

DSE-9 Plant Diversity and Human Welfare

MM : 100
Time : 3 hrs
L Credit
4 4

Sessional : 30
ESE : 70
Pass Marks : 40

Total Hours: 60

Learning objective:

- To understand the basic knowledge of plant diversity and human welfare.
- To acquire the basic information of plant diversity and its scope.
- To acquire an overall knowledge of biodiversity loss and its management.
- To become familiar with Conservation of biodiversity, ethical and aesthetic values.
- To acquire the basic information on the role of plants in relation to human welfare.

Learning outcomes:

- The student shall be able to familiar with genetic, species, plant diversity at the ecosystem level, and cultivated plants.
- The student shall be able to understand basic information on loss of genetic, species, and ecosystem diversity.
- The student shall be able to understand the organizations associated with biodiversity management-methodology for execution like IUCN, UNEP, UNESCO, WWF, and NBPGR.
- The student shall be to understand the about the biodiversity management, and Conservation.
- The student shall be to learn and understand importance of forestry, utilization and important fruit crops for their commercial importance.
- The student shall be able take the decisions for carrier point of views in research, industries and academia entrepreneurship etc.

Unit 1: Plant Diversity and its Scope:**(16 Lectures)**

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.

Unit 2: Loss of Biodiversity and its Management:**(16 Lectures)**

Loss of genetic diversity, loss of species diversity, loss of ecosystem diversity, loss of agro-biodiversity, projected scenario for biodiversity loss.

Unit 3: Conservation of Biodiversity:**(16 Lectures)**

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 4: Role of Plants in Relation to Human Welfare:**(12 Lectures)**

Importance of forestry their utilization and commercial aspects, avenue trees, ornamental plants of India. Alcoholic beverages through ages; fruits and nuts: Important fruit crops their commercial importance.

Unit 5: Management of Natural Resources:

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.

Chhaya
22/5/22

Jay
27/5/22

Manish
31
D
27/5/2022
Falgun

Arvind

DSE 9 SEMESTER VII / BBO-E753 (LAB COURSE CC-09)

The Practicals based on BBO E703 will be performed.

Practicals

1. Prepare maps showing forest types in India and Uttarakhand.
2. Collect and study the remote sensing images showing forest vegetation in India and Uttarakhand.
3. Photographs/collection of three local endangered plants.
4. Collection and documentation of native medicinal plants.
5. Collection and documentation of cultivated plants.
6. Collection and documentation of invasive species.
7. Visit/excursion local conserves area (Biosphere reserve/National parks/Wild life sanctuaries/scared grooves).
8. Map of Vegetation types of India

Chiranjiv
27/5/22

27/5/22

Abund.

Hd
27/5/2022

Polpana Chink

Abund

Quina

Abund