

(FOR THE CANDIDATES ADMITTED

23UZY611

DURING THE ACADEMIC YEAR 2023 -2026 ONLY)

REG.NO. :

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

END-OF-SEMESTER EXAMINATIONS : MAY 2026

B.Sc., ZOOLOGY

MAXIMUM MARKS: 75

SEMESTER VI

TIME : 3 HOURS

PART - III

23UZY611– ANIMAL PHYSIOLOGY & ENDOCRINOLOGY

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

(K1)

1. Hydrochloric acid in gastric juice helps in digestion by_____
 - a) Activating trypsinogen
 - b) Emulsifying fats
 - c) Activating pepsinogen into pepsin
 - d) Digesting carbohydrates
2. The pacemaker of the human heart is_____
 - a) Atrioventricular node
 - b) Bundle of His
 - c) Purkinje fibres
 - d) Sinoatrial node
3. Which band remains constant in length during contraction?
 - a) I band
 - b) A band
 - c) H zone
 - d) Z line
4. Which hormone acts as a hyperglycemic hormone?
 - a) Insulin
 - b) Somatostatin
 - c) Glucagon
 - d) Pancreatic polypeptide
5. Testosterone is secreted by_____
 - a) Sertoli cells
 - b) Leydig cells
 - c) Germ cells
 - d) Pituitary cells

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

(K2)

6. Name the respiratory pigment found in Molluscs and Arthropods.
7. What are Osmoconformers?
8. Define reflex arc.
9. What is the main function of Parathyroid Hormones?
10. Which gland secretes growth hormone?

SECTION – B

(5 X 5 = 25 MARKS)

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

11. a) Enunciate the role of the endocrine system in regulating of gastrointestinal secretions.

(OR)

- b) Explain aerobic respiration with its stages and energy yield.

(CONTD 2)

12. a) Illustrate the origin and spread of electrical impulses in the human heart.
(OR)
b) Elucidate the role of organ of Corti in sound perception.
13. a) Outline the sequence of events in muscle contraction according to the sliding filament theory.
(OR)
b) Illustrate the structure of female reproductive system in Humans.
14. a) Discuss the role of thyroid hormones in metabolism of carbohydrates, proteins, and lipids.
(OR)
b) Explain the positive feedback mechanism in hormone action with a suitable example.
15. a) Expound the role of iodine deficiency in the development of goitre.
(OR)
b) Assess the hormonal causes of female infertility.

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K4 (Or) K5)**

16. a) Discuss the digestion and absorption of proteins in the human digestive system.
(OR)
b) Explain the mechanism of carbon dioxide transport in blood with suitable diagrams.
17. a) Illustrate how different components of blood contribute to transport, regulation, and defense.
(OR)
b) Analyse the differences in osmotic regulation between freshwater and marine fishes.
18. a) Evaluate the importance of synaptic transmission in integrating nervous system responses.
(OR)
b) Compare the synthesis and excretion of ammonia, urea, and uric acid in different animal groups.
19. a) “Pituitary is the master of all endocrine glands” – Prove it.
(OR)
b) Compare the endocrine roles of testes and ovary in human reproduction.
20. a) Explain the regulation of growth hormone secretion and relate it to growth disorders.
(OR)
b) Discuss the causes, types, symptoms, and complications of diabetes mellitus.
