STUDY PLAN

By Dr. Debasree Lodh

Assistant Professor Department of Botany Holy Cross College, Agartala

Session: April, 2022 - August, 2022

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|--|-----------|--|
| April | Algae | General account, Thallus organization. Ultra-structure of plastid & flagella, Origin & evolution of sex. | Completed | Uploadedin the google classroom |
| May | Algae | Economic importance of algae. Salient features of Charophyceae, Life history of <i>Chara</i> . Salient features of Chlorophyceae, Life history of <i>Chlamydomonas</i> , <i>Oedogonium</i> . Outline classification (Lee-1999) up to phylum with characters. | Completed | Uploadedin the Google Classroom |
| June | Algae | Salient features of Phaeophyceae, Life history of <i>Ectocarpus</i> . Salient features of Xanthophyceae, Life history of <i>Voucheria</i> . Bacillariophyceae (Diatom), Cell structure, Auxospore formation in Centrales and Pennales. Salient features of Rhodophyceae, Life history of <i>Polysiphonia</i> . | Completed | Uploadedin the Google Classroom |
| July | | Remedial Classes/ Revision Classes | | |
| Assessment | •Class test •Assignmen •Presentatio •Group Disc | n | | ermanniar den en e |
| Materials Needed: | • Projection | | | PRIACE CREATE COMMANDER COMMANDER CREATE CRE |

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|---|-----------|------------------------------------|
| April | Anatomy | Anatomy -Cell wall (Gross structure and chemical composition), Meristematic and | Completed | Uploaded in the google classroom |
| May | Tissue & Vascular bundle | Permanent tissue (structure, distribution and function); Vascular bundles- types, stele- types and evolution, Normal secondary growth | Completed | Uploaded in the google classroom |
| June | Anomalous secondary growth | Anomalous secondary growth (Stems of Boerhaavia, Chenopodium, Mirabilis, Bignonia, Nyctanthes, Root of Tinospora) | Completed | Uploaded in the google classroom - |
| July | | Remedial Classes/ Revision Classes | | |
| Assessment | •Class test •Assignment •Presentation •Group Discussi | on | | |
| Materials Needed: | Projection syste Board for Demo | em onstration Problems | | |

| | Na | me of the Teacher: DR. DEBASREE LODI | H | |
|----------------------|---|---|-----------|----------------------------------|
| Month | Topic Name | Lesson Name | Status | Study materials |
| April | Biochemistry | Structure and properties of water, covalent and non-covalent bonds, hydrogen bonds, Vander Waal's forces, pH, buffer and isoelectric points. | | Uploaded in the google classroom |
| May | Biochemistry | Carbohydrate: Classification, structure and properties; Lipids: Classification and function: Protein: Classification and structure (Primary, Secondary, Tertiary and Quaternary structure); Amino acids: Structure, charge and polarity; essential | Completed | Uploaded in the google classroom |
| | | amino-acids; | | |
| June | Biochemistry | Enzyme: Classification and function, Isozymes, Allosteric enzymes and Coenzymes; Glycolysis, conversion of pyruvic acid to Acetyl Co-A, TCA cycle; Membrane chemistry, transport and mechanism of ion uptake; | Completed | Uploaded in the google classroom |
| July | Rem | nedial Classes/ Revision Classes | | |
| Assessment | Class testAssignmentPresentationGroup Discussion | | | |
| Materials Needed: | Projection system Board for Demonstra | tion Problems | | |

| | Name | of the Teacher: DR. DEBASREE LODI | I | |
|----------------------|---|---|-----------|----------------------------------|
| Month | Topic Name | Lesson Name | Status | Study materials |
| April | Biochemistry | Structure and properties of water, covalent and non-covalent bonds, hydrogen bonds, Vander Waal's forces, pH, buffer and isoelectric points. | Completed | Uploaded in the google classroom |
| May | Biochemistry | Carbohydrate: Classification, structure and properties; Lipids: Classification and function: Protein: Classification and structure (Primary, Secondary, Tertiary and Quaternary structure); Amino acids: Structure, charge and polarity; essential amino-acids; | Completed | Uploaded in the google classroom |
| June | Biochemistry | Enzyme: Classification and function, Isozymes, Allosteric enzymes and Coenzymes; Glycolysis, conversion of pyruvic acid to Acetyl Co-A, TCA cycle; Membrane chemistry, transport and mechanism of ion uptake; | Completed | Uploaded in the google classroom |
| July | Remed | ial Classes/ Revision Classes | | |
| Assessment | Class testAssignmentPresentationGroup Discussion | | | |
| Materials Needed: | Projection system Board for Demonstration | Problems | | |

2ND SEMESTER BOTANY GENERAL, 2022

| Month | Topic Name | Name of the Teacher: DR. DEBASREE LOD Lesson Name | Status | Study materials |
|-------------------|--|--|-----------|-------------------------------------|
| A | 41 | | Status | Study materials |
| April | Algae | General account, Thallus organization. Economic importance of algae. | Completed | Uploadedin the google classroom |
| May | Algae | Life history of <i>Chara</i> . Life history of, <i>Oedogonium</i> | Completed | Uploaded in the Google Classroom |
| June | Algae | Life history of <i>Ectocarpus</i> . Life history of <i>Polysiphonia</i> Cell structure of Diatom, Auxospore formation in Centrales and Pennales. | Completed | Uploaded in the Google Classroom |
| July | | Remedial Classes/ Revision Classes | | |
| Assessment | •Class test •Assignme •Presentati •Group Dis | nt on | | |
| Materials Needed: | • Projection | | | |

4TH SEMESTER BOTANY GENERAL, 2022

| Month | Topic Name | Lesson Name | Status | Study materials |
|-------------------|--|---|-----------|----------------------------------|
| April | Anatomy | Anatomy -Cell wall (Gross structure and chemical composition), Meristematic and Permanent tissue (structure, distribution and function) | Completed | Uploaded in the google classroom |
| May | Anatomy | Vascular bundles- types, stele- types and evolution | Completed | Uploaded in the google classroom |
| June | Anatomy | Normal secondary growth; Ecology- Habitat and Niche (preliminary idea) | Completed | Uploaded in the google classroom |
| July | | Remedial Classes/ Revision Classes | | |
| Assessment | •Class test •Assignment •Presentation •Group Discu | | | |
| Materials Needed: | •Projection sy •Board for D | ystem emonstration Problems | | |

2nd SEMESTER BOTANY HONOURS PRACTICAL, 2022

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|---|---------------------|-----------------|
| April | Microscope Study Identification | To learn use of Simple and Compound Microscopes. Study of Permanent slides: <i>Volvax</i> , <i>Polysiphonia</i> . | Completed Completed | Given |
| May | Work out Identification | Oedogonium Morphological study of the plant body (Bryophytes): Genera as mentioned in theoretical syllabus. | Completed Completed | Given |
| June | Work out Identification | Chara, Ectocarpus Riccia (V.S. of thallus with antherdia/archegonia/sporophyte), Marchantia (L.S. through gemma cup,antheridiophore, archegoniophore, sporophyte), Anthoceros (L.S. of sporophyte), Funaria (L.S. of capsule. | Completed | Given |
| July | Reme | dial Classes/ Revision Classes | | |
| Assessment | Class testAssignmentPresentationGroup Discussion | | | |
| Materials Needed: | Projection system Board for Demonstration | n Problems | | |

2nd SEMESTER BOTANY GENERAL PRACTICAL, 2022

| Month | Topic Name | Lesson Name | Status | Study materials |
|-------------------|--|--|---------------------|-----------------|
| April | Microscope Study | To learn use of Simple and Compound Microscopes. | Completed Completed | Given |
| | Identification | Study of Permanent slides: <i>Volvax, Polysiphonia.</i> | Completed | |
| May | Work out | Oedogonium | Completed | Given |
| | Identification | Morphological study of the plant body (Bryophytes): Genera as mentioned in theoretical syllabus. | Completed | Given |
| June | Work out | Chara, Ectocarpus | Completed | Given |
| | Identification | Marchantia (L.S. through gemma cup, antheridiophore, archegoniophore, sporophyte), Anthoceros (L.S. of | Yet to be completed | Given |
| | | sporophyte), <i>Funaria</i> (L.S. of capsule). | | |
| July | Re | emedial Classes/ Revision Classes | | |
| Assessment | •Class test | | The state of the F | |
| | AssignmentPresentationGroup Discussion | yawa sa Charase e Mesamon Classico | | |
| Materials Needed: | Projection system Board for Demonstration | ation Problems | | |

6TH SEMESTER BOTANY HONOURS PRACTICAL, 2022

| Month | Topic Name | Lesson Name | Status | Study materials |
|-------------------|---|---|-----------|-----------------|
| April | Plant physiology | Estimation of Catalase activity in plant samples. Effect of CO ₂ on the rate of photosynthesis. To extract and separate chlorophyll pigment by chromatogram. Determination of loss of water per stomata per hour. | | Given |
| May | Biochemistry | Measurement of osmotic pressure of <i>Rhoeo</i> leaf by plasmolytic method. Effect of temperature on absorption of water by storage tissue and determination of Q ₁₀ . Comparison of imbibitions of water by starchy, proteinaceous and fatty seeds. | Completed | Given |
| June | | Relationship between transpiration and evaporation. Measurement of oxygen uptake by respiring tissue (perg/hr). Determination of the RQ of germinating seeds. | Completed | Given - |
| July | | Remedial Classes/ Revision Classes | | |
| Assessment | •Class test •Assignment •Presentation •Group Discussion | on | | |
| Materials Needed: | Projection syste Board for Demo | m Instration Problems | | |

| Month | Topic Name | Status |
|-------------------|---|--|
| April | Students project | 30-35 % completed |
| May | Students project | 70-75 % completed |
| June | Project submission and Viva-voce | Completed |
| Assessment | Presentation Group Discussion | |
| Materials Needed: | Projection system lab facilities PC | e apprendición de company de la persona de la company de l |

