PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 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 Best Linear Unbiased estimate with examples.

    b   Explain Gauss Markov set up in the estimability of linear parametric function.
                                    OR
    c   Explain Analysis of non-orthogonal data.

    d Explain Testing Linear hypothesis and its application to analysis of variance.

2   a Explain total and partial confounding in Design of Experiments.

    b Explain confounding in 2^3 experiments.
                                    OR
    c Explain Asymmetrical factorial experiment,

    d Explain partial confounding in 3^n system with example.

3   a Briefly explain fractional factorials.

    b Explain Analayis of two way nested design.
                                    OR
    c Discuss half and quarter replicates in 2^n scries,

    d Explain the Statistical Analysis of split plot design..

4   a Briefly explain Balanced Incomplete Block design with its properties of parameter.

    b Write a short note on Yoden square and Lattice design.
                                    OR
    c Explain PBIBD with its properties of parameters,

    d Explain the classification of two-associate scheme.

5   a Explain the design of Bio-assays with direct, indirect and parallel line assays.   (15)
                                    OR
    b Explain Response surface design,

    c Discuss the analysis of cross-over design.

                            Z-Z-Z   END