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

First Semester FYUGP Statistics Examination
November 2024 (2024 Admission onwards)
KU1DSCSTA121 (INTRODUCTORY STATISTICS)
(EXAM DATE : 06-12-2024)

Time : 120 min   Maximum Marks : 70

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

1. Explain the important characteristics that a good average should possess.   3

2. What is the median, and how is it calculated?   3

3. Calculate the missing frequencies from the following frequency distribution of 200 observations with A.M. 1.46.

    x: 0   1   2   3   4   5   3
    f: 16 –   –   25 10 5

4. If SD of $x_1, x_2, ... x_n$ is k. Find the SD of $2x_1, 2x_2, ... 2x_n$ 3

5. Explain mean deviation and its calculation.   3

6. What are central moments? Give an example.   3

7. Calculate the first raw moment for the dataset: 2, 4, 6, 8, and 10.   3

8. What do you understand by skewness? How is it measured?   3

Part B (Answer any 4 questions. Each carries 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?   6

10. What are deciles, and how would you compute them for a given dataset in the form of grouped frequency table?   6

11. Find GM for the following data

    Class: 1 – 3   4 – 6   7 – 9   10 – 12   6
    Frequency: 8   16   15   3

12. Define raw moments and calculate the first three raw moments for the data:

    Class: 0 – 10   10 – 20   20 –30   30 – 40   40 – 50   6
    Freq.: 6   10   14   7   3

13. The first four raw moments of a distribution are 2,136,320, and 40.000. Find out coefficients of skewness and kurtosis.   6

14. Define kurtosis and explain its significance in statistical analysis.   6

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

15. (a) Discuss the importance of primary data. Why is it often preferred over secondary data? Give specific examples to support your argument.   7

    (b) Define census and sampling. Compare the advantages and disadvantages of census method.   7

16. Explain the principal steps involved in conducting a sample survey.   14

17. (a) 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.   7

    (b) 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

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