

# **B.Sc Botany**

# PROGRAMME OUTCOME

At the end of a UG programme, a student would have

- 1. Acquired adequate knowledge of the student
- 2. Crafted a foundation for higher learning
- 3. Been initiated into the basics of research
- 4. Imbibed sound moral and ethical values
- 5. Become conscious of environmental and societal responsibilities
- 6. Attained skills for communication and career
- 7. Learned to tolerate diverse ideas and different points of views
- 8. Become empowered to face the challenges of the changing universe

# PROGRAMME SPECIFIC OUTCOME

	Program specific Outcomes
PSO1	Scope and importance of Botany: Understand scope and importance of Botany
PSO2	<b>Environmental concern:</b> Create awareness on natural resources and their importance in sustainable development, analyze the importance of biodiversity conservation, estimate biodiversity loss and develop conservation strategies
PSO3	<b>Scientific Temper</b> : Develop scientific temper and undertake scientific projects
PSO4	<b>Practical application</b> : Identify and classify plants according to the principles of plant systematic, apply techniques like plant propagation methods, organic farming, mushroom cultivation, preparation of bio fertilizers, bio pesticides etc
PSO5	Awareness of life processes: Understand plant life processes, bio molecules and basic hereditary principles

# **COURSE OUTCOME**

### SJBOT1BOT1T: ANGIOSPERM ANATOMY, REPRODUCTIVE BOTANY AND PALYNOLOGY

SJBOT1BOT1T.C01 Demonstrate the ability to differentiate plant organs by observing anatomical Features.

SJBOT1BOT1T C02 Understand the non-living inclusions of plants and their significance.

SJBOT1BOT1T C03. Differentiate tissues and their functions.

SJBOT1BOT1T C04. Illustrate primary and secondary (normal and anomalous) structures of plant organs.

SJBOT1BOT1T CO5. Explain various developmental details of angiosperms.

SJBOT1BOT1T C06. Realize the significance and applications of palynology.

# SJBOT2BO2T: MICROBIOLOGY, MYCOLOGY, LICHENOLOGY AND PLANT PATHOLOGY

SJBOT2BO2T.C01Understand basics of microbial life and their economic importance.

SJBOT2BO2T.C02. Develop general awareness on the diversity of microorganisms, fungi Lichens.

SJBOT2BO2T.C03Analyze the ecological role played by bacteria, fungi and lichens

SJBOT2BO2T.C04 Identify plant diseases and find out control measures.

SJBOT2BO2T.C05 Realize the significance of plant diseases as far as crop production is concerned.

#### SJBOT3BO3T: PHYCOLOGY, BRYOLOGY AND PTERIDOLOGY

SJBOT3BO3T.C01 Appreciate the diversity and evolutionary significance of lower plant groups.

SJBOT3BO3T.C02 Classify algae, bryophytes and pteridophytes.

SJBOT3BO3T.C03 Understand the economic and ecological importance of lower plant groups.

# SJBOT5B04T: METHODOLOGY AND PERSPECTIVES IN PLANT SCIENCE

SJBOT4BO4T.CO1 Develop scientific temper and problem solving skills.

SJBOT4BO4T.CO2 Undertake scientific projects and prepare project reports

SJBOT4BO4T.CO3 Summarize, organize and display quantitative data and derive conclusions

SJBOT4BO4T.CO4 Prepare permanent slides, applying the histochemical techniques

## SJBOT5B06T: GYMNOSPERMS, PALAEOBOTANY, PHYTOGEOGRAPHY AND EVOLUTION

SJBOT5BO6T.CO1 Understand the role of gymnosperms as a connecting link between pteridophytes and angiosperms

SJBOT5BO6T.CO2 Appreciate the process of organic evolution.

SJBOT5BO6T.CO3 Realize the importance of fossil study.

SJBOT5BO6T.CO4 Understand the climatic conditions of the past and realize the changes happened

SJBOT5BO6T.CO5 Recognize the Phytogeography zones of India.

