S.V.L.N.S GOVT. DEGREE COLLEGE, BHEEMUNIPATNAM

DEPARTMENT OF BOTANY

COURSE	COURSE OUTCOMES
SEMESTER-I (THEORY)	ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO: EXPALIN ORIGIN OF LIFE ON THE EARTH. ILLUSTRATE DIVERSITY AMONG THE VIRUSES AND PROKARYOTIC ORGANISMS AND CATEGORISE THEM. CLASSIFY FUNGI,LICHENS,ALGEA AND BRYOPHYTES BASED ON THEIR STUCTURE,REPRODUCTION AND LIFE CYCLES. ANALYZE AND ASCERTAIN THE PLANT DISEASE SYMTOMS DUE TO VIRUSES,BACTERIA AND FUNGI. RECALL AND EXPLAIN THE EVOLUTIONARY TRENDS AMONG AMPHIBIANS OF PLANT KINGDOM FOR THEIR SHIFT TO LAND HABIATAT. EAVLUTE THE ECOLOGICAL AND ECONOMIC VALUES OF MICROBES,THALLOPHYTES AND BRYOPHYTES.
PRACTICAL	ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO: DEMONSTRATE THE TECHNIQUES OF USE OF LAB EQUIPMENT PREPARING SLIDES AND IDENTYFY THE MATERIAL AND DRAW DIAGRAMS EXACTLY AS IT APPEARS. ABSERVE AND IDENTIFY MICROBES AND LOWER GROUPS OF PLANTS ON THEIR OWN. DEMONSTRATE THE TECHNIQUES OF INOCULATION,PRAPARATION OF MEDIA ETC. IDENTIFY THE MATERIAL IN THE PERMANENT SLIDES ETC.

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COURSE	COURSE OUTCOMES
SEMESTER-II (THEORY)	**ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO:** 1. Demonstrate the techniques of use of lab equipment, preparing slides and identify the material and draw diagrams exactly as it appears. 2. Observe and identify microbes and lower groups of plants on their own . 3. Demonstrate the techniques of inoculation, preparation of media etc. 4. Identify the material in the permanent slides etc .
PRACTICAL	**ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO:** ➢ Classify and compare Pteridophytes and Gymnosperms based on their morphology, anatomy, reproduction and life cycles . ➢ Justifyevolutionary trends in tracheophytes to adapt for land habitat . ➢ Explain the process of fossilization and compare the characteristics of extinct and extant plants. ➢ Critically understand various taxonomical aids for identification of Angiosperms. ➢ Analyze the morphology of the most common Angiospermplantsof their localities and recognize their families. ➢ Evaluate the ecological, ethnic and economic value of different tracheophytes and summarize their goods and services for human welfare. ➢ Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.

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COURSE	COURSE OUTCOMES
SEMESTER-III (THEORY)	**ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO:** ➢ Understand on the organization of tissuesand tissue systems in plants. ➢ Illustrate and interpret various aspects of embryology. ➢ Discuss the basic concepts of plant ecology, andevaluate the effects of environmental and biotic factors on plant communities. ➢ Appraise various qualitative and quantitative parameters to study the population and community ecology. ➢ Correlate theimportance of biodiversity and consequences due to its loss. ➢ Enlistthe endemic/endangered flora and fauna from two biodiversity hot spots in India and assess strategies for their conservation.
PRACTICAL	**ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO:** 1. Get familiarized with techniques of section making, staining and microscopic study of vegetative, anatomical and reproductive structure of plants. 2. Observe externally and under microscope, identify and draw exact diagrams of the material in the lab. 3. Demonstrate application of methods in plant ecology and conservation of biodiversityand qualitative and quantitative aspects related to populations and communities of plants.

