

2022

**PHYSIOLOGY**

**[Honours]**

**(B.Sc. Second Semester End Examination-2022)**

**PAPER-C4T**

*Full Marks: 40*

*Time: 02 Hrs*

*The figures in the right hand margin indicate marks  
Candidates are required to give their answers in their own words as  
far as practicable  
Illustrate the answers wherever necessary*

**A. Answer any five questions from the following: 5x2= 10**

1. What do you mean by EPSP & IPSP.
2. What are nerve growth factors?
3. Describe the 'all or none law'.
4. What is single unit smooth muscle?
5. What is EMG?
6. What is Synaptic delay?
7. What is motor point?
8. What is chronaxie and Rheobase?

**B. Answer any four questions from the following: 4x5 = 20**

1. Describe the ionic basis of nerve action potential with suitable diagram.

(2)

2. What do you understand by end-plate potential and post-tetanic potentiaion? 3+2
3. Mention the role of calcium ion in muscle contraction. 5
4. Write down the differences between isometric and isotonic contractions. 5
5. Describe the electron microscopic structure of skeletal myofibril. 5
6. Describe the mechanism of smooth muscle contraction with special emphasis on MLCK. 5

**C. Answer any one question of the following: 1x10 = 10**

1. a) Discuss the chemical and electrical changes in skeletal muscle during contraction and relaxation. 4+4  
b) What do you mean by tetanus and fatigue? 1+1
2. a) what are antagonists and agonist? 2  
b) What is refractory period? 2  
c) what is Rynodine receptor nd DHP receptor? 2  
d) What is MEPP and EPP. 2  
e) What do you mean by excitation-contraction coupling? 2

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