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HOLY CROSS COLLEGE, AGARTALA

| Month | Topic Name | Name of the Teacher: DR. SOMNATH KAR Lesson Name | Status | Study materials |
|----------------------|---|--|---|---|
| April | Gymnosperms | Introduction Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Cycas | Completed Completed | Uploaded in the google classroom |
| May | Gymnosperms | Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Pinus Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Gnetum Comperative account of Cycas, Pinus and Gnetum Economic importance with reference to wood, resins, essential oils & drugs Progymnosperm –Diagnostic characters, Vegetative & reproductive structures of Archeopteris. | Completed Completed Completed Completed Ongoing | Uploaded in the google classroom |
| June | Plant fossil | Types of fossils - Different modes of preservation (Schopf – 1975), Conditions favouring fossilization, Importance of fossil study. Geological time scale with dominant plant groups through ages. Indian Gondwana System. Lyginopteris, Williamsonia, Cordaites | Completed Yet to be completed Yet to be completed | - |
| July | | Remedial Classes/ Revision Classes | | |
| Assessment | Class testAssignmentPresentationGroup Discus | sion | | |
| Materials Needed: | •Projection sys | | | |

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|--|--|--|----------------------------------|
| April | Morphology | Fruits- types | Completed | Uploaded in the google classroom |
| May | Embryology | Microsporogenesis Microgametegenesis Mega sporogenesis Megagametegenesis (Monosporic, bisporic and tetrasporic) | Completed Completed Completed Completed | Uploaded in the google classroom |
| June | Embryology Taxonomy Taxonomy | Development of embryo, Development of endosperm Nomenclature and rules of ICBN Mimosaceae, Caesalpiniaceae, Fabaceae, Solanaceae, Lamiaceae and Asteraceae | Yet to be completed Yet to be completed | |
| July | | Remedial Classes/ Revision Class | es | |
| Assessment | Class test Assignment Presentation Group Discu | 1 | | |
| Materials Needed: | Projection s Board for December 1 | ystem emonstration Problems | | |

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|---|--|----------------------------------|
| April | Plant physiology | Photosynthesis: introduction Components of photosynthesis, Types of chlorophyll carotenoids and their structures and functions | Completed Completed Completed Completed | Uploaded in the google classroom |
| May | Plant physiology | Red drop effect Enhancement effect Antenna complex, photochemical reactions, Mechanism of electron transport in PS-I and PS-II, Calvin cycle; HSK pathway; C3 and C4 plants and photosynthetic efficiency, photorespiration, Crassulacean acid metabolism (CAM) | Completed Completed Completed Completed | Uploaded in the google classroom |
| June | | Stomatal physiology, Respiration, Biological Nitrogen fixation, Photoperiodism, Photomorphogenesis Plant growth regulators | Completed | Uploaded in the google classroom |
| July | Ren | nedial Classes/ Revision Classes | , L | |
| Assessment | Class testAssignmentPresentationGroup Discussion | | | |
| Materials Needed: | Projection system Board for Demonstration | ation Problems | | |

2ND SEMESTER BOTANY GENERAL, 2022

| Month | Topic Name | Lesson Name | Status | Study materia Is |
|----------------------|--|---|---|---|
| April | Gymnosperms | Introduction Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Cycas | Completed Completed | Uploade din the google classroo m |
| May | Gymnosperms | Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Pinus Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Gnetum Comperative account of Cycas, Pinus and Gnetum Economic importance with reference to wood, resins, essential oils & drugs Progymnosperm –Diagnostic characters | Completed Completed Completed Completed Ongoing | Uploade din the google classroo m |
| June | Plant fossil | Types of fossils - Different modes of preservation (Schopf – 1975), Conditions favouring fossilization, Importance of fossil study. Geological time scale with dominant plant groups through ages. | Completed Yet to be completed | - |
| July | | Remedial Classes/ Revision Classes | 3-30.5% | |
| Assessment | Class test Assignment Presentation Group Discu | | | |
| Materials Needed: | •Projection s | | | |

4TH SEMESTER BOTANY GENERAL, 2022

| Name of the | Teacher: I | DR. SOMNATH KAR | | |
|----------------------|---|--|---------------------|----------------------------------|
| Month | Topic Name | Lesson Name | Status | Study materials |
| April | Morphology | Introduction | Completed | Uploaded in the google classroom |
| May | Morphology | Fruits- types | Completed | Uploaded in the google classroom |
| June | Taxonomy | Mimosaceae, Caesalpiniaceae, Fabaceae, Solanaceae, Lamiaceae and Asteraceae | Yet to be completed | |
| | | | Yet to be completed | - |
| | 29.08 - 0 | | Yet to be completed | |
| July | | Remedial Classes/ Revision Class | es | |
| Assessment | •Class test •Assignment •Presentation •Group Discus | | | |
| Materials Needed: | •Projection sy | | | |

4TH SEMESTER BOTANY HONOURS PRACTICAL, 2022

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|--|-------------------------------------|-----------------|
| April | Identification | Types of stomata, Sclerides, Types of Raphides, | Completed Completed Completed | Given |
| May | Identification | Fruit type Placentation , Nymphaea petiole, Nerium leaf | Completed Completed | Given |
| June | Work out | Anomalous secondary structures Angiospermic plants | Completed Completed | |
| | Identification | Cystolith, laticiferous duct, Aleurone grain, Special types of inflorescences Types of stamens | Completed Completed | Given |
| July | Remedia | Classes/ Revision C | Classes | |
| Assessment | Class testAssignmentPresentationGroup Discussion | | | |
| Materials Needed: | Projection system Board for Demonstration Properties | oblems | | |

4TH SEMESTER BOTANY GENERAL PRACTICAL,2022

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|---|---|-----------------|
| April | Identification | Types of stomata, Sclerides, Types of Raphides, | Completed Completed Completed | Given |
| May | Identification Work out | Fruit type Placentation Monocot stem, Dicot stem, Monocot root, Dicot root. | Completed Completed Completed | Given |
| June | Work out Identification | Angiospermic plants Cystolith, laticiferous duct, Aleurone grain | Yet to be completed Yet to be completed Yet to be completed | - |
| July | Reme | edial Classes/ Revision | Classes | |
| Assessment | Class testAssignmentPresentationGroup Discussion | | | |
| Materials Needed: | Projection system Board for Demonstration | on Problems | | |

6TH SEMESTER BOTANY HONOURS PRACTICAL, 2022

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|--|---------------------|-----------------|
| April | Plant physiology | Relationship between transpiration and evaporation | Completed | Given |
| | | Comparison of imbibitions of water by starchy, proteinaceous and fatty seeds. | Completed | |
| May | Biochemistry | Detection of organic acids: citric, tartaric, oxalic and malic acids from unknown samples. | Completed | |
| | | Detection of the nature of carbohydrate: glucose, fructose, sucrose from unknown samples | Completed | Given |
| June | Pharmacognosy | Study of Palisade ratio and Vein islet no. | Yet to be completed | - |
| July | F | Remedial Classes/ Revision C | Classes | |
| Assessment | Class test Assignment Presentation Group Discussion | 1 | | |
| Materials Needed: | Projection system Board for Demon | n | | |

| Month | Topic Name | Status |
|-------------------|---------------------------------------|----------------------|
| April | Students project | 30-35 % completed |
| May | Students project | 70-75 % completed |
| June | Project submission and Viva-voce | Yest to be completed |
| Assessment | Presentation Group Discussion | |
| Materials Needed: | Projection system lab facilities Pc | |

STUDY PLAN

By

DR. DIPANWITA CHAUDHURI SIL

Assistant Professor
Department of Botany
Holy Cross College, Agartala

Session: April, 2022- August, 2022

| Month | Topic Name | NameoftheTeacher:Dr.Dipanwita chaudhuri S LessonName | Status | Studymaterials |
|-----------|------------|--|-----------|--------------------------------------|
| July | Bryophyte | General characteristics of Bryophytes,, Origin of Bryophytes, Amphibian nature. | Completed | Uploadedinthe googleclassroom |
| August | Bryophyte | Life history: Gametophyte structure & reproduction, Development of Sporophyte, Spore dispersal of <i>Marchantia</i> , Riccia, Anthoceros | Completed | Uploadedin theGoogleClassroo m |
| September | Bryophyte | Pellia ,Porella Evolution of sporophyte - Progressive theory. | Completed | Uploadedin theGoogleClassroon |

| Month | Topic Name | LessonName | Status | Studymaterials |
|-----------|------------|--|-----------|-----------------------------------|
| July | Morphology | Flower types, floral parts- calyx, corolla (Forms and aestivation), stamens (cohesion and adhesion | Completed | Uploadedinthe google classroom |
| August | Morphology | Carpel (Apocarpous and Syncarpous), Aestivation, | Completed | Uploaded in the googleclassroom |
| September | Taxonomy | Angiospermic families Asteraceae,Poaceae,Liliaceae | Completed | Uploaded in the googleclassroom |

| | Na | meoftheTeacher: Dr. Dipanwita Chaudhur | i sil | |
|------------|------------------------|--|-----------|---------------------------------|
| Month | Topic Name | LessonName | Status | Studymaterials |
| July | Tissue culture | Totipotency and concept of plant tissue culture; Function and. | Completed | Uploaded in thegoogleclassro om |
| August | Tissue culture | plant tissue culture laboratory; Techniques of plant tissue culture: cell suspension culture technique, protoplast culture technique | Completed | Uploaded in thegoogleclassro om |
| September | Tissue culture | Callus culture and applications; Haploid Culrture Protoplast culture technique | Completed | Uploaded in thegoogleclassroom |
| Assessment | •Classtest, Assignment | , Presentation, GroupDiscussion | | |

