

A-1067

Total Pages : 03

Roll No. -----

MSCZO-506

Concepts of Cell Biology and Genetics

M.Sc. Zoology (MSCZO)

Examination 2026(Feb.)

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)

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.

[2x19=38]

P.T.O.

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- Q.1. What is sex determination? Describe the different theories of sex determination.
- Q.2. Write a short note
- Human Genome
 - Model of Prokaryotic Genome
 - DNA Fingerprinting
- Q.3. Explain dosage compensation in *Drosophila*.
- Q.4. Explain the various model of Prokaryotic Genome.
- Q.5. Explain the Gene regulation in Prokaryotic & Eukaryotic cell.

Section-B

(Short-Answer-Type Questions)

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.

[4x8=32]

- Q.1. Describe the structure and function of Lamp brush chromosome?

- Q.2. Write a short note on dosage compensation in drosophila.
- Q.3. Write applications of somatic hybridization technology.
- Q.4. Write a short note on the mechanism of cell fusion.
- Q.5. Write a note on bacterial chromosome.
- Q.6. Write a short note on Genome analysis?
- Q.7. Write a short note on the mechanism of cell fusion.
- Q.8. Discuss various cell cycle checkpoints.
