DEPARTMENT OF BOTANY
PROGRAMME: B. SC.

Statements of program me Specific Outcomes (PSOs)

By the end of this course, the students will be able to:

1.Understand the basic concepts of lower group plants and morphology of higher groups.
2.Understand the evolution, Classification ,anatomical details of higher group plants.
3.Analyze the cell organells and application of genetics, molecular biology in plant breeding.
4.Identify the bacteria, viruses and plant pathogen.
5.Analyze metabolic activities of plants.
6.Understand the application of genetic engineering for the improvements of plants.
7.Understand the basic concepts of ecology.
8.perform the procedure of laboratory technique in biochemistry, biotechnology and utilization of plants.

Statements of course outcomes (Cos)

B.Sc.Course:SEM-I Paper -1

Course Outcomes:By the end of this course, the students will be able to:

1.Understand the basic concept of bacteria, virus and mycoplasma.
2.Student will understand types of bacteria, viruses and mycoplasma.
3 Student will able to describe Classification and general characteristic of Algae.
4 Analyze economic importance of bacteria, virus and algae.
5.Student will describe life-cycle of micro organism and Algae.
6.Student differentiated between bacteria and Algae.

B.Sc.Course:SEM-I Paper -2

Course Outcomes:By the end of this course, the students will be able to:

1. Compare lower group of plants with higher.
2. Students understand Fungi ,Lichen, Plant diseases and Bryophytes.
3. Identify the different plant diseases.
4.Understand the Economic importance fungi, lichens and bryophytes.
5.Discuss the classification of fungi and Bryophytes.

B.Sc.Course:SEM-I Lab

Course Outcomes: By the end of this course, the students will be able to:

1.Student will understand working and precaution while handling microscope.
2.Understand the basic technique in lab e.g. Slide preparation and Section cutting.
3.Identify bacterial, cynobacterial ,algal, fungal lichens and Bryophytic plant.
4.Comparative study of lower groups and lower higher groups.
5.Understand and identify the algal, bryophyte, fungal, plant pathology and lichens under natural habitat.

B.Sc.Course:SEM-II Paper-1

Course Outcomes: By the end of this course, the students will be able to:

1.Explain the classification pteridophyta and gymnosperm.

2 Describe the economic importance of pteridophyta and gymnosperm.

3.Discuss the alternation of generation pteridophyta and gymnosperm.

4.Critize the concept of heterospory and seed habit.

5 .Discuss morphology and anatomy of cycadeoidea.

B.sc. course:SEM II Paper -2

Course outcomes: By the end of this course, the students will be able to:

1.Understand the paleobotany and geological time scale.

2.Identify the different type of fossils.

3.Explain the morphology and modification of plants.

4.Compare the types inflorescence and fruits.

5.Desribe the parts of flower.

6.Student will understand the process of fossilization.

7.Student will understand fossil types in the field.

8.Student will describe vegetative and floral parts in scientific language.

9.Students will identify types of root,stem,leaves and flowers.

B.Sc.Course:SEM-II Lab

Course Outcomes: By the end of this course, the students will be able to:

1.Describe the various parts of flower.

2.Identify the anatomy of plants material by making temporary mount.

3.Identify the different types of fossils.

4.Identify various Plant specimen.

5.Understand and Identify the morphological characters of plants in natural environment.

6.Students will understand the structure of *Enigmocarpon* fruit.

2.Students will identify types of roots, stem, leaves, inflorescence, flower and fruits in the field visit.

B.Sc.Course:SEM-III Paper-1

Course Outcomes: By the end of this course, the students will be able to:

1.Describe general taxonomic rule of plant classification.

2.Acquire the basic knowledge of taxonomy.

3.Made aware with local flora.

4.Discuss the principal of botanical nomenclature.

5.Criticize the classification of angiosperms.

6.Justify the merits and demerits of systems of classification.