2NDSEMESTERBOTANYGENERAL,2022

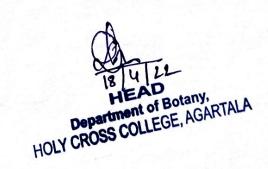
| Month | Topic Name | LessonName | Status | Studymaterials |
|--------|------------|--|-----------|----------------------------------|
| July | Bryophyte | General characteristics of Bryophytes,, Origin of Bryophytes, Amphibian nature | Completed | Uploadedinthe Googleclassroom |
| August | Bryophyte | Gametophyte structure & reproduction, Development of sporophyte, Spore dispersal of <i>Marchantia</i> , <i>Anthocero</i> | Completed | Uploadedin theGoogleClassroom |
| Septem | Bryophyte | Gametophyte structure & reproduction, Development of sporophyte, Spore dispersal of <i>Pellia</i> , <i>Porella</i> | Completed | Uploadedin theGoogleClassroom |

4TH SEMESTER BOTANY GENERAL,2022

| Month | Topic Name | LessonName | Status | Studymaterials |
|-----------|-------------------------|--|-----------|----------------------------------|
| July | Morphology | Morphology- Inflorescence- types with examples, flower types, floral parts- calyx, corolla (Forms and aestivation), stamens (cohesion and adhesion | Completed | Uploadedinthe google classroom |
| August | Morphology | carpel (Apocarpous and Syncarpous), Placentation types, | Completed | Uploadedinthe google classroom |
| September | Morphology and taxonomy | Angiospermic falilies | Completed | Uploadedinthe Googleclassroom |

6TH SEMESTERBOTANYHONOURSPROJECT,2022

| Month Topic Name July Studentsproject completed August Studentsproject completed | late d | |
|--|---|--|
| July Studentsproject completed | | |
| August Studentsproject completed | Studentsproject | |
| | Studentsproject | |
| September ProjectsubmissionandViva-voce Completed | ProjectsubmissionandViva-voce Completed | |



STUDY PLAN

By

DR. DIPANWITA CHAUDHURI SIL

Assistant Professor Department of Botany Holy Cross College, Agartala

Session: september, 2022- March, 2023

1st Semester Botany Honours

| Month | Tonia Na | NameoftheTeacher:Dipanwita Chaudhuri sil | | | | | |
|-----------------|---------------------------|--|-----------|--------------------------------------|--|--|--|
| With | Topic Name | LessonName | Status | Studymaterials | | | |
| October | Industrial Botany | Origin of life, Difference between plant and animal cell. Three domains of classification – Archaea, Bacterial Eukaryota. | Completed | Uploadedinthe googleclassroom | | | |
| November | Industrial Botany | History of Plant classification: Natural (Bentham & Hooker) and Artificial (Linnaeus). | Completed | Uploadedin theGoogleClassroo m | | | |
| December | Industrial Botany – II | History of Plant classification: Phylogenetic (Hutchinson) system of Classification. Plant life cycle pattern & alternation of generation. | Completed | Uploadedin theGoogleClassroom | | | |
| January | | Remedial Classes | | | | | |
| February, March | | Tripura University Examination | | | | | |
| Assessment | •Classtest, A | ssignment, Presentation, Group Discussion | | | | | |

| NameoftheTeacher:DR. Dipanwita Chaudhuri sil | | | | | | |
|--|---------------------------|---|-----------|-------------------------------------|--|--|
| Month | Topic Name | LessonName | Status | Studymaterials | | |
| October | Botany - II | Origin of life, Difference between plant and animal cell. Time line of plant evolution. Three domains of classification – Archaea, Bacterial Eukaryota. | Completed | Uploadedinthe googleclassroon | | |
| November | Industrial Botany – II | History of Plant classification: Natural (Bentham & Hooker) and Artificial (Linnaeus) | Completed | Uploadedin theGoogleClassro m | | |
| December | | History of Plant classification: Phylogenetic (Hutchinson) system of Classification. Plant life cycle pattern & alternation of generation. | Completed | Uploadedin theGoogleClassroo | | |

| February, March | Tripura University Examination |
|-----------------|--|
| Assessment | •Classtest, Assignment, Presentation, Group Discussion |

| NameoftheTeacher: Dipanwita Chaudhuri sil | | | | | | | |
|---|--|--|------------|--------------------------------------|--|--|--|
| Month | Topic Name | LessonName | Status | Studymaterials | | | |
| October | Microbiology and Plant pathology | General account of Phycomycetes, Life history of <i>Mucor</i> , <i>Synctitricum</i> ; General account of Ascomyctes, Life history of <i>Pecicillium</i> , <i>Ascobolus</i> ; | Comple ted | Uploadedinthe googleclassroom | | | |
| November | Microbiology and Plant pathology | General account of Deuteromycetes, Life history of Fusarium, Cereal – Rice, Wheat; Pulses – Gram, Moong and Lens | Completed | Uploadedin theGoogleClassroo m | | | |
| December | Microbiology and Plant pathology | Beverages – Tea and Coffee: Fruits – Mango, Citrus and Papaya; Drug yielding – Cinchona, Rauwolfia, Digitalis and Papaver: Spices – Ginger, Cumin and Clove; Oil yielding – Mustard, Groundnut, Coconut and Linseed | Completed | Uploadedin theGoogleClassroon | | | |
| January | | Remedial Classes | | | | | |
| February, March | 1 | Tripura University Examination | | | | | |
| Assessment | •Classtest, •Assignment, •Presentation, •GroupDiscussion | | | | | | |

3rd Semester Botany General

| | | NameoftheTeacher: Dipanwita Ch | audhuri sil | |
|-------------------------|--------------------------------------|---|-------------|----------------------------------|
| Month | Topic Name | LessonName | Status | Studymaterials |
| October | Microbiology and Plant pathology | General account of Phycomycetes, Life history of Mucor | Completed | Uploadedinthe Googleclassroom |
| November | Microbiology and | General account of Deuteromycetes, Life history of Fusarium, | Completed | Uploadedin theGoogleClassroom |
| December | Dlant nothology | Cereal – Rice, Wheat; Pulses – Gram, Moong and Lens; Beverages – Tea and Coffee: Fruits – Mango, Citrus and Papaya; Drug yielding – Cinchona, Rauwolfia, Digitalis and Papaver: | 4 | Uploadedin theGoogleClassroom |
| T | | Remedial Classes | | |
| January February, March | | Tripura University Examin | nation | |
| Assessment | •Classtest, •Assignment, | | | |
| | •Presentation, | | | |
| | Group Discussion | | | |

5th Semester Botany Honours

| | | NameoftheTeacher: Dipanwita Chaudhuri si | | |
|-----------------|---|--|-----------|--------------------------------------|
| Month | Topic Name | | Status | Studymaterials |
| October | Cytogenetics | Chromosome morphology and Organization of Eukaryotic Chromosome (Nucleosome concept); Centromere and telomere – structure and function; | Completed | Uploadedinthe googleclassroom |
| November | | Morphology of RNAe, forms salient features of Nucleic Acids (DNA and RNA); Structure forms and salient features of Nucleic Acids (DNA and RNA); DNA replication, Mechanism of DNA replication in Prokaryotes, Lac Operon (brief idea). Totipotency and concept of plant tissue culture; Function and organization of a typical plant tissue culture laboratory | Completed | Uploadedin theGoogleClassroo m |
| December | Cytogenetics & Plant Breeding | Cell cycle and Cell division, Structure and function of Cell Organelles (Nucleus, Mitochondria, Chloroplast, Ribosome) | Completed | Uploadedin theGoogleClassroom |
| January | | Remedial Classes | | |
| February, March | - 15 16 16 16 16 16 16 16 16 16 16 16 16 16 | Tripura University Examination | | |
| Assessment | Classtest, Assignment Presentation GroupDiscu | n, | | |

5th Semester Botany General

| | | Nameofthe Teacher: Dipanwita Chaudhuri sil | | |
|--------------------|--|--|-----------|--|
| Month | Topic Name | LessonName | Status | Studymateria ls |
| October | CellBiology, Molecular Biology, Cytogenetics Plant Breeding | Cell cycle and Cell division, Structure and function of Cell Organelles (Nucleus, Mitochondria, Chloroplast, Ribosome) 2022 | Completed | Uploadedinth e googleclassro om |
| November | Cell Biology, Molecular Biology, Cytogenetics Plant Breeding | Cell cycle and Cell division, Structure and function of Cell Organelles (Nucleus, Mitochondria, Chloroplast, Ribosome) | Completed | Uploadedin theGoogleCla ssroom |
| December | Cell Biology, Molecular Biology, Cytogenetics Plant Breeding | Methods of plant breeding: Introduction, emasculation, Techniques of plant tissue culture: cell suspension culture technique, protoplast culture technique; Modes of <i>in vitro</i> regeneration and applications; Callus culture and applications; Haploid and embryo culture; | Completed | Uploadedin theGoogleClass room |
| January | | Remedial Classes | | |
| February, March | | Tripura University Examination | | |
| Assessment | •Classtest, • Assignment, • Presentation, • Group Discussion | | | |



