23P135

Reg. No…….. Name……

M.Sc. DEGREE END SEMESTER EXAMINATION: NOVEMBER 2023

SEMESTER 1: BOTANY

COURSE: 21P1BOTT03: ECOLOGY, ENVIRONMENTAL BIOLOGY, PHYTOGEOGRAPHY AND RESEARCH METHODOLOGY

(For Regular - 2023 Admission and Improvement/ Supplementary 2022/2021 Admissions)

Time: Three Hours Max. Weightage: 30

PART A

Answer any 8 questions **Weight: 1**

1. Define *El Nino* and *La Nina*. (A)
2. Define abstracting journals. (U,CO6)
3. Define ecological amplitude. (R)
4. What is an alternate hypothesis? Give example. (U,CO6)
5. Justify the importance of endemic species. (U)
6. Write the significance of food chain. (A)
7. Explain interference and exploitative competition. (U, CO 2)
8. Define allogenic and autogenic succession. (U, CO 2)
9. Provide the importance of acknowledgement in scientific writing. (A, CO 2)
10. List out the applications of ecology and environmental science in agriculture. (A, CO 1)

(1 x 8 = 8)

PART B

Answer any 6 questions **Weight: 2**

11. Explain the different trophic levels in a food chain. (AN)
12. Explain different types of the floristic kingdom. (U)
13. Explain age structure concepts in population based on human age structure patterns. (U, CO 2)
14. Explain different types of hypothesis and describe how would you incorporate these hypothesis in your research. (A, CO 6)
15. Discuss the differences and similarities between geometric and exponential growth. (A, CO2)
16. What are the applications of bioscrubber? (An)
17. Explain the role of bioethics in research experimentation. (U, CO 6)
18. Explain the origin of the Western Ghats. (U, CO 5)

(2 x 6 = 12)

PART C

Answer any 2 questions **Weight: 5**

19. Explain different quantitative, qualitative and synthetic characteristics of communities. (U, CO3)

OR

20. Make a hypothetical proposition and give a proposal to avail research funding. (A, CO 6)

21. Bioremediation is a technique used to reduce environmental pollution by using living organisms. What are their applications? (A)

OR

22. Write an essay on conventions, policies and other efforts on biodiversity and its conservation on a global and national level. (U)

(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.			
CO 2	Discover the theatrical and practical knowledge on ecology and environmental science.			
CO 3	Demonstrate with different mathematical and statistical models and indices to explain natural phenomena and theatrical principles with which several ecological processes are explained.			
CO 5	Explain origin of the Western Ghats and diversity and conservation in the Western Ghats.			
CO 6	Define biodiversity, phytogeography, ecosystem functioning etc. and integrate scientific aptitude, and apply methodologies to pursue scientific researches.			

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