

DEPARTMENT OF BOTANY

## **H.N.B. PG COLLEGE KHATIMA**

**(VISION, MISSION, PEO, PO, PSO & CO)**

### **VISION:**

To promote the culture of learning by educating students in the basics of plant science, its related components, and evolving advancements that will serve science and the nation in the twenty-first century.

### **MISSION:**

1. To make a significant contribution to the national goals of promoting knowledge society through high-quality education, innovative research, and services to the society in the field of plant sciences.
2. To produce highly qualified postgraduate and Ph.D. students in the field of plant sciences that serve in academic and research institutions.
3. To serve society's needs and contribute to transforming society into a knowledge society.

### **PROGRAM EDUCATIONAL OBJECTIVES (PEOS):**

PEO-1: Enable graduates to pursue post-graduate studies in botany and succeed in academic and research careers.

PEO-2: Possess essential professional plant science skills that make them confident to synthesize and apply knowledge in various application domains.

PEO-3: Demonstrate an understanding of the importance of life-long learning through practical training.

PEO-4: Assume leading and influential roles in their organizations and societies.

### **PROGRAM OUTCOME:**

After the successful completion of the M.Sc. degree in Botany, the students will be able to:

PO-1: Understand the structure, function and life-cycle patterns of different plant life forms.

PO-2: Achieve an up-to-date level of understanding of plant physiology, ecology, and biochemistry.

PO-3: Identify plant diseases, causing organisms, and their control measures.

PO-4: Identify plants in their natural habitats, and their economic and ethnobotanical importance.

PO-5: Differentiate between different types of ecosystems and their structural components.

PO-6: Evaluate services provided by different ecosystems in the Himalayan region.

PO-7: Understand and solve problems related to climate change and global warming.

PO-8: Isolate and identify phytochemicals in different plant species and their antimicrobial potential.

PO-9: Analyze the regeneration status of different tree species in their natural habitat. PO-10. Develop strategies for the conservation of rare and threatened plant species.

PO-11: Develop a protocol for propagation of economically and medicinally important plant species through plant tissue culture.

#### **PROGRAM SPECIFIC OUTCOME (PSOS):**

After the successful completion of the M.Sc. degree in Botany the students will be able to:

PSO 1: Apply knowledge of botany in many applied fields like Agriculture, Horticulture, Sericulture, Forestry, Pharmacology, and Medicine.

PSO 2: Able to qualify for competitive exams like UPSC, NET, SET, GATE, etc.

PSO 3: Understand the multi-functionality of plants in the production of secondary metabolites and their widespread industrial applications.

PSO 4: Correlate biodiversity to habitat, climate change, land and forest degradation and develop conservation measures.

**COURSE OUTCOME (COs):**

**AT U.G. LEVEL:**

1. Students will be able to explain how organisms function at the level of the biomolecules, genes, genome, cells, tissue, and various plant systems.
2. They will be able to explain various physiological and biochemical processes, development, reproduction, and behavior of different forms of plant life.

**AT P.G. LEVEL:**

1. Students will be able to understand the range of plant diversity in terms of structure, function, and conservation.
2. Students will strengthen the experimental techniques and methods of analysis appropriate for their area of



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