

FACULTY OF SCIENCE
B.Sc. CBCS I-Year (I-Semester) Regular Examinations, February/March-2023
Biotechnology-I
(Cell Biology and Genetics)

Time: 3 Hours

Max Marks: 80

SECTION-A

(4x5=20 Marks)

Answer any Four questions from the following

1. Fluid mosaic model.
2. Prokaryotic cell.
3. Necrosis.
4. Apoptosis.
5. Law of independent assortment.
6. Sex determination in Drosophila.
7. Mitochondrial inheritance in human.
8. Gene mapping.

SECTION-B

(4x15=60 Marks)

Answer all the following questions

9. (a) Explain in detail about ultrastructure of Eukaryotic cell.
(OR)
(b) Explain in detail about specialized chromosomes.
10. (a) What are different phases in meiosis write its significance?
(OR)
(b) Explain in detail about Eukaryotic cell cycle.
11. (a) What are different factors contributing to success of Mendel's experiment?
(OR)
(b) Explain in detail about Penetrance and Expressivity.
12. (a) Explain in detail about Non-Mendelian inheritance.
(OR)
(b) Explain in detail about Hardy-Weinberg Equilibrium.