25U182   (Pages: 2)   Name   :   ....

                                                     Reg. No   :   ....

FIRST SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025

(FYUGP)

(Regular/Supplementary/Improvement)

CC24USTA1MN101 - DESCRIPTIVE STATISTICS FOR DATA SCIENCE

(Statistics - Minor Course)

(2024 Admission onwards)

Time: 2.0 Hours   Maximum: 70 Marks

                                                                       Credit: 4

Part A (Short answer questions)

Answer *all* questions. Each question carries 3 marks.

1. Explain the scope of Statistics.   [Level:2] [CO1]

2. Describe the methods of collecting primary data.   [Level:2] [CO1]

3. Explain grouped frequeny distribution with examples.   [Level:2] [CO2]

4. Describe Historigrams.   [Level:2] [CO2]

5. Calculate Harmonic mean of 5, 10, 15, 20, 25, 30, 45.   [Level:3] [CO3]

6. Calculate mean deviation about mean for the following data. 25, 63, 85, 75, 62, 70,   [Level:3] [CO3]
   83, 28, 30, 12.

7. Calculate the Range of 75, 62, 55, 82, 15, 12, 45, 65, 70.   [Level:3] [CO3]

8. Calculate the mean for the following data.   [Level:3] [CO3]

Class	15-25	25-35	35-45	45-55	55-65	65-75
Frequency	4	11	19	14	0	2

9. Explain Random experiment with examples.   [Level:2] [CO4]

10. Explain statistical independence.   [Level:2] [CO4]

                                                            (Ceiling: 24 Marks)

Part B (Paragraph questions/Problem)

Answer *all* questions. Each question carries 6 marks.

11. Explain different type of diagrams.   [Level:2] [CO2]

12. Calculate the Quartiles of 34, 50, 90, 13, 14, 15, 15, 21, 28, 30.   [Level:3] [CO3]

13. Calculate mode for the following data [Level:3] [CO3]

Class	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	40	50	70	90	22	65	80	30

14. Calculate P_{25}, D_6, P_{70}, D_5 [Level:3] [CO3]

55, 60, 65, 70, 75, 80, 85, 90, 95, 100.

15. Calculate median for the following data. [Level:3] [CO3]

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Number of students	3	10	15	20	12	7	3

16. A bag contains 7 white and 9 black balls . 3 balls are drawn together. Calculate the probability that (1) all are black (2) all are white (3) 1white and 2 black (4) 2 white and 1 black. [Level:3] [CO4]

17. 20% of all students in a university are graduates and 80% are undergraduates. The probability that graduate student is married is 0.50 and the probability that an undergraduate student is married is .10. One student is selected at random, Calculate the probability that the student selected is married. [Level:3] [CO4]

18. In a bolt factory machine X, Y, Z manufactured respectively 20%, 30% and 50% of the total. Of their output 5, 4.2 percents are defective. A bolt is drawn at random from the product and is found to be defctive. Calculate the probability that it was manufactured by machine X. [Level:3] [CO4]

(Ceiling: 36 Marks)

Part C (Essay questions)

Answer any *one* question. The question carries 10 marks.

19. Describe different types of graphs. [Level:2] [CO2]

20. Calculate standard deviation for the following data. [Level:3] [CO3]

Class	3-5	5-7	7-9	9-11	11-13	13-15
Frequency	10	35	70	35	12	6

(1 × 10 = 10 Marks)

****