

Reg No:.....
Name :.....

K24FY1492-B

First Semester FYUGP Statistics Examination
November 2024 (2024 Admission onwards)
KU1DSCSTA121 (INTRODUCTORY STATISTICS)
(EXAM DATE : 04-12-2024)

Time : 120 min

Maximum Marks : 70

Part A (Answer any 6 questions. Each carries 3 marks)

1. Define nominal data and provide an example. 3
2. Define secondary data and provide two examples. 3
3. Find the mean and median of the following set of numbers: 3, 7, 9, 12, 15. 3
4. What is a weighted average? 3
5. Define harmonic mean with a suitable example. 3
6. Define dispersion in statistics. 3
7. If SD of x_1, x_2, \dots, x_n is k. Find the SD of $2x_1, 2x_2, \dots, 2x_n$ 3
8. Explain the term relative measure of dispersion. Briefly describe any two relative measures of dispersion. 3

Part B (Answer any 4 questions. Each carries 6 marks)

9. Define mean, median, and mode and highlight their differences. 6
10. State and prove any two mathematical properties of AM. 6
11. Explain the geometric mean and calculate it for the following numbers: 4, 16, 64. 6
12. Calculate the range and mean deviation from median of the following data set: 10, 15, 22, 18, 14, 16, 12, 30. 6
13. Explain absolute and relative measures of dispersion. If the range of a dataset is 30 and the highest value is 70, what is the coefficient of range? 6
14. Find coefficient of variation of the following series: 192, 288, 236, 229, 184, 260, 348, 291, 330, 300. 6

Part C (Answer any 2 question(s). Each carries 14 marks)

15. Define skewness. Find the coefficient of skewness based on quartiles for the following frequency distribution.

Class:	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	14
Frequency:	358	417	976	129	62	18	10	

16. Define skewness and kurtosis. Explain the methods of measuring skewness and kurtosis using moments. 14
17. Explain the concept of probability sampling. Discuss the various types, including simple random, stratified, and systematic random sampling, with examples. 14