



Date: 24-04-2025

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 PM

SECTION A

ANSWER ANY FOUR OF THE FOLLOWING

4 X10=40 Marks

1. Examine the nature and functions of Statistics
2. Describe the various classification of data.
3. Calculate Quartile Deviation and Coefficient of Quartile Deviation for the following data. 23, 8, 5, 16, 33, 7, 24, 5, 30, 33, 37, 30, 9, 11, 26, 32
4. Explain different types of correlation with examples.
5. State and prove the Theorems of Probability
6. A random variable has the following probability distribution.

x	4	5	6	8
Probability	0.1	0.3	0.4	0.2

Find the expected value and the standard deviation of the random variable x.

7. Find the area under the standard normal curve between $z=-2.88$ and $z=1.15$.
8. Explain the properties of Binomial Distribution

SECTION – B

ANSWER ANY THREE OF THE FOLLOWING

3X 20 =60 Marks

9. Write short notes on the following:
 - a) Equally Likely event.
 - b) Independent event.
 - c) Complimentary event.
 - d) Exhaustive event.

10. Calculate Arithmetic Mean and Median for the following data:

Income	0-5	5-10	10-15	15-20	20-25	25-30
Frequency	5	7	10	8	6	4

11. Analyse different measures of dispersion and their significance.

12. Calculate the regression equation of x on y from the following data.

x	10	12	13	17	18
y	5	6	7	9	13

13. Describe the properties of Normal Distribution.

14. Four coins were tossed and number of heads noted. The experiment is repeated 200 times. Fit a binomial distribution to these observed results.

Number of heads	0	1	2	3	4
Number of tosses	15	35	90	40	20
