two possible arrangements – Arrangement I and Arrangement II that we looked at already. In each arrangement, the remaining three people can sit in the remaining three seats in 6 ways. Thus, a total of 12 ways of seating the seven persons is possible.
Choice (D)

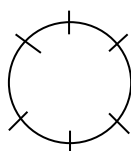
Questions on circular arrangement involve seating of people around a table or arrangement of things in a circular manner (for example, different coloured beads strung to form a necklace).

In case of people sitting around a table, the table could be of any shape – rectangular, square, circular or any other.

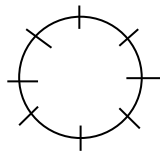
The data given in such sets of questions specify the positions of some or all of the individuals (or things) in the arrangement. The positions are specified through conditions involving specified persons sitting (or not sitting) opposite each other or a particular person sitting to the right or left 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.

Six people
around a circular table



Eight people
around a circular table



Statements like “A and B are sitting farthest from each other” or “A and B sit across the table” imply that A and B sit opposite each other.

On the other hand, you should remember that, unlike in straight-line arrangement, the words “immediately” and “directly” do not play any role in circular arrangement. In general, there is no left side or right side (unless we are talking of ‘immediate right’ or ‘immediate left’).

So if it is given that C sits to right of B, then it is clear that C must be to the immediate right of B. Go “anti-clockwise” if anybody’s right has to be located, and go “clockwise” if somebody’s left has to be located.

Let us take some examples.

Directions for questions 1 to 5: These questions are based on the following information.

P, Q, R, S and T sit around a table.

P sits two seats to the left of R and Q sits two seats to the right of R.

1. If S sits in between Q and R, who sits to the immediate right of P?
(A) T (B) S (C) Q (D) R (E) P
2. Which of the following cannot be the correct seating arrangement of the five persons in either the clockwise direction or the anti-clockwise direction?
(A) P, Q, R, S, T
(B) P, S, R, T, Q
(C) P, Q, S, R, T
(D) P, T, R, S, Q
(E) None of the above

3. If S is not sitting next to Q, who is sitting between Q and S?
(A) R (B) P
(C) T (D) Both (R) and (P)
(E) None of these

4. If a new person U joins the group such that the initial conditions for the seating arrangement should be observed and also a new condition that U does not sit next to R be satisfied, then which of the following statements is true?

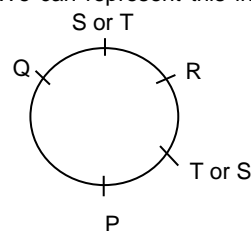
- (A) U sits to the immediate right of S.
(B) U sits to the immediate left of T.
(C) U sits to the immediate left of P.
(D) Either (A) or (B) above.
(E) Q sits to the immediate right of U.

5. If a new person U joins the group such that the initial conditions for the seating arrangement should be observed and also a new condition that U does not sit next to P, S or T be satisfied, then who will be the neighbours of P (one on either side)?

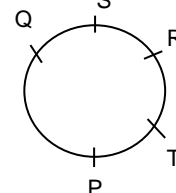
- (A) T and Q (B) S and Q (C) T and R
(D) R and Q (E) S and T

Solutions for questions 1 to 5:

P sits two seats to the left of R, and Q sits two seats to the right of R. We can represent this information in the diagram below.

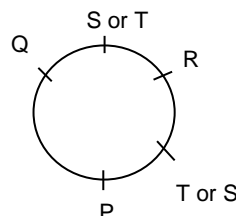


1. If S sits between Q and R, then the arrangement is as follows.



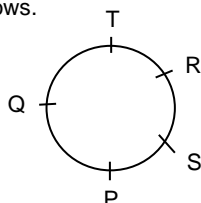
As can be seen from the diagram, T is to the immediate right of P.
Choice (A)

2. We will take each choice and see whether it fits in the arrangement that we represented through a diagram in the analysis of the data (the same diagram is reproduced below).



We can see that the arrangement given in choice (A) is not possible and hence the answer choice is (A).
Choice (A)

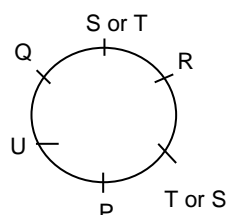
3. If S is not next to Q, then the seating arrangement is fixed as follows.



Now P is between Q and S.

Choice (B)

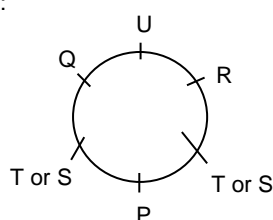
4. On the basis of the diagram that we drew, we find that to accommodate U we have to create a new slot between P and Q.



Hence, choice (C) is the correct answer.

Choice (C)

5. We create a new slot for the sixth person. But since U will not sit next to P, S or T, he will have to sit between R and Q. The arrangement will then look as follows:



As we can see from the diagram, the neighbours of P will be T and S.

Choice (E)

In this type of problems, you have to match two or more "variables" [Variable means a "subject" as used in the discussion of Linear Arrangement]. In double line-up, the data given may talk of four people living in four houses each of a different colour. What we need to find out is the colour of the house of each of the four persons. There is no first position or second position of the houses.

Sometimes, Double line-up is also called as "Distribution."

An example of data given for this variety of questions is:

"Each of the four persons A, B, C and D wears a different coloured shirt – Red, Pink, Blue and White. A has a Red shirt and D does not have a Pink shirt."

From the above statement, it becomes clear that no person among A, B, C and D can have shirts of two different colours among Red, Pink, Blue and White.

As discussed in the questions on Single Line-up, questions can be solved easily by representing the given data pictorially. In case of Double Line-up, it will help us if we represent the data in the form of a matrix or a table.

Let us see how to draw a matrix for the data given above.

Names	Colours			
	Red	Pink	Blue	White
A	✓			
B				
C				
D		x		

As it is given that A has red colour shirt, it is clear that he does not have any other colour shirt. Similarly B, C, D do not Red colour shirt. So, in all the other cells in the row belonging to A, we put a cross ('x'). Then, the table will look as follows:

Names	Colours			
	Red	Pink	Blue	White
A	✓	x	x	x
B	x			
C	x			
D	x	x		

In this manner, we can fill up the cells on the basis of the data given to us. Once, we use up all the data, we will draw any conclusions that can be drawn and then answer the questions given in the set.

Let us take a few examples.

Directions for questions 1 to 5: These questions are based on the following information.

P, Q, R, S, T, U, V and W are eight employees of a concern. Each is allotted a different locker, out of eight lockers numbered 1 to 8 in a cupboard. The lockers are arranged in four rows with two lockers in each row.

Lockers 1 and 2 are in the top row from left to right respectively while lockers 7 and 8 are in the bottom row – arranged from left to right respectively. Lockers 3 and 4 are in the second row from the top – arranged from right to left respectively. So are lockers 5 and 6 – arranged from right to left respectively – in the second row from the bottom. P has been allotted locker 1 while V has been allotted locker 8. T's locker is just above that of Q which is just above that of R, whereas W's locker is in the bottom row.

- Which of the following cannot be the correct locker number–occupant pair?
(A) 3-Q (B) 7-W (C) 4-U
(D) 6-R (E) 8 – V
- If U's locker is not beside Q's locker, whose locker is just above that of W?
(A) U (B) S (C) R
(D) Q (E) None of these
- Which of these pairs cannot have lockers that are diagonally placed?
(A) P-Q (B) S-R
(C) U-R (D) Either (B) or (C)
(E) None of these

4. Which of the following groups consists only occupants of odd numbered lockers?
 (A) P, Q, V (B) R, V, W (C) T, R, Q
 (D) P, T, Q (E) Q, R, W
5. If U's locker is in the same row as that of R, and S exchanges his locker with V, then who is the new neighbour of V in the same row? (Assume that nothing else is disturbed from the original arrangement)
 (A) P (B) Q (C) R
 (D) U (E) W

Solutions for questions 1 to 5:

Let us first try to locate the lockers in the cupboard as per the conditions given. Then, we will do the allotment to the persons.

Lockers 1 and 2 are in the top row and lockers 7 and 8 are in the bottommost row. In these two rows, the lockers are numbered from left to right. In the other two rows, the lockers are numbered from right to left.

		L	R	
1	2			Top Row
4	3			
6	5			
7	8			Bottom Row

Now let us look at the conditions given for the allotment of the lockers.

P has locker 1. V has locker 8.

1-P	2
4	3
6	5
7	8-V

Locker of W is in the bottom row → W's locker must be 7.

1-P	2
4	3
6	5
7-W	8-V

T's locker is just above that of Q, which is just above that of R → The lockers of T, Q and R must be 2, 3 and 5 respectively (there are no other group of lockers which satisfy this condition).

1-P	2-T
4	3-Q
6	5-R
7-W	8-V

S and U have lockers 4 and 6 left for them.

Thus, on the basis of the data given to us, we can show the final arrangement of lockers as below.

1-P	2-T
4-S/U	3-Q
6-U/S	5-R
7-W	8-V

Now we can answer the questions easily on the basis of the above.

1. By looking at the final arrangement of lockers above, we find that choice (D) does not represent the correct combination of locker number-occupant pair.
Choice (D)
2. If U's locker is not beside Q's locker, then U's locker must be locker 6. So, it is U's locker that will be immediately above W's.
Choice (A)
3. R's locker is in the same row as that of exactly one of S or U and diagonally placed to the other one. Hence, "either S-R or U-R" is the answer.
Choice (D)
4. The odd-numbered lockers 1, 3, 5 and 7 which belong to P, Q, R and W respectively. Of the choices, we find that Q, R, W appear in choice (A). Hence, this is the correct choice.
Choice (E)
5. U's locker is in the same row as that of R which means that locker 6 belongs to U. So locker 4 belongs to S. Now V and S exchange lockers. Then the new neighbour of V is Q.
Choice (B)

In this category of questions, a small group of items or persons has to be selected from a larger group satisfying the given conditions. The conditions will specify as to when a particular item or person can be included or cannot be included in the subgroup. For example, the condition may specify that two particular persons should always be together or that two particular persons should not be together.

Sometimes, the conditions given for selection or non-selection of items or persons may be based on logical connectives like if-then, either-or, unless, etc. You should be careful in interpreting the logical connectives used in the conditions.

Directions for questions 1 to 5: These questions are based on the following information.

Amit, Bittu, Chintu, Dumpy, Falgun, Hitesh, Ronit, Purav and Saurav are nine players from among whom three teams consisting respectively of 4 members, 3 members and 2 members must be formed subject to the following conditions.

Chintu must have three more players with him while Dumpy must have only two more with him.
 Chintu and Saurav cannot be in the same team.
 Purav and Bittu cannot be in the same team.
 Ronit and Hitesh must be in the same team.

