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Total Pages: 3 Roll No.

MZO-504

Molecular Biology

M.Sc. Zoology (MSCZO)

1st Semester Examination, 2023 (June)

Time: 2 Hours] [Max. Marks: 35

Note: This paper is of Thirty Five (35) 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 Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only. (2×9½=19)

1. What is genetic code? Describe in detail the properties of genetic code.

- **2.** Write the structure and functions of the different types of RNA.
- **3.** What is cancer? Discuss the types and the factors that leads to cancer.
- **4.** Describe the different stages of transcription in prokaryotes.
- **5.** Describe the mechanisms of eukaryotic gene regulation.

SECTION-B

(Short Answer Type Questions)

Note: Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only. (4×4=16)

- **1.** Write notes on Wobble hypothesis.
- **2.** Radiation acts as carcinogen and use for treating cancer as well. Comment on it.
- **3.** Write notes on DNA Polymerase.
- **4.** What is the function of mobile genetic elements? Write about Transposon.

- **5.** What is aminoacyl-tRNA and its function?
- **6.** What is the main purpose of alternative splicing?
- 7. Write about Semi-Conservative DNA Replication.
- **8.** Write about any two methods of gene transfer in prokaryotes.

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