GOVERNMENT DEGREE COLLEGE

RAYACHOTY,ANNAMAYYA DISTRICT,A.P.516269

(Accredited with C grade by NAAC)

Department of Botany

COs & PSOs MAPPING

B.Sc. BOTANY

UNDER CBCS FRAMEWORK

WITH EFFECT FROM 2015-16

PROGRAM SPECIFIC OUTCOMES FOR B.Sc. BOTANY

Students after successful completion of B.Sc. BOTANY will be able to:	
PSO-1	The student will understand how to analyse the basic concepts, methods, scopes, classifications, characterization, diseases and economic importance of microorganisms.
PSO-2	know about the basic principles of plant function, metabolism, secondary products, cell physiology & principles of growth & development.
PSO-3	students will understand the basic information on mushroom, be empowered with entrepreneurial skills through the production and disease management of mushrooms.
PSO-4	Understand the importance of microorganisms 3 Learn about the pathogenic microorganisms and their mode of entry and control measures.
PSO-5	The students will be Strengthened to promote mushroom cultivation through good laboratory techniques. Provided with appropriate training personnel for the promotion of mushroom production in the college,enabled for entrepreneurship skill through this course.

Course Title-I: Microbial Diversity, Algae and fungi

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Explain origin of life on the earth.	✓			✓	✓
CO-2	Illustrate diversity among the viruses and prokaryotic organisms and categorize them.	✓	✓	✓		✓
CO-3	Analyze and as certain the plant disease symptoms due to viruses, bacteria and fungi.	✓			✓	✓
CO-4	Evaluate the ecological and economic value of microbes, halophytes and bryophytes.	✓	✓		✓	✓
CO-5	Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.	✓	✓	✓		✓

TitleoftheCourse: Diversity of Archegoniate and Anatomy

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Under stand on the organization of tissues and tissue system sin plants.	✓		✓	✓	✓
CO-2	Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and biotic factors on plant communities.	✓		✓		✓
CO-3	Appraise various qualitative and quantitative parameters to study the population and community ecology.	✓	✓		✓	✓
CO-4	Correlate the importance of biodiversity and consequences due to its loss.	✓		✓		✓
CO-5	Correlate the importance of biodiversity and consequences due to its loss.		✓	✓		✓

TitleoftheCourse: Plant Taxonomy and Embryology.

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Enlist the endemic/endangered flora and fauna from two biodiversity hotspots in India and assess strategies for their conservation.	✓		✓	✓	✓
CO-2	Critically understand various taxonomical aids for identification of Angiosperms.	✓	✓		✓	✓
CO-3	Explain the process off fossilizations and compare the characteristics of extinct and	✓			✓	✓
CO-4	Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.	✓		✓	✓	✓
CO-5	Discuss the basic concepts of plant ecology, and evaluate the effects of environme	✓	✓	✓		✓

Title of the Course: Plant Physiology and Metabolism.

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Comprehend the importance of water in plant life and mechanisms for transport of water and solutes in plants.	✓	✓		✓	✓
CO-2	Inter prettherole of enzymes in plant metabolism.	✓		✓		✓
CO-3	Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms.	✓	✓		✓	✓
CO-4	Critically understand the light reactions and carbon assimilation processes responsible for synthesis of food in plants.	✓		✓		✓
CO-5	Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and biotic factors on plant communities.	✓	✓	✓	✓	✓

TitleoftheCourse: Cell Biology, Genetics and Plant Breeding.

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Demonstrate technique stood serve the cell and its components under a microscope.	✓	✓		✓	✓
CO-2	Distinguish prokaryotic and eukaryotic cells and design the model of a cell.	✓		✓		✓
CO-3	Explain the procedures of selection and hybridization for improvement of crops.	✓	✓		✓	✓
CO-4	Evaluate the structure, function and regulation of genetic material.	✓		✓		✓
CO-5	Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.	✓	✓	✓		✓

TitleoftheCourse: Plant Ecology and Phytogeography

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Evaluate the structure, function and regulation of genetic material.	✓	✓		✓	✓
CO-2	Evaluate the ecological, ethnic and economic value of different tracheophytes and summarize their goods and services for human welfare.	✓		✓		✓
CO-3	Analyze the morphology of the most common Angiosperm plants of their localities and recognize their families.	✓		✓	✓	✓
CO-4	Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.	✓			✓	✓
CO-5	Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and biotic factors on plant communities.		✓	✓		

TitleoftheCourse: Plant Tissue Culture and its Bio-Technological Applications.

