

M.Sc. DEGREE END SEMESTER EXAMINATION - NOVEMBER 2024**SEMESTER 1 : ZOOLOGY****COURSE : 21P1ZOOT02 : EVOLUTIONARY BIOLOGY AND ETHOLOGY***(For Regular 2024 Admission and Improvement/Supplementary 2023/2022/2021 Admissions)*

Duration : Three Hours

Max. Weights: 30

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

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| 1. | Explain different forms of sexual selection. | (U, CO 8) |
| 2. | How did bipedalism enable improved food acquisition? | (U, CO 4) |
| 3. | Distinguish between avoidance and tolerance. | (An, CO 8) |
| 4. | What is genetic equidistance? | (R, CO 3) |
| 5. | Explain coevolution with the help of examples. | (U, CO 3) |
| 6. | Define kin selection. | (R, CO 8) |
| 7. | Explain internal causal factors of behaviour. | (U, CO 8) |
| 8. | What is HAT activity of clock? | (R, CO 8) |
| 9. | Explain chemical communication among ants. | (U, CO 8) |
| 10. | Enlist Ivan P. Pavlov's major contribution to the study of Animal Behaviour. | (R, CO 6) |
| | | (1 x 8 = 8) |

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

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| 11. | Explain the idea of genetic drift and present an account of its impact on speciation. | (U, CO 3) |
| 12. | Explain the motivational basis of animal behaviour, with the help of suitable models. | (U, CO 8) |
| 13. | Describe the origin of photosynthesis. | () |
| 14. | Explain molecular divergence. | () |
| 15. | Elaborate the concept of Fitness and Natural selection. | () |
| 16. | Discuss the idea of Panspermia. | () |
| 17. | Elaborate on Mitochondrial Eve and Y chromosomal Adam. | (Cr, CO 4) |
| 18. | Explain different types of memories and their mechanisms of encoding. | (U, CO 8) |
| | | (2 x 6 = 12) |

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

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| 19. | Explain the role of developmental genes in Drosophila. | () |
| 20. | Explain physiological and biochemical evidences of evolution. | (U, CO 3) |
| 21. | Describe reflex actions and fixed action patterns. | () |
| 22. | Explain the formation and types of fossils. | () |
| | | (5 x 2 = 10) |

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 2	Analyse the evidences of biological evolution	U	15	5
CO 3	Examine the process of animal evolution through studying the population genetics and ontogeny	U	4, 5, 11, 15, 16, 17	19
CO 4	Explain the theories regarding human evolution and analyse the molecular evidences of our phylogeny	U	2, 13	3
CO 6	Explain the causal factors of behaviour and different types of behaviour	U	10	1
CO 8	Evaluate the processes underlying the expression of behaviour patterns by animals	U	1, 3, 6, 7, 8, 9, 12, 14	10

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