TEACHING PLAN
DEPARTMENT OF BOTANY
MORIGAON COLLEGE
EVEN SEMESTER
(APRIL 2022- JUNE 2022)

EVEN SEMESTER

2ND SEMESTER (HONOURS)

PAPER- BOT-HC- 2016

MYCOLOGY AND PHYTOPATHOLOGY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
TRIDEEP CHETIA	UNIT 1- INTRODUCTION TO FUNGI (GENERAL CHARACTERS, LIFE HISTORY, CLASIFICATION- MYXOMYCOTA, OOMYCOTA, ZYGOMYCOTA, ASCOMYCOTA, BASIDIOMYCOTA)	10	4	16^{TH} APRIL-5^{TH}MAY	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : MASTIGOMYCOTINA (CHYTRIDIOMYCETES AND OOMYCETES) (*Synchytrium/ Phytophthora/ Albugo*)	6	3	6^{TH}MAY- 18^{TH} MAY	
	UNIT 3 : ZYGOMYCOTINA (*Rhizopus*)	2	2	19^{TH}MAY- 25^{TH} MAY	
	UNIT 4 : ASCOMYCOTINA (*Saccharomyces, Aspergillus, Penicillium, Neurospora, Peziza*)	10	3	26^{TH}MAY- 15^{TH} JUNE	
ANKUR JYOTI BORAH	UNIT 5 : BASIDIOMYCOTINA (AGARICUS, BIOLUMINESCENCE, FAIRY RINGS)	8	2	16^{TH} APRIL- 30^{TH} APRIL	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 6 : DEUTEROMYCOTINA (FUNGI IMPERFECTI)- (*Alternaria, Colletotrichum*)	3	1	1^{ST} MAY- 15^{TH} MAY	
	UNIT 7 : APPLIED FUNGI- MYXOMYCOTA (SLIME MOULDS)	3	Nil	17^{TH} MAY - 30^{TH} MAY	
JAGAT CH. SAIKIA	UNIT 8 : SYMBIOTIC ASSOCIATIONS (LICHEN, MYCORRHIZA)	3	2	5^{TH} MAY - 19^{TH}MAY	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 9 : APPLIED MYCOLOGY (BIOFERTILIZER,	5	1	20^{TH} MAY – 4^{TH} JUNE	

	MYCOTOXINS, MEDICAL MYCOLOGY ETC.)				
	UNIT 10 : PHYTOPATHOLOGY	10	5	5TH JUNE – 20TH JUNE	

2ND SEMESTER (HONOURS)
PAPER- BOT-HC- 2026
ARCHEGONIATE

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
AMI DEVI	UNIT 1: INTRODUCTION- (ARCHEGONIATE, ALTERNATION OF GENERATION)	4	Nil	20TH APRIL- 30TH APRIL	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2: BRYOPHYTES- (CLASSIFICATION, THALLUS ORGANIZATION, ADAPTATION)	6	Nil	1ST MAY – 15TH MAY	
	UNIT 3: TYPE STUDIES- BRYOPHYTES (*Riccia, Marchantia, Anthoceros, Sphagnum, Polytrichum*)	12	3	17TH MAY – 5TH JUNE	
ANKUR JYOTI BORAH	UNIT 4: PTERIDOPHYTES (CHARACTERS, CLASSIFICATION, *Rhynia, Cooksonia*)	6	Nil	20TH APRIL- 5TH MAY	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 5: TYPE STUDIES- PTERIDOPHYTES (*Psilotum, Lycopodium, Selaginella, Equisetum, Pteris, Marsilea*)	14	2	6TH MAY- 28TH MAY	
	UNIT 6: GYMNOSPERMS (GENERAL	18	4	29TH MAY- 20TH JUNE	

	CHARACTERS, *Cycas, Pinus, Ginkgo, Gnetum*, ECONOMIC IMPORTANCE)				

2ND SEMESTER (GENERIC)
PAPER- BOT- HG-2016
PLANT ECOLOGY AND TAXONOMY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
TRIDEEP CHETIA	UNIT 1 : INTRODUCTION	2	Nil	17TH APRIL- 25TH APRIL	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : ECOLOGICAL FACTORS (SOIL, WATER, LIGHT, TEMPERATURE, ADAPTATIONS)	10	5	26TH APRIL – 15TH MAY	
	UNIT 3 : PLANT COMMUNITIES (CHARACTERS, ECOTONE AND EDGE EFFECT,SUCCESSION, PROCESSES AND TYPES)	6	2	17TH MAY- 30TH MAY	
	UNIT 4 : ECOSYSTEM (STRUCTURE, ENERGY FLOW, FOOD CHAINS AND FOOD WEBS, BIOGEOCHEMICAL CYCLING)	8	Nil	31ST MAY- 20TH JUNE	
	UNIT 5 : PHYTOGEOGRAPHY (PRINCIPLE, BIOGEOGRAPHICAL ZONES, ENDEMISM)	4	2	21ST JUNE- 30TH JUNE	
	UNIT 6 : INTRODUCTION TO PLANT TAXONOMY (IDENTIFICATION, CLASSIFICATION, NOMENCLATURE)	2	2	18TH APRIL- 21ST APRIL	
	UNIT : 7 IDENTIFICATION (FUNCTIONS OF HERBARIUM, DOCUMENTATION: FLORA, KEYS)	4	2	22ND APRIL- 28TH APRIL	
	UNIT : 8 TAXONOMIC EVIDENCES FROM	6	Nil	29TH APRIL- 10TH MAY	

ANKUR JYOTI BORA	PALYNOLOGY, CYTOLOGY, PHYTOCHEMISTRY AND MOLECULAR DATA.				SEMINARS/ CLASS TESTS/ REVISION
	UNIT 9 : TAXONOMIC HIERARCHY (RANKS, CATEGORIES AND TAXONOMIC GROUPS)	2	Nil	11TH MAY- 15TH MAY	
	UNIT 10 : BOTANICAL NOMENCLATURE (PRINCIPLES AND RULES (ICN) RANKS AND NAMES, BINOMINAL SYSTEM, TYPIFICATION)	6	2	17TH MAY- 31ST MAY	
	UNIT 11 : CLASSIFICATION (TYPES OF CLASSIFICATION-ARTIFICIAL, NATURAL AND PHYLOGENETIC. BENTHAM AND HOOKER (UPTO SERIES), ENGLER AND PRANTL (UPTO SERIES))	6	Nil	1ST JUNE- 15TH JUNE	
	UNIT 12 : BIOMETRICS, NUMERICAL TAXONOMY AND CLADISTICS (CHARACTERS, VARIATIONS, CLUSTER ANALYSIS, PHENOGRAMS, CLADOGRAMS (DEFINITIONS AND DIFFERENCES)	4	Nil	16TH JUNE- 25TH JUNE	

