

**K-525**

Total Pages : 3

Roll No. ....

**MZO-503**

**CELL BIOLOGY**

M.Sc. Zoology (MSCZO-20)

1st Semester Examination, 2023 (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. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

**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 structure and function of mitochondria? Discuss the role of mitochondria in energy production.
2. What is Oxidative phosphorylation? Discuss how the various events of oxidative phosphorylation occur in mitochondria.
3. What are the difference between light and electron Microscope?
4. Explain the transport function of plasma membrane with suitable examples.
5. Describe the structure and function of Golgi complex.

### **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. Explain the *C-Value Paradox*.
2. Explain the Special type of Chromosomes (Polytene and Lamp brush Chromosomes).
3. Write the structure and function of Nucleus.

4. Explain the Selective transport of protein to and from the nucleus.
  5. Explain in detail the Cell Cycle.
  6. Explain the Phase contrast microscope.
  7. Gving the principle explain the working of flow cytometry.
  8. Write a short note on :
    - (a) Lysosomes.
    - (b) Bright field microscopy.
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