

**C303**

Total Pages : 3

Roll No. ....

**MSCZO-507**

**Molecular Biology & Biotechnology**

M.Sc. Zoology (MSCZO)

2nd Semester Examination, 2022 (June)

**Time : 2 Hours]**

**Max. Marks : 80**

**Note :** This paper is of Eighty (80) 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 Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

(2×20=40)

1. Describe the process of replication in Eukaryotes.
2. Describe the Structure and Function of different type of RNA.

3. What is recombinant DNA technology? What are the basic steps involved in recombinant DNA technology?
4. Explain the Plasmid Biology in detail.
5. Explain the following processes in detail :
  - (a) Cryobiology.
  - (b) Embryo culture.

### **SECTION-B**

#### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)

1. Write short notes on :
  - (a) Rolling circle mode of replication.
  - (b) Okazaki fragments.
2. What is transcription?
3. Describe the process of Eukaryotic translation.
4. Describe the nuclear export of mRNA.
5. Explain the 5'-cap formation.

6. Write a Short note on :
    - (a) Regulation of Translation.
    - (b) Post translational modification.
  7. Explain the process of in vitro fertilization.
  8. Describe the Post- transcriptional modification.
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