1. If Dumpy, Falgun, Purav form the team of 3 members, then which of the following must be TRUE?
 (A) Hitesh must be in a team with Bittu.
 (B) Saurav must form a two-member team with Amit or Chintu.
 (C) Saurav must form a two-member team with Bittu or Amit.
 (D) Chintu should form a team of 4 members with Hitesh, Ronit and Amit.
 (E) None of the above is true

2. If Dumpy takes Amit as a part of his three-member team, which of the following must go into Chintu's team?
 (A) Bittu and Hitesh (B) Hitesh and Ronit
 (C) Purav and Ronit (D) Purav and Falgun
 (E) Purav and bittu
3. If Chintu and Falgun are together and Saurav is in the team of two members, then how many sets of different teams are possible?
 (A) 5 (B) 3 (C) 2
 (D) 1 (E) 4
4. If Chintu does not have Purav in his team and the two member team consists of Saurav and Amit, then Chintu should take
 (A) Hitesh, Bittu and Ronit.
 (B) Bittu but not Ronit.
 (C) Bittu and Falgun.
 (D) Hitesh and Ronit.
 (E) None of these
5. If Purav is in the same team as Chintu and Falgun, then Saurav must be in the same team as
 (A) Bittu (B) Bittu and Amit.
 (C) Amit (D) Bittu and Dumpy.
 (E) None of these

Solutions for questions 1 to 5:

It is given that:

Chintu must form a team of 4 members only

Dumpy must form a team of 3 members only.

Since Chintu and Dumpy are in two different teams, let us, for convenience, denote the two teams as the respective teams of these two persons. Let us call the team with four members as the first team and the team with three members as the second team. The third team should have two persons.

Number of members		
4	3	2
Chintu	Dumpy	Saurav
	Saurav	

Now let us take the other conditions and fill them up in the table above.

Chintu and Saurav cannot be in the same team.

→ Saurav will be in the second or the third team.

Purav and Bittu cannot be in the same team.

Hitesh and Ronit must be in the same team.

We cannot represent these two conditions right now in the table above but we will use them as we go along.

1. If Dumpy, Falgun, Purav form the team of 3 members, then Saurav should be in the third team. Since Hitesh and Ronit must be in the same team, they have to be in the first team. That leaves only Amit or Bittu to be with Saurav in the third team.
 Choice (C)

(Also, note that we can eliminate choice (B) easily.)

2. Dumpy takes Amit as a member of his team.
 If we take Hitesh and Ronit as the two members of the third team, then Saurav has to be in the second team, in which case we will have both Purav and

Bittu coming into the same team – the first team – which is not possible.

Since Saurav cannot be in Chintu's team and Purav and Bittu cannot be in the same team, the three people required for Chintu's team will **have to be** Hitesh and Ronit and one among Falgun or Purav or Bittu.
 Choice (B)

3. Let us analyse the conditions. It is given that Chintu and Falgun are together, whereas Saurav is in the team of two members. Let us fill up these details in the box that we made above and then see in how many ways we can fill up the remaining cells in the box.

Chintu	Dumpy	Saurav
Falgun		

First let us look at Hitesh and Ronit who must be in the same team.

They can go into the first team or the second team. Let us consider these two cases.

Case 1: Hitesh and Ronit go into the first team.

Then, one out of Bittu and Purav will go into the third team and the other into the second team. This gives rise to two ways of forming the teams – one with Bittu in the second team and the other with Bittu in the third team.

Case 2: Hitesh and Ronit go into the second team.

In this case too, one out of Bittu and Purav will go into the third team and the other into the second team. Hence, this will also give rise to two ways of forming the teams.

Hence, there are total four ways of forming the teams.
 Choice (E)

4. Let us use the table that we built in the initial analysis and fill up the details that we have in this problem.

Since the two member team is already formed and Chintu does not take Purav, hence Purav will have to go into the second team.

Chintu	Dumpy	Saurav
	Purav	
		Amit

Since Ronit and Hitesh have to be in the same team, they should go into the first team. Since Bittu cannot go with Purav, he should also be in the first team. This leaves Falgun for the second team. Thus, we can fill up the table as follows:

Chintu	Dumpy	Saurav
Ronit	Purav	
Hitesh		Amit
Bittu	Falgun	

Choice (A)

5. If Purav is with Chintu and Falgun, then Bittu cannot be with them. Since Ronit and Hitesh should be together, the only other person left is Amit.

These four members form the first team.

If Hitesh and Ronit together form the two member team, then Bittu and Saurav will be part of the three member team.

Instead, if Hitesh and Ronit are in the three-member team, then Saurav and Bittu will form the two-member team.

In either case, Saurav and Bittu are together in one team. Choice (A)

The term "Order Sequence" is self-explanatory. In questions for this category, you will be asked to deal with relative positions of subjects. The absolute values of the subjects is not what you should be interested in. It is comparison between different subjects that you have to deal with. The data also specifies the relationships like "A is greater than B" or "C is not less than D" and so on. You have to decide the positions of the subjects in ascending or descending order on the parameters given. The subjects of comparison can be people or things.

In short, data will be given to compare the quality or quantity. The parameters on which the subjects are compared can be heights or weights of people, the money with them, complexion, sizes of things, etc.

In such questions, you will come across typical statements like "A is taller than B," "B is not shorter than C", and so on.

You may use the following symbols to symbolically represent the conditions given and then later, represent all the subjects pictorially.

Greater than >
Less than <
Greater than or equal ≥
Less than or equal ≤

"Not greater than" is the same as "less than or equal to." Similarly, "not less than" is the same as "greater than or equal to".

Words like "Who, And, Which, But" used in the data play a significant role in analysing the data. "AND" and "BUT" play the same role whereas "Who" and "Which" play the same role.

Let us take one statement.

"A is taller than B, who is shorter than C and taller than D but shorter than E, who is taller than F and G but shorter than H".

By using appropriate symbols, the above statement can be represented as follows.

A > B; B < C; B > D; B < E; E > F; E > G; E < H

Questions on the above data can be as follows.

- Who is the tallest?
- Who is the shortest?
- Who is the second tallest in the group? etc.

Let us take some examples.

Directions for questions 1 to 5: These questions are based on the following information.

A, B, C, D and E are five cars while P, Q and R are three motorcycles. A is the fastest of the cars and R is the

slowest of the motorcycles. C is costlier than D and Q but cheaper than B. Among cars, A is not the costliest. D is cheaper than E and there is no car whose cost lies between the cost of these two. E is faster than three of the cars and all the motorcycles. Q is costlier than R but cheaper than P, who is faster than Q.

- Which of the following cars cannot stand exactly in the middle position among cars as far as their cost is concerned?
(A) A (B) C (C) E
(D) D (E) B
- Which of the following statements is true about the motorcycles?
(A) P is the costliest as well as the fastest motorcycle.
(B) The fastest motorcycle is not the costliest motorcycle.
(C) The slowest motorcycle is also the cheapest motorcycle.
(D) Both (A) and (C)
(E) Both (A) and (B)
- If P is costlier than E, how many cars are cheaper than P?
(A) 1 (B) 2
(C) 3 (D) 4
(E) Cannot be determined
- If P is cheaper than A which is not costlier than E, which of these is the cheapest of all the cars and motorcycles put together?
(A) R (B) Q (C) E
(D) A (E) Cannot be determined
- Which of these is the slowest of the cars, if B and C are faster than D?
(A) B (B) D (C) E
(D) A (E) Cannot be determined

Solutions for questions 1 to 5:

Let us first write down all the comparisons given for costs and speeds. Then we will tabulate them.

Speed

A → fastest car

E → Faster than three of the cars → E is the second fastest car

R → slowest motorcycle

P > Q

Cost

C > D

C > Q

B > C

A → Not the costliest among cars

E > D → No other car lies between these two

Q > R

P > Q

Now let us tabulate this data.

Speed

Cars

Fastest	A	E				Slowest
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Motorcycles

Fastest	P	Q	R	Slowest
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Cost
Cars

Costliest	B C E D	Cheapest
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Here, we know that A is not the costliest car but we do not know where it will fit in. It can come anywhere after B except between E and D.

Motorcycles

Costliest	P	Q	R	Cheapest
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In addition to the above, we have to also keep in mind that $C > Q$ in cost. (From this we can conclude that $B > Q$, $B > R$, $C > R$ in cost).

1. In terms of cost of the cars, A can come between B and C or between C and E or to the right of E. In each of the above cases, the middle car will be C, A and E respectively. Hence, among the cars given, D cannot be in the middle. Choice (D)
2. By looking at the tables above, we can make out that choices (A) and (C) are both correct and hence, the correct answer is (D). Choice (D)

3. If P is costlier than E, we can also conclude that it is costlier than D but we cannot conclude anything about the relationship between the cost of P and that of B, C and A. Choice (E)

4. Since A is not costlier than E, it means that A is at the same level of E or cheaper than E. We cannot conclude which of these two positions A is in. Hence, we cannot conclude which the cheapest of all the vehicles is. {Please note that if A is the cheapest car, then R will be the cheapest of all the vehicles. However, if A is at the same level as E in cost, then there is a possibility of R or D being the cheapest of all the vehicles.} Choice (E)

5. If B and C are faster than D, then the order will be as follows:

1	2	3	4	5
A	E	B/C	C/B	D

Hence, D is the slowest of all the cars.

Choice (B)

Exercise – 10(a)

Directions for question 1: Select the correct alternative from the given choices.

1. P, Q, R, S and T are five speakers who have to speak on a particular day, not necessarily in the same order. R is neither the first nor the last speaker. There are three speakers after S and three speakers ahead of T. If P speaks after Q, then who is the last speaker to speak?
- (A) S (B) T (C) P
(D) Q (E) R

Directions for questions 2 and 3: These questions are based on the following data.

Five persons – A, B, C, D and E are being compared in weight and height. The second heaviest person, D, is the shortest. A is the 2nd tallest and shorter than E. The heaviest person is the third tallest person. There is only one person shorter than B, who is lighter than E and A respectively.

2. Who is the heaviest person?
- (A) A (B) B (C) E
(D) D (E) C
3. What is the position of A in height and weight respectively?
- (A) 2nd, 4th (B) 4th, 3rd (C) 2nd, 1st
(D) 5th, 3rd (E) 4th, 2nd

Directions for questions 4 to 8: Select the correct alternative from the given choices.

4. 15 people entered a theater before Sujit. 7 people entered the theater between Sujit and Suraj and 20 people entered the theater after Suraj. How many people are there in the theater?
- (A) 28 (B) 36 (C) 44
(D) 42 (E) Cannot be determined
5. In the above problem if Suraj entered the theater before Sujit then how many people are there in the theater?
- (A) 28 (B) 36 (C) 44
(D) 40 (E) 42
6. A, B, C, D, E and F are six cities which are collinear in the same order. The distance between any two adjacent cities is equal. A bus starts at A for city F. It takes 25 minutes for the bus to travel from one city to another and stops for 5 minutes at each place. If the bus reaches E at 8:55, then at what time did it reach station B?
- (A) 7:25 (B) 7:30 (C) 7:35
(D) 7:40 (E) 7:45
7. P through U are six cities which are in a row in the same order. A bus, b_1 travels from P to U and another bus b_2 travels from U to P. The bus b_1 reaches S at 10:40 and bus b_2 reaches Q at 10 : 35. If the travel time between any two adjacent cities is 40 minutes and the stoppage time at each city is

15 minutes, then at what time do they start at their respective destinations?