4TH SEMESTER (HONOURS)
PAPER- BOT-HC-4016
MOLECULAR BIOLOGY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
TRIDEEP CHETIA	UNIT 1: NUCLEIC ACIDS : CARRIERS OF GENETIC INFORMATION	4	Nil	16TH APRIL- 22THAPRIL	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2: THE STRUCTURES OF DNA AND RNA / GENETIC MATERIAL (DENATURATION, RENATURATION, MITOCHONDRIAL AND CLOROPLAST DNA, NUCLEOSOME, EUCHROMATIN AND HETEROCHROMATIN)	10	2	23RD APRIL- 10TH MAY	

AMI DEVI	UNIT 3: THE REPLICATION OF DNA (UNI AND BI, SEMI DISCONTINUOUS, ROLLING CIRCLE, THETA MODE, ENZYMES OF REPLICATION)	10	4	17TH APRIL- 26TH APRIL	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 4: CENTRAL DOGMA AND GENETIC CODE	2	Nil	27TH APRIL- 4TH MAY	
	UNIT 5: TRANSCRIPTION (PROKARYOTES, EUKARYOTES, LACTOSE AND TRYPTOPHAN, GENE SPLICING)	18	Nil	5TH MAY- 28TH MAY	
	UNIT 6: PROCESSING AND MODIFICATION OF RNA (INTRONS AND EXONS, RIBOZYMES, SPLICING PATHWAYS)	8	2	29TH MAY- 15TH JUNE	
	UNIT 7: TRANSLATION (tRNA, SYNTHESIS, POST TRANSCRIPTIONAL MODIFICATION)	8	3	16TH JUNE- 30TH JUNE	

4TH SEMESTER (HONOURS)
PAPER- BOT-HC-4026
PLANT ECOLOGY AND PHYTOGEOGRAPHY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
ANKUR JYOTI BORAH	UNIT 1 : INTRODUCTION (LEVELS OF ORGANIZATION, DYNAMISM, HOMEOSTASIS)	4	2	18TH APRIL- 25TH APRIL	FIELD VISIT/ SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : SOIL (FORMATION, COMPOSITION,PROFILE)	8	4	26TH APRIL- 10TH MAY	
	UNIT 3 : WATER (ATMOSPHERIC MOISTURE, PRECIPITATION, SOIL WATER)	4	3	11TH MAY- 20TH MAY	
	UNIT 4 : ADAPTATION OF PLANTS TO VARIOUS	6	1	21ST MAY- 5TH JUNE	

	ENVIRONMENTAL FACTORS (LIGHT, TEMPERATURE, WIND, FIRE)				
	UNIT 5 : BIOTIC INTERACTIONS (TROPHIC ORGANIZATION, FOOD CHAIN, WEB, PYRAMIDS)	2	Nil	6TH JUNE- 15TH JUNE	
TRIDEEP CHETIA	UNIT 6 : POPULATION ECOLOGY (CHARACTERISTICS, GROWTH CURVE, R AND K SELECTION)	4	2	1ST MAY- 10TH MAY	FIELD VISIT/ SEMINARS/ CLASS TESTS/ REVISION
	UNIT 7 : PLANT COMMUNITIES (HABITAT AND NICHE, ECOLOGICAL AMPLITUDE, SUCCESSION)	8	3	11TH MAY- 30TH MAY	
	UNIT 8 : ECOSYSTEMS (TROPHIC ORGANISATION, ECOLOGICAL PYRAMIDS)	4	Nil	31ST MAY- 5TH JUNE	
	UNIT 9 : FUNCTIONAL ASPECTS OF ECOSYSTEM (ENERGY FLOW , PRODUCTION AND PRODUCTIVITY, BIOGEOCHEMICAL CYCLES)	8	Nil	6TH JUNE- 15TH JUNE	
	UNIT 10 : PHYTOGEOGRAPHY (CONTINENTAL DRIFT, THEORY OF TOLERANCE, ENDEMISM, PHYTOGEOGRAPHICAL DIVISION OF INDIA, VEGETATION TYPES OF NE INDIA	12	2	16TH JUNE TO 30TH JUNE	

4TH SEMESTER (HONOURS)
PAPER- BOT-HC-4036
PLANT SYSTEMATICS

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
JAGAT CH. SAIKIA	UNIT 1 : SIGNIFICANCE OF PLANT SYSTEMATICS (PLANT IDENTIFICATION, CLASSIFICATION,	8	3	20TH APRIL- 30TH APRIL	

	NOMENCLATURE HERBARIUM, PALYNOLOGY, CYTOLOGY, PHYTOCHEMISTRY)				
	UNIT 2 : BOTANICAL NOMENCLATURE (PRINCIPLES AND RULES (ICN), RANKS AND NAMES; TYPIFICATION, AUTHOR CITATION, PRINCIPLE OF PRIORITY AND ITS LIMITATIONS)	10	Nil	1ST MAY- 15TH MAY	FIELD VISIT/ SEMINARS/ CLASS TESTS/ REVISION
ANKUR JYOTI BORAH	UNIT 3 : SYSTEMS OF CLASSIFICATION (THEOPHRASTUS, BAUHIN, TOURNEFORT, LINNAEUS, ADANSON, DE CANDOLLE, BESSEY, HUTCHINSON, TAKHTAJAN AND CRONQUIST , BENTHAM AND HOOKER (UPTO SERIES) AND ENGLER AND PRANTL (UPTO SERIES), ANGIOSPERM PHYLOGENY GROUP (APG) CLASSIFICATION)	12	3	16TH MAY- 31ST MAY	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 4 : NUMERICAL TAXONOMY AND CLADISTICS (CHARACTERS, VARIATIONS, CLUSTER ANALYSIS, PHENOGRAMS, CLADOGRAMS)	10	Nil	1ST JUNE- 15TH JUNE	
TRIDEEP CHETIA	UNIT 5 : PHYLOGENY OF ANGIOSPERMS (PRIMITIVE AND ADVANCED, HOMOLOGY AND ANALOGY, PARALLELISM AND CONVERGENCE, MONOPHYLY, PARAPHYLY, POLYPHYLY AND CLADES, ORIGIN AND EVOLUTION OF ANGIOSPERMS, CO-EVOLUTION OF ANGIOSPERMS AND ANIMALS)	12	Nil	15TH MAY- 10TH JUNE	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 6 : ANGIOSPERMIC FAMILIES (MAGNOLIACEAE, FABACEAE, ASTERACEAE, SOLANACEAE, ACANTHACEAE, LAMIACEAE, EUPHORBIACEAE, ORCHIDACEAE, MUSACEAE, ZINGIBERACEAE, POACEAE)	8	4	11TH JUNE- 25TH JUNE	