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Comprehend the basic knowledge and applications of plant tissue culture.	✓	✓		✓	✓
CO-2	Identify various facilities required to set up a plant tissue culture laboratory Acquire a critical knowledge on sterilization techniques related to plant Tissue culture.	✓		✓		✓
CO-3	Demonstrate skills of callus culture through hands on experience. Understand the biotransformation technique for production of secondary metabolites.	✓	✓		✓	✓
CO-4	Comprehend the basic knowledge and applications of plant tissue culture .Identify various facilities required to setup a plant tissue culture laboratory.	✓		✓	✓	
CO-5	**Economic Impact**: Assessing the economic consequences of plant diseases on agriculture and horticulture.		✓	✓		✓

Title of theCourse: Biological Instrumentations and Methodology.

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Discuss the applications of biophysics and principle involved in bioinstruments.	✓	✓		✓	✓
CO-2	Describe the methodology involved in biotechniques.	✓		✓		✓
CO-3	Describe the applications of bioinstruments, Demonstrate knowledge and practical skills of using instruments in biology and medical field.	✓	✓		✓	✓
CO-4	**Bioinformatics skills are valuable for students who may seek careers which will necessitate the analysis of genomic data.**	✓		✓	✓	
CO-5	**This minor provides students the opportunity to learn programming skills, mine genomic data, and participate in independent research.**		✓	✓		✓

Title of theCourse: Mushroom Cultivation.

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Demonstrate skills preparation of compost and spawn. Acquire a critical knowledge preparation of value-added products and marketing.	✓	✓		✓	✓
CO-2	discriminate edible and poisonous mushrooms. Identify the basic infrastructure to e	✓		✓		✓
CO-3	Explain the methods of storage, preparation of value-added products and marketing.	✓	✓		✓	✓
CO-4	It is major project work of future purpose.	✓		✓	✓	
CO-5	Evaluate the structure, function and regulation of genetic material.		✓	✓		✓

Title of the course: **Project work.**

COs ⇓		PSOs ⇓				
		1	2	3	4	5
CO-1	Explain different competitive environments in which various project works pa	✓	✓		✓	✓
CO-2	**Project outcomes** refer to the **desired results or impacts** that a project Aims to achieve.	✓		✓		✓
CO-3	These outcomes can be **positive or negative**, and they are **specific and measura** accomplished your goals.	✓	✓		✓	✓
CO-4	**Project outcomes** refer to the **desired results or impacts** that a project aims to achieve.	✓		✓	✓	
CO-5	Demonstrate skills of callus culture through hands on experience. Understand the biotransformation technique for production of secondary metabolites.		✓	✓		✓

B.SHANTHA KUMARI
lecturer In Botany
GDC RAYACHOTY

B.KIRAN KUMAR,MSc,Bed,NET,SET
IQAC Coordinator
GDC Rayachoty

Dr.P.HARSHA LATHA,MSc,MPhill,PHD
PRINCIPAL
GDC RAYACHOTY

GOVERNMENT DEGREE COLLEGE

RAYACHOTY, ANNAMAYYA DISTRICT, A.P.516269

(Accredited with C grade by NAAC)

