

Code No: 58060

Set No. 1

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**IV B.Tech. II Sem., II Mid-Term Examinations, April-2014**

**QUANTITATIVE ENGINEERING PHYSIOLOGY**

**Objective Exam**

Name: \_\_\_\_\_ Hall Ticket No.

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**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.**

**I. Choose the correct alternative:**

1. Elevated ST segment results in \_\_\_\_\_ [      ]  
a) Myocardial Infraction      b) Bundle Block      c) Coronary Insufficiency      d) AV Block
2. Factors that can cause congestive heart failure: [      ]  
a) Systemic hypertension      b) Pulmonary emboli      c) Myocardial infraction      d) All of the above
3. Arrhythmias may be caused by [      ]  
a) Abnormal heart rate      b) Abnormal impulse origination  
c) Abnormal conduction      d) All of the above
4. Regardless of the method of excitation of cells or the intensity of the stimulus, the action potential is always the same at any given cell. This is known as [      ]  
a) All or nothing law      b) Nothing or none law      c) All or few law      d) Few or none law
5. The two basic divisions of nervous system are [      ]  
a) CNS and PNS      b) ANS and PNS      c) CNS and ANS      d) None of the above
6. \_\_\_\_\_ Potentials are allowed only for short distance communications [      ]  
a) Action Potential      b) Resting potential      c) Graded potential      d) Membrane potential
7. Electric signals in the dendrites and cell body of a neuron are called: [      ]  
a) Threshold potentials      b) Graded potentials      c) Action Potential      d) Neurotransmitters
8. Skeletal muscle is a form of striated muscle tissue which is under the control of the [      ]  
a) Somatic Nervous system      b) Autonomic Nervous system  
c) Intrinsic nervous system      d) Enteric nervous system
9. Which of the following substances increases in quantity during repetitive muscle contraction [      ]  
a) Glucose      b) Lactic acid      c) Oxygen      d) ATP
10. Disease that causes demyelination is [      ]  
a) Multiple Sclerosis      b) Fibrillation      c) Myocardial Infraction      d) AV block

**Cont.....2**

**II Fill in the Blanks:**

11. The \_\_\_\_\_ connects the nervous system to the muscular system via synapses.
12. Stroke Volume (SV) = \_\_\_\_\_
13. After an action potential has occurred, there is a transient negative shift, called as \_\_\_\_\_
14. Coronary insufficiency can be characterized as \_\_\_\_\_ in the ECG Wave.
15. IPSP stands for \_\_\_\_\_
16. \_\_\_\_\_ is an involuntary non-striated muscle.
17. Acetyl Choline is an example of \_\_\_\_\_ that stimulates muscular contraction.
18. As the action potential is conducted down the axon it \_\_\_\_\_ in size.
19. End Systolic Pressure Volume Relationship (ESPVR) becomes steeper and shifts to the left as inotropy (Contractility) \_\_\_\_\_
20. The smallest functional unit of a brain is \_\_\_\_\_

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**Set No. 2**

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**Objective Exam**

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**I. Choose the correct alternative:**

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9. Factors that can cause congestive heart failure: [      ]  
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10. Arrhythmias may be caused by [      ]  
a) Abnormal heart rate      b) Abnormal impulse origination  
c) Abnormal conduction      d) All of the above

**Cont.....2**

**II Fill in the Blanks:**

11. Coronary insufficiency can be characterized as \_\_\_\_\_ in the ECG Wave.
12. IPSP stands for \_\_\_\_\_
13. \_\_\_\_\_ is an involuntary non-striated muscle.
14. Acetyl Choline is an example of \_\_\_\_\_ that stimulates muscular contraction.
15. As the action potential is conducted down the axon it \_\_\_\_\_ in size.
16. End Systolic Pressure Volume Relationship (ESPVR) becomes steeper and shifts to the left as inotropy (Contractility) \_\_\_\_\_
17. The smallest functional unit of a brain is \_\_\_\_\_
18. The \_\_\_\_\_ connects the nervous system to the muscular system via synapses.
19. Stroke Volume (SV) = \_\_\_\_\_
20. After an action potential has occurred, there is a transient negative shift, called as \_\_\_\_\_

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Set No. 3

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

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**Objective Exam**

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10. The two basic divisions of nervous system are [     ]  
a) CNS and PNS    b) ANS and PNS    c) CNS and ANS    d) None of the above

**Cont.....2**

**II Fill in the Blanks:**

11. \_\_\_\_\_ is an involuntary non-striated muscle.
12. Acetyl Choline is an example of \_\_\_\_\_ that stimulates muscular contraction.
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17. Stroke Volume (SV) = \_\_\_\_\_
18. After an action potential has occurred, there is a transient negative shift, called as \_\_\_\_\_
19. Coronary insufficiency can be characterized as \_\_\_\_\_ in the ECG Wave.
20. IPSP stands for \_\_\_\_\_

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Set No. 4

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

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c) Abnormal conduction      d) All of the above
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