## P-212

Total Pages: 3 Roll No. .....

# MSCZO-507

### Molecular Biology and Biotechnology

M.Sc. Zoology (MSCZO)

2nd Semester Examination, 2023 (June)

Time: 2 Hours] 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.

#### **SECTION-A**

(Long Answer Type Questions)

**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.

 $(2 \times 19 = 38)$ 

**1.** Explain different methods of eukaryotic replication with the help of suitable diagram.

- **2.** What are transgenic animals? Explain developmental processes of sheep Dolly.
- **3.** Elaborate the process of translation in detail.
- **4.** Explain the process and applications of DNA fingerprinting along with suitable diagram.
- **5.** What do you understand by RFLP? Explain its process and uses.

#### **SECTION-B**

### (Short Answer Type Questions)

**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. (4×8=32)

- 1. Describe different methods of DNA repair mechanisms.
- **2.** What do you understand by Genetic code? Elaborate in detail.
- **3.** Discuss cell culture process and its applications.
- **4.** Explain different types of RNA with their functions.

- **5.** Describe the process of Northern Blotting along with suitable diagram.
- **6.** Write a note on process and practices of gene therapy.
- **7.** Explain the method for developing a transgenic animal with the help of suitable diagram.
- **8.** Describe the process of development of recombinant DNA (rDNA).