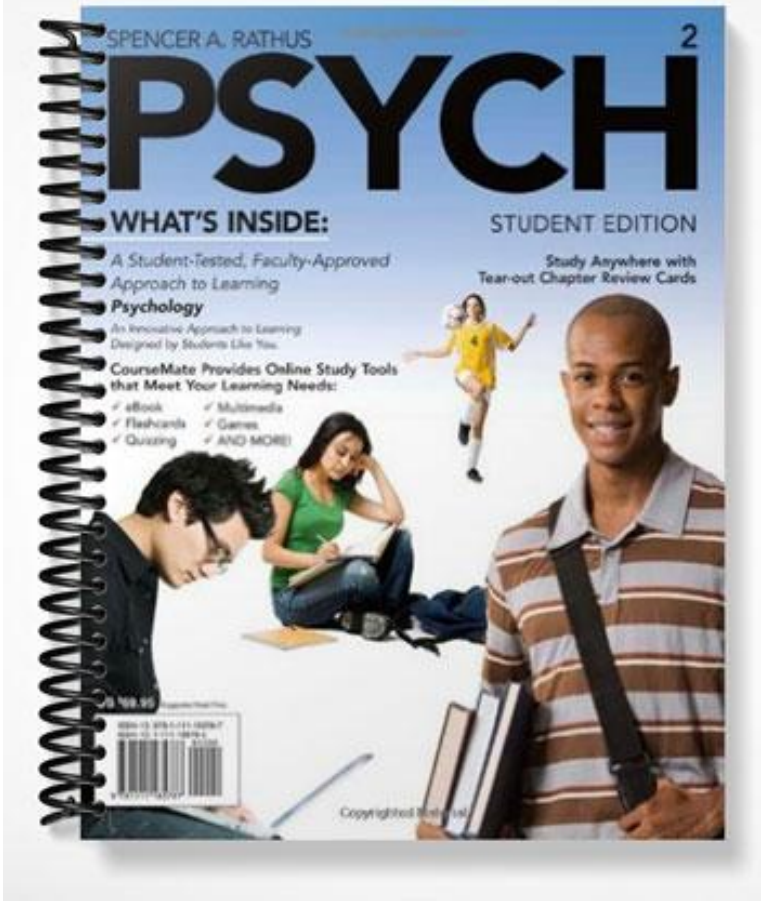
TEST BANK


SPENCER A. RATHUS
2
PSYCH
WHAT'S INSIDE:
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MULTIPLE CHOICE

1. Which of the following would not be possible without the functioning of the nervous system?
   a. ideals, thoughts, and plans
   b. imagery and cognitions
   c. behaviors, emotions, and cognitions
   d. all of these

   ANS: D DIF: 2 REF: 2-26 OBJ: 1
   MSC: TYPE: Conceptual

2. A(n) _____ is a nerve cell.
   a. axon
   b. neuron
   c. dendrite
   d. glial cell

   ANS: B DIF: 1 REF: 2-26 OBJ: 1
   MSC: TYPE: Factual NOT: BTC

3. _____ remove dead neurons and waste products from the nervous system, nourish and insulate neurons, and direct their growth.
   a. Schwann cells
   b. Neurons
   c. Glial cells
   d. Myelin sheaths

   ANS: C DIF: 2 REF: 2-26 OBJ: 1
   MSC: TYPE: Factual

4. The function of glial cells in the nervous system is to
   a. remove waste products from the nervous system.
   b. insulate and nourish neurons.
   c. direct the growth of neurons.
   d. all of these

   ANS: D DIF: 2 REF: 2-26 OBJ: 1
   MSC: TYPE: Factual

5. An axon's length can range from a few millimeters to
   a. 1 inch.
   b. 12 inches.
   c. several feet.
   d. up to a mile.

   ANS: C DIF: 1 REF: 2-27 OBJ: 1
   MSC: TYPE: Factual

6. The part of the neuron that receives messages from a neighboring neuron is the
   a. dendrite.
   b. terminal.
   c. soma.
   d. axon.

   ANS: A DIF: 1 REF: 2-27 OBJ: 1
   MSC: TYPE: Factual

7. The part of the neuron that sends messages to other neurons is the
   a. dendrite.
   b. terminal.
   c. soma.
   d. axon.

   ANS: D DIF: 1 REF: 2-27 OBJ: 1
   MSC: TYPE: Factual

8. The cell body of a neuron contains the
   a. dendrites.
   b. axon.
   c. nucleus.
   d. neuron.

   ANS: C DIF: 2 REF: 2-27 OBJ: 1
   KEY: WWW MSC: TYPE: Factual

9. The axon of a neuron ends in small bulb-like structures called
   a. terminal buttons.
   b. myelin.
   c. dendrites.
   d. glial cells.

   ANS: A DIF: 1 REF: 2-27 OBJ: 1
   MSC: TYPE: Factual

10. The white fatty material that insulates the neuron is called the
    a. cortex.
    b. myelin sheath.
    c. nodes of Ranvier.
    d. soma.

    ANS: B DIF: 1 REF: 2-27 OBJ: 1
    MSC: TYPE: Factual

11. The _____ minimizes leakage of electrical current traveling along the axon.
    a. nodes of Ranvier
    b. synaptic cleft
    c. myelin sheath
    d. soma

    ANS: C DIF: 1 REF: 2-27 OBJ: 1
    KEY: WWW MSC: TYPE: Factual

12. Within their first year of life, babies have problems walking and performing other physical acts because the _____ of many neurons are not fully developed.
    a. myelin sheaths
    b. axons
    c. dendrites
    d. somas

    ANS: A DIF: 2 REF: 2-27 OBJ: 1
    MSC: TYPE: Factual

13. A child without complete myelination will not be able to engage in activities requiring visual-motor coordination for which of the following reasons?
    a. The afferent neurons are damaged, causing the axon to swell.
    b. The axon does not have sufficient myelin coating.
    c. The dendrite is not insulated with myelin.
    d. The leakage of electrical current being carried along the axon is minimized.

    ANS: B DIF: 2 REF: 2-27 OBJ: 1
    MSC: TYPE: Conceptual

14. When someone steps on your toe, this information is carried to the brain and spinal cord by
    a. afferent neurons.
    b. efferent neurons.
    c. glial neurons.
    d. schwann cells.

    ANS: A DIF: 2 REF: 2-27 OBJ: 1
    MSC: TYPE: Applied

15. If someone steps on your toe, _____, or motor neurons, tell you to quickly move your foot away.
    a. interneurons
    b. afferent neurons
    c. efferent neurons
    d. glial cells

    ANS: C DIF: 2REF: 2-27 OBJ: 1 MSC: TYPE: Applied

16. If someone steps on your toes, resulting in pain and the movement of your foot, which of the following describes this process?
    a. Afferent neurons transmit the sensation of pain to the spinal cord and to the brain followed by efferent neurons sending the message to your foot to move.
    b. Efferent neurons transmit the sensation of pain to the spinal cord and to the brain followed by afferent neurons sending the message to your foot to move.
    c. Efferent neurons transmit the sensation of pain to the spinal cord and to the brain followed by efferent neurons sending the message to your foot to move.
    d. Afferent neurons transmit the sensation of pain to the spinal cord and to the brain followed by afferent neurons sending the message to your foot to move.

    ANS: A DIF: 3 REF: 2-27 OBJ: 1
    MSC: TYPE: Applied

17. If you accidentally touch a hot iron, you quickly remove your hand. This rapid withdrawal from the hot iron is the result of nerve impulses carried by _____ neurons.
    a. glial
    b. schwann
    c. efferent
    d. afferent

    ANS: C DIF: 2 REF: 2-27 OBJ: 1
    MSC: TYPE: Applied

18. Sensory neuron is to motor neuron as
    a. interneuron is to glial cell.
    b. efferent neuron is to afferent neuron.
    c. glial cell is to interneuron.
    d. afferent neuron is to efferent neuron.

    ANS: D DIF: 2 REF: 2-27 OBJ: 1
    MSC: TYPE: Applied

19. During his rain storm experiment, Luigi Galvani discovered that
    a. electricity is easily conducted by metal.
    b. lightening over-cooks frogs.
    c. neural impulses that travel along neurons are electrochemical in nature.
    d. neural impulses are only electrical in nature.

    ANS: C DIF: 1 REF: 2-27&28 OBJ: 1
    MSC: TYPE: Factual

20. Luigi Galvani demonstrated that messages' traveling along neurons is accomplished
    a. by electrical transmission.
    b. by chemical transmission.
    c. by electrochemical transmission.
    d. by reflexes, as seen in frogs.

