

4/ZOO-250 (Th) Syllabus-2023

2 0 2 5

(May-June)

FYUP : 4th Semester Examination

ZOOLOGY

**(Evolutionary Biology Adaptation
and Animal Behaviour)**

(ZOO-250)

(Theory)

Marks : 56

Time : 3 hours

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

Answer Question No. **1** which is compulsory
and *any* **four** from the rest

1. Write notes on any *three* of the following :

4×3=12

(a) Darwinism

(b) Anatomical evidence of evolution

(2)

- (c) Deep-sea adaptations
- (d) Fossorial adaptations
- (e) Fixed action patterns (FAPs)
2. (a) Define the term 'speciation'. Explain the different modes of speciation. 1+6=7
- (b) Write a note on evolutionary species concept. 4
3. Describe the evolution of the genus, *Homo*. 11
4. (a) Define colouration and explain the types of colouration in animals. 1+5=6
- (b) Write a note on the adaptive significance of colouration camouflage and communication. 5
5. Define mimicry. Explain Batesian and Müllerian mimicry with examples. 1+5+5=11
6. Discuss briefly the genetic and hormonal regulation of behaviour. $5\frac{1}{2}+5\frac{1}{2}=11$
7. (a) Discuss the male and female strategies in sexual selection. 6

(3)

- (b) Explain the evolutionary significance in the mating system. 5
8. Write short notes on any two of the following : $5\frac{1}{2}\times 2=11$
- (a) Innate behaviour
- (b) Hardy-Weinberg principle
- (c) Genetic variations
- (d) Modes of communication in animals
