

U.G. 2nd Semester Examination - 2020

PHYSIOLOGY

[GENERIC ELECTIVE]

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.

1. Answer any **five** questions: 2×5=10
 - a) Define synaptic cleft.
 - b) What is sarcomere?
 - c) What is tropomyosin?
 - d) Define motor unit.
 - e) What is calmodulin ?
 - f) What are Nissl granules?
 - g) What do you understand by muscle fatigue?
 - h) What do you understand by isometric contraction?

2. Answer any **two** questions: 5×2=10
 - a) Discuss the mechanism of sliding of myofilaments during muscle contraction.

- b) What are neuroglia? Write the functions of different types of neuroglia.
- c) What is resting membrane potential? Discuss the staircase phenomenon.
- d) Write a short note on postsynaptic potentials.

3. Answer any **two** questions : 10×2=20
 - a) Discuss about different patterns of synaptic connection. State the physiological properties of synapse. 5+5=10
 - b) Delineate with suitable diagram the mechanism of neuromuscular transmission. 10
 - c) What are neurotransmitters? Give a brief account on different types of neurotransmitters and their function. 2+8=10
 - d) Discuss with diagram the microscopic structure of cardiac muscle. Explain the generation of action potential in pacemaker cell. 5+5=10

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[Turn over]