7.Understand the fossil angiosperm *sahanianthus*

B.Sc.Course:SEM-III Paper-2

Course Outcomes: By the end of this course,the students will be able to:

1.Describe the structure of plant cell and its organelles.

2.Analyze the morphology of chromosome organization.

3.Explain the plant cell-division and its significance.

4.Evaluate the biostatic formulas.

5.Understand the method of plants breeding.

6.structure of typical plant cell and plant membrane.

7.Objectives and application of plant breeding statistical methods used in biology.

B.Sc.Course:SEM-III lab

Course Outcomes: By the end of this course,the students will be able to:

1.Preparation of herbarium.

2.Analyze the floral formula of monocot and dicot families.

3.Perform the procedure of cytological techniques.

4.Analyze the biostatics data.

5.Understand and identify the plants under natural environment.

6.Enriched with fundamental aspects of botany.

B.Sc.Course:SEM-IV paper-1

Course Outcomes: By the end of this course,the students will be able to:

1.Classify the meristimatic and permenant tissue based on origin and position.

2. Compare the different theories of tissue.

3.Understand primary,secondary and anomalous ,anatomical structure of plant parts.

4.Understand the various types of pollination mechanism.

5.Explain the types of ovules.

6.Students will understand double staining technique.

B.Sc.Course:SEM-IV paper-2

Course Outcomes: By the end of this course,the students will be able to:

1.Describe the laws of mendelism.

2.Summarize the theories of linkage.

3.Design and construct the variation in chromosome structure and number.

4.Understand the concept of gene.

5.Discuss the types of mutations and its application in crop –improvement.

B.Sc.Course:SEM-IV Lab

Course Outcomes: By the end of this course, the students will be able to:

1.Perform double-stained permenant slide mounting.

2.Calculate the percent germination of pollen-grains.

3.Solve the Mendel's law of inheritance through color beads.
4.Solve interaction of gens from the given data.

B.Sc.Course:SEM-V Paper-1

Course Outcomes: By the end of this course,the students will be able to:
1.Classify and describe about bimolecular.
2.Describe about the basic of enzymes.
3.Understand plant water relation.Write about mineral nutrients.
4.Summerize the cycle of respiration and photosynthesis.

B.Sc.Course:SEM-V Paper-2

Course Outcomes: By the end of this course,the students will be able to:
1.Define and explain about ecology branches and its significance.
2.Summarize the environmental factors.
3.Understand and explain the nitrogen cycle.
4.Compare the various Phytogeographic regions of india.
5.Describe the types of ecosystem.
6.Student will explain the effect of climatic factors on vegetation.
7.Students will understand food chain,food web and ecological pyramids.

B.Sc.Course:SEM-V Lab

Course Outcomes: By the end of this course,the students will be able to:
1.Perform major and minor physiology experiment.
2.Perform micro-chemical and bio-chemical test.
3.Understand ecological adaptations of plants.
4.Compare different types of soil.
5.students able to measure the water holding capacity and moisture content.

B.Sc.Course:SEM-VI Paper-1

Course Outcomes: By the end of this course,the students will be able to:
1.Describe the plant growth and its growth regulators.
2.Describe the seed –dormancy.
3.Describe the plant-defense and role of secondary metabolites.
4.Discuss plant tissue culture technique and its application.
5.Discuss the advantages and disadvantages of genetic-engineering.

B.Sc.Course:SEM-VI Paper-2

Course Outcomes: By the end of this course,the students will be able to:
1.Compare the various ecological successions.
2.Explain different types of environmental pollution and its management.
3.Understand about the renewable and non-renewable natural sources.

4.Analyze the principal,types and application of instruments.
5.Explain morphology utilization and chemical-constituents of different plants.

B.Sc.Course:SEM-VI lab

Course Outcomes: By the end of this course, the students will be able to:
1.perform principles and working of instruments.
2.Study and identity the types and Characteristic of soil.
3.Study the physical and chemical properties of water.
4.Study the plants of ethnobotanical importance.
5.Understand and identify ethno-botanical plants under natural habitat.