Department of Botany

COs & PSOs MAPPING

B.Sc. BOTANY

UNDER REVISED CBCS FRAMEWORK

WITH EFFECT FROM 2020-21

PROGRAM SPECIFIC OUTCOMES FOR B.Sc. BOTANY

Students after successful completion of B.Sc. BOTANY will be able to:	
PSO-1	The students are able to understand about Plant taxonomy and their systematic classification systems are able to understand about modern approaches in taxonomic studies.
PSO-2	By the end of this course students will be able to understand the structure of cells in relation to the functional aspects to understand the difference between prokaryotic and eukaryotic cells to study the details of the plant cell wall, cytosol and cytoplasmic organelles to learn the functioning of the cell at the molecular level to understand the properties of nucleic acids (DNA &RNA).
PSO-3	comprehend the changes during growth process (germination to abscission),understand the energy flow and various metabolic cycles with their integration, get an overall perception about various physiological processes occurring in plants.
PSO-4	The students will be able to learn the nutritive values and medicinal properties of different plants. understand the role of plants as environmental indicators and protectors appreciate the aesthetic values about ornamental plants there by developing entrepreneurship skills.
PSO-5	The students are able to understand about Plant taxonomy and their systematic classification systems are able to understand about modern approaches in taxonomic studies. Enlightened about the role of taxonomy in conservation of biodiversity.
PSO-6	The students will be able to understand the methods of plant breeding techniques. To analyze and compare the organic and inorganic farming. To understand the organic farming which does not totally exclude the elements of modern agriculture.
PSO-7	To prepare oneself for competitive / entrance examination (IFS, CSIR, UGC- NET/SET, etc.).

TitleoftheCourse: Fundamentals of microbes and Non-Vascular plants.

COs ⇩		PSOs ⇩						
		1	2	3	4	5	6	7
CO-1	Explain origin of life on the earth.	✓		✓	✓	✓	✓	✓
CO-2	Recall and explain the evolutionary trends among of amphibians plant kingdom for their shift to land habitat. Evaluate the ecological and economic value of microbes, halophytes and bryophytes.	✓	✓	✓		✓		✓
CO-3	Illustrate diversity among the viruses and prokaryotic organisms and can categorize them. Classify fungi, lichens, algae and bryophytes based on their structure, reproduction and life cycles. Analyze and certain the plant disease symptoms due to viruses, bacteria and fungi.	✓			✓	✓		
CO-4	Evaluate the ecological and ecvalue of microbes, thallophytic anryopl	✓	✓	✓	✓	✓	✓	✓
CO-5	Analyze and as certain the plant disease symptoms due to viruses, bacteria and fungi.	✓	✓	✓		✓	✓	✓

TitleoftheCourse: Basics of Vascular plants &Phytogeography.

COs ⇩		PSOs ⇩						
		1	2	3	4	5	6	7
CO-1	Classify and compare Pteridophytes and Gymnosperms based on their morphology, anatomy, reproduction and life cycles. Justify evolutionary trends in tracheophytes to adapt for land habitat.	✓		✓	✓	✓	✓	✓
CO-2	Explain the process of fossilization and compare the characteristics of extinct extant plants. Critically understand various taxonomical aids for identification of Angiosperms.	✓	✓		✓	✓	✓	✓
CO-3	Analyze the morphology of the most common Angiosperm plants of their localities andrecognize their families Evaluate the ecological, ethnic and economic value of different tracheophytes and summarize their goods and services for human welfare.	✓			✓	✓	✓	
CO-4	Locate different phytogeographical regions of the world and India an	✓		✓	✓	✓		✓
CO-5	Critically understand various taxonomical aids for identification of Angiosperms.	✓	✓	✓		✓	✓	

TitleoftheCourse: Anatomy and Embryology of Angiosperms, Plant Ecology and Bio-Diversity.

COs ⇓		PSOs ⇓						
		1	2	3	4	5	6	7
CO-1	Understand on the organization of tissues and tissue systems in plants. Illustrate and interpret various aspects of embryology.	✓	✓		✓	✓		✓
CO-2	Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and biotic factors on plant communities.	✓		✓		✓	✓	
CO-3	Appraise various qualitative and quantitative parameters to study the consequences due to its loss.	✓	✓		✓	✓	✓	✓
CO-4	Appraise various qualitative and quantitative parameters to study the population and community ecology. Correlate the importance of biodiversity and consequences due to its loss.	✓		✓		✓	✓	✓
CO-5	Assessing the economic consequences of plant diseases on agriculture and horticulture.	✓	✓	✓	✓	✓	✓	

TitleoftheCourse: Plant Physiology and Metabolism.

