

**DEPARTMENT OF BOTANY  
LESSON PLAN  
SESSION 2023-24  
SEMESTER – III**

**NAME OF TEACHER: BHANUMATI SARKAR**

**PAPER ALLOTTED: GENETICS (BOTACOR07T, BOTACOR07P), PLANT ANATOMY & EMBRYOLOGY (BOTHGEC03T/ BOTGCOR03T, BOTHGEC03P/ BOTGCOR03P, PLANT DIVERSITY AND HUMAN WELFARE (BOTSSECO1M)**

Month	Paper	Topic	No of classes
September 25.09.2023	Genetics BOTACOR07T	Unit 2: Extrachromosomal Inheritance: Chloroplast mutation: Variegation in Four o'clock plant; mitochondrial mutations in yeast;	2
	Genetics BOTACOR07P	Meiosis through temporary smear preparation (Rhoeo discolour) Unit 1b.	2
	Plant Anatomy & Embryology BOTHGEC03T BOTGCOR03T	Unit 4: Adaptive & Protective system: Epidermis,	1
	Plant Anatomy & Embryology BOTHGEC03P BOTGCOR03P	Unit.1. Study of meristems through permanent slides and photographs.	2
	Skill Enhancement Course -1 Plant Diversity and Human Welfare BOTSSEC01M	Organizations associated with biodiversity management- Methodology for execution-IUCN, UNEP, UNESCO. Unit 2: Loss of Biodiversity-Management of Plant Biodiversity:	1
October 2023	Genetics BOTACOR07T	Unit 2: Extrachromosomal Inheritance: maternal effects-shell coiling in snail; infective heredity- kappa particles in Paramecium. Unit 4: Variation in chromosome number. Euploidy and aneuploidy. Unit 5: Gene mutations (6 lectures) Types of mutations; molecular basis of mutations; mutagens – physical and chemical (Base analogs, deaminating, alkylating and intercalating agents); detection of mutations: CIB method. Role of transposons in mutation; DNA repair mechanisms	6
	Genetics BOTACOR07P	UNIT:5 Study of aneuploidy: Down's, Klinefelter's and Turner's syndromes (demonstration through pictures).	12

		Mitosis through temporary squash preparation ( <i>Allium cepa</i> , <i>Lens esculentus</i> , <i>Aloe vera</i> ). Unit;1a UNIT:7; Study of human genetic traits: Sickle cell anemia, xeroderma pigmentosum, albinism, red-green colour blindness, widow's peak, rolling of tongue, Hitchhiker's thumb and attached ear lobe. (demonstration through pictures)	
	Plant Anatomy & Embryology BOTHGEC03T BOTGCOR03T	Unit 4: Adaptive & Protective system: cuticle, stomata , General account of adaptations in xerophytes	4
	Plant Anatomy & Embryology BOTHGEC03P BOTGCOR03P	Unit.2. Tissues (parenchyma, collenchyma and sclerenchyma); Macerated xylary elements, Phloem (Permanent slides, photographs) 3. Stem: Monocot: <i>Zea mays</i> ; Dicot: <i>Helianthus</i> ; Secondary: <i>Helianthus</i> (only Permanent slides). 4. Root: Monocot: <i>Zea mays</i> ; Dicot: <i>Helianthus</i> ; Secondary: <i>Helianthus</i> (only Permanent slides). 5. Leaf: Dicot and Monocot leaf (only Permanent slides). 6. Adaptive anatomy: Xerophyte ( <i>Nerium</i> leaf); Hydrophyte ( <i>Nymphaea</i> petiole) 7. Structure of anther (young and mature), tapetum (amoeboid and secretory) (Permanent slides).	8
	Skill Enhancement Course -1 BOTSSEC01M Plant Diversity and Human Welfare	Biodiversity: Organizations associated with biodiversity management-Methodology for execution WWF, NBPGR; Biodiversity legislation and conservations, Biodiversity information management and communication Unit 2:Loss of Biodiversity	4
October 2023		PUJA VACATION 19.10.2023 to 15.11.2023	
November 2023	Genetics BOTACOR07T	Unit 6: Fine structure of gene ; Classical vs molecular concepts of gene; Cis-Trans complementation test for functional allelism; structure of phage T4, rII locus. Unit 6. Population and Evolutionary Genetics: Allele frequencies, genotype frequencies, Hardy-Weinberg Law, role of natural selection, mutation, genetic drift. Genetic variation and speciation	4
	Genetics BOTACOR07P	Unit 1b: Meiosis through temporary smear preparation ( <i>Allium cepa</i> ) Unit 6: Photographs and permanent slides showing translocation ring, Laggards and Inversion Bridge, Multipolarity, Sticky Bridge, Fragmentation and Pollen mitosis	8
	Plant Anatomy & Embryology BOTHGEC03T BOTGCOR03T	General account of adaptations in hydrophytes Unit:8 Apomixis: Definition, types and practical applications.	4

