

A-240

Total Pages : 3

Roll No.

MSCZO-507

M.Sc. ZOOLOGY (MSCZO)

(Molecular Biology and Biotechnology)

2nd Semester Examination, 2024 (June)

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section-A

(Long Answer Type Questions) 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

1. Give detail of cell culture technique.
2. Write an account of the enzymology of DNA replication.
3. Explain the structural features and role of RNA polymerases and promoters in transcription of eukaryotes and prokaryotes.
4. Describe the gene regulation at lac and arabinose operons.
5. Describe the essential mechanism of transcription.

Section–B

(Short Answer Type Questions) 4×8=32

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. Write short note on :
 - (a) rRNA
 - (b) tRNA
 - (c) mRNA
2. Describe the splicing and editing.
3. What is RAPD ? (Random Amplification of polymorphic DNA).

4. Describe the plasmid biology with example.
5. Write short note on :
 - (a) Prokaryotic Termination
 - (b) Eukaryotic Termination
6. Describe the cloning vector.
7. Explain in detail the Yeast Artificial Chromosomes.
8. Explain the process of in vitro fertilization.
