



**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 :  $2 \times 10 = 20$

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.



( 2 )

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.

22J/18

( Continued )

( 3 )

17. 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

22J/18

( Turn Over )



( 4 )

25. State Hardy-Weinberg law of equilibrium. Explain with suitable example and illustrations.  $1+3+2=6$
26. Define genetic drift. Explain the bottleneck effect and Founder effect with suitable illustrations.  $1+3+2=6$
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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