

St. Xavier College Jaipur
Department of Science

UG0803-STA-51T-101

Question Bank

Descriptive Statistics

1. A national random sample of 20 ACT scores from 2010 is listed below. Calculate the sample mean and standard deviation.

29, 26, 13, 23, 23, 25, 17, 22, 17, 19, 12, 26, 30, 30, 18, 14, 12, 26, 17, 18

2. Calculate the mean number of children per family for the sample from the following table.

Number of children	Number of families
0	8
1	16
2	22
3	14
4	6
5	4
6	2

3. Numerical data presented in descriptive form is called _____
4. _____ is a representative of population.
5. If the numbers of units in a population are limited, it is known as _____ population. Stratified sampling is appropriate when population is _____
6. The probability of selection of any one sample out of $N C_n$ sample is _____
7. The probability of drawing of each sample is equal, and then the method is called _____ method.
8. Sampling error may arise due to _____ selection of sample.
9. Census data is free from _____ error.
10. _____ error is more in census data.
11. For the mid value given 25, 34, 43, 53, 61, 70. The first class of the distribution is _____
12. If the lower limit and upper limit of a class are 10 and 40 respectively, the midpoint of the class is _____
13. mean is a measure of _____
14. A frequency distribution can be _____
15. Graphs and charts facilitate _____ (Comparison of values, To know the trend, To know the relationship,) All the above
16. In bar diagram, bars are _____ (Horizontal, Vertical, Slanting, None of above)
17. In a component bar diagram the length of the bar _____ (Will be same for all, will not be same, Depends on the total)
18. Give the advantages of tabulation
19. Write a detail note on the types of classification
20. What are the essential characteristics of a good table?
21. Write the limitations of Statistics.

22. Difference between qualitative and quantitative data.
23. Construct a frequency distribution table for the following data 32,45,8, 24, 42, 22, 12, 9, 15, 26, 35, 23, 41, 47, 18, 44, 37, 27, 46, 38, 24, 43,10,21,36, 45, 22, 18
24. How diagrams are useful in representing statistical data?

Unit-2

25. Extreme value have no effect on_____
26. A frequency distribution having two modes is said to be_____
27. The average of n natural numbers is_____
28. If the sorghum ear- heads are 5,48, 60, 65, 65, 100 gms, calculate the median.

29. Find the mode for the following

Weight of sorghum in gms (x)	No. of ear head(f)
50	6
65	8
75	16
80	8
95	12

30. Draw frequency curve for the following data:

Seed Yield (gms)	No. of Plants
2.5-3.5	4
3.5-4.5	6
4.5-5.5	10
5.5-6.5	26
6.5-7.5	24
7.5-8.5	15
8.5-9.5	10
9.5-10.5	5

31. Write down the merit and demerit of Arithmetic mean.
32. Write the characteristics of good measures of central tendency.

33. Peakness of a frequency curve is measured by _____ curve.
34. Best measures of dispersion is _____
35. Which of the following is a unitless measure of dispersion _____ (Standard deviation, Mean deviation, Coefficient of variance, Range)

Unit-3

1. Use the least square method to determine the equation of line of best fit for the data. Then plot the line.

x	8	2	11	6	5	4	12	9	6	1
y	3	10	3	6	8	12	1	4	9	14

2. Explain various measures of central tendency. What are their merits and demerits?
3. What is Primary data? State Various methods of collecting the primary data and discuss its merits and demerits. 3. What is meant by data collection? Discuss different methods of data collection. Give their merits and demerits
4. What are the sources of secondary data. Discuss its methods.
5. What is tabulation of data? Discuss objectives of the tabulation.
6. Explain various kinds of tables.
7. Define various types of skewness.
8. Show that Karl Pearson's Coefficient of Skewness
9. Derive Spearman's rank Correlation Coefficient and writes its properties.
10. Explain correlation coefficient and writes its properties.
11. Explain Rank correlation coefficient and writes its properties.
12. Derive the regression lines of Y on X and X on Y
13. Explain the properties of regression coefficients.
14. Explain correlation Vs regression.

Unit 4

1. The correlation between two variables can be shown graphically by a _____
2. The spearman rank order correlation is used when the variables to be correlated are measured on _____ scale.
3. When increase in one variable is associated with decrease in other variable, the correlation between these variables is _____
4. The range of correlation coefficient is _____
5. Correlation coefficient is independent of _____
6. Correlation can be calculated when the variables have _____ unit.
7. If correlation coefficient value is +1 then it indicates _____
8. The regression line is also called a _____
9. The slope of the regression line is represented by _____
10. In regression, the independent variable is also called _____
11. The geometric mean of two regression coefficient is _____
12. If one regression coefficient is more than unity then other is _____

13. Regression coefficient is _____ on change of origin and _____ on change of scale.

14. If $r=0$, then the angle between two regression line is _____

15. _____ gave the term Regression

Long Answer

1. What is a scatter diagram? Mention its uses

2. Define correlation. Write its type.

3. Define regression.

4. Mention the properties of the correlation coefficient?

5. Find correlation coefficient between plant height and number of pods.

X 15 20 17 22 25 29 12

Y 18 17 21 23 20 19 22

6. Properties of regression coefficient

7. Briefly write the significance of correlation coefficient.