

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**M.Sc. DEGREE EXAMINATION – ZOOLOGY****FIRST SEMESTER – NOVEMBER 2023****PZO1MC03 – ETHOLOGY AND EVOLUTIONARY BIOLOGY**

Date: 06-11-2023

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A – K1 (CO1)**Answer ALL the questions****(5 x 1 = 5)****1 Definitions**

- a) Ethology
- b) Genetic monogamy
- c) Transversion mutation
- d) Molecular divergence
- e) Population genetics

SECTION A – K2 (CO1)**Answer ALL the questions****(5 x 1 = 5)****2 Answer the following**

- a) Write a short note on synapse.
- b) Comment on parental care.
- c) What is the ultimate goal of adaptation?
- d) Mention the importance of molecular dating.
- e) Comment on slime mold in animal behaviour.

SECTION B – K3 (CO2)**Answer any THREE of the following****(3 x 10 = 30)**

- 3 Explain the key brain regions involved in learning and memory processes.
- 4 Illustrate and explain polygyny and explain its types in detail.
- 5 Prepare and present the Mendel's contribution in the field of genetics.
- 6 Write down the role of mutations in the origin of new genes.
- 7 Analyse the role of bottle neck effect and founder's effect in speciation.

SECTION C – K4 (CO3)**Answer any TWO of the following****(2 x 12.5 = 25)**

- 8 Analyse the role of the various methods to study the animal behaviour.
- 9 Classify the various kinds of parental care in animal kingdom.
- 10 Compare the applications of molecular phylogeny in animal behavioural analysis.
- 11 Correlate the details on how we could predict the human evolution in future scenario.

SECTION D – K5 (CO4)

Answer any ONE of the following

(1 x 15 = 15)

12 Evaluate details on the behavioural changes on domestication of animals.

13 Summarise the main applications of ancient DNA.

SECTION E – K6 (CO5)

Answer any ONE of the following

(1 x 20 = 20)

14 “Environmental sources are also influencing in shaping of animal behaviours”- Substantiate.

15 Summarise the road map of the major events in Paleozoic era.
