K25FY4602 Pages: 2 Reg No:.....
Name:.....

First Semester FYUGP Degree (Reg/Sup) Examination
November 2025
KU1DSCSTA121 - INTRODUCTORY STATISTICS

2024 Admission onwards

Time : 2 hours Maximum Marks : 70

Section A

Answer any 6 questions. Each carry 3 marks.

1. Find the mean deviation from mean for the data: 5, 7, 9,12, 16
2. Define range for raw data and for a grouped frequency distribution
3. What is the median, and how is it calculated?
4. Explain quartiles and how they divide data.
5. AM of the reciprocals of 10 observations are 0.50. Calculate HM.
6. What are central moments? Give an example.
7. Calculate the third central moment for the dataset: 1, 2, 3, 4, 5.
8. Define skewness. Explain any one method of measuring skewness.

Section B

Answer any 4 questions. Each carry 6 marks.

9. Explain the procedure of finding he combine mean of two sets of observations. The mean age of a group of 100 children was 12 years. The mean age of 40 of them was 9 years. What was the mean age for the remaining group of 60 children?
10. Define and calculate the weighted AM for the scores: (70, 80, 90) with weights (1, 2, 3).Explain he advantage of weighted AM.
11. Determine Q_1 and $Q_3$from the following frequency distribution

Class:	10 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60 – 69
Frequency:	8	11	15	17	12	7

12. Define moment of a random variable. Derive the relation between moments about mean in terms of moments about any point.
13. The first three moments about origin are given by $\frac{n+1}{2}$, $\frac{(n+1)(2n+1)}{6}$ and $\frac{n(n+1)^2}{4}$ respectively. Examine the skewness of the data.

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14. Define Karl Pearson's coefficient of skewness. For a distribution, Karl Pearson's coefficient of skewness is 0.64, standard deviation is 13 and mean is 59.2. Find mode and median.

Section C

Answer any 2 questions. Each carry 14 marks.

15. Distinguish between Primary and Secondary data and explain various methods for collecting primary data and secondary data.

16. Explain census and sampling. What are their advantages and disadvantages? Also explain the possible errors in census and sampling.

17. (a) The mark scored by 10 students of a class in Mathematics and Physics are listed below. In which of the subjects the students' performance is more consistent?

Student :	1	2	3	4	5	6	7	8	9	10
Maths :	35	37	38	43	33	35	41	45	32	40
Physics :	43	45	36	41	39	44	35	39	46	38

(b) Define coefficient of variation. Given two sets observations: Set I: 48, 40, 53, 44, 57 and 49; Set II: 47, 41, 50, 46, 58, and 47. Obtain coefficient of variation for Set I and Set II. Identify more consistent set.

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