

B.Sc. Part-I
Paper-II Cell Biology and Genetics

A. Short answer type questions

1. Who discovered nucleus.
2. Write any two features of eukaryotes.
3. What do you mean by diffusion?
4. Define mutant.
5. What are topoisomerases?
6. What is Turner's syndrome?
7. Differentiate between Euchromatin and Heterochromatin.
8. Write the functions of t-RNA.
9. Define polyploidy.
10. Define cell cycle.
11. Write the full form of ATP.
12. Mention any three contrasting traits that were studied by Mendel in pea plant.
13. What are Okazaki fragments?
14. Who coined the name Mitochondria?
15. Who proposed the fluid mosaic model of plasma membrane?

B. Long answer type questions

1. Discuss Mendel's law of inheritance.
2. Write short notes on -
 - a) Functions of Golgi complex
 - b) Structure of cilia
3. Short notes on-
 - a) Incomplete dominance
 - b) Cytoplasmic inheritance
4. Describe various types of mutations and discuss the role of gene mutations in the process of evolution.
5. Explain the structure of chromosomes.
6. Describe in detail the fluid mosaic model of plasma membrane.
7. Describe chemical composition of RNA. What are different kinds of RNA? State their functions.
8. Give an account of DNA replication.
9. Describe process of meiosis and compare it with mitotic cell division.
10. Give an account of ultrastructure chemical composition and functions of mitochondria.