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IV Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/ Improvement) Examination, April 2025 (2020 to 2023 Admissions)

GENERAL AWARENESS COURSE IN LIFE SCIENCES (ZOOLOGY) AND COMPUTATIONAL BIOLOGY

4A13ZCB : Evolution

Time: 3 Hours Max. Marks: 40

PART - A

Write about **each** of the following in **2** or **3** sentences. **Each** question carries **1** mark. **(6×1=6)**

- 1. Endosymbiosis
- 2. Neo-Lamarckism
- 3. Fossilization
- 4. Genetic drift
- 5. Name any two fossil ancestors of modern man.
- 6. Big Bang Theory of evolution.

PART - B

Explain about any six of the following. Each question carries 2 marks. (6×2=12)

- 7. Write short notes on fossil dating.
- 8. C value paradox.
- 9. Explain Hardy-Weinberg law.
- 10. Who proposed Mutation Theory, what is its key concept?

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- 11. What is Abiogenesis and how it differ from biogenesis?
- 12. What is co-evolution? Mention how does it occurs.
- 13. Distinguish Micro and Macro evolution.
- 14. What is the concept of the selfish gene and how does it explain evolutionary behavior?

PART - C

Write short notes on any four of the following. Each question carries 3 marks. $(4\times3=12)$

- 15. What is kin selection and how does it influence evolutionary behavior?
- 16. Differentiate between Batesian mimicry and Mullerian mimicry with examples.
- 17. Explain the key concept of Haldane-Oparin theory with its significance.
- 18. How did amphibians evolve and what are the adaptations that helped them transition from water to land?
- 19. Write short notes on Darwin's finches provide evidence for natural selection.
- 20. Explain Lamarck's theory and its criticism.

PART - D

Write essay on any two of the following. Each question carries 5 marks. $(2\times5=10)$

- 21. Describe the modern ideas on the origin of life and how do the Naked Gene Hypothesis and RNA World Theory contribute to these explanations.
- 22. What is species concept? What are the different types of species concepts used in biological classification?
- 23. Write an essay on Miller-Urey experiment with experimental setup.
- 24. Briefly explain the contributions of Alfred Russel Wallace.
