Student name:_____

1) The_____Blank is an insulating coating of fat and protein wrapped around an axon.

2) According to the_____Blank law, neurons are either on or off.

3) After a long run, Aaron sometimes experiences a feeling of euphoria, a "runner's high," reflecting the activity of a group of neurotransmitters called_____Blank.

4) The neurons that transmit information from the perimeter of the body to the central nervous system are called_____Blank.

5) The somatic nervous system controls voluntary movement. In contrast, the_____Blank nervous system controls involuntary movement.

6) Wilma has been experiencing memory difficulties, and her doctor is concerned that Wilma may have a brain tumor. Her doctor is most likely to recommend a(n)_____Blank scan to confirm his diagnosis.

7) Extending from the medulla, through the

midbrain, into the forebrain is the_____Blank, which can activate other parts of the brain immediately to produce general bodily arousal.

8) Information travels from the sensory receptors to the_____Blank in the brain, which communicates the information upward to higher parts of the brain.

9) The amygdala and hippocampus are found within the brain's_____Blank, the part of the brain that controls eating, aggression, and reproduction.

10) The cortex has four major sections called_____Blank.

11) The_____Blank area in the parietal lobe encompasses specific locations associated with the ability to perceive touch and pressure in a particular area of the body.

12) Vince has learned to voluntarily control his internal physiological processes as part of the treatment for an anxiety disorder. This is an example of_____Blank.

13) Psychologists who specialize in considering the ways in which the biological structures and functions of the body affect behavior are known as

A) genetic psychologists.
B) biopsychologists.
C) evolutionary psychologists.
D) forensic psychologists.

14) The basic elements of the nervous system are called

A) erythrocytes.
B) neutrophils.
C) neurons.
D) neurotransmitters.

15) Which of the following characteristics distinguishes neurons from most other cells in the human body?

A) the ability to migrate and accommodate the body's physiological requirements
B) the ability to undergo division and replication for extended periods of time
C) the ability to communicate with other cells and over long distances
D) the ability to withstand denaturation in extremely acidic or alkaline conditions

16) There is a cluster of fibers at the end of every neuron that receives messages from other neurons called

A) axons.
B) terminal buttons.
C) glial fibers.
D) dendrites.

17) An axon is a

A) neuron's cell body.
B) cluster of fibers at one end of a neuron.
C) neuron's protective coating of fat and protein.
D) long, slim, tubelike extension of a neuron.

18) Terminal buttons are small bulges found at the end of

A) neurotransmitters.
B) dendrites.
C) axons.
D) glial cells.

19) Dendrite is to axon what_____Blank is to_____Blank.

A) receiving; sending
B) sending; receiving
C) reuptake; action potential
D) action potential; reuptake

20) Which of the following is true of neural impulses?

A) They are electrical in nature.
B) They deliver excitatory and inhibitory messages.
C) They are stored in the axons of neurons.
D) They are bidirectional.

21) Which of the following sequences accurately reflects the route followed by nerve impulses when one neuron communicates with another?

A) dendrite → axon → cell body
B) dendrite → cell body → axon
C) cell body → axon → dendrite
D) axon → dendrite –→ cell body

22) Electrical wires are generally protected by a tube of plastic. Similarly, the nervous system is insulated by a

A) myelin sheath.
B) glial cell.
C) terminal button.
D) synapse.

23) _____Blank is a protective coating of fat and protein that wraps around an axon.

A) A myelin sheath
B) A glial cell
C) The

sarcoplasmic reticulum

D) The basal lamina

24) The rule that neurons are either on or off is known as the_____Blank law.

A) intensity of stimulus
B) graded action
C) all-or-none
D) incremental transformational

25) The state in which there is a negative electrical charge of about −70 millivolts within a neuron is known as the_____Blank state.

A) triggering
B) terminal
C) optimum
D) resting

26) Which of the following statements is true of an action potential?

A) As an impulse travels along an axon, the movement of ions changes the charge from positive to neutral in successive sections of the axon.
B) An action potential moves from one end of an axon to the other like a flame moving along a fuse.
C) After an impulse has passed through a particular section of an axon, negative ions are pumped out of that section, and its charge returns to positive while an action potential continues to move along the axon.
D) Just after an action potential has passed through a section of an axon, a neuron can fire again immediately if it receives enough stimulation.

27) An action potential is triggered when a neuron's electrical charge changes from

A) negative to neutral.
B) positive to neutral.
C) negative to positive.
D) positive to negative.

