

Reg. No .....

Name .....

18P121

**M.Sc DEGREE END SEMESTER EXAMINATION - NOVEMBER 2018**

**SEMESTER 1 : ZOOLOGY**

**COURSE : 16P1ZOOT02 : EVOLUTIONARY BIOLOGY AND ETHOLOGY**

*(For Regular - 2018 Admission & Supplementary - 2016 / 2017 Admissions)*

Time : Three Hours

Max. Marks: 75

**Section A**

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

1. What is the contribution of Rose Mary and Peter Grant to evolution?
2. Differentiate Eubacteria and Archaeobacteria.
3. What is meant by biochemical recapitulation?
4. What is the role of twist and decapentaplegic?
5. Give the features of *Sahelanthropus tchadensis*.
6. Write a short note on Ivan P. Pavlov's contribution to the study of Animal Behaviour.
7. What is Taxes? Present any two examples.
8. Differentiate between homoeostatic and non-homoeostatic drives.
9. What is imprinting?
10. What is Jacobson's organ?
11. Comment on different mating systems.
12. What are circadian rhythms?

**(2 x 8 = 16)**

**Section B**

**Answer any 7 (5 marks each)**

13. Write notes on evidences of evolution from embryology
14. Briefly describe genetic drift
15. Explain how co-option is exhibited at the molecular level.
16. Elaborate on Mitochondrial Eve and Y chromosomal Adam.
17. Describe the organization of a reflex arc and properties exhibited by a reflex action.
18. Explain the motivational basis of animal behaviour with the help of suitable models.
19. Describe habituation and sensitization in *Aplysia*.
20. Explain the pheromonal communication in ants.
21. Parental care in mammals.
22. What are the various types of biological rhythms ? Explain.

**(5 x 7 = 35)**

**Section C**

**Answer any 2 (12 marks each)**

23. Explain the evidences of evolution from morphology and anatomy
24. Explain the role of developmental genes in *Drosophila*.
25. Write an essay on animal communication through auditory signals.
26. Write an essay on sexual selection.

**(12 x 2 = 24)**