6 SEM TDC ZOOH (CBCS) C 14

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(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) According to chemical evolution, _____ are the first pre-cells that gradually transformed into living cells.

   (b) The use and disuse theory of evolution was proposed by _____.

   (c) _____ fossil is formed when minerals fill the cavity left behind by a decayed organism.

(d) The gradual change in the characters of a species across a geographical area forms a _____.

(e) _____ is the movement of alleles from one population to another due to interbreeding between members of two population.

2. Differentiate between the following (any *two*) :

$3 \times 2 = 6$

(a) Darwinism and Neo-Darwinism

(b) Hominid characteristics and Primate characteristics

(c) Allopatric and Sympatric speciation

(d) Microevolution and Macroevolution

3. Write short notes on the following (any *three*) :

$4 \times 3 = 12$

(a) Causes of mass extinction

(b) Neutral theory of molecular evolution

(c) Multiple sequence alignment (MSA)

(d) Background extinction

(e) Sexual selection

4. Describe briefly about the evolution of primates to humans. 6

Or

Discuss about the molecular analysis of human origin.

5. Describe the process of chemical origin of life. What is biogeny?   5+3=8

                              Or

   Differentiate between chemogeny and biogeny. Write a note on the evolution of eukaryotes.   2+6=8

6. Describe different types of heritable variations and explain their roles in evolution.   8

                              Or

   Define palaeontology. Explain the evidences from fossil records in favour of organic evolution citing suitable examples.   1+7=8

7. What are the factors that disrupt the Hardy-Weinberg equilibrium? Write a note on Kin selection.   5+3=8

                              Or

   Define genetic drift. Explain the role of migration and mutation in changing allele frequencies.   1+7=8

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