TOPICS : Introduction to Statistics & Statistical Description of Data, Measures of Central Tendency of Averages, Measures of Dispersion

1. The perpendicular line drawn from the intersection of two ogives which touches at _____ point in X-axis.

(a) Median   (b) Mode   (c) Third quartile   (d) First quartile

2. The Primary rules that should be observed in classification

i) As far as possible the class should be of equal width

ii) The Classes should be exhaustive

iii) The Classes should be unambiguously defined.

Then which of the following is correct

(a) Only (i) and (ii)   (b) Only (ii) and (iii)

(c) Only (i) and (iii)   (d) all (i), (ii) and (iii)

3. If for a symmetrical distribution $Q_1 = 20$ and $Q_3 = 30$, find the median.

(a) 20   (b) 25   (c) 30   (d) 15

4. G.M is less than H.M

(a) true   (b) false   (c) both   (d) none

5. The variance of first ten natural number is -10.

(a) False   (b) True   (c) (a) or (b)   (d) none of these

6. Which of the following companies show high variation in stock prices if range is used for analysis?

Company 'a'	12	34	45	23	34	56	34	23
Company 'b'	23	45	56	23	23	78	45	23

(a) a   (b) b   (c) Both (a) and (b)   (d) None

7. Statistics deals with –

(a) Independent data   (b) Quantitative data

(c) Qualitative data   (d) Both (b) and (c)

8. The accuracy and consistency of data can be verified by

(a) Internal Checking   (b) External Checking

(c) Scrutiny   (d) Both (a) and (b)

9. Mean is influenced by extreme values.

    (a) true   (b) false   (c) both   (d) none

10. If the relationship between two variables u and v is given by equation $2u + 1/5v = 10$ and the mode of the variable u is 10, then find the mode of v?

    (a) -20   (b) 10   (c) -50   (d) None of the above

11. Calculate the mean deviation about the mean for the following data and find its coefficient: 10, 12, 14, 15, 15, 13, 15, 10, 12, 14

    (a) 1.45, 0.1231   (b) 1.6, 0.1231   (c) 1.4, 0.1231   (d) 1.6, 1.231

12. For 333, 999, 888, 777, 666, 555, 444. Rank of 1st quartile is:

    (a) 3   (b) 1   (c) 2   (d) 7

13. There were 200 employees in an office in which 150 were married. Total male employees were 160 out of which 120 were married. What was the number of female unmarried employees?

    (a) 30   (b) 10   (c) 40   (d) 50

14. The best method to collect data in case of a natural calamity is

    (a) Personal interview   (b) Indirect interview

    (c) Questionnaire method   (d) Direct Observation method

15. Half of the numbers in an ordered set have values less than the _____ and half will have values greater than the _____ .

    (a) mean, median   (b)median, median   (c) mode, mean   (d) none.

16. Rajesh travelled some distance by cycle at a speed of 15 km per hour. On return journey, he travelled the same distance at a speed of 10 km per hour. What was his average speed per hour during the entire journey?

    (a) 12.5 KmPH   (b) 13 KmPH   (c) 12 KmPH   (d) 15 KmPH

17. If X any Y are related as 3X-4Y = 20 and the quartile deviation of X is 12, then the quartile deviation of Y is:

    (a) 14   (b) 15   (c) 16   (d) 9

18. Find out the coefficient of range of the following data:

Height	No. of Students
60-70	8
70-80	20
80-90	30
90-100	18
100-110	5

    (a) 0.33   (b) 0.29   (c) 0.22   (d) 0.78

19. Class: 0-10   10-20   20-30   30-40   40-50

    Frequency   5   8   15   6   4

    For the class 20-30, cumulative frequency is

    (a) 20   (b) 13   (c) 15   (d) 28

20. The data given below refers to the marks gained by a group of students:

Marks	Below 10	Below 20	Below 30	Below 40	Below 50
No. of Students	15	38	65	84	100

Then the no. of students getting marks more than 30 would be _____.

    (a) 50   (b) 53   (c) 35   (d) 62

21. If the mean of frequency distribution is 100 and coefficient of variation is 45% then standard deviation is _____

    (a) 45   (b) 0.45   (c) 0.045   (d) none

22. Neha obtained 66, 95, and 85 marks respectively in three CA Foundation Mock test and 90 marks in the Olympiad Test. The three Mock test are of equal weightage whereas the Olympiad Test is weighted twice as much as a Mock Test. Her mean marks is:

    (a) 82.25   (b) 85.2   (c) 80.2   (d) None of these

23. Mean deviation takes its minimum value, when deviation is taken from

    (a) mean   (b) mode   (c) median   (d) geometric mean

24. Quartile deviation = Probable error of Standard deviation.

    (a) true   (b) false   (c) both   (d) none

25. The Coefficient of mean deviation about the mean for the first 9 natural numbers is

    (a) $\frac{400}{9}$ (b) $\frac{300}{9}$ (c) $\frac{200}{9}$ (d) $\frac{100}{9}$

26. Tally marks determines

    (a) class width   (b) class boundary   (c) class limit   (d) class frequency

27. For determining the class frequencies it is necessary that these classes are

    (a) mutually exclusive   (b) not mutually exclusive

    (c) independent   (d) none

28. If the A.M. and H.M. of 2 numbers are 6 and 4, respectively, then the G.M. is

    (a) $\sqrt{23}$ (b) $\sqrt{24}$ (c) $\sqrt{25}$ (d) $\sqrt{26}$

29. Two variables x and y are given by y = 2x − 3. If the median of x is 20, What is the median of y?

(a) 20   (b) 40   (c) 37   (d) 35

30. What is the Coefficient of range for the following wages of 7 workers Rs. 650, Rs. 900, Rs. 600, Rs. 750, Rs. 700, Rs. 720, Rs. 850