Study Plan for 1st, 3rd, and 5th Semester

Theory and Practical Classes

Duration: September, 2022- March, 2023



Holy Cross College, Agartala

Dr. Debasree Lodh

Assistant Professor

Department of Botany

Semester: 1st Semester (Honours) (Theory)

| | | | · · · · · · · · · · · · · · · · · · · | | |
|-----------|------------------------|--|--|--|--|
| Month | Day | Duration of Class | Topic Name | Lesson Name | Total No. of Period Required |
| | | | | SEPTEMBER 2022 | |
| September | Tuesday, Wednesday | 50 Mins. | Industrial Botany – II (Plant Nursery and Floriculture Industry) | Concept and types of nurseries: ornamental plant nursery, fruit plant nursery, medicinal plant nursery | 3 |
| | | | An and the second secon | OCTOBER 2022 | |
| October | Tuesday, Wednesday | 50 Mins. | Industrial Botany – II (Plant Nursery and Floriculture Industry) | vegetable plant nursery and orchid nursery (with reference to infrastructure required and commercial applications). | 4 |
| | Prince Chieffians of a | ************************************** | enegan generali in di selektra dipuntan Liberatura | NOVEMBER 2022 | and for each of the end of the en |
| November | Tuesday, Wednesday | 50 Mins. | Industrial Botany – II (Plant Nursery and Floriculture Industry) | Propagation methods: Seed propagation, natural vegetative propagation and artificial vegetative propagation (Cutting: Stem, Layering: Air layering, Grafting: Stone grafting and Approach grafting, Budding: T budding). | 4 |

| The state of the s | | | | DECEMBER 2022 | |
|--|-----------------------|----------|---|--|---------|
| December | Tuesday, Wednesday | 50 Mins. | Industrial Botany – II (Plant Nursery and Floriculture Industry) | Introduction to floriculture: Important floricultural crops, open cultivation practices, harvesting and marketing. | 2 |
| 100 g | | | | January, 2023 | |
| January | Tuesday, Wednesday | 50 Mins. | Industrial Botany – II (Plant Nursery and Floriculture Industry) | open cultivation practices, harvesting and marketing. | 2 |
| | | | | February, 2023 | |
| February | Tuesday, Wednesday | 50 Mins. | | Remedial | Classes |

Semester:1st Semester (General) (Theory)

| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/C Requi |
|-----------|----------|-------------------|---------------------------------------|--|-------------------------------|
| | | | San san reinesen in den ville | SEPTEMBER 2022 | |
| September | Thursday | 50 Mins. | Industrial Botany – II (Plant Nursery | Concept and types of nurseries: ornamental plant nursery, fruit plant nursery. | 3 |

| | | | and Floriculture Industry) | | |
|--|--|----------|--|--|-----------|
| | | | | OCTOBER 2022 | |
| October | Thursday | 50 Mins. | Industrial Botany – II (Plant Nursery and Floriculture Industry) | vegetable plant nursery (with reference to infrastructure required and commercial applications). | 2 |
| esperatus de la companya de la comp | erichen K. W. F. | | | NOVEMBER 2022 | e Propins |
| November | Thursday | 50 Mins. | Industrial Botany – II (Plant Nursery and Floriculture Industry) | Propagation methods: Seed propagation, natural vegetative propagation and artificial vegetative propagation (Cutting, Layering and grafting) | 4 |
| SALES OF THE SALES | | | | DECEMBER 2022 | |
| December | Thursday | 50 Mins. | Industrial Botany – II (Plant Nursery and Floriculture Industry) | Introduction to floriculture: Important floricultural crops, | 2 |
| | | | | January, 2023 | |
| January | Thursday | 50 Mins. | Industrial Botany – II (Plant Nursery | open cultivation practices, harvesting and marketing. | 2 |

| February | Thursday | 50 Mins. | | Remedial Classes |
|----------|----------|----------|-------------------------------|------------------|
| | | | Fel | bruary, 2023 |
| | | | and Floriculture Industry) | |

Semester: 3rd Semester (Honours) (Theory)

| | | Semester (Honours) (Theory) | | | |
|-----------|--------------------------|--|--|--|-----------------------------|
| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/ Requ |
| | | | Bendungsige word (see a see a see a see | SEPTEMBER 2022 | |
| September | Tuesday | 50 Mins. | Microbiology and Plant pathology | General characteristics of Plant virus and Bacteriophage, | 4 |
| | A SEAGHAGA CONTRACTOR | | | OCTOBER 2022 | |
| October | Tuesday | 50 Mins. | Microbiology and Plant pathology | Growth cycle Lytic (T ₄) and Lysogenic (λ virus) | 4 |
| lord | The second second second | on the second se | en de la composition della com | NOVEMBER 2022 | y trouves rytosay vyym |
| November | Tuesday | 50 Mins. | Microbiology and Plant pathology | Bacteria-Cell structure Endospore formation | 8 |
| | | alema de statos en como es Antopospetas investos associa | | DECEMBER 2022 | |

| December | Tuesday | 50 Mins. | Microbiology and Plant pathology | Genetic Recombination-Conjugation, | 4 |
|----------|---------|-----------|--|------------------------------------|---|
| | | Sac Selfs | | January, 2023 | |
| January | Tuesday | 50 Mins. | Microbiology and Plant pathology | transformation and transduction | 4 |
| | | | | February, 2023 | |
| February | Tuesday | 50 Mins. | | Remedial Classes | |

Semester: 3rd Semester (General) (Theory)

| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/O Requi |
|-----------|--|--|--|--|-------------------------------|
| | | | | SEPTEMBER 2022 | |
| September | Monday & Friday | 50 Mins | Microbiology and Plant pathology | General characteristics of Plant virus and Bacteriophage | 4 |
| | an and a gradual state of the s | gar senakka a senak epis posta jeden 19. – Santa Santa Santa Santa Santa Santa Santa 19. – Santa S | and the state of t | OCTOBER 2022 | |
| October | Monday & Friday | 50 Mins | Microbiology and Plant pathology | Growth cycle Lytic (T ₄) and Lysogenic (λ virus) | 4 |
| | | A man of America Services - Av | | NOVEMBER 2022 | |

| November | Monday & Friday | 50 Mins | Microbiology and Plant pathology | Bacteria-Cell structure Endospore formation | 4 |
|----------|--------------------|---------|--|---|---|
| | | | 一些影響的 | DECEMBER 2022 | |
| December | Monday & Friday | 50 Mins | Microbiology and Plant pathology | Genetic Recombination-Conjugation, | 4 |
| | | | | January, 2023 | |
| January | Monday & Friday | 50 Mins | Microbiology and Plant pathology | Transformation and transduction | 4 |
| | | | | February, 2023 | |
| February | Monday & Friday | 50 Mins | | Remedial Classes | |

Semester: 5th Semester (Honours) (Theory)

| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/C Requi |
|-----------|---------------------|-------------------|--------------|--|-------------------------------|
| | | | | SEPTEMBER 2022 | |
| September | Tuesday & Friday | 50 Mins | Cytogenetics | Mendelian inheritance; Gene interactions: Incomplete Dominance (1:2:1), Modified dihybrid ratio (12:3:1, | 4 |

| | | | | 9:3:4, 9:7, 9:6:1, 13:3), Atavism, Pleiotropism | |
|------------------|------------------------|------------------------|--|--|-----------|
| | 4 790 | and present the second | The state of the s | OCTOBER 2022 | |
| October | Tuesday & Friday | 50 Mins | Cytogenetics | Crossing Over: Cytological proof of crossing over (McClintock's experiment); Molecular basis of Crossing Over | 4 |
| | | | | NOVEMBER 2022 | TI AN EXP |
| November | Tuesday & Friday | 50 Mins | Cytogenetics | Complete and incomplete linkage. Thee point test cross, Problems on Gene Mapping; Sex linked trait and sex linked inheritance; Aneuploidy and Euploidy, role of polyploidy in crop improvement | 8 |
| | inspalment in the city | | enterior sections de | DECEMBER 2022 | 200 10 |
| December | Tuesday & Friday | 50 Mins | Cytogenetics & Plant Breeding and Biostatistics | Chromosomal aberration: Types and meiotic behavior of deletion, duplication, translocation and inversionMolecular mapping – FISH technique; Bioinformatics: Genomics and proteomics (A brief idea). Methods of plant breeding: Introduction, emasculation, Hybridization and Acclimatization | 4 |
| The state of the | 1.0000037.2 | | | January, 2023 | |
| January | Tuesday & Friday | 50 Mins | | Selection: Mass selection and pure selection; Male sterility: Genetic, | 4 |

| | | | Cytoplasmic and Cytoplasmic-genetic male sterility; Heterosis and hybrid vigour |
|----------|---------------------|---------|---|
| | | | February, 2023 |
| February | Tuesday & Friday | 50 Mins | Remedial classes |

