

**2023**

**( FYUGP )**

**( 3rd Semester )**

**ZOOLOGY**

**( Major )**

**Paper Code : ZOO/C6**

**( Animal Physiology—1 : Controlling and Coordinating Systems )**

Full Marks : 75

Pass Marks : 40%

**Time : 3 hours**

*The figures in the margin indicate full marks for the questions*

1. Explain the structure, classification and functions of nervous tissue. 15

Or

Explain the structure and types of cartilages.

7½+7½=15

2. Describe the stages of an action potential with diagrammatic representation. Elaborate on its propagation across myelinated and non-myelinated nerve fibres. 7+8=15

Or

Classify the types of synapses based on anatomy and functions. Describe the process of synaptic transmission. 7+8=15

3. Explain in detail the histological characteristics of different types of muscle based on morphology and function. 15

Or

Discuss in detail the molecular mechanism of muscle contraction with relevant illustrations.

4. Describe the anatomy of the female reproductive system with proper diagrams and explain its physiology. 15

Or

Explain the process that leads to the development of a matured Graafian follicle and its associated hormonal regulation.

5. Write the mechanisms and enzymes involved in the signal transduction pathways for non-steroidal hormones with all required illustrations. 15

Or

What is hypothalamic-hypophyseal axis? Describe the anatomy and physiology of the hypothalamus and pituitary complex. 2+13=15

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