

Reg. No

Name

24P2007

M. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2024

SEMESTER 2 - ZOOLOGY

COURSE : 21P2ZOOT05 - FIELD ECOLOGY

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

Duration : Three Hours

Max. Weights: 30

PART A

Answer any 8 questions

Weight: 1

1. Comment on the factors responsible for annual population fluctuations (A, CO 3)
 2. Comment on the term 'cybernetics'. (U, CO 2)
 3. Differentiate fundamental and realized niche (A, CO 1)
 4. Write notes on soil formation (R)
 5. What is biogeochemical cycle? (R, CO 3)
 6. Define 'wetlands' (R)
 7. Differentiate between autogenic succession and allogenic succession. (A, CO 4)
 8. Difference between physiological natality and ecological natality. (A, CO 3)
 9. Differentiate guild and ecological equivalents. (A, CO 4)
 10. What is primary productivity? (R, CO 3)
- (1 x 8 = 8)**

PART B

Answer any 6 questions

Weights: 2

11. Write notes on the physical and chemical properties of soil (U)
 12. Write a note on the trends expected during the course of autogenic succession of ecosystems (A, CO 4)
 13. Differentiate resistance and resilience stability. (An, CO 2)
 14. Explain Gaian hypothesis. (An, CO 2)
 15. Differentiate between r and k selection in population ecology. (A, CO 3)
 16. Describe the basic practices towards sustainable development of resources in ecology. (U)
 17. Elucidate phosphorous cycle with a flow chart. (A, CO 3)
 18. Discuss the mechanism of cyclical oscillation type of population fluctuations. (U, CO 3)
- (2 x 6 = 12)**

PART C

Answer any 2 questions

Weights: 5

19. Explain resource partitioning quoting suitable examples. (U)
 20. Give an account of the laws of thermodynamics. Add a note on energy flow in the ecosystem. (An, CO 3)
 21. Explain the concept and structure of meta population with Levin's model. Compare it with Logistic population model. (U)
 22. Describe the mineral resources of India and impact of mining on environment. (U)
- (5 x 2 = 10)**

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Perceive the fundamentals of ecology and environment – Physical environment, homeostasis.	Cr	3	1
CO 2	Relate the cybernetic nature of ecosystem - feedback control & redundancy of components; resistance and resilience stability, Gaia hypothesis.	E	2, 13, 14	5
CO 3	Discuss the structure and function of the Ecosystem – Ecological energetics, Animals and nutrient acquisition Biomass and productivity measurement, Biogeochemical cycles	An	1, 5, 8, 10, 15, 17, 18, 20	15
CO 4	Explain the concepts of population ecology – Population group properties, growth forms, life history strategies, population structure,	A	7, 9, 12	4

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