

**First Semester M.Sc. Degree Examination (CSS) - Zoology**  
**ZY1CT02 Course II – Evolutionary Biology and Ethology**

**Time: 3Hours**

**Total Weight-30**

---

**Section I – Short answer type questions**

**Weight-1**

*Answer any 10 out of 12*

1. What is endosymbiont theory?
2. Comment on neutral evolution.
3. Distinguish between intelligent design and evolutionary theory.
4. What is LUCA?
5. Define Hardy-Weinberg law.
6. Distinguish between heterotopy and heterometry.
7. Comment on RNA world.
8. What is founder effect? Give an example.
9. Briefly highlight a few advantages of chemical communication.
10. Differentiate between habituation and sensitization in animal behavior.
11. Comment on the differences between kinesis and taxis.
12. What are the advantages of altruism?

**Section II- Short essay type questions**

**Weight -2**

*Answer any 5 out of 8*

13. Discuss Neutralist versus Selectionist approaches in evolution.
14. Comment on the contributions of Rosemary and Peter Grant in understanding molecular evolution.
15. Discuss the idea of biochemical origin of life and describe the experiment that supported the concept.
16. Which are the major mass extinctions in the geological past? How did they affect evolutionary process?
17. Give an account on evolution of sex and its advantages.
18. Explain biological rhythms influenced by the lunar cycle with examples.
19. What is the role of courtship in reproductive behavior? Add a note on the mating systems met within birds.
20. What is imprinting? Why is it a unique form of learning?

**Section III- Long essay type questions**

**Weight -5**

**Answer any 2 out of 3**

21. Discuss Darwinism in the light of modern developments in biology.
22. Describe hominid fossils and comment on the cytogenetic and molecular basis of origin of man.
23. Give an account on the social organization of primates.