COs ⇓		PSOs ⇓						
		1	2	3	4	5	6	7
CO-1	Comprehend the importance of water in plant life and mechanisms fo nutrition and their deficiency symptoms.	✓	✓		✓	✓	✓	
CO-2	Interpret the role of enzymes in plant metabolism. Critically understand the light reactions and carbon assimilation processes responsible for synthesis of food in plants.	✓		✓		✓	✓	✓
CO-3	Evaluate the physiological factors that regulate growth and development in plants.	✓	✓		✓	✓	✓	✓
CO-4	Examine the role of light on flowering and explain physiology of plants under stress conditions.	✓		✓		✓	✓	
CO-5	Critically understand various taxonomical aids for identification of Angiosperms.	✓	✓	✓		✓	✓	✓

Title of theCourse: Cell Biology, Genetics and Plant Breeding.

COs ⇓		PSOs ⇓						
		1	2	3	4	5	6	7
CO-1	Demonstrate technique stood serve the cell and its components under a microscope.	✓	✓		✓	✓	✓	✓
CO-2	Distinguish prokaryotic and eukaryotic cells and design the model of a cell.	✓		✓		✓		
CO-3	Explain the procedures of selection and hybridization for improvement of crops.	✓		✓	✓	✓	✓	✓
CO-4	Evaluate the structure, function and regulation of genetic material.	✓			✓	✓	✓	
CO-5	Understand the application of principles and modern techniques implant breeding.		✓	✓				✓

TitleoftheCourse: Plant Tissue Culture and its Bio-Technological Applicatios.

COs ⇓		PSOs ⇓						
		1	2	3	4	5	6	7
CO-1	Comprehend the basic knowledge and applications of plant tissue culture .Identify various facilities required to setup a plant tissue culture laboratory.	✓	✓		✓	✓	✓	
CO-2	Acquirea critical knowledge on sterilization techniques related to plant tissue culture.	✓		✓		✓	✓	✓
CO-3	Demonstrate skills of callus culture through hands on experience. Understand the biotransformation technique for production of secondary metabolites	✓	✓		✓	✓		✓
CO-4	**Knowledge on animal classification, physiology, embryonic development and their economic importance.**	✓		✓	✓			
CO-5	**To Analysis the Biological themes.**		✓	✓		✓	✓	✓

TitleoftheCourse: Plant Ecology and Phytogeography.

COs ⇓		PSOs ⇓						
		1	2	3	4	5	6	7
CO-1	Enlist the endemic/endangered flora and fauna from two biodiversity hot spots in India and assess strategies for their conservation	✓	✓		✓	✓	✓	
CO-2	Appraise various qualitative and quantitative parameters to study the population and community ecology.Correlate the importance of biodiversity and consequences due to its loss.	✓		✓		✓	✓	✓
CO-3	Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and biotic factors on plant communities.	✓	✓		✓	✓		✓
CO-4	Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.	✓		✓	✓			
CO-5	Explain the process of fossilization and compare the characteristics of extinct and extant plants.		✓	✓		✓	✓	✓

B.SHANTHA KUMARI
lecturer In Botany
GDC RAYACHOTY

B.KIRAN KUMAR,MSc,Bed,NET,SET
IQAC Coordinator
GDC Rayachoty

Dr.P.HARSHA LATHA,MSc,MPhill,PHD
PRINCIPAL
GDC RAYACHOTY

GOVERNMENT DEGREE COLLEGE

RAYACHOTY, ANNAMAYYA DISTRICT, A.P.516269

(Accredited with C grade by NAAC)

Department of Botany

COs & PSOs MAPPING

B.Sc. HONOURS BOTANY(MAJOR)

4-YEARS UG HONOURS PROGRAM WITH SINGLE MAJOR AND ONE MINOR

WITH EFFECT FROM 2023-24

PROGRAM SPECIFIC OUTCOMES FORB.Sc. HONOURS BOTANY(MAJOR)

