MSc DEGREE EXAMINATION MAY 2018
(Second Semester)

Branch-**STATISTICS**

LINEAR MODELS & DESIGN OF EXPERIMENTS

Time: Three Hours Maximum: 75 Marks

Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 15 = 75)

1 a Explain linear model with an example and estimability of linear function of parameters.

b State the Gauss - Markov theorem by stating the setup conditions.

OR

c Explain briefly the testing the linear hypothesis,

d Explain the mixed plot technique.

2 a Explain the concept of confounding in a factorial experiment with an example.

b Explain the Main effects, interaction effects and generalised interaction effects in a factorial experiment.

,OR

c Draw a layout of 2^3 factorial experiment where all the iteration are partially confounded.

d What are the advantages and disadvantages of confounding in a factorial experiments?

3 a Explain fractional factorials,

b Explain the half replicates in 2^n factorial experiment.

OR

e Explain the analysis of two-way nested design,

d Define split-plot design and its sutabilitv.

4 a Explain BIBD and obtain the relationship among its parameters.

b Explain Inter Block analysis in BIBD.

OR

c Explain PBIBD and state the properties of its parameters,

d Explain classification of two-associate scheme.

5 a Explain Direct and indirect assays.

b Explain Response surface design.

OR

c Explain the analysis of cross-over design,

d Explain briefly weighing design.