- (A) 8:00, 7:00 (B) 8:00, 7:10
(C) 8:10, 7:10 (D) 8:15, 7:25
(E) None of these

8. In the above problem, at which city do the two buses meet?

- (A) Q (B) R (C) S
(D) (E) Cannot be determined

Directions for questions 9 and 10: These questions are based on the following data.

B – 1, B – 2 and B – 3 are three buses that travel from Mumbai to Delhi. Each bus starts at a different time and arrives at a different time. The digit in the bus number and the order of their departure or arrival is not the same. The first bus to leave Mumbai is the third bus to reach Delhi.

9. Which is the first bus to leave Mumbai?
- (A) B – 1 (B) B – 2
(C) B – 3 (D) B – 1 or B – 2
(E) Cannot be determined
10. Which is the second bus to reach Delhi?
- (A) B – 1 (B) B – 2
(C) B – 3 (D) B – 1 or B – 3
(E) Cannot be determined

Directions for questions 11 and 12: Select the correct alternative from the given choices.

11. The departure timings of six flights, A_1 through A_6 have to be scheduled. The schedule has to be according to the following conditions.
- (i) A_4 should not be the first or the last flight to leave the airport.
(ii) A_2 , A_3 and A_5 should leave the airport one after the other in the same order.
(iii) A_3 should not be the 2nd or the 5th flight to leave the airport.

If A_6 is to leave before A_1 , then in which position will A_4 leave the airport?

- (A) Second (B) Fifth (C) First
(D) Third (E) Cannot be determined.

12. In the above problem, if A_1 is to leave the airport immediately after A_5 , then in which position will A_3 leave the airport?
- (A) Second (B) Fourth (C) Last
(D) First (E) Third

Directions for questions 13 and 14: These questions are based on the following data.

In an international conference scientists from six different countries are invited. They are from America, Germany, France, Japan, Russia and India. On a particular day presentations of these six scientists are scheduled. German scientist's presentation is the only presentation between the presentations of the Russian and the Indian scientists.

There are three presentations between the presentations of the French and the Japanese scientists.

13. How many presentations are there after the German scientist's presentation?
 (A) Two (B) Three
 (C) Four (D) One
 (E) Cannot be determined
14. If the Russian scientist's presentation is before the American scientist's presentation and the Japanese scientist's presentation is immediately after the Indian scientist's presentation, then the Russian scientist's presentation is the _____.
 (A) 2nd (B) 3rd
 (C) 4th (D) 5th
 (E) Cannot be determined

Directions for questions 15 to 17: These questions are based on the following data.

A train travels from A to E, with intermediary stations being B, C and D. Ten parcels with code numbers 101 through 110 were transported between these stations.

They are transported based on the following conditions.

- (i) Only four parcels, 101, 104, 105 and 107 were loaded at A. One among these was unloaded at B, one at C and two at D.
 - (ii) 102 and 106 were unloaded at C and 108, which was loaded at B, was unloaded at E.
 - (iii) Only one parcel was loaded at D, which was 103.
 - (iv) Only two parcels were unloaded at D and 101 was unloaded at C, the station immediately after the station at which 105 is unloaded.
 - (v) The number of parcels which were loaded at different stations was different and the number of parcels which were unloaded at different stations was different. No parcel is loaded at E and no parcel is unloaded at A.
15. How many parcels are loaded at C?
 (A) One (B) Two (C) Three
 (D) Four (E) Five
16. Which of the following two parcels travel through the maximum number of intermediary stations in the journey?
 (A) 101 and 104 (B) 101 and 107
 (C) 109 and 110 (D) 104 and 107
 (E) None of these
17. Which among the following combinations of stations and the parcels which are loaded and unloaded at that station is true?
 (A) A – (loading) 101, 104, 105, 107 – (unloading) 105
 (B) B – (loading) 102, – (unloading) 108, 106
 (C) C – (loading) 109, 110 – (unloading) 101, 102, 106
 (D) D – (loading) 103 – (unloading) 109, 110
 (E) None of the above is true.

Directions for questions 18 to 20: These questions are based on the following data.

Four Cars, numbered as (C₁, C₂, C₃ and C₄) are participating in a car rally. They have to travel from P to Q then to R. After the race, the following is observed.

- (i) The digit in the car number and the order in which they depart or arrive at any point is not the same.
- (ii) The first car to leave P is the second car to reach R.
- (iii) The first car to reach R is the second car to leave P and the last car to reach Q.

18. Which is the first car to leave P?
 (A) C₄ (B) C₃ (C) C₂
 (D) C₁ (E) Cannot be determined.
19. Which is the second car to reach Q?
 (A) C₁ (B) C₂ (C) C₃
 (D) C₄ (E) Cannot be determined.
20. Which is the third car to reach R?
 (A) C₁ (B) C₂
 (C) C₃ (D) Either C₁ or C₃
 (E) Cannot be determined.

Directions for questions 21 to 25: These questions are based on the following data.

In a parking area eight cars of different companies are parked, with four cars adjacent to each other on one side of the walk way and the other four opposite to them. The following information is known about them.

- (i) Tata is parked between Mercedes and BMW.
 - (ii) Maruthi is parked to the immediate right of Fiat, on the same side.
 - (iii) Toyota is parked opposite to Fiat and both of them are at one of the extreme ends.
 - (iv) Ford car is parked opposite to Tata.
 - (v) Hyundai is parked opposite to BMW and both of them are at an extreme end.
 - (vi) Ford is parked exactly between Hyundai and Maruthi.
21. Which of the following cars are parked diagonally opposite to each other?
 (A) Mercedes and Tata (B) Maruti and Hyundai
 (C) Fiat and BMW (D) Tata and Maruti
 (E) Fiat and Toyota
22. Which car is parked opposite to Maruthi?
 (A) Mercedes (B) Tata (C) BMW
 (D) Hyundai (E) Ford
23. If the positions of Ford and Tata are swapped, then which car is parked to the immediate left of Hyundai?
 (A) Fiat (B) BMW (C) Ford
 (D) Maruti (E) Tata
24. If the positions of Fiat and BMW are interchanged, then which car is parked opposite to Toyota?
 (A) Maruthi (B) Fiat (C) BMW
 (D) Ford (E) Tata
25. Which car is parked opposite to Mercedes?
 (A) Maruthi (B) Ford (C) Tata
 (D) Toyota (E) Fiat

Directions for questions 26 and 27: Select the correct alternative from the given choices.

26. In a multiplex movie theatre there are eight screens arranged in two rows – four on each side. In one row four Hindi movies are being screened and in the other row four English movies are being screened. The heroes of Hindi movies are Shah-Rukh, Salman, Akshay and Aamir and the heroes of the English movies are Ben, Tom, Jackie and Arnold. In each movie there is only one hero and no two movies have the same hero. Ben's movie is being screened on a screen which is opposite to the screen on which Aamir's movie is being screened and to the immediate left of the screen on which Jackie's movie is being screened, whose movie is being screened on a screen which is opposite to the screen on which Salman's movie is being screened. Neither Arnold's nor Ben's movie is being screened at the screens which are at any end of the arrangement. Shah Rukh's movie is being screened on a screen which is opposite to the screen on which Arnold's movie is being screened, whose movie is being screened on a screen which is opposite to the screen in which Tom's movie is being screened?
(A) Akshay (B) Shah Rukh (C) Aamir
(D) Salman (E) Cannot be determined
27. U, V, W, X, Y and Z are six police officers, who are parading in two rows, with three in the front row and three in the back row. Each officer in the back row has one officer exactly in the front of him. W and X are at the extreme ends of two different rows. Y is to the right of U and exactly in front of V. If Z is exactly behind W, then which of the following statements is true?
(A) X is exactly between V and Z.
(B) Z and U are at extreme ends.
(C) With the given information two seating arrangements are possible.
(D) Y and X are at extreme ends of the front row.
(E) All are true

Directions for questions 28 to 32: These questions are based on the following data.

Eight persons – P, Q, R, S, T, U, V and W are sitting around a circular table. S is to the immediate right of W. V is not next to either R or T. W is to the immediate right of T, who is sitting opposite to R. U and W are sitting opposite to each other.

28. Who is to the right of U?
(A) R (B) V (C) P (D) Q (E) T
29. Who is sitting two places to the right of W?
(A) P (B) S (C) V
(D) T (E) Cannot be determined.
30. If R and V interchange their places, then who is opposite to T?
(A) P (B) S (C) R (D) V (E) Q
31. If V is to the immediate left of P, then who is to the immediate left of R?
(A) U (B) P (C) Q (D) S (E) W
32. Who is sitting opposite to S?
(A) V (B) R (C) T
(D) P (E) Cannot be determined

Directions for questions 33 to 37: These questions are based on the following data.

In a round table conference six persons are participating. They are Andy, Bob, Charles, Douglas, Elena and Fred. Bob is sitting between Charles and Elena and is opposite to Andy. Douglas is sitting to the left of Elena.

33. Who is sitting opposite to Douglas?
(A) Andy (B) Bob (C) Charles
(D) Fred (E) None of these
34. Who is sitting to the left of Bob?
(A) Charles (B) Elena (C) Douglas
(D) Andy (E) Fred
35. If Elena interchanges her place with the person sitting opposite to Bob, then who sits to the right of Fred?
(A) Andy (B) Charlie (C) Bob
(D) Fred (E) None of these
36. If each person interchanges his/her place with the person sitting opposite, then who is sitting to the right of Charles?
(A) Elena (B) Bob (C) Andy
(D) Fred (E) Cannot be determined.
37. If Andy interchanges his place with Douglas, Fred with Elena and Bob with Charles, then which of the following statements is true?
(A) There are two persons sitting between Bob and Douglas.
(B) Elena is sitting to the right of Fred.
(C) Douglas and Charles are sitting opposite to each other.
(D) Fred is to the left of Andy.
(E) More than one of the above

Directions for questions 38 to 42: These questions are based on the following data.

Four couples sit around a circular table in a party. Every husband sits to the right of his wife. P, Q, R and S are husbands and T, U, V and W are wives. Q – U and R – V are two married couples. S does not sit next to V. T sits to the left of P, who sits opposite S.

38. Q sits between _____.
(A) U and V (B) T and U (C) U and S
(D) W and T (E) U and B
39. Who sits to the right of W?
(A) S (B) Q (C) R (D) P (E) U
40. If P interchanges his place with the person who sits opposite to R disregarding the condition that husband and wife sit together, then who sits to the right of U?
(A) T (B) Q (C) P (D) R (E) V
41. If every husband interchange his position with the person sitting opposite to him, then who sits between S and R?
(A) T (B) U (C) V (D) W (E) Q
42. Who sits between P and Q?
(A) R (B) U (C) V (D) W (E) T

Directions for questions 43 to 47: These questions are based on the following diagram.

