

P-924

Total Pages : 3

Roll No.

BOT-551

Cell Biology, Genetics, Biostatistics and Ecology

M.Sc. Botany (MSCBOT)

2nd Year Examination, 2023 (June)

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. Candidates should limit their answer 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.

(2×19=38)

1. Draw a labelled diagram of the structure of chromosome and chromatids. Discuss special types of chromosomes.
2. Write an essay on transcription.
3. Discuss genetic recombination in bacteria.
4. Write a detailed account on the levels of organization of biological spectrum.
5. Give a detailed account on biodiversity concept. Discuss *in-situ* and *ex-situ* conservation with examples.

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. Discuss the mechanism of cell cycle control.
2. Write short notes on the following (any *four*)
 - I. Protein synthesis.
 - II. T test.
 - III. Eutrophication.

IV. Electron microscopy.

V. Food chain and food web.

3. What is sex linkage? Write a short note on sex linked inheritance in man.
 4. Explain induced gene mutation.
 5. What is analysis of variance? Explain.
 6. What is Bioinformatics? Describe its main components and applications.
 7. Discuss about the numerical and structural aberration in brief.
 8. What is air pollution? Discuss its causes, effects and control measures.
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