

2023

3rd Semester Examination  
ZOOLOGY (Honours)

Paper : C 6-T

[Animal Physiology : Controlling  
and Coordinating System]

[CBCS]

Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

**Group - A**

Answer any *five* questions from the following :

2×5=10

1. Why is vitamin C necessary for collagen synthesis?
2. Define autocrine communication with a suitable example.
3. Write the function of Nebulin.
4. What is duty cycle in muscle contraction relaxation?

P.T.O.

( 2 )

5. Write down the function of Brown Adipose Tissue  
(BATS)
6. What is a bipolar neuron? Give example.
7. Distinguish between A-band and B-band.
8. What is Sertoli cell? Mention its function.

### Group - B

Answer any *four* questions from the following :

5×4=20

9. Why does giant axon conduct action potential more rapidly than small-diameter axon?
10. Discuss the role of hormones in regulating calcium homeostasis in humans.
11. Why do humans with *Myasthenia gravis* disorder experience muscle weakness and increased susceptibility to muscle fatigue?
12. Describe the histological structure of testis. 5
13. Write the names and functions of placental hormones. 2+3
14. Distinguish between striated muscle, non striated muscle and cardiac muscle. What is Cori cycle? 3+2

3+2

( 3 )

**Group - C**

Answer any *one* question from the following :

10×1=10

15. What do you mean by primary and secondary messengers? Discuss the signal transduction pathways of steroidal hormone. Mention the role of hypothalamus. 3+5+2
16. What is prime mover? Describe the sliding filament theory of muscle contraction. Distinguish between myelinated and nonmyelinated nerve fibre. 2+5+3
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