28) _____Blank are specialized neurons that fire not only when a person enacts a particular behavior, but also when a person simply observes another individual carrying out the same behavior.

A) Pharyngeal motor neurons
B) Mirror neurons
C) Ventral cord motor neurons
D) Amphid neurons

29) A_____Blank is the space between two neurons where the axon of a sending neuron communicates with the dendrites of a receiving neuron by using chemical messages.

A) synapse
B) terminal button
C) tight junction
D) sarcomere

30) Which of the following statements is true of inhibitory messages?

A) Inhibitory messages, on outnumbering excitatory messages, cause neurons to fire.
B) Inhibitory messages decrease the likelihood that a receiving neuron will fire.
C) Inhibitory messages are triggered when a neurotransmitter does not fit into a receptor site on a neuron.
D) Inhibitory messages make it more likely that an action potential will travel down an axon.

31) The reabsorption of neurotransmitters by an axon's terminal button is termed

A) recycling.
B) reassertion.
C) reuptake.
D) reuse.

32) Which of the following neurotransmitters is correctly matched with its description?

A) Acetylcholine: It transmits messages related to skeletal muscles.

B) Gamma-aminobutyric acid (GABA): It is an excitatory neurotransmitter inhibited by alcohol or tranquilizers.

C) Serotonin: It aids in muscle movement and cognitive functioning.

D) Glutamate: It is primarily an inhibitory neurotransmitter, except in the hippocampus.

33) Identify a true statement about the neurotransmitter dopamine.

A) A deficiency in dopamine levels is related to Alzheimer's disease.

B) It is found primarily in the spinal cord.

C) Reduction in dopamine production enables effective regulation of sleep and pain.

D) It is involved in movement, attention, and learning.

34) Which neurotransmitter is correctly matched with a psychological function?

A) Glutamate: It relieves pain.

B) Acetylcholine: It regulates mood.

C) Dopamine: It facilitates learning.

D) Serotonin: It contributes to memory.

35) Which disorder is correctly paired with an associated neurotransmitter?

A) Parkinson's disease: dopamine

B) Depression: glutamate

C) Schizophrenia: serotonin

D) Alzheimer's

disease: endorphins

36) Inhibitory is to excitatory what_____Blank is to_____Blank.

A) glutamate; gamma-aminobutyric acid (GABA)
B) glutamate; acetylcholine
C) gamma-aminobutyric acid (GABA); glutamate
D) an endorphin; serotonin

37) The nervous system is divided into

A) the primary and secondary nervous systems.
B) the somatic and autonomic nervous systems.
C) the sympathetic and parasympathetic nervous systems.
D) the central and peripheral nervous systems.

38) The brain and the spinal cord constitute the_____Blank nervous system.

A) central
B) peripheral
C) somatic
D) parasympathetic

39) The_____Blank is the primary means for transmitting messages between the brain and the rest of the body.

A) hematopoietic stem cell
B) sarcoplasmic reticulum
C) juxtaglomerular apparatus
D) spinal cord

40) One of the characteristic features of the spinal cord is that it

A) functions exclusively as a communication channel.

B) is not involved in reflexes.

C) can control some simple reflexes without the brain's help.

D) is a part of the peripheral nervous system.

41) A(n)_____Blank is an automatic, involuntary response to an incoming stimulus.

A) action potential

B) synapse

C) inflammation

D) reflex

42) Unlike the central nervous system, the peripheral nervous system

A) is made up of sensory neurons, motor neurons, and interneurons.

B) is composed of the brain and the spinal cord.

C) consists of neurons that have short axons and dendrites.

D) comprises the somatic and autonomic nervous systems.

43) Sensory is to motor what_____Blank is to_____Blank.

A) efferent; afferent

B) afferent; efferent

C) afferent; interneuron

D) interneuron; efferent

44) _____Blank are involved in reflexes and communicate information from the nervous system to muscles and glands.

A) Mirror neurons

B) Amphid neurons

C) Motor neurons

D) Autoneurons

45) The two major divisions of the peripheral nervous system are

A) the somatic and autonomic divisions.
B) the sympathetic and parasympathetic divisions.
C) the afferent and efferent divisions.
D) the sensory and motor divisions.

46) The_____Blank is the part of the peripheral nervous system that specializes in the control of voluntary movements and communicates information to and from the sense organs.

A) somatic division
B) sympathetic division
C) parasympathetic division
D) autonomic division

47) Somatic is to autonomic what_____Blank is to_____Blank.

