

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

**DEPARTMENT OF BOTANY**

**2021-2022**

**COURSE OUTCOMES**

**SEMESTER – I - Paper –I - 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 Phytogeography**

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 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. 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 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 6- Plant Ecology and Phytogeography**

1. Study about tissue culture methods and applications are extensively studied with application point of view
2. Plant biotechnology reveals new trends in plant sciences this was extensively studied
3. Diversified plants are studied extensively
4. Ornamental plants study is possible
5. Secondary metabolites are studied from phytochemistry
6. Medicinal plants are extensively studied from different species of plants

## **Semester VI- Paper VII-(B): Elective [(A) Nursery Gardening & Floriculture**

1. Understand about Nursery Management and landscaping and different gardening styles
2. Make use of different plant propagation structures for plant multiplication.
3. Explore the specialized organs or asexual propagules in some plants for their proliferation.
4. Demonstrate skills on micropropagation of plants through vegetative propagation techniques.
5. Understand about the cultivation practices of various Ornamental Plants

### **Paper VIII,-A-1 : Plant Diversity And Human Welfare**

1. Understand the concept and levels of biodiversity
2. Correlate the importance of biodiversity and consequences due to its loss.
3. Enlist the endemic/endangered flora and fauna from two biodiversity hot spots in India and assess strategies for their conservation
4. Understand about the various organizations involved in the conservation of Biodiversity
5. Elucidate the utilization and commercial aspects of Forestry

### **Paper VIII-A-2 Ethnobotany And Medicinal Botany :**

1. Understand about the study of relationship between Plants and Humans
2. Learn about Phyto chemical significance of various Medicinal plant products
3. Elucidate the importance of Indigenous Medicinal sciences
4. Understand about the conservation strategies of Endangered and endemic medicinal plants
5. Emphasis the importance of Biopiracy and the value of various plants useful; for the mankind

### **Paper VIII-A-3 -Pharmacognosy And Phytochemistry**

1. Understand about different medicinal drugs obtained from Natural resources
2. Analyze Cultivation collection Extraction Isolation Bioassaying of Crude drugs of Natural origin
3. Understand about the Pharmacological actions of various drugs and drug Evaluation methods
4. Analyze the extraction of Alkaloids , Terpenoids , Phenolics etc.
5. Elucidate the significance of Aromatherapy and volatile oils