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Total Pages: 3 Roll No.

MZO-503

Cell Biology

M.Sc. Zoology (MSCZO)

1st 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. Describe the process of mitosis with suitable diagram of each phase.

- **2.** What do you understand by cell signaling and its different types? Describe enzyme-linked receptors in detail.
- **3.** Which organelle is known as Power house of the cell? Explain its Structure and Functions.
- **4.** What is electron microscopy. Describe it in detail with applications and limitations.
- **5.** What do you understand by Cell classification and its basis. Describe it in detail with suitable examples.

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 Cilia and Flagella? Distinguish between them. Explain their Functions.
- **2.** Write notes on G-protein receptors.
- **3.** What do you understand by cell fractionation? Describe its significance.

- **4.** Write notes on fluorescence resonance energy transfer (FRET) technique.
- **5.** What is Golgi apparatus? Give its functions in detail.
- **6.** Write notes on the structure, types and functions of Endoplasmic reticulum.
- 7. Write notes on the structure and function of nucleus.
- **8.** Write notes on protein kinases.
