Model Question Paper M.Sc. Botany - Semester I

Core Paper 101: BIOLOGY AND DIVERSITY OF ALGAE AND BRYOPHYTES

(With effect from 2021 - 2022 admitted batches)

Time: Three hours

Maximum marks: 80

 $(16 \times 5 = 80)$

Answer one question from each Unit.

All questions carry equal marks

Unit – I

a. Give a detailed classification of Algae by Fritsch
b.Give a detailed classification of Algae by Bold and Wynne

OR

a. Analyse the Economic importance of Algaeb. critically Analyse Thallus organization and Reproduction of Algae

Unit – II

- 3. a. Examine the thallus structure, reproduction, life histories of Chlorophyceae.
 - b. Distinguish between Phaeophyta and Rhodophyta

OR

- 4. a. Enumerate Salient features of Cyanophyta
 - b. Enumerate Salient features of Xanthophyta

Unit – III

- 5. a. Give a detailed account on Cultivation of economically important seaweeds
 - b. Examine the Classification of Bryophytes by Smith and Campbell

OR

- 6. a. Write a note on conduction in bryophytes
 - b. Critically explain the process of Mass culture of micro algae, Waste land reclamation,

Bio-fouling and Bio-remediation through the Algae.

Unit – IV

a. Enumerate Morphology, structure, reproduction and life history of Hepaticopsidab. Write a note on Marchantiales

OR

- **8.** a. Critically Analyse the Morphology, structure, reproductionand life history of Anthocerotopsida.
 - b. Enumerate the Morphology, structure, reproduction and life history of Jungermaniales

Unit – V

9. a. Write an account of structure, reproduction and life history of Sphagnales b. Discuss the structure, reproduction and life history of Bryopsida

OR

- 10. a. Analyze the structure, reproduction and life history of Funariales
 - b. Examine the structure, reproduction and life history of Polytrichales

Model Question Paper

M.Sc. Botany - Semester I

Core Paper 102: BIOLOGY AND DIVERSITY OF VIRUSES, BACTERIA AND FUNGI

(With effect from 2021 - 2022 admitted batches)

Time: 3 hours

Max. Marks: 80 marks

(16 X 5 = 80)

Answer one question from each Unit.

All questions carry equal marks

Unit:1

- 1 A Write a note on general account of Archaebacteria
 - B Explain the classification of Eubacteria.

OR

- 2 A Describe the Ultrastructure of Eubacteria
 - B Illustrate the Economic importance of bacteria.

Unit: II

- 3 A Describe the morphology and chemical composition of Actinomycetes
 - B Explain the ultrastructure and chemistry of Viruses.

OR

- 4 A Write a note on Morphology and Chemical composition of Mycoplasmas.
 - B Explain the Transmission of viruses.

Unit: III

- 5 A Write a note on Nitrogen fixation
 - B Explain the steps in Mushroom cultivation

OR

- 6 A Write a note on Mycorrhiza.
 - B Write a note on use of Fungi in Industry and Medicine

Unit: IV

- 7 A Write a note on Classification of Fungi.
 - B Illustrate the Fungal diseases in Plants

OR

8 A Describe the general characters of Ascomycotina.

B Write a note on Phylogeny of Fungi.

Unit: V

- 9 A Describe the Thallus organization in Fungi.
 - B Write a note on Nutrition in fungi

OR

- 10 A Describe the Ultrastructure of Fungal cell
 - B Write a note on Asexual Reproduction in Fungi

Model Question Paper

M.Sc. Botany - Semester I

Core Paper 103: CELL BIOLOGY OF PLANTS

(With effect from 2021 - 2022 admitted batches)

Time: 3 hours

Max. Marks: 80 marks

 $(16 \times 5 = 80)$

Answer one question from each Unit

All questions carry equal marks

Unit – I

a. Explain in detail about the ultrastructure and organization of a prokaryotic cell.

b. Write an essay on plasmodesmata structure and functions.

OR

2. a. Explain in detail about plasma membrane structure, models and functions.

b. Write an essay on vacuoles structure and functions.

Unit – II

a. Write a detailed essay on cell wall.

b. Explain in detail about chloroplast and endoplasmic reticulum.

OR

4. a. Write an essay on the structure and functions of lysosomes, Micro bodies and Peroxisomes.

b. Write an essay on cytoskeleton and add a note on the techniques used for their Visualization.

Unit – III

5. a. Write in detail about the nucleus.

b. Write an essay about structure of chromosomes and add a note on centromere and Telomeres.

OR

6. a. Write an essay on the types and organization of chromatin.

b. Write in detail about the lamp brush and polytene chromosomes.

Unit – IV

7. a. Write an essay on chromosomal structural aberrations.

b. Write in detail about aneuploidy with special focus on their meiotic behavior.

OR

8. a. Write in detail about chromosomal numerical aberrations.

b. Write about the genomes of wheat and tobacco as examples of allopolyploids.

Unit – V

9. a. Explain in detail about the different stages of mitosis.b. Write an essay on the mechanism and significance of Apoptosis.

OR

10. a. Write a detailed essay on the process of Meiosis.

b. Write an essay on cell cycle and its regulation.

Model Question Paper M.Sc. Botany – Semester I Core paper 104: ETHNOBOTANY, MEDICINAL AND AROMATIC PLANTS

(With effect from 2021 - 2022 admitted batches)

Time: 3 hours

Max. Marks: 80 marks

 $(16 \times 5 = 80)$

Answer one question from each Unit

All questions carry equal marks

Unit – I

a. What is Ethnobotany? Describe the scope of Ethnobotany in Detail.
b. Write an essay on centers of Ethnobotany in India.

OR

a. Write an account on major and minor ethnic groups of Andhra Pradesh
b. Enlist and give the uses of ethno botanical plants used by the primitive tribes for Wood and NTFP's.

Unit – II

- 3. a. Describe the role of CIMAP in medicinal and aromatic plant conservation.
 - **b**. Describe the uses of ethno botanical plants used by the primitive tribes for Jaundice.

OR

4. **a.** Write any two Role of research institutes in medicinal and Aromatic plats.

b. Briefly explain Ethnomedicinal plants used for Skin disease.

Unit – III

- 5. **a.** Describe the recent trends of medicinal and aromatic plants in the World.
 - b. Give an account of the principles and Importance of Ayurveda systems of Medicines.

OR

- 6. **a**. Explain about Siddha system of medicines.
 - b. Give an account of the principles and Importance of Homeopathy systems of Medicines.

Unit – IV

- 7. **a.** What are different strategies of plant conservation? Add a note on status of plants based on IUCN.
 - b. Explain Botanic Gardens & In-vitro conservation.

OR

- Write detailed account on biosphere reserves in India with special reference to Andhra Pradesh
 - **b**. Write a note on sacred groves and In-vitro conservation.

Unit – V

9. a. Describe the occurrence and Classification of Alkaloids.b. What is IPR? Explain the mode of patenting of active principles.

OR

- 10. **a.** Write Comment on aromatic plants with any two suitable examples.
 - b. Write a note on cultivation methods and Medicinal importance of Withaniasomnifera.