	Plant Anatomy & Embryology BOTHGEC03P BOTGCOR03P	8. Types of ovules: anatropous, orthotropous, circinotropous, amphitropous/ campylotropous from permanent slides. 9. Ultrastructure of mature egg apparatus cells through electron micrographs. 10. Pollination types and seed dispersal mechanisms (including appendages, aril, caruncle) (Photographs and specimens)	8
	Skill Enhancement Course -1 Plant Diversity and Human Welfare BOTSSECO1M	Student's quiz,, Project.	2
December 2023	Genetics BOTACOR07T	Unit 6. Population and Evolutionary Genetics: role of natural selection, mutation, genetic drift. Genetic variation and speciation Revision Class, Peer learning	6
	Genetics BOTACOR07P	Practice of mitosis of ( <i>Allium cepa</i> , <i>Lens esculentus</i> , <i>Aloe vera</i> ) and meiosis cell division of <i>Allium cepa</i> , <i>Rhoeo discolor</i> )	8
	Plant Anatomy & Embryology BOTHGEC03P BOTGCOR03P	11. Dissection of embryo/endosperm from developing seeds. 12. Calculation of percentage of germinated pollen in a given medium.	4
3 <sup>rd</sup> Week of December 2023		Class test, And Student's Seminar& Revision Class,	6
26.12.2023 to 02.01.2024		Internal Examination	
1 <sup>st</sup> week of January 2024	ALL	Revision Class, Solve model questions and previous years university questions and Remedial classes for Slow Learners	8
2 <sup>nd</sup> week of January 2024	ALL	Practice of workout for practical Class and class for Slow Learners, Mock test,	6
27.01.2024		END SEMESTER EXAMINATION	
Total Classes			106

NAME OF TEACHER: MADHURIMA ROY

PAPER ALLOTTED: ECONOMIC BOTANY (BOTACOR06T, BOTACOR06P),  
PLANT ANATOMY AND EMBRYOLOGY (BOTHGECOR03T/BOTGCOR03T),  
PLANT DIVERSITY AND HUMAN WELFARE (BOTSSECO1M)

Month	Paper	Topic	No. of classes
September	BOTACOR06T	Beverages: coffee - morphology, processing & uses. (Unit-6)	1

