DATA ARRANGEMENT TEST

Contents

1.1.11 DATA ARRANGEMENT TEST

In these types of questions, first of all diagrams should be made. By doing so questions are easily solved. The data can be arranged either in linear or Complex (includes Circular, rectangular, hexagonal and diagonal).

1.1.11.1 Linear Arrangement Test

In these types of questions arrangement is done in a linear (straight line) fashion. These types of problems are based on either the arrangement of objects (in a row, table, or cottages).

1.1.11.1.1 Linear Sitting Arrangement

Example: Six friends went on a vacation to a hill station. They are to be accommodated in a row of nine cottages, each to a cottage. Mohan, Tanya and Roma do not want to live in a cottage at the end of the row. Babu and Mohan must not have anybody adjacent to their cottages. There is only an empty cottage between Mohan and Roma. Chander is adjacent to both Jayanthi and Roma. Tanya is next to the cottage at the beginning.

Q1: Who has empty cottages on both sides?

1) Roma 2) Babu 3) Mohan 4) Tanya

Q2: Who is in the third cottage?

1) Jayanthi 2) Chander 3) Nobody 4) Roma

Q3: Which cottages are empty?

1) 1, 6, 8 2) 1, 5, 8 3) 4, 5, 6 4) 5, 6, 8

Q4: What is the maximum number of consecutive cottages that are occupied?

1) 2 2) 3 3) 1 4) 4

Answer: (i) Identify the elements: Mohan (M), Tanya (T), Babu (B), Roma (R), Chander(C) and Jayanthi (J).

(ii) Identify the positions: These 6 friends have 1 2 3 4 5 6 7 8 9 to occupy 6 out of 9 cottages.

(iii) Using the conditions:

a) M, T and R do not want to live in a cottage at the end of the row (9^{th} cottage): ~R, ~T, ~M

b) B and M must not have anybody adjacent to their cottages:

× B × and × M ×

c) There is 1 empty cottage between M and R: M × R or R × M

(If the cottage is empty then nobody occupies it)

d) C is adjacent to both J and R J C R or R C J

e) T is next to the cottage at the beginning 1 2 3 4 5 6 7 8 9

T

We need to confirm to all the conditions to arrive at the answer. Look out for the person or element which is common to 2 or more conditions. We find that R is common to conditions (c) and (d).

We form a chain J C R × M or M × R C J

Also, since there must not be anybody adjacent to M (condition (b)) we have

J C R × M × or × M × R C J

The other elements are × B × and T

Position of T is fixed at 2. R, T, M cannot be at position 1 and 9 (condition (a)). Also J, C and B cannot be at position 1 (condition (b) and (d)). Thus, either R or J can occupy position 3.

R should have a vacant place followed or preceded by M on one side and C on the other. Both these conditions cannot be fulfilled simultaneously if R is placed at position 3. Hence, J must be at position 3. Thus, C will be at position 4 and R at position 5 followed by an empty cottage at position 6. Therefore, M is at position 7 followed by an empty cottage and B is at position 9. Therefore, the final arrangement will look like:

1	2	3	4	5	6	7	8	9
X	T	J	C	R	X	M	X	B

1) Only Mohan has empty cottages on both the sides. Hence, [3]
2) Jayanthi is in the third cottage. Hence, [1]
3) The first, sixth and eight cottages are empty. Hence, [1]
4) Maximum four consecutive cottages are occupied. Hence, [4]

1.1.11.1.2 Linear Arrangement of Letters & Numbers

In this type of questions, a linear arrangement of letters, numbers and symbols are given. Based on this arrangement you have to answer the questions.

Illustration: Based on the following arrangement answer the following questions:

£ L M P 2 = 3 V D ⋆ 9 C F @ ÷ 4 N T $ 7 W ? H K 6

Example:

If all the digits are removed from the arrangement, then which of the following will be the 6th to the left of the 14th element from the left end?

Answer: ⋆

After removing the digits from the given arrangement, we have
£ L M P = V D ⋆ C F @ ÷ N T $ W ? H K
From left the 14th element is 'T' and the 6th left of it is '⋆'.

Example:

If all the letters are removed from the arrangement, then which of the following will be the 8th to the right of the 13th element from the right end?

Answer: 4
£ 2 = 3 ⋆ 9 @ ÷ 4 $ 7 ? 6
From right the 13th element is '£' and 8th element right to that is '4'.

Example:

How many such symbols are there in the arrangement, each of which is immediately followed by a letter but not immediately preceded by a digit?

Answer: One

£ L M P 2 = 3 V D ⋆ 9 C F @ ÷ 4 N T $ 7 (?) H K 6

The circled element follows the rule mentioned.

Example:

Four of the following five are alike in a certain way based on the position of their elements in the arrangement and so form a group. Which is the one that does not belong to the group?

1) LM =£ 2) 9F4⋆ 3) VDC3 4) ÷ 4$@ 5) 7WK$

Answer: 9F4⋆

See the gap between each two successive elements of each group.

1) L + 1	M+3	=– 5	£
2) **9 + 2**	**F+3**	**4– 6**	**⋆**
3) V + 1	D+3	C– 5	3
4) ÷ + 1	4+3	$– 5	@
5) 7+ 1	W+3	K– 5	$

1.1.11.2 Complex Arrangement Test

This includes questions based on circular, rectangular, hexagonal and diagonal arrangements.

The most important point of concern in complex arrangement is to understand the problem and draw a matrix illustrating all the given points of the basic structure of the argument.

Example:

There are four friends A, B, C and D. They drink two soft drinks, Coke, Pepsi with favourite heroes' beings Brad Pitt and Tom Cruise. They drive a bike and a car.

1. A drives a bike but not a car, drinks Coke and Pepsi and likes Brad Pitt.
2. B drives both and drinks Pepsi and likes Tom Cruise.
3. C drives car and drinks nothing but likes both Brad Pitt and Tom Cruise.
4. D drives nothing, drinks nothing but likes both Brad Pitt and Tom Cruise.

Q1: A and D always go together so they watch _____ movie and go by ____.

1) Tom, car 2) Tom and Brad, bike
3) Tom, Bike 4) Brad, Bike

Q2: If D has to watch a Tom Movie, and has a bike, who does he go with?

1) C 2) A 3) B 4) (A) or (B)

Q3: Which of the following is true?

(i) A drinks Coke, because he likes Brad.
(ii) Among the four friends, those who love Tom drink Pepsi.
(iii) Among the four friends, those who drink Pepsi drive a bike.

1) (i) 2) (ii) 3) (iii) 4) (i) and (ii)

Q4: Which of the following is/are true?

(i) The person driving a car has Pepsi.
(ii) The person who likes Tom drives a bike.

1) only (i) is true 2) only (ii) is true
3) both are true 4) neither is true

Q5: If C goes for Brad movie on bike, then he goes with:
1) A 2) B 3) D 4) A & D

Answer:

For answer to examples 1 to 5:

	Drink	Actor	Vehicle
A	C & P	BP	B
B	P	TC	B & C
C	×	BP & TC	C
D	×	BP & TC	×

1) D does not drive any vehicle, but A can drive a bike and the common actor that they like is Brad Pitt. So answer is [4]

2) The only person who can drive a bike and likes Tom Cruise is B. Hence, [3]

3) Only (iii) is true. Hence, answer is [3].

4) Neither of the statement is true. Hence, answer is [4].

5) The only person who like Brad and drives a bike is A. Hence, answer is [1]