1. In the ANS
   a. there is always a synapse between the CNS motor neuron and the peripheral effector
   b. preganglionic fibers innervate the peripheral organs
   c. preganglionic fibers are unmyelinated
   d. motor neuron pathways synapse in the same patterns as in the somatic nervous system.
   e. none of the above is true

2. The origin of the sympathetic division of the autonomic nervous system is
   a. craniosacral
   b. dorsoventral
   c. thoracolumbar
   d. pre- and postganglionic
   e. none of the above

3. The sympathetic division of the ANS generally
   a. stimulates tissue metabolism
   b. increases alertness
   c. prepares the body to deal with emergencies
   d. is called the “fight-or-flight division
   e. all of the above

4. Tissue responses to neurotransmitters
   a. are always excitatory
   b. may be excitatory or inhibitory
   c. are always inhibitory
   d. depend on the response of the membrane receptor
   e. b and d from above are correct

5. All of the following apply to preganglionic neurons of the ANS sympathetic division except
   a. their cell bodies are located between spinal segments T1 and L2
   b. their cell bodies are situated in the lateral gray horns of the spinal cord
   c. their axons synapse with the peripheral effector organs
   d. their axons emerge along the ventral roots of the spinal cord between segments T1 and L2
   e. some fibers do not synapse until the collateral ganglia

6. The adrenal gland
   a. contains specialized neurons
   b. contains ganglionic neurons with extremely long axons
   c. has a central core (medulla) composed of a modified sympathetic ganglion
   d. releases neurotransmitters to postganglionic neurons
   e. none of the above are true
7. Typical sympathetic postganglionic fibers that release norepinephrine at neuroeffector junctions are classified as
   a. cholinergic
   b. adrenergic
   c. norephinephric
   d. nonsecretory
   e. none of the above

8. The sympathetic division of the ANS includes which of the following?
   a. three segmentally arranged sympathetic chains
   b. paired collateral ganglia anterior to the spinal column
   c. two adrenal medullae
   d. all of the above
   e. a and b from above

9. Signs of sympathetic stimulation include
   a. an increase in cardiovascular and respiratory activity
   b. a decrease in blood pressure
   c. a feeling of lethargy
   d. a and b from above are correct

10. The parasympathetic division of the ANS includes
    a. preganglionic neurons on the brain stem.
    b. preganglionic neurons in the lumbar segments of the spinal cord.
    c. ganglionic neurons in the parasympathetic chain
    d. neurons with a greater range of effects upon the target organs than have the neurons of the sympathetic division.
    e. none of the above.

Answers
1. a
2. c
3. e
4. e
5. c
6. c
7. b
8. c
9. a
10. a