

Syllabus of Statistics

Analysis of Variance and Design of Experiment

Credits: 04	Course Code: B060502T	Sem. V
	External Max. Marks 75	Internal Max. Marks 25

Unit	Topic	No. of Lectures
I	Definition of Analysis of Variance, Assumptions and Limitations of ANOVA, One way classifications.	08
II	Two way classification with one observations per cell. Multiple comparison tests using critical difference criteria	08
III	Principles of Design of Experiment: Randomization, Replication and Local Control, Choice of size and type of a plot using uniformity trials.	07
IV	Completely Randomized Design (CRD), Concept and definition statistics analysis of CRD, Merits and demerits.	07
V	Randomized Block Design (RBD), Concept and definition of efficiency of design, Comparison of efficiency between CRD and RBD.	07
VI	Latin Square Design (LSD), Lay-out, ANOVA table, Comparison of efficiencies between LSD and RBD, LSD and CRD.	08
VII	Missing plot technique: Estimation of missing plots by minimizing error sum of squares in RBD and LSD with one missing observation.	07
VIII	Factorial Experiment: General description of factorial experiment, 2^2 , 2^3 and 2^n Factorial experiments arranged in RBD and LSD Definition of main Effects and Interactions in 2^2 and 2^3 factorial experiments.	08