    ANS: C DIF: 1 REF: 2-27&28 OBJ: 1
    MSC: TYPE: Factual

21. _____ demonstrated that messages traveling along neurons are electrochemical.
    a. James
    b. Galvani
    c. Wundt
    d. Edison

    ANS: B DIF: 1 REF: 2-27&28 OBJ: 1
    MSC: TYPE: Factual

22. The electrochemical discharge of a nerve cell or neuron is called a(n)
    a. neural impulse.
    b. synapse.
    c. neurotransmitter.
    d. afferent impulse.

    ANS: A DIF: 1 REF: 2-27&28 OBJ: 1
    MSC: TYPE: Conceptual

23. The resting potential of a neuron is about
    a. -40 millivolts.
    b. +40 millivolts.
    c. -70 millivolts.
    d. +70 millivolts.

    ANS: C DIF: 1 REF: 2-28 OBJ: 1
    MSC: TYPE: Factual

24. When a section of a neuron is stimulated by neighboring neurons, the cell membrane becomes _____ to sodium ions.
    a. positive
    b. permeable
    c. polarized
    d. impermeable

    ANS: B DIF: 2 REF: 2-28 OBJ: 1
    MSC: TYPE: Factual

25. In a resting state, fluid on the inside of the neuron is _____ charged relative to the outside.
    a. positively
    b. negatively
    c. equally
    d. electrically

    ANS: B DIF: 2 REF: 2-28 OBJ: 1
    MSC: TYPE: Factual NOT: BTC

26. When a neuron cell membrane has become permeable to sodium ions, what has transpired?
    a. A section of the neuron has been stimulated by a neighboring neuron.
    b. An action potential of about –70 millivolts has been initiated.
    c. The inside cell at the disturbed area has an action potential of about -40 millivolts.
    d. The previous section of the cell has become permeable to potassium chloride ions.

    ANS: A DIF: 3 REF: 2-28 OBJ: 1
    MSC: TYPE: Applied

27. The polarization of a neuron results in a resting potential of about –70 millivolts. This is followed by depolarization resulting in an action potential of +110 millivolts. This brings the membrane voltage to
    a. + 40 millivolts.
    b. - 40 millivolts.
    c. +180 millivolts.
    d. -180 millivolts.

    ANS: A DIF: 2 REF: 2-28 OBJ: 1
    MSC: TYPE: Conceptual

28. When the cell membrane becomes permeable to sodium ions, this brings the membrane voltage to _____.
    a. -70 millivolts
    b. +70 millivolts
    c. -40 millivolts
    d. +40 millivolts

    ANS: D DIF: 2 REF: 2-28 OBJ: 1
    MSC: TYPE: Factual

29. The inside of the cell at the disturbed area has an action potential of about _____ millivolts.
    a. -70
    b. +70
    c. -40
    d. +110

    ANS: D DIF: 2 REF: 2-28 OBJ: 1
    MSC: TYPE: Factual

30. The electrical impulse that stimulates the conduction of a neural impulse along an axon is called a(n)
    a. electric potential.
    b. resting potential.
    c. action potential.
    d. final potential.

    ANS: C DIF: 1 REF: 2-28 OBJ: 1
    MSC: TYPE: Factual

31. When an action potential occurs, this causes the next section of the cell to become permeable to
    a. potassium chloride ions.
    b. depolarization.
    c. sodium ions.
    d. sodium chloride ions.

    ANS: C DIF: 2 REF: 2-28 OBJ: 1
    MSC: TYPE: Factual

32. Neurons will not fire unless the incoming messages combine to reach a certain strength called the
    a. threshold.
    b. minimum.
    c. membrane.
    d. potential.

    ANS: A DIF: 1 REF: 2-29 OBJ: 1
    MSC: TYPE: Factual

33. If someone squeezed your hand gently or tightly the sensory neurons will fire impulses of the same magnitude. This is due to the
    a. over stimulation of the sensory neuron.
    b. all-or none principle.
    c. damage in the sensory neuron.
    d. all of these.

    ANS: B DIF: 3 REF: 2-29 OBJ: 1
    MSC: TYPE: Applied

34. The fact that a neuron fires an impulse of the same strength whenever its action potential is triggered is called
    a. resting potential.
    b. polarization.
    c. the refractory period.
    d. the all-or-none principle.

    ANS: D DIF: 1 REF: 2-29 OBJ: 1
    MSC: TYPE: Factual

35. If sodium is prevented from passing through the neuronal membrane,
    a. the neuron has just fired.
    b. the neuron is in the refractory period.
    c. both a & b
    d. none of these

    ANS: C DIF: 2 REF: 2-29 OBJ: 1
    MSC: TYPE: Conceptual

36. The phase following firing during which a neuron's action potential cannot be triggered is called the
    a. relative refractory period.
    b. refractory period.
    c. resting potential.
    d. all-or-none period.

    ANS: B DIF: 2 REF: 2-29 OBJ: 1
    KEY: WWW MSC: TYPE: Factual

37. Which of the following is ***NOT*** true regarding a synapse?
    a. A synapse is bordered by an axon terminal from the transmitting neuron.
    b. A synapse is bordered by a dendrite.
    c. The neural impulse jumps across the synapse.
    d. The synaptic cleft is the fluid-filled gap between an axon terminal and a dendrite.

    ANS: C DIF: 2 REF: 2-29 OBJ: 1
    MSC: TYPE: Conceptual

38. A neuron conveys a message to a neighboring neuron across a junction called a
    a. transmitter site.
    b. terminal.
    c. receptor site.
    d. synapse.

    ANS: D DIF: 1 REF: 2-29 OBJ: 1
    KEY: WWW MSC: TYPE: Factual

39. When the neural impulse reaches the axon terminals, the vesicles release varying amounts of
    a. electrical impulses.
    b. hormones.
    c. electrochemical substances.
    d. neurotransmitters.

    ANS: D DIF: 1 REF: 2-29 OBJ: 7
    MSC: TYPE: Factual

40. Neurotransmitters are stored in
    a. the nodes of ranvier.
    b. synaptic clefts.
    c. synaptic vesicles.
    d. dendritic branches.

    ANS: C DIF: 1 REF: 2-29 OBJ: 1
    KEY: WWW MSC: TYPE: Factual

41. Neurotransmitters find their way to _____ and subsequently trigger firing of that neuron.
    a. receptor sites
    b. terminal buttons
    c. synaptic vesicles
    d. transmitter sites

    ANS: A DIF: 1 REF: 2-30 OBJ: 1
    MSC: TYPE: Factual

42. Which statement is **NOT** true regarding neurotransmitters?
    a. Synaptic vesicles contain neurotransmitters.
    b. Only six neurotransmitters have been identified.
    c. Some neurotransmitters act to excite other neurons, while some act to inhibit receiving neurons.
    d. None of these.

    ANS: B DIF: 2 REF: 2-30 OBJ: 1
    MSC: TYPE: Conceptual

43. Which of the following statements is **NOT** true for neurotransmitters?
    a. Neurotransmitters are stored in synaptic vesicles.
    b. A neurotransmitter conveys a message to a neighboring neuron by traveling along the axon to the terminal fibers.
    c. Neurotransmitters find their way to neuron receptor sites and subsequently trigger firing.
    d. When the neural impulse reaches the axon terminals, the vesicles release varying amounts of neurotransmitters.

    ANS: B DIF: 2 REF: 2-30 OBJ: 1
    MSC: TYPE: Conceptual

44. At the synapse, acetylcholine will be
    a. excitatory.
    b. inhibitory.
    c. either excitatory or inhibitory.
    d. neither excitatory nor inhibitory.

    ANS: C DIF: 2 REF: 2-30 OBJ: 1
    MSC: TYPE: Factual

45. The toxin curare prevents _____ from binding within receptor sites in neurons, resulting in paralysis and often death.
    a. acetylcholine
    b. noradrenaline
    c. serotonin
    d. dopamine

    ANS: A DIF: 1 REF: 2-30 OBJ: 1
    MSC: TYPE: Factual

46. Botulism spores, which have the same effect as the toxin curare, result in _____ because they prevent _____ from being released into the synapse.
    a. stomach cramps; dopamine
    b. coma; noradrenaline
    c. paralysis; acetylcholine
    d. hallucinations; serotonin

    ANS: C DIF: 3 REF: 2-30 OBJ: 1
    MSC: TYPE: Factual

47. While visiting the jungles of South America in the early part of the 20th century, Eugene was shot with a poison dart. He immediately became paralyzed. The toxin in the dart most likely blocked the action of
    a. acetylcholine.
    b. serotonin.
    c. dopamine.
    d. noradrenaline.

