WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 2nd Semester Examination, 2020

PHYACOR03T-PHYSIOLOGY (CC3)

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.

Answer any *five* questions from the following   8×5 = 40

1. (a) Classify the neurons on the basis of their histological structures.   3+3+2

    (b) What is the role of potassium ion in the electrical phenomena that occurs in a nerve cell, after receiving a threshold stimulus?

    (c) What is chronaxie?

2. (a) Explain the propagation of nerve impulse in a myelinated nerve fibre with proper diagram.   5+3

    (b) What do you mean by compound action potential?

3. (a) Briefly discuss the ionic basis of resting membrane potential.   3+3+2

    (b) Mention the changes take place in an injured nerve fibre.

    (c) Define latent period.

4. (a) Distinguish between thick and thin filaments of muscle fibre.   3+3+2

    (b) State the role of calcium ion in muscle contraction.

    (c) What is sarcomere?

5. (a) Write down the process of excitation-contraction coupling.   5+3

    (b) What is the role of sarcotubular system in the impulse conduction process in muscle fibre?

6. (a) Define motor unit.   2+3+3

    (b) What is tetanus? Explain the ionic basis of this condition.

    (c) Write down the differences between isometric and isotonic contraction.

7. (a) Classify the synapse according to their anatomical structures.   2+4+2

    (b) Draw a labelled diagram of synapse.

    (c) What do you mean by myasthenia gravis?

8. (a) What are the differences between EPSP and IPSP? 2+4+2

    (b) Elucidate, with a proper diagram, the histological structure of neuromuscular junction.

    (c) Name two neuromuscular blocker drugs.

    N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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