A) involuntary; voluntary
B) voluntary; involuntary
C) excitation; rest
D) rest; excitation

48) The part of the autonomic division of the peripheral nervous system that acts to prepare an organism's body for action in stressful situations, engaging all of the organism's resources to respond to a threat is known as the

A) somatic division.
B) sympathetic division.
C) parasympathetic division.
D) synaptic division.

49) The "fight-or-

flight" response is associated with the_____Blank of the autonomic division of the peripheral nervous system.

A) somatic division
B) sympathetic division
C) parasympathetic division
D) hematopoietic division

50) The part of the autonomic division of the peripheral nervous system that acts to calm the body after an emergency or a stressful situation has ended is known as the

A) somatic division.
B) sympathetic division.
C) parasympathetic division.
D) synaptic division.

51) The_____Blank of the autonomic division of the peripheral nervous system directs the body to store energy for use in emergencies.

A) somatic division
B) sympathetic division
C) parasympathetic division
D) dendritic division

52) Which of the following situations is most likely to involve the action of the parasympathetic nervous system?

A) Brooke accidentally touches a hot iron, and she immediately jerks her hand away.
B) Callie panics when she mistakes her roommate for a thief, but she relaxes after having a glass of water.
C) Denise walks toward her car in a deserted street and is alarmed when a strange-looking man appears out of nowhere.
D) Peyton gets ready to go to bed and is alarmed when she sees a stranger at her window.

53) Izzy sees a snake in

her backyard. Her pupils dilate, and her heart starts pounding. Her breathing is shallow and rapid. Her_____Blank nervous system is active.

A) parasympathetic
B) sympathetic
C) hematopoietic
D) somatic

54) The study of the effects of heredity on how people conduct themselves is known as

A) behavioral genetics.
B) classical genetics.
C) development genetics.
D) molecular genetics.

55) Tara is an 18-year-old with a rare and inherited form of childhood blindness. Her case has been referred to Dr. Schilling, who is currently conducting experimental trials with people having this form of blindness. In his experiments, Dr. Schilling targets the mutated genes responsible for the blindness and replaces them with functional pieces of deoxyribonucleic acid (DNA). The treatment method that Dr. Schilling is trying to perfect is

A) gene therapy.
B) gene sequencing.
C) gene mapping.
D) gene linkage.

56) Which of the following statements best expresses the relationship between the nervous system and the endocrine system?

A) The nervous system and the endocrine system operate independently of each other.
B) The endocrine system is part of the central nervous system.
C) The endocrine system influences and is influenced by the nervous

system.

D) The central nervous system is part of the endocrine system.

57) The_____Blank gland is the major component of the endocrine system, which secretes hormones that control growth and other parts of the endocrine system.

A) esophageal
B) apocrine
C) parotid
D) pituitary

58) The_____Blank gland has sometimes been called the "master gland" because it controls the functioning of the rest of the endocrine system.

A) pituitary
B) esophageal
C) apocrine
D) parotid

59) Gayle confides in his friend that he is considering using steroids to increase muscle mass. Gayle's friend has been studying about the effects of steroids and warns him that steroid abuse may lead to

A) violent and dangerous behavior.
B) extreme tiredness.
C) yellowing of the eyes and skin.
D) symptoms of type II diabetes.

60) Which of the following is a diagnostic use of the brain-scanning technique electroencephalography (EEG)?

A) It helps in accurate diagnosis of strokes and multiple sclerosis.
B) It facilitates more precise diagnosis of epilepsy and learning disabilities.
C) It facilitates viewing individual circuits of neurons.
D) It helps to identify the presence of brain tumors.

61) Which of the following brain-scanning techniques is correctly matched with its description?

A) Electroencephalogram (EEG): records the brain's electrical activity through electrodes

B) Positron emission tomography (PET): uses magnetic fields to cause a momentary interruption of the brain's electrical activity

C) Functional magnetic resonance imaging (fMRI): traces biochemical activity in the brain

D) Transcranial magnetic stimulation (TMS): produces a graph of electrical wave patterns

62) Brent is taking part in an experiment in the cognitive neuroscience laboratory on campus. He is made to read silently sequences of words flashed on a computer screen. Simultaneously, the electrical activity of his brain is recorded through electrodes placed on the outside of his skull. The brain-scanning technique used in this study is

A) functional magnetic resonance imaging (fMRI).

B) positron emission tomography (PET).

C) electroencephalogram (EEG).

D) transcranial magnetic stimulation (TMS).