    ANS: A DIF: 2 REF: 2-30 OBJ: 1
    MSC: TYPE: Conceptual

48. Minutes after eating a few bites of food in a local restaurant, Mary was unable to breathe and began to experience muscular paralysis. She had ingested food contaminated with botulism, which blocked the action of
    a. serotonin.
    b. acetylcholine.
    c. dopamine.
    d. noradrenaline.

    ANS: B DIF: 2 REF: 2-30 OBJ: 1
    MSC: TYPE: Conceptual

49. The Shakespearean character Juliet took a potion that paralyzed her and affected her muscles used for breathing. She probably took something that blocked the action of
    a. noradrenaline.
    b. serotonin.
    c. acetylcholine.
    d. dopamine.

    ANS: C DIF: 3 REF: 2-30 OBJ: 1
    MSC: TYPE: Conceptual

50. Because acetylcholine is implicated in memory, we would expect it to be prevalent in the
    a. cerebellum.
    b. hippocampus.
    c. amygdala.
    d. medulla.

    ANS: B DIF: 3 REF: 2-30 OBJ: 1
    KEY: WWW MSC: TYPE: Conceptual

51. The neurotransmitter _____ is found in the brain structure called the hippocampus.
    a. serotonin
    b. dopamine
    c. endorphins
    d. acetylcholine

    ANS: D DIF: 2 REF: 2-30 OBJ: 1
    MSC: TYPE: Factual

52. The hippocampus is a brain structure that is involved in the formation of
    a. memories.
    b. motor movements.
    c. sensations.
    d. endorphins.

    ANS: A DIF: 1 REF: 2-30 OBJ: 1
    MSC: TYPE: Factual

53. Muhammad Ali is suffering from Parkinson's disease. This should suggest to you that his brain is not producing enough
    a. norephinephrine.
    b. serotonin.
    c. acetylcholine.
    d. dopamine.

    ANS: D DIF: 3 REF: 2-30 OBJ: 1
    MSC: TYPE: Conceptual

54. One theory of schizophrenia is that people who suffer from it may have more receptor sites for what neurotransmitter?
    a. norephinephrine
    b. dopamine
    c. acetylcholine
    d. serotonin

    ANS: B DIF: 2 REF: 2-30 OBJ: 1
    MSC: TYPE: Factual

55. Since dopamine is primarily an *inhibitory* neurotransmitter involved in voluntary movement, individuals who are deficient in dopamine would exhibit
    a. controllable movement.
    b. uncontrollable movement.
    c. coordinated movement.
    d. smooth movement.

    ANS: B DIF: 3 REF: 2-30 OBJ: 1
    MSC: TYPE: Conceptual

56. Phenothiazines, a group of drugs used to treat schizophrenia, block the action of the neurotransmitter
    a. dopamine.
    b. acetylcholine.
    c. endorphins.
    d. noradrenaline.

    ANS: A DIF: 2 REF: 2-30 OBJ: 1
    MSC: TYPE: Factual

57. Phenothiazines, a group of drugs used to treat schizophrenia, block the action of dopamine. A severe side-effect of this medication, if used over a long period of time, could be
    a. Parkinson's-like symptoms.
    b. hallucinations.
    c. Alzheimer's disease.
    d. thought disorders.

    ANS: A DIF: 3 REF: 2-30 OBJ: 1
    MSC: TYPE: Conceptual

58. Dr. Kelly Earls, a neuropsychologist, was sitting next to an individual on a train who was exhibiting uncontrollable movement. Dr. Earls assumed that this individual had an imbalance in which of the following neurotransmitters?
    a. acetylcholine
    b. norephinephrine
    c. serotonin
    d. dopamine

    ANS: D DIF: 3 REF: 2-30 OBJ: 1
    MSC: TYPE: Applied

59. If there were a drug that blocked the reuptake of norepinephrine, we would expect that the effect would most likely be
    a. sleeplessness.
    b. too much sleep.
    c. drowsiness.
    d. psychomotor retardation.

    ANS: A DIF: 2 REF: 2-30&31 OBJ: 1
    MSC: TYPE: Conceptual

60. In an emergency, _____ is (are) very abundant in our brain and body.
    a. GABA
    b. endorphins
    c. norepinephrine
    d. serotonin

    ANS: C DIF: 3 REF: 2-30&31 OBJ: 1
    MSC: TYPE: Conceptual

61. Norepinephrine, which elevates heart rate and other vital signs, is operating when the _____ nervous system is activated.
    a. somatic
    b. somatosensory
    c. parasympathetic
    d. sympathetic

    ANS: D DIF: 3 REF: 2-31&32 OBJ: 1
    KEY: WWW MSC: TYPE: Applied

62. Cocaine and amphetamines increase the production of which neurotransmitters?
    a. GABA and endorphins
    b. norephinephrine and dopamine
    c. acetylcholine and endorphins
    d. acetylcholine and GABA

    ANS: B DIF: 3 REF: 2-31 OBJ: 1
    MSC: TYPE: Applied

63. Deficiencies in _____ have been linked to anxiety, mood disorders, eating disorders, and insomnia.
    a. noradrenaline
    b. acetylcholine
    c. serotonin
    d. dopamine

    ANS: C DIF: 1 REF: 2-31 OBJ: 1
    MSC: TYPE: Factual NOT: BTC

64. Jeff is very aggressive and exhibits alcoholism and depression. More than likely he has a
    a. serotonin deficiency.
    b. serotonin abundance.
    c. dopamine deficiency.
    d. none of these.

    ANS: A DIF: 2 REF: 2-31 OBJ: 1
    MSC: TYPE: Applied

65. Which of the following neurotransmitters is believed to be involved in reducing anxiety reactions?
    a. dopamine
    b. serotonin
    c. GABA
    d. norephinephrine

    ANS: C DIF: 1 REF: 2-31 OBJ: 1
    MSC: TYPE: Factual

66. Which of the following statements is *NOT* supported by research on GABA?
    a. Tranquilizers and alcohol may act on GABA receptors and thus reduce anxiety.
    b. One class of anti-anxiety drugs many increase the sensitivity of GABA receptors.
    c. Deficiencies in GABA may be involved in depression.
    d. None of these

    ANS: D DIF: 3 REF: 2-31 OBJ: 1
    MSC: TYPE: Factual

67. Endorphins are endogenous, which means they
    a. occur naturally in the brain and the bloodstream.
    b. do not occur naturally in the brain and bloodstream.
    c. increase pain messages to the brain.
    d. decrease the functioning of the immune system.

    ANS: A DIF: 2 REF: 2-31 OBJ: 1
    MSC: TYPE: Conceptual

68. Jack just finished a 26-mile marathon. In spite of the physical strain he feels euphoric and elated due to the release of
    a. serotonin.
    b. dopamine.
    c. endorphins.
    d. acetylcholine.

    ANS: C DIF: 2 REF: 2-31 OBJ: 1
    MSC: TYPE: Applied

69. The neurotransmitter(s) linked to pleasure and alleviation of pain is (are)
    a. norephinephrine.
    b. endorphins.
    c. serotonin.
    d. acetylcholine.

    ANS: B DIF: 1 REF: 2-31 OBJ: 1
    MSC: TYPE: Factual

70. Right after a car accident, _____ is (are) released to act as a temporary pain killer.
    a. norephinephrine
    b. endorphins
    c. serotonin
    d. dopamine

    ANS: B DIF: 2 REF: 2-31 OBJ: 1
    MSC: TYPE: Applied

71. Which of the following is *true* about endorphins?
    a. They may produce the pleasurable "runner's high."
    b. They may increase the functioning of the immune system.
    c. They may increase our sense of competence.
    d. all of these

    ANS: D DIF: 2 REF: 2-31 OBJ: 1
    MSC: TYPE: Conceptual

72. A nerve is
    a. a soma.
    b. a bundle of axons.
    c. a cell body.
    d. a neuron cell.

    ANS: B DIF: 1 REF: 2-31 OBJ: 1
    MSC: TYPE: Factual

73. The brain and spinal cord make up the
    a. peripheral nervous system.
    b. central nervous system.
    c. autonomic nervous system.
    d. sympathetic nervous system.

    ANS: B DIF: 1 REF: 2-32 OBJ: 1
    KEY: WWW MSC: TYPE: Factual

74. Sensory and motor messages that allow you to pick up your pen are transmitted by the
    a. afferent and efferent nerves.
    b. peripheral nervous system.
    c. autonomic nervous system.
    d. both a and b

    ANS: D DIF: 2 REF: 2-32 OBJ: 1
    MSC: TYPE: Conceptual

75. The two main divisions of the peripheral nervous system are the
    a. sympathetic nervous system and the parasympathetic nervous system.
    b. somatic nervous system and the motor nervous system.
    c. autonomic nervous system and the central nervous system.
    d. autonomic nervous system and the somatic nervous system.

