

## **Stat-327 Statistical Data Analysis VIII**

**50 Marks: 02 Credits**

**Number of Class: 20-26**

### ***Group A (Order Statistics and Non-parametric Methods):25 Marks***

Estimation of moments, point and interval estimation of distribution function and density function, point and interval estimation of percentiles, confidence interval for distribution function.

Randomness test based on ranks, Kolmogorov-Smirnov (K-S) test, Chi-Square test, Sign test, Wilcoxon signed-rank test, binomial and quantile test, Kolmogorov-Smirnov two-sample test, median test and Mann-Whitney U test, Wilcoxon rank-sum test, terry hoeffding test, Van Der Waerden test, test for different location and scale problems.

### ***Group B (Test of Hypothesis): 25 Marks***

Most powerful test, Uniformly Most Powerful Test, Uniformly Most Powerful Unbiased Test, Locally Uniformly Most Powerful Unbiased Test, Optimal Tests in Different Situations, Randomized Tests, Consistent Tests, Unbiased Tests, Similar Region, Likelihood Ratio Test, Generalized Likelihood Ratio Tests, Monotone Likelihood Ratio Test, Test of homogeneity in Parallel Samples., LM Test and Wald Test, SPRT, OC and ASN Function, Bayesian Test of Hypothesis.

### ***Viva-Voce: 50 Marks***