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COURSE	COURSE OUTCOMES
SEMESTER-IV (THEORY)	**ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO:** ➢ Comprehendthe importance of water in plant life and mechanisms for transport of water and solutes in plants. ➢ Evaluate the role of minerals in plant nutrition and their deficiency symptoms. ➢ Interpret the role of enzymes in plant metabolism. ➢ Critically understand the light reactions and carbon assimilation processes responsible for synthesis of foodin plants. ➢ Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms. ➢ Evaluate the physiological factors that regulategrowth and development in plants. ➢ Examine the role of light on flowering and explain physiology of plants under stress conditions
PRACTICAL	**ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO:** 1. Conduct lab and field experiments pertaining to Plant Physiology, that is, biophysical and biochemical processes using related glassware, equipment, chemicals and plant material. 2. Estimate the quantities and qualitative expressions using experimental results and calculations 3. Demonstrate the factors responsible for growth and development in plants.

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PROGRAMME	PROGRAMME SPECIFIC OUTCOMES
BSC(CBZ)	TO UNDERSTAND PRINCIPLES OF ORIGIN OF LIFE NAD EVOLUTIONARY TRENDS ,MICROTRAIL AND DIVERSITY CHEMICAL THEORY RELATED TO ORIGIN OF LIFE. TO ANALYSIS THE TAXONAMIC RANGE OF VARIOUS LIFE FORMS AS PER THEIR EXTERNAL CHARECTERS AND INTERNAL CHEMICAL CONSTITUTIONS. THE KNOWLEDGE ABOUT OF ECOLOGICAL AND PHOTO GEOGRAPHICAL STUDIES RELATED IN ENVIRONMENTAL BIODIVERSITY WITH TOXIC AND ABIOTIC FACTORS SKILLS TO STUDY THE PRINCIPLES OF TISSUE CULTURE TECNIQUES IN BIOLOGY LEADS TO A VIRUS DIVERSITY OF LIFE FORMS BY USING CHEMICALLY SYNTHASYZED GROWTH HORMONES.

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PROGRAMME	PROGRAMME OUTCOMES
BSC(BOTANY)	**KNOWLEDGE AND UNDERSTANDING OF** **1.THE RANGE OF PLANT DIVERSITY IN TERMS OF STRUCTURES FUNCTIONS OF THE ENVIRONMENTAL RELATIONSHIP.** **2.THE EVALUTION OF PLANT DIVERSITY .** **3.PLANT CLASSIFICATION AND THE FLORA OF SURROUNDINGS THE LOCAL AREA.** **4.THE ROLE PLANTS IN THE FUNCTIONING OF THE GLOBLE ECO SYSTEM .** **INTALECTUAL SKILLS ABLE TO** **1.ASSIMILATE KNOWLEDGE AND IDEAS BASED ON WIDE READING AND THROUGH THE INTERNET** **2.TRANFER OF APPROPRIATE KNOWLEDGE AND METHODS FROM ONE TOPIC TO ANOTHER WITH IN THE SUBJECT.** **3.UNDERSATNADING THE EVOLVING STATE OF KNOWLEDGE RAPIDLY DEVELOPING FIELD.** **PRACTICAL SKILLS** **1.SDTUDENT LEARING CARRYOUT PRACTICAL WORK IN THE FIELD AND IN THE LABORAYORY** **2.INTERPRETING PLANTT IN MORPHOLOGY AND ANATOMY .** **3.PLANT IDENTIFICATION .** **4.VEGITATION ANALYSIS TECNIQUES.** **TRANSFERABLE SKILLS**

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	1.USE OF IT. **2.COMMUNICATIONS OF SCIENTIFIC IDEAS IN WRITING AND ORALLY.** **3.ABILITY TIO WORK AS PART OF A TEAM.** **4.ABILITY TO USE LIBRARY RESOURCES.** **5.TIME MANAGEMENT.** **6.CAREER PLANING.** **DESIGN /DEVELOPMENT OF SOLUTIONS** **1.DESIGNS SOLUTIONS FROM MEDITIONAL PLANTS FOR HEALTH PROBLEMS.** **2.DISORDERS AND DISEASES OF HUMAN BEINGS AND ESTIMATE THE PHYTO CHEMICAL OF PLANTS WITCH SPECIFIED NEEDS TO APPROPRUIATE CONSIDERATION FOR THE PUBLIC HEALTH**

