

**2024/TDC (CBCS)/EVEN/SEM/
ZOOHCC-602T/023**

TDC (CBCS) Even Semester Exam., 2024

ZOOLOGY

(6th Semester)

Course No. : ZOOHCC-602T

(Evolutionary Biology)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

UNIT—I

1. Answer any two questions from the following : 2×2=4

- (a) What is the law of biogenesis?
- (b) What is the significance of coacervates?
- (c) Give examples of homologous and analogous organs.

(2)

2. Answer any *one* question from the following : 6

- (a) Discuss how eukaryotes evolve with necessary illustration.
- (b) Discuss Darwinism and neo-Darwinism. Add a note on the objection to Darwinism.

UNIT—II

3. Answer any *two* questions from the following : $2 \times 2 = 4$

- (a) What do you mean by molecular clock?
- (b) How is the integrity of a gene pool maintained?
- (c) What is geological time scale?

4. Answer any *one* question from the following : 6

- (a) Discuss the evolution of horse with suitable illustration.
- (b) Discuss the heritable variation and their role in evolution.

UNIT—III

5. Answer any *two* questions from the following : $2 \times 2 = 4$

- (a) What do you mean by natural selection?

(3)

(b) What is population bottleneck?

(c) What is founder effect?

6. Answer any *one* question from the following : 6

- (a) Describe the rules of migration and mutation in changing allele frequency.
- (b) Discuss Hardy-Weinberg equilibrium with suitable illustration. Add a note on significance of Hardy-Weinberg equilibrium.

UNIT—IV

7. Answer any *two* questions from the following : $2 \times 2 = 4$

- (a) What do you mean by allopatric speciation?
- (b) What is cline?
- (c) Discuss adaptive radiation in limb structure of mammal.

8. Answer any *one* question from the following : 6

- (a) What is isolating mechanism? Discuss the various ways with which free inbreeding may be interfered.
- (b) Describe the mechanism of micro-evolution. Add a note on mass extinction.

(4)

UNIT—V

9. Answer any *two* questions from the following : $2 \times 2 = 4$

- (a) How *Homo sapiens* differ from *Homo erectus*?
- (b) What do you mean by phylogenetic tree?
- (c) What do you mean by convergent and divergent evolutions?

10. Answer any *one* question from the following : 6

- (a) How hominids differ from primate? Describe the origin and evolution of man.
- (b) Discuss the anatomy of phylogenetic tree with suitable illustration.
