

B.Sc. III Year

Semester-V

Plant Biodiversity and Human Welfare

GE-1E (2 hrs/week) Credits-2

Generic Elective-I

30 hours

Theory Syllabus

Unit-I:

1. Plant diversity and its scope- Genetic diversity, Species diversity, Plant diversity at The ecosystem level, Agro-biodiversity and cultivated plant taxa, wild taxa. Values and uses of Biodiversity: Ethical and aesthetic values, Precautionary principle, Methodologies for valuation, Uses of plants, Uses of microbes.
2. Loss of Biodiversity: Loss of genetic diversity, Loss of species diversity, Loss of ecosystem diversity, Loss of agro-biodiversity, Projected scenario for biodiversity loss,
3. Conservation of Biodiversity: Conservation of genetic diversity, species diversity and ecosystem diversity, In situ and ex situ conservation, Social approaches to conservation, Biodiversity awareness programmes, Sustainable development.

Unit-II:

4. Role of plants in relation to Human Welfare; a) Importance of forestry their utilization and commercial aspects. b) Avenue trees. c) Ornamental plants of India. d) Alcoholic beverages through ages. Wood and its uses.
5. Fruits and nuts: Important fruit crops their commercial importance.
6. Management of Plant Biodiversity: Organizations associated with biodiversity management-Methodology for execution-IUCN, UNEP, UNESCO, WWF, NBPGR; Biodiversity legislation and conservations, Biodiversity information management and communication.

Suggested Readings

1. Krishnamurthy, K.V. (2004). An Advanced Text Book of Biodiversity - Principles and Practices. Oxford and IBH Publications Co. Pvt. Ltd. New Delhi