Students after successful completion of B.Sc. Botany will be able to:	
PSO-1	The students will understand the concepts of microbial and human genetics and genetic mapping.
PSO-2	The students are enabled to understand the plant reproduction organs of flowering plants.
PSO-3	The students will gain ability to apply the acquired knowledge and skills in the field of plant morphology and anatomy.
PSO-4	The students Will have overview and understanding about the structure and relationship of various forms of cryptogams.
PSO-5	The students Will have overview and understanding about the structure and relationship of various forms of cryptogams.
PSO-6	Will understand evolutionary trends among non flowering plants.
PSO-7	They gain Knowledge about the rules of generative and vegetative plant multiplication.
PSO-8	To understand the organic farming which does not totally exclude the elements of modern agriculture.

TitleoftheCourse: Introduction to Classical Biology.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	**Learn the principles of classification and preservation of biodiversity**	✓			✓	✓	✓	✓	✓
CO-2	**Understand the plant anatomical, physiological and reproductive processes.**	✓	✓	✓		✓		✓	
CO-3	**. Knowledge on animal classification, physiology, embryonic development and their economic importance.**	✓			✓	✓			✓
CO-4	**To Analysis the Biological themes.**	✓	✓		✓	✓	✓	✓	✓
CO-5	Explain origin of life on the earth.	✓	✓	✓		✓	✓	✓	✓

TitleoftheCourse: Introduction to Applied Biology.

COs ⇩		PSOs ⇩							
		1	2	3	4	5	6	7	8
CO-1	Bioinformatics skills are valuable for students who may seek careers which will necessitate the analysis of genomic data.	✓		✓	✓	✓	✓	✓	✓
CO-2	This minor provides students the opportunity to learn programming skills, mine genomic data, and participate in independent research	✓	✓		✓	✓	✓	✓	✓
CO-3	Learn the principles of classification and preservation of biodiversity	✓			✓	✓	✓		
CO-4	Knowledge on animal classification, physiology, embryonic development and their economic importance	✓		✓	✓	✓		✓	✓
CO-5	Describe the methodology involved in biotechniques.	✓	✓	✓		✓	✓		✓

TitleoftheCourse: **Non-Vascular Plants.**

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	Illustrate diversity among the viruses and prokaryotic organisms and can categorize them. Classify fungi, lichens, algae and bryophytes based on their structure, reproduction and life cycles. Analyze and certain the plant disease symptoms due to viruses, bacteria and fungi.	✓	✓		✓	✓	✓		
CO-2	Recall and explain the evolutionary trends among amphibians of plant kingdom for their shift to land habitat.	✓		✓		✓	✓	✓	
CO-3	Evaluate the ecological and economic value of microbes, f	✓	✓		✓	✓	✓	✓	✓
CO-4	Explain origin of life on the earth.	✓		✓		✓	✓		✓
CO-5	Analyze and ascertain the plant disease symptoms due to viruses, bacteria and fungi.	✓	✓	✓		✓	✓	✓	✓

TitleoftheCourse: Origin of Life and Diversity of Microbes.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	Explain origin of life on the earth.	✓	✓		✓	✓	✓	✓	
CO-2	Illustrate diversity among the viruses and prokaryotic organisms and can categorize them.	✓		✓		✓			✓
CO-3	Classify fungi, lichens, algae and bryophytes based on their structure, reproduction and life cycles.	✓		✓	✓	✓	✓	✓	
CO-4	Analyze and ascertain the plant disease symptoms due to viruses, bacteria and fungi.	✓			✓	✓	✓		✓
CO-5	Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.		✓	✓				✓	✓

TitleoftheCourse: Vascular Plants.