4TH SEMESTER (HONOURS)
PAPER- BOT-SE-4014
NURSERY AND GARDENING

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
TRIDEEP CHETIA	UNIT 1: NURSERY: DEFINITION, OBJECTIVES AND SCOPE AND BUILDING INFRASTRUCTURE, PLANTING - DIRECT SEEDING AND TRANSPLANTS.	8	2	20TH APRIL- 5TH MAY	FIELD VISIT/ SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2: SEED: STRUCTURE AND TYPES, DORMANCY, BREAKING DORMANCY, SEED STORAGE: SEED BANKS, PRODUCTION TECHNOLOGY - SEED TESTING AND CERTIFICATION	12	Nil	6TH MAY- 20TH MAY	
	UNIT 3: VEGETATIVE PROPAGATION, LAYERING, CUTTING, SELECTION OF CUTTING, COLLECTING SEASON, TREATMENT OF CUTTING, MEDIUM AND PLANTING OF CUTTINGS, HARDENING OF PLANTS, GREEN HOUSE	12	2	21TH MAY- 5TH JUNE	
JAGAT CH. SAIKIA	UNIT 4: GARDENING- TYPES, PLANT MATERIALS AND DESIGN, COMPUTER APPLICATIONS IN LANDSCAPING, GARDENING OPERATIONS	16	1	6TH JUNE- 15TH JUNE	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 5: SOWING/RAISING OF SEEDS AND SEEDLINGS TRANSPLANTING STUDY OF CULTIVATION OF DIFFERENT VEGETABLES, STORAGE AND MARKETING PROCEDURES.	12	2	16TH JUNE- 30TH JUNE	

4TH SEMESTER (GENERIC)
PAPER- BOT- HG-4026
PLANT ANATOMY AND EMBRYOLOGY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
JAGAT CH. SAIKIA	UNIT 1 : ORIGIN OF CULTIVATED PLANTS	4	Nil	25TH APRIL- 29TH APRIL	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : CEREALS (WHEAT -ORIGIN, MORPHOLOGY, USES)	4	1	30TH APRIL- 5TH MAY	
	UNIT 3 : LEGUMES (GRAM AND SOYBEAN)	4	2	6TH MAY- 12TH MAY	
	UNIT 4 : SPICES (CLOVE AND BLACK PEPPER)	4	1	13TH MAY- 20TH MAY	
TRIDEEP CHETIA	UNIT 5 : BEVERAGES (TEA (MORPHOLOGY, PROCESSING, USES)	2	1	20TH APRIL- 30TH APRIL	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 6 : OILS AND FATS (GROUNDNUT)	2	2	2ND MAY- 6TH MAY	
	UNIT 7 : FIBER YIELDING PLANTS (COTTON)	2	1	7TH MAY- 10TH MAY	
AMI DEVI	UNIT 8 : INTRODUCTION TO BIOTECHNOLOGY	2	Nil	8TH MAY- 10TH MAY	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 9 : PLANT TISSUE CULTURE (MICROPROPAGATION, EMBRYO AND ENDOSPERM CULTURE)	8	2	11TH MAY- 25TH MAY	
	UNIT 10 : RECOMBINANT DNA TECHNIQUES (BLOTTING TECHNIQUES DNA FINGERPRINTING, RAPD, RFLP, SNPS; DNA SEQUENCING, ELISA AND IMMUNODETECTION)	18	3	26TH MAY- 15TH JUNE	
	UNIT 11 : BIOINFORMATICS (BIOLOGICAL DATA BASE)	5	2	16TH JUNE- 23RD JUNE	

	UNIT 12 :APPLICATIONS OF BIOINFORMATICS (MOLECULAR PHYLOGENY, BASICS IN PROTEOMICS AND GENOMICS)	5	2	24TH JUNE- 30TH JUNE	

6TH SEMESTER (HONOURS)
PAPER- BOT-HC-6016
PLANT METABOLISM

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
AMI DEVI	UNIT 1 : CONCEPT OF METABOLISM (ANABOLIC AND CATABOLIC PATHWAYS, CLASSIFICATION, NOMENCLATURE AND IMPORTANCE OF ENZYME, ENZYME INHIBITION)	8	Nil	18TH APRIL- 24TH APRIL	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : CARBON ASSIMILATION (PHOTOSYNTHETIC PIGMENTS, ROLE OF PHOTOSYNTHETIC PIGMENTS, PHOTORESPIRATION, C4- PATHWAYS; CRASSULACEAN ACID METABOLISM)	12	4	25TH APRIL- 10TH MAY	
	UNIT 3 : CARBOHYDRATE METABOLISM (SYNTHESIS AND CATABOLISM OF SUCROSE AND STARCH)	2	3	11TH MAY- 15TH MAY	
	UNIT 4 : CARBON OXIDATION (GLYCOLYSIS, TCA CYCLE, MITOCHONDRIAL ELECTRON TRANSPORT, OXIDATIVE PHOSPHORYLATION, CYANIDE-RESISTANT RESPIRATION)	10	3	16TH MAY- 30TH MAY	

	UNIT 5 : ATP-SYNTHESIS (MECHANISM OF ATP SYNTHESIS, PHOSPHORYLATION, CHEMIOSMOTIC MECHANISM, ATP SYNTHASE, RACKER'S EXPERIMENT, JAGENDORF'S EXPERIMENT)	8	Nil	31ST MAY- 15TH JUNE	
ANKUR JYOTI BORAH	UNIT 6 : LIPID METABOLISM (SYNTHESIS AND BREAKDOWN OF TRIGLYCERIDES, B-OXIDATION, GLYOXYLATE CYCLE, GLUCONEOGENESIS)	8	2	15TH MAY- 31ST MAY	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 7: NITROGEN METABOLISM (NITRATE ASSIMILATION, BIOLOGICAL NITROGEN FIXATION, AMMONIA ASSIMILATION AND TRANSAMINATION)	8	3	1ST JUNE- 15TH JUNE	
	UNIT 8 : MECHANISMS OF SIGNAL TRANSDUCTION (RECEPTOR-LIGAND INTERACTIONS, SECOND MESSENGER CONCEPT, CALCIUM CALMODULIN, MAP KINASE CASCADE)	4	Nil	16TH JUNE TO 28TH JUNE	

