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# **BOT-551**

#### Cell Biology, Genetics, Biostatistics and Ecology

M.Sc. BOTANY (MSCBOT)

2nd Year Examination, 2022 (June)

Time : 2 Hours]

Max. Marks : 80

**Note :** This paper is of Eighty (80) 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 Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

 $(2 \times 20 = 40)$ 

**1.** Explain the ultra structure and functions of endoplasmic reticulum.

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- **2.** What is mutation? Give a detailed note on types of mutations.
- **3.** Define community ecology. Describe its characteristics in detail.
- 4. What is air pollution? How it is caused? Discuss its effects and control measures.
- 5. Give a detailed note on genetic code.

# SECTION-B

# (Short Answer Type Questions)

- **Note :** Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)
- **1.** Phase contrast microscope.
- 2. Write a note on Lampbrush chromosomes.
- 3. Chi-square test.
- 4. Differentiate between *In-situ* and *Ex-situ* conservation.
- 5. Fluid Mosaic Model.

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- **6.** Greer house effect.
- 7. Differentiate between monohybrid cross and dihybrid cross.
- **8.** Threats to biodiversity.