

SEMESTER-I

LEARNING OUTCOME:

Course: UG-H-BOT-CC-T-01 & UG-H-BOT-CC-P-01

After completion of the course the learners will be able to:

- ❖ describe the types, nomenclature and structures of biomolecules;
- ❖ explain the function and structure of cells including the metabolic reactions that occur in cells;
- ❖ elucidate the laws of thermodynamics and translate reaction mechanisms within cells into their final expressions;
- ❖ discuss the origin of eukaryotic cell;
- ❖ explain the processes of cell division and inheritance.

Course: UG-H-BOT-GE-T-01 & UG-H-BOT-GE-P-01

After completion of the course the learners will be able to:

- ❖ describe general characteristics of viruses, bacteria, algae, fungi and archegoniate with special reference to their classification, morphology, reproduction and ecology;
- ❖ explain their role in environment, human welfare and in industrial applications;
- ❖ apply this knowledge in understanding the evolutionary significance of these organisms.

SEMESTER-II

LEARNING OUTCOME:

Course: UG-H-BOT-CC-T-03 & UG-H-BOT-CC-P-03

After completion of the course the learners will be able to:

- ❖ describe general characteristics of viruses, bacteria and algae with special to their classification, morphology, reproduction, distribution and ecology;
- ❖ explain their role in environment, human welfare and in industrial applications;
- ❖ apply this knowledge in understanding the evolutionary significance of these organisms.

Course: UG-H-BOT-CC-T-04 & UG-H-BOT-CC-P-04

After completion of the course the learners will be able to:

- ❖ describe general characteristics of fungi with special reference to their classification, somatic diversity, reproduction, symbiosis and applied aspects;
- ❖ explain plant pathogen interactions, control spread of plant pathogens and plant diseases.

SEMESTER-III

LEARNING OUTCOME:

Course: UG-H-BOT-CC-T-05 & UG-H-BOT-CC-P-05

After completion of the course the learners will be able to:

- ❖ describe general characteristics of bryophytes and pteridophytes with special to their classification, morphology, reproduction, distribution and ecology;
- ❖ explain their role in environment, human welfare and in industrial applications;
- ❖ apply this knowledge in understanding the evolutionary significance of these organisms.

Course: UG-H-BOT-CC-T-06 & UG-H-BOT-CC-P-06

After completion of the course the learners will be able to:

- ❖ determine the concept of progymnosperms and its significance in plant evolutionary history
- ❖ describe general characteristics of gymnospermous plant group with special reference to their classification, morphology, reproduction, distribution, and ecology;
- ❖ explain their role in environment, and their economic importance;
- ❖ apply this knowledge in understanding their evolutionary significance;
- ❖ describe primordial life forms and their evolution through geological ages;
- ❖ explain the rate of diversification and extinction of plant species;
- ❖ determine the age of sediments and fossils;
- ❖ translate plant fossil evidences to continental drift and plate tectonic theory.

Course: UG-H-BOT-SEC-T-03

After completion of the course the learners will be able to:

- ❖ elucidate different types of fertilizers using biological organisms;
- ❖ apply the knowledge gained in utilization of biofertilizers in organic farming.

SEMESTER-IV

LEARNING OUTCOME:

Course: UG-H-BOT-CC-T-10

After completion of the course the learners will be able to:

- ❖ identify the plant parts of economic importance and their uses;
- ❖ identify the medicinal plants from the pharmacognostic preparations;
- ❖ distinguish between the adulterants and authentic pharmacognostic preparations;
- ❖ elucidate the chemical constituents of medicinal plants.

Course: UG-H-BOT-SEC-T-02

After completion of the course the learners will be able to:

- ❖ describe nutritional and medicinal values of edible mushrooms and their cultivation strategies;
- ❖ apply the knowledge gained in storage and food preparation.

SEMESTER-V

LEARNING OUTCOME:

Course: UG-H-BOT-CC-T-11 & UG-H-BOT-CC-P-11

After completion of the course the learners will be able to:

- ❖ discuss plant water relations, i.e. how plants acquire, utilize, and regulate the flow of water between plant and environment
- ❖ outline the mineral nutrients plants require, and how they are obtained, metabolized, transported and their role in plants;
- ❖ explain how plant growth regulators regulate the growth and development in plants;
- ❖ describe physiology of flowering, light responses and seed dormancy in plants.

SEMESTER-VI

LEARNING OUTCOME:

Course: UG-H-BOT-CC-T-14 & UG-H-BOT-CC-P-14

After completion of the course the learners will be able to:

- ❖ Explain the principles, technical requirement, scientific and commercial applications of plant tissue and cell culture.
- ❖ Understand different gene transfer techniques.
- ❖ Exploit the recombinant DNA technology for development of transgenic plants.

Course: UG-H-BOT-DSE-T-03 & UG-H-BOT-DSE-P-03

After completion of the course the learners will be able to:

- ❖ demonstrate an advanced understanding of the application of fundamental principles of ecological studies to the conservation of biodiversity;
- ❖ discuss and cite theories and case studies as prerequisites for success in sustainable utilization and effective species conservation;
- ❖ translate theoretical aspects of contemporary practices to recommendations for environmental management;
- ❖ communicate effectively in the form of written reports and spoken presentations.

Course: UG-H-BOT-DSE-P-04

After completion of the course the learners will be able to:

- ❖ apply the knowledge gained through different courses in practical field.
- ❖ solve problems related to his course of study.
- ❖ document, calculate, analyse and interpret data.
- ❖ deduce findings from different studies
- ❖ write and report in standard academic formats.