Unit 3 Practice Test

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. An axon is
   a. a cell that serves as the basic building block of the nervous system.
   b. a layer of fatty tissue that encases the fibers of many neurons.
   c. an antagonist molecule that blocks neurotransmitter receptor sites.
   d. the extension of a neuron that carries messages away from the cell body.
   e. a junction between a sending and receiving neuron.

2. In transmitting sensory information to the brain, an electrical signal travels from the ________ of a single neuron.
   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

3. Which of the following are located exclusively within the brain and spinal cord?
   a. sensory neurons
   b. motor neurons
   c. myelin sheath
   d. interneurons
   e. axons

4. The selective permeability of a neural membrane creates a(n)
   a. myelin sheath.
   b. resting potential.
   c. neural network.
   d. reuptake.
   e. dendrite.

5. With regard to the process of neural transmission, a refractory period refers to a time interval in which
   a. a neuron fires more rapidly than usual.
   b. an electrical charge travels from a sensory neuron to a motor neuron.
   c. positively charged ions are pumped back outside a neural membrane.
   d. an individual reflexively withdraws from a pain stimulus.
   e. dendrites transmit more electrical signals to axons.
6. Transferring messages from a motor neuron to a leg muscle requires the neurotransmitter known as
   a. dopamine.
   b. epinephrine.
   c. acetylcholine.
   d. insulin.
   e. endorphin.

7. Migraine headaches are most closely linked with an
   a. oversupply of GABA.
   b. undersupply of serotonin.
   c. oversupply of glutamate.
   d. undersupply of acetylcholine.
   e. oversupply of norepinepherine.

8. The tremors of Parkinson's disease result from the death of nerve cells that produce the neurotransmitter
   a. serotonin.
   b. ACh.
   c. GABA.
   d. dopamine.
   e. acetylcholine.

9. A person with schizophrenia may have an overactive dopamine system. Drugs used to treat this disorder prevent the action of dopamine by keeping it from binding to its receptors. These drugs are
   a. agonists.
   b. somatic.
   c. sympathetic.
   d. antagonists.
   e. selectively permeable.

10. For you to experience the pain of a sprained ankle, ________ must first relay messages from your ankle to your central nervous system.
    a. endocrines
    b. interneurons
    c. glands
    d. motor neurons
    e. sensory neurons

11. The somatic nervous system is a component of the ________ nervous system.
    a. peripheral
    b. autonomic
    c. central
    d. sympathetic
    e. parasympathetic
12. An accelerated heartbeat is to a slowed heartbeat as the ______ nervous system is to the ______ nervous system.
   a. somatic; autonomic
   b. autonomic; somatic
   c. central; peripheral
   d. sympathetic; parasympathetic
   e. parasympathetic; sympathetic

13. To identify which specific brain areas are most active during a particular mental task, researchers would be most likely to make use of a(n)
   a. fMRI.
   b. hemispherectomy.
   c. ACh agonist.
   d. brain lesion.
   e. MRI.

14. Which of the following structures in the brainstem helps coordinate movements and lies above the medulla?
   a. reticular formation
   b. hippocampus
   c. pons
   d. thalamus
   e. hypothalamus

15. If Professor Kosiba lesions the amygdala of a laboratory rat, the rat will most likely become
   a. hungry.
   b. sexually aroused.
   c. physically uncoordinated.
   d. less aggressive
   e. aphasib.

16. Your conscious awareness of your own name and self-identity depends primarily on the normal functioning of your
   a. cerebellum.
   b. amygdala.
   c. hypothalamus.
   d. sympathetic nervous system.
   e. cerebral cortex.

17. The cortical regions that are not directly involved in sensory or motor functions are known as
   a. interneurons.
   b. Broca's area.
   c. frontal lobes.
   d. association areas.
   e. parietal lobes.
18. A stroke patient can recognize the sound of his wife's voice but cannot recognize her face when she stands next to him. Which brain region has most likely been damaged?
   a. the visual cortex in the occipital lobe  
   b. the underside of the right temporal lobe  
   c. Wernicke's area in the left temporal lobe  
   d. the hippocampus in the limbic system  
   e. the reticular formation in the brainstem

19. If a blind person uses one finger to read Braille, the brain area dedicated to that finger expands as the sense of touch invades the visual cortex. This is an example of
   a. brain plasticity.  
   b. hemispheric specialization.  
   c. neural prosthetics.  
   d. integrated association areas.  
   e. aphasia.

