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B.Sc/6th Sem (H)/ZOO/25(CBCS)

2025

6th Semester Examination

ZOOLOGY (Honours)

Paper : C 14-T

[Evolutionary Biology]

[CBCS]

Full Marks : 40

Time : Two Hours

The figures in the margin indicate full marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any *five* questions : $2 \times 5 = 10$

1. What is microsphere?
2. What do you mean by co-evolution?
3. What is the difference between primates and hominids?
4. What do you mean by allopatric speciation?
5. What is adaptive radiation?
6. Define founder's effect.
7. Name two fossil records of hominids.

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8. A population of 200 individuals is composed of 90TT, 60Tt and 50tt. Calculate the gene frequencies of T and t.

Group - B

Answer any *four* questions : $5 \times 4 = 20$

9. What is species? Explain Biological species concept.
10. Write a short note on stabilising selection. What is monophyly? $3+2$
11. Contrast unique hominin characteristics. Explain the origin of photosynthesis. $3+2$
12. Differentiate between homologous and analogous structures. What are isolating mechanisms? $2+3$
13. Explain the role of mutation in changing allele frequencies. What is convergent evolution? $3+2$
14. Who proposed RNA World theory? What does RNA theory proposed.

Group - C

Answer any *one* question : $10 \times 1 = 10$

15. How are phylogenetic trees constructed using parsimony? Explain the concept of fitness in natural selection. Describe the causes and effects of mass extinction. What is molecular clock? $3+3+3+1$

16. Discuss the historical review of evolutionary concepts, including Lamarckism, Darwinism and Neo-Darwinism. Explain the Hardy-Weinberg Law, including its derivation.

5+5