6TH SEMESTER (HONOURS)
PAPER- BOT-HC-6026
PLANT BIOTECHNOLOGY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
JAGAT CH. SAIKIA	UNIT 1 : PLANT TISSUE CULTURE (TOTIPOTENCY; ORGANOGENESIS; EMBRYOGENESISTISSUE CULTURE APPLICATIONS)	16	3	16TH APRIL- 24TH APRIL	SEMINARS/ CLASS TESTS/ REVISION

	UNIT 2 : RECOMBINANT DNA TECHNOLOGY (RESTRICTION ENDONUCLEASES, RESTRICTION MAPPING, CLONING VECTORS, LAMBDA PHAGE	12	2	25TH APRIL- 5TH MAY	
TRIDEEP CHETIA	UNIT 3 : GENE CLONING (RECOMBINANT DNA, BACTERIAL TRANSFORMATION, PCR-MEDIATED GENE CLONING, COLONY HYBRIDIZATION	10	2	6TH MAY- 16TH MAY	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 4 : METHODS OF GENE TRANSFER AGROBACTERIUM-MEDIATED GENE TRANSFER BY ELECTROPORATION, MICROINJECTION, MICROPROJECTILE	8	2	17TH MAY- 31ST MAY	
	UNIT 5 : APPLICATIONS OF BIOTECHNOLOGY (TRANSGENIC CROPS WITH IMPROVED QUALITY TRAITS-FLAVR SAVR TOMATO, GOLDEN RICE, ROLE OF TRANSGENICS IN BIOREMEDIATION, BIOSAFETY CONCERNS	14	3	1ST JUNE- 20TH JUNE	

6TH SEMESTER (HONOURS)
PAPER- BOT-HE-6016
INDUSTRIAL AND ENVIRONMENTAL MICROBIOLOGY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
JAGAT CH. SAIKIA	UNIT 1 : SCOPE OF MICROBES IN INDUSTRY AND ENVIRONMENT	6	Nil	16TH MAY- 21ST MAY	FIELD VISIT/ SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : BIOREACTORS/FERMENTERS AND FERMENTATION PROCESSES (FERMENTATIONS	12	2	22ND MAY- 7TH JUNE	

	TYPES OF BIOREACTORS-LABORATORY)				
TRIDEEP CHETIA	UNIT 3: MICROBIAL PRODUCTION OF INDUSTRIAL PRODUCTS (DOWNSTREAM PROCESSING, FILTRATION, CENTRIFUGATION, CELL DISRUPTION, SOLVENT EXTRACTION, PRECIPITATION AND ULTRAFILTRATION, MICROBIAL FERMENTATIONS FOR THE PRODUCTION, ENZYME ESTIMATION, ORGANIC ACID	12	Nil	18TH APRIL- 30TH APRIL	FIELD VISIT/ SEMINARS/ CLASS TESTS/ REVISION
	UNIT 4: MICROBIAL ENZYMES OF INDUSTRIAL INTEREST AND ENZYME IMMOBILIZATION (METHODS OF IMMOBILIZATION, ADVANTAGES AND APPLICATIONS OF IMMOBILIZATION, LARGE SCALE APPLICATIONS OF IMMOBILIZED ENZYMES, HYDROLYSIS)	8	3	1ST MAY- 15TH MAY	
	UNIT 5: MICROBES AND QUALITY OF ENVIRONMENT (ISOLATION OF MICROORGANISMS FROM SOIL, AIR AND WATER)	6	3	16TH MAY- 25TH MAY	
ANKUR JYOTI BORA	UNIT 6: MICROBIAL FLORA OF WATER. (DETERMINATION OF BOD, COD, TDS AND TOC OF WATER SAMPLES	8	Nil	26TH MAY- 12TH JUNE	
	UNIT 7: MICROBES IN AGRICULTURE AND REMEDIATION OF CONTAMINATED SOILS (BIOLOGICAL FIXATION; MYCORRHIZAE; BIOREMEDIATION OF CONTAMINATED SOILS. ISOLATION OF ROOT NODULATING BACTERIA, ARBUSCULAR MYCORRHIZAL COLONIZATION IN PLANT ROOTS)	8	3	13TH JUNE- 20TH JUNE	FIELD VISIT/ SEMINARS/ CLASS TESTS/ REVISION

6TH SEMESTER (HONOURS)
PAPER- BOT-HE-6036
PROJECT WORK/DISSERTATION

TEACHER	TOPIC	TENTATIVE DATE FOR COMPLETION
JAGAT CH. SAIKIA/ AMI DEVI/ TRIDEEP CHETIA/ ANKUR JYOTI BORA	PROJECT/DISSERTATION	1ST MAY – 30TH JUNE

TEACHING PLAN
DEPARTMENT OF BOTANY
MORIGAON COLLEGE
ODD SEMESTER
(SEPTEMBER 2021- DECEMBER 2021)

ODD SEMESTER

1ST SEMESTER (HONOURS)

PAPER- BOT-HC- 1016

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
ANKUR JYOTI BORAH	UNIT 1: INTRODUCTION TO MICROBIAL WORLD (NUTRITION, GROWTH AND METABOLISM, FERMENTATION)	10	2	30TH SEP- 9TH OCT	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2: VIRUSES (DISCOVERY, PHYSIOCHEMICAL AND BIOLOGICAL CHARACTERISTICS, CLASSIFICATION ECONOMIC IMPORTANCE)	7	2	17TH OCT- 26TH OCT	
	UNIT 3 : BACTERIA (DISCOVERY, GENERAL CHARACTERISTICS; CELL STRUCTURE; NUTRITIONAL TYPES; REPRODUCTION, ECONOMIC IMPORTANCE)	6	1	27TH OCT- 5TH NOV	
	UNIT 4: ALGAE (GENERAL CHARACTERISTICS, ECOLOGY AND DISTRIBUTION, CELL STRUCTURE AND COMPONENTS; CLASSIFICATION; EVOLUTIONARY SIGNIFICANCE)	10	2	6TH NOV- 15TH NOV	
JAGAT CH. SAIKIA	UNIT 5 : CYANOPHYTA AND XANTHOPHYTA (ECOLOGY AND OCCURRENCE, REPRODUCTION, MORPHOLOGY AND LIFE-CYCLE OF NOSTOC AND VAUCHERIA)	8	3	30TH OCT- 10TH NOV	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 6 : CHLOROPHYTA, CHAROPHYTA AND BACILLARIOPHYTA (GENERAL CHARACTERISTICS, OCCURRENCE, REPRODUCTION. MORPHOLOGY)	3	2	11TH NOV- 18TH NOV	
	UNIT 7 : PHAEOPHYTA AND RHODOPHYTA (CHARACTERISTICS, OCCURRENCE, REPRODUCTION. MORPHOLOGY)	6	3	20TH NOV- 5TH DEC	

