Unit 6 – Basic Statistics

Multiple Choice Questions

1. A grouped frequency table is also called:

(a) Data
(b) Frequency distribution
(c) Frequency polygon
(d) Histogram

2. A histogram is a set of adjacent:

(a) Squares (b) rectangles
(c) Circles (d) Dots

3. A frequency polygon is a many sided:

(a) Closed figure (b) rectangle
(c) Square (d) Circles

4. A cumulative frequency table is also called:

(a) Frequency distribution
(b) Data
(c) Less than cumulative frequency distribution
(d) Histogram

5. In a cumulative frequency polygon frequencies are plotted against:

(a) Midpoints
(b) Upper class boundaries
(c) Class limits (d) frequencies

6. Arithmetic mean is a measure that determines a value of the variable under study by dividing the sum of all values of the variable by their:

(a) Number (b) group
(c) Denominator (d) numerator

7. A deviation is defined as a difference of any value of the variable from a:

(a) Constant (b) histogram
(c) Sum (d) frequency

8. A data in the form of frequency distribution is called:

(a) Grouped data
(b) Ungrouped data
(c) Histogram
(d) Dispersion

9. Mean of a variable with similar observations say constant k is:

(a) Negative (b) k itself
(c) Zero (d) one

10. Mean is affected by change in:
(a) Value (b) ratio
(c) Origin (d) none of these

11. Mean is affected by change in:
(a) Place (b) scale
(c) Rate (d) none of these

12. Sum of the deviations of the variable x from its mean is always:
(a) Zero (b) one
(c) Same (d) negative

13. The n^{th} positive root of the product of the $x_1, x_2, x_3, \ldots\ldots\ldots\ldots x_n$ observations is called:
(a) Mode (b) Mean
(c) Geometric mean d) median

14. The value obtained by reciprocating the mean of the reciprocal of $x_1, x_2, x_3 .. x_n$ observations is called:
(a) Geometric mean
(b) Median
(c) Harmonic mean
(d) S.D

15. The most frequent occurring observation in a data set is called:
(a) Mode
(b) Median
(c) Harmonic mean
(d) Mean

16. The measure which determines the middlemost observation in a data set is called:
(a) median (b) mode
(c) Mean (d) variance

17. The observation that divide a data set into four equal part, are called:
(a) defiles (b) quartiles
(c) Percentiles (d) mode

18. The spread or scatterings of observations in a data set is called:
(a) average
(b) dispersion
(c) central tendency
(d) quartile

19. The measures that are used to determine the degree or extent of variation in a data set are called measures of:
(a) Dispersion (b) central tendency
(c) Average (d) quartile

20. The extent of variation between two extreme observations of a data set is measured by:
(a) Average (b) range
(c) Quartiles (d) mode

21. The mean of the squared deviations of x_i (i = 1, 2……,n) observations from their arithmetic mean is called:
(a) Variance
(b) Standard deviation
(c) Range (d) mode

22. The positive square root of mean of the squared deviations of x_i (i – 1,2,…. n) observations from their arithmetic mean is called:
(a) Harmonic mean (b) range
(c) S.D (d) variance

23. The size of class interval (6–10) is:
(a) 4 (b) 5
(c) 8 (d) 10

24. The arrangement of data is necessary to find the value of:
(a) Mean (b) Median
(c) Mode (d) Range

25. The class having maximum frequency is called ……..class.
(a) Modal (b) Median
(c) Lower (d) Upper

26. The class containing $\frac{n}{2}$ th observation is called _____ class.
(a) Modal (b) Median
(c) Boundary of (d) Size of

27. During frequency distribution number of groups should be between:
(a) 5 and 10 (b) 10 and 15
(c) 10 and 20 (d) 5 and 15

28. Direct formula to find mean from ungrouped data.

(a) $\bar{X}=\frac{\sum x}{n}$ (b) $\bar{X}=\frac{\sum fx}{\sum f}$

(c) $\bar{X}=A+\frac{\sum D}{n}$ (d) $\bar{X}=A+\frac{\sum fD}{\sum f}$

29. Direct formula to find mean from grouped data is:

(a) $\bar{X}=\frac{\sum x}{n}$ (b) $\bar{X}=\frac{\sum fx}{\sum f}$

(c) $\bar{X}=A+\frac{\sum D}{n}$ (d) $\bar{X}=A+\frac{\sum fD}{\sum f}$

30. Short formula to find mean from ungrouped data is:

(a) $\bar{X}=\frac{\sum x}{n}$ (b) $\bar{X}=\frac{\sum fx}{\sum f}$

(c) $\bar{X}=A+\frac{\sum D}{n}$ (d) $\bar{X}=A+\frac{\sum fD}{\sum f}$

31. Short formula to find mean from grouped data is:

(a) $\bar{X}=\frac{\sum x}{n}$ (b) $\bar{X}=\frac{\sum fx}{\sum f}$

(c) $\bar{X}=A+\frac{\sum D}{n}$ (d) $\bar{X}=A+\frac{\sum fD}{\sum f}$

32. Coding formula to find mean from ungrouped data is:

(a) $\bar{X}=\frac{n}{\sum \frac{1}{x}}$ (b) $\bar{X}=\frac{n}{\sum \frac{f}{x}}$

