

S-182

Total Pages : 3

Roll No.

MSCZO-506

Concepts of Cell Biology and Genetics

M.Sc. Zoology(MSCZO)

2nd Semester Examination, 2022 (Dec.)

Time : 2 Hours]

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.

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.

(2×19=38)

1. What is dosage compensation? How is this achieved? Discuss the difference in the mechanism involved in humans and drosophila.

2. Describe the process of meiosis in detail in animal cells. What is its significance?
3. Discuss various syndromes known to be caused due to numerical changes in chromosomes in human beings.
4. Give in detail the comparative account of Fluorescent in situ hybridization (FISH) and Genome in situ hybridization (GISH).
5. Write in detail about chromosome packaging and the proteins involved in the process.

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. (4×8=32)

1. How does sex determination differ in fruitfly and humans?
2. What are giant chromosomes, explain and also draw their well labelled sketches.
3. Describe the role of maturation promoting factors in mitosis.

4. Write short notes on :
 - (a) Heterokaryon.
 - (b) Kinetochore.
 5. Write note on human genome project.
 6. Describe the structure and morphology of T4 phage.
 7. Explain about viral genome.
 8. Write detailed note on karyotype.
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