63) One of the newest brain-scanning techniques that is sometimes called a virtual lesion is

A) positron emission tomography (PET).

B) electroencephalogram (EEG).

C) transcranial magnetic stimulation (TMS).

D) functional magnetic resonance imaging (fMRI).

64) Marisol is trying a new treatment for severe depression, in which a tiny region of her brain is exposed to a strong magnetic field. Marisol is undergoing

A) optogenetic therapy.

B) transcranial magnetic stimulation.

C) positron emission tomography.

D) functional magnetic resonance imaging.

65) In the context of brain-scanning techniques, the emerging field of_____Blank involves genetic engineering and the use of special types of light to view individual circuits of neurons.

A) optogenetics
B) synaptic reflectance
C) neurogenetics
D) transcranial magnetic stimulation

66) In the context of brain-scanning techniques, researchers are developing hydrogel embedding methods to

A) make unresponsive and mutated genes inoperative.
B) view individual brain cells and the wiring of brain circuitry.
C) cause interruptions in the brain's electrical activity.
D) determine the composition of the human genome.

67) Sofia is learning about the human brain. Her teacher asks her to identify a part of the brain's central core. Which of the following should she choose?

A) the cerebellum
B) the cerebral cortex
C) the hippocampus
D) the spinal cord

68) Which of the following is a function of the medulla?

A) maintaining body movement and balance
B) coordinating muscle movements
C) maintaining body temperature
D) regulating breathing and heartbeat

69) The pons serves to

A) regulate breathing and heartbeat.
B) relay sensory information to the brain's association areas.
C) integrate movement between the left and right halves of the body.
D) consolidate memories.

70) Identify a true statement about the cerebellum.

A) It is sometimes referred to as the "animal brain" because its structures and functions are like those of other mammals.
B) Drinking too much alcohol may depress the activity of the cerebellum.
C) It is involved in regulating sleep.
D) Injury to the cerebellum can produce striking changes in behavior.

71) The part of the brain extending from the medulla through the pons and made up of groups of nerve cells that can immediately activate other parts of the brain to produce general bodily arousal is called the

A) reticular formation.
B) thalamus.
C) cerebellum.
D) sarcoplasmic reticulum.

72) The_____Blank is the part of the brain located in the middle of the central core that acts primarily to relay information about the senses.

A) thalamus
B) cerebellum
C) hypothalamus
D) amygdala

C) hypothalamus
A) medulla
D) perichondrium
B) cerebellum

74) The hypothalamus in the brain contributes to the body's maintenance of a steady internal environment called

C) ketoacidosis.
A) peristalsis.
D) hematopoiesis.
B) homeostasis.

75) Which of the following structures is found in the limbic system?

C) the thalamus
A) the amygdala
D) the corpus callosum
B) the pons

76) The structures of the_____Blank jointly control a variety of basic functions relating to emotions and self-preservation, such as eating, aggression, and reproduction.

C) limbic system
A) basal lamina
D) cerebral cortex
B) endocrine system

77) The_____Blank is referred to as the "new brain" because of its relatively recent evolution.

C) cerebral cortex
A) hindbrain
D) hypothalamus
B) sarcoplasmic reticulum

78) The uneven shape of the cerebral cortex

A) enables sophisticated information processing.
B) helps in the maintenance of body temperature.
C) depresses the activity of the cerebellum.
D) helps in the identification of brain tumors.

79) In the context of the cerebral cortex of the brain, the motor area is located in the_____Blank lobes.

A) occipital
B) frontal
C) parietal
D) temporal

80) In a neurophysiological investigation, a rat makes an involuntary gesture when a portion of its brain is electrically stimulated. The area of the brain that was most likely stimulated is the

A) parietal lobe.
B) frontal lobe.
C) temporal lobe.
D) occipital lobe.

81) The_____Blank area is the site in the brain of the tissue that corresponds to each of the senses, with the degree of sensitivity related to the amount of the tissue allocated to that sense.

A) attribution
B) sensory
C) motor
D) association

82) The somatosensory area is to the auditory area what the_____Blank lobe is to the_____Blank lobe.

A) temporal; parietal
B) parietal; occipital
C) occipital; parietal
D) parietal; temporal

83) The visual area in the cortex is located in the

A) frontal lobe.
B) occipital lobe.
C) temporal lobe.
D) parietal lobe.

84) The_____Blank in the cerebral cortex are the site of higher mental processes, such as thinking, language, memory, and speech.