20. The localization of a function such as speech production to the right or left side of the brain is called
   a. neurogenesis.  
   b. lateralization.  
   c. hemispherectomy.  
   d. plasticity.  
   e. reticular formation.

21. A picture of a cat is briefly flashed in the left visual field and a picture of a mouse is briefly flashed in the right visual field of a split-brain patient. The individual will be able to use her
   a. right hand to indicate she saw a cat.  
   b. left hand to indicate she saw a mouse.  
   c. right hand to indicate she saw a mouse.  
   d. left or right hand to indicate she saw a cat.  
   e. left or right hand to indicate she saw a mouse.

22. If primed with the flashed word *foot*, the ________ will be especially quick to recognize the word *heel*. If primed with *foot*, *cry*, and *glass*, the ________ will be especially quick to recognize the word *cut*.
   a. right hemisphere; left hemisphere  
   b. left hemisphere; right hemisphere  
   c. cerebellum; brainstem  
   d. left hemisphere; left hemisphere  
   e. sensory cortex; speech cortex
23. A patient who suffered a stroke says that she no longer recognizes herself in a mirror. Which brain structure was likely damaged in the stroke?
   a. occipital lobes
   b. temporal lobes
   c. left hemisphere
   d. right hemisphere
   e. reticular formation

24. The threadlike structures that contain genes are called
   a. synapses.
   b. hormones.
   c. neurons.
   d. chromosomes.
   e. genomes.

25. Put the following terms in order, from smallest to largest.
   a. chromosomes, genes, DNA
   b. genes, chromosomes, DNA
   c. DNA, genes, chromosomes
   d. DNA, chromosomes, genes
   e. genes, DNA, chromosomes

26. Studies of identical twins who had been reared apart most clearly highlight the importance of ________ in personality development.
   a. natural selection
   b. mutation
   c. adoptive relatives
   d. home environments
   e. genetic predispositions

27. Twin studies suggest that a strong influence on emotional instability comes from
   a. genetic predispositions.
   b. the Y chromosome.
   c. natural selection.
   d. the X chromosome.
   e. mutation.

28. The personalities of adopted children
   a. are very similar to the personalities of the other children in their adoptive families.
   b. are very similar to the personalities of their biologically related siblings.
   c. are not very similar to the personalities of their adoptive parents.
   d. are more similar to the personalities of their caregiving adoptive parents than to the personalities of their biological parents.
   e. are usually not related to their temperaments.
29. Research most clearly suggests that personality traits are more strongly influenced by
   a. genes than by home environment.
   b. home environment than by genes.
   c. genes than by peers.
   d. home environment than by peers.
   e. genes than by heredity.

30. If a genetic predisposition to fear darkness contributes to reproductive success, that trait will likely be passed on to subsequent generations. This best illustrates
   a. molecular genetics.
   b. behavior genetics.
   c. self-regulation.
   d. natural selection.
   e. nurture.
MULTIPLE CHOICE

1. ANS: D  PTS: 1 DIF: Easy
   REF: Page 53 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
   OBJ: 2 TOP: Neurons MSC: Factual | Definitional

2. ANS: D  PTS: 1 DIF: Easy
   REF: Page 53 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
   OBJ: 2 TOP: Neurons MSC: Factual | Definitional

3. ANS: D  PTS: 1 DIF: Easy
   REF: Page 53 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
   OBJ: 2 TOP: Neurons MSC: Factual | Definitional

4. ANS: B  PTS: 1 DIF: Medium
   REF: Page 54 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
   OBJ: 2 TOP: Neurons MSC: Factual | Definitional

