



Course No: PHSC 1308  
Course Title: Anatomy & Physiology 1  
Date: 27/5/2015  
No. of Questions: (5)  
Time: 1hour  
Using Calculator (No)

Final Exam  
Second term  
2014/2015  
Total Grade: 60  
Marks

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College Name: Pharmacy  
Dep./Specialist:  
Using Dictionary (No)

**Question 1: Put the sign ( ✓ ) if the statement right and the sign ( x ) if the statement wrong:**

1. ( ) Microglia are phagocytic macrophages in peripheral nervous system.
2. ( ) During depolarization, more Na<sup>+</sup> channels open for Na<sup>+</sup> inward.
3. ( ) Gamma aminobutyric is an excitatory neurotransmitter in central nervous system.
4. ( ) Cervical enlargement of spinal cord extends from the C1 to C4 vertebra.
5. ( ) The speed of impulse is dependent of stimulus strength.
6. ( ) Rubrospinal tract is located in lateral column of white matter of spinal cord.
7. ( ) Precentral gyrus is a land mark for the general sensory area of the cerebral cortex.
8. ( ) Nissl bodies are Chromatophilic substances responsible for protein synthesis in neuron.
9. ( ) The centers which help control of respiration are located in pons and medulla oblongata.
10. ( ) During the relative refractory period increased K<sup>+</sup> permeability.
11. ( ) Primary visual area & visual association area are located at occipital lobe of cerebrum.
12. ( ) Paraplegia results, if the upper cervical cord is transected completely.
13. ( ) In Right hand- control people, Left hemisphere is more important for imagination
14. ( ) Facilitated zone is the region of neural pool, where the post-synaptic neuron receiving few pre-synaptic end bulbs which insufficient to fire.
15. ( ) lateral spinothalamic tract conveys touch sensations to opposite side of thalamus.

**Question 2: Write the scientific term for each statement: (7.5 Marks)**

- 1.( ) Attempt of human body to still balance, equilibrium, and constant.
- 2.( ) The result of the accumulation of neurotransmitter from several pre-synaptic neurons.
- 3.( ) Deep wide groove on the anterior (ventral) surface of spinal cord.
- 4.( ) The largest portion of gray matter of basal ganglia of cerebral hemispheres.
- 5.( ) Small space in the central of gray commissure runs the length of spinal cord.
- 6.( ) Thick Phospholipid substance that insulates the nerve to help transmit the electrical signal along the length of the axon.
- 7.( ) Unit contains 1000- 10000 molecules of neurotransmitters.
- 8.( ) A group of nerve cell bodies with other group of cell bodies outside the central nervous system.
- 9.( ) Type of autonomic nervous fibers produce norepinephrine.
- 10.( ) Stimulus is strong enough to initiate an impulse.
- 11.( ) Space between the arachnoid and the pia matter of meninges.
- 12.( ) The time required for actually cross synaptic cleft.
- 13.( ) The central constricted area of cerebellum.
- 14.( ) Membrane-enclosed sacs in the end bulbs of neuron store the neurotransmitters inside it.
15. ( ) Sudden, Jerky, withdrawal, spontaneous, purposeless, involuntary

movements results due to lesion of subthalamic Nucleus of basal ganglia.

