

DEPARTMENT OF BOTANY (LESSON-PLAN)

PAPER:- Ecology & Phyto geography.


TEACHER'S NAME:- Dr. Mamta Rani

CLASS/SEM.:- B.Sc.Ist/2nd Sem

MONTH	FEBRUARY
WEEK 2	Ecological Adaptation Hydrophytes, Halophytes
WEEK 3	Xerophytes Adaptation, soil profile, formation, composition
WEEK 4	Water cycle, Light, Temp.
MONTH	MARCH
WEEK 1	Types of water, Population Ecology
WEEK 2	Community Ecology.
WEEK 3	Phytogeographical regions of India
WEEK 4	Holi Vacation - (23rd - 31st March).
MONTH	APRIL
WEEK 1	Ecosystem - food chain & food web
WEEK 2	Ecological pyramids, Ecological efficiencies
WEEK 3	Biogeochemical cycles
WEEK 4	Plant succession Process & Type
MONTH	MAY
WEEK 1	Shelford's Law of Tolerance, Biotic interactions.
WEEK 2	Revision.
WEEK 3	
WEEK 4	

Dr. Mamta Rani
(TEACHER'S NAME.)

Mamta
(TEACHER'S SIGN.)


(H.O.D.)
(BOTANY)

DEPARTMENT OF BOTANY (LESSON-PLAN)

PAPER:- Plant systematics (20UBOT202)

TEACHER'S NAME:- Dr. Asho Devi

CLASS/SEM.:- 2nd sem

MONTH	FEBRUARY
WEEK 2	Identification, classification, Nomenclature, ICBN
WEEK 3	chemotaxonomy, cytotaxonomy, Numerical taxonomy
WEEK 4	Herbarium and Botanical gardens
MONTH	MARCH
WEEK 1	Taxonomical literature (Flora, monograph and Journals)
WEEK 2	ICBN: Rules and Principles, Type of classification
WEEK 3	Bentham and Hooker classification, Englem and Pringle classification
WEEK 4	Holi vacation (23 rd - 31 st March 2024)
MONTH	APRIL
WEEK 1	Type of inflorescence; Ranunculaceae
WEEK 2	Brassicaceae, Malvaceae, Euphorbiaceae Test
WEEK 3	Families:- Fabaceae, Apiaceae, Lamnaceae
WEEK 4	Families:- Asteraceae, Solanaceae, Cucurbitaceae
MONTH	MAY
WEEK 1	Families:- Liliaceae, Poaceae
WEEK 2	Revision.
WEEK 3	---
WEEK 4	---

Dr. Asho Devi
(TEACHER'S NAME)

Asho.
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(BOTANY)

M.N.S.GOV.T. COLLEGE, BHIWANI
DEPARTMENT OF Botany

LESSON PLAN (4th SEM.)


SESSION: 2023-24


Name of Assistant Professor: Dr. Sunita

Class & Section: B.Sc.II (M)

Paper: I (Plant Physiology)

Month	Week	Topic
February	Week 1	Importance of water, water potential and its components;
	Week 2	Imbibition, Diffusion, Osmosis, Absorption of water
	Week 3	Transport of water (Transpiration pull theory), Root pressure and guttation, Transpiration and its significance; Factors affecting transpiration
	Week 4	Revision of Unit-1 & test
March	Week 1	Essential macro and microelements and their role, Criteria of essentiality of elements; Role of essentiality of elements; Deficiency symptoms,
	Week 2	Role of essentiality of elements; Deficiency symptoms, Transport of ions across cell membrane, active and passive transport,
	Week 3	Transport of organic substance: girdling experiment, Pressure flow model, Phloem loading and unloading.
	Week 4	Holi vacation
April	Week 1	Photosynthetic Pigments (Chl a, Chl b, xanthophyll, carotene); reaction center, antenna molecules action spectra, enhancement effect,
	Week 2	Photosystem I and II, Factors affecting Photosynthesis ,Electron transport and mechanism of ATP synthesis, C3, C4 and CAM pathways of carbon fixation, Photorespiration.
	Week 3	Revision of Unit-2,3 & test
	Week 4	Aerobic and anaerobic respiration, Glycolysis (EMP), TCA cycle;
	Week 5	Oxidative phosphorylation, Oxidative Pentose Phosphate Pathway, Respiratory Quotient, ATP as energy currency of cell.
May	Week 1	Revision of Unit-4 & test
	Week 2	Revision


Class Teacher
DR. SUNITA


HOD

DEPARTMENT OF BOTANY

LESSON PLAN - PAPER - BOT 402 (PLANT METABOLISM)

Teacher's Name: DEEPIKA RANI

Class: B.Sc. II (M) 4th Sem.

MONTH: →	FEBRUARY
Week 2	Enzymes - nomenclature, classification, structure.
Week 3	Properties & mechanism of enzyme action
Week 4	Mode of Action, enzyme inhibition
MONTH: -	MARCH
Week 1	Physiological role & biosynthesis of PGR - Auxin
Week 2	Gibberellins & Cytokinin / Assignments.
Week 3	Ethylene, ABA and mode of Action / Class-Test.
Week 4	HOLI VACATIONS. (23 March - 31 March, 2024)
MONTH: -	APRIL
Week 1	Lipids - Classification, introduction - Fatty Acids.
Week 2	Lipid biosynthesis & β -oxidation
Week 3	Glyoxylate cycle, N_2 -fixation & its significance.
Week 4	Nitrate & Ammonia Assimilation / Class-Test.
MONTH:	MAY
Week 1	Phases of Plant Growth & Development, Photoperiodism.
Week 2	Flowering, Florigen Concept, SDP, LDP.
Week 3	Phytochrome, Photomorphogenesis (Red-far red)
Week 4	Vernalization & senescence. / Revision.

