

M.Sc. DEGREE EXAMINATIONS – APRIL, 2016

SECOND SEMESTER

STATISTICS

PAPER –IV DESIGN OF EXPERIMENTS

25154

Time: 3 Hours

Max. Marks: 75

(No additional sheet will be supplied)

PART – A (5x3=15 marks)

Answer Any FIVE Questions

Each question carries 3 marks

Each answer should not exceed One page

1. Explain the fixed effect model.
2. Explain the concept of contrast.
3. Explain Tukey's test.
4. Explain missing plot technique.
5. Describe single missing plot technique in LSD.
6. Explain split plot design.
7. Explain the lay out and conditions of a Youden square design.
8. How a PBIB is different from BIBD? Explain.

PART – B (4x15=60 marks)

Answer All Questions

Each question carries 15 marks

Each answer should not exceed Six pages

9. Explain the necessity of analysis of covariance technique and also explain the ANCOVA technique for one way layout.
(OR)
10. Workout the analysis of variance for a two way classifications. State the assumptions made.
(OR)
11. Discuss the analysis of RBD with two observations missing.
(OR)
12. Explain Duncan's multiple range test for comparing the paired treatment means.
13. Explain in detail the main effects and interactions in a 2^3 factorial experiment. How do you test the significance of various factorial effects in 2^3 Factorial Experiment?
(OR)
14. Explain partial confounding. Obtain the partial confounding arrangement in three blocks in a 3^3 Factorial Experiments.
15. Explain BIBD. State and prove the necessary conditions for the existence of BIBD also explain the inter block analysis of BIBD.
(OR)
16. Define a PBIB design. Explain the intra block analysis of PBIB design with two associates classes.