5. ANS: E  PTS: 1 DIF: Difficult
   REF: Page 54 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
   OBJ: 2 TOP: Neurons MSC: Factual | Definitional

6. ANS: C  PTS: 1 DIF: Medium
   REF: Page 56 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
   OBJ: 4 TOP: How neurotransmitters influence us MSC: Conceptual

7. ANS: C  PTS: 1 DIF: Difficult
   REF: Page 57 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
   OBJ: 4 TOP: How neurotransmitters influence us (TableA 3.1) MSC: Factual | Definitional

8. ANS: D  PTS: 1 DIF: Medium
   REF: Page 57 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
   OBJ: 4 TOP: How neurotransmitters influence us (TableA 3.1) MSC: Factual | Definitional

9. ANS: D  PTS: 1 DIF: Medium
   REF: Page 58 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
   OBJ: 4 TOP: How drugs and other chemicals alter neurotransmission MSC: Conceptual | Application

10. ANS: E  PTS: 1 DIF: Easy
    REF: Page 59 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
    OBJ: 5 TOP: The peripheral nervous system MSC: Conceptual | Application

11. ANS: A  PTS: 1 DIF: Medium
    REF: Page 59 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
    OBJ: 5 TOP: The peripheral nervous system MSC: Factual | Definitional

12. ANS: D  PTS: 1 DIF: Difficult
    REF: Page 59 | Section- Biological Bases of Behavior: 3A—Neural Processing and the Endocrine System
    OBJ: 5 TOP: The peripheral nervous system MSC: Conceptual
13. ANS: A  PTS: 1  DIF: Medium
REF: Page 68 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 1  TOP: The tools of discovery  MSC: Factual | Definitional
14. ANS: C  PTS: 1  DIF: Easy
REF: Page 69 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 2  TOP: The brainstem  MSC: Factual | Definitional
15. ANS: D  PTS: 1  DIF: Difficult
REF: Page 71 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 3  TOP: The amygdala  MSC: Conceptual | Application
16. ANS: E  PTS: 1  DIF: Medium
REF: Page 74 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 4  TOP: The cerebral cortex  MSC: Conceptual | Application
17. ANS: D  PTS: 1  DIF: Medium
REF: Page 78 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 5  TOP: Association areas  MSC: Factual | Definitional
18. ANS: A  PTS: 1  DIF: Medium
REF: Page 79 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 5  TOP: Association areas  MSC: Conceptual | Application
19. ANS: D  PTS: 1  DIF: Medium
REF: Page 82 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 7  TOP: The brain's plasticity  MSC: Factual | Definitional
20. ANS: B  PTS: 1  DIF: Medium
REF: Page 83 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 8  TOP: Splitting the brain  MSC: Factual | Definitional
21. ANS: C  PTS: 1  DIF: Difficult
REF: Page 85 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 8  TOP: Splitting the brain  MSC: Conceptual
22. ANS: B  PTS: 1  DIF: Medium
REF: Page 87 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 9  TOP: Right-left differences in the intact brain  MSC: Factual | Definitional
23. ANS: D  PTS: 1  DIF: Medium
REF: Page 87 | Section- Biological Bases of Behavior: 3B—The Brain
OBJ: 9  TOP: Right-left differences in the intact brain  MSC: Factual | Definitional
24. ANS: D  PTS: 1  DIF: Easy
REF: Page 95 | Section- Biological Bases of Behavior: 3C—Genetics-Evolutionary Psychology-and Behavior
OBJ: 1  TOP: Genes: Our codes for life  MSC: Factual | Definitional
25. ANS: E  PTS: 1  DIF: Easy
REF: Page 95 | Section- Biological Bases of Behavior: 3C—Genetics-Evolutionary Psychology-and Behavior
OBJ: 1  TOP: Genes: Our codes for life  MSC: Factual | Definitional
26. ANS: E  PTS: 1  DIF: Medium
REF: Page 97 | Section- Biological Bases of Behavior: 3C—Genetics-Evolutionary Psychology-and Behavior
OBJ: 2  TOP: Twin and adoption studies  MSC: Factual | Definitional
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