

Time : 3 hours

Max Marks : 75

(No additional sheet will be supplied)

PART A – (5X3 = 15 Marks)

Answer any five questions

Each question carries 3 marks

Each answer should not exceed 1 page.

1. Define Standard Deviation. Give its importance.
2. Distinguish between Skewness and Kurtosis.
3. Give any two definitions of probability. Mention the properties of probability.
4. Explain the concept of a Random Variable and its Mathematical expectation. State additive property of Mathematical expectation.
5. What are the applications of χ^2 and t-distributions?
6. Explain the concept of multiple correlation coefficients. Give its properties.
7. Discuss about simple Random sampling with and without replacement techniques.
8. Explain Systematic Random sampling. Give its uses.

PART B – (4X15 = 60 Marks)

Answer All questions

Each question carries 15 marks

Each answer should not exceed 6 pages.

9. Describe the Graphic representation of Statistical data.
(OR)
 10. Explain Mean, Median and Mode as measures of central tendency.
 11. Compute Mean and Standard Deviation from the following frequency distribution.
Daily Wages (in Rs.) :
No. of workers :
- | | | | | | |
|-------|-------|-------|-------|--------|---------|
| 50-60 | 60-70 | 70-80 | 80-90 | 90-100 | 100-110 |
| 2 | 8 | 12 | 15 | 2 | 1 |

(OR)

12. Distinguish between Raw and Central moments of a distribution. Explain β_1 , β_2 , γ_1 and γ_2 coefficients as measures of Skewness and Kurtosis.
13. What are poisson and normal probability distributions? Give their properties and applications.

(OR)

14. Obtain two lines of regression from the following data :

X :	6	9	10	5	12	8
Y :	10	12	11	8	13	6

15. What are Non-Random sampling techniques? Explain the concepts of population, sample, parameter and statistic.

(OR)

16. Describe the Stratified Random Sampling technique. Explain proportional and optimum allocation methods to determine sample sizes in Stratified Random Sampling.