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DATE:9-4-18

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27**

B.Sc. STATISTICS - IV SEMESTER

SEMESTER EXAMINATION - APRIL 2019

**ST: 415/ 416 – Tests of Significance**

**Time: 1½ Hours Max Marks: 35**

This question paper has **ONE** printed page and **THREE** parts

**Supplementary candidates only**

**Attach the question paper to the answer booklet**

**SECTION – A**

**I Answer any FIVE of the following: 5 x 2 = 10**

1. Write a note on test for normality.
2. Write a note on odds ratio.
3. What is fisher’s Z transformation? Mention any two applications of it.
4. Define Spearman’s Rank Correlation Coefficient
5. What are non-parametric tests? Mention any two applications it.
6. Find the number of runs and length of longest run from the following random sequence ABBABBAAABAABAABABAAABBBBABAABABAABABA
7. Write down chi-square statistic for 2x2 contingency table with usual notation.

**SECTION – B**

**II Answer any THREE of the following: 3 x 5 = 15**

1. Explain the test concerning single population variance when sample size is small
2. Mention the various applicationsof*‘****t’*** statistic. How would you test the significance of an observed correlation coefficient when the sample size is small?
3. Describe the test procedure for goodness of fit.
4. State one way classification ANOVA model and explain assumptions.
5. Explain Kolmogorov-Smirnov one sample test.

**SECTION – C**

**III Answer any ONE of the following: 1 x 10 = 10**

13. A) Explain the procedure for testing equality of two proportions (4)

B) Give the outline for two-way analysis of variance (6)

14. A) Explain run test based on single sample (4)

B) Explain the procedure for testing significance of population regression co-efficient (slope) in simple linear regression model (6)

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