**PY 101 Quiz 2**

1. Dr. Wozniak is examining a cell from the nervous system of an animal. He notices that at one end of the cell body is a long, fibrous strand of tissue. He immediately recognizes this as an axon that is responsible for
   1. **carrying signals away from the cell body.**
   2. receiving signals from other cells and carrying them toward the cell body.
   3. determining the speed at which an action potential will travel.
   4. determining whether the cell inhibits or excites neighboring neurons.
2. A neuron cell body reaches threshold and depolarizes. The depolarization propagates down the length of the \_\_\_\_\_\_\_\_\_\_, is chemically transmitted across the \_\_\_\_\_\_\_\_\_\_, and directly affects the electrical potential in the \_\_\_\_\_\_\_\_\_\_ of the successive neuron.
   1. **axon; synapse; dendrites**
   2. dendrites; synapse; axon
   3. myelin; synapse; dendrites
   4. dendrites; receptor; axon
3. If the myelin sheathing on neurons is absent or removed in a given individual, he or she will exhibit difficulties in speaking, vision, and balance because without myelin the
   1. quantity of neurotransmitters released into synapses will be reduced.
   2. quantity of neurotransmitters released into synapses will be increased.
   3. speed of neural conduction along critical paths will be too fast.
   4. **speed of neural conduction along critical paths will be too slow.**
4. In a resting state, sodium (Na+) is at a higher concentration outside the cell and potassium (K+) is more concentrated inside the cell. During an action potential, the sodium levels \_\_\_\_\_\_\_\_ inside the cell.

a. decrease

**b. increase**

c. increase only if potassium levels remain the same

d. stay the same

1. Which nervous system is involved in allowing you to shoot a basketball, smell freshly baked bread, and push the keys on a piano?
   1. Sympathetic branch of the autonomic nervous system
   2. Parasympathetic branch of the autonomic nervous system
   3. Both branches of the autonomic nervous system
   4. **Somatic nervous system**
2. The central nervous system consists of the brain and the \_\_\_\_\_\_\_\_.

a. brainstem

b. internal organs

c. peripheral nerves

**d. spinal cord**

1. Latoria is horseback riding when she falls and hits her head. After the accident, she has difficulty performing finely coordinated movements. Latoria has most likely damaged her
   1. medulla oblongata.
   2. recticular formation.
   3. **cerebellum.**
   4. locus coeruleus.
2. Which of the following senses is not routed through the thalamus?

a. audition

**b. smell**

c. taste

d. vision

1. After an accident, Stella was left with brain damage. Now Stella has trouble judging the emotions of others, even when she can see their facial expressions. Stella has most likely damaged her
   1. cerebellum.
   2. **amygdala.**
   3. hypothalamus.
   4. thalamus.
2. Just before the glee club performance at Regionals, Finn Hudson receives damage to his association cortex during a football game. At glee club practice, he sings “The baby is a fortitude. Ice is calling.” Finn must have received damage to his
   1. **Wernicke’s area.**
   2. Broca’s area.
   3. thalamus.
   4. hypothalamus.
3. Jennifer has been depressed for several months, and she decided to take an overdose of sleeping pills. After taking the pills, her breathing rate decreased dramatically, her heart slowed down, and her blood pressure decreased. Which brain structure is the drug acting on?

a. amygdala

**b. medulla**

c. pons

d. reticular formation

1. The right hemisphere gets information from the \_\_\_\_\_\_\_\_\_\_ side of the body and has better \_\_\_\_\_\_\_\_\_\_ abilities than the left hemisphere.
   1. left; logical
   2. right; language
   3. **left; spatial**
   4. right; artistic
2. Devin has been having trouble initiating movements lately and has also developed a tremor in his hands. He is diagnosed with Parkinson's disease and put on medication. To help alleviate Devin's symptoms directly, the drugs would need to increase the effects of which of the following?
   1. GABA
   2. Acetylcholine
   3. Serotonin
   4. **Dopamine**
3. \_\_\_\_\_\_\_\_ refers to the way that sensory information is interpreted and consciously experienced; \_\_\_\_\_\_\_\_ refers to what happens when sensory information is detected by a sensory receptor.

a. perception; reception

**b. perception; sensation**

c. preception; postception

d. sensation; perception

1. While walking outside, you notice the sun shining. Your ability to see the sunshine is related to visual processing of the light in your brain. The process by which physical energy (the sunshine) has been converted to neural activity in your brain is called
   1. reticular formation.
   2. habituation.
   3. **transduction.**
   4. accommodation.
2. What kind of processing is exemplified by the following scenario? Shimon offers Mouin some salmon. Mouin thinks, “How nice. My friend is offering me fish. I wonder where he got it.” This thought leads Mouin to feel happy, appreciative, and curious; he responds with a smile and an extended hand.

a. bottom-down

b. bottom-up

**c. top-down**

d. top-first

1. The psychological dimensions of sound, loudness, and pitch are determined by the physical dimensions of sound waves, \_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_, respectively.
   1. frequency; timbre
   2. **amplitude; frequency**
   3. decibels; hue
   4. amplitude; timbre
2. Transduction of auditory information takes place in the
   1. fovea.
   2. pinna.
   3. **cochlea.**
   4. malleus.
3. In doing research on auditory processing, you find a relationship between the location on the basilar membrane that a sound wave has its biggest peak and the detection of pitch. This supports the \_\_\_\_\_\_\_\_\_\_ theory of hearing.
   1. frequency-matching
   2. volley
   3. **place**
   4. opponent-process
4. Oscar likes to run at night. Even though it is dark, Oscar can see because his eyes have specialized cells that convert the low levels of light energy into neural activity. These cells are known as
   1. corneas.
   2. foveas.
   3. **photoreceptors.**
   4. papillae.
5. To see a very faint star at night, look slightly away from it because this will
   1. focus the star's light on the fovea.
   2. speed up the process of dark adaptation.
   3. increase the number of rods in the eyes.
   4. **focus the star's light on rods outside the fovea.**
6. While daydreaming, Felix was staring at a yellow school bus. When he then looked at a white wall he saw the color \_\_\_\_\_\_\_\_\_\_. This is best explained by the \_\_\_\_\_\_\_\_\_\_ theory.
   1. red; trichromatic
   2. red; opponent-process
   3. blue; trichromatic
   4. **blue; opponent-process**
7. Which of the following exemplifies olfaction?

a. feeling the warmth of the sun

b. hearing an airplane fly overhead

**c. smelling cookies in the oven**

d. tasting white chocolate fudge