

**DEPARTMENT OF BOTANY
SRI Y N COLLEGE (AUTONOMOUS):
NARSAPUR**

Course outcomes

Sno	Semester	Paper	Course Code	Title of the paper
1	I	I	1106	Microbial diversity algae and fungi
2	II	II	2106	Diversity of archaeogoniates & plant anatomy
3	III	III	3106	Plant Taxonomy and embryology
4	IV	IV	4106	Plant physiology and metabolism
5	V	V	5133	Cell biology, genetics & plant breeding
6	V	VI	5134	Plant ecology & phytogeography
7	IV	VII	6143	Plant tissue culture and it's biotechnological applications

Paper - I .Microbial diversity, Algae & Fungi

- The Course introduction to origin and evolution of life, the student learns formation of earth in the universe and existence of life on earth.
- Students comes to know about microbial diseases regarding to various micro organism in man, animals and plants.
- The algae group of plants gives an vast knowledge to growing the populations with its lot of Economic importance as food, fodder and feed etc.,
- Student gain knowledge of fungi as pathogen causing many famines as in the past and to overcome and manage the fungal disease and protect the life forms

on the earth.

- seed sowing, soil preparation in suitable way for proper growth & development candidates should work for long hours, mostly in sensitive areas like forest. student can go for master degrees & research programs.
- Often job opportunities, at B.sc level also job opportunities & begin our business also, given base knowledge for higher degree in programme, can be an advisor to farmers – govt. job mainly land scape, parks, public greenery, official lawns & many bio diversity basis.
- Self-Employment and manage new nurseries

Paper-II Diversity of archaeogoniatas & plant Anatomy

- * Student understands on the organisation of tissues and tissue systems in plants.
- * Correlate the importance of diversity and consequences due to its loss
- * Study of economic importance-teak, red sanders and rosewood

Paper - III Plant Taxonomy and Embryology

- Every citizen and students acquire the knowledge of classification of the plants and the comparison, origin and evolution of angiosperms which are the most important species in our daily life.
- The students to know the acquired knowledge to maintain botanical garden worldwide.
- To acquire the knowledge of the development of embryo, structure, pollination and fertilization methods to develop with new genetically combinations leading to new varieties.

Paper - IV Plant physiology and metabolism

- * Comprehensive the importance of water in plant life and mechanism of water and solutes in plant's evolution 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 process responsible for synthesis of food in plant's.
- * Analyze the biochemical reactions in relation to nitrogen and lipid metabolism.

*Evolute the physiological factors that regulate growth and development in plant's.

*Examine the role of light on flowering and physiology of plants under stress conditions.

Paper –V Cell Biology, Genetics and Plant Breeding

- Students going knowledge regarding the unit of life that is cell, types, functions of the various organelles of the cell.
- The student know the DNA Structure which is very useful at molecular levels of genes in various aspects of life quality of genetical characters and forensic methods of the society etc.
- Selection of the best genetic cell characters by advanced molecular techniques in genetics and in crop improvement.
- Plant breeding techniques with help of biotechnology at molecular level breeding with variety of special environmental Habbarder

Paper –VI Plant Ecology and Phytogeography

- Every students should have the knowledge of elements of environment.
- Climatic factors like light, temperature, in related to growth of plant.
- Students going to knowledge regarding the soil composition the best media for the growth of the plant and other organelles and their interaction in nature.
- Maintenance of flora and fauna population to the community level.
- The course gives wide knowledge of the distribution of the plant and identifying the endemic species maintenance of the biodiversity.
- The student learns acquired knowledge regarding seed bank, conservation the genetic resources and its importance in balancing of the life forms.

Paper VII Plant tissue culture and it's biotechnological applications

- * Students prepare to learn m.s medium
- * Demonstration of in vitro sterilisation methods and inoculation methods using leaf and nodal explant
- * The student study of of embryo culture and micro propagation of somatic embryogenesis.
- * Study of gene transfer through photographs agrobacterium. mediat gene ltransfer by electroporation, micro injection and micro projectile combatent.

- *Student learn invited initiation of calls on artificial medium.
- *Students utilize the rDNA technology.
- *Understands the applications for biotechnology.
- *Study of growth patterns, vegetative characteristics of Bt cotton and identifying the futures of its pestresistance.

Objectives and General out comes of programme and Domain subject:-

Programme(Bsc)objectives: the objectives of bachelor's degree program with Botany are: 1.

1. To provide a comprehensive knowledge on various aspects related to microbes and plants.
2. To deliver knowledge on latest development in the field of plant sciences with a practical approach.
3. To produce a student who things independently critically ,and discuss various aspects of plant life.
4. To enable the graduate to prepare and pass through national and international examinations related to botany.
5. To empower the student to become an employee or an entrepreneur in the filed of Botany/Biology and to serve the nation.

Program Specific Outcomes :

PSO 1: Understand the basic concepts of Botany in relation to its allied core courses.

PSO 2 :perceive the significance of microbes and plants for human welfare and structural and functional aspects of plants.

PSO 3 : Demonstrate simple experiments related to Plant sciences, analyze, data and interpret them with theoretical knowledge.

PSO 4 :work in teams with enhanced inter-personal skills.

PSO 5 :Develop the critical thinking with scientific temper.

PSO 6:Effectively communicate scientific ideas both orally and in writing.

PSO 7 : Understand experiments in botany.

PSO 8 : To understand Knowledge of Taxonomy and Ethno botany

PSO 9 : To Understand the Knowledge of Medicinal Plants.

Domain subject(Botany)objectives:

- 1.To impart knowledge on origin, evolution, structure, reproduction and interrelationships of microbes and early plant groups.
- 2.To provide knowledge on biology and taxonomy of true land plants with in a phylogenetic framework.
- 3.To teach aspects related to Anatomy, embryology and ecology of plants and importance of biodiversity.
- 4.To explain the structural and functional aspects of plants with respect to the cell organelles, chromosomes and genes and methods of plant breeding.
- 5.To Develop a critical understanding on SPAC, metabolism and growth and development in plants.
- 6.To enable the student proficient in experimental techniques and methods of analysis appropriate for various sub-courses in Botany.

Domain subject (Botany)outcomes:

- 1.students will be able to identify, compare and distinguish various groups of microbes and primitive plants based on their characteristics.
- 2.students will be able to explain the evolution of tracheophytes and also distribution of plants on globe.
- 3.Student will able to discuss on internal structure, embryology and ecological

adoptions of plants and want of conserving biodiversity.

4. students will be able to interpret life process in plants in relation to physiology and metabolism.

5. students will be able to describe ultrastructure of plant cells inheritance and crop improvement methods.

6. student will independently design and conduct simple experiments based on the knowledge acquired in theory and practicals of the different sub-courses in Botany.