2023 (25.09.2023)	BOTACOR06P	Cereals: Wheat: habit sketch, L. S/T.S. grain, starch grains – type; micro-chemical tests – iodine spot test. Rice: habit sketch, study of paddy and grain, starch grains– type; micro-chemical tests – iodine spot test. (UNIT-1)	2
	BOTHGEC03T BOTGCOR03T	Secondary Growth: Vascular cambium – structure and function (Unit-3) Continued...	1
	BOTSSEC01M	Role of plants in relation to Human Welfare: a) Importance of forestry their utilization and commercial aspects b) Avenue trees (Unit-4) Continued	1
October 2023	BOTACOR06T	Natural Rubber: Para-rubber, tapping, processing and uses. (Unit-8) Sources of oils and fats: General description, classification, extraction, their uses and health implications of groundnut, linseed, soybean, mustard and coconut (botanical name, family & uses). Essential oils - <i>Santalum</i> and <i>Eucalyptus</i> : general account, extraction methods, comparison with fatty oils & their uses. (Unit-7)	5
	BOTACOR06P	Legumes: Soybean and Ground nut: habit sketch, fruit, seed structure and micro-chemical tests (Millon test- Soyabean, Sudan IV test- Groundnut) (UNIT-2) Sources of sugars and starches: Sugarcane - habit sketch; cane juice- micro-chemical tests (Molisch test). Potato - habit sketch, tuber morphology, T.S. of tuber to show localization of starch grains, w.m. starch grains, micro-chemical tests (Iodine test) (UNIT-3), Spices: Black pepper, Fennel and Clove - Demonstration, habit sketch and comments, (UNIT-4),	6
	BOTHGECOR03T / BOTGCOR03T	Secondary Growth: seasonal activity. Secondary growth in root and stem, Wood (heartwood and sapwood). (Unit-3)	4
	BOTSSEC01M	Role of plants in relation to Human Welfare: c) Ornamental plants of India. d) Alcoholic beverages through ages. (Unit-4) Continued	2
	October 2023	PUJA VACATION (19.10.23 to 15.11.2023)	
November 2023	BOTACOR06T	Timber plants: General account with special reference to teak, sal and pine. (Unit-10) Drug yielding plants: Therapeutic and habit-forming drugs with special reference to <i>Cinchona</i> , <i>Digitalis</i> , <i>Papaver</i> and <i>Cannabis</i> . (Unit-9) Continued	4
	BOTACOR06P	Beverages: Tea leaf and coffee bean - extraction (Biochemical Tests for Tannin and Alkaloid) and comments. (UNIT-5), Sources of oils and fats: Coconut - kernel and Mustard - seeds: tests for fats (Sudan IVtest)(UNIT-6) Essential oil-yielding plants: Habit sketch of <i>Santalum</i> and <i>Eucalyptus</i> (specimens /photographs). (UNIT-7), Rubber: specimen, photograph/model of tapping, samples of	6

		rubber products. (UNIT-8),	
	<b>BOTHGECOR03T / BOTGCOR03T</b>	<b>Apomixis and polyembryony: Definition, types and practical applications of Polyembryony. (Unit-8)</b>	<b>2</b>
	<b>BOTSSEC01M</b>	<b>Role of plants in relation to Human Welfare: a) Importance of forestry their utilization and commercial aspects b) Avenue trees (Unit-4)</b>	<b>2</b>
<b>December 2023</b>	<b>BOTACOR06T</b>	<b>Tobacco - Morphology, processing, uses and health hazards. (Unit-9)</b> <b>Fibers: Classification based on the origin of fibers; Cotton and Jute - morphology, extraction and uses. (Unit-11)</b> <b>Class test</b>	<b>5</b>
	<b>BOTACOR06P</b>	<b>Drug-yielding plants: Specimens of Digitalis, Papaver and Cannabis. (UNIT-9),</b> <b>Tobacco: specimen and products of Tobacco. (UNIT-10),</b> <b>Woods: Tectona, Pinus and Shorea; Specimen; Section of young stem specimen. (UNIT-11),</b> <b>Fiber-yielding plants: Cotton – specimen whole mount of fiber and test for cellulose – general test with benzene and/or aniline acetate test. Jute - transverse section of stem, test for lignin – phloroglucinol test on transverse section of stem and fiber. (UNIT-12)</b> <b>Revision Class</b>	<b>8</b>
	<b>BOTHGECOR03T / BOTGCOR03T</b>	<b>Class test</b>	<b>2</b>
	<b>BOTSSEC01M</b>	<b>Role of plants in relation to Human Welfare: Fruits and nuts: Important fruit crops their commercial importance. Wood and its uses. (Unit-4)</b>	<b>2</b>
<b>4<sup>th</sup> Week of December 2023</b>		<b>Internal Examination</b>	<b>2</b>
<b>1<sup>st</sup> and 2<sup>nd</sup> week of January 2024</b>		<b>Class for Slow Learners</b> <b>END SEMESTER EXAMINATION</b>	<b>4</b>
<b>Total classes</b>			<b>59</b>

