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(FOR THE CANDIDATES ADMITTED **22UZY611**

DURING THE ACADEMIC YEAR 2022 ONLY) **REG.NO. :**

N.G.M. COLLEGE (AUTONOMOUS): POLLACHI

END-OF-SEMESTER EXAMINATIONS : MAY 2025

BSC.ZOOLOGY(AIDED) **MAXIMUM MARKS: 50**

SEMESTER- VI **TIME : 3 HOURS**

PART – III
22UZY611– ANIMAL PHYSIOLOGY & ENDOCRINOLOGY

SECTION – A **(10 X 1 = 10 MARK)**

ANSWER THE FOLLOWING QUESTIONS. **(K1)**

1. What is the primary site of nutrient absorption in the digestive system?
   a. The mouth b. The stomach
   c. The small intestine d. The large intestine
2. The pacemaker of the human heart is located in the:_____
   a. Atrioventricular node b. Sinoatrial node
   c. Bundle of His d. Purkinje fibers
3. Which part of a neuron receives signals from other neurons?
   a. Axon b. Dendrite
   c. Cell body d. Synapse
4. Which of the following is the "Master Gland" of the Endocrine system?
   a. Pituitary gland b. Thyroid gland
   c. Adrenal gland d. Pancreas
5. Which of the following is a common symptom of diabetes?
   a. Fatigue b. Weight gain
   c. Cold intolerance d. All of the above

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES **(K2)**

6. Distinguish between the transport of oxygen and carbon dioxide in the blood
7. Define photoreceptors in the context of the human eye.
8. Define the term "osmoregulation" in the context of kidney function.
9. Differentiate between hypothyroidism and hyperthyroidism in terms of their effects on metabolism.
10. Explain how Gigantism and Dwarfism arise from the same organ

(CONT…2)

Ethical paper

SECTION – B (5 X 3 = 15 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Describe the role of the large intestine in water absorption and the formation of feces. **(OR)**
    b) Compare and contrast the major byproducts of aerobic and anaerobic respiration in human muscle cells
12. a) Assess the relative advantages and disadvantages of myogenic and neurogenic hearts in terms of their adaptability to changing environmental conditions. **(OR)**
    b) Describe the structural adaptations of the gills in fish that facilitate ion exchange
13. a) Describe the role of the pituitary gland in regulating water balance and electrolyte homeostasis.**(OR)**
    b) List and explain the key hormones involved in the stress response and their respective function
14. a) Discover the role of calcium ions in the contraction mechanism of both skeletal and cardiac muscles.**(OR)**
    b) Sketch a simplified diagram of a nephron, labeling its key components.
15. a) How do peptide and steroid hormone signaling pathways differ? Point out the similarities and differences **(OR)**
    b) Examine the impact of stress on blood glucose control in individuals with diabetes.

SECTION – C (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 (Or) K5)

16. a) Discuss the mechanisms of neural control of gastric acid secretion. **(OR)**
    b) Classify respiratory pigments add notes on it.
17. a) Justify the role of the pacemaker cells in regulating the heart rate. **(OR)**
    b) Analyze the role of chemoreceptors in taste perception and explain how they contribute to food preferences and aversions.
18. a) Analyze the structural and functional differences between sensory, motor, and interneurons, relating these differences to their specific roles in the nervous system. **(OR)**
    b) Discuss the similarities and differences between male and female gamete production.
19. a) Discuss the significant role of endocrinology in modern healthcare, highlighting its impact on the prevention, diagnosis, and treatment of hormone-related disorders. **(OR)**
    b) Categorize the endocrine glands based on their location in the body. Discuss the significance of their anatomical placement.
20. a) Discuss the different types of Goiters based on their etiology and the importance of early diagnosis and treatment of Goiter. **(OR)**
    b) Categorize the different types of female sex hormones and discuss their roles in the menstrual cycle and fertility.

Ethical paper

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