

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 : 25000614

Course Code : 24USZ022

UG Degree – End Semester Examinations, November 2025

Second Semester

B.Sc. ZOOLOGY

Animal Behaviour

(For those who joined in July 2024 onwards)

Time : 3Hours

Maximum : 75 Marks

PART – A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

1. The proportion of a trait's variation due to genetic factors is called
(a) Evolution (b) Adaptation
(c) Heritability (d) Natural selection
2. Darwinian fitness is measured by an organism's ability to
(a) Grow faster (b) Survive and reproduce

- (c) Defend itself from predators (d) Migrate long distances
3. Which scientist proposed the concept of sexual selection?
(a) Charles Darwin (b) Gregor Mendel
(c) Linnaeus (d) Watson and Crick
4. Which of the following is NOT a form of animal perception?
(a) Echolocation (b) Magnetoreception
(c) Thermoregulation (d) Electroreception
5. What part of the brain plays a key role in maintaining homeostasis?
(a) Hypothalamus (b) Cerebellum
(c) Hippocampus (d) Medulla oblongata
6. What type of learning involves problem-solving and mental processing of information?
(a) Classical conditioning (b) Operant conditioning
(c) Cognitive learning (d) Habituation
7. What is the primary factor influencing decision-making behavior in animals?
(a) Random choices (b) Parental teaching
(c) Genetic mutations (d) Hunger and survival
8. Which of the following is a form of nonverbal communication in humans?

- (a) Speaking a sentence (b) Making eye contact
(c) Writing a letter (d) Typing a message
9. What is a common effect of circadian clock dysfunction in humans?
- (a) Increased immune function (b) Improved metabolism
(c) Faster aging (d) Sleep disorders
10. What is the scientific term for organisms that are active during the day?
- (a) Nocturnal (b) Diurnal
(c) Crepuscular (d) Aestivating

PART - B (5 X 5 = 25 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 250 words.

11. (a) Distinguish between single-gene (Mendelian) inheritance and polygenic inheritance with examples.

(OR)

- (b) Define Darwinian fitness and explain its relationship with natural selection.
12. (a) Mention the organisms exhibiting social organisation among them.

(OR)

(b) Mention the significance of animal perception.

13. (a) Explain Homeostasis behaviour in animals.

(OR)

(b) Describe the cognitive aspects of learning.

14. (a) Enumerate the displacement activities in animal and their causes.

(OR)

(b) Describe the nonverbal communication in humans.

15. (a) Differentiate between the central and peripheral clock system.

(OR)

(b) List the functions of the 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 materials.

(OR)

(b) Evaluate the frequency distribution of phenotype.

17. (a) Explain the concept of Altruism with examples.

(OR)

(b) Elaborate on the neural control of behaviour.

18. (a) Discuss the process of Animal learning.

(OR)

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

19. (a) Explain the mechanism of decision making behaviour in animals.

(OR)

(b) How animals exhibit intelligence through mental ability. Illustrate with example.

20. (a) Explain the photoreception and photo transduction in animals.

(OR)

(b) Elaborate the role of biological clocks in human health.