A – W, B – X, C – Y and D – Z are four married couples. In a restaurant they are sitting around a rectangular table, with three persons along each of the longer sides of the table and one person along each of the shorter sides. All the male persons (A, B, C and D) are sitting along the longer sides and no the male persons are sitting together. X is sitting to the right of C. W and Z are sitting at the longer sides and neither of them is sitting adjacent to their respective husbands. Y is sitting to the right of A.

43. Which pair of people are sitting at the shorter sides of table?
(A) Z and X (B) B and Y
(C) X and C (D) X and D
(E) X and Y
44. Who is sitting to the immediate right of Y?
(A) A (B) B (C) C (D) D (E) W
45. Who is sitting two places to the right of A?
(A) B (B) X (C) D (D) W (E) Y
46. If A and D interchange their places and C and W interchange their places, then who sits to the left of C?
(A) A (B) Z (C) W (D) D (E) B
47. Which among the following is a pair of persons sitting diagonally opposite to each other?
(A) A and C (B) B and D
(C) C and D (D) Both (A) and (B)
(E) None of these

Directions for questions 48 to 50: Select the correct alternative from the given choices.

48. Six persons – A, B, C, D, E and F, are sitting around a circular table. B is sitting to the immediate right of E. C is not sitting next to F. F is sitting opposite B and D is sitting opposite E. Who is sitting to the immediate left of D?
(A) F (B) A (C) C
(D) B (E) Cannot be determined
49. Eight persons P through W, are sitting around an octagonal table, according to the following conditions.
(i) P is sitting to the right of U.
(ii) T is adjacent to S and P.
(iii) Q is sitting to the right of W.
(iv) V is sitting opposite P and Q is sitting opposite S.
Which of the following is true?
(A) P is sitting adjacent U and W.
(B) U is sitting adjacent of R.
(C) R is sitting between S and V.
(D) Either U or R is sitting opposite T.
(E) More than one of the above
50. P through V are seven persons sitting around a circular table. V is sitting to the left of P, who is sitting to the left of S. V is sitting to the right of U. R is sitting between T and U. Who is sitting to the right of Q?
(A) U (B) T (C) S (D) P (E) P

Exercise – 10(b)

Directions for questions 1 to 5: These questions are based on the following information.

Seven persons - Dinesh, Ganesh, Mahesh, Naresh, Rajesh, Suresh and Veeresh are seated in a row, not necessarily in the same order, facing north. We know the following additional information about them.

- (i) Ganesh is exactly in between Suresh and Dinesh
 - (ii) The number of persons to the right of Rajesh is same as the number of persons to the left of Veeresh.
 - (iii) Dinesh is to the right of Rajesh.
 - (iv) Veeresh is second from the extreme right.
 - (v) Dinesh is two places away to the left of Naresh.
 - (vi) Rajesh is to the left of Mahesh.
1. Who is third from the extreme left?
(A) Dinesh (B) Ganesh (C) Mahesh
(D) Naresh (E) Suresh
 2. Find the number of persons between Ganesh and Veeresh.
(A) 0 (B) 1 (C) 2 (D) 3 (E) 4
 3. Who is at the extreme right?
(A) Suresh (B) Naresh (C) Mahesh
(D) Dinesh (E) Either (A) or (B)
 4. Who is at the extreme left?
(A) Dinesh (B) Mahesh (C) Rajesh
(D) Suresh (E) None of these

5. Who is at the middle of the row?
(A) Suresh (B) Ganesh (C) Dinesh
(D) Mahesh (E) Rajesh

Directions for questions 6 to 10: These questions are based on the following information.

Each of the four friends – Mahendar, Niranjana, Sridhar and Veeru are from four different cities – Ahmedabad, Bangalore, Hyderabad and Kolkata and have one car each among - Ferrari, Renault, McLaren and Williams, not necessarily in the same order. We know the following additional information.

- (i) Niranjana is neither from Kolkata nor he has Williams.
 - (ii) Sridhar does not have McLaren.
 - (iii) Veeru has Ferrari but is not from Kolkata.
 - (iv) Mahendar is from Ahmedabad.
 - (v) The person from Kolkata does not have Williams and the person from Hyderabad does not have McLaren.
6. Niranjana is from which city?
(A) Ahmedabad (B) Bangalore
(C) Hyderabad (D) Either (A) or (B)
(E) Cannot be determined
 7. The person from which city has McLaren?
(A) Bangalore (B) Kolkata
(C) Ahmedabad (D) Either (A) or (B)
(E) Cannot be determined

8. Who has Williams?
 (A) Niranjana (B) Sridhar
 (C) Mahendar (D) Either (A) or (B)
 (E) Cannot be determined
9. Which of the following combinations is true?
 (A) Sridhar - Kolkata - Williams
 (B) Sridhar - Bangalore - Reynault
 (C) Sridhar - Kolkata - Reynault
 (D) Niranjana - Hyderabad - Mc Laren
 (E) More than one of the above
10. Who is from Hyderabad?
 (A) Niranjana (B) Veeru
 (C) Sridhar (D) Either (A) or (B)
 (E) Cannot be determined

Directions for questions 11 to 15: These questions are based on the following information.

Each of the five boys - Anuj, Bharath, Chakri, David and Eshwar are of different weights and different heights. We know the following additional data.

- (i) If they were given ranks 1 to 5 according to their heights [in decreasing order of heights] and weights [in decreasing order of weights], no boy got the same rank in both the categories.
 (ii) For any boy, the number of boys heavier than him is not equal to the number of boys shorter than him.
 (iii) Eshwar, the tallest boy, is heavier than Anuj, the shortest boy.
 (iv) Chakri is heavier than only one boy and is shorter than David.
11. What is the rank of Bharath in weight?
 (A) 1 (B) 2 (C) 3
 (D) 4 (E) Cannot be determined
12. Who is the third heaviest boy?
 (A) Chakri (B) Eshwar (C) Bharath
 (D) Anuj (E) Cannot be determined
13. Who among the following is heavier than Anuj?
 (A) Bharath (B) David
 (C) Chakri (D) Eshwar
 (E) More than one of the above
14. What is the sum of the ranks of Chakri in both the categories?
 (A) 5 (B) 6 (C) 7 (D) 8 (E) 9
15. Who is the fourth tallest boy?
 (A) Bharath (B) Chakri
 (C) David (D) Either (A) or (C)
 (E) Cannot be determined

Directions for questions 16 to 20: These questions are based on the following information.

Five girls Fathima, Gouri, Harshitha, Indu and Jaya are wearing five different coloured dresses among red, blue, green, yellow and black each of which is of different cost. We know the following information about them.

- (i) The cost of the yellow coloured dress is less than that of the green coloured dress but more than that of the pink coloured dress.

- (ii) The cost of Fathima's dress is more than that of Jaya's dress, which is more than the cost of Harshitha's dress.
 (iii) The cost of Gouri's dress is less than the cost of the pink coloured dress.
 (iv) Indu's dress is the costliest and the blue coloured dress is the cheapest.
 (v) The cost of the red coloured dress is the average of the costs of the yellow and pink coloured dresses.
16. Who is wearing the pink coloured dress?
 (A) Fathima (B) Gouri (C) Harshitha
 (D) Jaya (E) Cannot be determined
17. What is the colour of the costliest dress?
 (A) Green (B) Yellow (C) Red
 (D) Pink (E) Cannot be determined
18. Who is wearing the second cheapest dress?
 (A) Fathima (B) Gouri (C) Harshitha
 (D) Jaya (E) Cannot be determined
19. Which coloured dress is Jaya wearing?
 (A) Yellow (B) Red (C) Pink
 (D) Green (E) Cannot be determined
20. The cost of Jaya's dress is greater than the cost of which coloured dress?
 (A) Pink (B) Red (C) Blue
 (D) Green (E) More than one of the above

Directions for questions 21 to 25: These questions are based on the following information.

Each of the five persons - Asha, Bhanu, Chandu, Dhanu and Ehsaan has to speak on one among the five different topics - Humanity, Politics, Ethics, Philosophy and Psychology, not necessarily in the same order, confirming to the following constraints.

- (i) Dhanu is to be the second to speak after the speech on humanity.
 (ii) Chandu must speak just before Ehsaan.
 (iii) The speech on Ethics is to be given before the speech of by Asha.
 (iv) Bhanu has to speak on Philosophy and the fourth speech is to be on Psychology.
 (v) Two speeches are to be given, between the speeches on Ethics and Politics,
21. Who has to give the third speech?
 (A) Asha (B) Bhanu (C) Chandu
 (D) Ehsaan (E) Cannot be determined
22. Who has to give the speech on Psychology?
 (A) Asha (B) Chandu (C) Ehsaan
 (D) Dhanu (E) Cannot be determined
23. The last speech is on which topic?
 (A) Philosophy (B) Ethics (C) Humanity
 (D) Politics (E) Cannot be determined
24. Chandu has to speak on which topic?
 (A) Ethics (B) Humanity (C) Psychology
 (D) Politics (E) Cannot be determined
25. The speech on which topic is just after the speech by Ehsaan?
 (A) Philosophy (B) Ethics (C) Humanity
 (D) Psychology (E) Cannot be determined

Directions for questions 26 to 30: These questions are based on the following information.

Six persons - Rinku, Tinku, Sunny, Kanna, Vicky and Nicky, who are wearing six different coloured shirt among - red, blue, green, yellow, white and pink, not necessarily in the same order, are seated around a round table.

We know the following information about their seating arrangement.

- Rinku is to the immediate right of Vicky.
- Nicky who is not wearing green coloured shirt, is to the immediate right of the person wearing red coloured shirt.
- Sunny, the person wearing yellow coloured shirt, is not adjacent to the person wearing pink coloured shirt.
- Rinku is sitting opposite to the person wearing blue coloured shirt.
- Tinku and Nicky are adjacent to each other.
- The person wearing green coloured shirt is adjacent to the persons wearing pink coloured shirt and red coloured shirt.

26. What is the colour of the shirt that Kanna wearing?
(A) Red (B) Blue (C) Green
(D) Pink (E) White

27. Who is to the immediate right of the person wearing white coloured shirt?
(A) Rinku (B) Tinku (C) Kanna
(D) Vicky (E) Sunny

28. Who is opposite Kanna?
(A) Rinku (B) Sunny (C) Nicky
(D) Vicky (E) Tinku

29. Nicky is opposite the person wearing which coloured shirt?
(A) Red (B) Green (C) Yellow
(D) Pink (E) White

30. Who is wearing green coloured shirt?
(A) Rinku (B) Tinku (C) Kanna
(D) Vicky (E) Nicky

Directions for questions 31 to 35: These questions are based on the following information.

A team of four out of seven girls - Bhavya, Chitra, Divya, Kavya, Navya, Shravya and Vidya is to be selected under the following constraints.