**NAME OF TEACHER: DR. MOULI SAHA**

**PAPER ALLOTTED: ECONOMIC BOTANY (BOTACOR06T, BOTACOR06P),  
PLANT ANATOMY AND EMBRYOLOGY (BOTHGECOR03T/BOTGCOR03T,  
BOTHGECOR03P/BOTGCO03P), PLANT DIVERSITY AND HUMAN WELFARE  
(BOTSSEC01M)**

<b>Month</b>	<b>Paper</b>	<b>Topic</b>	<b>No of classes</b>
<b>September 2023</b>	<b>BOTACOR06T</b>	<b>Origin of Cultivated Plants: Concept of centres of origin, their importance with reference to Vavilov's work. (UNIT-1)</b>	<b>1</b>

(25.09.2023)	BOTACOR06P	Cereals: Wheat: habit sketch, L. S/T.S. grain, starch grains – type; micro-chemical tests – iodine spot test. Rice: habit sketch, study of paddy and grain, starch grains– type; micro-chemical tests – iodine spot test. (UNIT-1)	2
	BOTHGEC03T BOTGCOR03T	Pollination and fertilization: Pollination mechanisms and adaptations (UNIT-6) Continuation...	1
	BOTHGEC03P/ BOTGCOR03P	1. Study of meristems through permanent slides and photographs. 2. Tissues (parenchyma, collenchyma and sclerenchyma); Macerated xylary elements, Phloem (Permanent slides, photographs)	2
October 2023	BOTACOR06T	Origin of Cultivated Plants: examples of major plant introductions; crop domestication and loss of genetic diversity. (UNIT-1) Cereals: Wheat and rice- origin, morphology, cultivation & uses; brief account on millets (UNIT-2),	4
	BOTACOR06P	Legumes: Soybean and Ground nut: habit sketch, fruit, seed structure and micro-chemical tests (Millon test- Soyabean, Sudan IV test- Groundnut) (UNIT-2) Sources of sugars and starches: Sugarcane - habit sketch; cane juice- micro-chemical tests (Molisch test). Potato - habit sketch, tuber morphology, T.S. of tuber to show localization of starch grains, w.m. starch grains, micro-chemical tests (Iodine test) (UNIT-3), Spices: Black pepper, Fennel and Clove - Demonstration, habit sketch and comments, (UNIT-4),	6
	BOTHGEC03PT BOTGCOR03T	Pollination and fertilization: Pollination mechanisms and adaptations (UNIT-6), Double fertilization; Seed-structure appendages and dispersal mechanisms.	4
	BOTHGEC03P/ BOTGCOR03P	3. Stem: Monocot: Zea mays; Dicot: Helianthus; Secondary: Helianthus (only Permanent slides). 4. Root: Monocot: Zea mays; Dicot: Helianthus; Secondary: Helianthus (only Permanent slides). 5. Leaf: Dicot and Monocot leaf (only Permanent slides).	6