(a) 30   (b) 20   (c) 40   (d) 60

31. Mean = 5, S.D = 2.6, Median = 5, Q.D = 1.5, then coeffieciet of Q.D is ?

(a) 35   (b) 39   (c) 30   (d) 32

32. Most of the commonly used frequency curves are

(a) Mixed   (b) Inverted J-Shaped   (c) U-Shaped   (d) Bell-Shaped

33. Vertical bar chart may appear somewhat alike

(a) Histogram   (b) Frequency Polygon   (c) Both   (d) none

34. For ordering shoes of various sizes for resale, a _____ size will be more appropriate.

(a) median   (b) modal   (c) mean   (d) none

35. In the following frequency distribution of marks, one of the frequencies is missing, If the arithmetic mean of the distribution is 50, then find the missing frequency.

Marks	0-20	20-40	40-60	60-80	80-100
Students	7	---	20	13	10

(a) 15   (b) 16   (c) 19   (d) 18

36. If the mean of a series is 10 and its coefficient of variation is 40%, the variance of the series is:

(a) 16   (b) 9   (c) 36   (d) None of these

37. The S.D is always taken from

(a) median   (b) mode   (c) mean   (d) none

38. The unpopularity of quartile deviation lies in the fact that it

(a) takes into account all the observations

(b) does not depend on the magnitudes of all observations

(c) can be calculated with open-end class intervals

(d) inferior to range as method of absolute measure of dispersion

39. For overlapping class-intervals the class limit & class boundary are

(a) same   (b) not same   (c) zero   (d) none

40. Classes with zero frequencies are called

(a) nil class   (b) empty class   (c) class   (d) none

41. For a positively skewed distribution

    (a) $\bar{x} = M = Z$ (b) $\bar{x} \neq M \neq Z$ (c) $\bar{x} > M > Z$ (d) $\bar{x} < M < Z$

42. The average salary of a group of skilled persons is Rs. 10,000 and that of a group of unskilled persons is Rs. 15,000. If the combined salary is Rs. 12,000 then what is the percentage of unskilled persons?

    (a) 30% (b) 60% (c) 40% (d) 70%

43. Co-efficient of QD is equal to _____

    (a) $\frac{QD}{M} \times 100$ (b) $\frac{QD}{x} \times 100$ (c) $\frac{QD}{Z} \times 100$ (d) None

44. If all the values taken by a variable x is a constant k, then MD is equal to

    (a) 0 (b) 1 (c) ∞ (d) not defined

45. Average score of three batsmen Virat, Suresh and Sachin in the series are 50, 48 and 12 respectively. The Standard Deviations of their runs are 15, 12 and 2 runs respectively. Who Should be selected?

    (a) Virat (b) Suresh (c) Sachin (d) None

46. A pie diagram used to represent the following data_____

Source	Customers	Excise Tax	Income Tax	Wealth Tax
Revenue	120	180	240	180

    In millions

    The central angles corresponding to Income Tax and Wealth Tax

    (a) 90˚, 120˚ (b) 120˚, 90˚ (c) 60˚, 120˚ (d) 90˚, 60˚

47. A set of numbers consists of three 4, five 5, Six 6, eight 8 and seven 10. The mode of the the set of number is

    (a) 6 (b) 8 (c) 7 (d) 10

48. Calculate the harmonic mean for the given set of observations.

    X: 1/2, 1/3, 1/5, 1/6, 1/9

    (a) 5 (b) 1.5 (c) 1 (d) 0.2

49. Range remains unaffected due to

(a) Change of origin (b) Change of scale (c) Both (a) and (b) (d) Neither (a) nor (b)

50. If n_1 and n_2 are two groups of observations, d_1 and d_2 their respective deviations from the A.M.s and S_1 and S_2 their respective S.D.s, then their combined S.D. is

    (a) $S = \sqrt{\dfrac{n_2 S_1^2 + n_1 S_2^2 + n_2 d_1^2 + n_1 d_2^2}{n_1 + n_2}}$

    (b) $S = \sqrt{\dfrac{n_1 S_1^2 + n_2 S_2^2 + n_1 d_1^2 + n_2 d_2^2}{n_1 + n_2}}$

    (c) $S = \sqrt{\dfrac{n_2 S_1^2 + n_2 S_2^2}{d_1 + d_2}}$

    (d) $S = \sqrt{\dfrac{n_1 S_1^2 + n_2 S_2^2 + n_1 d_1^2 + n_2 d_2^2}{S_1 + S_2}}$