

- All questions are compulsory.
- Draw diagram wherever necessary.
- Figures to the right indicate marks.

**Q. I ANSWER THE FOLLOWING: (ANY TWO)**

(20)

1. Explain the ultra-structure of chloroplast.
2. What is a cell wall? Explain its components and state its functions.
3. Diagrammatically explain ultrastructure of endoplasmic reticulum.
4. Give any five points of differences between a prokaryotic and eukaryotic cell.

**Q. II EXPLAIN THE FOLLOWING: (ANY TWO)**

(20)

1. Tropical rain forest.
2. Desert Ecosystem.
3. Fresh water Ecosystem
4. Energy flow in an ecosystem.

**Q. III ANSWER THE FOLLOWING: (ANY TWO)**

(20)

1. Discuss dihybrid cross with a suitable example.
2. Explain recessive epistasis with an example
3. What is an allele? Explain multiple alleles with an example
4. Illustratively explain gene interaction without modification of Mendelian ratio

**Q. IV WRITE A SHORT NOTE ON (ANY THREE)**

(15)

1. Fluid Mosaic Model.
2. Functions of chloroplast and Endoplasmic reticulum.
3. Boreal coniferous forest.
4. Parasitic food chain.
5. Monohybrid Cross.
6. Explain the terms: - Gene, Phenotype, Genotype, Diploid, Heterozygote.

-----XXXXXX-----