Reg. No ..... Name **25U588**

B.Sc. DEGREE END SEMESTER EXAMINATION - OCTOBER 2025

SEMESTER 5 : ZOOLOGY

COURSE : **19U5CRZOO08 : BIOCHEMISTRY, HUMAN PHYSIOLOGY AND ENDOCRINOLOGY**

(For Regular 2023 Admission and Supplementary 2022/ 2021/ 2020/ 2019 Admissions)

Time : Three Hours Max. Marks: 60

PART A

Answer All (1 mark each)

1. Define muscle fatigue .
2. Define nerve impulse.
3. Define polycythemia.
4. What is Hypercapnia?
5. Name a PUFA.
6. What does the BMI value indicate?
7. Name the process of conversion of ammonia to urea.
8. Specify the tonicity of urine in the different locations of the nephron.

(1 x 8 = 8)

PART B

Answer any 6 (2 marks each)

9. What is prolactin? Define the peculiar role of prolactin in females.
10. Give the classification of WBC.
11. Recall the different forms of respiration. List the components of the human respiratory system.
12. Enlist the major food adulteration categories.
13. What is the significance of cholesterol?
14. Differentiate competitive and non-competitive inhibition in enzyme action.
15. Illustrate the sequence of events that occur during the release of neurotransmitters.
16. Differentiate between presynaptic and postsynaptic neurons.

(2 x 6 = 12)

PART C

Answer any 4 (4 marks each)

17. Illustrate with examples the classification of carbohydrates.
18. Define feed back mechanism. Recollect the feedback mechanism involving insulin and glucagon.
19. Briefly explain the regulation of enzyme action.
20. Explain the different reactions involved in protein metabolism with examples.
21. What do you mean by nutrition? What are the major types of food?
22. Differentiate between the followings
    1. Isotonic and Isometric contraction
    2. Latent and refractory period of muscle contraction
    3. Superposition and summation curve

(4 x 4 = 16)

PART D

Answer any 2 (12 marks each)

23. Discuss the mechanism of blood clotting in humans. Analyze the mechanism behind the removal of clot.
24. Present the mechanism by which an electrical impulse is coverted in to a chemical impulse in brain cells.
25. Explain the mechanism of the kidney to conserve water in the body.
26. Explain the process of beta- oxidation of fatty acids.

(12 x 2 = 24)