

Name of the Assistant Professor: Dr. Anju
Class and Section: B.Sc. Medical (2nd Sem.)
Subject: Botany. Lesson plan session 2022-2023

April 2023

Unit: Introduction to Ecology and related Factors

Soil: Formation, composition, soil profile, Precipitation, Types of water and water cycle, Light and temperature, Shelford's law of Tolerance in brief.

Unit 2: Ecological adaptations

Ecological adaptation of hydrophytes, halophytes and xerophytes.

Unit 3: Plant communities and Phytogeography

Population Ecology: Basic concept and Characteristics, Biotic potential and growth curve, Community ecology: Concepts, qualitative and quantitative characteristics (including biological spectrum), Phytogeographical regions of India.

Unit 4: Ecosystem and biogeochemical cycles

Ecosystem: Structure and function (Trophic level, food chain, food web and ecological pyramids), Ecological efficiencies, Biogeochemical cycling: Carbon, Nitrogen and Phosphorus Cycle, Succession: Process and types.

May 2023

Unit 1 :Introduction to Plant Taxonomy

Identification, Classification, Nomenclature, Role of modern tools (Chemotaxonomy, cytotaxonomy and Numerical taxonomy) in relation to taxonomy, Functions of Herbarium, Important herbarium and botanical gardens of India and the world, Taxonomic literature: Flora, Monographs and Journals.

Unit 2: Botanical Nomenclature and Classification

Principles and rules (ICBN), Ranks and names, Binomial system, Typification, Author citation, valid publication, Rejection of names, principle of priority and its limitations, Types of classification- Artificial, Natural and Phylogenetic, Bentham and Hooker's Classification (upto order), Engler and Prantl Classification (upto order).

Unit 3: Biology and Diversity of Angiosperms-I

Types of inflorescence, Diagnostic features and economic importance of the following families: Ranunculaceae, Brassicaceae, Malvaceae, Euphorbiaceae, Fabaceae, Apiaceae.

Unit 4: Biology and Diversity of Angiosperms-II

Diagnostic features and economic importance of the following families: Asclepiadaceae, Lamiaceae, Asteraceae, Solanaceae, Cucurbitaceae, Liliaceae and Poaceae