1ST SEMESTER (HONOURS)
PAPER- BOT-HC- 1026
BIOMOLECULES AND CELL BIOLOGY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
AMI DEVI	UNIT 1 : BIOMOLECULES (CARBOHYDRATES, LIPIDS, PROTEINS,NUCLEIC ACID)	3	2	30TH SEP- 10TH OCT	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : BIOENERGENETICS (LAWS OF THERMODYNAMICS, CONCEPT OF FREE ENERGY, ENDERGONIC AND EXERGONIC REACTIONS, REDOX REACTIONS)	5	2	20TH OCT- 31ST OCT	
	UNIT 3: ENZYMES (STRUCTURE OF ENZYME, HOLOENZYME, CLASSIFICATION, MICHAELIS – MENTEN EQUATION, ENZYME INHIBITION AND FACTORS AFFECTING ENZYME ACTIVITY.)	10	6	1ST NOV- 15TH NOV	
TRIDEEP CHETIA	UNIT 4: THE CELL (PROKARYOTIC AND EUKARYOTIC CELLS, ENDOSYMBIOTIC THEORY)	4	2	16TH NOV- 25TH NOV	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 5: CELL WALL AND PLASMA MEMBRANE (CHEMISTRY, STRUCTURE AND FUNCTION OF PLANT CELL WALL, CHEMICAL COMPOSITION OF MEMBRANES)	4	2	26TH NOV- 5TH DEC	
	UNIT 6: CELL ORGANELLES (NUCLEUS, CYTOSKELETON, CHLOROPLAST, MITOCHONDRIA AND PEROXISOMES, ENDOMEMBRANE SYSTEM)	16	5	6TH DEC- 15TH DEC	
	UNIT 7: CELL DIVISION (PHASES OF EUKARYOTIC CELL CYCLE, MITOSIS AND MEIOSIS, REGULATION OF CELL CYCLE-CHECKPOINTS, ROLE OF PROTEIN KINASES.)	6	2	16TH DEC- 25TH DEC	

1ST SEMESTER (GENERIC)
PAPER- BOT- HG-1016

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DATE FOR COMPLETION	OTHER ACTIVITIES
JAGAT CH. SAIKIA	UNIT 1 : MICROBES (VIRUSES – DISCOVERY, GENERAL STRUCTURE, REPLICATION, BACTERIA- DISCOVERY, GENERAL CHARACTERISTICS, REPRODUCTION – VEGETATIVE, ASEXUAL AND RECOMBINATION)	10	2	30TH SEP- 10TH OCT	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : ALGAE (GENERAL CHARACTERISTICS; ECOLOGY AND DISTRIBUTION, *Nostoc, Chlamydomonas, Oedogonium, Vaucheria, Fucus, Polysiphonia,* ECONOMIC IMPORTANCE OF ALGAE)	12	5	20TH OCT- 31ST OCT	
TRIDEEP CHETIA	UNIT 3 : FUNGI (INTRODUCTION- GENERAL CHARACTERISTICS, ECOLOGY AND SIGNIFICANCE, CELL WALL COMPOSITION, NUTRITION, REPRODUCTION AND CLASSIFICATION, *Rhizopus, Penicillium,Alternaria*, *Puccinia, Agaricus,* SYMBIOTICASSOCIATION- LICHENS)	12	4	1ST NOV- 18TH NOV	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 4 : INTRODUCTION TO ARCHEGONIATE (TRANSITION TO LAND HABIT, ALTERNATION OF GENERATIONS)	2	2	19TH NOV- 24TH NOV	
ANKUR JYOTI BORA	UNIT 5 : BRYOPHYTES(CLASSIFICATION, RANGE OF THALLUS, ANATOMY AND REPRODUCTION OF *Marchantia* AND *Funaria*, ECOLOGY AND ECONOMIC IMPORTANCE OFBRYOPHYTES WITH SPECIAL MENTION OF *Sphagnum*.	10	2	25TH NOV- 5TH DEC	SEMINARS/ CLASS TESTS/ REVISION

	UNIT 6 : PTERIDOPHYTES (GENERAL CHARACTERISTICS, CLASSIFICATION*Selaginella, Equisetum* AND *Pteris,* HETEROSPORY AND SEED HABIT	8	3	6TH DEC- 15TH DEC	
	UNIT 7: GYMNOSPERMS (GENERAL CHARACTERISTICS, CLASSIFICATIONMORPHOLOGY, ANATOMY AND REPRODUCTION OF *Cycas* AND *Pinus*)	6	2	16TH DEC- 25TH DEC	

3RD SEMESTER (HONOURS)
PAPER- BOT-HC- 3016
MORPHOLOGY AND ANATOMY OF ANGIOSPERMS

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
TRIDEEP CHETIA	UNIT 1: MORPHOLOGY (INFLORESCENCE, STAMENS AND CARPEL, FRUIT, TELOME THEORY, PHYLLODE THEORY)	4	2	30TH SEP- 5TH OCT	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2: INTRODUCTION AND SCOPE OF PLANT ANATOMY (APPLICATION IN SYSTEMATICS, FORENSICS AND PHARMACOGNOSY)	4	NIL	6TH OCT- 10TH OCT	
	UNIT 3: STRUCTURE AND DEVELOPMENT OF PLANT BODY(ORGANIZATION OF PLANT BODY, TISSUE SYSTEMS, TISSUES. DEVELOPMENT OF PLANT BODY, POLARITY, CYTODIFFERENTIATION AND ORGANOGENESIS DURING EMBRYOGENIC DEVELOPMENT)	6	2	19TH OCT- 25TH OCT	
	UNIT 4: TISSUES 9CLASSIFICATION OF TISSUES, SIMPLE AND COMPLEX TISSUES)	11	NIL	26TH OCT- 14TH NOV	