    ANS: D DIF: 1 REF: 2-32 OBJ: 1
    MSC: TYPE: Factual

76. The two divisions of the autonomic nervous system are the
    a. sympathetic nervous system and the parasympathetic nervous system.
    b. peripheral nervous system and the central nervous system.
    c. somatic nervous system and the motor nervous system.
    d. peripheral nervous system and the somatic nervous system.

    ANS: A DIF: 1 REF: 2-32 OBJ: 1
    MSC: TYPE: Factual

77. The autonomic nervous system does **NOT** directly influence which of the following?
    a. Transmitted messages about sight, sound, smell, taste, and tactile information.
    b. Blushing over an embarrassing situation.
    c. Dilated pupils and rapid heartbeat.
    d. The fear experienced when a rat rushes across the room.

    ANS: A DIF: 3 REF: 2-32 OBJ: 1
    MSC: TYPE: Applied

78. The _____ nervous system transmits messages about sight, sound, smell, taste, and tactile information.
    a. sympathetic
    b. central
    c. autonomic
    d. somatic

    ANS: D DIF: 1 REF: 2-32 OBJ: 1
    KEY: WWW MSC: TYPE: Factual

79. When a person is anxious or fearful, they may experience indigestion. Why?
    a. The sympathetic division of the ANS predominates when we feel fear or anxiety.
    b. The parasympathetic division of the ANS predominates when we feel fear or anxiety.
    c. The sympathetic division of ANS stimulates the digestive process.
    d. The parasympathetic branch inhibits digestion.

    ANS: A DIF: 3 REF: 2-32 OBJ: 1
    MSC: TYPE: Applied

80. When Charlotte hears something embarrassing, she blushes. Being a student of psychology, she knows that this condition is controlled by the
    a. motor cortex.
    b. autonomic nervous system.
    c. somatosensory cortex.
    d. motor nervous system.

    ANS: B DIF: 2 REF: 2-32 OBJ: 1
    MSC: TYPE: Conceptual

81. If you just finished a 4-mile run, what part of the autonomic system was active during the run?
    a. Parasympathetic branch
    b. Sympathetic branch
    c. Hippocampus
    d. Aphasia

    ANS: B DIF: 2 REF: 2-32 OBJ: 1
    MSC: TYPE: Conceptual

82. A person highly trained in yoga and meditation is capable of controlling his heart rate and blood pressure, that is, raising and lowering it at will. A student of psychology knows that these functions are controlled by the
    a. motor cortex.
    b. somatosensory cortex.
    c. motor nervous system.
    d. autonomic nervous system.

    ANS: D DIF: 2 REF: 2-32 OBJ: 1
    MSC: TYPE: Conceptual

83. Pupil dilation and rapid heartbeat are the result of activation of which branch of the autonomic nervous system?
    a. the sympathetic nervous system
    b. the parasympathetic nervous system
    c. the somatosensory cortex
    d. the peripheral nervous system

    ANS: A DIF: 1 REF: 2-32 OBJ: 1
    MSC: TYPE: Factual

84. You and a friend are studying psychology at the dining room table when you hear something stirring underneath it. You lean over to investigate, and a rat scurries across the floor. Which nervous system kicks into gear in both you and your friend?
    a. the afferent nervous system
    b. the parasympathetic nervous system
    c. the sympathetic nervous system
    d. the central nervous system

    ANS: C DIF: 2 REF: 2-32 OBJ: 1
    MSC: TYPE: Applied

85. When you pick up a dime, a message is transmitted from sensory receptors in your hand to the brain, and from the brain to the muscles in your hand. Which structure(s) are part of this process?
    a. spinal cord
    b. peripheral nervous system
    c. afferent and efferent neurons
    d. all of these

    ANS: D DIF: 2 REF: 2-32 OBJ: 1
    MSC: TYPE: Conceptual

86. A spinal reflex is
    a. an unlearned response to a stimulus that possibly involves only two neurons.
    b. a learned response to a stimulus that possibly involves only one neuron.
    c. a voluntary response to a stimulus that possibly involves only two neurons.
    d. an acquired response to a stimulus that possibly involves only one neuron.

    ANS: A DIF: 2 REF: 2-33 OBJ: 1
    MSC: TYPE: Factual

87. The brain and spinal cord contain non-myelinated neurons that make up the _____ and myelinated neurons that make up the _____.
    a. white matter; gray matter
    b. gray matter; white matter
    c. white matter; brown matter
    d. brown matter; white matter

    ANS: B DIF: 1 REF: 2-33 OBJ: 1
    MSC: TYPE: Factual

88. After a serious car accident, Dr. Murray tests the reflexes of an unconscious victim. Lack of response may indicate that he has injuries to his
    a. cerebrum.
    b. limbic system.
    c. spinal cord.
    d. frontal lobes.

    ANS: C DIF: 2 REF: 2-33 OBJ: 1
    MSC: TYPE: Conceptual

89. Based on Dr. Octopus, a character in the recent Spiderman movie, researchers are studying _____ interfaces for use in persons with spinal cord damage.
    a. brain-machine
    b. spinal cord-machine
    c. octopus-machine
    d. robot-machine

    ANS: A DIF: 2 REF: 2-33 OBJ: 1
    MSC: TYPE: Conceptual

90. You are about to take part in a sleep study. Which of the following brain study techniques might be used by the researcher?
    a. brain lesioning
    b. brain ablation
    c. autopsy
    d. EEG

    ANS: D DIF: 1 REF: 2-34 OBJ: 2
    MSC: TYPE: Applied

91. This technique of brain imaging called _____uses a computer to integrate measurements of radiation passing through the brain at multiple angles. The final image is integrated into a three-dimensional image of the brain.
    a. video imaging procedure.
    b. MRI.
    c. CBF.
    d. CAT.

    ANS: D DIF: 2 REF: 2-35 OBJ: 2
    MSC: TYPE: Factual

92. An EEG
    a. creates an image of the area of the brain that responds to a flashing light.
    b. detects minute amounts of electrical activity.
    c. passes x-rays through the area of the brain under study.
    d. All of these.

    ANS: B DIF: 2 REF: 2-34 OBJ: 2
    MSC: TYPE: Conceptual NOT: BTC

93. You go to a neurologist because of headaches. You are told that the doctor would like to get some images of your brain and that the procedure involves a technique in which a narrow x-ray beam will be passed through your head. You know a little bit about brain study techniques and realize that the doctor is suggesting a(n)
    a. CAT scan.
    b. MRI.
    c. PET.
    d. autopsy.

    ANS: A DIF: 3 REF: 2-35 OBJ: 2
    MSC: TYPE: Applied

94. The positron emission tomography, or PET scan, method of brain study involves a computer-generated image of brain activity by tracing the amount of
    a. glucose metabolized in areas of the brain.
    b. radiation passing through areas of the brain.
    c. shifts in blood flow in the brain.
    d. electrical activity on the surface of the brain.

    ANS: A DIF: 2 REF: 2-35 OBJ: 2
    MSC: TYPE: Factual

95. You have gone to a neurologist and she tells you that you need additional tests. One procedure will require that you receive an injection of a mild radioactive substance mixed with glucose or a tracer. You know immediately that you are being scheduled for a
a. PET.
b. CAT.
c. MRI.
d. CBF.

ANS: A DIF: 2 REF: 2-35 OBJ: 2
MSC: TYPE: Applied

96. In _____, the person lies in a powerful magnetic field and is exposed to radio waves that cause part of the brain to emit signals.
a. MRI
b. PET
c. CAT
d. CBF

ANS: A DIF: 2 REF: 2-35 OBJ: 2
MSC: TYPE: Factual

97. While the PET assesses brain activity in terms of glucose metabolism, the MRI measures
a. multiple angles of radiation.
b. tracers.
c. subtle shifts in blood flow.
d. electrical activity.

ANS: C DIF: 2 REF: 2-35 OBJ: 2
MSC: TYPE: Factual

98. _____ is a type of brain imaging technique that includes repeated scans to allow researchers to see the brain at work.
a. MRI
b. Functional MRI
c. PET
d. CAT

ANS: B DIF: 2 REF: 2-36 OBJ: 2
MSC: TYPE: Factual

99. PET scans and MRI have supported the belief that the prefrontal cortex is involved in
a. decision making.
b. problem solving.
c. sensations.
d. decision making and problem solving.

