

ADIKAVI NANNAYA UNIVERSITY
RAJAMAHENDRAVARAM
V SEMESTER
Paper- V: FOREST UTILIZATION

Unit-I : WOOD TECHNOLOGY

Logging and Extraction Techniques; Transport and storage, physical and mechanical properties of wood, defects and abnormalities, composite and other wood products, saw milling, wood seasoning and preserving.

Unit- II : FOREST INDUSTRIES

Paper and pulp, other cellulose based industries, plywood, veneer, match industry, rubber, furniture, sports goods and pencils.

Unit-III : MINOR VEGETABLE FOREST PRODUCTS

Gums, resins, turpentine, oil seeds, drugs, species and bamboo products

Unit IV: MINOR EDIBLE FOREST PRODUCTS

Edible products, poisons

Unit V: MINOR ANIMAL FOREST PRODUCTS

Lac, honey and wax, silk, horns, bones and ivory

PRACTICALS

1. Microscopic study of the structure of wood and identification of major wood species on the basis of the internal structure.
2. Study of instruments in wood testing
3. Visit to composite wood yards, wood seasoning preservation of food and cellulose and paper branches
4. Taxonomic identification of paper yielding plants
5. Cellulose isolation and estimation
6. Study of wood cutting and furniture making instruments

BOOKS FOR REFERENCE:

1. Brown H.P. Wood Technology, Mc. Graw hills. Book company
2. Krishna Murthy. T . Minor Forest Products of India
3. Mathur A.N, Economics of Energy Plantation, Himanshu Publications

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PAPER VI: FOREST PROTECTION

Unit I: ENERGY PLANTATION:

Energy Plantations and their prospects, Eucalyptus Plantations, Fuel and Wood Farms.

Unit II : FEASIBILITY OF ENERGY PLANTATIONS

Feasibility of Energy Plantations

Unit III: FOREST PROTECTION :

Climatic and Biotic factors effecting forests.

Unit IV: METHODS OF CONSERVATIONS:

Methods of plant conservation, methods of wild life conservation, Endangered species, methods of soil conservation, methods of water conservation.

Unit V. FOREST LAWS :

Forest laws: Necessity, general principles, Indian forest Act 1927; Forest conservation Act 1980; Wild life protection Act 1972, Environmental protection Act 1986, Biological diversity Act 2000.

Practicals:

1. Identification and description of vegetable and animal forest products.
2. Identification and study of fuel wood plants.
3. Description of endangered species in India.
4. Classification and description of local wild life.
5. Visit to Mangrove vegetation
6. Forest industries and sanctuaries
7. National parks and Zoological parks.

Books for Reference:

1. Mathur A.N, *Economics of Energy Plantations*, Himanshu Publications
2. Robert L, Edmonds, James K. Agee, Robert I.Gare, *Forest Health & Protection*.
3. Lawrence C.Christy, Charles E. Dileva, Jonathan M. Lindsay, *Forest Law & Sustainable Development*.