

Session Plan 2021-2022

Paper code. BOT-2.1, Diversity of Archegoniates
Dated - 21/3/2022 to 31/3/2022
UNIT-I BSc Botany Sem IInd
Bryophyta- General characters, classification (upto classes), alternation of generations.

evolution of sporophytes and economic importance

Dated - 1/4/2022 to 15/4/2022

UNIT -II

Bryophyta: Structure and reproduction (excluding development) of *Marchantia* (Hepaticopsida), *Anthoceros* (Anthocerotopsida) and *Funaria* (Bryopsida)

Dated - 16/4/2022 to 30/4/2022

UNIT-III

Pteridophyta- General characters, classification (upto classes), alternation of generations, heterospory, apospory, apogamy and economic importance;

General account of stellar evolution

Dated - 1/5/2022 to 25/5/2022

UNIT IV

Pteridophyta: Structure and reproduction (excluding development) of *Rhynia* (Psilopsida), *Selaginella* (Lycopsida), *Equisetum* (Sphenopsida) and *Pteris* (Pteropsida)

Note: Including test & assignments.

Lession Plan 2021-2022

Paper Code - BOT-2.2 UNIT-I B.Sc. Botany Sem IInd
Dated - 26/5/2022 to 5/6/2022

Genetic Material: DNA - the genetic material, DNA structure and replication, DNA-Protein interaction, The Nucleosome Model, Genetic Code, Satellite and Repetitive DNA.

Dated - 6/6/2022 to 15/6/2022

UNIT - II

Genetic Inheritance: Mendelism: Laws of Segregation and Independent Assortment; Linkage Analysis; Allelic and non-allelic interactions.

Dated - 16/6/2022 to 25/6/2022

UNIT-III

Extra-nuclear Inheritance: Presence and function of Mitochondrial and Plastid DNA; Plasmids.

Genetic Variations: Mutations - spontaneous and induced; transposable genetic elements; DNA damage and repair.

Dated - 26/6/2022 to 11/7/2022

UNIT - IV

Gene Expression: Modern concept of gene; RNA; Ribosomes; Transfer of genetic information - transcription and translation; Structure of proteins; Regulation of gene expression in prokaryotes and eukaryotes

Note: Including test & assignments.

Lesson
Plan 2021 to 2022

Paper code - 4.2 Dated - 26/5/2022 to 5/6/22
UNIT-I
B.Sc. 1st Year Sem.

Flower-a modified shoot, Microsporangium, its wall and dehiscence mechanism.

Microsporogenesis, pollen grains and its structure (pollen wall).

Dated - 6/6/22 to 15/6/2022
UNIT-II

Pollen germination (microgametogenesis), Male gametophyte, Pollen-pistil interaction; self incompatibility, Pollination: types and agencies

Dated - 16/6/2022 to 25/6/2022
UNIT-III

Structure of Megasporangium (ovule), its curvatures; Megasporogenesis and Megagametogenesis, Female gametophyte (mono, bi and tetrasporic), Double fertilization, Endosperm types and its biological importance.

Dated - 26/6/2022 to 11/7/2022
UNIT-IV

Embryogenesis in Dicot and Monocot; Polyembryony, Structure of Dicot and Monocot seed, Fruit types; Dispersal mechanisms in fruits and seeds.

Note: Including test & assignments.

Lesson Plan - 2021 to 2022

Paper code - 4.1, Dated - 24-3/2022 to 31/3/2022
UNIT-I B.Sc. Botany Sem. Vth
Taxonomy and Systematics, fundamental components of taxonomy (identification,

classification, description, nomenclature and phylogeny), Role of chemotaxonomy, cytotaxonomy and taxometrics in relation to taxonomy, Botanical Nomenclature, principles and rules, principle of priority, Keys to identification of plants.

Dated 1/4/2022 to 15/4/2022
UNIT-II

Type concept, taxonomic ranks, Salient features of the systems of classification of angiosperms proposed by Bentham & Hooker and Engler & Prantl, Floral Terms and Types of Inflorescence

Dated - 16/4/2022 to 30/4/2022
UNIT-III

Diversity of Flowering Plants: Diagnostic features and economic importance of the following families: Ranunculaceae, Brassicaceae, Malvaceae, Euphorbiaceae, Rutaceae, Fabaceae, Cucurbitaceae

Dated 1/5/2022 to 25/5/2022
UNIT-IV

Diversity of Flowering Plants: Diagnostic features and economic importance of the families: Apiaceae, Asclepiadaceae, Lamiaceae, Solanaceae, Asteraceae, Liliaceae and Poaceae

Note: Including test & assignments

Lesson Plan - 2021-2022

Paper code - 6-2 (BOT) Dated - 26/5/2022 to 5/6/2022
UNIT-I B.Sc. Botany Sem V with
Vavilov's centres of origin of crop plants, Origin, distribution, botanical description,
brief idea of cultivation and economic uses of the following:

Food plants - cereals (rice, wheat and maize), pulses (gram, arhar and pea),
vegetables (potato, tomato and onion).

Dated - 6/6/2022 to 15/6/2022
UNIT-II
Origin, distribution, botanical description, brief idea of cultivation and economic uses
of the following:

Fibers- cotton, jute and flax.

Oils- groundnut, mustard, sunflower and coconut.

Dated - 16/6/2022 to 25/6/2022
UNIT-III

Morphological description, brief idea of cultivation and economic uses of the
following:

Spices- coriander, ferula, ginger, turmeric, cloves.

Medicinal plants- *Cinchona*, *Rauwolfia*, *Atropa*, *Opium*, *Cannabis*, *Azadirachta*,
Withania.

Dated - 26/6/22 to 11/7/2022
UNIT-IV

Botanical description, processing and uses of:

Beverages- tea and coffee;

Rubber - *Hevea*;

Sugar- sugarcane

General account and sources of timber; energy plantations and bio-fuels.

Note: Including test & assignments.

Lession Plan - 2021-2022

Paper code - BOT-6.1, Dated - 21/3/2022 to 31/3/2022
UNIT-I B.Sc. Botany, B.Sc. V/TH Sem
Basics of Enzymology: Discovery and nomenclature; characteristics of enzymes; concept of holoenzyme, apoenzyme, coenzyme and co-factors; regulation of enzyme activity; mechanism of action.

Dated - 1/4/2022 to 15/4/2022
UNIT-II

Respiration: ATP - the biological energy currency; aerobic and anaerobic respiration; Krebs cycle; electron transport mechanism (chemiosmotic theory); redox -potential; oxidative phosphorylation; pentose phosphate pathway.

Dated - 16/4/2022 to 30/4/2022
UNIT-III

Lipid metabolism: Structure and functions of lipids; fatty acid biosynthesis; β -oxidation; saturated and unsaturated fatty acids; storage and mobilization of fatty acids.

Nitrogen metabolism: Biology of nitrogen fixation; importance of nitrate reductase and its regulation; ammonium assimilation.

Dated - 1/5/2022 to 25/5/2022
UNIT-IV

Genetic engineering and Biotechnology: Tools and techniques of recombinant DNA technology; cloning vectors; genomic and cDNA library; transposable elements; aspects of plant tissue culture; cellular totipotency, differentiation and morphogenesis; biology of *Agrobacterium*; vectors for gene delivery and marker genes.

Note: Including test & assignments.