Semester: 5th Semester (Honours) (Practical)

| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/ Requi |
|-----------|-----------------------|-------------------|---|--|------------------------------|
| | | | The control of a first of the second of the | SEPTEMBER 2022 | restriction of the |
| September | Monday & Wednesday | 50 Mins | Mitotic Study | Mitotic Study: Temporary preparation of metaphase chromosomes from root tips of <i>Allium cepa</i> and <i>Lens esculenta</i> and determination of their somatic chromosome number. | 4 |
| | | | | OCTOBER 2022 | |
| October | Monday & Wednesday | 50 Mins | Meiotic Study | Study of mitotic index in <i>Allium</i> cepa L. Meiotic Study: Temporary preparation of prophase I (Diplotene and diakinesis), | 4 |

| | | | | Metaphase – I and Anaphase – I from flower buds of <i>Allium cepa</i> , <i>Rhoeo sp</i> and <i>Datura sp</i> | |
|--------------------------|-----------------------|---------|--|--|---|
| en a santa. Antonomia | | | | NOVEMBER 2022 | |
| November | Monday & Wednesday | 50 Mins | Identification of permanent slides Study of pollen sterility | Identification with reasons from permanent slides: Different stages of mitosis and meiosis including abnormalities like Sticky Bridge, laggard chromosome(s), chromosomal fragmentation, ring chromosome, early separation. Study of pollen sterility by Aceto-carmine staining technique. | 8 |
| | Secretary of | | Marie Albania de la compansión de la compa | DECEMBER 2022 | |
| December | Monday & Wednesday | 50 Mins | Demonstration of emasculation Statistical analysis | Demonstration of emasculation technique. Graphical representation of statistical Data. Statistical analysis of Mean, Mode, Median, Standard deviation, Standard error and T-Test. Determination of goodness of fit in normal and modified dihybrid ratios. | 4 |
| | | | | January, 2023 | |
| January | Monday & Wednesday | 50 Mins | Demonstration of emasculation | Statistical analysis of Mean, Mode, Median, Standard deviation, Standard error and T- Test. | 4 |

| February | Monday & Wednesday | 50 Mins | | Remedial Classes |
|----------|--------------------|---------|----------------------|--|
| | | | 11,250 220 0 | February, 2023 |
| | | | Statistical analysis | Determination of goodness of fit in normal and modified dihybrid ratios. |

Semester: 5th Semester (General) (Theory)

| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/ Requ |
|--|------------|---|--|--|-----------------------------|
| gana da sana d Marangan da sana da sa | The Assets | A Proposition of the Control of the | | SEPTEMBER 2022 | Andreas |
| September | Monday | 50 Mins | Cell Biology and Molecular Biology, Cytogenetics and Plant Breeding | Mendelian inheritance; Gene interactions: Incomplete Dominance (1:2:1), Modified dihybrid ratio (12:3:1, 9:3:4, 9:7) | 4 |
| | | | Control of the contro | OCTOBER 2022 | |
| October | Monday | 50 Mins | Cell Biology and Molecular Biology, Cytogenetics and Plant Breeding | Crossing Over: Cytological proof of crossing over (McClintock's experiment); | 4 |

| | | analysis of a special section of the | the control of the second of | NOVEMBER 2022 | |
|----------|--------|--|---|---|---|
| November | Monday | 50 Mins | Cell Biology and Molecular Biology, Cytogenetics and Plant Breeding | Complete and incomplete linkage; Aneuploidy and Euploidy, role of polyploidy in crop improvement; | 8 |
| | | | | DECEMBER 2022 | |
| December | Monday | 50 Mins | Cell Biology and Molecular Biology, Cytogenetics and Plant Breeding | Chromosomal aberration: deletion, duplication, translocation and inversion; | 4 |
| | | | | January, 2023 | |
| January | Monday | 50 Mins | Cell Biology and Molecular Biology, Cytogenetics and Plant Breeding | Methods of plant breeding: Introduction, emasculation | 2 |
| | | | an easy of Al- | February, 2023 | |
| | Monday | 50 Mins | | Remedial Classes | |

Semester: 5th Semester (General) (Practical)

| Month | Day | Duration | Topic Name | Lesson Name | Total l |
|---|--------------------------|--|--|---|---------|
| | Duy | of Class | Topic Name | Lesson Name | Requ |
| 6 () () () () () () () () () (| | | The state of the s | SEPTEMBER 2022 | |
| September | Tuesday & Thursday | 50 Mins | Mitotic Study | Mitotic Study: Temporary preparation of metaphase chromosomes from root tips of <i>Allium cepa</i> Study of mitotic index in <i>Allium cepa</i> L. | 4 |
| Kalabatata | us national files | Was as the o | er an an head selfan. | OCTOBER 2022 | |
| October | Tuesday & Thursday | 50 Mins | Mitotic Study | Identification with reasons from permanent slides: Different stages of mitosis and meiosis including abnormalities like Sticky Bridge, laggard chromosome(s). | 4 |
| an y areas | | Carlos July Carlos (Carlos Carlos Car | | NOVEMBER 2022 | |
| Novembe | Tuesday & Thursday | 50 Mins | Detection of organic acids Detection of the nature of carbohydrate Photosynthesis | chromosomal fragmentation, ring chromosome, early separation. Study of pollen sterility by Acetocarmine staining technique. Detection of organic acids: citric, tartaric, oxalic and malic acids from unknown samples. Detection of the nature of carbohydrate: glucose, fructose, and sucrose from unknown samples.Determination of released oxygen during photosynthesis. | 8 |

| | | | 温度 三字集作品 | DECEMBER 2022 | |
|--------------------|--------------------------|---------|--|---|---|
| December | Tuesday & Thursday | 50 Mins | Chromatography Measurement of oxygen Effect of temperature Comparison of imbibition's | To extract and separate chlorophyll pigment by chromatography. Relationship between transpiration and evaporation. | 4 |
| | | | | January, 2023 | |
| January | Tuesday & Thursday | 50 Mins | Chromatography Measurement of oxygen Effect of temperature Comparison of imbibition's Tissue Culture | Measurement of oxygen uptake by respiring tissue (per g/hr). Effect of temperature on absorption of water by strage tissue and determination of Q ₁₀ . Comparison of imbibition's of water by starchy, proteinaceous and fatty seeds. Demonstration and function of autoclave, laminar airflow, pH meter and culture room. Aseptic techniques of explants culture. | 4 |
| A TOTAL CONTRACTOR | The write A color | | and the state of t | February, 2023 | |
| February | Tuesday & Thursday | 50 Mins | | Remedial Classes | |

HEAD
Department of Botany,
HOLY CROSS COLLEGE, AGARTALA

Study Plan for 1st, 3rd, and 5th Semester Theory and Practical Classes

Duration: September 2022- March 2023

Holy Cross College



Dr. Somnath Kar

Department of Botany

Dr. Somnath Kar

Semester: 1st Semester (Honours) (Theory)

| | | | | Dr. Somnath Kar | |
|------------------|----------------|------------------------|--|--|-----------------------------|
| Month | Day | Duration of Class | Topic Name | Lesson Name | Total l Periods/ Requ |
| oleksary jezot y | - (**-1) 24-10 | | and the state of t | SEPTEMBER 2022 | |
| September | Thursday | 50 Mins. | Environmental Botany | Pollution: Definition and categories Air pollution: Types and sources of air pollutants and their effects on plants and animals. | 3 |
| | | | A property state of the second | OCTOBER 2022 | |
| October | Thursday | 50 Mins. | Environmental Botany | Water pollution: Types and sources of pollutants and their effects on plants and animals. Soil pollution: Sources of pollutants and their effects on living organisms. | 6 |
| i sheke garan | | and the second section | | NOVEMBER 2022 | |
| | | A STATE OF THE SECOND | Control of the section of the section of the | Bioremediation, noise pollution, acid | |

| | | | A CONTRACTOR OF THE STATE OF TH | DECEMBER 2022 | 4 |
|----------|----------|----------|--|---|---|
| December | Thursday | 50 Mins. | Environmental Botany | Greenhouse effect and global warming – basic concept significance of ozone umbrella, ozone hole – types of ozone depleting chemicals and their interactions. | 4 |
| | | | | JANUARY 2023 | |
| January | Thursday | 50 Mins. | Environmental Botany | Revision and doubt clearing session | 4 |
| | | | | FEBRUARY 2023 | |
| February | Thursday | 50 Mins. | Environmental Botany | Remedial classes | 3 |

Semester:1st Semester (General) (Theory)

| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/G Requi |
|-----------|-----------|-------------------|-------------------------|---|-------------------------------|
| | | | | SEPTEMBER 2022 | |
| September | Wednesday | 50 Mins. | Environmental Botany | Pollution: Definition and categories Air pollution: Types and sources of air pollutants | 3 |
| | | | | OCTOBER 2022 | |

| October | Wednesday | 50 Mins. | Environmental Botany | Water pollution: Types and sources of pollutants and their effects on plants and animals. | 2 |
|-------------|-------------------------------|----------|-------------------------|---|--|
| | | | | NOVEMBER 2022 | The state of the s |
| November | Wednesday | 50 Mins. | Environmental Botany | Soil pollution: Sources of pollutants and their effects on living organisms. Noise pollution | 4 |
| | | | | DECEMBER 2022 | |
| December | Wednesday | 50 Mins. | Environmental Botany | Heavy metal pollution and radioactive pollution | 4 |
| | | | | JANUARY 2023 | |
| January | Wednesday | 50 Mins. | Environmental Botany | Revision and doubt clearing session | 4 |
| Salar Salar | and send the late of the send | | | FEBRUARY 2023 | To the second |
| February | Wednesday | 50 Mins. | Environmental Botany | Remedial classes | 3 |

