

U.G. 2nd Semester Examination - 2022**PHYSIOLOGY****[HONOURS]****Generic Elective Course (GE)****Course Code : PHYSIOL-H-GE-T-02**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***GROUP-A**1. Answer any **five** from the following questions :

2×5=10

- What is sarcomere?
- What do you mean by myelinogenesis?
- What is motor end plate?
- Define EPSP.
- State the difference between slow and fast muscle fibre.
- State the location and function of oligodendrocytes.
- Give example of two chemoreceptors.
- What is cross-bridge cycle?

*[Turn over]***GROUP-B**2. Answer any **two** from the following questions:

5×2=10

- Describe any two mechanical properties of cardiac muscle. 5
- Describe the structure of a neuronal synapse with proper diagram. 5
- State the difference between isometric and isotonic muscle contraction with proper example. 5
- Briefly describe the following properties of skeletal muscle : 5
 - Fatiguability
 - Summation

GROUP-C3. Answer any **two** from the following questions:

10×2=20

- Describe the structure of neuromuscular junction with a labelled diagram. 6+4=10
- What do you mean by E-C coupling? State the molecular mechanism of contraction and relaxation of skeletal muscle fibre. 3+7=10
- Describe the origin and propagation of action potential in myelinated nerve fibre. 6+4=10
- Explain with a suitable diagram the process of synaptic transmission. 10