ANS: D DIF: 2 REF: 2-36 OBJ: 2
MSC: TYPE: Factual

100. The structure in the hindbrain that regulates heart rate, blood pressure and breathing is the
a. medulla.
b. pons.
c. thalamus.
d. limbic system.

ANS: A DIF: 1 REF: 2-36 OBJ: 2
MSC: TYPE: Factual

101. Injury to the _____ can result in a lack of motor coordination, such as stumbling and loss of muscle tone.
a. hypothalamus
b. thalamus
c. cerebrum
d. cerebellum

ANS: D DIF: 2 REF: 2-36 OBJ: 2
KEY: WWW MSC: TYPE: Applied

102. After her stroke Cathy was no longer able to coordinate her dance movements. More than likely her _____ was damaged.
a. thalamus
b. cerebellum
c. medulla
d. amygdala

ANS: B DIF: 2 REF: 2-36 OBJ: 2
MSC: TYPE: Applied

103. Damage to the _____ can prevent an individual from being aroused and possibly lead to a coma.
a. thalamus
b. reticular activation system
c. hypothalamus
d. septum

ANS: B DIF: 2 REF: 2-36&37 OBJ: 2
MSC: TYPE: Applied

104. The structure that serves as a relay station for incoming sensory stimulation and directs this information to appropriate brain sites is the
a. pons.
b. RAS.
c. thalamus.
d. septum.

ANS: C DIF: 1 REF: 2-37 OBJ: 2
MSC: TYPE: Factual

105. Tom is unable to sweat. It is possible that he has damage to his
a. thalamus.
b. hypothalamus.
c. hippocampus.
d. RAS.

ANS: B DIF: 3 REF: 2-37 OBJ: 2
KEY: WWW MSC: TYPE: Conceptual

106. You and your research team are studying electrical stimulation of the brain. The rats are exhibiting compulsive eating and drinking behaviors. The electrode is probably implanted in the rats'
a. amygdala.
b. septum.
c. pituitary gland.
d. hypothalamus.

ANS: D DIF: 3 REF: 2-37 OBJ: 2
MSC: TYPE: Conceptual

107. While conducting research on electrical stimulation with rats, Olds and Milner believed they found the *pleasure center* of the brain. They were stimulating the
a. hippocampus.
b. hypothalamus.
c. thalamus.
d. brain stem.

ANS: B DIF: 2 REF: 2-37 OBJ: 2
MSC: TYPE: Factual

108. If a person has a damaged hippocampus, which of the following would most likely take place?
a. Lack of response when reflexes are tested.
b. Lack of motor coordination.
c. An inability to sweat.
d. The ability to recall old memories, but no ability to form new ones.

ANS: D DIF: 2 REF: 2-37 OBJ: 2
MSC: TYPE: Factual

109. After a gunshot wound to the head, a patient is unable to form new memories but can recall old ones. You would expect that the wound was to the
a. cerebellum.
b. cerebrum.
c. hippocampus.
d. thalamus.

ANS: C DIF: 2 REF: 2-37 OBJ: 2
KEY: WWW MSC: TYPE: Conceptual

110. The amygdala is implicated in _____ behavior in monkeys, cats, and other animals.
a. sexual
b. eating
c. aggressive
d. courting

ANS: C DIF: 2 REF: 2-37&38 OBJ: 2
MSC: TYPE: Factual

111. The amygdala is involved in all of the following EXCEPT
a. aggression.
b. fear.
c. vigilance.
d. balance.

ANS: D DIF: 2 REF: 2-37&38 OBJ: 2
MSC: TYPE: Factual

112. Only in humans does the _____ compose such a large proportion of the brain relative to other parts.
a. limbic system
b. cerebrum
c. cerebellum
d. medulla

ANS: B DIF: 2 REF: 2-38 OBJ: 2
MSC: TYPE: Factual

113. The "valleys" in the cerebral cortex are called
a. fissures.
b. callosums.
c. crevices.
d. cerebrals.

ANS: A DIF: 1 REF: 2-38 OBJ: 2
MSC: TYPE: Factual

114. The _____ is the structure that connects the hemispheres of the cerebral cortex.
a. cerebellum
b. corpus callosum
c. cerebrum
d. thalamus

ANS: B DIF: 1 REF: 2-38 OBJ: 2
MSC: TYPE: Factual

115. Which of the following statements is ***NOT*** *true* about the cerebral cortex?
   a. The cerebral cortex is involved in very few of our bodily activities.
   b. The cerebral cortex is the outer coating of the cerebrum.
   c. The cerebral cortex has two hemispheres.
   d. Areas of the cerebral cortex that are not primarily involved in sensation or motor activity are called association areas.

   ANS: A DIF: 2 REF: 2-38 OBJ: 2
   MSC: TYPE: Factual

116. A patient comes to his doctor complaining of visual difficulties. After a thorough examination the ophthalmologist finds no anatomical problem in the patient's eyes. The doctor therefore refers the patient to a neurologist to investigate possible damage to his
   a. parietal lobe.
   b. frontal lobe.
   c. temporal lobe.
   d. occipital lobe.

   ANS: D DIF: 2 REF: 2-38 OBJ: 2
   MSC: TYPE: Applied

117. Rick was goofing around with a friend when he fell and hit his head. Soon after, he was having difficulty with his vision. It is possible that he sustained injury to the _____ lobe.
   a. parietal
   b. frontal
   c. occipital
   d. temporal

   ANS: C DIF: 2 REF: 2-38 OBJ: 2
   KEY: WWW MSC: TYPE: Applied

118. The visual area of the cortex is located in the _____ lobes.
   a. temporal
   b. parietal
   c. frontal
   d. occipital

   ANS: D DIF: 1 REF: 2-38 OBJ: 2
   MSC: TYPE: Factual

119. The auditory cortex lies within the _____ lobe.
   a. temporal
   b. parietal
   c. frontal
   d. occipital

   ANS: A DIF: 1 REF: 2-39 OBJ: 2
   MSC: TYPE: Factual

120. Andy was in a car accident and hit his head. Later, he had trouble hearing. It's probable that he sustained damage to the _____ lobe.
   a. temporal
   b. parietal
   c. occipital
   d. frontal

   ANS: A DIF: 2 REF: 2-39 OBJ: 2
   MSC: TYPE: Applied

121. If a neurosurgeon stimulated a specific area of your brain and you felt heat in your left leg, it is likely he stimulated the

a. motor cortex.
b. thalamus.
c. somatosensory cortex.
d. hypothalamus.

ANS: C DIF: 2 REF: 2-39 OBJ: 2
MSC: TYPE: Applied

122. The somatosensory cortex is located in the _____ lobes.
a. frontal
b. temporal
c. parietal
d. occipital

ANS: C DIF: 1 REF: 2-39 OBJ: 2
MSC: TYPE: Factual

123. The motor cortex is located in the _____ lobes.
a. frontal
b. parietal
c. temporal
d. occipital

ANS: A DIF: 1 REF: 2-39 OBJ: 2
MSC: TYPE: Factual

124. If a neurosurgeon stimulated a specific area of your _____, you might raise an arm or move a finger.
a. somatosensory cortex
b. motor cortex
c. visual cortex
d. auditory cortex

ANS: B DIF: 3 REF: 2-39 OBJ: 2
MSC: TYPE: Applied

125. Association areas are those areas of the cerebral cortex that are primarily involved in
a. sensation.
b. motor action.
c. learning, thought, and language.
d. somatosensory functions.

ANS: C DIF: 2 REF: 2-39 OBJ: 2
MSC: TYPE: Factual

126. Damage to either the Broca's area or Wernicke's area is likely to cause _____.
a. aphasia
b. amnesia
c. affect
d. anger

ANS: A DIF: 2 REF: 2-39 OBJ: 2
MSC: TYPE: Factual

127. Wernicke's aphasia causes
a. impairment of one's ability to comprehend speech and to think of the proper words to express their own thoughts.
b. one to speak slowly and laboriously in simple thoughts.
c. serious impairment in reading.
d. an inability to segment words in sounds while reading.

ANS: A DIF: 2 REF: 2-40 OBJ: 2
MSC: TYPE: Applied NOT: BTC

128. If a patient has damage to Broca's area, they usually
   a. comprehend language but have difficulty with speech.
   b. do not comprehend language and have difficulty with speech.
   c. have both impaired comprehension and speech.
   d. none of these

   ANS: A DIF: 2 REF: 2-40 OBJ: 2
   MSC: TYPE: Conceptual

129. Research does suggest that in right-handed individuals, the left hemisphere is relatively more involved in
   a. intellectual undertakings that require logical analysis.
   b. recognition of faces.
   c. discrimination of colors.
   d. creative mathematical reasoning.