ANKUR JYOTI BORAH	UNIT 5: APICAL MERISTEMS (EVOLUTION OF CONCEPT OF ORGANIZATION OF SHOOT APEX, VASCULAR BUNDLES, DICOT AND MONOCOT STEM, DICOT AND MONOCOT LEAF, KRANZ ANATOMY, ORGANIZATION OF ROOT APEX)	14	3	15TH NOV- 30TH NOV	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 6: VASCULAR CAMBIUM AND WOOD (STRUCTURE, FUNCTION OF CAMBIUM, RAYS AND AXIAL PARENCHYMA; DENDROCHRONOLOGY, DEVELOPMENT)	14	3	1ST DEC- 15TH DEC	
	UNIT 7: ADAPTIVE AND PROTECTIVE SYSTEMS (EPIDERMAL TISSUE SYSTEM, CUTICLE, EPICUTICULAR WAXES, TRICHOMES, STOMATA, ANATOMICAL ADAPTATIONS OF XEROPHYTES AND HYDROPHYTE)	7	2	16TH DEC- 30TH DEC	

3RD SEMESTER (HONOURS)
PAPER- BOT-HC-3026
ECONOMIC BOTANY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
ANKUR JYOTI BORA	UNIT 1: ORIGIN OF CULTIVATED PLANTS (VAVILOV'S CENTRES OF ORIGIN, IMPORTANCE OF GERMPLASM DIVERSITY, EVOLUTION OF NEW CROPS/VARIETIES)	6	NIL	30TH SEP- 10TH OCT	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2: CEREALS (WHEAT AND RICE- ORIGIN, MORPHOLOGY, PROCESSING & USES)	6	2	20TH OCT- 31ST OCT	
	UNIT 3: LEGUMES (ORIGIN, MORPHOLOGY AND USES OF CHICK PEA, PIGEON PEA AND FODDER	6	2	1ST NOV- 10TH NOV	

	LEGUMES)				
	UNIT 4: SOURCES OF SUGARS AND STARCHES (MORPHOLOGY AND PROCESSING OF SUGARCANE)	4	1	11TH NOV- 18TH NOV	
JAGAT CH. SAIKIA	UNIT 5: SPICES (IMPORTANT SPICES FENNEL, SAFFRON, CLOVE AND BLACK PEPPER)	6	NIL	5TH NOV- 12TH NOV	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 6: BEVERAGES (TEA, COFFEE MORPHOLOGY, PROCESSING & USES	4	2	13TH NOV- 20TH NOV	
	UNIT 7: SOURCES OF OILS AND FATS (GROUNDNUT, COCONUT, LINSEED, SOYBEAN, MUSTARD AND COCONUT, ESSENTIAL OILS)	10	3	21ST NOV- 30TH NOV	
	UNIT 8: NATURAL RUBBER (PARA-RUBBER, TAPPING, PROCESSING AND USES)	3	1	1ST DEC- 5TH DEC	
	UNIT 9: DRUG-YIELDING PLANTS (*Cinchona, Digitalis, Papaver, Cannabis, Tobacco)*	8	2	6TH DEC- 15TH DEC	
	UNIT 10: TIMBER PLANTS (TEAK AND PINE)	3	NIL	16TH DEC- 20TH DEC	
	UNIT 11: FIBERS (COTTON, COIR AND JUTE)	4	2	21ST DEC- 30TH DEC	

3RD SEMESTER (HONOURS)
PAPER- BOT-HC-3036
GENETICS

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
AMI DEVI	UNIT 1: MENDELIAN GENETICS AND ITS EXTENSION-MENDELISM, CHROMOSOME THEORY OF INHERITANCE, PEDIGREE ANALYSIS,	4	NIL	30TH SEP- 10TH OCT	

	INCOMPLETE DOMINANCE AND CODOMINANCE .				SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2: EXTRACHROMOSOMAL INHERITANCE (CHLOROPLAST INHERITANCE, MATERNAL EFFECTS-SHELL COILING IN SNAIL; KAPPA PARTICLES IN PARAMECIUM)	10	Nil	19^{TH} OCT- 31^{ST} OCT	
	UNIT 3: : LINKAGE, CROSSING OVER AND CHROMOSOME MAPPING, LINKAGE AND CROSSING OVER-CYTOLOGICAL BASIS OF CROSSING OVER.	10	3	1^{ST} NOV- 15^{TH} NOV	
	UNIT 4 : VARIATION IN CHROMOSOME NUMBER AND STRUCTURE	4	2	16^{TH} NOV- 20^{TH} NOV	
	UNIT 5: GENE MUTATIONS (MOLECULAR BASIS OF MUTATIONS, DETECTION OF MUTATIONS, ROLE OF TRANSPOSONS IN MUTATION. DNA REPAIR MECHANISMS)	6	2	21^{ST} NOV- 30^{TH} NOV	
TRIDEEP CHETIA	UNIT 6: FINE STRUCTURE OF GENE-CLASSICAL VS MOLECULAR CONCEPTS OF GENE; CISTON, RACON, MUTON, RII LOCUS	4	2	1^{ST} DEC- 10^{TH} DEC	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 7: POPULATION AND EVOLUTIONARY GENETICS (ALLELE FREQUENCIES, HARDY-WEINBERG LAW, ROLE OF NATURAL SELECTION, MUTATION, GENETIC DRIFT. GENETIC VARIATION AND SPECIATION	6	2	11ST DEC- 20^{TH} DEC	

3RD SEMESTER (HONOURS)
PAPER- BOT-SE-3014
BIOFERTILIZERS

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
JAGAT CH. SAIKIA	UNIT 1 : GENERAL ACCOUNT ABOUT THE MICROBES USED AS BIOFERTILIZER-*Rhizobium*, ACTINORRHIZAL SYMBIOSIS.	8	2	1ST OCT- 15TH OCT	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : *Azospirillum*: ISOLATION AND MASS MULTIPLICATION; *Azotobacter*: CLASSIFICATION, CHARACTERISTICS – CROP RESPONSE TO *Azotobacter* INOCULUM, MAINTENANCE AND MASS MULTIPLICATION.	16	3	16TH OCT- 31ST OCT	
TRIDEEP CHETIA	UNIT 3 : CYANOBACTERIA - *Azolla* AND *Anabaena Azollae* ASSOCIATION, NITROGEN FIXATION, FACTORS AFFECTING GROWTH, BLUE GREEN ALGAE AND *Azolla* IN RICE CULTIVATION.	8	3	1ST NOV- 10TH NOV	
	UNIT 4 : MYCORRHIZAL ASSOCIATION, TYPES OF MYCORRHIZAL ASSOCIATION VAM – ISOLATION AND INOCULUM PRODUCTION OF VAM, AND ITS INFLUENCE ON GROWTH AND YIELD OF CROP PLANTS.	16	2	11TH NOV- 25TH NOV	
	UNIT 5 : ORGANIC FARMING – GREEN MANURING AND ORGANIC FERTILIZERS, RECYCLING OF BIO-DEGRADABLE, BIO-COMPOST MAKING METHODS, TYPES AND METHOD OF VERMICOMPOSTING – FIELD APPLICATION.	12	1	26TH NOV- 10TH DEC	

