QP Code: D132850	**Total Pages: 2**	**Name:**
		Register No.

FIRST SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025

(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	Identify whether the variable is qualitative or quantitative (i) A person's blood type (ii) amount of rain fall in a city on a day.
2	Define discrete variables. Site an example.
3	Define secondary data. Site any two examples.
4	Define frequency distribution.
5	Define (i) subdivided and (ii) deviation bar diagrams.
6	Mention any three merits of graphical representation of data.
7	Define mode. How can we find the mode graphically?
8	Define (i) range and (ii) quartile deviation
9	State the multiplication theorem on probability for (i) any two events A and B (ii) for two independent events A and B.
10	Define 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 the methods of collecting primary data.
12	Explain two dimensional and three dimensional diagrams with suitable examples.
13	Sketch a frequency curve for the following data: Class: 0 – 10 10 – 20 20 – 40 40 – 70 70 – 90 90 – 100 Freq.: 7 14 18 11 6 4
14	Find the geometric mean for the following data: Class: 0 – 10 10 – 20 20 – 30 30 – 40 40 – 50 50 – 60 Freq.: 6 8 16 12 10 8
15	Explain skewness and its measures.

16	Calculate 4^{th} decile and 85^{th} percentile for the following data: Class: 0 – 10 10 – 20 20 – 30 30 – 40 40 – 50 50 – 60 60 – 70 70 – 80 Freq.: 8 14 16 22 15 10 8 7
17	If P(A) = 0.6, P(B) = 0.4 and P(B / A^c) = 0.60, find (i) P(AUB) (ii) P(AUB^c) (iii) P(A^c/B^c)
18	Define (i) mutually exclusive events (ii) independent events. If A and B are independent events, show that (a) P(A/B) = P(A) (b) P(B^c/A) = P(B^c).
Section C	
Answer any ONE .Each Question carries 10 marks (1x10=10 Marks)	
19	(i) Explain the merits and demerits of various measures of central tendency. (ii) Approximate the median graphically for the following data. Also calculate the median using mathematical approximation: Class: 0 – 10 10 – 20 20 – 30 30 – 40 40 – 50 Freq.: 7 13 20 12 8
20	State Bayes' theorem. The content of two boxes I and II are 3 white, 4 blue, 5 red balls; 4 white, 6 blue, 6 red balls respectively. If two balls drawn after selecting one of the boxes randomly appeared to be both red, what is the probability that the box selected was the Box I?