KAMARAJ COLLEGE (Autonomous)

Accredited with A+ Grade by NAAC

(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

THOOTHUKUDI – 628 003

(5 Pages) **Reg. No: ……**

Question. Code No : 25E00604 **Sub Code : 24USZO22**

UG Degree – End Semester Examinations - April 2025

Second Semester

B.Sc. ZOOLOGY

Animal Behaviour

(For those who joined in July 2024 onwards)

Time : 3 Hours **Maximum : 75 Marks**

PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

1. Name the location of genes in a cell.

   (a) Ribosomes (b) Lysosomes

   (c) Chromosomes (d) Golgi apparatus

2. Which of the following contributes to genetic variation?

   (a) Cloning (b) Mutation

(c) Asexual reproduction (d) Mitosis

3. Which sense is primarily used by bats to navigate in the dark?
   (a) Vision (b) Echolocation
   (c) Magnetoreception (d) Thermoregulation
4. Which part of the nervous system processes sensory information and coordinates responses?
   (a) Peripheral Nervous System (b) Autonomic Nervous System
   (c) Central Nervous System (d) Endocrine System
5. Which of the following is an example of homeostasis in animals?
   (a) Migration of birds
   (b) Nest-building in birds
   (c) Predatory hunting behavior
   (d) Regulation of body temperature in mammals
6. What type of learning involves copying the behavior of others?
   (a) Classical conditioning
   (b) Observational learning
   (c) Habituation
   (d) Trial-and-error learning
7. What is the primary factor influencing decision-making behavior in animals?

(a) Hunger and survival (b) Random choices

(c) Parental teaching (d) Genetic mutations

8. In a honey bee colony, how is the queen bee chosen?

(a) By size and aggression

(b) By the number of eggs laid

(c) By worker bee selection and feeding of royal jelly

(d) By pheromone signalling from the queen

9. What is the primary function of the circadian system in animals?

(a) Controlling daily biological rhythms

(b) Regulating digestion

(c) Producing energy

(d) Fighting infections

10. Photo-transduction is the process by which

(a) Heat is produced in response to sunlight

(b) The body detects temperature changes

(c) Melatonin is synthesized in response to light

(d) Light is converted into electrical signals in the retina

PART – B (5 X 5 = 25 Marks)

Answer ALL Questions choosing either (a) or (b).
Answer should not exceed 250 words.

11. (a) Explain genetic variation in a population.

(OR)

(b) Describe the concept of Darwinian fitness and its role in natural selection.

12. (a) Explain neural control of animal behaviour.

(OR)

(b) Describe the concept of sexual selection seen in animals.

13. (a) Discuss homeostasis and behaviour.

(OR)

(b) Describe Animal learning.

14. (a) Explain decision making behaviour in animals.

(OR)

(b) Mention some complex behaviour observed in honey bees.

15. (a) Explain the circadian system in multicellular animals.

(OR)

(b) Explain biological clock.

PART – C (5 X 8 = 40 Marks)

Answer ALL Questions choosing either (a) or (b).
Answer should not exceed 500 words.

16. (a) Explain the structure and function of genetic material in living organisms.

(OR)

(b) Discuss the polygenic inheritance of behaviour.

17. (a) Define altruism in animals and give an example of altruistic behaviour.

(OR)

(b) Explain the visual adaptations seen in animals to unfavourable environments.

18. (a) Explain conditioning and learning behaviour in animals.

(OR)

(b) Elaborate on behaviour and adaptive mechanism seen in animals in response to environment.

19. (a) Describe the instinct and learning behaviour seen in animals.

(OR)

(b) Explain the cognitive abilities of animals.

20. (a) Explain the concept of central and peripheral clock system.

(OR)

(b) Explain communication in animals.