1) Which of the following is a function of the nervous system?
A) sense the internal and external environments
B) integrate sensory information
C) coordinate voluntary and involuntary activities
D) control peripheral effectors
E) all of the above

2) The ______ nervous system is composed of the brain and spinal cord.
A) autonomic
B) peripheral
C) central
D) efferent
E) afferent

3) The ______ nervous system controls the skeletal muscles.
A) sympathetic
B) parasympathetic
C) afferent
D) somatic
E) autonomic

4) The efferent division of the peripheral nervous system innervates _______ cells.
A) skeletal muscle
B) smooth muscle
C) heart muscle
D) glandular
E) All of the answers are correct.

5) The basic functional unit of the nervous system is the
A) neuron.
B) axon.
C) nerve.
D) glial cell.
E) receptor.

6) The plasma membrane of an axon is called the
A) axon terminal.
B) neurilemma.
C) myelin sheath.
D) sarcolemma.
E) axolemma.
7) The most abundant class of neuron in the central nervous system is
A) anaxonic.
B) bipolar.
C) multipolar.
D) pseudopolar.
E) unipolar.

8) The site of intercellular communication between a neuron and another cell is the
A) telodendria.
B) synaptic terminals.
C) collateral.
D) hillock.
E) synapse.

9) The rabies virus travels to the CNS via
A) anterograde axoplasmic transport.
B) retrograde axoplasmic transport.
C) blood vessels.
D) subcutaneous connective tissue.
E) cerebrospinal fluid.

10) _______ neurons are short, with a cell body between dendrite and axon, and occur in
special sense organs.
A) Multipolar
B) Anaxonic
C) Unipolar
D) Bipolar
E) Motor

11) Most CNS neurons lack centrioles. This observation explains
A) why CNS neurons grow such long axons.
B) why CNS neurons cannot divide to repair damaged nervous tissue
C) the ability of neurons to generate an action potential.
D) the ability of neurons to communicate with each other.
E) the ability of neurons to produce a resting potential.

12) Neuron cell bodies in the PNS are clustered together in masses called
A) fibers.
B) tracts.
C) nerves.
D) nuclei.
E) ganglia.

13) All the followings are function of the neuroglia except?
A) support
B) memory
14) The myelin sheath that covers many CNS axons is formed by
A) astrocytes.
B) satellite cells.
C) oligodendrocytes.
D) microglia.
E) ependymal cells.

15) In the peripheral nervous system, Schwann cells participate in the repair of damaged nerves by
A) producing new axons.
B) regenerating cell bodies for the neurons.
C) forming a cellular tube that directs axonal regeneration.
D) clearing away cellular debris.
E) producing more satellite cells that fuse to form new axons.

16) Opening of sodium channels in the axon membrane causes
A) depolarization.
B) repolarization.
C) hyperpolarization.
D) increased negative charge inside the membrane.
E) inhibition.

17) During repolarization of a neuron
A) sodium ions move out of the cell.
B) potassium ions move out of the cell.
C) potassium ions move into the cell.
D) both sodium and potassium ions move into the cell.
E) sodium ions move into the cell.

18) The following are the main steps in the generation of an action potential.
1. Sodium channels are inactivated.
2. Voltage-gated potassium channels open and potassium moves out of the cell, initiating repolarization.
3. Sodium channels regain their normal properties.
4. A graded depolarization brings an area of an excitable membrane to threshold.
5. A temporary hyperpolarization occurs.
6. Sodium channel activation occurs.
7. Sodium ions enter the cell and depolarization occurs.

What is the proper sequence of these events?
A) 4, 6, 7, 3, 2, 5, 1
B) 4, 6, 7, 1, 2, 3, 5
19) Rapid impulse conduction from "node" to "node" is called
A) spatial propagation.
B) saltatory propagation.
C) divergent propagation.
D) synaptic transmission.
E) continuous propagation.

20) Which of the following types of nerve fiber possesses the fastest speed of impulse propagation?
A) type A
B) type B
C) type C
D) type D
E) type E

21) A neuron that receives neurotransmitter from another neuron is called
A) the presynaptic neuron.
B) the motor neuron.
C) an oligodendrocyte.
D) a satellite cell.
E) the postsynaptic neuron.

