06

Ranking Test

This chapter broadly deals with the problems related to the arrangement of persons/objects in ascending/descending order (based on different parameters like-height, weight, merit, position etc.) and determining the position of a person/object in a row/queue.

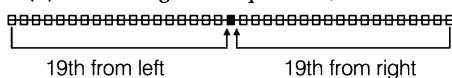*There are two types of problems that are asked from Ranking Test.*

1. Position Based

In this type of questions, the rank or position of a person(s) from either of the two ends of a row/queue is given and it is asked to determine the total number of persons in the group or the number of persons to the left/right (or above/below) of a particular person etc.

Example 1 In a class, boys stand in a single row. One of the boy is nineteenth in order from both the ends. How many boys are there in the row?
(a) 27   (b) 37   (c) 38   (d) 39

Sol. (*b*) According to the question,

19th from left   19th from right

Clearly, number of boys in the row
$$= (18 + 18 + 1) = 37$$

Example 2 In a class of 42 students, Mahesh's rank is 16th from the bottom. What is his rank from the top?
(a) 25th   (b) 26th
(c) 24th   (d) 27th

Sol. (*d*) Number of students ahead of Mahesh
$$= 42 - 16 = 26$$
Now, Mahesh's rank from top = 26 + 1 = 27
So, Mahesh's rank is 27th from the top.

Example 3 Anu and Vinay are ranked seventh and eleventh, respectively from the top in a class of 31 students. What will be their respective ranks from the bottom in the class?
(a) 20th and 24th   (b) 24th and 20th
(c) 25th and 21st   (d) None of these

Sol. (*c*) Number of students after Anu in the class
$$= (31 - 7) = 24$$
Now, Anu's rank from bottom = 24 + 1 = 25
So, Anu is 25th from the bottom.
Number of students after Vinay in the class
$$= 31 - 11 = 20$$
Now, Vinay's rank from bottom = 20 + 1 = 21
So, Vinay is 21st from the bottom.

☑ Rank of person from lower end = (Total number of persons in row) − (Rank of person from upper end) + 1

2. Arrangement Based

It involves ordering of two or more persons/things based on the comparison of parameters such as age, height, marks, salary, weight, length, size etc.

Questions based on this type are generally given with a set of information in jumbled form. Based on this, the candidates are required to systematically arrange the given information and determine the correct order of arrangement of the various persons/objects.

Example 4 There are five friends–Sachin, Kamal, Mohan, Arun and Ram. Sachin is shorter than Kamal, but taller than Ram. Mohan is the tallest. Arun is a little shorter than Kamal and a little taller than Sachin. Who is the second tallest?
(a) Ram   (b) Sachin (c) Kamal (d) Arun

Sol. (c) According to the question,
Mohan > Kamal > Sachin > Ram
and Kamal > Arun > Sachin
On arranging the above data, we get
Mohan > Kamal > Arun > Sachin > Ram
It is clear that the second tallest is Kamal.

⏰ Practice Exercise

1. Rashmi is 14th from the right end in a row of 40 girls. What is her position from the left end?
   (a) 25th   (b) 27th
   (c) 21st   (d) None of these

2. Kavi ranked 9th from the top and 38th from the bottom in a class. How many students are there in the class?
   (a) 45   (b) 42   (c) 46   (d) 44

3. A class of girls stands in a single line. One girl is 19th in order from both the ends. How many girls are there in the class?
   (a) 27   (b) 37   (c) 38   (d) 39

4. In class of 45 students, rank of Ayush is 15 from top, then rank of Ayush from bottom is
   (a) 30   (b) 32   (c) 31   (d) 35

5. In a row of boys, Jeevan is 7th from the start and 11th from the end. In another row of boys, Vikas is 10th from the start and 12th from the end. How many boys are there in both the rows together?
   (a) 38
   (b) 40
   (c) 32
   (d) Cannot be determined

6. Some boys are sitting in a row. P is sitting fifteenth from the left and Q is sixth from the right. If there are five boys between P and Q, how many boys are there in a row?
   (a) 30   (b) 26   (c) 25   (d) 24

7. In a class of thirty students, Mahesh is 14th from the left and Ramesh is 20th from the right end. How many students are there between Ramesh and Mahesh?
   (a) 3   (b) 2
   (c) 4   (d) Data inadequate

8. Seema's younger brother Sohan is older than Seeta. Sweta is younger than Deepti but elder than Seema. Who is the eldest?
   (a) Seema (b) Sweta (c) Seeta (d) Deepti

9. Barun is taller than Sanjay. Bipul is taller than Barun. Krishna is also not as tall as Bipul but is taller than Barun. Who is the tallest?
   (a) Barun   (b) Bipul   (c) Krishna (d) Sanjay

10. Anil is taller than Sunny and Sunny is shorter than Baby. Anil is taller than Bose whose height is less than Sunny. Baby is shorter than Anil. Who is the shortest among them?
    (a) Anil   (b) Baby   (c) Sunny (d) Bose

11. N is more intelligent than M. M is not as intelligent as Y. X is more intelligent than Y but not as good as N. Who is the most intelligent of all?
(a) N   (b) M   (c) X   (d) Y

12. A, B, C, D and E each has different heights. D is shorter than only B. E is shorter than A and C. Who is the shortest of them?
(a) E   (b) A
(c) C   (d) Data inadequate

13. A, B, C and D are four buildings in a residential complex. Each has different heights. A is higher than only D, B is shorter than C but higher than A. Which of the following buildings is the highest?
(a) D   (b) C   (c) B   (d) A

14. Each of P, Q, T, A and B has different heights. T is taller than P and B but shorter than A and Q. P is not the shortest. Who is the tallest?
(a) A
(b) Q
(c) P
(d) Cannot be determined

