

Botany (P.G.)

[CBCS]

M.Sc. Third Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER-303

[Ecology & Environmental Biology]

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

Unit – I

Full Marks 20

[Ecology]

Group A

- 1. Answer any four questions of the following: 4x1= 4**
- Name four organic osmolytes.
 - Write two functions of ecosystem.
 - Which phyto hormones play the fundamental role in seed germination under saline condition?
 - Define deflected succession.
 - How many adaptations occur in hydrophytes?
 - What are epistomatous leaves?

(2)

Group B

2. Answer any two questions of the following: 2x4= 8
- a. Write physiological as adaptations of hydrophytes.
 - b. Define Ephemeral Annuals and Succulent. 2+2
 - c. Compare between Deep ecology and Shadow ecology. 4
 - d. Write notes on ecological niche and habitat niche. 2+2

Group C

1. Answer any one question of the following: 1x8=8
- a) Describe the biochemical and physiological Adaptation of Halophytes. 8
 - b) Write about Life Table and Population Growth. 4+4

(3)

Unit – II

Full Marks 20

[Environmental Biology]

Group A

1. Answer any four questions of the following: 4x1= 4
- a) Write the name of two bio-indicators?
 - b) Define species diversity with suitable example?
 - c) What are the main functions of a biosphere reserve?
 - d) What connections exist between spheres of earth?
 - e) Name two front workers of 'Narmada Bachao Andolan' of India.
 - f) What are critical conditions for bioremediation?

Group B

2. Answer any two questions of the following: 2x4= 8
- a) Write short notes on
 - i) Ramsar sites – Indian Scenario
 - ii) Smog
 - b) Discuss About different strategies of biodiversity conservation.
What is Dobson unit? 3+1
 - c) Write down the significance of Silent Valley.
 - d) What is meant by Sustainable development? Discuss its main features. Who wrote "our common future"? 1+2+1

(4)

Group C

3. Answer any one question of the following: $1 \times 8 = 8$

a) Define EIA. Explain its importance, objectives and Methodology. Mention the year of current EIA notification in India. $1 + (2 + 2 + 2) + 1$

b) Discuss the effect of Global warming on climate change? What do you mean by Ozone Hole? Write down the reasons of Antarctic Ozone Hole according to NASA and NOAA. $2 + 2 + 4$