	<b>BOTSSEC01M</b>	<b>Agro biodiversity and cultivated plant taxa, wild taxa. Values and uses of Biodiversity.</b>	<b>2</b>
<b>October 2023</b>		<b>PUJA VACATION (19.10.23 to 15.11.2023)</b>	
<b>November 2023</b>	<b>BOTACOR06T</b>	<b>Legumes: Origin, morphology and uses of Chick pea &amp; Pigeon pea; importance to man and ecosystem (UNIT-3) Sources of sugars and starches: Morphology and processing of sugarcane; products and by-products of sugarcane industry. Potato – morphology, propagation &amp; uses. (UNIT-4)</b>	<b>4</b>
	<b>BOTACOR06P</b>	<b>Beverages: Tea leaf and coffee bean - extraction (Biochemical Tests for Tannin and Alkaloid) and comments. (UNIT-5), Sources of oils and fats: Coconut - kernel and Mustard - seeds: tests for fats (Sudan IVtest)(UNIT-6) Essential oil-yielding plants: Habit sketch of Santalum and Eucalyptus (specimens /photographs). (UNIT-7), Rubber: specimen, photograph/model of tapping, samples of rubber products. (UNIT-8),</b>	<b>6</b>
	<b>BOTHGEC03PT/ BOTGCOR03T</b>	<b>Embryo and endosperm: Endosperm types, structure and functions (Unit-7), Class Tests.</b>	<b>2</b>
	<b>BOTHGEC03P/ BOTGCOR03P</b>	<b>6. Adaptive anatomy: Xerophyte (Nerium leaf); Hydrophyte (Nymphaea petiole). 7. Structure of anther (young and mature), tapetum (amoeboid and secretory)(Permanent slides). 8. Types of ovules: anatropous, orthotropous, circinotropous, amphitropous/campylotropous from permanent slides. 9. Ultrastructure of mature egg apparatus cells through electron micrographs. 10. Pollination types and seed dispersal mechanisms (including appendages, aril,caruncle) (Photographs and specimens).</b>	<b>4</b>
	<b>BOTSSEC01M</b>	<b>Plant diversity and its scope, Genetic diversity, Species diversity, Plant diversity at the ecosystem level. Ethical and aesthetic values, Precautionary principle, Methodologies for valuation, Uses of plants, Uses of microbes. (UNIT-1)</b>	<b>2</b>
<b>December 2023</b>	<b>BOTACOR06T</b>	<b>Spices: Listing of important spices, their family and part used. Economic importance with special reference to fennel, saffron, clove and</b>	<b>5</b>

		black pepper. (UNIT-5) Beverages: Tea - morphology, processing & uses. (UNIT-6) Class Test	
	BOTACOR06P	Drug-yielding plants: Specimens of Digitalis, Papaver and Cannabis. (UNIT-9), Tobacco: specimen and products of Tobacco. (UNIT-10), Woods: Tectona, Pinus and Shorea; Specimen; Section of young stem specimen. (UNIT-11), Fiber-yielding plants: Cotton – specimen whole mount of fiber and test for cellulose – general test with benzene and/or aniline acetate test. Jute - transverse section of stem, test for lignin – phloroglucinol test on transverse section of stem and fiber. (UNIT-12) Revision Class	8
	BOTHGEC03P/ BOTGCOR03P	11. Dissection of embryo/endosperm from developing seeds. 12. Calculation of percentage of germinated pollen in a given medium Revision Class	6
	BOTSSEC01M	Plant diversity and its scope, Genetic diversity, Species diversity, Plant diversity at the ecosystem level. (UNIT-1)	3
4 <sup>th</sup> Week of December 2023		Internal Examination	2
1 <sup>st</sup> and 2 <sup>nd</sup> week of January 2024		Class for Slow Learners END SEMESTER EXAMINATION	4
Total Classes			74

NAME OF TEACHER: NANDITA DEY

PAPER ALLOTTED: MORPHOLOGY AND ANATOMY (BOTACOR05T, BOTACOR05P), PLANT ANATOMY AND EMBRYOLOGY (BOTHGECOR03T/BOTGCOR03T, ), PLANT DIVERSITY AND HUMAN WELFARE (BOTSSECO1M)

Month	Paper	Topic	No of classes
September 2023 (25.09.2023)	BOTACOR05T	Inflorescence-types with examples, concept of advanced and primitive types. (UNIT-1)	4
	BOTACOR05P	Study of anatomical details of the following through permanent slides/temporary stain mounts-apical meristem of root, shoot, vascular cambium, distribution and types of	5

