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

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

Definition, importance and principles of measurements, system of units and accuracy implied in their expression. Linear measurements- diameter and girth measurements, place and standard rules of breast height measurement, bark thickness and instruments used. Measurement of tree height, principles of height measurements, instruments used for measurement of height, height measurement under different field condition. Method of studying tree stem form- form factor, form quotient, form point and taper table. Measurement of volume of tree- definition, object, and measurement of volume of felled and standing trees, classification and use of volume tables. Age of trees: object and methods of determination of age of standing and felled trees. Growth of tree, measurement of growth by increment boring, growth curves. Increment, increment percent for diameter and volume.

Paper II Environmental Science and Forest Laws **(60+ 20 marks)**

Definition and components- atmosphere, hydrosphere, lithosphere and biosphere. Natural resources and their management- forest, wildlife, water, and land resources. Environmental pollution-Types of pollutants, global warming, green house gasses, ozone layer depletion, acid rains. Control prevention of air, water and noise pollution. Role of trees and forest in environmental conservation, environmental monitoring and concept of sustainable development. Environmental policy and legislation in India- Wild life Protection Act 1972 amended 1991, Water prevention and control of pollution Act 1974. Air prevention and control of pollution Act 1981, Environmental protection Act 1986 and Biodiversity conservation bill. Environmental impact assessment. Definition and background of forest policy, laws and act. National forest policy 1894,1952, 1988 and its modification in brief Indian forest Act 1927 and 2006, forest conservation Act 1980. Wildlife protection Act 1972 and its modification.

Paper III Forest Management **(60+ 20 marks)**

Definition and scope, management of private forest vis-a-vis public forests, objects of management. Forest organization: Geographical and ecological classification, functional classification, legal classification, territorial classification, administrative classification. Sustained yield, increasing and progressive yield, and arguments for and against sustained yield principles. Increment- CAI and MAI curves, increment percent. Distribution of age classes and age gradation in even and uneven aged forest and growing stock. Normal forest- basic factors of normality, kinds of abnormality in regular and irregular forest. Yield regulation: Definition, principle and method of yield, area method. Von mental Method for yield regulation. Rotation: Definition and concept of rotation, types of rotation and conversion period.

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