COs ⇩		PSOs ⇩							
		1	2	3	4	5	6	7	8
CO-1	Evaluate the ecological and economic value of microbes, thallophytes and bryophytes.	✓	✓		✓	✓	✓	✓	✓
CO-2	Classify fungi, lichens, algae and bryophytes based on their structure, reproduction and life cycles.	✓	✓	✓			✓	✓	✓
CO-3	Analyze the morphology of the most common Angiosperm plants of their localities and recognize their families.	✓	✓		✓		✓		✓
CO-4	Evaluate the physiological factors that regulate growth and development in plants.	✓			✓		✓	✓	
CO-5	Examine the role of light on flowering and explain physiology of plants under stress conditions.	✓	✓	✓		✓		✓	✓

TitleoftheCourse: Plant Pathology and Plant Diseases.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	Investigating the organisms (such as fungi, bacteria, viruses, etc.) responsible for causing diseases in plants.	✓	✓		✓	✓	✓		✓
CO-2	Understanding how these pathogens interact with plants and the mechanisms by which they cause disease.	✓	✓	✓		✓		✓	✓
CO-3	Studying the life cycles of pathogens and their impact on plants. **Economic Impact**: Assessing the economic consequences of plant diseases on agriculture and horticulture.	✓	✓		✓		✓	✓	
CO-4	Describes the pathogenic symptoms and analyses of the remedy.	✓	✓	✓	✓			✓	✓
CO-5	Analyze the morphology of the most common Angiosperm plants of their localities and recognize their families.	✓		✓		✓	✓		✓

TitleoftheCourse: Plant Breeding.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	Elucidate the role of extra-chromosomal genetic material for inheritance of characters.	✓	✓		✓	✓	✓		✓
CO-2	Evaluate the structure, function and regulation of genetic material.	✓	✓	✓		✓		✓	✓
CO-3	Understand the application of principles and modern techniques inplant breeding.	✓	✓		✓		✓	✓	
CO-4	Explain the procedures of selection and hybridization for improvement of crops	✓	✓	✓	✓			✓	✓
CO-5	Describes the significance of plant Breeding.	✓		✓		✓	✓		✓

TitleoftheCourse: Plant Bio-Technology.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	. Comprehend the basic knowledge and applications of plant tissue culture .Identify various facilities required to setup a plant tissue culture laboratory.	✓	✓		✓	✓	✓		✓
CO-2	dentify various facilities required to set up a plant tissue culture laboratory Acquire a critical knowledge on sterilization techniques related to plant Tissue culture.	✓	✓	✓		✓		✓	✓
CO-3	Demonstrate skills of callus culture through hands on experience. Understand the biotransformation technique for production of secondary metabolites.	✓	✓		✓		✓	✓	
CO-4	Understand the biotransformation technique for production of secondary metabolites.	✓	✓	✓	✓			✓	✓
CO-5	Comprehend the basic knowledge and applications of plant tissue culture.	✓		✓		✓	✓		✓

TitleoftheCourse: Anatomy and Embryology of Angiosperms.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	Under stand on the organization of tissues and tissue systems in plants.	✓	✓		✓	✓	✓		✓
CO-2	Illustrate and interpret various aspects of embryology.	✓	✓	✓		✓		✓	✓
CO-3	Discuss the basic concepts of plant ecology, and evaluate	✓	✓		✓		✓	✓	
CO-4	They gain Knowledge about the rules of generative and vegetative plant multiplication.	✓	✓	✓	✓			✓	✓
CO-5	To understand the organic farming which does not totally exclude the elements of modern agriculture.	✓		✓		✓	✓		✓

Titleof the Course: Plant Ecology, Bio-Diversity and Phytogeography.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	Justify evolutionary trends in tracheophytes to adapt for land habitat.	✓	✓		✓	✓	✓		✓
CO-2	Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.	✓	✓	✓		✓		✓	✓
CO-3	Explain the process of fossilization and compare the characteristics of extinct and extant plants.	✓	✓		✓		✓	✓	
CO-4	The students will understand the concepts of microbial and human genetics and genetic mapping.	✓	✓	✓	✓			✓	✓
CO-5	The students are enabled to understand the plant reproduction organs of flowering plants.	✓		✓		✓	✓		✓

Titleof the Course: Plant Resources and Utilization.

