

GOVERNMENT DEGREE COLLEGE, NANDIKOTKUR

DEPARTMENT OF BOTANY

Non-Vascular Plants (Algae, Fungi, Lichens and Bryophytes)

Unit 1: Introduction to Algae

Short Answer Questions:

1. What are the general characteristics of algae?
2. Explain the importance of pigments in algae.
3. Describe Fritsch's classification of algae.
4. What is the role of reserve food material in algae?
5. Define thallus organization in algae.

Long Answer Questions:

1. Discuss the ecological and economic importance of algae.
2. Explain the life cycle variations in algae with suitable examples.
3. Compare Fritsch (1935) and Lee (2008) classifications of algae.
4. Describe the various forms of thallus organization in algae.

Unit 2: Biology of Selected Algae

Short Answer Questions:

1. Write a note on the structure and reproduction in *Spirogyra*.
2. Describe the life cycle of *Ectocarpus*.
3. What are the distinguishing features of *Vaucheria*?
4. Write a brief account of *Polysiphonia*.
5. What are Bacillariophyceae?

Long Answer Questions:

1. Explain the occurrence, structure, and reproduction of *Spirogyra*.
2. Discuss the ecological significance and cultivation of *Chlorella*.
3. Compare the structural and reproductive features of *Ectocarpus* and *Vaucheria*.
4. Elaborate on the life cycle of *Polysiphonia* with diagrams.

Unit 3: Introduction to Fungi

Short Answer Questions:

1. List the general characteristics of fungi.
2. Write a note on Ainsworth's classification of fungi.
3. What is parasexuality in fungi?
4. Explain the ecological importance of fungi.
5. What are the nutritional types found in fungi?

Long Answer Questions:

1. Discuss the various modes of nutrition in fungi.
2. Explain the significance of heterothallism and parasexuality in fungi.
3. Write an essay on the economic importance of fungi.
4. Compare the thallus organization and reproduction in fungi.

Unit 4: Biology of Selected Fungi and Lichens

Short Answer Questions:

1. Describe the structure and reproduction of *Phytophthora*.
2. Write a note on the life cycle of *Rhizopus*.
3. Explain the economic importance of *Penicillium*.
4. What are the distinguishing features of lichens?
5. Write a note on the structure and reproduction of *Puccinia*.

Long Answer Questions:

1. Discuss the life cycle of *Penicillium* with diagrams.
2. Explain the ecological and economic importance of lichens.
3. Compare the life cycles of *Rhizopus* and *Puccinia*.
4. Elaborate on the structure, reproduction, and life cycle of *Phytophthora*.

Unit 5: Biology of Bryophytes

Short Answer Questions:

1. What are the general characteristics of bryophytes?
2. Describe Rothmaler's classification of bryophytes.
3. Write a note on the sporophyte of *Marchantia*.
4. Explain the structure and reproduction of *Anthoceros*.
5. What is the role of bryophytes in ecological balance?

Long Answer Questions:

1. Discuss the life cycle of *Marchantia* with illustrations.
2. Compare the morphological and reproductive features of *Anthoceros* and *Funaria*.
3. Explain the evolution of sporophytes in bryophytes.
4. Write an essay on the ecological and economic importance of bryophytes.