ADITYA DEGREE COLLEGES

∗ ANDHRA PRADESH ∗

PRE FINAL - EXAMINATIONS
II B.Sc *IV SEMESTER*

STATISTICS - IV

Max. Marks : 75 M
Time: 3 Hours

Date:

SECTION-A

I. Answer any FIVE of the following questions: **5 x 5 = 25 M**

1. Define point estimation and interval estimation ?
2. Write the Statement of Fisher-Neyman criterion ?
3. Explain i) Null and alternative hypothesis ii) Type - I and Type -II errors
4. Explain large sample test for testing the significance of single mean ?
5. What are the assumptions are made for validity of t-test.
6. Write the valid conditions for χ^2 test.
7. What are the assumptions of non parametric tests.
8. Explain the procedure for paired t-test ?

SECTION-B

II. Answer the following questions: **5 x 10 = 50 M**

9. a) Briefly explain the criteria of good estimator ? **(Or)**
    b) What do you mean by maximum likelihood estimation method ? State its properties ?

10. a) State and prove Neyman - Pearson's lemma. **(Or)**
    b) Obtain the best critical region for testing $H_0 : \lambda = \lambda_0$ against $H_1 : \lambda = \lambda_1$ is poisson population ?

11. a) Explain a large sample test for testing the significance for difference of two proportions ? **(Or)**
    b) Two random samples of sizes 100 each have drawn from two populations with the standard deviaitons 2.823 and 1.548. Test the significance difference between the sample standard deviations if the population standard deviaiton is 2.

12. a) For a 2X2 contingency table

	Attribute B	
Attribute A	a	b
	c	d

prove that $\chi^2 = \dfrac{N(ad-bc)^2}{(a+b)(c+d)(a+c)(b+d)}$

Where N = a + b + c + d **(Or)**

    b) Explain F-test for equality of population variances.

13. a) Define Non parametric test. Explain the difference between parametric & Non parametric test

(Or)

    b) Explain Median test Procedure.