**EXAM: CHAPTER 2**

**Neuroscience and Behavior**

1. Dr. Weber does research on the potential relationship between sex hormones and emotional behavior. Which psychological specialty does Dr. Weber’s research best represent?

 a. phrenology

 b. biological psychology

 c. psychoanalysis

 d. clinical psychology

2. A biological psychologist would be most interested in the relationship between:

 a. body chemistry and sexual behavior.

 b. skull shape and character traits.

 c. reason and emotion.

 d. brain size and cell structure.

3. Dendrites are branching extensions of:

 a. neurotransmitters.

 b. endorphins.

 c. neurons.

 d. glial cells.

 e. endocrine glands.

4. The longest part of a neuron is most likely to be the:

 a. dendrite.

 b. axon.

 c. cell body.

 d. synapse.

5. In transmitting sensory information to the brain, an electrical signal within a single neuron travels from the:

 a. cell body to the axon to the dendrites.

 b. dendrites to the axon to the cell body.

 c. axon to the cell body to the dendrites.

 d. dendrites to the cell body to the axon.

 e. axon to the dendrites to the cell body.

6. The speed at which a neural impulse travels is increased when the axon is encased by a(n):

 a. association area.

 b. myelin sheath.

 c. endocrine gland.

 d. neural network.

 e. synaptic vesicle.

7. A brief electrical charge that travels down the axon of a neuron is called the:

 a. synapse.

 b. threshold.

 c. action potential.

 d. myelin sheath.

 e. refractory period.

8. The minimum level of stimulation required to trigger a neural impulse is called the:

 a. reflex.

 b. threshold.

 c. synapse.

 d. action potential.

9. Increasing the intensity of a stimulus above the threshold will not similarly increase the intensity of a neural response to that stimulus. This highlights the nature of the:

 a. synaptic gap.

 b. myelin sheath.

 c. reward deficiency syndrome.

 d. all‑or‑none response.

 e. glial cells.

10. A synapse is a(n):

 a. chemical messenger that triggers muscle contractions.

 b. automatic response to sensory input.

 c. neural network.

 d. junction between a sending neuron and a receiving neuron.

 e. neural cable containing many axons.

11. The chemical messengers released into the spatial junctions between neurons

 are called:

 a. hormones.

 b. neurotransmitters.

 c. synapses.

 d. genes.

 e. glial cells.

12. Schizophrenia is most closely linked with excess activity at receptor sites for the neurotransmitter:

 a. dopamine.

 b. epinephrine.

 c. acetylcholine.

 d. serotonin.

13. Alzheimer’s disease is most closely linked to the loss of neurons that produce:

 a. dopamine.

 b. acetylcholine.

 c. epinephrine.

 d. endorphins.

14. A drug that mimics the effect of dopamine is called a(n):

 a. hormone.

 b. steroid.

 c. agonist.

 d. opiate.

15. The two major divisions of the nervous system are the central and the \_\_\_\_\_\_\_\_ nervous systems.

 a. autonomic

 b. sympathetic

 c. parasympathetic

 d. peripheral

16. The central nervous system consists of:

 a. sensory and motor neurons.

 b. somatic and autonomic subsystems.

 c. the brain and the spinal cord.

 d. sympathetic and parasympathetic branches.

17. Sensory neurons are an important part of the:

 a. limbic system.

 b. reticular formation.

 c. peripheral nervous system.

 d. central nervous system.

 e. sympathetic nervous system.

18. Motor neurons transmit signals to:

 a. glands.

 b. interneurons.

 c. sensory neurons.

 d. all the above.

19. Messages are transmitted from your spinal cord to muscles in your hands by the \_\_\_\_\_\_\_\_ nervous system.

 a. central

 b. peripheral

 c. parasympathetic

 d. sympathetic

 e. autonomic

20. The somatic nervous system is a component of the \_\_\_\_\_\_\_\_ nervous system.

 a. peripheral

 b. autonomic

 c. central

 d. sympathetic

 e. parasympathetic

21. The part of the peripheral nervous system that controls glandular activity and the muscles of internal organs is called the:

 a. somatic nervous system.

 b. reticular formation.

 c. limbic system.

 d. autonomic nervous system.

22. You come home one night to find a burglar in your house. Your heart starts racing and you begin to perspire. These physical reactions are triggered by the:

 a. somatic nervous system.

 b. sympathetic nervous system.

 c. parasympathetic nervous system.

 d. limbic system.

23. Heartbeat acceleration is to heartbeat deceleration as the \_\_\_\_\_\_\_\_ nervous system is to the \_\_\_\_\_\_\_\_ nervous system.

 a. somatic; autonomic

 b. autonomic; somatic

 c. central; peripheral

 d. sympathetic; parasympathetic

 e. parasympathetic; sympathetic

24. Neural networks refer to:

 a. the branching extensions of a neuron.

 b. functionally interconnected clusters of neurons in the central nervous system.

 c. neural cables containing many axons.

 d. junctions between sending and receiving neurons.

 e. neurons that connect the central nervous system to the rest of the body.

25. In a tragic diving accident, Andrew damaged his spinal cord and consequently suffered paralysis of his legs. Andrew’s injury was located in his:

 a. somatic nervous system.

 b. limbic system.

 c. sympathetic nervous system.

 d. central nervous system.

26. The knee-jerk reflex is controlled by interneurons in the:

 a. limbic system.

 b. spinal cord.

 c. brainstem.

 d. cerebellum.

27. After discovering that the shadows outside his window were only the trees in the yard, Ralph’s blood pressure decreased and his heartbeat slowed. These physical reactions were most directly regulated by his:

 a. parasympathetic nervous system.

 b. sympathetic nervous system.

 c. somatic nervous system.

 d. sensorimotor nervous system.

28. The vast majority of cells in the body’s information-processing system are:

 a. interneurons.

 b. motor neurons.

 c. sensory neurons.

 d. neurotransmitters.

29. Information is carried from the central nervous system to the tissues by:

 a. interneurons.

 b. sensory neurons.

 c. motor neurons.

 d. the limbic system.

30. Phrenology highlighted the potential importance of:

 a. specific brain regions.

 b. neurotransmitters.

 c. hormones.

 d. the right brain.