

Reg No:.....
Name :.....

K25FY2481 C

Second Semester FYUGP Zoology Examination
APRIL 2025 (2024 Admission onwards)
KU2DSCZOO106 (BASICS OF EVOLUTIONARY BIOLOGY)
(DATE OF EXAM: 2-5-2025)

Time : 90 min

Maximum Marks : 50

Part A (Answer any 6 questions. Each carries 2 marks)

1. Name scientists who conducted experiments to support the chemical origin of life. 2
2. What does Darwin mean by "survival of the fittest"? 2
3. What is the significance of fossil evidence in understanding evolution? 2
4. Why is the Ordovician period significant in evolutionary history? 2
5. What is the significance of vestigial organs in understanding evolution? 2
6. What is the geological timescale, and why is it important? 2
7. Define gradualism in evolution and provide an example. 2
8. Discuss the role of mutation and recombination in maintaining genetic variation in populations. 2

Part B (Answer any 4 questions. Each carries 6 marks)

9. How does the rapid evolution of HIV within a host affect treatment strategies? 6
10. Describe Jean-Baptiste Lamarck's theory of evolution and explain why it is not accepted today. 6
11. If life were to re-evolve, how might evolutionary pathways differ from those seen in Earth's history? Justify your answer. 6
12. Discuss major vestigial organs and their significance as evidence of evolution. 6
13. Briefly explain the evolutionary trends in horse evolution. 6
14. Distinguish between adaptation and preadaptation/exaptation. Give examples. 6

Part C (Answer any 1 question(s). Each carries 14 marks)

15. Arrange the following stages in order and explain the Lamarckian evolution with examples. Inheritance of acquired characters. Environmental changes Use of an organ New needs Structure disappears Origin of a new species New needs Disuse of an organ Structure develops better. 14
16. Explain the concept of evolution. Provide two case studies to explain how evolution is observed in real time. 14