

Bs/EVS C-12T

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(FYUGP)

(6th Semester)



ENVIRONMENTAL SCIENCE

(MAJOR)

Paper : EVS C-12T

(Organism and Evolutionary Biology)

Full Marks : 75

Pass Marks : 40%

Time : 3 hours

*The figures in the margin indicate full marks
for the questions.*

1. (a) Describe the major group of animals focusing on their key characteristics with examples. 15

Or

- (b) Describe the history of life on earth with reference to the evolutionary time scale.
2. (a) Explain the evolution of unicellular eukaryotes. With the help of a labelled diagram describe the eukaryotic cell. 5+10=15

(2)

Or

- (b) Explain the patterns of geographic distribution of organisms and the historical factors affecting biogeographic distribution. 15

3. (a) Illustrate the factors that are responsible for change in gene frequency in a population. 15

Or

- (b) Explain the Hardy-Weinberg law and discuss its significance in population genetics and evolution.

4. (a) Describe sexual selection as a mechanism of evolution. Explain its types, examples and importance. 15

Or

- (b) Explain the principle of molecular clocks, their applications and limitations.

5. (a) Describe the stages in primate evolution leading to the origin of *Homo sapiens*. 15

(3)

Or

- (b) Write an account of the evolutionary relationship between anaerobic metabolism, photosynthesis and aerobic metabolism.

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