

P-225

Total Pages : 3

Roll No.

MZO-503

Cell Biology

M.Sc. Zoology (MSCZO)

Ist 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. Describe the process of meiosis with suitable diagram of each phase.

2. What do you understand by cell communication? Describe G protein-coupled receptors in detail.
3. What are the models of cell membrane? Describe the fluid mosaic model of membrane structure with suitable diagrams.
4. What is Endoplasmic Reticulum? What are the types and functions of it?
5. What is Fluorescence microscopy. Describe its applications in detail.

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 is Centrosome? Explain the Structure and Functions of it.
2. What are the differences between eukaryotic and prokaryotic cell?
3. What is freeze-fracture microscopy used for? Describe this technique.

4. Write notes on Fluorescence Recovery After Photobleaching (FRAP) technique.
 5. Which organelle is known as suicide bag of the cell? Write its structure and function.
 6. Write notes on the cytoskeletal system of the cell.
 7. What is difference between Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM)? Also write the applications of these two techniques.
 8. Write notes on autocrine signalling.
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