

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

IV Semester

Paper I Wildlife Management

(60+ 20 marks)

Definition, concept and history of wildlife management in India, Rare, threatened and endangered species of India. Wildlife Sanctuaries, National Parks, Zoological parks and Biosphere reserves, Project tiger, project elephant, and wildlife legislation, Various Government and private agencies involved in wildlife conservation, wildlife values and conflict and protected area management. Important features of Tiger, Lion, leopard, antelopes, Black Buck, Rhinoceroses, Elephant, Alligators. Guidelines for declaration of Big Cats as man eaters.

Paper II - Plantation Technologies

(60+ 20 marks)

Definition, aims and objective of plantation forestry. Plantation organization and structure. Failures of plantations – reasons for failure and remedial techniques. Afforestation of problematic sites – drought prone, arid, marshy, saline land, sandy soils and suitable species for plantation of these sites. Seed technology – introduction, scope, seed sources and seedling established, seed biology and seed production. History of forest production in India. Seed germination, seed collection and handling. Seed stands, seed collection, storage and supply of seeds. Stump planting: advantages of stump planting and patterns of planting.

Paper III - Wood Science & Technology

(60+ 20 marks)

Wood structure – gross structure of wood, cellular composition of bark, sap wood, heart wood and pith, early wood, growth rings, grain, texture and identification of wood. Physical properties of wood: weight, density, reaction of heat, sound, light and electricity on wood, thermal; expansion, moisture contain, porosity, colour, and wood working qualities. Mechanical properties of wood: standard test, special testing on wood store and timber products, non destructive testing of wood, factor influencing strength, hardness, flexibility, elasticity, fissility and combustibility. Defects and abnormalities of wood: Natural defects, method of evaluation and measurement, influences of defects on conversion and utilization, defects during processing, manufacturing, seasoning and wood destroying agents. Seasoning of wood – principles and methods, air, solar and kiln seasoning. Wood preservation: causes and methods, different preservatives and their properties.

Practical

(45+15) 60 Marks