

2025

(FYUGP)

(6th Semester)

ZOOLOGY

(MAJOR)

Paper : ZOO/C14

(Evolutionary Biology)

Full Marks : 75

Pass Marks : 40%

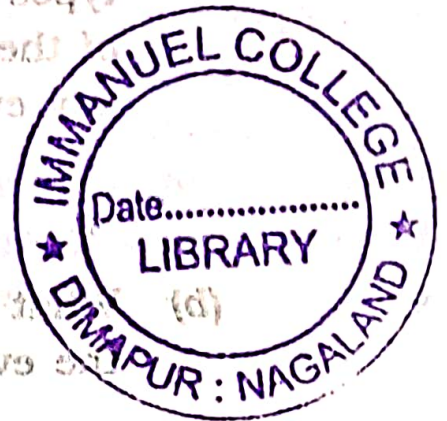
Time : 3 hours

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

1. (a) Explain the various principles of Darwin's theory of natural selection and discuss how industrial melanism serves as an evidence supporting natural selection. 10+5=15

Or

- (b) Explain Lamarck's theory of the origin of species with appropriate examples and highlight its criticisms. 10+5=15



(2)

2. (a) What are fossils? Explain the various types of fossils. Provide a brief overview of the geological timescale, highlighting key events. 1+7+7=15

Or

- (b) What are transitional fossils? Discuss the evolution of modern horse. 2+13=15

3. (a) Discuss Hardy-Weinberg equilibrium and its applications. What are the evolutionary forces upsetting Hardy-Weinberg law? $7\frac{1}{2}+7\frac{1}{2}=15$

Or

- (b) Briefly explain selection coefficient with the help of a suitable example. Discuss genetic drift. 5+10=15

4. (a) Write a note on the concept of species. Discuss pre-mating and post-mating isolation mechanism. 2+13=15

Or

- (b) What is gradual speciation? Explain the different modes of speciation. 2+13=15

L25/585

(Continued)

(3)

5. (a) Discuss the origin and evolution of Man. 15

Or

- (b) What are the evolutionary changes that developed in modern humans? Discuss the molecular analysis of human origin. 5+10=15



L25—100/585

Bs/ZOO/C14