B.Sc. III Year

BBO-S501 Semester – V

SEC-3 Plant Diversity and Human Welfare

MM : 100
Time : 3 hrs

Sessional : 30
ESE : 70
Pass Marks : 40

Learning objective:

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

Learning outcomes:

At the end of course student will be able

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