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PROGRAMME	PROGRAMME OUTCOMES
BSC(BOTANY)	**KNOWLEDGE AND UNDERSTANDING OF** **1.THE RANGE OF PLANT DIVERSITY IN TERMS OF STRUCTURES FUNCTIONS OF THE ENVIRONMENTAL RELATIONSHIP.** **2.THE EVALUTION OF PLANT DIVERSITY .** **3.PLANT CLASSIFICATION AND THE FLORA OF SURROUNDINGS THE LOCAL AREA.** **4.THE ROLE PLANTS IN THE FUNCTIONING OF THE GLOBLE ECO SYSTEM .** **INTALECTUAL SKILLS ABLE TO** **1.ASSIMILATE KNOWLEDGE AND IDEAS BASED ON WIDE READING AND THROUGH THE INTERNET** **2.TRANFER OF APPROPRIATE KNOWLEDGE AND METHODS FROM ONE TOPIC TO ANOTHER WITH IN THE SUBJECT.** **3.UNDERSATNADING THE EVOLVING STATE OF KNOWLEDGE RAPIDLY DEVELOPING FIELD.** **PRACTICAL SKILLS** **1.SDTUDENT LEARING CARRYOUT PRACTICAL WORK IN THE FIELD AND IN THE LABORAYORY** **2.INTERPRETING PLANTT IN MORPHOLOGY AND ANATOMY .** **3.PLANT IDENTIFICATION .** **4.VEGITATION ANALYSIS TECNIQUES.** **TRANSFERABLE SKILLS** **1.USE OF IT.** **2.COMMUNICATIONS OF SCIENTIFIC IDEAS IN WRITING AND ORALLY.** **3.ABILITY TIO WORK AS PART OF A TEAM.** **4.ABILITY TO USE LIBRARY RESOURCES.** **5.TIME MANAGEMENT.**

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	6.CAREER PLANING. **DESIGN /DEVELOPMENT OF SOLUTIONS** **1.DESIGNS SOLUTIONS FROM MEDITIONAL PLANTS FOR HEALTH PROBLEMS.** **2.DISORDERS AND DISEASES OF HUMAN BEINGS AND ESTIMATE THE PHYTO CHEMICAL OF PLANTS WITCH SPECIFIED NEEDS TO APPROPRUIATE CONSIDERATION FOR THE PUBLIC HEALTH**

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DEPARTMENT OF BOTANY

COURSE	COURSE OUTCOMES
SEMESTER-IV (THEORY)	**ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO:** ➢UNDERSTAND THE PLANT TISSUE CULTURE RESEARCH ,PRINCIPLES TOTIPOTENCY ,THALLUS CULTURE, MERISTEM CULTURE ,ORGAN CULTURE DIFFERENTIATION AND DIFFERENCIATION ➢ DISCUSS ABOUT CROPRESERVATION EMBRIO CULTURE,REPRODUCTION SECONDARY METOBOLITES APPLICATION OF TISSUE CULTURE ➢ DISCUSS ABOUT METHODS OF GENE TRANFOR AND SELECTION OF TRANSGENICS. ➢ DISCUSS ABOUT THE APPLICATIONS OF PALNT GENETIC ENGINEERING ➢ Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms. ➢ Evaluate the physiological factors that regulategrowth and development in plants. ➢
PRACTICAL	**ON SUCCESSFUL COMPLETION OF THIS COURSE THE STUDENTS WILL BE ABLE TO:** 1. PREPARATION OF MS MEDIUM 2. TOOLS OR INSRUMENTS USED IN STERLIZATION 3. PHOTOGRAPHS OF GENETICALLY MODIFIED CROPS 4.DISCUSS r-DNA TECHNOLOGY