Syllabus Coverage: 70%
Dr.

Deepika
(DEEPIKA RANI)
(Teacher's sign.)


(H.O.D.)

DEPARTMENT OF BOTANY (LESSON-PLAN)

PAPER:- Nursery & Gardening

TEACHER'S NAME:- Dr. Mamta Rani

CLASS/SEM.:- 2nd year / 4th sem

MONTH	FEBRUARY
WEEK 2	Nursery definition, scope, infrastructure of nursery.
WEEK 3	Planting. Direct seeding & transplant, seed storage.
WEEK 4	Seed banks, factors affecting seed viability, genetic erosion.
MONTH	MARCH
WEEK 1	Air-layering, cutting, collection season, rooting medium.
WEEK 2	Hardening of plants - green house, mist house, shed roof.
WEEK 3	Mist chamber, glass house, hardening.
WEEK 4	Holi Vacation - (23 rd - 31 st March)
MONTH	APRIL
WEEK 1	Types of gardening & landscape.
WEEK 2	Parks, Plant material, computer applications.
WEEK 3	Gardening operations.
WEEK 4	Sowing of seeds & seedlings.
MONTH	MAY
WEEK 1	Cultivation of vegetables (all types)
WEEK 2	Storage & marketing procedure.
WEEK 3	Revision.
WEEK 4	

Dr. Mamta Rani
(TEACHER'S NAME)

Mamta
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(H.O.D.)

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DEPARTMENT OF BOTANY (LESSON-PLAN)

PAPER:- Cell & Molecular Biology - I

TEACHER'S NAME:- Dr. Mamta Rani

CLASS/SEM.:- B.Sc IIIrd/6th Sem

MONTH	FEBRUARY
WEEK 2	Cell theory, Prokaryotic & Eukaryotic, cell size & shape
WEEK 3	Mitosis & Meiosis
WEEK 4	Mitochondria, chloroplast
MONTH	MARCH
WEEK 1	Golgi Body, lysosomes, vacuoles, Peroxisomes
WEEK 2	Nucleus & Nucleolus, ER.
WEEK 3	Chromosomes, DNA, Packaging
WEEK 4	Holi Vacation - (2 nd - 3 rd March)
MONTH	APRIL
WEEK 1	Cytoplasts, Membrane models
WEEK 2	Membrane structure & function
WEEK 3	Ribosome, Membrane permeability
WEEK 4	Cellular connections.
MONTH	MAY
WEEK 1	Carbohydrates in the membrane & faces of membranes
WEEK 2	Revision.
WEEK 3	
WEEK 4	

Dr. Mamta Rani

(TEACHER'S NAME)

Mamta

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(BOTANY)

DEPARTMENT OF BOTANY (LESSON-PLAN)

PAPER:- Cell and molecular biology -II (20UBOT 601B)

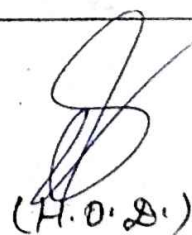
TEACHER'S NAME:- Dr. Asha Devi

CLASS/SEM:- 6th sem.

MONTH	FEBRUARY
WEEK 2	DNA:- Watson and Crick model, historical perspective
WEEK 3	DNA structure, Types of DNA, Type of genetic material
WEEK 4	Hershey and Chase experiment / Test
MONTH	MARCH
WEEK 1	Griffith and Avery transformation experiment
WEEK 2	DNA replication (Prokaryotes), Bidirectional replication, Semiconservative
WEEK 3	DNA replication (eukaryotes), semidiscontinuous, mode of replication
WEEK 4	Holi vacation (23 rd - 31 st March 2024)
MONTH	APRIL
WEEK 1	replication enzymes, replication of linear, ds DNA.
WEEK 2	Types of RNA, Monocistronic, Polycistronic RNA, RNA polymerase
WEEK 3	Transcription:- Prokaryotic and Eukaryotic / Test
WEEK 4	Translation:- Prokaryotes and Eukaryotes
MONTH	MAY
WEEK 1	lac operon, Tryptophan operon, eukaryotic gene regulation
WEEK 2	DNA repair, Post translational modification
WEEK 3	REVISION
WEEK 4	

Dr. Asha Devi
(TEACHER'S NAME)

Asha
(TEACHER'S SIGN.)



(H.O.D.)

(BOTANY)

DEPARTMENT OF BOTANY (LESSON-PLAN)

PAPER:- Mushroom culture technology (20SEC B604)

TEACHER'S NAME:- Dr Asho Devi

CLASS/SEM:- 6th sem

MONTH	FEBRUARY
WEEK 2	Mushroom:- History, Nutritional and medicinal value
WEEK 3	Types of mushroom, Poisonous mushroom,
WEEK 4	edible mushroom:- Volvariella, Pleurotus, Agaricus bisporus
MONTH	MARCH
WEEK 1	Infrastructure
WEEK 2	Pure culture:- Medium, sterilization, spawn preparation, multiplication
WEEK 3	Mushroom bed preparation and factor affecting
WEEK 4	Holi vacation (23 rd - 31 March 2024)
MONTH	APRIL
WEEK 1	Low cost technology, composting technology, of mushroom
WEEK 2	Long and short term storage, nutrition in mushroom.
WEEK 3	Test / Types of food preparation from mushroom.
WEEK 4	Research centres of mushroom.
MONTH	MAY
WEEK 1	Cost benefit ratio, export value, Marketing in India & abroad
WEEK 2	Revision
WEEK 3	- - -
WEEK 4	- - -

Dr Asho Devi
(TEACHER'S NAME)

Asho

(TEACHER'S SIGN.)

(H.O.D.)

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