

Course No: PHRM 1206  
Course Title: Anatomy & Physiology 1  
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Time: 2 hours  
Using Calculator (No)

University of Palestine  
  
Final Exam  
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Total Grade: 50 Marks

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Dep./Specialist:  
Using Dictionary (No)

**Question 1: Put the sign (  $\checkmark$  ) if the statement right and the sign ( x ) if the statement wrong:**

01. ( ) Childbirth is an example of positive feedback.
02. ( ) Peritoneum is a serous membrane of abdominal cavity.
03. ( ) Mesenchyme is an embryonic connective tissue gives rise to all epithelial tissues.
04. ( ) Muscular tissue is avascular.
05. ( ) Bone hardness depends on collagen fibers .
06. ( ) Cranial bones are formed in embryo as intra-membranous ossification.
07. ( ) Transverse tubule is the structural unit of muscle contraction.
08. ( ) In isotonic contraction, the skeletal muscle develops tension but no change in length.
09. ( ) The release of acetylcholine from axon terminals requires potassium ions .
10. ( ) Lesion in cerebellum results in a motor disturbance called hemiballismus .
11. ( ) During repolarization, the permeability of  $K^+$  outward movement through channels become more than that during resting potential .
12. ( ) The tension development in skeletal muscle is related to resting length.
13. ( ) Neurons of olfactory area is an example of bipolar neuron.
14. ( ) Nicotonic receptors are in all effectors innervated by sympathetic postganglionic axons.
15. ( ) Cell bodies of preganglionic neurons of sympathetic nervous system is located in Craniosacral division of spinal cord.

**Question 2: Write the scientific terminology for each statement:**

**(7.5 Marks)**

01. ( ) The Structural unit of muscle contraction.
02. ( ) Motor area of cerebral cortex responsible for translation thoughts into speech.
03. ( ) Group of structures encircles the brain stem and functions in the emotional aspects behavior related to survival .
04. ( ) Not Strong enough stimulus to initiate impulse.
05. ( ) Alteration of synaptic membrane to more -ve resting membrane potential.
06. ( ) A region of spinal cord from which a pair of spinal nerves arise.
07. ( ) Reflexes cause the contraction of skeletal muscles .
08. ( ) Right upper region of abdomen .
09. ( ) Transition of cells from unspecialized to specialized cells.
10. ( ) Plane that divides the body into medial and lateral.
11. ( ) Connective tissue cells secrete histamine in allergy .
12. ( ) Type of Stratified epithelial tissues found only in the urinary system.
13. ( ) Partial fracture in one side of bone , where the other side bends .
14. ( ) Production of blood cells from red bone marrow.
15. ( ) Increase in body size.

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

**(5 Marks)**

1. Which of the following is intracellular fluid:
  - a. Blood plasma.
  - b. Lymph.
  - c. Cytosol.
  - d. Synovial fluid.
2. Connective tissues develops from:
  - a. Ectoderm.
  - b. Mesoderm.
  - c. Endoderm.
  - d. All the germ layers.
3. Which of the following hormones increases the activity of Osteoclasts:
  - a. Parathormone.
  - b. Insulin.
  - c. Thyroxin.
  - d. Calcitonin.
4. One end of the fractured bone is forcefully driven into another in:
  - a. Open fracture.
  - b. Impacted fracture.
  - c. Closed fracture.
  - d. Stress fracture.
5. Which of the followings is correct about smooth muscles:
  - a. Have scattered myosin fibers.
  - b. Have no tendons or aponeuroses .
  - c. their cells are multinucleated.
  - d. Myosin fibers have more heads per thick filament.
6. Which of the following cranial nerves is pure sensory nerve:
  - a. Trigeminal nerve
  - b. Optic nerve
  - c. Facial nerve
  - d. Glossopharyngeal nerve
7. Which of the following structures is not part of brain stem :
  - a. Thalamus.
  - b. Pons verilli.
  - c. Midbrain.
  - d. Medulla oblongata.
8. Which of the following structures is not part of forebrain:
  - a. Cerebral cortex.
  - b. Tectum.
  - c. Thalamus.
  - d. Amygdala.
9. Which of the followings reflexes is not a Neuroglia of Central Nervous System :
  - a. Schwan cells.
  - b. Microglia.
  - c. Astrocytes.
  - d. Oligodendrocytes.
10. Which of the following descending tracts does not cross to contra lateral skeletal muscles :
  - a. Lateral corticospinal.
  - b. Tectospinal.
  - c. Anterior corticospinal.
  - d. Vestibulospinal.

**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	Visual association area	Paralysis of upper extremity, trunk and lower extremity of one side. ( )
2	Primary visual area	Inactivate the norepinephrine. ( )
3	Monoamino oxidase	Principal relay station for sensory impulses that reach cerebral cortex. ( )
4	Thalamus	Paralysis of both lower extremities. ( )
5	Facial nerve	Responsible for innervation of tongue muscles. ( )
6	Hemiplegia	Interprets shape, color and movement of object. ( )
7	Neostigmine	Relates present to past visual experience. ( )
8	Paraplegia	Inhibits the acetylcholine esterase. ( )
9	Hypothalamus	Responsible for taste sensation of anterior two third of tongue ( )
10	Hypoglossal nerve	Regulate food intake. ( )

**Question 5: Answer the following questions according to the following notes : (25 Marks)**

**First) Compare between the followings: (5 Marks)**

**Stretch Reflex & Tendon Reflex**

No.	Comparative aspects	Stretch Reflex	Tendon Reflex
a.	<b>Synapse</b>		
b.	<b>stimulus</b>		
c.	<b>Receptor</b>		
d.	<b>pathway</b>		
e.	<b>Response</b>		
f.	<b>Function</b>		
g.	<b>Reciprocal innervation</b>		

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

1. **Ganglia:**-----  
-----
2. **Sarcomere:**-----  
-----
3. **Gyri:**-----  
-----
4. **Muscle tone:**-----  
-----
5. **Calcification:**-----  
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**Third) Enumerate the followings: (5 Marks)**

1. **Functions of Basal Ganglia:**  
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-----  
-----
2. **Phases of muscular twitch :**

3. types of cell junctions:

4. Name of cranial nerves that are originated from Pons of verilli :

5. Factors which determine the speed of nerve impulse:

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

1. Membrane (resting) potential of neuron equals  $-70\text{ mV}$  , where inside the membrane is  $70\text{ mV}$  less than outside.

Justification:-----

2. Medulla oblongata is responsible for regulating heart beat and force of contraction.

Justification:-----

3. The PH of blood decreases as the person practice heavy exercise.

Justification:-----

4. Sweat glands are exocrine glands.

Justification:-----

5. Repair of cartilage is slow, when injured or inflamed .

Justification:-----

**Fifth) Explain the followings in details? (5 Marks)**

A. Formation, circulation and absorption of Cerebro- spinal fluid?