#### SJBOT5B07T: ANGIOSPERM MORPHOLOGY AND SYSTEMATICS

SJBOT5BO7T.CO1 Appreciate the diverse morphology of angiosperms.

SJBOT5BO7T.CO2 Identify and classify plants based on taxonomic principles.

SJBOT5BO7T.CO3 Make scientific illustrations of vegetative and reproductive structures of plants.

SJBOT5BO7T.CO4 Develop the skill of scientific imaging of plants.

SJBOT5BO7T.CO5 Realize the importance of field study.

SJBOT5BO7T.CO6 Change their attitude towards over exploitation of rare/endemic plants

## SJBOT5B08T: TISSUE CULTURE, HORTICULTURE, ECONOMIC BOTANY AND

SJBOT5BO8T.CO1 Critically evaluate the advantages of tissue culture and horticulture over conventional methods of propagation.

SJBOT5BO8T.CO2 Apply various horticultural practices in the field.

SJBOT5BO8T.CO3.Experiment on the subject and try to become entrepreneurs.

SJBOT5BO8T.CO4 Identify the economically important plants.

#### SJBOT5B09T: CELL BIOLOGY AND BIOCHEMISTRY ETHNOBOTANY

SJBOT5BO9T.CO1 Appreciate the ultra-structure of a plant cell.

SJBOT5BO9T.CO2 Enumerate the functions of each cell organelles.

SJBOT5BO9T.CO3. Draw and explain the structure of biomolecules.

#### SJBOT6B010T: GENETICS AND PLANT BREEDING

SJBOT6BO10T.CO1 Appreciate the facts behind heredity and variations.

SJBOT6BO10T.CO2 Understand the basic principles of inheritance.

SJBOT6BO10T.CO3 Solve problems related to classical genetics.

SJBOT6BO10T.CO4 Predict the pattern of inheritance.

SJBOT6BO10T.CO5 Understand various plant breeding techniques.

SJBOT6BO10T.CO6 Realize the role of plant breeding in increasing crop productivity.

## SJBOT6B011T: BIOTECHNOLOGY, MOLECULAR BIOLOGY AND BIOINFORMATICS

SJBOT6BO11T.CO1 Analyze the role of biotechnology in daily life.

SJBOT6BO11T.CO2 Understand the basic aspects of bioinformatics.

SJBOT6BO11T.CO3. Explain the concepts in molecular biology.

#### SJBOT6B012T: PLANT PHYSIOLOGY AND METABOLISM

SJBOT6BO12T.CO1 Identify the physiological responses of plants.

SJBOT6BO12T.CO2 Analyze the role of external factors in controlling the physiology of plants.

SJBOT6BO12T.CO3 Explain the metabolic processes taking place in each cell.

SJBOT6BO12T.CO4 Appreciate the energy fixing and energy releasing processes taking place in cells.

#### SJBOT6B013T: ENVIRONMENTAL SCIENCE

SJBOT6BO13T.CO1 Realize the importance of ecological studies.

SJBOT6BO13T.CO2 Develop environmental concern in all their actions and practice Reduce, Reuse and Recycle.

SJBOT6BO13T.CO3 Try to reduce pollution and environmental hazards and change their attitude towards throwing away plastic wastes.

SJBOT6BO13T.CO4 Spread awareness of the need of conservation of biodiversity and natural resources.

SJBOT6BO13T.CO5 Analyze the reasons for climate change and find out ways to combat it.

## SJBOT6B014T(E2) : ELECTIVE-3: GENETICS AND CROP IMPROVEMENT

SJBOT6BO14T (E2). CO1. TUnderstand various techniques employed for increasing crop productivity.

SJBOT6BO14T (E2). CO2 Identify diseases affecting crop plants.

SJBOT6BO14T (E2). CO3 Attain general awareness on various crop research stations of the country.