- Kavya and Shravya should not be selected together.
- Only if Divya is selected, Bhavya will be selected.
- At most one of Navya and Shravya must be selected.
- At most one of Chitra and Vidya must be selected.
- At least one of Bhavya and Shravya must be selected.

31. Who must always be selected?
(A) Divya (B) Kavya (C) Navya
(D) Shravya (E) None of these

32. If Vidya must be selected then in how many ways the team can be selected?
(A) 0 (B) 1 (C) 2 (D) 3 (E) 4

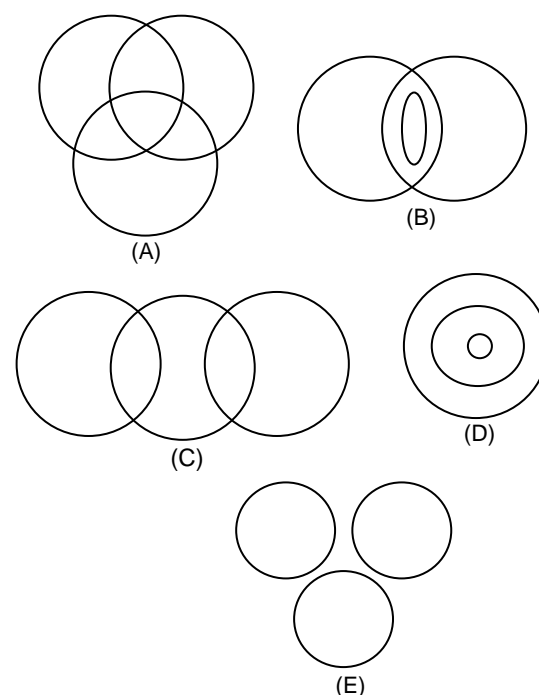
33. If Kavya is not to be selected, then which of the following can not be a possible team?
(A) Bhavya, Divya, Shravya, Vidya
(B) Bhavya, Chitra, Divya, Navya

- (C) Bhavya, Divya, Navya, Vidya
(D) Bhavya, Chitra, Divya, Vidya
(E) More than one of the above

34. If Shravya is not to be selected, then in how many ways the team can be selected?
(A) 7 (B) 6 (C) 3 (D) 5 (E) 4

35. If Shravya and Vidya are selected, then the other two must be
(A) Bhavya and Divya (B) Divya and Navya
(C) Divya and Kavya (D) Bhavya and Chitra
(E) None of these

Directions for questions 36 to 39: Choose from the five diagrams the one that best illustrates the relationship among the given groups.



36. Vegetarians, Boys, students.

37. Men, Widowers, Husbands.

38. Multiples of 2, multiples of 3, multiple of 18.

39. Gold ornaments, Bangles, Bracelets.

Directions for questions 40 to 50: Select the correct alternative from the given choices.

40. In a certain code language, DISABLE is written as HRL20. How is ENABLE written in that code?
(A) GA21 (B) HR 20 (C) JB 20
(D) FL24 (E) IP20

41. P, Q, R, S, T and U are the members of a family. There are, two married couples and three generations in the family. P and Q are brothers and R is the son of S. T has two children and U is the mother - in - law of S. Which of the following is true?
(A) Q is the father of R.
(B) P is the father of R.
(C) T is the father-in-law of S.
(D) S is the wife of T.
(E) None is true

42. What is the next letter in the series?

A, D, A, P, U, _____

(A) B (B) J (C) I (D) M (E) W

43. If every third letter of English Alphabet from C onwards is written as a number from 1 onwards and the remaining letters are written in lower case and upper case alternatively (in alphabetical order) then how is WINTER written?

(A) W3NTE6 (B) W3NtE6 (C) w3nTe6
(D) w3ntE6 (E) W3nTe6

44. On the first day, a person earns Re.1 and spends none. On every subsequent day, he earns twice the amount earned on the pervious day and spends half the amount earned on the previous day. At the end of the 10th day, how much money is left with him?

(A) ₹2⁹ (B) ₹1023.50 (C) ₹511.50
(D) ₹750 (E) ₹767.50

45. A number belongs to set x if it is divisible by 4 or if it is a factor of 4 or if it has 4 as one of its digits or if the sum of its digits is 4. Other numbers do not belong to x. How many numbers from 1 to 50 belong to x?

(A) 18 (B) 22 (C) 26 (D) 30 (E) 36

46. A vendor has six baskets - A, B, C, D, E and F. A has 15 fruits, B has 25 fruits, C has 21 fruits, D has 18 fruits, E has 30 fruits and F has 10 fruits. The fruits are either mangoes or oranges. If all the fruits in one of these baskets are sold, then the number of mangoes left is thrice the number of oranges left. Which basket is sold?

(A) F (B) D (C) C (D) A (E) F

47. Some friends bought some chocolates and hid them in a box and went to sleep. One of the friends woke-up and ate one chocolate before taking half the number of chocolates. Now the second friend woke-up, did the same and went to sleep. This process continued until the last person did the same and went to sleep. When they woke up in the morning only one chocolate was left. If it is known that there are less than hundred chocolates, then how many friends are there? (to the maximum)

(A) 4 (B) 5 (C) 6 (D) 7 (E) 8

48. Consider the following sum

LEAVE
+SHARE

116578

If each letter in the words represents a different digit then which of the following group of letters can represent 116578?

(A) RRSVAL (B) VVALSR (C) HHLSAV
(D) AAVSRL (E) RHLSVA

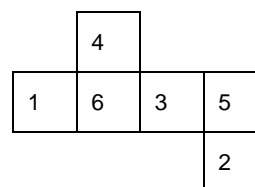
49. Two persons are playing a game which consists of the following table.

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

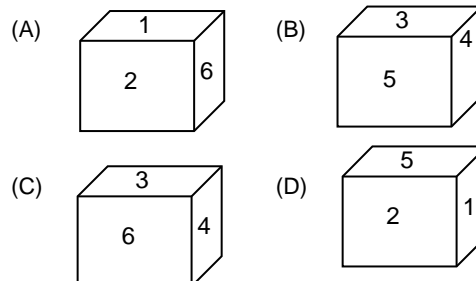
Each person must erase the numbers in a row or a column (starting with the first player). If the first player erases a row, then the second player must erase a column else he must erase a row. The last digit left is the score of the first person. The first person tries to maximize his score where as the other tries to minimize the score. If each player plays cleverly, then what is the score of the first player?

(A) 9 (B) 8 (C) 7 (D) 6 (E) 5

50. The following six faces are folded to form a cube



Which of the following is not a possible view of the cube formed?



(E) More than one of the above

Exercise – 10(c)

Directions for questions 1 to 5: These questions are based on the following information.

Eight persons - Madhu, Naveen, Prakash, Ravi, Sunil, Tarun, Uday and Varun are sitting in a row, not necessarily in the same order, facing the same direction. We know the following information about their seating arrangement.

- Only Madhu is sitting between Naveen and Prakash.
- The number of persons who are sitting between Sunil and Tarun is four.
- The number of persons to the right of Uday is same as the number of persons to the left of Varun.
- Ravi is to the immediate left of Tarun.

(v) Uday is two places away from Prakash.

- Who is the third person from the left?
(A) Uday (B) Naveen (C) Prakash
(D) Tarun (E) Sunil
- Who is sitting to the immediate right of Naveen?
(A) Ravi (B) Madhu (C) Sunil
(D) Tarun (E) Prakash
- If Sunil and Tarun interchange their positions, then who will sit to the immediate right of Sunil?
(A) Prakash (B) Uday (C) Naveen
(D) Varun (E) Ravi

4. What is the number of persons sitting between Madhu and Tarun?
 (A) Five (B) Four (C) Three
 (D) Two (E) One
5. Who is sitting at the extreme right end?
 (A) Ravi (B) Sunil (C) Tarun
 (D) Prakash (E) Varun

Directions for questions 6 to 10: These questions are based on the following information.

Each of the five women – Asha, Bindu, Chitra, Devi and Eshwari, whose ages are distinct, has a daughter among Pavani, Kalyani, Rani, Sita and Teena, not necessarily in the same order. We know the following information about them.

- (i) For every pair of mother and daughter, the difference between the age of the mother and her daughter is the same.
 - (ii) Eshwari is not the mother of Rani. Asha is elder than Chitra.
 - (iii) Teena is the daughter of neither Devi nor Bindu but younger than Sita, whose mother is older than Bindu.
 - (iv) Teena has as many children younger than her as older than her.
 - (v) Asha and Eshwari are the eldest and the youngest among the five women.
 - (vi) Bindu's daughter is not younger than Rani but elder than Pavani.
6. Who is the mother of Rani?
 (A) Bindu (B) Devi
 (C) Eshwari (D) Either (A) or (B)
 (E) Cannot be determined
7. Among the children who is the oldest?
 (A) Rani (B) Kalyani
 (C) Sita (D) Either (A) or (B)
 (E) Cannot be determined
8. Who is the daughter of Chitra?
 (A) Pavani (B) Sita
 (C) Kalyani (D) Teena
 (E) Cannot be determined
9. How many women are elder to Devi?
 (A) Three (B) Two
 (C) One (D) Zero
 (E) Cannot be determined
10. Who is the daughter of Eshwari?
 (A) Teena (B) Kalyani
 (C) Rani (D) Pavani
 (E) Cannot be determined

Directions for questions 11 to 15: These questions are based on the following information.

Eight persons – Ankur, Brijesh, Charan, Dhawan, Enrique, Farhaan, Girish and Harish are sitting around a circular table, not necessarily in the same order, in the following manner.

- (i) Girish is sitting to the immediate left of Dhawan, who is sitting opposite Harish.
- (ii) Brijesh is to the immediate left of Enrique.

- (iii) Ankur is sitting opposite Charan, who is not adjacent to Farhaan.

11. If Charan and Enrique interchange their positions, who are adjacent to Brijesh?
 (A) Dhawan and Enrique
 (B) Charan and Dhawan
 (C) Charan and Harish
 (D) Harish and Enrique
 (E) Charan and Enrique
12. Who is sitting to the immediate left of Ankur?
 (A) Dhawan (B) Harish (C) Farhaan
 (D) Enrique (E) Girish
13. Who is sitting opposite Farhaan?
 (A) Brijesh (B) Enrique
 (C) Girish (D) Either (A) or (B)
 (E) Cannot be determined
14. Who is to the immediate left of Brijesh?
 (A) Enrique (B) Ankur (C) Charan
 (D) Farhaan (E) Dhawan
15. What is the number of persons sitting to the left of Farhaan and before Harish?
 (A) One (B) Two (C) Three
 (D) Zero (E) Four

Directions for questions 16 to 20: These questions are based on the following information.

Eight boys - Hafeez, Manohar, Pavan, Raju, Santhosh, Venkat, Keerthan and Naresh are to be divided into two teams, TEAM I and TEAM II, of four members each under the following constraints.

