

Reg. No

Name

22P1023

M. Sc. DEGREE END SEMESTER EXAMINATION : OCTOBER 2022

SEMESTER 1 : ZOOLOGY

COURSE : 21P1ZOOT02: EVOLUTIONARY BIOLOGY AND ETHOLOGY

(For Regular - 2022 Admission and Supplementary - 2021 Admission)

Duration : Three Hours

Max. Weights: 30

PART A

Answer any 8 questions

Weight: 1

1. Describe the contribution of Rose Mary and Peter Grant to evolution? (R, CO 1)
 2. Explain stromatolites? (R, CO 1)
 3. Compare orthologues and homologues? (R, CO 4)
 4. Write a short note on the Taung child. (R, CO 4)
 5. What is HAT activity of clock? (R, CO 8)
 6. Define kin selection. (R, CO 8)
 7. Distinguish between avoidance and tolerance. (An, CO 8)
 8. What is Neutral Theory of Molecular Evolution? (R, CO 3)
 9. Explain the effect of migration on speciation. (U, CO 3)
 10. What do you mean by displacement behaviour? (R, CO 6)
- (1 x 8 = 8)**

PART B

Answer any 6 questions

Weights: 2

11. Give an account of Heterotopy with suitable examples. (R)
 12. Explain heterometry. (U)
 13. What are the various types of communication in primates? (R, CO 4)
 14. What are the various cues in migration? (R, CO 8)
 15. Present an account of vestigial organs and mention their importance in evolution (E, CO 3)
 16. Explain the idea of genetic drift and present an account of its impact on speciation (U, CO 3)
 17. Differentiate homoeostatic and non-homoeostatic drives? (An, CO 8)
 18. Discuss 'classical conditioning' experiments done by I. P. Pavlov. (E, CO 8)
- (2 x 6 = 12)**

PART C

Answer any 2 questions

Weights: 5

19. Explain the role of developmental genes in *Drosophila*. (U, CO 4)
20. Discuss the evolution of photosynthesis and aerobic metabolism. (E, CO 3)

21. Elaborate on communication behaviour studied in insects. (E, CO 8)
22. Discuss the mating systems found in primates. (E, CO 8)
(5 x 2 = 10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Explain the concepts of organic evolution	U	1, 2	2
CO 3	Examine the process of animal evolution through studying the population genetics and ontogeny	U	8, 9, 15, 16, 20	11
CO 4	Explain the theories regarding human evolution and analyse the molecular evidences of our phylogeny	U	3, 4, 13, 19	9
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	5, 6, 7, 14, 17, 18, 21, 22	19

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