

Faculty of Science

B.Sc (Statistics) II-Year, CBCS-IV Semester Examinations**PAPER: INFERENCE**

Time: 3 Hours

Max Marks: 80

Section-A

I. Answer any FIVE of the following questions. (5x4=20 Marks)

1. Define different types of hypotheses.
2. Discuss the uses of Central Limit Theorem.
3. When do you apply the large sample tests.
4. Write the 99% confidence limits for population proportion.
5. Define Correction for continuity of Cell Frequencies.
6. Define order statistics.
7. Explain Median test.
8. Define nominal and ordinal scales.

Section-B

II. Answer the following questions. (4x15=60 Marks)

9. (a) State and prove Neyman – Pearson's Lemma.

(OR)

(b) Find B.C.R in listing $H_0: \lambda = \lambda_0$ against $H_1: \lambda = \lambda_1$ in case of poisson distribution.

10.(a) Explain the test procedure in testing the two-sample proportions.

(OR)

(b) Explain the test procedure in testing the two sample correlation co-efficients.

11.(a) Explain χ^2 - test for goodness of Fit.

(OR)

(b) The two samples are drawn from a population independently.

Sample-I 12 6 14 18 20 10

Sample-II 8 10 12 15 9 6

Test the homogeneity of two sample variances at 5% LOS

12.(a) Define NP-Tests and explain their advantages and disadvantages.

(OR)

(b) Stating the assumptions explain Wilcoxon – Mann – Whitney U-Test.