   ANS: A DIF: 2 REF: 2-40 OBJ: 2
   MSC: TYPE: Conceptual

130. The left hemisphere of the brain is more involved in cognitive functions requiring
   a. logical analysis and problem solving.
   b. visual-spatial functions.
   c. emotional responses.
   d. creative mathematical reasoning.

   ANS: A DIF: 2 REF: 2-40 OBJ: 2
   MSC: TYPE: Conceptual

131. Which of the following is usually ***NOT*** true for left-handed people?
   a. They are more likely to be female.
   b. They are more likely to experience language problems.
   c. They are more likely to suffer from migraine headaches and allergies.
   d. They are more likely to be creatively gifted.

   ANS: A DIF: 2 REF: 2-40 OBJ: 2
   MSC: TYPE: Factual

132. Jane's parents are both left-handed. There is a _____ chance she will be left-handed as well.
   a. 50%
   b. 10%
   c. 40%
   d. 100%

   ANS: A DIF: 1 REF: 2-41 OBJ: 2
   MSC: TYPE: Factual

133. If an individual has surgery in order to control epilepsy, what will probably happen?
   a. They will automatically become right handed.
   b. They will have their corpus callosum severed.
   c. They will have the inability to retrieve visual and auditory memories.
   d. They will automatically become left-handed.

   ANS: B DIF: 3 REF: 2-41 OBJ: 2
   MSC: TYPE: Applied

134. In split-brain patients, surgeons
   a. cut both the right and left hemispheres in half.
   b. sever the corpus callosum, which joins the right and left hemispheres.
   c. cut the frontal lobes in half.
   d. cut an incision between the frontal and parietal lobes.

   ANS: B DIF: 2 REF: 2-41 OBJ: 2
   MSC: TYPE: Factual

135. With epileptic patients, the purpose of severing the corpus callosum is to
   a. rid the patient of brain seizures.
   b. confine the seizures to one hemisphere.
   c. minimize seizure activity to both hemispheres.
   d. mimic a lobotomy.

   ANS: B DIF: 3 REF: 2-41 OBJ: 2
   MSC: TYPE: Factual

136. When a patient undergoes a split-brain operation, which of the following is likely to happen?
   a. Their behavior changes drastically.
   b. If their eyes are closed, they can verbally describe an object such as a small toy when
      they hold it in one hand, but not when they hold it in the other hand.
   c. Most of the time the two hemispheres will work together even when the person is playing the piano or solving math problems.
   d. None of these

   ANS: B DIF: 3 REF: 2-41 OBJ: 2
   MSC: TYPE: Conceptual

137. Endocrine glands secrete _____ that regulates various bodily functions.
   a. hormones
   b. endorphins
   c. neurotransmitters
   d. saliva

   ANS: A DIF: 1 REF: 2-42 OBJ: 3
   MSC: TYPE: Factual

138. The gland that is often referred to as the “master gland” is the
   a. hypothalamus.
   b. adrenal gland.
   c. thyroid gland.
   d. pituitary gland.

   ANS: D DIF: 1 REF: 2-42 OBJ: 3
   MSC: TYPE: Factual

139. The gland that produces growth hormone is the
   a. adrenal gland.
   b. hypothalamus.
   c. pituitary gland.
   d. pancreas.

   ANS: C DIF: 1 REF: 2-42 OBJ: 3
   MSC: TYPE: Factual NOT: BTC

140. Prolactin stimulates the
a. production of ova.
b. onset of labor.
c. production of sperm.
d. production of milk.

ANS: D DIF: 2 REF: 2-42 OBJ: 3
MSC: TYPE: Factual

141. Oxytocin stimulates the
a. onset of labor.
b. production of milk.
c. production of sperm.
d. production of ova.

ANS: A DIF: 2 REF: 2-42 OBJ: 3
MSC: TYPE: Factual

142. Which of the following statements is *true* for the endocrine system's master gland?
a. Only one type of hormone is secreted.
b. The pituitary gland lies above the hypothalamus.
c. The hypothalamus does not regulate much of the pituitary activity.
d. Growth, maternal behavior and production of urine are influenced by this gland.

ANS: D DIF: 2 REF: 2-42 OBJ: 3
MSC: TYPE: Conceptual

143. Bobby is only 10 years old, and is nearly 6 feet tall. Tests reveal a problem with his _____.
a. adrenal gland
b. pancreas
c. thyroid gland
d. pituitary gland

ANS: D DIF: 3 REF: 2-42 OBJ: 3
MSC: TYPE: Applied

144. Which of the following statements about the hormone vasopressin are *true*?
a. As an anti-diuretic, it inhibits urine production when bodily fluids are low.
b. In humans it is involved in monogamy and attachment between men and women.
c. In non-human mammals, it is connected to some father-offspring behaviors.
d. Both a & c are true

ANS: D DIF: 3 REF: 2-42 OBJ: 3
MSC: TYPE: Factual

145. The _____ regulates the pituitary gland.
a. hypothalamus
b. hippocampus
c. hormone center
d. none of these

ANS: A DIF: 1 REF: 2-42 OBJ: 3
MSC: TYPE: Factual

146. Bonny is 16 years old, yet is only 4 feet tall. Tests reveal deficiencies in hormones produced by the
a. adrenal gland.
b. hippocampus.
c. pituitary gland.
d. thyroid gland.

ANS: C DIF: 2 REF: 2-42 OBJ: 3
MSC: TYPE: Applied

147. The pineal gland secretes the hormone melatonin, which has been connected with all of the following EXCEPT
a. sleep regulation.
b. aging.
c. jet-lag.
d. growth.

ANS: D DIF: 2 REF: 2-42 OBJ: 3
MSC: TYPE: Factual

148. If a person is having trouble sleeping, they might take the following hormone.
a. prolactin
b. corticosteroids
c. melatonin
d. thyroxin

ANS: C DIF: 2 REF: 2-42 OBJ: 3
MSC: TYPE: Applied

149. Some people are overweight because of
a. hyperthyroidism.
b. hypothyroidism.
c. hyperglycemia.
d. hypoglycemia.

ANS: B DIF: 3 REF: 2-42 OBJ: 3
MSC: TYPE: Applied

150. Low secretions of thyroxin can result in
a. anorexia.
b. hypoglycemia.
c. obesity.
d. hyperthyroidism.

ANS: C DIF: 2 REF: 2-42 OBJ: 3
MSC: TYPE: Applied

151. Bobby's growth is stunted and he exhibits mental retardation. More than likely he has
a. too much thyroxin.
b. hyperthyroidism.
c. cretinism.
d. none of these.

ANS: C DIF: 1 REF: 2-42 OBJ: 3
MSC: TYPE: Applied

152. Cretinism in children results from
a. hyperthyroidism.
b. hyperglycemia.
c. a deficiency in thyroxin.
d. too much thyroxin.

ANS: C DIF: 2 REF: 2-42 OBJ: 3
MSC: TYPE: Applied

153. The glands that are located above the kidneys are the
a. adrenal glands.
b. thyroid glands.
c. pituitary glands.
d. sebaceous glands.

ANS: A DIF: 1 REF: 2-43 OBJ: 3
MSC: TYPE: Factual

154. The adrenal cortex secretes
a. corticosteroids.
b. tyrosine.
c. thyroxin.
d. oxytocin.

ANS: A DIF: 2 REF: 2-43 OBJ: 3
MSC: TYPE: Factual

155. Testosterone is produced by
a. testes, ovaries, and adrenal glands.
b. testes and ovaries.
c. testes only.
d. ovaries only.

ANS: A DIF: 3 REF: 2-43 OBJ: 3
MSC: TYPE: Factual

156. _____ sex characteristics are directly involved in reproduction but _____ sex characteristics are not.
a. Secondary; primary
b. Primary; secondary
c. Primary; external
d. Secondary; internal

ANS: B DIF: 2 REF: 2-43 OBJ: 3
MSC: TYPE: Factual

157. Estrogen is produced by
a. the testes and ovaries.
b. only the testes.
c. only the ovaries.
d. the hypothalamus.

ANS: A DIF: 2 REF: 2-43 OBJ: 3
MSC: TYPE: Factual NOT: BTC

158. _____ promotes the growth of female reproductive organs and helps maintain pregnancy.
a. Estrogen
b. Oxytocin
c. Progesterone
d. Luteinizing hormone

ANS: C DIF: 1 REF: 2-43 OBJ: 3
MSC: TYPE: Factual

159. You are considering taking anabolic steroids. What is unlikely to happen?
a. increase in muscle mass
b. liver damage
c. decreased resistance to stress
d. an increase in the body's energy supply

ANS: C DIF: 2 REF: 2-43 OBJ: 3
MSC: TYPE: Applied

160. The evolutionary concept of _____ proposes that species that are better able to adapt to the environment are more likely to survive and reproduce.
a. struggle for existence
b. mutation
c. maturity
d. natural selection

ANS: D DIF: 1 REF: 2-44 OBJ: 4
MSC: TYPE: Factual

161. _____ are small genetic variations that lead to differences among individuals in physical traits.
a. Random codes
b. Systematic changes
c. Mutations
d. Decoders

ANS: C DIF: 1 REF: 2-44 OBJ: 4
MSC: TYPE: Factual

162. Which of the following is **NOT** true of the basic tenets of the theory of evolution?
a. Species that are adaptive manage to survive.
b. Species that do not adapt dwindle in numbers and may become extinct.
c. Survivors do not transmit their traits to future generations.
d. All of these.

