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Total Pages: 3 Roll No.

MZO-603

Animal Biotechnology

M.Sc. Zoology (MSCZO)

3rd 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.

 $(2 \times 9\frac{1}{2} = 19)$

1. Write detailed account on transformation of malignancy.

- **2.** How are recombinants and transgenic organism generated? What is the aim of transgenesis?
- **3.** Explain with diagrammatic representation homologous and non-homologous recombination.
- **4.** Describe the process of in vitro fertilization and embryo transfer.
- **5.** Explain in detail about the preparation of culture media.

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. What are different sources of embryonic stem cell?
- 2. Write in detail on the control, testing and storage of media.
- **3.** Role of serum in cell culture for attachment and spreading factors. Discuss.
- **4.** Write in detail about the working of laminar flow.

- **5.** Write short notes on the following:
 - (a) Connective tissue.
 - (b) Blood brain barrier.
- **6.** Explain the role of biotechnology is useful in health and disease.
- **7.** Explain the method employed to generate the first transgenic animal Dolly.
- **8.** Define various properties of embryonic stem cells.