**Botany XI**

**SET - I**

**1. Answer in very short (attempt any seven) [7×1=7]**

1. Define cellular totipotency.
2. Who proposed cell theory?
3. What is glycosidic bond?
4. Define taxonomy.
5. What is binomial system?
6. How can you identify *Spirogyra*?
7. What is rhizome?
8. What do you understand by edaphic factors?
9. Define commensalism.
10. What do you understand by ecological niche?

**2. Answer in brief (attempt any five) [5×3=15]**

1. Write down the characteristic features of gymnosperms.
2. Note down the identifying characters of red algae.
3. Describe the structure and functions of mitochondrion.
4. Mention the economic importance of bacteria.
5. Describe the role of temperature in ecosystem.
6. Describe nitrogen cycle.
7. Distinguish between prokaryotic and eukaryotic cells.

**3. Describe the family compositae in semi-technical terms with floral formula and floral diagram. Also write the economic importance of any two plants of the family. [ 7.5 ]**

**OR**

**Define alternation of generation. Describe the process of alternation of generation with reference to the life cycle of *Marchantia*.**

**4. What is meiosis? Describe the process of meiosis I. [8]**

**SET - II**

**1. Answer in very short (attempt any seven) [7×1=7]**

1. What do you understand by incipient nucleus?
2. What is pinocytosis?
3. What are the constituents of nucleic acids?
4. What are the hierarchy of classification?
5. State the functions of rhizoids.
6. What is peristome?
7. Why are virus called biological puzzle?
8. Define food chain.
9. What causes acid rain?
10. State any two causes of deforestation.

**2. Answer in brief (attempt any five) [5×3=15]**

1. How can you distinguish gymnosperms from the angiosperms?
2. Write down the characteristic features of kingdom mycota.
3. Mention the significances of meiosis.
4. Give a brief account on protein.
5. Describe the structure and functions of chloroplast.
6. Write down the general processes of succession.
7. Write down the importance of lichens.

**3. Describe the Sub-family Papilionaceae in semi-technical terms with floral formula and floral diagram. Also write the economic importance of any two plants of the family. [7.5]**

**OR**

**Define alternation of generation. Describe the process of alternation of generation with reference to the life cycle of *Drypteris*.**

**4. Define ecosystem. Describe the structural and functional aspects of grassland ecosystem. [8]**

**SET - III**

**1. Answer in very short (attempt any seven) [7×1=7]**

1. What are cristae?
2. Why is prokaryotic DNA called naked?
3. What do you understand by conjugated protein?
4. Give any two examples of class chlorophyceae.
5. What do you understand by gametophytic generation?
6. Define hierarchic system of classification.
7. What do you understand by perianth?
8. State the functions of ozone layer.
9. Define symbiosis.
10. What is ecological succession?

**2. Answer in brief (attempt any five) [5×3=15]**

1. How flow of information takes place through a cell?
2. Describe the structure and functions of endoplasmic reticulum.
3. Distinguish between mitosis and meiosis.
4. Who proposed 5 kingdom systems? Mention its advantages over 2 kingdom system.
5. Write down the characteristic features of kingdom monera.
6. Write short notes on xerosere.
7. What is acid rain? Write down its consequences.

**3. Describe the family Solanaceae in semi-technical terms with floral formula and floral diagram. Also write the economic importance of any two plants of the family. [7.5]**

**OR**

**Describe the different mode of life cycle of Yeast.**

**4. Define ecosystem. Describe the structural and functional aspects of pond ecosystem. [8]**

**SET - IV**

**1. Answer in very short (attempt any seven) [7×1=7]**

1. Mention the functions of cell wall.
2. Why are lysosome called suicidal bag?
3. Name any two plant micronutrients.
4. State the function of heterocyst.
5. What is coenocytic mycelium?
6. What is glycosidic bond?
7. Define mycorrhizae.
8. What are heliophytes?
9. Define autecology.
10. What is net primary productivity?

**2. Answer in brief (attempt any five) [5×3=15]**

1. Differentiate between plant and animal cell.
2. Describe fluid mosaic model of cell membrane.
3. What is binomial system? Write down its rules.
4. Differentiate tap root and fibrous root.
5. Write down the characters of bryophyte.
6. Discuss the role of rainfall in ecosystem.
7. What is global warming? Mention its impact.

**3. Describe the family Graminae in semi-technical terms with floral formula and floral diagram. Also write the economic importance of any two plants of the family. [7.5]**

**OR**

**Define alternation of generation. Describe the the sexual life cycle of *Spirogyra*.**

**4. Define cell cycle. Describe the process of mitotic cell division with necessary figures. [8]**

**SET - V**

**1. Answer in very short (attempt any seven) [7×1=7]**

1. State the constituents of cell membrane.
2. Define peptide linkage.
3. Mention the components of bacterial cell wall.
4. What is akinete?
5. Define pneumatophores.
6. What do you understand by stipules?
7. Define biosphere.
8. What is proto-coperation?
9. What is the common method of reproduction in fungi?
10. What do you understand by ecotype?

**2. Answer in brief (attempt any five) [5×3=15]**

1. Mention the characteristic features of virus.
2. How flow of energy takes place through a cell?
3. What is mitosis? Mention its significance.
4. Give an account on lipid.
5. What is gametophytic generation? Draw the gametophyte of fern and lebel it.
6. Describe different steps of hydrosere in brief.
7. Discuss the role of humidity in ecosystem.

**3. Describe the family Cruciferae in semi-technical terms with floral formula and floral diagram. Also write the economic importance of any two plants of the family. [7.5]**

**OR**

**Define alternation of generation. Describe the process of alternation of generation with reference to the life cycle of *Funaria*.**

**4. Define ecosystem. Describe the role of light and temperature in the ecosystem. [8]**