ADITYA DEGREE COLLEGES
ANDHRA PRADESH
II B.Sc Statistics IV SEMESTER - I MID EXAMINATIONS
(DESIGN & ANALYSIS OF EXPERIMENTS)

Date:

Max. Marks : 60
Time : 2 Hours

SECTION - A

Answer any FIVE Questions   5X4=20M

1.   Explain about ANOVA techniques?

2.   State Cochran's theorem.

3.   Give the assumption of ANOVA

4.   Define i) Experiment   ii) Experimental error.

5.   Write the applications of Design of Experiments

6.   Explain Gauss Markov linear model

7.   Define treatment, Experimental unit.

8.   Explain the concept of precision.

SECTION - B

Answer all the Questions.   4X10= 40M

9. a) Give the statistical analysis for the one way classification.

(OR)

b) The following table shows lives in hours of four electric lamps.

Batches	lives in hours							
1	1600	1610	1650	1680	1700	1720	1800	_
2	1580	1640	1640	1700	1750	_	_	_
3	1460	1550	1600	1620	1640	1660	1740	1820
4	1510	1520	1530	1570	1600	1680	_	_

perform ANOVA oneway classification.

10. a) Give the statistical analysis for the two way classification.

(OR)

b) The following defective pieces produced by four operators working in turn on four different machines

MACHINES	OPERATOR			
	B1	B2	B3	B4
A1	34	28	33	29
A2	31	24	35	22
A3	27	20	43	72
A4	28	28	29	26

11. a) Explain the principles of Design of Experiments.

(OR)

b) Explain Critical difference.

12. a) Explain the concept of CRD along with advatages and disadvantages.

(OR)

b) Give the following data obtaines from a CRD with 4 tratments

T1	T2	T3	T4
20.9	23.7	13.2	5.8
12.1	14.1	10.2	6.1
10.1	9	5.1	4.8
4.2	_	_	1.5