

**B. Sc. DEGREE END SEMESTER EXAMINATION: NOVEMBER 2023****SEMESTER 5 : ZOOLOGY****COURSE : 19U5CRZOO08 : BIOCHEMISTRY, HUMAN PHYSIOLOGY AND ENDOCRINOLOGY***(For Regular 2021 Admission and Supplementary 2020/2019 Admissions)*

Time : Three Hours

Max. Marks: 60

**PART A****Answer All (1 mark each)**

1. Define baroreceptors.
2. What is perikaryon?
3. Provide the basic difference between summation and simple muscle curve.
4. Name a non- carbohydrate precursor for glucose synthesis.
5. Endocrine glands known as ductless glands. Why?
6. Define carcinogen.
7. Name an aldose and ketose sugar.
8. What is Hypocapnia?

**(1 x 8 = 8)****PART B****Answer any 6 (2 marks each)**

9. "Breast milk is a complete food for the first 4-6 months of an infant" Justify the statement.
10. Differentiate holoenzyme and co-enzyme.
11. Recall the different forms of respiration. List the components of the human respiratory system.
12. Define alzheimers disease.
13. Categorize the muscles with example.
14. Discuss the medical conditions of heart occurring due to build of fats and cholestrol.
15. Define metabolism.
16. Differentiate essential and non-essential amino acids.

**(2 x 6 = 12)****PART C****Answer any 4 (4 marks each)**

17. Categorize the hormones based on their chemical nature. Present the mechanism of action of different hormones using diagrams.
18. Compare and contrast between steroid, peptide and amine hormones. Exemplify hormones as chemical messengers.
19. Explain the structure of nephron using neat illustration.
20. What are the ill effects of cigarette smoking?
21. Differentiate between the followings
  1. Isotonic and Isometric contraction
  2. Latent and refractory period of muscle contraction
  3. Superposition and summation curve
22. Briefly explain the regulation of enzyme action.

**(4 x 4 = 16)**

**PART D**

**Answer any 2 (12 marks each)**

23. Explain the mechanism of blood clotting. Mention the significance of blood clotting.
24. Elaborate on the classification of lipids based on their chemical composition. Add a note on the derivatives of cholesterol.
25. Explain the mechanism of the kidney to conserve water in the body.
26. Present the mechanism by which an electrical impulse is converted into a chemical impulse in brain cells.

**(12 x 2 = 24)**