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D1BST2505 **Name: .....**

Reg. No.: .....

FIRST SEMESTER FYUGP EXAMINATION NOVEMBER 2025

(Regular/Improvement/Supplementary)

MINOR

STA1MN101: DESCRIPTIVE STATISTICS FOR DATA SCIENCE

Time: 2 Hrs. **Maximum Marks: 70**

M – Mark BL - Bloom's Taxonomy Level (1 to 6) CO - Course Outcome

Section A: Answer all questions. Each carries 3 marks.
Ceiling: 24 Marks

No.	Question	M	BL	CO
1.	Define Qualitative and Quantitative data.	3	1	CO1
2.	Define secondary data. What are the sources of secondary data.	3	2	CO1 CO2
3.	Define frequency distribution. Explain different types of frequency distribution.	3	2	CO2
4.	What are ogives? Explain the method of constructing ogives.	3	4	CO3
5.	Find the combined mean from the following data. Series I: Arithmetic mean 10, No of items 50 Series II: Arithmetic mean 20, No of items 40	3	4	CO4
6.	A train covered the first 7km of its journey at a speed of 60km/hr and next 13 kms. at a speed of 75km/hr. Find the average speed of the train.	3	5	CO4
7.	Define measures of dispersion. What are the different measures of dispersion?	3	1	CO4
8.	Describe statistical regularity.	3	2	CO5
9.	In a box, there are 6 white balls, 5 green and 4 red balls. Out of them 3 are chosen at random. Find the chance that they all belong to different verities.	3	5	CO5
10.	A problem in statistics is given to three students A , B and C where chances of solving it are 1/3 , 1/4 , 1/5 respectively. What is the probability that the problem will be solved?	3	6	CO5

Section B: Answer all questions. Each carries 6 marks.
Ceiling: 36 Marks

No.	Question	M	BL	CO
11.	Differentiate between primary data and secondary data. Explain the merits and demerits of each.	6	3	CO1 CO2
12.	Draw a frequency polygon for the following frequency distribution. class: 0-10, 10-20, 20-30, 30-40, 40-50, 50-60, 60-70 Frequency: 4, 6, 10, 20, 10, 6, 4	6	5	CO3
13.	Compute arithmetic mean to the following data: Value: 15, 28, 43, 58, 76, 41 Frequency: 16, 10, 8, 7, 6, 3	6	4	CO4

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14.	What is meant by skewness? Explain different methods for measuring skewness.	6	4	CO4
15.	Calculate Bowley's coefficient of skewness from the following data. Class: 0 – 5 | 5 – 10 | 10 – 15 | 15 – 20 | 20 – 25 | 25 – 30 | 30 - 35 f: 6 | 10 | 18 | 32 | 30 | 20 | 14	6	5	CO4
16.	Four cards are drawn at random from a pack of 52 cards. Find the probability that: (i) They are king, a queen, a jack and an ace. (ii) Two are kings and two are queens. (iii) Two are black and two are red. (iv) There are two cards of hearts and two cards of diamonds.	6	6	CO5
17.	There are three urns having the following compositions of white and black balls. Urn I: 6 white balls 4 black balls Urn II: 4 white balls 6 black balls Urn III: 5 white balls 5 black balls One of the urn is chosen at random with probabilities 0.2, 0.6 and 0.2 respectively. From the chosen urn two balls are drawn without replacement. Calculate the probability that both two balls are white.	6	4	CO5
18.	State and prove Bayes theorem.	6	5	CO5

Section C: Answer any one question. Each carries 10 marks. (1 x 10 = 10 Marks)

No.	Question	M	BL	CO
19.	Calculate coefficient of variation for the following data. Classes: 0 - 6 | 6 - 12 | 12 - 18 | 18 - 24 | 24 - 30 | 30 – 36 f: 8 | 12 | 30 | 20 | 18 | 7	10	4	CO4
20.	(a) Define independent events. (b) It is 7 :4 against the wife who is 35 years old living till she is 65 and 4 : 3 against her husband now 50 living till he is 80. Find the probability that: (i) Both will be alive. (ii) None will be alive. (iii) Only wife will be alive. (iv) Only husband will be alive. (v) Only one will be alive. (vi) At least one will be alive.	10	5	CO5