

SEMESTER:VI

MAJOR DISCIPLINE SPECIFIC CORE COURSE:

PROGRAMMECODE: SCIUG103

SEM- VI: SC23MJDSCBOT601: PLANT BIOTECHNOLOGY AND
REPRODUCTIVE BIOLOGY



Programme specific Learning Outcomes:

On completion of the course, the students will be able to:

- Understand the core concepts and fundamentals of plant biotechnology and genetic engineering
- Develop their competency on different types of plant tissue culture.
- Analyze the enzymes and vectors for genetic manipulations.
- Examine gene cloning and evaluate different methods of gene transfer.
- Critically analyze the major concern and applications of transgenic technology.
- Recall the history of reproductive biology of angiosperms & recognize the importance of genetic and molecular aspects of flower development.
- Understand structure and functions of anther wall and pollen wall evaluate the special structures of Ovule.
- Solve Self-incompatibility in Pollination and fertilization & relate between Embryo, Endosperm and Seed.
- Comprehend the causes of Polyembryony and apomixes with its classification.

SEM-VI: SC23MJDSCBOT601A : PLANTMETABOLISM AND PHYSIOLOGY

Programme specific Learning Outcomes:

On completion of the course, the students will be able to:

- Differentiate anabolic and catabolic pathways of metabolism.
- Recognize the importance of Carbon assimilation in photorespiration.
- Explain the ATP-Synthesis.
- Interpret the Biological nitrogen fixation in metabolism.
- Understand Water relation of plants with respect to various physiological processes.
- Explain chemical properties and deficiency symptoms in plants.
- Classify aerobic and anaerobic respiration.
- Explain the significance of Photosynthesis and respiration.
- Assess dormancy and germination in plants.

MINOR DISCIPLINE SPECIFIC CORE COURSE

PROGRAMMECODE: SCIUG103

SEM-VI: SC23MIDSCBOT602 : PLANTMETABOLISM

Programme specific Learning Outcomes:

On completion of the course, the students will be able to:

- Differentiate anabolic and catabolic pathways of metabolism.
- Recognize the importance of Carbon assimilation in photo respiration
- Explain the ATP-Synthesis.
- Interpret the Biological nitrogen fixation in metabolism.

INTERNSHIP:


PROGRAMMECODE: SCIUG103

SEM-VI: SC23INTBOT607: INTERNSHIP IN BOTANY

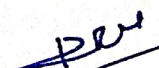
Programme specific Learning Outcomes:

On completion of the course, the students will be able to:

- Identify and classify various plants pieces with scientific accuracy.
- Demonstrate practical knowledge of plant anatomy and physiology.
- Apply laboratory techniques for plant analysis and experimentation.
- Conduct field work, collect plant samples, and maintain herbarium records.
- Analyze ecological interactions and biodiversity indifferent habitats.
- Utilize tools such as microscopes and GPS for botanical research.
- Understand the role of plants in agriculture, medicine, and industry.
- Communicate scientific findings through reports and presentations.
- Collaborate effectively in research team sand field projects.
- Develop awareness of environmental conservation and sustainability.


Head
Department of Botany
The MNSB, Ltd. Science College
Himatnagar-383001




Principal
The MNSB, Ltd. Science College
Himatnagar-383 001