B. Sc. Three Year Degree Course
Department of Forestry and Environmental Sciences
Detailed semester syllabus commenced from 2016-17

VI Semester

Paper I Forest Physiology **(60+ 20 marks)**

Introduction and practical application in forestry. Soil, water, absorption of water, water conducting system, transpiration, water stress and drought. Photosynthesis- pigments, mechanisms and factors affecting photosynthesis. Respiration- mechanism, glycolysis and kerb cycle, anaerobic respiration and respiratory quotients. Growth and growth regulators, relative growth rate, plant hormones- auxins, gibberellins, cytokininis and ethylene.

Paper II Biostatistics **(60+ 20 marks)**

Definition its scope and importance in forestry, collection Classification and tabulation of statistical data, frequency distribution, diagrammatic and graphical representation of data Measures of central tendency: mean, mode, median, measures of dispersion, mean deviation, standard deviation and standard error. Simple correlation and regressions. Elementary idea on probability- additive and multiplicative theorems, binomial and normal distribution. Test of significance- based on normal, t and X^2 test. Sampling techniques – Simple, random, stratified and systematic sampling.

Paper III Forest Genetics and Tree Improvement **(60+ 20 marks)**

Introduction and its application in tree improvement. Cell structure and function, chromosome structure and cell division. Mendel's law of inheritance, qualitative and quantitative characters. Tree breeding: control pollination, vegetative propagation, tissue culture, hybridization, polyploidy and maturation. Seed orchards and seed production area.

Practical **(45+15) 60 Marks**