

A-0100

Total Pages : 3

Roll No.

MSCZO-506

M.Sc. ZOOLOGY (MSCZO)

(Concepts of Cell Biology and Genetics)

2nd Semester Examination, Session December 2024

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) 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 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

1. Explain C-Value paradox with suitable example.
2. Describe the process of meiosis with suitable diagram and discuss its significance.
3. What is sex determination ? Describe various example of sex chromosomal mechanism of sex determination.
4. Explain the chromosome structure and DNA material.
5. Describe the polytene chromosome and lamp brush chromosome.

Section–B

Short Answer Type Questions 4×8=32

Note :- Section 'B' contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What is metaphase chromosome model of chromosomes.
2. What is dosage compensation ?
3. What is sex determination ?
4. Describe the dosage compensation in human beings.
5. Write application of somatic hybridization technology.

6. Explain the molecular basis of Neoplasia.
7. Explain the Gene regulation in prokaryotic cell.
8. Write the short notes on the following :
 - (a) Bacterial chromosome.
 - (b) Structure and morphology of T4 Phage.