3RD SEMESTER (GENERIC)
PAPER- BOT-HG-3016
PLANT PHYSIOLOGY AND METABOLISM

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
ANKUR JYOTI BORA	UNIT 1 : PLANT-WATER RELATIONS (TRANSPIRATION AND ITS SIGNIFICANCE FACTORS AFFECTING TRANSPIRATION, ROOT PRESSURE AND GUTTATION)	8	2	30TH SEP- 25TH OCT	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2 : MINERAL NUTRITION (ESSENTIAL ELEMENTS, MACRO AND MICRONUTRIENTS, TRANSPORT OF IONS ACROSS CELL MEMBRANE, ACTIVE AND PASSIVE TRANSPORT, CARRIERS, CHANNELS AND PUMPS)	8	NIL	26TH OCT- 31ST OCT	
ANKUR JYOTI BORAH	UNIT 3 : TRANSLOCATION IN PHLOE (COMPOSITION OF PHLOEM SAP, GIRDLING EXPERIMENT, PRESSURE FLOW MODEL, PHLOEM LOADING AND UNLOADING)	6	NIL	1ST NOV- 15TH NOV	
AMI DEVI	UNIT 4 : PHOTOSYNTHESIS (PHOTOSYSTEM I AND II, ELECTRON TRANSPORT AND MECHANISM OF ATP SYNTHESIS; C3, C4 AND CAM PATHWAYS)	12	2	16TH NOV- 30TH NOV	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 5 : RESPIRATION (GLYCOLYSIS, ANAEROBIC RESPIRATION, TCA CYCLE OXIDATIVE PHOSPHORYLATION, GLYOXYLATE)	6	1	1ST DEC- 10TH DEC	
	UNIT 6 : ENZYMES (STRUCTURE AND PROPERTIES, MECHANISM OF ENZYME CATALYSIS)	4	2	11TH DEC- 20TH DEC	

TRIDEEP CHETIA	UNIT 7 : NITROGEN METABOLISM (BIOLOGICAL NITROGEN FIXATION, NITRATE AND AMMONIA, ASSIMILATION)	4	NIL	5TH DEC- 11TH DEC	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 8 : PLANT GROWTH REGULATORS (AUXINS, GIBBERELLINS, CYTOKININS, ABA, ETHYLENE)	6	NIL	12TH DEC- 19TH DEC	
	UNIT 9 : PLANT RESPONSE TO LIGHT AND TEMPERATURE (PHOTOPERIODISM, PHYTOCHROME, VERNALIZATION)	6	NIL	20TH DEC- 30TH DEC	

5TH SEMESTER (HONOURS)
PAPER- BOT-HC-5016
REPRODUCTIVE BIOLOGY OF ANGIOSPERMS

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
	UNIT 1: INTRODUCTION	4	NIL	30TH SEP- 5TH OCT	
	UNIT 2: REPRODUCTIVE DEVELOPMENT- (FLOWER AS SHOOT AND ITS DEVELOPMENT, GENETIC AND MOLECULAR ASPECTS)	6	3	6TH OCT- 25TH OCT	
	UNIT 3: ANTHER AND POLLEN BIOLOGY- (MICROSPOROGENESIS, CALLOSE DEPOSITION, MICROGAMETOGENESIS,MGU, NPC, POLLEN,POLLINIA, PSEUDOMONADS, MASSUALE, POLYADS.	10	4	26TH OCT- 10TH NOV	

JAGAT CH. SAIKIA	UNIT 4: OVULE- (SPECIAL STRUCTURES, MEGASPOROGENESIS AND MEGAGAMETOGENESIS, EMBRYO-SAC.	8	2	11TH NOV- 18TH NOV	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 5: POLLINATION AND FERTILIZATION- STIGMA AND STYLE, PATH OF POLLEN TUBE, DOUBLE FERTILIZATION.	6	2	19TH NOV- 25TH NOV	
	UNIT 6: CELL INCOMPITIBILITY- BASIC CONCEPTS, GSI AND SSI, MIXED, BUD, STUB, INTRA-OVARIAN, IN-VITRO POLLINATION, STIGMA MODIFICATION,CYBRIDS, IN-VITRO FERTILIZATION.	10	Nil	26TH NOV- 10TH DEC	
	UNIT 7: EMBRYO ENDOSPERMS AND SEED- EMBRYO (DICOT, MONOCOT), ENDOSPERM, EMBRYO-ENDOSPERMS RELATIONSHIP, SEED STRUCTURE AND DISPERSAL.	8	2	11TH DEC- 20TH DEC	
	UNIT 8: POLYEMBRYONY AND APOMIXIS- CLASSSIFICATION, CAUSES AND APPLICATION	6	3	21ST DEC- 30TH DEC	

5TH SEMESTER (HONOURS)
PAPER- BOT-HC-5026
PLANT PHYSIOLOGY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
	UNIT 1: PLANT-WATER RELATIONS (WATER POTENTIAL AND ITS COMPONENTS, ROOT PRESSURE, GUTTATION, ASCENT OF SAP)	10	NIL	30TH SEP- 10TH OCT	

MRS. AMI DEVI	UNIT 2: MINERAL NUTRITION-(ESSENTIAL AND BENEFICIAL ELEMENTS, ROLES OF ESSENTIAL ELEMENTS, CHELATING AGENTS, ION ANTAGONISM)	8	Nil	19^{TH} OCT- 30^{TH} OCT	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 3: NUTRIENT UPTAKE (PASSIVE ABSORPTION, ELECTROCHEMICAL GRADIENT, FACILITATED DIFFUSION, ACTIVE ABSORPTION,UNIPORT, CO-TRANSPORT, SYMPORT, ANTIPORT)	8	Nil	1^{ST} NOV- 8^{TH} NOV	
	UNIT 4: TRANSLOCATION IN THE PHLOEM (FLOW MODEL, PHLOEM LOADING AND UNLOADING, SOURCE-SINK RELATIONSHIP)	8	2	9^{TH} NOV- 15^{TH} NOV	
	UNIT 5: PLANT GROWTH REGULATORS (BIOASSAY, GIBBERELLINS, CYTOKININ, ABSCISIC ACID, ETHYLENE, BRASSINOSTERIODS AND JASMONIC ACID)	6	2	16^{TH} NOV- 25^{TH} NOV	
	UNIT 6: PHYSIOLOGY OF FLOWERING (PHOTOPERIODISM, FLOWERING STIMULUS, FLORIGEN CONCEPT, VERNALIZATION, SEED DORMANCY)	10	Nil	26^{TH} NOV- 15^{TH} DEC	
	UNIT 7: PHYTOCHROME, CRYTOCHROMES AND PHOTOTROPINS (CHEMICAL NATURE, PHOTOMORPHOGENESIS)	8	2	16^{TH} DEC- 25^{TH} DEC	