		parenchyma,collenchymas,sclerenchyma (UNIT-1)	
	BOTHGEC03T BOTGCOR03T	Meristematic and permanent tissue-root and shoot apical meristem. (UNIT-1) Continuation...	2
	BOTSSEC01M	Loss of genetic diversity,loss of species diversity,loss of ecosystem diversity, (UNIT-2)	2
October 2023	BOTACOR05T	Flower-types with example,aestivation,floral parts,various types of adhesion and cohesion with example,carpel types advanced and primitive ones and placentation (UNIT-2)	5
	BOTACOR05P	Xylem-tracheary elements-tracheids,vessel elements,thickening,perforation plates,xylem fibres(permanent slides) Wood-ring porous,diffuse porous,tyloses,heart and sap wood(permanent slides) Phloem-sieve tubes-sieve plates,companion cells,phloem fibres(permanent slides)	8
	BOTHGEC03T BOTGCOR03T	Meristem and permanent tissue-simple and complex tissues.	4
	BOTSSEC01M	Loss of genetic diversity,loss of species diversity,loss of ecosystem diversity, (UNIT-2)	4
October 2023		PUJA VACATION (19.10.2023 to 15.11.2023)	
November 2023	BOTACOR05T	Fruit and seed-types with examples	5
	BOTACOR05P	Epidermal system-cell types,stomata types,trichomes,glandular and non glandular(permanent slides) Periderm,lenticels,c4 leaves(kranz anatomy),secretory tissues,cavities,lithocysts,laticifers.	5
	BOTHGEC03T BOTGCOR03T	Organs-structure of dicot ana monocot-root,stem,leaf(unit-2) Class Tests.	5
1 <sup>st</sup> Week of December 2023	BOTACOR05T	Class Test	4
	BOTACOR05P	Revision Class	2
4 <sup>th</sup> Week of December 2023		Internal Examination & Class for Slow Learners	6
1 <sup>st</sup> & 2 <sup>nd</sup> week of		End Semester Examination	

January 2024			
Total Classes			61

NAME OF TEACHER: MR. RAJATESH CHAKRABORTY

PAPER ALLOTTED: GENETICS (BOTACOR07T, BOTACOR07P), PLANT ANATOMY AND EMBRYOLOGY (BOTHGECOR03T/BOTGCOR03T, BOTHGECOR03P/BOTGCO03P), PLANT DIVERSITY AND HUMAN WELFARE (BOTSSEC01M)

Month	Paper	Topic	No of classes
September 2023 (25.09.2023)	BOTACOR07T	Mendelian genetics and its extension: Mendelism: Principles of inheritance; chromosome theory of inheritance; , (UNIT -1)	1
	BOTACOR07P	Meiosis through temporary smear preparation ( <i>Rhoeodiscolour</i> )	3
	BOTHGEC03T BOTGCOR03T	Structural organization of flower :Structure of anther and pollen	1
	BOTSSEC03M	Conservation of Biodiversity: Conservation of genetic diversity, species diversity and ecosystem diversity (UNIT3)	1
October 2023	BOTACOR07T	Mendelian genetics and its extension: pleiotropy, recessive and dominant traits, penetrance and expressivity, numericals; polygenic inheritance.(UNIT-1)Linkage, crossing over and chromosome mapping:Linkage and crossing over-cytological basis of crossing over; recombination frequency, two factor crosses (UNIT-3)	8
	BOTACOR07P	Mitosis through temporary squash preparation ( <i>Allium cepa</i> , <i>Lens esculentus</i> , <i>Aloe vera</i> ).	9
	BOTHGEC03T BOTGCOR03T	Structural organization of flower : Structure and types of ovules; Types of embryo sacs,organization	3
	BOTSSEC03M	Conservation of Biodiversity: <i>In situ</i> and <i>ex situ</i> conservation, Social approaches to conservation,Biodiversityawareness(UNIT -3)	3
PUJA VACATION (19.10.23 to 15.11.2023)			
November 2023	BOTACOR07T	Linkage, crossing over and chromosome mapping: three factor crosses; interference and coincidence; numericals based on gene mapping; sex Linkage (UNIT -3)	4
	BOTACOR07P	Mitosis through temporary squash preparation ( <i>Allium cepa</i> ) Mendel's laws through seed ratios(3:1, 1:1, 9:3:3:1, 1:1:1:1). ultrastructure of mature embryo sac (UNIT -5)	8
	BOTHGEC03T BOTGCOR03T	Embryo and endosperm: Dicot and monocot embryo; Embryoendospermrelationship (UNIT-7)	4
	BOTSSEC03M	Conservation of Biodiversity: <i>In situ</i> and <i>ex situ</i> conservation, Social approaches to conservation,Biodiversityawareness(UNIT -3)	3
December	BOTACOR07T	Mendelian genetics and its extension: autosomes and sex	8