**Question 3: Select the correct answer and encircle it:**

**(10 Marks)**

1. The portion of central nervous system that is composed of Pons and Cerebellum only called:
  - a. Telencephalon.
  - b. Metencephalon.
  - c. Diencephalon.
  - d. Myelencephalon.
2. Area of the skin supplied by nerve fibers originating from a single dorsal nerve root called:
  - a. Dermatome.
  - b. Myotome.
  - c. Horn.
  - d. Receptor.
3. Which is correct about axonal transport:
  - a. It is slower than axoplasmic flow.
  - b. Convey material in both directions.
  - c. Renews axoplasm.
  - d. Regenerates axon.
4. Which of the followings is not correct about Saltatory conduction:
  - a. Impulse conduction in myelinated fibers.
  - b. Impulse jumps along intervals.
  - c. slower than step-by step conduction.
  - d. Lower Expenditure of energy.
5. Which of the followings is correct about Patellar reflex:
  - a. It is poly synaptic reflex.
  - b. It is tendon reflex.
  - c. It is contralateral reflex.
  - d. It prevents injury from over stretching.
6. The outermost covering around entire spinal nerve:
  - a. Endoneurium
  - b. Epineurium
  - c. Perineurium
  - d. Schwann cells
7. Which of the followings is not correct about autonomic nervous system receptors:
  - a. Beta receptors are inhibitory receptors.
  - b. Alpha receptors are Excitatory receptors.
  - c. NE stimulates ( $\alpha$ ) receptors only.
  - d. Epinephrine stimulates both ( $\alpha$ ) and ( $\beta$ ).
8. Nuclei of vestibular branch of cranial nerve (VIII) is located in:
  - a. Cerebral Cortex.
  - b. Thalamus.
  - c. Midbrain.
  - d. Pons of Verillii.
9. Which of the followings is correct about spinal shock:
  - a. Characterized by areflexia.
  - b. Last period following transection.
  - c. Knee jerk is the last reflex return.
  - d. flexion reflexes are the last return.
10. Which of the following is correct about dendrites:
  - a. Have not ribosomes.
  - b. Bring information to the cell body.
  - c. Branch further from the cell body.
  - d. Have smooth Surface.

**Question 4: Match the statements of Group “A” with those of Group “B” by writing the number of statement of Group “A” opposite the suitable word of Group “B: (5 Marks)**

Group “A”		Group “B”	
1	Gnostic	Nuclei in the thalamus serve as relay stations for hearing impulses.	( )
2	Tentorium	Nuclei of basal ganglia concerned with regulation of muscle tone.	( )
3	Broca’s	The roof of dorsal portion of midbrain.	( )
4	Corpus callosum	Part of limbic system responsible for memory.	( )
5	Globus pallidus	Extension of the cranial dura mater separates the cerebellum from cerebrum.	( )
6	Gracilis	Motor speech area.	( )
7	Hippocampus	Nerves that arise from lower portion of the cord.	( )
8	Geniculate	One of two pairs of dorsal nuclei of medulla oblongata.	( )
9	Tectum	Common integrative area leading to formation of common thought.	( )
10	Cauda equina	Transverse fibers of white matter connect the two hemisphere of cerebrum.	( )

**Question 5: Answer the following questions: (30 Marks)**

**First) Compare between the followings: (10 Marks)**

**1. Somatic efferent & Autonomic Nervous System**

No.	Comparative item	Somatic Efferent	Autonomic Nervous System

**2. Nerve Fibers Type (A) & Nerve Fibers Type (C)**

No.	Comparative item	Nerve Fbers Tyme (A)	Nerve Fibers Tyme (C)

**Second) Define the followings: (5 Marks)**

1. **Reciprocal Innervation:**-----  
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2. **Inhibitory post-synaptic potential :**-----  
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3. **Proprioception:**-----  
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4. **Denticulate Ligaments:**-----  
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5. **Folia:**-----  
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Third) Enumerate the followings: (4 Marks)

1. Branches of spinal nerve:

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2. Cranial nerves responsible for eye ball movement and determine the origin and type of each nerve and the muscles which innervated by each nerve:

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3. Types of neuron according to number of processes and give one example for each one:

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4. Types of white matter of cerebrum according to their directions and determine the direction of impulse for each type:

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Fourth) Give the correct anatomical & physiological justification for the following statements: (5 Marks)

1. When people are confronted with a stress condition, The blood sugar level rises .

Justification:-----  
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2. The postsynaptic neuron is an integrator.

Justification:-----  
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3. Injury of central nervous system neurons is permanent, but injury to radial nerve

may repair itself.

Justification:-----  
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4. The vagus nerve is considered a mixed nerve.

Justification:-----  
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5. Non fatal Medullary injury may result in Paralysis on the opposite side of the body,  
while partial injury of spinal cord results in Paralysis on the same side

Justification:-----  
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Fifth) Explain the followings in details? (6 Marks)

A. Explain in details, the formation and circulation of cerebrospinal fluid (C.S.F)  
in the central nervous system?

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B. Explain the path of brachial plexus & Enumerate the three important nerves  
arising from brachial plexus?

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Good Luck