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6 SEM TDC ZOOH (CBCS) C 14

2 0 2 4

(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 _____.

(2)

(d) Founder effect was initially proposed by _____.

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

2. Write short notes on (any two) : $4 \times 2 = 8$

(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.

$2+6=8$

(3)

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. $4+4=8$
