

A-927

Total Pages : 3

Roll No. -----

MZO-603

Animal Biotechnology

M.Sc. Zoology (MSCZO)

3rd Semester Examination 2024 (June)

Time: 2:00 hrs

Max. Marks: 35

Note : This paper is of Thirty Five (35) marks divided into Two (02) Section A and B. Attempt the questions contained in these sections according to the detailed given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

P.T.O.

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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.

[2x9½=19]

- Q.1. What are tumor suppressor genes? Explain the role of p53 and Rbl.
- Q.2. Write in detail about stages of cryopreservation.
- Q.3. Explain in detail about in-vitro fertilization.
- Q.4. How are recombinants and transgenic organism generated? What is the aim of transgenesis? What are methods employed to generate first transgenic animal Dolly?
- Q.5. What is pluripotent stem cell? What are the sources of hematopoietic stem cell?

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.

[4x4=16]

- Q.1. Write in detail about the working of laminar flow.
- Q.2. Write short note on any two of the following:
- a. Subculture propagation
 - b. Selection of cell lines
 - c. Gene knock-in and gene knock-out
- Q.3. Write short note on the following:
- a. Role of serum in cell culture
 - b. Blood brain barrier
- Q.4. Write short note on following:
- a. Balanced salt solution
 - b. Histology of liver
- Q.5. Write short note on any two of the following:
- a. Bio-control agent
 - b. Growth factors
 - c. Role of serum in cell culture
 - d. Sterilization
- Q.6. Explain in detail on the maintenance of cell lines.
- Q.7. Differentiate between benign and malignant tumors.
- Q.8. Write a note on scope of biotechnology.
