

FACULTY OF SCIENCE

B.Sc. (CBCS) II-Year (III-Semester) Regular Examinations, Dec-2022/Jan-2023

Biotechnology-III

(Molecular Biology and Recombinant DNA Technology)

Time: 3 Hours

Max Marks: 80

SECTION-A

(4x5=20 Marks)

Answer any Four questions from the following

1. Prokaryotic genome organization.
2. Wobble hypothesis.
3. Splicing mechanism.
4. Colony hybridization.
5. Enzymes involved in the replication of DNA.
6. DNA ligases.

SECTION-B

(4x15=60 Marks)

Answer all the following questions

7. (a) What is mutation? Discuss different types of mutations.
(OR)
(b) Discuss about Griffiths transformation experiment.
8. (a) Explain in detail about translational mechanism in eukaryotes.
(OR)
(b) Elaborate on transcription mechanism in prokaryotes.
9. (a) Discuss about post-translational modifications.
(OR)
(b) Explain in detail about Operon concept.
10. (a) Explain in detail about applications of recombinant DNA technology.
(OR)
(b) What are vectors? Discuss different types of vectors.