



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