

**S-43**

Total Pages : 3

Roll No. ....

## **MBOT-606**

**Biostatistics and Ecology**

M.Sc. Botany (MSCBOT)

4th Semester Examination, 2022 (Dec.)

**Time : 2 Hours]**

**[Max. Marks : 35**

**Note :** This paper is of Thirty Five (35) 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 Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.

(2×9½=19)

1. Define biological diversity. What are the role and application of biodiversity?

2. What are biogeochemical cycles? Discuss the Carbon cycle in detail.
3. Define a biotic community. Describe the various features that characterize a community.
4. What do you mean by environmental pollution? Give a brief account of air and water pollution.
5. Write an explanatory note on application of computer in biological science.

## **SECTION-B**

### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only. (4×4=16)

1. How will you compare the mean of more than two samples? What is the name of this test and how it is performed?
2. Select two questions from the following to give answers in brief :
  - (a) Greenhouse gases and their sources.
  - (b) Consequence of climate change.
  - (c) Abiotic components of the ecosystem.

3. Write an explanatory note on the soil profile.
  4. Describe the ecological pyramids in brief with the help of suitable diagrams.
  5. Write short notes on any *two* of the following :
    - (a) Threatened species.
    - (b) Biodiversity hot spot.
    - (c) Scope of ecology.
    - (d) Scope and Importance of Variance.
  6. Describe temperate mountain forests in brief with particular reference to India.
  7. What is energy? Describe the flow of energy in an ecosystem.
  8. Write short notes on any *two* of the following :
    - (a) Null hypothesis.
    - (b) Degree of freedom.
    - (c) Trophic level.
    - (d) Food chain.
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