- (i) Either Hafeez or Keerthan must be in TEAM I.
 - (ii) Exactly one of Manohar and Naresh must be in TEAM II.
 - (iii) Pavan and Raju must be in the same team.
 - (iv) Santosh must be in TEAM II.
 - (v) Hafeez and Manohar cannot be in the same team.
16. Who must be in the same team as Hafeez?
 (A) Keerthan (B) Venkat (C) Pavan
 (D) Naresh (E) Either (B) or (C)
17. If Naresh is in TEAM II, then in how many ways the TEAM I can be selected?
 (A) Four (B) Three (C) Two
 (D) One (E) Five
18. If Manohar is in TEAM II, then in how many ways the TEAM I, can be selected?
 (A) Four (B) Three (C) Five
 (D) One (E) Two
19. If Naresh is selected in TEAM I, who must be selected in TEAM II?
 I. Manohar II. Pavan
 III. Santosh IV. Raju
 (A) Only I (B) Only III
 (C) Both II and IV (D) Both I and III
 (E) Both II and III
20. If Venkat is selected in TEAM II, then who must be selected in TEAM I?
 (A) Hafeez (B) Keerthan (C) Manohar
 (D) Naresh (E) None of these

Directions for questions 21 to 25: These questions are based on the following information.

Each of the five friends - Anil, Bhanu, Charan, David and Eswar met at a party. They live in different cities among - Delhi, Mumbai, Bangalore, Chennai and Hyderabad and work in different companies among - P-soft, Q-soft, R-soft, S-soft and T-Soft, not necessarily in the same order. We know the following information about them.

- (i) Anil lives in Delhi but does not work in Q - soft.
 - (ii) Charan works in T - soft.
 - (iii) The person, who lives in Bangalore, works in S-soft.
 - (iv) Neither David nor Bhanu lives in Chennai.
 - (v) Bhanu works in P-soft and Eswar lives in Hyderabad.
21. Who lives in Mumbai?
(A) Bhanu (B) David
(C) Eswar (D) Either (A) or (B)
(E) Cannot be determined
 22. Which company does David work in?
(A) Q - soft (B) R - soft
(C) S - soft (D) Either (A) or (B)
(E) Cannot be determined
 23. In which city does the person who works in T - soft lives?
(A) Delhi (B) Chennai
(C) Hyderabad (D) Either (A) or (B)
(E) Cannot be determined
 24. In which city does the person who works in P - soft lives?
(A) Chennai (B) Delhi
(C) Mumbai (D) Either (A) or (B)
(E) Cannot be determined
 25. For which company does the person who lives in Hyderabad works?
(A) Q - soft (B) P - soft
(C) T - soft (D) R - soft
(E) Cannot be determined

Directions for questions 26 to 30: These questions are based on the following information.

Seven friends – Chandu, Durgesh, Harish, Keerthish, Manohar, Naresh and Rakesh are comparing their scores in an exam. We know the following information about their scores.

- (i) Each of them scored a distinct mark.
 - (ii) Keerthish scored the same marks as the average of the marks scored by Chandu and Durgesh where Chandu scored more marks than Durgesh.
 - (iii) Both Manohar and Naresh scored less marks than Harish but more than Rakesh and the marks scored by Rakesh is not the least.
 - (iv) The number of persons who scored more marks than Keerthish is same as the number of persons who scored less marks than Keerthish.
 - (iv) Chandu scored less marks than Manohar.
26. Among them who scored the second highest marks?
(A) Naresh (B) Manohar (C) Chandu
(D) Rakesh (E) Keerthish
 27. Among them who scored the second lowest marks?
(A) Chandu (B) Rakesh (C) Chandu
(D) Naresh (E) Durgesh

28. What is the number of persons who scored more marks than Chandu?
(A) Five (B) Four (C) Three
(D) One (E) Two
29. What is the number of persons whose scores are in between the scores of Naresh and Durgesh?
(A) Four (B) Three (C) Two
(D) One (E) Zero
30. Which of the following is true?
(A) Naresh scored more than Manohar.
(B) Durgesh scored more than Naresh.
(C) Rakesh scored more than Keerthish.
(D) Naresh scored more than Durgesh.
(E) More than one of the above.

Directions for questions 31 to 35: These questions are based on the following information.

Seven persons – Ajit, Bhadri, Chakri, Danuj, Eshwar, Firoz and Girish, have to give their performances on seven different days – Monday through Sunday not necessarily in the same order, starting with Monday.

- (i) On each day exactly one person will perform.
 - (ii) Danuj can perform either on Tuesday or on Thursday only.
 - (iii) Neither Ajit nor Bhadri can perform on Sunday and between them exactly one person has to perform.
 - (iv) Chakri has to perform just after Girish.
 - (v) Firoz can perform neither on Monday nor on Tuesday.
 - (vi) Neither Bhadri nor Eshwar can perform on Wednesday, but Bhadri can perform only after Eshwar's performance.
31. Who has to perform on Saturday?
(A) Ajit (B) Bhadri (C) Firoz
(D) Girish (E) Danuj
 32. Who is the first performer?
(A) Eshwar (B) Ajit
(C) Girish (D) Either (A) or (C)
(E) Cannot be determined
 33. Who has to perform just after Ajit?
(A) Danuj (B) Eshwar (C) Girish
(D) Firoz (E) Bhadri
 34. What is the number of persons who will perform between Bhadri and Danuj?
(A) Zero (B) One (C) Two
(D) Three (E) Four
 35. Who is the second performer after Firoz?
(A) Bhadri (B) Girish (C) Chakri
(D) Danuj (E) Eshwar

Directions for questions 36 to 40: These questions are based on the following information.

Six girls - Archana, Chandrakala, Himaja, Prashanti, Shilpa and Vanaja from six cities - Ahmedabad, Bangalore, Calcutta, Lucknow, Indore and Khozokode, not necessarily in the same order, are sitting in a row facing the same direction.

- (i) Shilpa is to the left of Chandrakala, who is to the immediate left of the person from Ahmedabad.
- (ii) The number of persons to the left of Vanaja is same as the number of persons to the right of Archana.

- (iii) Prashanthi is three places away from Chandrakala and Vanaja is to the immediate left of the person from Indore.
- (iv) The person from Ahmedabad is three places away to the right of the person from Khozikode. The person from Calcutta is to the immediate left of the person from Bangalore.
- (v) Himaja is from Ahmedabad and Chandrakala is from Bangalore.
36. Who is from Indore?
 (A) Shilpa (B) Archana
 (C) Prashanthi (D) Both (A) and (B)
 (E) None of these
37. Who is sitting to the immediate left of the person from Calcutta?
 (A) Chandrakala (B) Shilpa
 (C) Archana (D) Prashanthi
 (E) Himaja
38. Who is from Lucknow?
 (A) Shilpa (B) Archana (C) Prashanthi
 (D) Vanaja (E) Chandrakala
39. Who is to the immediate right of Archana?
 (A) Vanaja (B) Himaja
 (C) Shilpa (D) Chandrakala
 (E) Vanaja
40. What is the number of girls between Shilpa and Prashanthi?
 (A) Zero (B) One (C) Two
 (D) Three (E) Four

Directions for questions 41 to 45: These questions are based on the following information.

Four boys – Anurag, Madhav, Praveen and Sreenu and four girls – Kavya, Divya, Bhavya and Navya are sitting around a round table such that no two girls are adjacent to each other. We know the following information about their seating arrangement.

- (i) Anurag is not sitting opposite Madhav.
 (ii) Navya is to the immediate left of Sreenu.
 (iii) Praveen and Anurag are adjacent to Bhavya.
 (iv) Sreenu is sitting three places away to the right of Kavya.
41. Who is to the immediate left of Praveen?
 (A) Divya (B) Kavya (C) Bhavya
 (D) Navya (E) Sreenu
42. Who is two places away to the left of Sreenu?
 (A) Anurag (B) Madhav (C) Praveen
 (D) Kavya (E) Either (A) or (B)

43. Who is sitting to the immediate right of Divya?
 (A) Anurag (B) Madhav (C) Praveen
 (D) Sreenu (E) Either (A) or (D)
44. Who is sitting three places away to the left of Divya?
 (A) Madhav (B) Anurag (C) Praveen
 (D) Sreenu (E) Bhavya
45. Which of the following is true?
 (A) Kavya and Divya are adjacent to Anurag.
 (B) Kavya and Divya are adjacent to Madhav.
 (C) Kavya and Divya are adjacent to Praveen.
 (D) Kavya and Divya are opposite to each other.
 (E) All are true.

Directions for questions 46 to 50: These questions are based on the following information.

Five boys – Kittu, Bittu, Chintu, Dattu and Mittu went to a movie and they are sitting in a row of five chairs facing the screen.

Some information regarding the order in which these five boys entered the theatre and seated in the theatre is given below.

- (i) No two boys among them went into the theatre at the same time.
 (ii) The first and the last boy to enter the theatre are not sitting at any of the extreme ends of the row.
 (iii) Chintu was sitting to the immediate left of Dattu.
 (iv) Between Bittu and Mittu exactly one boy is sitting.
 (v) The boy who came second is sitting at the extreme left of the row.
 (vi) Bittu entered fifth and Kittu entered just before Dattu.

46. Who entered first?
 (A) Kittu (B) Chintu (C) Dattu
 (D) Mittu (E) Cannot be determined
47. Who is sitting at the middle of the row?
 (A) Kittu (B) Bittu (C) Chintu
 (D) Dattu (E) Cannot be determined
48. Who is sitting at the extreme left of the row?
 (A) Mittu (B) Bittu (C) Chintu
 (D) Kittu (E) Cannot be determined
49. Who entered just before Kittu?
 (A) Mittu (B) Chintu (C) Dattu
 (D) Kittu (E) Cannot be determined
50. The boy sitting at the right end of the row is
 (A) the first boy to enter the theatre.
 (B) the second boy to enter the theatre.
 (C) the third boy to enter the theatre.
 (D) the fourth boy to enter the theatre.
 (E) cannot be determined

Exercise – 10(d)

Directions for questions 1 to 5: These questions are based on the following information.

Eight persons – P, Q, R, S, T, U, V and W sit in a row. Some are facing North and the rest are facing South. The following information is known about them.

R sits second to the left of V, one among them sits at the end. The persons who sit at the ends do not face South. There are three persons between V and W. Q sits third to the right of W who faces South. P sits to the

immediate left of T, and is adjacent to W. Only one person sits between P and U and U does not face North. P and S face different direction as T faces (i.e. if T faces North Q and S face South and vice versa) R faces the opposite direction as that of S.

1. How many persons are facing South?
 (A) Three (B) Five
 (C) Four (D) Two
 (E) None of these

2. Who sits third to the right of U?
(A) V (B) T (C) P (D) S (E) W
3. How many persons sit between T and the person who sits to the immediate right of R?
(A) Four (B) Three (C) Five
(D) Two (E) Six
4. Which of the following statements is true based on the given information?
(A) P and U face the same direction
(B) R sits to the immediate right of S
(C) U sits third to the left of T and V
(D) More than one of the above
(E) None of these
5. Four of the following five are alike in a certain way based on the given information and so form a group. Find the one which does not belong to that group.
(A) T, P (B) W, V (C) Q, U
(D) S, R (E) P, S

Directions for questions 6 to 10: These questions are based on the following information.

