

M. Sc. DEGREE END SEMESTER EXAMINATION : OCTOBER 2022**SEMESTER 1 : BOTANY****COURSE : 21P1BOTT03: ECOLOGY, ENVIRONMENTAL BIOLOGY, PHYTOGEOGRAPHY AND RESEARCH
METHODOLOGY***(For Regular - 2022 Admission and Supplementary - 2021 Admission)*

Duration : Three Hours

Max. Weights: 30

PART A**Answer any 8 questions****Weight: 1**

- | | | |
|-----|--|--------------------|
| 1. | Briefly analyse the role of ecology in healthy life | (An, CO 1) |
| 2. | How do you use the value of a diversity index? | (A, CO 2, CO 3) |
| 3. | Define autotrophic and heterotrophic succession. | (U, CO 2) |
| 4. | Write the significance of Food chain. | (A) |
| 5. | What are bioindicators? | (An) |
| 6. | Define a floristic province. | (U) |
| 7. | Explain the role of IUCN in species conservation. | (E) |
| 8. | What is citation index? Explain the significance of the same. | (U, CO 6) |
| 9. | What is null hypothesis? Provide example. | (U, CO 6) |
| 10. | What is a review article? Give its significance in a research. | (R, CO 6) |
| | | (1 x 8 = 8) |

PART B**Answer any 6 questions****Weights: 2**

- | | | |
|-----|---|---------------------|
| 11. | What is carrying capacity? Is this a static or dynamic measure? Why? | (U, CO 2) |
| 12. | Briefly explain and analyze the factors affecting population growth. | (An) |
| 13. | What is a biodiversity hot spot? Explain its role in Conservation Biology | (U, CO 5) |
| 14. | Explain the different types of Ecological pyramids. | (E) |
| 15. | Explain the working of a biofilter | (An) |
| 16. | Write a short note on GPS. | (A) |
| 17. | What is gap area of research process? Explain how you would handle gap areas. | (An, CO 6) |
| 18. | Explain the role of bioethics in research experimentation. | (U, CO 6) |
| | | (2 x 6 = 12) |

PART C**Answer any 2 questions****Weights: 5**

- | | | |
|-----|--|---------------------|
| 19. | Write an essay on the functional aspects with an emphasis on inter-specific interactions of a community. | (U, CO 2, CO 3) |
| | OR | |
| 20. | Describe the role of bioreactors in waste management. | (E) |
| 21. | Explain different threat factors that affect biodiversity. Suggest conservation measures for each factors. | (U) |
| | OR | |
| 22. | Explain how will you design the materials and method of a research proposal. | (A) |
| | | (5 x 2 = 10) |

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Explain the basics of ecology and environmental science.	U	1	1
CO 2	Discover the theoretical and practical knowledge on ecology and environmental science.	An	2, 3, 11, 19	9
CO 3	Demonstrate with different mathematical and statistical models and indices to explain natural phenomena and theoretical principles with which several ecological processes are explained.	A	2, 19	6
CO 5	Explain origin of the Western Ghats and diversity and conservation in the Western Ghats.	U	13	2
CO 6	Define biodiversity, phytogeography, ecosystem functioning etc. and integrate scientific aptitude and apply methodologies to pursue scientific researches.	An	8, 9, 10, 17, 18	7

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;