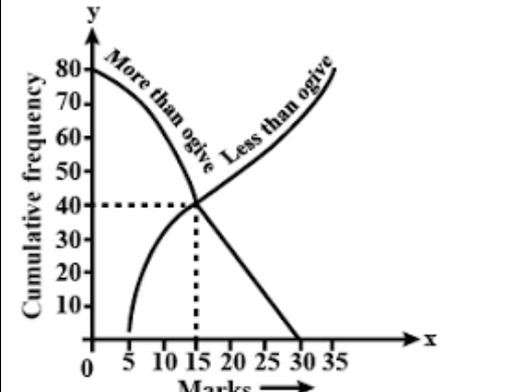# Statistics

I – Choose the correct alternative and write the complete answer along with its letter of alphabet.

1. In figure the value of the median of the data using the graph of less than Ogive and more than ogive is A] 5 B] 40 C] 80 D] 15	

2. For the following distribution.

Marks less than	10	20	30	40	50	60
No of students	3	12	27	57	75	80

   The modal class is:

   A] 10-20   B] 20- 30   C] 30 – 40   D] 50 – 60

3. If mode of a data is 45, mean is 27, then median is:

   A] 30   B] 27   C] 33   D] none

4. For a symmetrical distribution, which is correct

   A] Mean > Mode > Median   B] Mean < Mode < Median

   C] Mode = $\frac{Mean+Median}{2}$ D] Mean = Median = Mode

5. The relation connecting the measures of central tendencies is:

   A] mode = 2 median – 3 mean   B] mode = 3 median – 2 mean

   C] mode = 2 median + 3 mean   D] mode = 3 median + 2 mean

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6. The mean and median of a data are 14 and 15 respectively. The value of mode is

     A] 16   B] 17   C] 13   d] 18

7. If mode of the following data is 7, then value of k in

   2,4,6,7,5,6,10,6,7,2k+1,9,7,13 is :

     A] 3   B] 7   C] 4   D] 2

8. If mode = 80 and mean = 110 then the median is:

     A] 110   B] 120   C] 100   D] 90

9. The upper limit of the median class of the following distribution is:

Class	0 – 5	6 – 11	12 – 17	18 – 23	24 - 29
Frequency	13	10	15	8	11

  A] 17   B] 17.5   C] 18   D] 18.5

10. The measure of central tendency is given by the x coordinate of the point of intersection of the more than ogive and less than ogive is:

     A] Mean   B] Median   C] Mode   D] All the above

11. Construction of a cumulative frequency table is useful in determining the

A] mean   B] median   C] mode   D] All the above three measures

12. The measures of central tendency which can't be found graphically is:

     A] mean   B] median   C] mode   D] none of these

13. Which of the following is not a measure of central tendency:

    A] mean   B] median   C] range   D] mode

14. A data has 25 observations (arranged in descending order). Which Observation represents the median?

    A] 12th   B] 13th   C] 14th   D] 15th

15. For a given data with 50 observations the 'Less than ogive' and the 'more than ogive' intersect at (15.5, 20). The Median of the data is

    A] 4.5   B] 20   C] 50   D] 15.5

16. For a given data with 40 observations the less than ogive and the more than Ogive intersect at (20.5, 1). The Median of the data is:

    A] 5.5   B] 20.5   C] 15   D] 40

17. The class mark of Class Interval is

    A] Lower limit + Upper limit   B] Upper limit – Lower limit

    C] $\frac{1}{2}$(Lower limit + Upper limit)   D] $\frac{1}{4}$(Lower limit + Upper limit)

18. One of the methods of determining mode is

    A] Mode = 2 Median – 3 Mean   B] Mode = 2 Median + 3 Mean

    C] Mode = 3 Median – 2 Mean   D] Mode = 3 Median + 2 Mean

19. The arithmetic mean of 1, 2, 3,-------n is

    A] $\frac{n-1}{2}$ B] $\frac{n+1}{2}$ C] $\frac{n}{2}$ D] $\frac{n}{2} + 1$

20. Mode is

    A] Least frequent value   B] middle most value

    C] Most frequent value   D] none of these

21. The algebraic sum of the deviations of a frequency distribution from its mean is

A] always positive   B] always negative   C] 0 D] a non zero number

22. Which of the following cannot be determined graphically?

A] mean   B] median   C] mode   D] none of these

23] The times, in seconds, taken by 150 athletes to run a 110m hurdle race are

Class	13.8 -14	14 -14.2	14.2-14.4	14.4 – 14.6	14.6 – 14.8	14.8 - 15
Frequency	2	4	5	71	48	20

The number of athletes who completed the race in less than 14.6 seconds is:

A] 11   B] 71   C] 82   D] 130

24. Consider the following distribution:

Marks obtained	Number of students
More than or equal to 0	63
More than or equal to 10	58
More than or equal to 20	55
More than or equal to 30	51
More than or equal to 40	48
More than or equal to 50	42

The frequency of the class (30 – 40) is

A] 3   B] 4   C] 48   D] 51

25. The abscissa of the point of intersection of the less than type and of the more than type cumulative frequency curves of a grouped data gives its

A] mean   B] median   C] mode   D] all the three above

26. 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

27. For the following distribution:

Class	0- 5	6 – 11	12 – 17	18 - 23	24 - 29
Frequency	13	10	15	8	11

The upper limit of the median class is:

A] 17   B] 17.5   C] 18   D] 18.5

28. for the following distribution:

Marks	Number of students
Below 10	3
Below 20	12
Below 30	27
Below 40	57
Below 50	75
Below 60	80

The modal class is

A] 10 – 20   B] 20 – 30   C] 30- 40   D] 50 – 60

29. Consider the data:

Class	65-85	85-105	105-125	125-145	145-165	165-185	185-205
Frequency	4	5	13	20	14	7	4

The difference of the upper limit of the median class and the lower limit of the Modal class is:

A] 0   B] 19   C] 20   D] 38

30. Average of first ten prime numbers is:

A] 12.6   B] 12.9   C] 13.9   D] 14.9

31. In the following distribution:

Monthly income range (in ₹)	Number of families
Income more than ₹ 10000	100
Income more than ₹ 13000	85
Income more than ₹ 16000	69
Income more than ₹ 19000	50
Income more than ₹ 22000	33
Income more than ₹ 25000	15

The number of families having income range (in ₹) 16000-19000 is

A] 15   B] 16   C] 17   D] 19

32. Consider the following frequency distribution of the heights of 60 Students of a class:

Height (in cm)	Number of Students
150-155	15
155-160	13
160-165	10
165-170	8
170-175	9
175-180	5

The sum of the lower limit of the modal class and upper limit of the median class is

A] 310   B] 315   C] 320   D] 330

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33. What is the arithmetic mean of 30,20,32,16 and 27 ?

    A] 23   B] 24   C] 25   D] 26

34. While computing mean of grouped data, we assume that the frequencies are

    A] evenly distributed over all the classes

    B] centred at the class marks of the classes

    C] centred at the upper limits of the classes

    D] centred at the lower limits of the classes

35. Mean of 11 observations is 50. If the mean of first six observations is 49 and that of last six observation is 52, then the sixth observation will be:

    A] 55   B] 56   C] 57   D] 58