

TDC (CBCS) Even Semester Exam., 2022

ZOOLOGY

(Honours)

(6th Semester)

Course No. : ZOOHCC-602T

(Evolutionary Biology)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

SECTION—A

Answer any ten of the following questions : 2×10=20

1. Write a brief note on the theory of chemogenesis.
2. What is the significance of coacervates?
3. Discuss the Urey-Miller experiments as the proof of prebiotic synthesis of organic molecules.

4. What do you mean by analogous organs? Give examples.
5. What is molecular clock concept?
6. Write a note on transitional forms.
7. State the conditions for Hardy-Weinberg equilibrium.
8. Name the factors responsible for genetic variability in a population.
9. What is population bottleneck?
10. What is cline?
11. Briefly discuss inter-population variation.
12. What is allopatric speciation?
13. Write a brief note on physical characteristics of Dryopithecus.
14. What do you mean by convergent and divergent evolution?
15. What is the difference between *Homo sapiens* and *Homo erectus*?

(3)

SECTION—B

Answer any five of the following questions : 6×5=30

16. Discuss in detail the evolution of eukaryotes with necessary illustrations.
17. Who are the supporters of neo-Darwinism? Describe some recent experiments put forward to support the natural selection theory. 2+4=6
18. Discuss the evolution of horse with suitable illustrations.
19. Define variation. What are its different types? Describe how germinal variation affects organisms with example. 1+2+3=6
20. Discuss the role of migration and mutation in changing allele frequency.
21. What is genetic drift? Discuss the founder effect and bottleneck effect with suitable illustrations. 2+4=6
22. What is isolating mechanism? Describe how many ways are there in which free interbreeding may be interfered. 2+4=6

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(Turn Over)

(4)

23. Where is the Galapagos island situated? Name the major islands which constitute the Galapagos island. Describe them giving emphasis on Darwin finches and mammals. 1+2+3=6
24. Which trait differentiates hominids from other primates? Discuss in brief the origin and evolution of man. 2+4=6
25. Write a detailed note on construction of phylogenetic trees and their interpretations.

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