

CHAPTER 13- STATISTICS

1. The mean of the observations given by:

- (a) Sum of observations/Total number of observations
- (b) Total number of observations/Sum of observations
- (c) Sum of observations +Total number of observations
- (d) None of the above

Answer: (a) Sum of observations/Total number of observations

2. If the mean of frequency distribution is 7.5 and $\sum f_i x_i = 120 + 3k$, $\sum f_i = 30$, then k is equal to:

- (a) 40
- (b) 35
- (c) 50
- (d) 45

Answer: (b) 35

3. The median of first seven prime numbers is:

- (a) 3
- (b) 5
- (c) 7
- (d) 11

Answer: (c) 7

4. The mean of the data: 4, 10, 5, 9, 12 is;

- (a) 8
- (b) 10
- (c) 9
- (d) 15

Answer: (a) 8

5. The median of the data 13, 15, 16, 17, 19, 20 is:

- (a) $30/2$
- (b) $31/2$
- (c) $33/2$
- (d) $35/2$

Answer: (c) $33/2$

6. If the mean of first n natural numbers is $3n/5$, then the value of n is:

- (a) 3
- (b) 4
- (c) 5
- (d) 6

Answer: (c) 5

7. The mean of first five whole numbers is:

- (a) 2
- (b) 3
- (c) 4
- (d) 5

Answer: (a) 2

8. If mean of a , $a+3$, $a+6$, $a+9$ and $a+12$ is 10, then a is equal to;

- (a) 1 (b) 2 (c) 3 (d) 4

Answer: (d) 4

9. The class interval of a given observation is 10 to 15, then the class mark for this interval will be:

- (a) 11.5 (b) 12.5 (c) 12 (d) 14

Answer: (b) 12.5

10. If the sum of frequencies is 24, then the value of x in the observation: $x, 5, 6, 1, 2$, will be;

- (a) 4 (b) 6 (c) 8 (d) 10

Answer: (d) 10

11. The mean of following distribution is:

X_i	11	14	17	20
F_i	3	6	9	7

- (a) 15.6 (b) 17 (c) 14.8 (d) 16.4

Answer: (d) 16.4

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

- (a) mean (b) median (c) mode (d) all the above three measures

Answer: (b) median

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

- (a) centred at the class marks of the classes (b) evenly distributed over all the classes
(c) centred at the upper limits of the classes (d) centred at the lower limits of the classes

Answer: (a) centred at the class marks of the classes

14. Consider the following frequency distribution of the heights of 60 students of a class:

Height (in cm)	150 – 155	155 – 160	160 – 165	165 – 170	170 – 175	175 – 180
Number of students	15	13	10	8	9	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

Answer: (b) 315

20. The method used to find the mean of a given data is (are):

- (a) direct method (b) assumed mean method (c) step deviation method (d) all the above

Answer: (d) all the above

21. For what value of x , the mode of the following data is 8:

4, 5, 6, 8, 5, 4, 8, 5, 6, x , 8

- (a) 5 (b) 6 (c) 8 (d) 4

Answer: (c) 8

22. The numbers are arranged in ascending order. If their median is 25, then $x = ?$

5, 7, 10, 12, $2x-8$, $2x+10$, 35, 41, 42, 50

- (a) 10 (b) 11 (c) 12 (d) 9

Answer: (c) 12

23. If the value of mean and mode are respectively 30 and 15, then median =?

- (a) 22.5 (b) 24.5 (c) 25 (d) 26

Answer: (c) 25

24. For the following distribution.

Marks	0-10	10-20	20-30	30-40	40-50
No. of students	3	9	13	10	5

the number of students who got marks less than 30 is

- (a) 13 (b) 25 (c) 10 (d) 12

Answer: (b) 25

25. If the median of the distribution is 28.5, find the value of x .

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60	Total
Frequency	5	x	20	15	7	5	60

- (a) 8 (b) 10 (c) 4 (d) 9

Answer: (a) 8

26. For the following distribution

Class interval	0-5	5-10	10-15	15-20	20-25
frequency	10	15	12	20	9

the sum of lower limit and upper limit of modal class

- (a) 20 (b) 15 (c) 30 (d) 35

Answer. (d) 35

27. 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 median class and modal class is:

- (a) 15 (b) 25 (c) 30 (d) 35

Answer: (b) 25

28. If 35 is removed from the data 30, 34, 35, 36, 37, 38, 39, 40 then the median increases by:

- (a) 2 (b) 1.5 (c) 1 (d) 0.5

Answer: (d) 0.5

29. For one term, absentee record of students is given below. If mean is 15.5, then the missing frequencies x and y are:

Number of days	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	TOTAL
Total Number of students	15	16	x	8	y	8	6	4	70

- (a) $x = 4$ and $y = 3$ (b) $x = 7$ and $y = 7$ (c) $x = 3$ and $y = 4$ (d) $x = 7$ and $y = 6$

Answer: (d) $x = 7$ and $y = 6$

30. If each observation increases by 2, then the mean of observations:

- (a) decrease by 2 (b) increase by 2 (c) remain same (d) none of these

Answer: (b) increase by 2