15. Mukesh is taller than Suresh but shorter than Rakesh. Rakesh is taller than Harish but shorter than Amar. Who among them is the shortest?
(a) Mukesh
(b) Suresh
(c) Harish
(d) Cannot be determined

Answers

1	(b)	2	(c)	3	(b)	4	(c)	5	(a)	6	(b)	7	(b)	8	(d)	9	(b)	10	(d)
11	(a)	12	(a)	13	(b)	14	(d)	15	(d)										

Hints & Solutions

1. Number of girls to the left of Rashmi
$$= 40 - 14 = 26$$
∴ Rashmi's position from the left end
$$= 26 + 1 = 27\text{th}$$

2. Number of students ahead of Kavi $= 9 - 1 = 8$
Number of students after Kavi $= 38 - 1 = 37$
∴ Total number of students in the class
$$= 8 + 37 + 1 = 46$$

3. Number of girls to the left of that girl $= 18$
Number of girls to the right of that girl $= 18$
∴ Total number of girls in the line
$$= 18 + 18 + 1 = 37$$

4. Number of students after Ayush $= 45 - 15 = 30$
∴ Rank of Ayush from bottom $= 30 + 1 = 31$ st

5. Total number of boys
= (Number of boys in Jeevan's row)
       + (Number of boys in Vikas's row)
$$= (6 + 1 + 10) + (9 + 1 + 11) = (17 + 21) = 38$$

6.
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                P   5 Boys   Q
         •——————————————————————•
From left  15th          6th   From right
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∴Total number of boys in the row $= 15 + 5 + 6 = 26$

7.
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                20th      14th
         |——————×————————×——————————————|
Left        Ramesh    Mahesh          Right
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Number of students to the left of Ramesh
$$= 30 - 20 = 10$$
Ramesh's position from left $= 10 + 1 = 11$th
Mahesh's position from left $= 14$th
Clearly, there are 2 students in between Ramesh and Mahesh.

8. According to the question, sequence is as follows
Deepti > Sweta > Seema > Sohan > Seeta
So, Deepti is the eldest.

9. The information given in the question may be arranged as follows
Bipul > Krishna > Barun > Sanjay
So, Bipul is the tallest.

10. According to the question,
Anil > Sunny; Baby > Sunny
Anil > Sunny > Bose; Anil > Baby
On arranging the above data, we get
Anil > Baby > Sunny > Bose
So, shortest person is Bose.

11. According to the question,
$$N > M; \ Y > M$$
$$N > X > Y$$
On arranging the above data, we get
$$\therefore \quad Ⓝ > X > Y > M$$
So, N is the most intelligent among them.

12. According to the question,
$$B > D, \ A/C > E$$
$$\therefore \quad B > D > A/C > Ⓔ$$
Clearly, E is the shortest among them.

13. According to the question,
$$A > D$$
$$C > B > A$$
$$\therefore \quad Ⓒ > B > A > D$$
So, highest building is C.

14. According to the question,
$$A/Q > T > P/B$$
But P is not the shortest.
$$\therefore \quad ⒶⓆ > T > P > B$$
So, tallest is either A or Q.

15. According to the question,
$$Rakesh > Mukesh > Suresh$$
$$Amar > Rakesh > Harish$$
The relation between Harish and Suresh cannot be established from the given information.
So, it is not possible to find out the shortest person.

➔ Try Yourself

1) In a class of students, Sandeep is 25th from top and 32nd from bottom, then total number of students in the class is
(a) 56   (b) 50   (c) 57   (d) 58

2) In a queue, Sohan is 10th from left and 28th from right. How many people in the queue?
(a) 38   (b) 35   (c) 37   (d) 42

3) Surbhi ranks 18th in a class of 49 students. What is her rank from the last?
(a) 31   (b) 28   (c) 35   (d) 32

4) Sunita is the 11th from either end of a row of girls. How many girls are there in that row?
(a) 19   (b) 20   (c) 21   (d) 22

5) Vinay is taller than Hansika, Hansika is taller than Abhay, Aalok is taller than Ashok and Ashok is taller than Vinay. Who is the shortest in the group?
(a) Aalok   (b) Ashok
(c) Hansika   (d) Abhay

6) In a group of five persons, Kamal is the tallest while Lata is the shortest. Rashmi is shorter than Kamal but taller than Vandana and Prem. Prem is second shortest person in the group. Who is the third tallest?
(a) Vandana   (b) Rashmi
(c) Prem   (d) Lata

7) Sunil is heavier than Abhinav but not as heavier as Rajiv. Abhinav is heavier than Jayesh. Kashi is heavier than Sunil but not as heavier as Rajiv. Who is the heaviest?
(a) Sunil   (b) Abhinav
(c) Rajiv   (d) Kashi

8) Vikash is more competent than Keshav, Shiv is less competent than Aashu but more competent than Keshav. Vikash is less competent than Shiv. Who is the most competent in the group?
(a) Aashu   (b) Keshav
(c) Vikash   (d) Shiv

9) Sati is elder than Renu, Geeta is younger than Renu while Priya is elder than Sati. Who is the eldest?
(a) Priya   (b) Sati   (c) Renu   (d) Geeta

10) Each of J, K, L, M and N have different heights. M is shorter than only J.K is not as tall as N and N is shorter than L. Who is the shortest of them?
(a) J   (b) N
(c) K   (d) L

Answers

1	*(a)*	2	*(c)*	3	*(d)*	4	*(c)*	5	*(d)*
6	*(a)*	7	*(c)*	8	*(a)*	9	*(a)*	10	*(c)*