

A.S.D.GOVERNMENT DEGREE COLLEGE FOR (W),(A), KAKINADA

DEPARTMENT OF BOTANY

2022-2023

COURSE OUTCOMES:

SEMESTER – I – Paper 1- Fundamentals of microbes and non vascular plants

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

SEMESTER – II – Paper-2- Basics of Vascular plants and Phyto geography

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

**SEMESTER-III- Paper 3- Anatomy and Embryology of Angiosperms
Plant Ecology and Biodiversity**

1. Understand on the organization of tissues and tissue systems in plants.
2. Illustrate and interpret various aspects of embryology.
3. Discuss the basic concepts of plant ecology, and evaluate the

- effects of environmental and biotic factors on plant communities.
4. Appraise various qualitative and quantitative parameters to study the population and community ecology.
 5. Correlate the importance of biodiversity and consequences due to its loss.
 6. Enlist the endemic/endangered flora and fauna from two biodiversity hot spots in India and assess strategies for their conservation.

SEMESTER – IV-Paper -4 Plant Physiology and Metabolism

1. Comprehend the importance of water in plant life and mechanisms for transport of water and solutes in plants.
2. Evaluate the role of minerals in plant nutrition and their deficiency symptoms. Interpret the role of enzymes in plant metabolism.
3. Critically understand the light reactions and carbon assimilation processes responsible for synthesis of food in plants.
4. Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms.
5. Evaluate the physiological factors that regulate growth and development in plants
6. Examine the role of light on flowering and explain physiology of plants under stress conditions

SEMESTER – IV- Paper -5 Cell Biology Genetics and Plant Breeding

1. Distinguish prokaryotic and eukaryotic cells and design the model of a cell.
2. Explain the organization of a eukaryotic chromosome and the structure of genetic material.
3. Demonstrate techniques to observe the cell and its components under a microscope.
4. Discuss the basics of Mendelian genetics, its variations and interpret inheritance of traits in living beings.
5. Elucidate the role of extra-chromosomal genetic material for inheritance of characters.
6. Evaluate the structure, function and regulation of genetic material.
7. Understand the application of principles and modern techniques in plant breeding.
8. Explain the procedures of selection and hybridization for improvement of crops.

SEMESTER –V- Paper -6A Plant Propagation

1. Make use of different plant propagation structures for plant Multiplication.
2. Explore the specialized organs or asexual propagules in some plants for their proliferation.
3. Demonstrate skills on micropropagation of plants through vegetative propagation techniques.
4. Evaluate and use a suitable propagation technique for a given plant species.

SEMESTER –V- Paper -7A Seed Technology

1. Explain the causes for seed dormancy and methods to break dormancy.
2. Understand critical concepts of seed processing and seed storage procedures.
3. Acquire skills related to various seed testing methods.
4. Identify seed borne pathogens and prescribe methods to control them.
5. Understand the legislations on seed production and procedure of seed certification