ANS: C DIF: 2 REF: 2-44 OBJ: 4
MSC: TYPE: Conceptual

163. Evolutionary Psychology
a. studies ways in which adaptation and natural selection can be applied to mental processes and behavior.
b. suggests that social behavior evolves and can be transmitted from one generation to the next.
c. suggest that traits such as aggression and altruism help organisms survive and thus reproduce.
d. suggests all of these.

ANS: D DIF: 3 REF: 2-44&45 OBJ: 4
MSC: TYPE: Conceptual

164. Which of the following statements are ***NOT*** true?
a. Social behavior evolves and is transmitted from generation to generation.
b. Behavior patterns are termed species-specific because they evolve within certain species.
c. Instinctive behavior can be modified by learning.
d. Psychologists have found no human behaviors that are instinctive.

ANS: D DIF: 2 REF: 2-45 OBJ: 4
MSC: TYPE: Conceptual NOT: BTC

165. One of the reasons why dogs have a better sense of smell than humans is because of differences in our _____.
a. environment
b. heredity
c. experience
d. all of these

ANS: B DIF: 2 REF: 2-45 OBJ: 4
MSC: TYPE: Conceptual

166. Behavior geneticists are attempting to sort out the relative importance of heredity and _____.
a. environmental influences
b. nature
c. nutrition
d. behavior

ANS: A DIF: 2 REF: 2-45 OBJ: 4
MSC: TYPE: Conceptual

167. Dr. Barnes is researching the brains of individuals who are alcoholic and have a history of alcoholism in their families. She is probably a
a. neurosurgeon.
b. substance abuse counselor.
c. brain surgeon.
d. behavioral geneticist.

ANS: D DIF: 2 REF: 2-45 OBJ: 4
MSC: TYPE: Applied NOT: BTC

168. _____ are the fundamental building blocks of heredity.
a. Zygotes
b. Alleles
c. Genes
d. Ova and sperm

ANS: C DIF: 1 REF: 2-46 OBJ: 4
MSC: TYPE: Factual

169. We inherit _____ chromosomes from our mother and _____ from our father.
a. 26; 26
b. 46; 46
c. 23; 23
d. 43; 43

ANS: C DIF: 1 REF: 2-47 OBJ: 4
MSC: TYPE: Factual

170. Each cell in the body contains _____ chromosomes, arranged in ____ pairs.
a. 44; 22
b. 46; 23
c. 42; 21
d. 45; 23

ANS: B DIF: 1 REF: 2-46 OBJ: 4
MSC: TYPE: Factual

171. Which is ***NOT*** true about chromosomes?
a. They are small complex molecules of deoxyribonucleic acid.
b. They contain 10 to 20 genes.
c. If we receive an x chromosome from our father, we develop into a female.
d. The 23rd pair consists of the sex chromosomes.

ANS: B DIF: 2 REF: 2-46&47 OBJ: 4
MSC: TYPE: Conceptual

172. Orlando's outer appearance is his _____, which is based on his genetic make-up or _____.
a. genotype; phenotype
b. phenotype; genotype
c. genotype; sex-type
d. sex-type; genotype

ANS: B DIF: 2 REF: 2-47 OBJ: 4
MSC: TYPE: Conceptual

173. An extra chromosome on the 21st pair would cause what?
   a. Monozygotic twins
   b. Down syndrome
   c. DZ twins
   d. Nothing out of the ordinary to happen

   ANS: B DIF: 2 REF: 2-47 OBJ: 4
   MSC: TYPE: Factual

174. Most individuals with Down syndrome have
   a. one less chromosome on the 21st pair.
   b. one extra chromosome on the 21st pair.
   c. one less chromosome on the 23rd pair.
   d. one extra chromosome on the 23rd pair.

   ANS: B DIF: 2 REF: 2-47 OBJ: 4
   MSC: TYPE: Factual

175. Dizygotic twins
   a. develop when two ova are fertilized.
   b. share 100% of their genes.
   c. are referred to as identical twins.
   d. demonstrate differences that are solely the result of nurture.

   ANS: A DIF: 2 REF: 2-47 OBJ: 4
   KEY: WWW MSC: TYPE: Applied

176. Kinship studies
   a. compare traits and behavior patterns in people who are biologically related.
   b. compare the prescence of traits and behavior patterns of those who are not biologically related.
   c. are run with twins and adopted individuals.
   d. all of these

   ANS: D DIF: 2 REF: 2-47&48 OBJ: 4
   MSC: TYPE: Conceptual

177. Jerry and his nephew exhibit the same musical talent, yet Jerry's brother (the child's father) does not demonstrate this skill. Why is this possible from a genetic standpoint?
   a. Parents and children only share 50% overlap in genetic endowment.
   b. Aunts and uncles and their nieces and nephews, related by blood have a 25% overlap in genetic endowment.
   c. Both a and b.
   d. None of these are applicable.

   ANS: C DIF: 3 REF: 2-47 OBJ: 4
   MSC: TYPE: Conceptual

178. Certain behaviors may have a genetic component if
   a. they are shared by close blood relatives.
   b. they are not shared by close blood relatives.
   c. only parents share the trait.
   d. none of these.

   ANS: A DIF: 2 REF: 2-47 OBJ: 4
   MSC: TYPE: Conceptual

179. When a zygote divides into two cells that separate,
a. the pregnancy will end.
b. monozygotic twins will be born.
c. dizygotic twins will be born.
d. a Down Syndrome baby will be born.

ANS: B DIF: 2 REF: 2-47 OBJ: 4
MSC: TYPE: Factual

180. When two ova are fertilized, they develop into
a. dizygotic twins.
b. monozygotic twins.
c. identical twins.
d. zygotic twins.

ANS: A DIF: 1 REF: 2-47 OBJ: 4
MSC: TYPE: Factual NOT: BTC

181. You and your team of behavioral geneticists are studying schizophrenia. One effective way to conduct your research would be to study
a. MZ twins reared together whose biological mother is schizophrenic.
b. MZ twins reared apart whose biological mother is schizophrenic.
c. DZ twins reared apart whose biological mother is schizophrenic.
d. DZ twins reared together whose biological mother is schizophrenic.

ANS: B DIF: 3 REF: 2-48 OBJ: 4
MSC: TYPE: Conceptual

182. Kinship studies show us that heredity is a more important determinant of happiness than money and other social factors. What else have these studies shown us?
a. People's levels of cheerfulness or grumpiness are not consistent.
b. Identical twins, separated at birth, and raised by other people, are similar to their natural parents in some traits.
c. There is very little evidence for a genetic role in the appearance of some traits.
d. None of these.

ANS: B DIF: 3 REF: 2-48 OBJ: 4
MSC: TYPE: Applied

183. Researchers who study twins in adoptive homes attempt to
a. determine evidence for a genetic role in the appearance of a trait.
b. sort out the effects of nature vs. nurture.
c. rule out environmental influences.
d. all of these.

ANS: D DIF: 2 REF: 2-48 OBJ: 4
MSC: TYPE: Conceptual

COMPLETION

1. _____ extend like roots from the cell body to receive incoming messages from thousands of adjoining neurons.

