Reg No:..... K24FY1620
Name :.....

# First Semester FYUGP Zoology Examination November 2024 (2024 Admission onwards) KU1DSCZOO104 (INTRODUCTORY ANIMAL PHYSIOLOGY)

(EXAM DATE : 06-12-2024)

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Time : 90 min Maximum Marks : 50

**Part A (Answer any 6 questions. Each carries 2 marks)**

1. Describe how Darwin's finches demonstrate the relationship between beak structure and feeding habits. 2

2. Describe how the integument aids in gas exchange in some invertebrates. 2

3. Explain the processes of diffusion and osmosis and their significance in cellular function 2

4. How does active transport differ from passive transport in the movement of electrolytes across cell membranes? 2

5. Describe how reptiles and birds conserve water in arid environments. 2

6. How do freshwater fishes regulate water and electrolyte balance in their bodies? 2

7. What are the three main processes involved in memory? 2

8. What are the primary mechanisms of olfaction? 2

**Part B (Answer any 4 questions. Each carries 6 marks)**

9. What are the three types of muscle tissue, and what are their unique characteristics? 6

10. Propose a hypothesis to explain how the color patterns on a butterfly's wings function as a warning signal to predators. 6

11. Analyze the role of different types of nitrogenous wastes in animals. How do these waste types correlate with the animal's habitat and mode of life? 6

12. Compare the water and electrolyte balance mechanisms of marine fishes and freshwater fishes. 6

13. Compare and contrast the structures and functions of the peripheral nervous system (PNS) and the central nervous system (CNS). 6

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14. Construct a schematic diagram to show mechanism of vision 6

**Part C (Answer any 1 question(s). Each carries 14 marks)**

15. Discuss the features of supportive connective tissues with examples 14

16. (a) Write a comparative account of the structure of integument in invertebrates and vertebrates and mention the functions of each 7

    (b) Explain the concept of homeostasis and its importance for animal physiology 7

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