Semester:3rd Semester (Honours) (Theory)

| | | | Semester:5" | semester (Honours) (Theory) | |
|-----------|--|----------------------|---|--|--|
| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/0 Requi |
| | | | | SEPTEMBER 2022 | |
| September | Monday & Friday | 50 Mins. | Microbiology and Plant pathology | Disease concepts, Symptoms- necrotic, hypoplastic and hyperplastic; | 4 |
| | The state of the s | | September 1981 | OCTOBER 2022 | |
| October | Monday & Friday | 50 Mins. | Microbiology and Plant pathology | Necrotrophs and biotrophs, mode of pathogenesis. | 6 |
| | | | South Annual Control of the Control | NOVEMBER 2022 | er e |
| November | Monday & Friday | 50 Mins. | Microbiology and Plant pathology | Defense mechanism with special references to phytoalexins, Plant quarantine; | 10 |
| | | | programme state | DECEMBER 2022 | - |
| December | Monday & Friday | 50 Mins. | Microbiology and Plant pathology | Koch's postulates, Symptoms, Casual organisms, Disease cycle and Control measures of Late blight of potato, Brown sport | 4 |

| | 2007 | | | of rice, Black stem of wheat and Stem rot of Jute | |
|----------|--------------------|----------|--|--|---|
| | | | | JANUARY 2023 | |
| January | Monday & Friday | 50 Mins. | Microbiology and Plant pathology | Revision and doubt clearing session | 4 |
| | | | | FEBRUARY 2023 | |
| February | Monday & Friday | 50 Mins. | Microbiology and Plant pathology | Remedial classes | 3 |

Semester:3rd Semester (General) (Theory)

| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/G Requi |
|--|-----------------------|--|--|--|--|
| | a and a second | and the second section of the second section of the second | 200 | SEPTEMBER 2022 | 20 00 00 3 00 00 4 00 00 00 4 00 00 00 5 00 00 00 5 00 |
| September | Tuesday | 50 Mins. | Microbiology and Plant pathology | Disease concepts, Symptoms- necrotic, hypoplastic and hyperplastic | 4 |
| and the Court of t | entropy of the Artist | The state of the second second second | e fra is careful is Mark to protection | OCTOBER 2022 | Control of the section |

| October | Tuesday | 50 Mins. | Microbiology and Plant pathology | Necrotrophs and biotrophs, mode of pathogenesis. | 4 |
|------------|------------------------|---|--|--|---|
| | a grander and a second | | y the second of | NOVEMBER 2022 | |
| November | Tuesday | 50 Mins. | Microbiology and Plant pathology | Defense mechanism with special references to phytoalexins, Plant quarantine; | 8 |
| | | | | DECEMBER 2022 | |
| December | Tuesday | 50 Mins. | Microbiology and Plant pathology | Koch's postulates, Symptoms, Casual organisms, Disease cycle and Control measures of Late blight of potato, Brown sport of rice, Black stem of wheat and Stem rot of Jute | 8 |
| | | Aller Comments | | JANUARY 2023 | |
| January | Tuesday | 50 Mins. | Microbiology and Plant pathology | Revision and doubt clearing session | 4 |
| A SE SESSE | | on the second | Control of the Contro | FEBRUARY 2023 | |
| February | Tuesday | 50 Mins. | Microbiology and Plant pathology | Remedial classes | 3 |

Semester: 5th Semester (Honours) (Theory)

| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/0 Requ |
|--|-----------------------|-------------------|----------------------------------|---|------------------------------|
| No. of the state o | | | | SEPTEMBER 2022 | 700 |
| September | Monday & Wednesday | 50 Mins. | Cell Biology | Structure and function of Cell Organelles (Nucleus, Mitochondria, Chloroplast, ER, Golgi Apparatus, Peroxisomes and Glyoxysomes, Ultra- structure of ribosome in Prokaryotes and Eukaryotes,) | 4 |
| | | | | OCTOBER 2022 | |
| October | Monday & Wednesday | 50 Mins. | Cell Biology | Plasma membrane – Structure (Fluid mosaic model) and function; Organization of cp and mt DNA and their significance; | 4 |
| | | | | NOVEMBER 2022 | |
| November | Monday & Wednesday | 50 Mins. | Plant Breeding and Biostatistics | Collection of data (Variable and attribute, Primary and Secondary data, Population and sample); Types of charts and diagrams: Frequency distribution (Simple, Grouped and Cumulative);. | 8 |

| | | | | Measures of Central tendency: Mean Mode and Median;; | |
|----------|-----------------------|----------|--|--|---|
| | | | l and the second second | DECEMBER 2022 | |
| December | Monday & Wednesday | 50 Mins. | Plant Breeding and Biostatistics | Measure of dispersion: Mean deviation and Standard Deviation; Standard Error Correlation and Coefficient of Correlation (r); Student t-test; Chi Square test for goodness of fit; Classical definition of Probability, Addition and Multiplication rules | 6 |
| | | | | JANUARY 2023 | |
| January | Monday & Wednesday | 50 Mins. | Cell Biology Plant Breeding and Biostatistics | Revision and doubt clearing session | 4 |
| | | | | FEBRUARY 2023 | |
| February | Monday & Wednesday | 50 Mins. | Cell Biology Plant Breeding and Biostatistics | Remedial classes | 3 |

Semester: 5th Semester (General) (Theory)

| Month | Day | Duration of Class | Topic Name | Lesson Name | Total I Periods/ Requ |
|-------------|-----------------------|--|---|--|-----------------------------|
| | | | | SEPTEMBER 2022 | |
| September | Tuesday & Friday | 50 Mins. | Plant Physiology and Plant Biotechnology: | Water potential and its components; Water absorption by roots (apoplastic and symplastic pathways); Photosynthesis: photochemical reactions, | 4 |
| | | | A Little and State State State | OCTOBER 2022 | |
| October | Tuesday & Friday | 50 Mins. | Plant Physiology and Plant Biotechnology: | Mechanism of electron transport in PS-I and PS-II, Calvin cycle; C ₃ and C ₄ plants and photosynthetic efficiency, photorespiration, Crassulacean acid metabolism (CAM); Transpiration and anti-transpirant. | 4 |
| | | with the capital street land | | NOVEMBER 2022 | |
| November | Tuesday & Friday | 50 Mins. | Plant Physiology and Plant Biotechnology: | Respiration: Glycolysis, Oxidative Phosphorylation, Mitochondrial ETS; N-metabolism: Assimilation of Nitrogen, Biological Nitrogen fixation: role of nitrogenase in N ₂ fixation; | 6 |
| at a second | and the second second | Contraction (the contraction of | | DECEMBER 2022 | |

| December | Tuesday & Friday | 50 Mins. | Plant Physiology and Plant Biotechnology | Photoperiodism: Photoperiodic responses and classification of plants, Photomorphogenesis; Plant growth regulators, physiological role and modes of action (IAA, Gibberellins and Cytokinins). | 6 |
|----------|---------------------|----------|---|--|---|
| | | | | JANUARY 2023 | |
| January | Tuesday & Friday | 50 Mins. | Plant Physiology and Plant Biotechnology: | Revision and doubt clearing session | 4 |
| | | | | FEBRUARY 2023 | |
| February | Tuesday & Friday | 50 Mins. | Plant Physiology and Plant Biotechnology: | Remedial classes | 3 |

Semester: 5th Semester (Honours) (Practical)

| | | | bemester. | 5 Semester (Honours) (Prac | ticai) |
|-----------|----------------|-------------------|---|---|--|
| Month | Day | Duration of Class | Topic Name | Lesson Name | Total No. of Periods/Classe Required |
| | | | 18, 15, 16, 17, 17, 17, 17, 17, 17, 17, 17, 17, 17 | SEPTEMBER 2022 | |
| September | Wednesday | 100 Mins | Demonstration of emasculation | Demonstration of emasculation technique. | 2. |
| | | | | OCTOBER 2022 | |
| October | Wednesday | 100 Mins | Statistical Analysis | Determination of goodness of fit in normal and modified dihybrid ratios. | 4 |
| | To the same of | | | NOVEMBER 2022 | |
| November | Wednesday | 100 Mins | Study of pollen sterility Statistical Analysis | Study of pollen sterility by Aceto-carmine staining technique. Graphical representation of statistical Data. Statistical analysis of Mean, Mode, Median, | 4 |
| | | | | DECEMBER 2022 | Territoria New Calland |
| December | Wednesday | 100 Mins | Statistical Analysis | Standard deviation, Standard error and T-Test. | 3 |

| | | | FEBRUARY 2023 | |
|---------|-----------|----------|-------------------------------------|---|
| January | Wednesday | 100 Mins | Revision and doubt clearing session | 4 |
| | | | JANUARY 2023 | |
| | | | | |
| | | | | |