Seven persons A to G are sitting in a row in such a way that some are facing north and the remaining are facing south. The following information is known about their seating arrangement.

The persons who are sitting at the ends are facing north. G is sitting fourth to the left of C. F is sitting exactly between A and E. Neither G nor E is sitting at an end. A is sitting adjacent to both D and G. F and B face different directions. E and A face the same direction. F is sitting to the right of both G and E.

6. Who is sitting to the immediate right of B?
(A) A (B) C (C) D
(D) E (E) Cannot be determined
7. How many persons are sitting between D and B?
(A) Two (B) Three (C) Five
(D) One (E) None of these
8. If F is facing south, then who is sitting to the immediate left of B?
(A) A (B) G (C) E (D) F (E) D
9. Four out of the following are alike in a particular pattern and so form a group. Find the one which does not belong to that group.
(A) DC (B) GA (C) DG
(D) CG (E) EA
10. Which of the following statement(s) is/are definitely false?
(A) C and D are at ends.
(B) A is sitting to the right of E.
(C) F is adjacent to both G and B.
(D) Four persons are facing north.
(E) A is sitting fifth to the left of C.

Directions for questions 11 to 15: These questions are based on the following information.

Eight persons — A to H sit around a circular table, but not necessarily in the same order. Some of them are facing the centre and the rest are facing away from the centre. C sits three places away from E, who faces H. D sits second to the right of C but is not third to the right of E. A sits to the immediate right of F, but neither of them

is adjacent to D. The neighbours of F face the same direction but opposite to the direction in which F faces i.e., the same direction means if one person faces the centre the other one also faces the centre and vice versa, opposite directions means, if one person faces the centre, the other person faces away from the center and vice versa. B does not sit adjacent to E, but is to the immediate left of G. B and D face the same direction, which is opposite to the direction in which E faces.

11. Who faces C?
(A) None (B) A (C) B
(D) D (E) G
12. Who sits to the immediate right of H?
(A) D (B) C (C) B (D) F (E) G
13. How many persons face away from the center?
(A) One (B) Two (C) Three
(D) Five (E) Four
14. Four of the following five are alike in a certain way based on the given arrangement and hence form a group. Find the one that does not belong to the group.
(A) F, B (B) E, H (C) G, C
(D) A, H (E) B, C
15. Which of the following statements is true?
(A) A sits three places away from D.
(B) C and G face the same direction.
(C) H and A face different directions.
(D) A faces D.
(E) None of these

Directions for questions 16 to 20: These questions are based on the following information.

Eight persons - A, B, C, D, E, F, G and H – sit around a circular table. Some are facing the centre and the remaining are facing away from the centre. The following information is known about them.

B sits three places away from H. C sits second to the right of H and is adjacent to neither B nor D. G sits third to the left of D, who faces the same direction as H. (i.e., if H faces the centre, then D also faces the centre and vice versa).

B and G are adjacent to each other. F sits second to the left of A, A and D face the same direction. No two adjacent persons face the centre, F faces the centre. C and B faces different directions, (i.e., if C faces the centre, then B faces away from the centre and vice versa).

16. Who sits third to the left of E?
(A) F (B) C (C) H (D) A (E) G
17. How many persons face away from the centre?
(A) Two (B) Five (C) Six
(D) Four (E) Cannot be determined
18. How many persons sit between F and E, when counted from the left of F?
(A) Four (B) Three (C) One
(D) Two (E) Five
19. If C and H interchange their positions, then who sits second to the left of G?
(A) C (B) E (C) H (D) D (E) A

20. Four of the following five are alike in a certain way based on the given information and so form a group. Find the one which does not belong to that group.
 (A) F, D (B) C, G (C) B, A
 (D) E, G (E) H, C

Directions for questions 21 to 25: These questions are based on the following information:

Eight persons – P, Q, R, S, T, U, V and W – belong to a family and they sit around a circular table, facing the center, not necessarily in the same order. Each person in the family is related to P in some way. The following information is known about them:

- (i) P's brother sits second to the right of P, who is not adjacent to R. P's husband sits third to the left of P's brother.
- (ii) Only one person sits between P's husband and R. P's sister sits third to the right of P's son, who is a neighbour of P's brother.
- (iii) P's sister is not a neighbour of P's daughter. Q sits second to the left of R, but is not P's son.
- (iv) P's daughter sits second to the right of T.
- (v) S sits second to the right of P's father and V sits two places away from P's mother. W is not a female.

21. How many persons sit between P's husband and P's daughter, when counted to the left of P's daughter?
 (A) One (B) None (C) Six
 (D) Five (E) Four
22. Who is P's brother?
 (A) W (B) U (C) R (D) Q (E) V
23. How is R related to Q?
 (A) Wife (B) Brother-in-law
 (C) Husband (D) Mother
 (E) Father
24. Who sits second to the left of V?
 (A) P's brother (B) P's mother
 (C) P's husband (D) P's daughter
 (E) None of these
25. Four of the following are alike in a certain way and so form a group. Find the one which does not belong to that group.
 (A) P (B) U (C) Q (D) W (E) T

Directions for questions 26 to 30: These questions are based on the following information:

Eight persons – P, Q, R, S, T, U, V and W – sit around a circular table, facing the center, not necessarily in that order. All of them belong to the same family. The following information is known about them:

- (i) P sits third to the right of his brother, W. W sits second to the right of Q, who is female.
- (ii) No female sits adjacent to P. W is married to V, who is not a neighbour of W.
- (iii) T is the mother of S and sits second to the right of S's sister.
- (iv) S sits adjacent to his parents. U's mother is adjacent to U.

26. How is U related to P?
 (A) Niece (B) Nephew (C) Brother
 (D) Sister (E) Uncle

27. Who sits to the immediate right of P's son?
 (A) S's mother (B) S (C) P
 (D) P's daughter (E) W

28. How is Q related to W, if Q is married to U?
 (A) Sister-in-law (B) Brother-in-law
 (C) Son-in-law (D) Daughter-in-law
 (E) Father-in-law

29. How many persons sit between V and R, if counted from the left of V?
 (A) Three (B) Five (C) Four
 (D) One (E) none of these

30. Four of the following are alike in a certain way and so form a group. Find the one which does not belong to that group.
 (A) P (B) U (C) S (D) Q (E) W

Directions for questions 31 to 35: These questions are based on the following information.

Eight persons – K, L, M, N, U, V, W and X – are sitting around a circular table(not necessarily in the same order). Among them three are facing the center. Each one like different instruments among Violin, Flute, Guitar, Piano, Trumpet, Mandolin, Sitar and Veena. The following information is known about them.

- (1) The one who likes Flute sits in the opposite place of V who is to the immediate left of W.
- (2) The neighbors of V faces away from the center and one among them likes Trumpet.
- (3) K sits in the opposite place of the person who likes Trumpet. M and the person who likes Flute are the neighbors of K.
- (4) X likes Violin and sits second to the right of U who sits to the immediate right of the person who likes Sitar.
- (5) Either W or K likes Sitar who sits to the immediate left of the person who likes Piano.
- (6) Neither U nor N likes Trumpet. The one who likes Veena sits to the immediate right X.
- (7) V faces the center and sits to the immediate left of the person who likes Guitar.

31. Who among the given persons sits to the immediate right of N?
 (A) U
 (B) The one who likes flute
 (C) X
 (D) Both (A) and (B)
 (E) Both (B) and (C)

32. What is the position of L with respect to the one who likes guitar?
 (A) Second to the left (B) Second to the right
 (C) immediate right (D) immediate left
 (E) Third to the right

33. Which among the following is definitely true?
 (A) V likes mandolin and sits to the immediate right of W.
 (B) M sits opposite the one who likes violin.
 (C) K sits second to the left of the one who likes guitar.
 (D) Both (A) and (B)
 (E) All of the above

34. Four of the following are alike in a certain way and hence form a group. Which is the one that does not belong to that group?

(A) L – Piano (B) U – Guitar
(C) N – Piano (D) M – Trumpet
(E) X – Sitar

35. If X and K interchange their places, then who among the following sits in the opposite place of the one who likes mandolin?

(A) X
(B) The one who likes sitar
(C) K
(D) The one likes violin
(E) None of these

Directions for questions 36 to 40: These questions are based on the following information.

Eight persons – A, B, C, D, E, F, G and H – are sitting around a circular table, each of them likes a different bird among eagle, hummingbird, kingfisher, kiwi, nightingale, parrot, penguin and sparrow, but not necessarily in the same order. Some of them are facing the centre and the rest are facing away from the centre.

C is sitting to the immediate left of G, who is facing away from the centre. G likes parrot and is sitting second to the right of the person who likes kiwi. C and the person who likes kiwi are not sitting adjacent to each other. A does not like kiwi but is sitting to the immediate right of F, who likes penguin. E likes nightingale and is sitting opposite F. A and F are facing different directions. D is sitting opposite B, who is to the immediate left of the person who likes eagle. B does not like kiwi. The person who likes sparrow is to the immediate left of the person who likes kingfisher. The person who likes hummingbird is three places away from the person who likes kingfisher.

36. Who likes the hummingbird?
(A) B (B) D (C) A
(D) C (E) H
37. How many persons is/are facing the centre?
(A) One (B) Two (C) Three
(D) Four (E) Five
38. The person who likes eagle is facing the same direction as _____.
(A) B is facing
(B) the person who likes penguin is facing
(C) H is facing
(D) the person who likes parrot is facing
(E) E is facing
39. In a certain way E is related to parrot and G is related to eagle. In the same way, A is related to _____.
(A) Kingfisher (B) Sparrow
(C) Penguin (D) Hummingbird
(E) Kiwi
40. Which of the following statements is/are true?
(A) G is sitting three places to the right of F.
(B) C is facing H.
(C) D is facing the person, who likes the hummingbird.
(D) More than one of the above
(E) None of the above

Directions for questions 41 to 45: These questions are based on the following information.

Eight persons S, T, U, V, W, X, Y and Z sit around a square table, some of them facing the center and some others are facing away from the center, not necessarily in the same order. No two persons who sit opposite each other face the same direction. The following information is known about them:

- (i) S sits opposite T, who sits two places away to the left of U.
(ii) T, U and Y face the same direction. Neither X nor W sits adjacent to V, who sits at a corner.
(iii) T sits to the immediate right of X, who is facing away from the center.
(iv) W faces the center and sits opposite to neither U nor V.
(v) Y sits in the opposite place of V, who sits to the immediate left of Z.