(c) $\bar{X}=A+\frac{\sum u}{n}\times h$ (d) $\bar{X}=A+\frac{\sum fu}{\sum f}\times h$

33. Coding formula to find mean from grouped data is:

(a) $\bar{X}=\frac{n}{\sum \frac{1}{x}}$ (b) $\bar{X}=\frac{n}{\sum \frac{f}{x}}$

(c) $\bar{X}=A+\frac{\sum u}{n}\times h$ (d) $\bar{X}=A+\frac{\sum fu}{\sum f}\times h$

34. Formula to find Harmonic mean from ungrouped data is:

(a) $\bar{X}=\frac{n}{\sum \frac{1}{x}}$ (b) $\bar{X}=\frac{n}{\sum \frac{f}{x}}$

(c) $\bar{X}=A+\frac{\sum fu}{n}\times h$

(d) $\bar{X}=A+\frac{\sum fu}{\sum f}\times h$

35. Formula to find Harmonic mean from grouped data is:

(a) $\bar{X}=\frac{n}{\sum \frac{1}{x}}$ (b) $\bar{X}=\frac{n}{\sum \frac{f}{x}}$

(c) $\bar{X}=A+\frac{\sum fu}{n}\times h$ (d) $\bar{X}=A+\frac{\sum fu}{\sum f}\times h$

36. The concept of antilogarithm is used to find the value of:

(a) A.M (b) G. M

(c) H. M (d) Mode

37. Variance is denoted by:

(a) V (b) S

(c) S^2 (d) $\bar{X}$

38. Standard deviation is denoted by:

(a) X (b) S

(c) S^2 (d) $\bar{X}$

39. Median is denoted by:

(a) $\bar{X}$ (b) X

(c) S (d) S^2

40. On the basis of types of variable or data, the types of frequency distribution are:

(a) 2 (b) 3

(c) 4 (d) 5

41. In class (10 – 19), upper class limit is:

(a) 10 (b) 19

(c) 29 (d) 14.5

42. In class (30–39), lower class limit is:

(a) 39 (b) 9

(c) 30 (d) 34.5

43. In class (20–29), Midpoint or class mark is:

(a) 20.5 (b) 24.5

(c) 29 (d) 49

44. Types of measures of central tendency are:

(a) 3 (b) 4

(c) 5 (d) 6

45. Median from the data 82,93,86,92 and 79 is:

(a) 82 (b) 86

(c) 92 (d) 93

46. Median from the data 2.3, 2.7, 2.5, 3.1 and 1.9 is:

(a) 2.3 (b) 2.5

(c) 2.7 (d) 2.9

47. Mode from the following data 4,4,5,5,6,6,6,7,7,5,8,8,8,6,5,6,5,7 is:

(a) 4 (b) 5

(c) 5, 6 (d) 5, 7

48. Geometric Mean of 2,4,8 is:

(a) 2 (b) 4

(c) 8 (d) 3

49. Harmonic mean for 12,5,8,4 is:

(a) 6.08 (b) 5.08

(c) 7.08 (d) 4.08

50. Range = ……

(a) $X_m + X_o$ (b) $X_m - X_o$

(c) $\frac{X_m}{X_o}$ (d) $\frac{X_o}{X_m}$

51. Range for the data 110, 109, 84, 89, 77, 104, 74, 97, 49, 59, 103, 62 is:

(a) 41 (b) 51

(c) 61 (d) 71

52. If standard deviation is 6 then its variance is:

(a) $\sqrt{6}$ (b) 36

(c) 3 (d) 6

53. $\sum(X - \overline{X}) =$ ……

(a) 0 (b) 1

(c) –1 (d) 2

54. Arithmetic mean of 34,34,34,34,34,34 is

(a) 0 (b) 34

(c) 6 (d) 170

55. If $Y = X + 5$ then $\overline{Y} =$ ……

(a) $\overline{X}$ (b) 5

(c) $\overline{X}+5$ (d) $5\overline{X}$

56. If $y = 10X$ then $\overline{y} =$…….

(a) 10 (b) $10\overline{X}$

(c) $\overline{X}$ (d) $10+\overline{X}$

57. Which one is formula for weighted Arithmetic mean?

(a) $\frac{\sum w}{\sum wx}$ (b) $\sum wx$

(c) $\sum x$ (d) $\frac{\sum wx}{\sum w}$

58. Types of dispersion are:.

(a) 4 (b) 5

(c) 6 (d) 3

1.	b	2.	b	3.	a	4.	c	5.	b
6.	a	7.	a	8.	a	9.	b	10.	c
11.	b	12.	a	13.	c	14.	c	15.	a
16.	a	17.	b	18.	b	19.	a	20.	b
21.	a	22.	c	23.	b	24.	b	25.	a
26.	b	27.	d	28.	a	29.	b	30.	c
31.	d	32.	c	33.	d	34.	a	35.	b
36.	b	37.	c	38.	b	39.	b	40.	a
41.	b	42.	c	43.	b	44.	c	45.	b
46.	b	47.	c	48.	b	49.	a	50.	b
51.	c	52.	b	53.	a	54.	b	55.	c
56.	b	57.	d	58.	b				