Semester: 5th Semester (General) (Practical)

| | | | Schlester: 5" 5 | Semester (General) (Practical) | |
|----------------------|--------------------------|--|--|---|-------------------------------|
| Month | Day | Duration of Class | Topic Name | Lesson Name | Total N Periods/C Requi |
| | | | | SEPTEMBER 2022 | |
| September | Tuesday & Thursday | 100 Mins | Plant physiology | Relationship between transpiration and evaporation. | 6 |
| ering of the company | | eri en esta parter ancies. Promi esta parter de la como | en ett gar eine enne i 1995 bli ett enne en en en 1998 enne betalle en en en skriver en et en | OCTOBER 2022 | -1 |
| October | Tuesday & Thursday | 100 Mins | Study of pollen sterility | Study of pollen sterility by Aceto- carmine staining technique. | 6 |
| | | PARTAMENT | | NOVEMBER 2022 | |
| November | Tuesday & Thursday | 100 Mins | Biochemistry | Detection of organic acids: citric, tartaric, oxalic and malic acids from unknown samples. Detection of the nature of carbohydrate: glucose, fructose, and sucrose from unknown samples. | 12 |
| | | re rejesk sjær edesk Geografisk skrivet | | DECEMBER 2022 | |
| December | Tuesday & Thursday | 100 Mins | Plant physiology | Effect of temperature on absorption of water by storage tissue and determination of Q ₁₀ . | 6 |

| | | Comparison of imbibition's of water by starchy, proteinaceous and fatty seeds. | |
|--------------------------|----------|--|---|
| | | JANUARY 2023 | |
| Tuesday & Thursday | 100 Mins | Revision and doubt clearing session | 6 |
| | | FEBRUARY 2023 | |
| Tuesday & Thursday | 100 Mins | Remedial classes | 3 |

Department of Botany,
HOLY CROSS COLLEGE, AGARTALA

STUDY PLAN

By Dr. Debasree Lodh

Assistant Professor Department of Botany Holy Cross College, Agartala

Session: April, 2023 - August, 2023

2ND SEMESTER BOTANY HONOURS, 2023

| Month | Topic Name | Name of the Teacher: DR. DEBASREE LOI Lesson Name | Status | Study materials |
|----------------------|--|---|--|---------------------------------------|
| April | Algae | General account, Thallus organization. Ultra-structure of plastid & flagella, Origin & evolution of sex. | Completed Completed | Uploadedin the google classroom |
| May | Algae | Salient features of Charophyceae, Life history of <i>Chara</i> . Salient features of Chlorophyceae, Life history of <i>Chlamydomonas</i> , <i>Oedogonium</i> . Outline classification (Lee-1999) up to phylum with characters. | Completed Completed Completed Completed | Uploadedin the Google Classroom |
| June | | Economic importance of algae. Salient features of Phaeophyceae, Life history of <i>Ectocarpus</i> . Salient features of Xanthophyceae, Life history of <i>Voucheria</i> . Bacillariophyceae (Diatom), Cell structure, Auxospore formation in Centrales and Pennales. Salient features of Rhodophyceae, Life history of <i>Polysiphonia</i> . | Completed Completed Yet to be completed Yet to be completed | Uploaded in the Google Classroom |
| July | | Remedial Classes/ Revision Classes | | - 142 (No. 1) (No. 1) (No. 1) (No. 1) |
| Assessment | •Class test •Assignment •Presentation •Group Disci | | | |
| Materials Needed: | •Projection s | | | |

4TH SEMESTER BOTANY HONOURS, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|---|---|----------------------------------|
| April | Anatomy | Anatomy -Cell wall (Gross structure and chemical composition), Meristematic and | Completed | Uploaded in the google classroom |
| May | Tissue & Vascular bundle | Permanent tissue (structure, distribution and function); Vascular bundles- types, stele- types and evolution, Normal secondary growth | Completed Completed Completed Completed | Uploaded in the google classroom |
| June | Anomalo us secondar y growth | Anomalous secondary growth (Stems of Boerhaavia, Chenopodium, Mirabilis, Bignonia, Nyctanthes, Root of Tinospora) | Completed Yet to be completed Yet to be completed | |
| July | | Remedial Classes/ Revision Classes | | |
| Assessment | •Class test •Assignment •Presentation •Group Discussion | on | | |
| Materials Needed: | • Projection syste • Board for Demo | m onstration Problems | | |

6TH SEMESTER BOTANY HONOURS, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|---|--|----------------------------------|
| April | Biochemistry | Structure and properties of water, covalent and non-covalent bonds, hydrogen bonds, Vander Waal's forces, pH, buffer and isoelectric points. | Completed Completed Completed Completed | Uploaded in the google classroom |
| May | Biochemistry | Carbohydrate: Classification, structure and properties; Lipids: Classification and function: Protein: Classification and structure (Primary, Secondary, Tertiary and Quaternary structure); Amino acids: Structure, charge and polarity; essential amino-acids; | Completed Completed Completed Completed | Uploaded in the google classroom |
| June | Biochemistry | Enzyme: Classification and function, Isozymes, Allosteric enzymes and Coenzymes; Glycolysis, conversion of pyruvic acid to Acetyl Co-A, TCA cycle; Membrane chemistry, transport and mechanism of ion uptake; | Completed | Uploaded in the google classroom |
| July | Rem | edial Classes/ Revision Classes | | |
| Assessment | Class testAssignmentPresentationGroup Discussion | | | |
| Materials Needed: | Projection system Board for Demonstrat | ion Problems | | |

2ND SEMESTER BOTANY GENERAL, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|--|---|---|----------------------------------|
| April | Algae | General account, Thallus organization. Economic importance of algae. | Completed Completed | Uploadedin the google classroom |
| May | Algae | Life history of <i>Chara</i> . Life history of, <i>Oedogonium</i> | Completed Completed | Uploaded in the Google Classroom |
| June | Algae | Life history of <i>Ectocarpus</i> . Life history of <i>Polysiphonia</i> Cell structure of Diatom, Auxospore formation in Centrales and Pennales. | Completed Yet to be completed Yet to be completed | Uploaded in the Google Classroom |
| July | | Remedial Classes/ Revision Classes | 1 | |
| Assessment | •Class test •Assignment •Presentation •Group Discu | | | |
| Materials Needed: | •Projection sy | | | |

4TH SEMESTER BOTANY GENERAL, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|--|---|---|----------------------------------|
| April | Anatomy | Anatomy -Cell wall (Gross structure and chemical composition), Meristematic and Permanent tissue (structure, distribution and function) | Completed | Uploaded in the google classroom |
| May | Anatomy | Vascular bundles- types, stele- types and evolution | Completed | Uploaded in the google classroom |
| June | Anatomy | Normal secondary growth; Ecology- Habitat and Niche (preliminary idea) | Yet to be completed Yet to be completed Yet to be completed | |
| July | | Remedial Classes/ Revision Classes | | |
| Assessment | •Class test •Assignment •Presentation •Group Discuss | sion | | |
| Materials Needed: | •Projection sys | | | |

2nd SEMESTER BOTANY HONOURS PRACTICAL, 2023

| Microscope Study Identification Work out Identification Work out Identification | To learn use of Simple and Compound Microscopes. Study of Permanent slides: Volvax, Polysiphonia. Oedogonium Morphological study of the plant body (Bryophytes): Genera as mentioned in theoretical syllabus. Chara, Ectocarpus | Completed Completed Completed Completed Completed | Given Given |
|---|--|--|---|
| Identification Work out | Polysiphonia. Oedogonium Morphological study of the plant body (Bryophytes): Genera as mentioned in theoretical syllabus. Chara, Ectocarpus | Completed | Given |
| Identification Work out | Morphological study of the plant body (Bryophytes): Genera as mentioned in theoretical syllabus. Chara, Ectocarpus | Completed | Given |
| Work out | body (Bryophytes): Genera as mentioned in theoretical syllabus. Chara, Ectocarpus | | Given |
| | Chara, Ectocarpus | Completed | |
| | Riccia (V.S. of thallus with antherdia/archegonia/sporophyte), Marchantia (L.S. through gemma cup,antheridiophore, archegoniophore, sporophyte), Anthoceros (L.S. of sporophyte), Funaria (L.S. of capsule | Yet to be completed | Given |
| Remed | dial Classes/ Revision Classes | | |
| Class test Assignment Presentation Group Discussion | | | |
| Projection system | | | |
|] | Class test Assignment Presentation Group Discussion Projection system | cup,antheridiophore, archegoniophore, sporophyte),\ Anthoceros (L.S. of sporophyte), Funaria (L.S. of capsule Remedial Classes/ Revision Classes Class test Assignment Presentation Group Discussion | cup,antheridiophore, archegoniophore, sporophyte),\ Anthoceros (L.S. of sporophyte), Funaria (L.S. of capsule Remedial Classes/ Revision Classes Class test Assignment Presentation Group Discussion Projection system |

2nd SEMESTER BOTANY GENERAL PRACTICAL, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|------------|---------------------------------------|------------------------------------|---------------------|-----------------|
| April | Microscope Study | To learn use of Simple and | Completed | Given |
| | | Compound Microscopes. | | olven. |
| | Identification | Study of Permanent slides: | Completed | |
| | | Volvax, Polysiphonia. | | |
| May | Work out | Oedogonium | Completed | |
| | | Morphological study of the plant | | Given |
| | Identification | body (Bryophytes): Genera as | Completed | |
| | | mentioned in theoretical syllabus. | | |
| June | Work out | Chara, Ectocarpus | Completed | |
| | | | | Given |
| | Identification | Marchantia (L.S. through | | |
| | | gemma cup, antheridiophore, | Yet to be completed | |
| | | archegoniophore, sporophyte), | | |
| | | Anthoceros (L.S. of | | |
| | | sporophyte), Funaria (L.S. of | | |
| | | capsule). | | |
| July | R | emedial Classes/ Revision Classes | | |
| Assessment | •Class test | Salar Company | | |
| | Assignment | | | |
| | Presentation | | | |
| | Group Discussion | | | |
| Materials | Projection system | | | |
| Needed: | Board for Demonstr | ation Problems | | |

