



RAM KRISHNA DHARMARTH FOUNDATION UNIVERSITY, BHOPAL

Airport Bypass Road, Gandhi Nagar, Bhopal - 462033

Semester – 6th

Branch	Subject Title	Subject Code
B.Sc. (Botany-DSE1)	Biodiversity and Economic Botany	BODSE1-161

Course Learning outcomes (CLO),

The course objective is to develop the skills related to plant ecology and forestry:

1. Apprehend plant products used in daily life
2. Assess the diversity of plants and the plant products in human use
3. Understand core concepts of Economic Botany
4. Get acquainted with the resources of millets, cereals, pulses, vegetables, flowers, fibre and wild food plants.
5. Recognize the importance of plants for enhancing immunity and their role in various medicinal systems

Content

Unit – 1

Concept of Biodiversity

Concept, definition, Scope and Constraints. Genetic. Types of Biodiversity- Genetic, Species / Organism Diversity, Ecological/Ecosystem, Agro and Urban Biodiversity. Centres of Biodiversity, Brief knowledge of types of plants - Terrestrial, Aquatic, Epiphytic, Parasitic and Saprophytic plants

Unit - 2

2. Threats to Biodiversity

Habitat Destruction, Fragmentation, Transformation, Degradation and Loss, IUCN threatened category. Endangered and Endemic species, Invasive species. Effect of Pollution-impact of Pesticides, over exploitation. Biodiversity indices. Biodiversity conservation. Strategies of Biodiversity conservation, Ecosystem Services

Unit – 3

Plant resources

Resource Survey and documentation in local markets. Checklist of locally used underutilized and discontinued plants.

Economic potential and Geographical distribution-Minor Millets, Cereals, Pulses, Vegetables, Flowers and Wild Edible Plant resources. Economical potential of Fodders and Wild Relatives of Cultivated Crops, Traditional water and soil management

Unit - 4

Other Economical plant Resources –

Types of Fibers, their Marketing potential-Cotton. Love Agave June, Banana based Products. Natural dyes and locally available dye yielding plants, Herbal cosmetics (skin and hair care), Sweetener like Jaggery, Palm, Cane sugars and Stevia. Difference between stimulating and alcoholic beverage- Coffee, Tea and a range of Herbal Teas Marketing, Scope value addition and export potential of any these resources.



Unit - 5

Medicinal Plant Resources: Raw drugs and related MFP. Any 10 Plants used in Traditional medicine (Ayurveda, Unani, Siddha, and Homeopathic). Lower Plants like algae and fungi in medicines and Nutraceuticals. Plants used in common aliments as home remedies. Plant and Herbal products used as Antibiotics and immunity boosters.

Practical's

Practical

1. Identification of locally available plant species and listing with botanical name, family and uses.
2. Plantation of specific local flower plants/ fruit plants/ vegetable plants/ medicinal plant (any one).
3. Identification and description of five local terrestrial/aquatic plants.
4. Identification and description of epiphytic, parasitic and saprophytic plant.
5. Identification and documentation of local fodder plants and their cultivation.
6. Identification and documentation of local millets and their uses.
7. Identification and documentation of local cereals and their uses.
8. Identification and documentation of local pulses and their uses.
9. Study of wild edible plants available in local area.
10. Study of fiber crop plants available in local area.
11. Study of locally available vegetable plants and Uveir uses
12. Study of traditional water conservation practices.
13. Study of soil management practices.
14. Study of locally available medicinal plants viz Ayurveda system/ Unani system/ Homeopathic system/Siddha system.
15. Study of medicinal plants and their products in home remedies for routine diseases.



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