B.Sc. Semester-II Examination, 2022-23

PHYSIOLOGY [Honours]

Course ID : 22511 Course Code : SH/PHY/201/C-3(T)

Course Title : Physiology of Nerve and Muscle Cells

[NEW SYLLABUS]

Time : 1 Hour 15 Minutes Full Marks : 25

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

UNIT–I

1. Answer any **five** questions from the following: 1×5=5

a) What is syncytium?

b) Name any two properties of receptor.

c) What is sarcoplasmic reticulum?

d) What do you mean by MEPP?

e) What do you mean by Wallerian degeneration?

f) Write the names of regulatory proteins of muscle.

g) Why synaptic plasticity is important for learning?

h) Mention the relationship between chronaxie and rheobase.

[Turn Over]

UNIT–II

2. Answer any **two** questions from the following: 5×2=10

a) Differentiate between single unit and multi unit of smooth muscles. Briefly mention the function of smooth muscle. 3+2

b) Name one excitatory and one inhibitory neurotransmitter. State their functions. 1+(2+2)

c) Discuss in brief the conduction of nerve impulse through nonmyelinated nerve fibre. 5

d) What do you mean by action potential? State the different phases of action potential. 2+3

UNIT–III

3. Answer any **one** question from the following: 10×1=10

a) Differentiate between red and white muscle. Describe in brief the electrical events that occur in Pacinian corpuscle. What is myasthenia gravis? 2+5+3

b) State the role of triad on muscle contraction. Discuss the mechanism of signal transduction in neuromuscular junction with proper diagram. 2+(6+2)

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