ANS: Dendrites

DIF: 2 REF: 2-27 OBJ: 1 MSC: TYPE: Factual

2. Fluid on the inside of the neuron is negatively charged relative to the outside, when in a _____.

   ANS: resting state

   DIF: 2 REF: 2-28 OBJ: 1 MSC: TYPE: Applied

3. The _____is the phase following firing during which a neuron's action potential cannot be triggered.

   ANS: refractory period

   DIF: 2 REF: 2-29 OBJ: 1 MSC: TYPE: Factual

4. Messages travel from neurons to other neurons, muscles, or glands via chemical messengers called_____.

   ANS: neurotransmitters

   DIF: 1 REF: 2-29 OBJ: 1 MSC: TYPE: Factual

5. In a process called _____, unused neurotransmitters are reabsorbed by the axon terminal of the sending neuron.

   ANS: reuptake

   DIF: 2 REF: 2-30 OBJ: 1 MSC: TYPE: Factual

6. Dopamine deficiencies are linked to _____ disease.

   ANS: Parkinson's

   DIF: 1 REF: 2-30 OBJ: 1 MSC: TYPE: Factual

7. The two main divisions of the peripheral nervous system are the _____ nervous system and the _____ nervous system.

   ANS: somatic; autonomic

   DIF: 2 REF: 2-32 OBJ: 1 MSC: TYPE: Factual

8. If a test is being given that requires an injection of a mild radioactive substance mixed with glucose or a tracer, the neurologist has ordered a _____.

   ANS: PET scan

   DIF: 2 REF: 2-35 OBJ: 2 MSC: TYPE: Applied

9. With an MRI, the person is exposed to a powerful magnetic field and _____ that cause parts of the brain to emit signals.

   ANS: radio waves

   DIF: 2 REF: 2-35 OBJ: 2 MSC: TYPE: Factual

10. The _____ is a bulge in the hindbrain that lies forward of the medulla and transmits information about body movement.

    ANS: pons

    DIF: 2 REF: 2-36 OBJ: 2 MSC: TYPE: Factual

11. The visual cortex is in the _____ _____.

    ANS: occipital lobe

    DIF: 1 REF: 2-38 OBJ: 2 MSC: TYPE: Factual

12. Language areas of the cortex usually lie in the _____ hemisphere.

    ANS: left

    DIF: 1 REF: 2-39 OBJ: 2 MSC: TYPE: Factual

13. The endocrine system consists of _____ _____ that secrete hormones.

    ANS: ductless glands

    DIF: 2 REF: 2-42 OBJ: 3 MSC: TYPE: Factual

14. The adrenal medulla secretes epinephrine and _____.

    ANS: norepinephrine

    DIF: 1 REF: 2-43 OBJ: 3 MSC: TYPE: Factual

15. _____ and natural selection are key concepts in evolutionary psychology.

    ANS: Adaptation

    DIF: 1 REF: 2-44 OBJ: 3 MSC: TYPE: Factual

16. A typical pattern of behavior that is triggered in a specific situation is a(n) _____.

    ANS: instinct

    DIF: 1 REF: 2-45 OBJ: 3 MSC: TYPE: Factual

17. Genes are segments of chromosomes, which consist of molecules of _____.

ANS: DNA

DIF: 1 REF: 2-46 OBJ: 4 MSC: TYPE: Factual

18. The 23rd pair of chromosomes called _____ _____determines whether you will become a male or female.

ANS: sex chromosomes

DIF: 2 REF: 2-47 OBJ: 4 MSC: TYPE: Factual

19. Studies of the distribution of traits or behavior patterns among related people are known as _____ studies.

ANS: kinship

DIF: 1 REF: 2-47 OBJ: 4 MSC: TYPE: Factual

20. The fertilized egg cell that carries genetic messages from both parents is called a(n) _____.

ANS: zygote

DIF: 1 REF: 2-47 OBJ: 4 MSC: TYPE: Factual

TRUE/FALSE

1. Dopamine is a neurotransmitter that is involved in voluntary movements.

ANS: T DIF: 2 REF: 2-30 OBJ: 1
MSC: TYPE: Factual

2. Stimulants like cocaine and amphetamines increase the release of norephinephrine.

ANS: T DIF: 1 REF: 2-31 OBJ: 1
MSC: TYPE: Factual

3. The sympathetic nervous system is primarily calming.

ANS: F DIF: 2 REF: 2-32 OBJ: 1
MSC: TYPE: Conceptual

4. The central nervous system consists of the spinal cord only.

ANS: F DIF: 1 REF: 2-32 OBJ: 1
MSC: TYPE: Factual

5. Reflexes are inborn behavior patterns that help individuals adapt to the environment.

ANS: T DIF: 1 REF: 2-33 OBJ: 1
MSC: TYPE: Factual

6. The left side of the brain controls the right side of the body.

ANS: T DIF: 1 REF: 2-34 OBJ: 2
MSC: TYPE: Factual

7. The reticular activation system (RAS) can become selective and learn to filter out certain sounds and be more sensitive to other sounds.

ANS: T DIF: 2 REF: 2-36&37 OBJ: 2
MSC: TYPE: Conceptual

8. A large majority of humans are truly left-brained or right-brained.

ANS: F DIF: 1 REF: 2-40 OBJ: 2
MSC: TYPE: Factual

9. Charles Darwin's book that made the case for the theory of evolution was titled *The Descent of Man*.

ANS: T DIF: 1 REF: 2-44 OBJ: 4
MSC: TYPE: Factual

10. If a psychological trait is thought to be polygenic, it is influenced by only one gene.

ANS: F DIF: 1 REF: 2-46 OBJ: 4
MSC: TYPE: Conceptual

ESSAY

1. How do neurons communicate? Describe how a neural impulse travels from a sending neuron to a receiving neuron. In your description, be sure to include the parts of a neuron and what happens at the synapse.

   ANS: Essay should include:

   Neural impulse: Dendrites – receive messages from other neurons >Cell body -- contains nucleus of the cell >Axon -- (myelin sheath insulates, speeding transmission) sends message from cell body >Terminal button of axon >Synapse >Receiving neuron. Synapse: gap between sending neuron and receiving neuron. As impulse reaches axon terminal of sending neuron, neurotransmitters (chemical messengers) are released and travel across synapse; they fit into specific receptor sites on receiving neuron – completing the transmission.

2. Discuss two neurological/psychological disorders that have been linked to neurotransmitters. For each disorder a) Describe the symptoms. b) Discuss what researchers have learned about the role of neurotransmitters in the disorder.

   ANS: Essay should include:

   Two of the following:
   Alzheimer's disease: a) formation of new memories is impaired. b) ACh is abundant in hippocampus – a structure involved in the formation of new memories. ACh deficiency is connected to Alzheimer's. Evidence found in memory loss of maze learning rats.
   Parkinson's disease: a) progressive loss of muscle control; muscle tremors, jerky uncoordinated movements. b) Dopamine deficiency is connected to Parkinson's. It acts on the brain affecting voluntary movements.
   Schizophrenia: a) confusion and false perceptions. b) Schizophrenics may have more receptors for dopamine in brain areas associated with emotional responding, resulting in overuse of dopamine. Treatment inhibits these receptors.

3. a) Describe the functions of the sympathetic and parasympathetic divisions of the autonomic nervous system. b) Provide a real-life example that demonstrates the effects of these two systems in humans.

   ANS: Essay should include:

   a) The two divisions of the autonomic nervous system have opposing effects. Sympathetic: involved in flight or fight response; increase in heart rate & breathing, increasing glucose, inhibits digestion and salivation. Parasympathetic: calming responses during relaxation; slows heart rate & breathing, stimulated digestion and salivation. When stressed, anxious, or fearful, eating is difficult. b) Any example that involves an arousing or stress-inducing situation that is complemented by a calming, restful situation and includes some of the effects described in (a).

4. Compare and contrast three brain-imaging techniques. Be sure to include what each technique can tell us about a person's brain.

   ANS: Essay should include:

   Compare three of the following: EEG – records electrical activity in the brain (brain waves); can detect certain brain waves associated with sleep, relaxation, or neurological problems. CT scan – x-rays of the brain; can reveal deformities, blood clots, tumors, other problems. PET scan – tracing metabolized glucose in the brain by measuring positively charged particles; shows areas of the brain that are most active during different tasks. MRI – person lies in magnetic field and is exposed to radio waves; measures signals from the brain; allows for repeated observations of changes in blood flow while patient is involved in different tasks. fMRI – observe brain while it works with repeated scans of the brain. Contrast: could include differences in what is measured in each scan (i.e. CT – x-rays, PET – glucose).

5. a) Discuss why psychologists are interested in studying identical twins that have been raised in different environments. b) What is the main conclusion of these studies?

   ANS: Essay should include:

   a) Identical twins have almost identical genetics. Studying identical twins reared in different environments can provide a clearer picture of the contribution of genetics. Identical twins in the same family also share similar environments – making it difficult to evaluate the relative contribution of genetics and environment. b) Results of the Minnesota study of identical twins reared apart show that that they are about as similar as identical twins living together on measures of: intelligence, personality, temperament, interests, and social attitudes. Therefore these traits are likely to be genetically influenced.