

B.Sc. III Year

BBO-S502

Semester - V

SEC-3 Medicinal and Economic Botany

MM : 100
Time : 3 hrs

Sessional : 30
ESE : 70
Pass Marks : 40

Learning objective:

- To understand the basic knowledge of medicinal and economic botany, introduction and history of Ayurveda.
- To acquire an overall knowledge on conservation of endangered and endemic medicinal plants.
- To become familiar with Ethno-botany and folk medicines.
- To acquire the information on Origin of cultivated plants and beverages, oils, legumes and spices.

Learning outcomes:

At the end of course student will be able

- The student will be able to familiar with the history, scope and importance of medicinal plants; indigenous medicinal sciences.
- The student will be able to understand about the endemic and endangered medicinal plants, red list criteria; *in-situ* and *ex-situ* conservation strategies, various methods of propagation of medicinal plants.
- The student will be to understand the about the palaeo-ethnobotany, folk medicines of ethno botany, importance of forestry their 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 entrepreneurs etc.

Unit 1: Introduction and History of Ayurveda:

(20 Lectures)

History, scope and Importance of medicinal plants; indigenous medicinal sciences; definition and scope- Ayurveda; history, origin, saptadhatu and tridosha concepts, Ramayana, plants used in Ayurveda treatments, Siddha: origin of Siddha medicinal systems; basis of Siddha system, plants used in Siddha medicine. Unani: history, concept: Introduction to Polyherbal formulations.

Unit 2: Conservation of Endangered and Endemic Medicinal Plants:(20 Lectures)

Definition: endemic and endangered medicinal plants, red list criteria; in situ conservation: Biosphere reserves, sacred groves, national parks; *Ex situ* conservation: botanic gardens, ethno-medicinal plant gardens. propagation of medicinal plants: objectives of the nursery, its classification, important components of a nursery, sowing, pricking, use of green house for nursery production, propagation through cuttings, layering, grafting and budding.

Unit 3: Ethno-Botany and Folk Medicines:

(20 Lectures)

Ethnobotany in India: methods to study ethno-botany; applications of ethno botany: national interacts, Palaeo-ethnobotany. Folk medicines of ethno botany, Ethno-medicine, ethno ecology, Ethnic communities of India; application of natural products to certain diseases- Jaundice, cardiac, infertility, diabetics, blood pressure and skin diseases.

Unit 4: Origin of Cultivated Plants:

(10 Lectures)

Concept of centers of origin, their importance with reference to Vavilov's work. Wheat - origin, morphology, uses. General description with special reference to cotton (botanical name, family, part used, morphology and uses).

Unit 5: Beverages, Oils, Legumes and Spices

(14 Lectures)

Tea (morphology, processing, uses). General description with special reference to groundnut. General account with special reference to Chick-pea and soybean. General account with special reference to clove and black pepper (botanical name, family, part used morphology and uses).

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