5TH SEMESTER (HONOURS)
PAPER- BOT-HE-5026
HORTICULTURAL PRACTICES AND POST-HARVEST TECHNOLOGY

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
MR. TRIDEEP CHETIA	UNIT 1:INTRODUCTION (BRANCHES OF HORTICULTURE; ROLE IN RURAL ECONOMY)	4	NIL	30TH SEP- 5TH OCT	FIELD TRIP/ SEMINARS/ CLASS TESTS/ REVISION
	UNIT 2: ORNAMENTAL PLANTS (TYPES, CLASSIFICATION IDENTIFICATION AND SALIENT FEATURES. TYPES, CLASSIFICATION (ANNUALS, PERENNIALS, CLIMBERS AND TREES) IDENTIFICATION AND SALIENT FEATURES OF SOME ORNAMENTAL PLANTS)	4	2	6TH OCT- 10TH OCT	
	UNIT 3: FRUIT AND VEGETABLE CROPS (PRODUCTION, ORIGIN AND DISTRIBUTION, IDENTIFICATION)	4	1	20TH OCT- 28TH OCT	
	UNIT 4: HORTICULTURAL TECHNIQUES (MANURE, FERTILIZERS, NUTRIENTS AND PGRS, BIOFERTILIZERS, BIOPESTICIDES)	8	2	29TH OCT- 10TH NOV	
	UNIT 5 : LANDSCAPING AND GARDEN DESIGN (PLANNING AND LAYOUT (PARKS AND AVENUES, GARDENING TRADITIONS - ANCIENT INDIAN, EUROPEAN, MUGHAL AND JAPANESE GARDENS)	6	Nil	11TH NOV- 15TH NOV	
	UNIT 6 : FLORICULTURE (CUT FLOWERS, BONSAI, COMMERCE (MARKET DEMAND AND SUPPLY); IMPORTANCE OF FLOWER SHOWS AND EXHIBITIONS)	16	1	16TH NOV- 25TH NOV	
	UNIT 7 : POST-HARVEST TECHNOLOGY	10	Nil	26TH NOV- 5TH DEC	

MR. TRIDEEP CHETIA	(EVALUATION OF QUALITY TRAITS; HARVESTING METHODS OF MINIMIZING LOSES DURING STORAGE AND TRANSPORTATION, FOOD IRRADIATION - ADVANTAGES AND DISADVANTAGES, FOOD SAFETY)				
	UNIT 8 : DISEASE CONTROL AND MANAGEMENT (FIELD AND POST-HARVEST DISEASES; IDENTIFICATION OF DEFICIENCY SYMPTOMS, NUTRITIONAL MANAGEMENT PRACTICES, CROP SANITATION, IPM STRATEGIES)	8	2	6^{TH} DEC- 15^{TH} DEC	
	UNIT 9 : HORTICULTURAL CROPS - CONSERVATION AND MANAGEMENT (ROLE OF MICROPROPAGATION AND TISSUE CULTURE TECHNIQUES, VARIETIES AND CULTIVARS OF VARIOUS HORTICULTURAL CROPS, IPR ISSUES)	10	2	16^{TH} DEC- 20^{TH} DEC	
	UNIT 10 : FIELD TRIP		5	20^{TH} OCT- 30^{TH} OCT	

5TH SEMESTER (HONOURS)
PAPER- BOT-HE-5016
NATURAL RESOURCE MANAGEMENT

TEACHER	UNITS	THEORY CLASSES	PRACTICAL CLASSES	TENTATIVE DAYS FOR COMPLETION	OTHER ACTIVITIES
	UNIT 1:NATURAL RESOURCES (DEFINITION AND TYPES)	2	NIL	30^{TH} SEP- 5^{TH} OCT	
	UNIT 2: SUSTAINABLE UTILIZATION- CONCEPT, APPROACHES (ECONOMIC, ECOLOGICAL AND SOCIO-CULTURAL)	8	NIL	6^{TH} OCT- 25^{TH} OCT	

ANKUR JYOTI BORAH					SEMINARS/ CLASS TESTS/ REVISION
	UNIT 3:LAND-UTILIZATION (AGRICULTURAL, PASTORAL, HORTICULTURAL, SILVICULTURAL, SOIL DEGRADATION AND MANAGEMENT)	8	3	26TH OCT- 10TH NOV	
	UNIT 4 : WATER (FRESH WATER,MARINE, ESTUARINE, WETLANDS,THREATS AND MANAGEMENT STRATEGIES)	8	NIL	11TH NOV- 15TH NOV	
	UNIT 5: BIOLOGICAL RESOURCESBIODIVERSITY (DEFINITION AND TYPES, SIGNIFICANCE, THREATS, MANAGEMENT STRATEGIES; BIO-PROSPECTING)	10	NIL	16TH NOV- 25TH NOV	
	UNIT 6: FORESTS (DEFINITION, COVER AND ITS SIGNIFICANCE,DEPLETION; MANAGEMENT)	6	3	26TH NOV- 5TH DEC	
	UNIT 7: ENERGY (RENEWABLE AND NON-RENEWABLE SOURCES OF ENERGY)	6	NIL	6TH DEC- 15TH DEC	
	UNIT 8: CONTEMPORARY PRACTICES IN RESOURCE MANAGEMENT (EIA, GIS, ECOLOGICAL FOOTPRINT,CARBON FOOTPRINT, WASTE MANAGEMENT)	8	4	16TH DEC- 24TH DEC	SEMINARS/ CLASS TESTS/ REVISION
	UNIT 9: NATIONAL AND INTERNATIONAL EFFORTS IN RESOURCE MANAGEMENT AND CONSERVATION	4	NIL	26TH – 30TH DEC	