2026

(FYUGP)

(6th Semester)

ZOOLOGY

(MAJOR)

Paper : ZOO/C14T

(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 different theories for the origin of life on earth. Briefly describe how Urey-Miller experiment supports Oparin's hypothesis. 10+5=15

Or

(b) Give a detailed account of Weismann's germ-plasm theory and its significance. 15

2. *(a)* Explain the molecular universality of the genetic code and protein synthesizing machinery. Discuss how similarities in DNA, RNA and ribosomes among organisms support the concept of common ancestry. 15

Or

(b) Write an essay on the neutral theory of molecular evolution. Explain its concept, assumptions and significance, and mention its contribution to the understanding of molecular evolution. 15

3. *(a)* Explain the different types of genetic load, and discuss its causes and the role in population survival and evolution. 15

Or

(b) Explain the different types of selection with neat diagrams and suitable examples. Add a note on founder's effect. 10+5=15

4. *(a)* Write short notes on any *two* of the following : 7½×2=15

(i) Micro-evolutionary changes

(ii) Allopatric speciation

(iii) Sympatric speciation

Or

(b) Write an essay on adaptive radiation, citing Darwin's finches. 15

5. *(a)* Discuss the unique hominin characteristics contrasted with primate characteristics. 15

Or

(b) Trace the phylogeny of primate from *Dryopithecus* leading to *Homo sapiens.* 15

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