

M. Sc DEGREE END SEMESTER EXAMINATION - OCT 2020 : FEBRUARY 2021**SEMESTER 1 : ZOOLOGY****COURSE : 16P1ZOOT02 : EVOLUTIONARY BIOLOGY AND ETHOLOGY***(For Regular - 2020 Admission and Supplementary - 2016/2017/2018/2019 Admissions)*

Time : Three Hours

Max. Marks: 75

PART A**Answer any 8 (2 marks each)**

1. What is punctuated equilibrium?
2. What is Retrograde evolution?
3. Comment on radiometric dating
4. What is the role of twist and decapentaplegic?
5. What are the various adaptations that distinguish primates from their arboreal ancestors?
6. Write a short note on Konrad Lawrence's contribution to ethology.
7. Define kinesis. What are the major types of kinesthetic responses found in animals?
8. What is meant by motivation?
9. What is imprinting?
10. Comment on Bio-electricity signals.
11. What is semelparity?
12. What are clock genes and Bmal?

(2 x 8 = 16)**PART B****Answer any 7 (5 marks each)**

13. Explain adaptive radiation in animals
14. Briefly describe 'genetic drift'.
15. Give an account of heterochrony and heterotypy.
16. Write a short note on the anatomical basis for evolution.
17. Describe the organization of a reflex arc and the properties of a reflex action.
18. Explain goal oriented drives.
19. Describe different types of memories.
20. Discuss vocal communication in amphibians and birds.
21. Explain parental investment and parental care in fishes.
22. What are the various types of biological rhythms ? Explain.

(5 x 7 = 35)**PART C****Answer any 2 (12 marks each)**

23. Write an essay on isolation and speciation in animals
24. Elaborate on the various mechanisms in evolution of complexity.
25. Explain how behavioral responses are derived from different animals
26. Write an essay on visual signaling among different animals

(12 x 2 = 24)