COs ⇩		PSOs ⇩							
		1	2	3	4	5	6	7	8
CO-1	Understand environmental botany	✓	✓		✓	✓	✓		✓
CO-2	Know nature and its co-relation with human society. Realize the impact of human activities on the environment.	✓	✓	✓		✓		✓	✓
CO-3	Understand the connection between material wealth & resource exploitation. Worth the relationship between economic growth and environmental degradation.	✓	✓		✓		✓	✓	
CO-4	Justify evolutionary trends in tracheophytes to adapt for land habitat.	✓	✓	✓	✓			✓	✓
CO-5	Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.	✓		✓		✓	✓		✓

Titleof the Course: Cell-Biology and Genetics.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	Understand the structural organization of plant cells.	✓	✓		✓	✓	✓		✓
CO-2	Understand transcription, translation post translation modification of protein. Students will learn about polyploidy and its uses.	✓	✓	✓		✓		✓	✓
CO-3	Students will be able to understand the structure, chemistry, and functions of cell and cellular organelles.	✓	✓		✓		✓	✓	
CO-4	Elucidate the role of extra-chromosomal genetic material for inheritance of characters.	✓	✓	✓	✓			✓	✓
CO-5	Evaluate the structure, function and regulation of genetic material Understand the application of principles and modern techniques implants breeding. Explain the procedures of selection and hybridization for improvement of crops.	✓		✓		✓	✓		✓

Titleof the Course: Plant Physiology and Metabolism.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	Understand plant structures in the context of the physiological functions of plants. Learn and understand mineral nutrition in plants.	✓	✓		✓	✓	✓		✓
CO-2	Understand lipid metabolism in plants.Understand the structure and functions of Carbohydrates, Amino acids, Proteins, and Lipids.	✓	✓	✓		✓		✓	✓
CO-3	Understand the growth and developmental processes in plants.	✓	✓		✓		✓	✓	
CO-4	Elucidate the role of extra-chromosomal genetic material for inheritance of characters.	✓	✓	✓	✓			✓	✓
CO-5	Evaluate the structure, function and regulation of genetic material.	✓		✓		✓	✓		✓

Titleof the Course: Seed Technology.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	After studying this course, the student will be able to identify floral plants, market demand and techniques of raising, growing, and cultivation techniques.	✓	✓		✓	✓	✓		✓
CO-2	Justify evolutionary trends in tracheophytes to adapt for land habitat.	✓	✓	✓		✓		✓	✓
CO-3	They will be able to apply various horticultural practices in the field.	✓	✓		✓		✓	✓	
CO-4	After studying this course, the student will be able to identify floral plants, market demand and techniques of raising, growing, and cultivation techniques.	✓	✓	✓	✓			✓	✓
CO-5	Justify evolutionary trends in tracheophytes to adapt for land habitat.	✓		✓		✓	✓		✓
	They will be able to apply various horticultural practices in the field.								

Titleof the Course: Muhroom Culture Technology.

COs ⇓		PSOs ⇓							
		1	2	3	4	5	6	7	8
CO-1	Under stand the structure and mushroom and discriminate edible a poisonous mushrooms.	✓	✓		✓	✓	✓		✓
CO-2	Demonstrate skills preparation of compost and spawn. Acquire critical knowledge on cultivation of some edible mushroom.	✓	✓	✓		✓		✓	✓
CO-3	Explain the methods of storage,preparation Of value-added products and marketing.	✓	✓		✓		✓	✓	
CO-4	The students will be able to learn the nutritive values and medicinal properties of different plants. understand the role of plants as environmental indicators and protectors appreciate the aesthetic values about ornamental plants there by developing entrepreneurship skills.	✓	✓	✓	✓			✓	✓
CO-5	The students are able to understand about Plant taxonomy and their systematic classification systems are able to understand about modern approaches in taxonomic studies. Enlightened about the role of taxonomy in conservation of biodiversity.	✓		✓		✓	✓		✓

B.SHANTHA KUMARI
lecturer In Botany
GDC RAYACHOTY

B.KIRAN KUMAR,MSc,Bed,NET,SET
IQAC Coordinator
GDC Rayachoty

Dr.P.HARSHA LATHA,MSc,MPhill,PHD
PRINCIPAL
GDC RAYACHOTY