QP Code: D 113112	**Total Pages: 2**	**Name:**
		Register No.

FIRST SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2024

(CUFYUGP)

STA1MN101 - DESCRIPTIVE STATISTICS FOR DATA SCIENCE

2024 Admission onwards

Maximum Time :2 Hours	**Maximum Marks :70**

Section A

All Questions can be answered.
Each Question carries 3 marks (Ceiling : 24 Marks)

1	Define (i) variable (ii) observation (iii) data set
2	Define discrete and continuous variables.
3	Define secondary data. Mention any two of its merits.
4	Define (i) class interval (ii) class mark (iii) frequency of a class.
5	Differentiate between one dimensional and two dimensional diagrams.
6	Define (i) central tendency (ii) average
7	Define median. Why median is considered as a partition value?
8	Define (i) quartile deviation (ii) variance
9	Define (i) random experiment (ii) sample space.
10	State the conditions for the mutual independence of three events A, B and C.

Section B

All Questions can be answered.
Each Question carries 6 marks (Ceiling : 36 Marks)

11	Define primary data. Explain its merits and demerits.
12	Explain various types of bar diagrams.
13	Sketch a frequency polygon for the following data: Class: 0 – 10 10 – 20 20 – 40 40 – 70 70 – 90 90 – 100 Freq.: 5 12 16 12 8 7
14	Find the mean and median for the following data: Class: 0 – 10 10 – 20 20 – 30 30 – 40 40 – 50 50 – 60 Freq.: 4 8 14 10 8 6
15	Define geometric mean (GM) and harmonic mean (HM). Calculate GM and HM for the observations 6, 10, 14, 20 and 24.

16	Define partition values. Explain quartiles, deciles and percentiles and their inter relations.
17	If P(A) = 0.6, P(B) = 0.4 and P(A / B) = 0.75, find (i) P(AUB) (ii) $P(AUB^c)$ (iii) $P(A^cUB^c)$
18	Define (i) mutually exclusive events (ii) independent events. If A and B are events with P(A) = 0.4, P(B) = 0.3, obtain P(AUB) when A and B are (a) mutually exclusive (b) independent.
Section C	
Answer any ONE .Each Question carries 10 marks (1x10=10 Marks)	
19	(i) Write a short note on skewness and kurtosis. (ii) Calculate the mean deviation about the mode for the following data: Class: 0 – 10 10 – 20 20 – 30 30 – 40 40 – 50 50 – 60 60 – 70 Freq.: 6 13 19 22 14 10 6
20	State Bayes' theorem. Two boxes A and B contain respectively 3 red, 6 blue balls and 5 red, 3 blue balls. One of the boxes is selected at random and two balls were drawn. If the balls obtained are one red and one blue, what is the probability that they were from the box B?