

D 112374

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Name.....

Reg. No.....

**FIRST SEMESTER (CUFYUGP) DEGREE EXAMINATION  
NOVEMBER 2024**

Zoology

ZOO 1CJ 101—AN OVERVIEW OF HUMAN PHYSIOLOGY : LIFE SUSTAINING  
SYSTEMS

(2024 Admission onwards)

Time : Two Hours

Maximum : 70 Marks

**Section A***All questions can be answered.**Each question carries 3 marks.**Ceiling 24 marks.*

1. Define homeostasis and explain its importance in maintaining physiological balance in the human body.
2. Define Tidal volume and Vital capacity.
3. What are the factors influencing oxygen dissociation curve ?
4. What is Rh factor and how it is significant in blood transfusion and pregnancy ?
5. Define Saltatory conduction.
6. What is the function of the Juxta Glomerular Apparatus ?
7. What is rigor mortis ?
8. Describe the role of neurotransmitters.
9. Write the role of any *two* glands in digestion
10. Explain the counter-current mechanism in urine formation.

**Section B***All questions can be answered.**Each question carries 6 marks.**Ceiling 36 marks.*

11. Describe the Body Mass Index (BMI).
12. Explain the biochemical pathway of blood coagulation.

**Turn over**

13. Describe how the pacemaker system that regulate the heart's rhythm.
14. Explain the sliding filament theory of muscle contraction.
15. Describe the process of message transmission at the neuromuscular junction.
16. Discuss the hormonal control of digestion.
17. Explain the role of the kidney in maintaining osmoregulation.
18. What is the ornithine cycle, and why is it important in the excretion of nitrogenous wastes ?

### Section C

*Answer any **one** question.*

*The question carries 10 marks.*

19. Discuss the transport of Oxygen and Carbon dioxide in the blood.
20. Explain the process of nerve impulse propagation and add a note on saltatory conduction.

(1 × 10 = 10 marks)