

Unit 1 Quiz

1. Fill in the blanks. Ionic bonds are different from covalent chemical bonds in that ionic bonds involve the _____ of electrons by two atoms, in contrast to the _____ of electrons in covalent bonds.

- A. Sharing, transfer
- B. Transfer, sharing
- C. Attraction, repelling
- D. Repelling, attraction

2. Which type of bond is most prevalent in gases, liquids, and solid materials?

- A. Covalent
- B. Ionic
- C. Hydrogen
- D. Polar

3. Place these steps of the Central Dogma of Molecular Biology in the correct order:

- I. mRNA is processed.
- II. DNA is replicated.
- III. mRNA is translated to protein.
- IV. mRNA is transcribed.

- A. I, II, III, IV
- B. IV, III, II, I
- C. II, IV, I, III
- D. II, I, IV, III

4. What does it mean to say that mRNA gets “processed?”

- A. mRNA is degraded.
- B. mRNA is synthesized.
- C. mRNA is used to synthesize proteins.
- D. mRNA is spliced to remove exons and migrates from nucleus into cytoplasm.



5. Which of the following is NOT one of the four important regions found in every neuron?

- A. Cell body
- B. Dendrites
- C. Axon
- D. Apical membrane

6. Assign each of the following functions with the appropriate neuron which carries out the function: S: Sensory neuron, I: Interneuron, M: motor neuron.

_____ converts external stimuli, such as touch or smell, into internal stimuli, which is processed in the brain.

_____ carry signals from the central nervous system to cause muscles to move.

_____ forms a connection between two other neurons

7. What is a primary function of a dendrite?

- A. Receive signals from other neurons and conduct the signal to the neuron cell body
- B. Send electrochemical signals to the post-synaptic neuron
- C. Generate an action potential to propagate the electrical signal
- D. Synthesize and store neurotransmitter molecules

8. Fill in the blanks. In a simple reflex circuit, _____ contain afferent axons, and _____ contain efferent axons.

- A. Interneurons, sensory neurons
- B. Motor neurons, sensory neurons
- C. Motor neurons, interneurons
- D. Sensory neurons, motor neurons

9. The central nervous system consists of what component(s)?

- A. Brain only
- B. Brain and spinal cord
- C. Brain, spinal cord, and cranial nerves
- D. Spinal cord only

10. Match the following sense with the correct sensory organ:

Fill in the blank with the correct letter. Hint: not all of the organs listed are sensory organs!

A: skin, B: heart, C: nose, D: liver, E: ear, F: kidney, G: tongue, H: brain, I: eye



Sense of smell _____

Sense of taste _____

Sense of touch _____

Sense of sight _____

Sense of hearing _____

11. Which of the following does the cerebellum NOT control?

- A. Balance
- B. Emotions
- C. Posture
- D. Coordination

12. Label items 1-3 on this figure with the correct body plane name.

- A. Sagittal plane
- B. Transverse plane
- C. Coronal plane

Source:
http://commons.wikimedia.org/wiki/File:BodyPlanes_fi.jpg

