

# 2021/TDC (CBCS)/EVEN/SEM/ ZOOHCC-602T/017

## TDC (CBCS) Even Semester Exam., September—2021

### ZOOLOGY

(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 abiogenesis.
- 2. Write briefly the Urey-Miller experiment on the proof of prebiotic synthesis of organic molecules.
- 3. Write a brief note on Coacervates.

(Turn Over)



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- 4. Briefly discuss the endosymbiotic origin of eukaryotes.
- 5. Briefly explain homology with an example.
- 6. What are analogous organs? Explain briefly with an example.
  - 7. Define geological time scale. Mention the dominant plant and animal groups in Cenozoic era.
  - 8. Write a brief note on transitional forms with an example.
  - **9.** Define gene pool. How the fluctuation in the size of gene pool takes place?
  - 10. What are the conditions for the Hardy-Weinberg equilibrium?
  - 11. Write a brief note on allele frequency.
  - **12.** Mention the different factors responsible for genetic variability in a population.
- 13. Write a brief note on genetic landscape.
- 14. Write a brief note on biological species concept.
- 15. Briefly discuss allopatric speciation.
- 16. Write a brief note on sympatric speciation.

#### (3)

- Distinguish between convergent and divergent evolutions.
- 18. Write a brief note on Dryopithecus.
- 19. Mention the characteristics of Ramapithecus.
- 20. Write a brief note on Homo erectus.

#### SECTION-B

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

- 21. Discuss the basic postulates of Darwinism with illustration. Add a note on the evidences that support Darwinism.

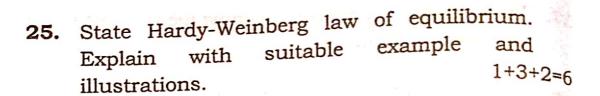
  4+2=6
- 22. What was the basic principle of Lamarckism? Explain the evolutionary theories of Lamarck with proper example.
  2+4=6
- 23. Define fossil. Discuss the different types of fossils. Add a note on the determination of age of fossils.1+3+2=6
- 24. Define variation. Write a brief note on somatic and germinal variations. Discuss the different sources of variation. 1+2+3=6

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(Turn Over)



- 26. Define genetic drift. Explain the bottleneck effect and Founder effect with suitable illustrations.
- 27. Define microevolution. Discuss the mechanism of microevolution with suitable examples.

  1+3+2=6
- 28. Define adaptive radiation. Explain the phenomenon of adaptive radiation with proper example. 2+4=6
- 29. Discuss the special features of primates. Add a note on some principal scientists associated with the study of human evolution.

  4+2=6
- 30. Discuss in detail the different evolutionary trends during evolution of horse with suitable illustrations.

  4+2=6

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