

Semester-II

Title of the Course : Plant Diversity and Human Welfare

Nature of course : GEC-II

Course code :

Total Credits : 03

Distribution of Marks: 60+40=100

Course outcome

1. Differentiate the level of plant diversity
2. Examine the cause of the loss of biodiversity
3. Analyse the biodiversity conservation strategies
4. Evaluate the role of plants in human welfare

Learning outcomes

1. Distinguish the biodiversity levels
2. Analyse threats to biodiversity
3. Understand the conservation strategies for biodiversity
4. Examine the role of plants, in human welfare

Mapping of CO with Bloom's taxonomy

Knowledge Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual						
Conceptual		CO1				
Procedural			CO3	CO4		CO2
Metacognitive						

Modes of internal assessment:

1. One internal examination (theory)
2. Viva-voce
3. Group discussion
4. Home assignments

Attainment of Cos:

1. Continuous evaluation through in and end semester theory and practical examinations
2. Field demonstration of local flora and fauna
3. Demonstration of biodiversity conservation models
4. Participation in seminar/conference

Lectures: 45

Unit 1:

(12 lectures)

Plant diversity and its scope- Genetic diversity, Species diversity, Plant diversity at the ecosystem level, Agrobiodiversity 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:

(13 lectures)

Loss of Biodiversity: Loss of genetic diversity, Loss of species diversity, Loss of ecosystem diversity, Loss of agrobiodiversity, Projected scenario for biodiversity loss,

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

Unit 3: **(10 lectures)**

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 4: **(10 lectures)**

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. Fruits and nuts: Important fruit crops their commercial importance. Wood and its uses.

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