

A-239

Total Pages : 3

Roll No.

MSCZO-506

M.Sc. ZOOLOGY (MSCZO)

(Concepts of Cell Biology and Genetics)

2nd Semester Examination, 2024 (June)

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. Describe the polytene chromosome and lamp brush chromosome,
2. Explain the nucleosome model of chromosomes.
3. Describe the dosage compensation in human beings.
4. Describe the process of cell cycle.
5. Write applications of somatic hybridization technology.

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. Write short notes on the following :
 - (a) Maturation Promoting Factor
 - (b) Genetic Regulation of meiosis
 - (c) Chromosome pairing and recombination
2. How somatic hybrids are produced ?
3. Write a short note on the mechanism of cell fusion.
4. Write a note on bacterial chromosome.

5. Write a note on morphogenesis in Bacteriophae.
6. Describe the principle and working of following technique.
7. (a) DNA Fingerprinting
(b) Flow cytometry
8. Write a short note on Genome analysis.