Total No. of Printed Pages—3

6 SEM TDC ZOOH (CBCS) C 14

2024

(May)

ZOOLOGY

(Core)

Paper : C–14

(Evolutionary Biology)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Fill in the blanks : 1×5=5

(a) Natural selection is the key concept of _____ theory of evolution.

(b) _____ refers to the evolutionary relationship between organisms.

(c) Darwin's finches are endemic to _____.

(d) Founder effect was initially proposed by _____.

(e) Non-avian dinosaurs became extinct during _____ extinction.

2. Write short notes on (any *two*) : 4×2=8

(a) Chemogeny

(b) Kin selection

(c) Molecular clock

(d) Parapatric speciation

3. Describe the evolutionary concept of Lamarckism. What is neo-Darwinism? 5+3=8

Or

What is multiple sequence alignment (MSA)? How does it help in evolutionary studies? 2+6=8

4. Describe various modes of speciation. 8

Or

What is the neutral theory of molecular evolution? Write a note on the three domains of life. 2+6=8

5. What is adaptive radiation? Explain it with the help of an example. 1+7=8

Or

Define Hardy-Weinberg principle. Describe the various conditions of Hardy-Weinberg equilibrium. 8

6. What are the causes and effects of mass extinction? 4+4=8

Or

Explain one extinction event with the help of proper example. 8

7. Write a note on primate phylogeny leading to *Homo sapiens*. 8

Or

Briefly describe the construction and interpretation of phylogenetic trees. 4+4=8

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