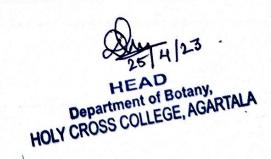
6TH SEMESTER BOTANY HONOURS PRACTICAL, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|-------|------------------|---|---------------------|-----------------|
| April | Plant physiology | Estimation of Catalase activity in plant samples. | Completed Completed | Given |
| | | Effect of CO ₂ on the rate of photosynthesis. | | |
| | | To extract and separate chlorophyll pigment by chromatogram. | | |
| | | Determination of loss of water per stomata per hour. | | |
| May | Biochemistry | Measurement of osmotic pressure of <i>Rhoeo</i> leaf by plasmolytic | Completed | 6: |
| | | method. Effect of temperature on absorption of water by storage tissue and determination of Q ₁₀ . | Completed | Given |
| | | Comparison of imbibitions of water by starchy, proteinaceous and fatty seeds. | | |
| June | | Relationship between transpiration and evaporation. | Yet to be completed | - |

| | uptake by respiring tissue (per g/hr). Determination of the RQ of germinating seeds. | |
|----------------------|---|--|
| July | Remedial Classes/ Revision Classes | |
| Assessment | •Class test •Assignment •Presentation •Group Discussion | |
| Materials Needed: | Projection system Board for Demonstration Problems | |

6TH SEMESTER BOTANY HONOURS PROJECT, 2023

| Month | Topic Name | Status |
|-------------------|---|----------------------|
| April | Students project | 30-35 % completed |
| May | Students project | 70-75 % completed |
| June | Project submission and Viva-voce | Yest to be completed |
| Assessment | Presentation Group Discussion | |
| Materials Needed: | Projection system lab facilities PC | |



2ND SEMESTER BOTANY HONOURS, 2023

| Month | Topic Name | Name of the Teacher: DR. SOMNATH KAR Lesson Name | Status | Study materials |
|----------------------|---|--|---|---|
| April | Gymnosperms | Introduction Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Cycas | Completed Completed | Uploaded in the google classroom |
| May | Gymnosperms | Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Pinus Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Gnetum Comperative account of Cycas, Pinus and Gnetum Economic importance with reference to wood, resins, essential oils & drugs Progymnosperm —Diagnostic characters, Vegetative & reproductive structures of Archeopteris. | Completed Completed Completed Completed Ongoing | Uploaded in the google classroom |
| June | Plant fossil | Types of fossils - Different modes of preservation (Schopf – 1975), Conditions favouring fossilization, Importance of fossil study. Geological time scale with dominant plant groups through ages. Indian Gondwana System. Lyginopteris, Williamsonia, Cordaites | Completed Yet to be completed Yet to be completed | - |
| July | Established Annual Section | Remedial Classes/ Revision Classes | | |
| Assessment | •Class test •Assignment •Presentation •Group Discus | sion | | |
| Materials Needed: | Projection sys Board for Der | stem nonstration Problems | | |

4TH SEMESTER BOTANY HONOURS, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|--|--|----------------------------------|
| April | Morphology | Fruits- types | Completed | Uploaded in the google classroom |
| May | Embryology | Microsporogenesis Microgametegenesis Mega sporogenesis Megagametegenesis (Monosporic, bisporic and tetrasporic) | Completed Completed Completed Completed | Uploaded in the google classroom |
| June | Embryology Taxonomy Taxonomy | Development of embryo, Development of endosperm Nomenclature and rules of ICBN Mimosaceae, Caesalpiniaceae, Fabaceae, Solanaceae, Lamiaceae and Asteraceae | Yet to be completed Yet to be completed | - |
| July | | Remedial Classes/ Revision Class | es | |
| Assessment | Class test Assignment Presentation Group Discus | | | |
| Materials Needed: | Projection sy Board for De | stem monstration Problems | | |

6TH SEMESTER BOTANY HONOURS, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|---|--|----------------------------------|
| April | Plant physiology | Photosynthesis: introduction Components of photosynthesis, Types of chlorophyll carotenoids and their structures and functions | Completed Completed Completed Completed | Uploaded in the google classroom |
| May | Plant physiology | Red drop effect Enhancement effect Antenna complex, photochemical reactions, Mechanism of electron transport in PS-I and PS-II, Calvin cycle; HSK pathway; C3 and C4 plants and photosynthetic efficiency, photorespiration, Crassulacean acid metabolism (CAM) | Completed Completed Completed Completed | Uploaded in the google classroom |
| June | | Stomatal physiology, Respiration, Biological Nitrogen fixation, Photoperiodism, Photomorphogenesis Plant growth regulators | Completed | Uploaded in the google classroom |
| July | Ren | nedial Classes/ Revision Classes | | |
| Assessment | Class testAssignmentPresentationGroup Discussion | againe de égamente a agus agus agus agus agus agus agus ag | | |
| Materials Needed: | Projection system Board for Demonstra | ition Problems | | |

2ND SEMESTER BOTANY GENERAL, 2023

| Month | Topic Name | Lesson Name | Status | Study materia Is |
|----------------------|--|---|---|---|
| April | Gymnosperms | Introduction Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Cycas | Completed Completed | Uploade din the google classroo m |
| May | Gymnosperms | Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Pinus Distribution in India, vegetative and reproductive structure, Development of gametophyte and embryogeny of Gnetum Comperative account of Cycas, Pinus and Gnetum Economic importance with reference to wood, resins, essential oils & drugs Progymnosperm –Diagnostic characters | Completed Completed Completed Completed Ongoing | Uploade din the google classroo m |
| June | Plant fossil | Types of fossils - Different modes of preservation (Schopf – 1975), Conditions favouring fossilization, Importance of fossil study. Geological time scale with dominant plant groups through ages. | Completed Yet to be completed | - |
| July | | Remedial Classes/ Revision Classes | | |
| Assessment | Class testAssignmentPresentationGroup Discu | | | |
| Materials Needed: | •Projection sy | | | |

4TH SEMESTER BOTANY GENERAL, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|--|---------------------|----------------------------------|
| April | Morphology | Introduction | Completed | Uploaded in the google classroom |
| May | Morphology | Fruits- types | Completed | Uploaded in the google classroom |
| June | Taxonomy | Mimosaceae, Caesalpiniaceae, Fabaceae, Solanaceae, Lamiaceae and Asteraceae | Yet to be completed | |
| | | | Yet to be completed | |
| | | | Yet to be completed | |
| July | | Remedial Classes/ Revision Class | es | |
| Assessment | Class testAssignmentPresentationGroup Discus | sion | | |
| Materials Needed: | •Projection sys | | | |

4TH SEMESTER BOTANY HONOURS PRACTICAL, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|--|-------------------------------------|-----------------|
| April | Identification | Types of stomata, Sclerides, Types of Raphides, | Completed Completed Completed | Given |
| May | Identification | Fruit type Placentation , Nymphaea petiole, Nerium leaf | Completed Completed | Given |
| June | Work out | Anomalous secondary structures Angiospermic plants | Completed Completed | |
| | Identification | Cerum Revolunt | Partition | Given |
| | | Cystolith, laticiferous duct, Aleurone grain, Special types of inflorescences Types of stamens | Completed Completed | |
| 30 80 80 980 80 | | | None | |
| July | Remedia | I Classes/ Revision C | Jiasses | |
| Assessment | Class testAssignmentPresentationGroup Discussion | | | |
| Materials Needed: | Projection system Board for Demonstration Projection | roblems | | |

4TH SEMESTER BOTANY GENERAL PRACTICAL,2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|---|---|-----------------|
| April | Identification | Types of stomata, Sclerides, Types of Raphides, | Completed Completed Completed | Given |
| May | Identification Work out | Fruit type Placentation Monocot stem, Dicot stem, Monocot root, Dicot root. | Completed Completed Completed | Given |
| June | Work out Identification | Angiospermic plants Cystolith, laticiferous duct, Aleurone grain | Yet to be completed Yet to be completed Yet to be completed | |
| July | Re | medial Classes/ Revisior | Classes | |
| Assessment | Class testAssignmentPresentationGroup Discussion | | | |
| Materials Needed: | Projection system Board for Demonstr | ration Problems | | |

6TH SEMESTER BOTANY HONOURS PRACTICAL, 2023

| Month | Topic Name | Lesson Name | Status | Study materials |
|----------------------|---|---|---------------------|-----------------|
| April | Plant physiology | Relationship between transpiration and evaporation Comparison of imbibitions of water by starchy, proteinaceous and fatty seeds. | Completed Completed | Given |
| May | Biochemistry | Detection of organic acids: citric, tartaric, oxalic and malic acids from unknown samples. Detection of the nature of carbohydrate: glucose, fructose, sucrose from unknown samples | Completed Completed | Given |
| June | Pharmacognosy | Study of Palisade ratio and Vein islet no. | Yet to be completed | - |
| July | R | emedial Classes/ Revision (| Classes | |
| Assessment | Class test Assignment Presentation Group Discussion | | | |
| Materials Needed: | Projection system Board for Demons | stration Problems | | |

6TH SEMESTER BOTANY HONOURS PROJECT, 2023

| Month | Topic Name | Status | |
|-------------------|---|----------------------|--|
| April | Students project | 30-35 % completed | |
| May | Students project | 70-75 % completed | |
| June | Project submission and Viva-voce | Yest to be completed | |
| Assessment | Presentation Group Discussion | | |
| Materials Needed: | Projection systemlab facilitiesPc | | |