

Mathematics

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(Chapter – 13) (Statistics & Probability)(Exemplar Problems)
(Class – X)

Exercise 13.1

Choose the correct answer from the given four options:

Question 6:

For the following distribution,

Class	0 – 5	5 – 10	10 – 15	15 – 20	20 – 25
Frequency	10	15	12	20	9

The sum of lower limits of the median class and modal class is

- (A) 15 (B) 25 (C) 30 (D) 35

Answer 6:

- (B) 25

Solution:

Here,

Class	Frequency	Cumulative Frequency
0 – 5	10	10
5 – 10	15	24
10 – 15	12	37
15 – 20	20	57
20 – 25	9	66

Now,

$$\frac{N}{2} = \frac{66}{2} = 33,$$

Which lies in the interval 10 – 15.

Therefore lower limit of the median class is 10.

The highest frequency is 20, which lies in the interval 15 – 20. Therefore, lower limit of modal class is 15. Hence, required sum is $10 + 15 = 25$.

Hence, the option (B) is correct.