A) sensory areas
B) auditory areas
C) motor areas
D) association areas

85) Which of the following is an executive function that is controlled by the association areas of the cortex?

A) recalling information
B) calculating expenses
C) setting goals
D) speaking clearly

86) The brain's ability to change throughout the life span through the addition of new neurons, new interconnections between neurons, and the reorganization of information-processing areas is termed

A) neurogenesis.
B) neuroplasticity.
C) neuroadaptation.
D) neuromutability.

87) _____Blank is the creation of new neurons.

C) Neuromutability
A) Neurogenesis
D) Neuropathy
B) Neuroadaptation

88) Which of the following statements is most accurate in the context of the lateralization of language?

the hemispheres.
A) Language processing is most likely to occur in the left side of the brain.
D) The lateralization of language varies dramatically from one person to another.
B) Language processing is most likely to occur in the right side of the brain.
C) The control of language is shared equally between

89) Trevor is desperately trying to solve a verbal analogy as part of a standardized entrance examination. On the other hand, Sienna is giving an oral presentation in a political science class. Which of the following is a true statement in the context of this scenario?

damage to their left hemispheres.
A) Sienna's right hemisphere is likely to be more active than her left hemisphere.
D) Neither Trevor's nor Sienna's brain exhibits lateralization.
B) Trevor's left hemisphere is likely to be more active than his right hemisphere.
C) Both Trevor and Sienna are likely to have suffered

90) Who among the following is likely to have suffered damage to the right side of the brain?

girlfriend's face
A) Kate, who is able to achieve feng shui in her living room by rearranging the couch and the TV
D) Harry, who is unable to express what is on his mind to his friends
B) Norah, who is able to easily read the musical notes in her violin class
C) Denver, who is unable to read the look on his

91) Ramona is a woman. Stefan is a man. Which of the following statements is true regarding the potential differences in the corpus callosum between these two individuals?

A) Stefan's corpus callosum is probably the same size as Ramona's.
B) A part of Ramona's corpus callosum is proportionally larger than Stefan's.
C) A part of Ramona's corpus callosum is slightly smaller than Stefan's.
D) A part of Stefan's corpus callosum is much larger than Ramona's.

92) People whose corpus callosum has been surgically cut to stop seizures are called

A) deep-brain patients.
B) dual-brain patients.
C) split-brain patients.
D) bicameral patients.

93) Mrs. Simon has learned to lessen the pain associated with her migraines by voluntarily relaxing specific muscles and reducing her blood pressure. This example illustrates

A) deep-brain stimulation.
B) biofeedback.
C) split-brain control.
D) transcranial stimulation.

94) Briefly describe mirror neurons.

95) Identify how abnormal levels of specific

neurotransmitters may be involved in each of these disorders: Alzheimer's disease, Parkinson's disease, and schizophrenia.

96) Briefly describe the peripheral nervous system.

97) Distinguish between the sympathetic and parasympathetic divisions of the autonomic nervous system. For each division, provide an example of a situation in which the division would become active. Describe the effects of the activity of each division on several bodily processes.

98) Briefly describe the functions of the endocrine system and the pituitary gland.

99) Review recent research investigating the effects of gender and culture on brain structure and function.

100) What is biofeedback? Describe the procedure and identify some of the physical and psychological disorders where it is applied.

Answer Key

Test name: Psychology and Your Life with P.O.W.E.R Learning Author: Feldman 4th ch2

1) myelin sheath

2) all-or-none

3) endorphins

4) afferent neurons

5) autonomic

6) positron emission tomography (PET)

7) reticular formation

8) thalamus

9) limbic system

10) lobes

11) somatosensory

12) biofeedback

13) B

14) C

15) C

16) D

17) D

18) C

19) A

20) A

21) B

22) A

23) A

24) C

25) D

26) B

27) C

28) B

29) A

30) B

31) C

32) A

33) D

34) C

35) A

36) C

37) D

38) A

39) D

40) C

41) D

42) D

43) B

44) C

45) A

46) A

47) B

48) B

49) B

50) C

51) C

52) B

53) B

54) A

55) A

56) C

57) D

58) A

59) A

60) B

61) A

62) C

63) C

64) B

65) A

66) B

67) A

68) D

69) C

70) B

71) A

72) A

73) C

74) B

75) A

76) C

77) C

78) A

79) B

80) B

81) B

82) D

83) B

84) D

85) C

86) B

87) A

88) A

89) B

90) C

91) B

92) C

93) B