41. Who sits in the opposite place of W?
(A) X (B) Y (C) S (D) T (E) U
42. What is the position of S with respect to V?
(A) Second to the right (B) Third to the right
(C) Second to the left (D) Third to the left
(E) None of these
43. How many persons sit between U and W when counted to the left of U?
(A) One (B) Two (C) Three
(D) Four (E) Five
44. Which of the following is definitely false?
(A) X sits opposite W. (B) V sits opposite Y.
(C) T sits opposite S. (D) Z sits opposite Y
(E) None of these
45. Four of the following are alike in a certain way and so form a group. Find the one which does not belong to that group.
(A) YS (B) WZ (C) TX
(D) SY (E) UX

Directions for questions 46 to 50: These questions are based on the following information.

Eight persons – A to H – sit around a square table facing different directions such that four persons sit at the four corners of the table and the remaining sit at centre of each side of the table. They play different games among cricket, football, volleyball, squash, badminton, tennis, kabaddi, and hockey but not necessarily in the same order. No two adjacent persons face the same direction. A plays neither cricket nor volleyball and sits second to the left of the football player. E plays either tennis or kabaddi and sits at one of the corners. Tennis player and cricket player sit opposite each other. D sits second to the right of A. Either D or G plays kabaddi. Kabaddi and cricket players sit adjacent to each other. Football player sits adjacent neither to F nor to the squash player. C sits adjacent to squash player. Volleyball player and H sit adjacent to each other. H plays neither squash nor badminton. B sits second to the right of the hockey player.

46. Who among the following plays cricket?
(A) A (B) C (C) B (D) D (E) F
47. F plays which game?
(A) Cricket (B) Volleyball (C) Kabaddi
(D) Squash (E) Badminton

48. What is the position of C with respect to the cricket player?
 (A) Immediate right (B) Immediate left
 (C) Second to the right (D) Second to the left
 (E) None of these

49. Which of the following 'player-game' combination is true?

- (A) H – Hockey (B) B – Squash
 (C) C – Football (D) G – Badminton
 (E) A – Hockey

50. Which of the following statements is/are definitely true?

- (A) B and E sit opposite each other.
 (B) A plays hockey.
 (C) C plays badminton.
 (D) Both (A) and (C)
 (E) None of these

Directions for questions 51 to 55: These questions are based on the following information:

Eight coaches – A to H sit around a rectangular table facing the center in a conference. They are associated with eight different games among cricket, football, volleyball, basketball, squash, kabaddi, badminton and tennis, but not necessarily in the same order. They sit in such a way that three persons sit at equal distance along each of the longer sides and one person sits along each of the shorter sides.

F sits second to the right of the basketball coach, who sits at one of the shorter ends. C and the kabaddi coach sit opposite each other but neither of them sits adjacent to F. Neither the cricket coach nor the squash coach is adjacent to F. The squash coach is adjacent to both C and D. H is the tennis coach and sits at one of the shorter ends. A sits to the immediate left of the volleyball coach. E sits opposite neither the squash coach nor A. G does not sit opposite the cricket coach and is not the football coach.

51. Who is the badminton coach?
 (A) A (B) E (C) C
 (D) G (E) None of these
52. D is associated with which of the following games?
 (A) basketball (B) football (C) badminton
 (D) kabaddi (E) squash
53. Who among the following sits opposite the kabaddi coach?
 (A) tennis coach (B) basketball coach
 (C) volleyball coach (D) squash coach
 (E) None of these
54. Which of the following person and associated game combinations is true?
 (A) A – volleyball (B) H – basketball
 (C) D – tennis (D) B – football
 (E) C – badminton
55. Four of the following are alike in a certain way, and hence form a group. Find the one which does not belong to that group.
 (A) B – cricket (B) E – badminton
 (C) H – basketball (D) F – volleyball
 (E) G – tennis

Directions for questions 56 to 60: These questions are based on the following information.

Eight persons A to H sit around a rectangular table such that three persons sit along each of the longer sides and one person sits at each of the shorter sides, and they are working as creative director, music director, lyrics writer, producer, story writer, movie editor, costume designer and choreographer, but not necessarily in the same order.

D sits opposite to F, the movie editor who sits along one of the shorter sides. Producer is a neighbour of both lyric writer and costume designer and each of these three persons sit along a different side. A sits adjacent to both lyric writer and choreographer. Movie editor sits second to the right of B. B sits adjacent to neither C nor H. H is not a lyric writer and does not sit opposite G. Creative director sits opposite to music director.

56. Who among the following is a story writer?
 (A) D (B) G (C) H
 (D) E (E) C
57. G is working as _____.
 (A) costume designer (B) movie editor
 (C) creative director (D) lyric writer
 (E) None of these
58. Which among the following combinations is definitely true?
 (A) B-creative director (B) A-music director
 (C) F-costume designer (D) D-music director
 (E) C-lyric writer
59. Four out of the following five are alike in a certain way and hence form a group. Find the one which does not belong to the group.
 (A) D-movie editor (B) H-story writer
 (C) E-choreographer (D) C-costume designer
 (E) F-creative director
60. Which of the following statements is/are definitely true?
 (A) G is a costume designer.
 (B) A sits opposite creative director.
 (C) E sits to the immediate left of movie editor.
 (D) Both (A) and (C).
 (E) All of the above

Directions for questions 61 to 65: These questions are based on the following information.

Eight people, A through H, joined a college and each of them should take one specialization among HR, Marketing and Finance and should play one of the games among Basketball, Volleyball and Football, not necessarily in the same order. At least two persons take one specialization and play one game. No two persons who take the same specialization play the same game.

The following information is known about them.

- (i) E takes Finance as his specialization and plays Football.
 (ii) B takes Marketing as his specialization, B and G play the same game.
 (iii) D plays Basketball. D and H take the same specialization.
 (iv) H plays Volleyball.
 (v) Either D or F takes HR as his specialization.
 (vi) G takes either HR or Finance as his specialization.
 (vii) C and H play the same game.
 (viii) A plays neither Volleyball nor Basketball.

- (ix) One person who takes Marketing plays Basketball.
 (x) Only two persons play Football. Only two persons take Marketing. F does not take Finance.

61. What is the specialization of F?
 (A) HR (B) Marketing
 (C) Finance (D) Either HR or Finance
 (E) Cannot be determined
62. Who among the following plays Volleyball?
 (A) A (B) B (C) F (D) D (E) G
63. Which among the following is/are 'definitely true'?
 (A) B – Finance – Basketball
 (B) D – HR – Basketball
 (C) E – Finance – Volleyball
 (D) G – Finance – Basketball
 (E) More than one of the above
64. Four of the following are alike in a certain way and so form a group. Find the one which does not belong to that group.
 (A) A – HR (B) B – Marketing
 (C) G – Finance (D) H – HR
 (E) C – Volleyball
65. Which of the following pairs plays Volleyball?
 (A) CF (B) AC (C) BC (D) FG (E) GH

Directions for questions 66 to 70: These questions are based on the following information

Eight persons – P, Q, R, S, T, U, V and W are from different villages among – I to VIII, and belong to a different tribe among – XAM, TAM and CAM. At least two and at most three persons belong to the same tribe.

P and R belong to TAM but neither of them is from III. Q is either from VII or IV. S does not belong to TAM. V belongs to CAM. T is from VIII. U, W and Q belong to the same tribe. The persons who belong to XAM are neither from IV nor from II. S is from I. The persons belonging to TAM are not from VI. The person from V is neither W nor belongs to TAM. The person from III does not belong to XAM.

66. Who is from II?
 (A) P (B) U (C) R
 (D) V (E) Cannot be determined
67. Who is from III?
 (A) U (B) V (C) W
 (D) U or V (E) V or W
68. Which of the following combinations is true, based on the given information?
 (A) P – II – TAM (B) R – IV – TAM
 (C) T – VIII – CAM (D) W – VI – XAM
 (E) None of these
69. Which among the following groups of persons belongs to different tribes?
 (A) P, Q, R (B) R, S, V (C) S, W, U
 (D) Q, U, V (E) U, V, R
70. Which among the following statements is true, based on the given information?
 (A) T belongs to TAM.
 (B) Q is from IV.
 (C) U is from V.
 (D) W does not belong to XAM.
 (E) None of these

Key

Exercise – 10(a)

- | | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. C | 6. A | 11. E | 16. D | 21. C | 26. A | 31. C | 36. D | 41. A | 46. A |
| 2. E | 7. C | 12. B | 17. C | 22. A | 27. B | 32. A | 37. C | 42. E | 47. D |
| 3. A | 8. B | 13. D | 18. A | 23. E | 28. B | 33. C | 38. B | 43. E | 48. C |
| 4. E | 9. B | 14. A | 19. A | 24. C | 29. E | 34. B | 39. A | 44. D | 49. C |
| 5. A | 10. A | 15. B | 20. E | 25. A | 30. D | 35. D | 40. C | 45. C | 50. B |

Exercise – 10(b)

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|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. B | 6. B | 11. E | 16. C | 21. D | 26. E | 31. A | 36. A | 41. C | 46. D |
| 2. C | 7. A | 12. D | 17. A | 22. A | 27. A | 32. D | 37. D | 42. E | 47. B |
| 3. B | 8. C | 13. D | 18. C | 23. D | 28. B | 33. D | 38. B | 43. A | 48. C |
| 4. E | 9. C | 14. C | 19. B | 24. A | 29. D | 34. D | 39. C | 44. E | 49. D |
| 5. D | 10. B | 15. A | 20. E | 25. D | 30. C | 35. A | 40. C | 45. C | 50. C |

Exercise – 10(c)

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|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. C | 6. B | 11. E | 16. D | 21. A | 26. B | 31. D | 36. C | 41. A | 46. B |
| 2. A | 7. C | 12. B | 17. D | 22. C | 27. B | 32. A | 37. B | 42. B | 47. B |
| 3. D | 8. D | 13. A | 18. E | 23. B | 28. E | 33. D | 38. D | 43. C | 48. A |
| 4. D | 9. A | 14. C | 19. D | 24. C | 29. D | 34. C | 39. D | 44. A | 49. A |
| 5. E | 10. D | 15. A | 20. E | 25. A | 30. D | 35. B | 40. E | 45. D | 50. D |

Exercise – 10(d)

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|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. C | 8. D | 15. B | 22. A | 29. B | 36. A | 43. D | 50. D | 57. A | 64. E |
| 2. B | 9. B | 16. D | 23. C | 30. D | 37. E | 44. D | 51. D | 58. E | 65. A |
| 3. D | 10. E | 17. C | 24. C | 31. C | 38. D | 45. E | 52. A | 59. E | 66. E |
| 4. C | 11. E | 18. A | 25. D | 32. A | 39. C | 46. C | 53. C | 60. D | 67. B |
| 5. E | 12. A | 19. C | 26. B | 33. B | 40. C | 47. B | 54. D | 61. B | 68. D |
| 6. E | 13. C | 20. D | 27. C | 34. B | 41. A | 48. C | 55. E | 62. C | 69. E |
| 7. B | 14. E | 21. C | 28. D | 35. E | 42. B | 49. A | 56. D | 63. E | 70. C |