S-170

Total Pages: 3 Roll No.

MZO-603

Animal Biotechnology

M.Sc. Zoology (MSCZO)

3rd Semester Examination, 2022 (Dec.)

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. Discuss in detail about the organization of different types of muscles.

- **2.** Write in detail about the nervous system and also discuss about the different cell types in the brain/CNS.
- **3.** What is pluripotent stem cell? Explain the potential of different stem cell?
- **4.** Describe various methods of cell Tissue culture.
- **5.** Write a short note on :
 - (a) Pluripotency.
 - (b) Progenitor cell.
 - (c) Plasticity of HSCs.

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. Give cellular aspects of tumor cells?
- **2.** Elucidate various method of gene transfer via sperm.
- **3.** What is the role of serum in cell culture for attachment and spreading factors?

- **4.** Write about the stages of cryopreservation.
- **5.** Write a short notes on the following:
 - (a) p53.
 - (b) Propagation of cell lines.
- **6.** Explain in detail on maintenance of cell lines.
- **7.** What are the methods employed to generate the first transgenic animal Dolly?
- **8.** Define various properties of embryonic stem cells.