2023		chromosomes, Probability and pedigree analysis; incomplete dominance and codominance; multiple alleles, lethal alleles, epistasis, (UNIT -1) Variation in chromosome number and structure: Deletion, duplication, inversion, translocation (UNIT-4) Class test	
	BOTACOR07P	Laboratory exercises in probability and chi-square Incomplete dominance and gene interaction through seed ratios (9:7, 9:6:1, 13:3, 15:1, 12:3:1, 9:3:4). Chromosome mapping using point test cross data & Revision Class	8
4 <sup>th</sup> Week of December 2023		Internal Examination & Class for Slow Learners	6
1 <sup>st</sup> and 2 <sup>nd</sup> week of January 2024		Class for Slow Learners END SEMESTER EXAMINATION	4
Total Classes			74

NAME OF TEACHER: DR. RAM PRASAD MUKHOPADHYAY

PAPER ALLOTTED: MORPHOLOGY AND ANATOMY (BOTACOR05T, BOTACOR05P)

Month	Paper	Topic	No of classes
September 2023 (25.09.2023)	BOTACOR05T	Introduction and scope of Plant Anatomy: Applications in systematics, forensics and pharmacognosy (UNIT-4)	3
	BOTACOR05P	Workout and preparation of permanent slides by following double staining method. a. Root anatomy (monocot – Orchid) (UNIT-2)	4
October 2023	BOTACOR05T	Internal organization of plant body; the three tissue systems, types of cells and tissues. (UNIT-5) Classification of tissues; simple and complex tissues (no phylogeny); cytodifferentiation of tracheary elements and sieve elements; pits and plasmodesmata; ergastic substances; hydathodes, cavities, lithocysts and laticifers. (UNIT-6)	8
	BOTACOR05P	Workout and preparation of permanent slides by following double staining method a. root anatomy dicot (Sunflower); secondary growth. (UNIT-2) b. Stem anatomy (monocot- maize), (dicot – Cucurbita) - primary and secondary growth (UNIT-2)	8
October 2023		PUJA VACATION (19.10.23 to 15.11.2023)	
November 2023	BOTACOR05T	Evolution of the concept of organization of the shoot apex (Apical cell theory, Histogen theory, Tunica Corpus theory) types of vascular bundles; structure of dicot and monocot stem; structure of dicot and monocot leaf, Kranz anatomy;	9

		<b>organization of root apex (Apical cell theory, Histogen theory, Korper-Kappe theory); quiescent centre; root cap; structure of dicot and monocot root. Unit 8: Vascular Cambium and Wood. (UNIT-7)</b>	
	<b>BOTACOR05P</b>	<b>c. Leaf: isobilateral (Tube rose), dorsiventral (Mango), d. Adaptive anatomy: xerophytes (Nerium leaf), hydrophytes (Nymphaea petiole) (UNIT-2)</b>	<b>8</b>
<b>December 2023</b>	<b>BOTACOR06T</b>	<b>Class Test</b>	<b>2</b>
	<b>BOTACOR06P</b>	<b>Revision Class</b>	<b>2</b>
<b>4<sup>th</sup> Week of December 2023</b>		<b>Internal Examination</b>	<b>6</b>
<b>1<sup>st</sup> and 2<sup>nd</sup> week of January 2024</b>		<b>Class for Slow Learners</b>	
		<b>END SEMESTER EXAMINATION</b>	
<b>Total Classes</b>			<b>50</b>