



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 6th Semester Examination, 2022



**ZOOACOR14T-ZOOLOGY (CC14)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

1. Answer any **eight** questions from the following: 2×8 = 16
- Define natural selection.
  - What is ring species?
  - What is bottleneck phenomenon?
  - Distinguish between microevolution and macroevolution.
  - What is 'Cambrian Explosion'?
  - Write two characteristics of *Homo habilis*.
  - Define cline and race.
  - What is neo-Darwinism?
  - What is genetic drift? Who proposed this theory?
  - What is molecular clock?
  - Distinguish between orthologous genes and paralogous genes with examples.
  - Who are called 'hominins'?
2. Answer any **three** questions from the following: 3×3 = 9
- Write down the Hardy Weinberg principle. Mention the factors on which this principle depends. 1+2
  - Briefly explain allopatric speciation. What is 'incipient species'?
  - Differentiate between analogous and homologous organs with examples.
  - Make a comparison among the three domains of life.
  - Comment on the evolution in vertebrate globin genes.
  - Write a short note on the dating of fossils.
3. Answer any **three** questions from the following: 5×3 = 15
- How fossils are formed? What are the different types of fossils? 2+3
  - Write in brief about the pre-mating isolating mechanisms. 5

- (c) Describe disrupting, stabilizing and directional selection with examples. 5
- (d) Write a short note on adaptive radiation with suitable example. Give examples of adaptive convergence each from placental and marsupial mammal groups. 3+2
- (e) What advantages did Bipedalism offered to early hominids? Comment on the theory of use and disuse. 3+2
- (f) What do you mean by panmixis? The number of heterozygous individuals in a population is eight times greater than the number of homozygous recessives. What are the frequencies of the recessive allele? 1+4

**N.B. :** *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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