**PSY 511.001**

**Fall 2021**

**Quiz 2**

(10 points)

**Instructions**

Type answers to the questions below using complete sentences. You may take a bit more space than indicated below if needed, but please be concise.

Please take no more than 45 min to complete this quiz. You *may* use your textbook or other online sources to answer these questions. If you do use other sources, please indicate that in the resources section at the end of the document.

Email a copy to me at rog1@psu.edu by 12:00 PM on Friday, November 5, 2021.

**Question**

1. Describe at least two ways that neurotransmitters released at the synapse are inactivated, with an example for each.

1. Describe at least two features that monoamine neurotransmitter systems have in common.
2. Which structure in the CNS controls the endocrine and neural responses to situations that require behavioral activation or increased activity and arousal? Give an example of how this might work in practice.
3. Starting with the arrival of the action potential at the terminal button, describe the main steps that lead to the release of neurotransmitter from the presynaptic terminal.
4. Briefly describe the roles of glutamate and GABA in the CNS.
5. Describe one of the phases of human brain development that ends before birth and a second that continues well after birth.
6. Which sensory systems use information derived from comparing signals from two spatially separate sensors?

1. What feature(s) of the human brain distinguish it from closely related animals?
2. What structural feature of the sensory cerebral cortex reflects the fact that peripheral sensors are not uniformly distributed across, for example, the skin or the retina.
3. Give an example of functional segregation, the separation of processing into distinct channels, in a sensory system.

**Bonus**

1. Benzodiazepines like Valium bind to a site on which neurotransmitter receptor? Do they serve as agonists, facilitating normal transmission, or antagonists, impeding it?
2. The cells lining the cerebral ventricles and central canal of the spinal cord may be critical to the development of treatments for neurodegenerative diseases. Why?

**Resources consulted**