

**Botany (P.G.)**

**[CBCS]**

**M.Sc. Second Semester End Examination-2024**

**(Regular & Supplementary Paper)**

**PAPER- BOT-203**

**[Ecology, Environmental Biology and Phytogeography]**

**Full Marks: 40**

**Time: 02 Hrs**

*The figures in the right hand margin indicate marks*

*Candidates are required to give their answers in their own words as far as practicable*

*Illustrate the answers wherever necessary*

**[Use separate answer script for each Unit]**

**Unit – I**

**F.M - 20**

**Group-A**

1. Answer any four question from the followings: **4x1=4**
- Define keytone species.
  - Define extremophiles.
  - Write the scientific name of one free floating hydrophytes and one floating but rooted hydrophyte.
  - What is epistomatous leaf and where do you find it?
  - Define hydro- halophytes and xerohalophytes.
  - What is meant by ecological affixing?
  - What is reflectivity of xerophytes?

(2)

**Group-B**

2. Answer any two questions from the following: 2x4=8

- a. Discuss briefly the various types of ecosystem functions.
- b. Describe about two simplest models of population growth using deterministic equations.
- c. What is fundamental Niche? How does it differ from realised niche? Define primary Productivity and discuss its measurement process. 1+1+2=4
- d. Write the levels of organization in an ecosystem with diagram.

**Group -C**

3. Answer any one questions of the following: 1x8 = 8

- a. What are the adaptations taken by the halophytes at the physiological level? Write a short note about the role of seed coat of dimorphic seeds. Classify the plants according to salinity tolerance with examples. 2+3+3=8
- b. Describe about positive and negative interactions among living organisms. Write about the changes in ecosystem properties during succession with suitable diagrams. 4+2=8

(3)

**Unit – II**

**F.M. - 20**

**Group-A**

1. Answer any four question from the followings: 4x1=4

- a. What is parabiosphere?.
- b. Define bio indicators? Give example.
- c. What is phytocorion?
- d. What are the function of BMC?.
- e. Define bio remediation? How is it act?
- f. Mention name of two Ramsar sites in India on which one must be in West Bengal.
- g. Name 2 endemic species of Eastern Himalayas.
- h. Define aerosol.

**Group-B**

2. Answer any two questions from the following: 2x4=8

- a. Write short note – any **one** of the following 4
  - i) Silent valley movement
  - ii) Air pollution
  - iii) Carrying capacity
- b. What is Chapman cycle? Explain how  $CFCl_3$  molecule destroys ozone molecule? 2+2
- c. What an Ramson sites? State the criteria for Ramson site. 2+2
- d. Discuss Agenda – 21. 4

(4)

**Group -C**

**3. Answer any one questions of the following: 1x8 = 8**

- a. How many vegetation regions found in India, mention with area? Explain cause and effect of Global Warming? Define EIA? 3+2+2+1
- b. Explain different aspects of Biodiversity conservation? Mention the different levels of Biodiversity. What is Gamma diversity? 4+3+1