22) The ion that triggers the release of acetylcholine into the synaptic cleft is
A) sodium.
B) potassium.
C) calcium.
D) chloride.
E) magnesium.

23) The nervous tissue outside of the central nervous system composes the ________ nervous system.
A) somatic
B) peripheral
C) autonomic
D) afferent
E) parasympathetic

24) The ________ nervous system provides involuntary regulation of smooth muscle, cardiac muscle, and glandular activity.
A) somatic
B) peripheral
C) autonomic
D) afferent
E) motor

25) ________ nerves are nerves that connect to the spinal cord.
A) Spinal
B) Cranial
C) Afferent
D) Multipolar
E) Autonomic

26) ________ carry sensory information to the CNS.
A) Motor neurons
B) Efferent neurons
C) Multipolar neurons
D) Afferent neurons
E) Interneurons

27) Regions of the CNS with an abundance of myelinated axons constitute the ________ matter.
A) gray
B) white
C) neural
D) brain
E) ganglion

28) The minimum stimulus required to trigger an action potential is known as the
A) threshold.
B) all-or-none response.
C) potential.
D) incentive.
E) summation.

29) The presence of ________ dramatically increases the speed at which an action potential moves along an axon.
A) a capsule
B) plasma protein
C) neurilemma
D) glial cells
E) myelin

30) The sensory loss and muscle weakness associated with multiple sclerosis are a consequence of
A) excessive myelin layers around the axonal fibers.
B) demyelination.
C) a neuron not having a myelin sheath.
D) a neuron without a neurilemma.
E) too few nodes of Ranvier.
31) The spinal cord is part of the ________ nervous system.
A) peripheral  
B) somatic  
C) central  
D) autonomic  
E) afferent

32) Spinal nerves are  
A) purely sensory.  
B) purely motor.  
C) both sensory and motor.  
D) interneuronal.  
E) involuntary.

33) Which of the following associations is incorrect?
A) 8 cervical spinal nerves  
B) 11 thoracic spinal nerves  
C) 5 lumbar spinal nerves  
D) 5 sacral spinal nerves  
E) 1 coccygeal spinal nerve

34) The dorsal root of a spinal nerve contains  
A) axons of motor neurons.  
B) axons of sensory neurons.  
C) cell bodies of motor neurons.  
D) cell bodies of sensory neurons.  
E) interneurons.

35) The anterior horns of the spinal cord contain mainly  
A) sensory nuclei.  
B) somatic motor nuclei.  
C) autonomic motor nuclei.  
D) nerve tracts.  
E) sympathetic nuclei.

36) The specialized membranes that surround the spinal cord are termed the  
A) cranial meninges.  
B) cranial mater.  
C) spinal meninges.  
D) spinal mater.  
E) epidural membranes.

37) The layer of the meninges in direct contact with the spinal cord is the  
A) dura mater.
B) subarachnoid space.  
C) arachnoid.  
D) pia mater.  
E) choroid plexus.

38) The ________ separates the dura mater from the walls of the vertebral canal.  
A) subdural space  
B) subarachnoid space  
C) epidural space  
D) venous dural sinus  
E) central canal

39) The condition in which a person loses all feeling and movement of the arms and legs due to spinal cord injury is termed  
A) paraplegia.  
B) hemiplegia.  
C) spinal shock.  
D) quadriplegia.  
E) spinal transection.

40) The specific strip of skin that is innervated by a specific spinal nerve is called a  
A) rootlet.  
B) ramus.  
C) meninx.  
D) ganglion.  
E) dermatome.

41) The nerve crucial for breathing that originates within the cervical plexus is called the ________ nerve.  
A) brachial  
B) phrenic  
C) intercostal  
D) ganglion  
E) sciatic

42) In a(n) ________ reflex, a sensory neuron synapses directly on a motor neuron.  
A) monosynaptic  
B) ipsilateral  
C) commensual  
D) involuntary  
E) polysynaptic

43) Reflexes that activate muscles on the opposite side of the body as the stimulus are called  
A) contralateral.  
B) ipsilateral.  
C) commensual.
D) involuntary.
E) parasympathetic.

44) In meningitis,
A) inflammation of the meninges occurs.
B) bacteria can be the cause.
C) viruses can be the cause.
D) CSF flow can be disrupted.
E) All of the answers are correct.

45) Which of the following is true regarding an epidural block?
A) It is commonly used as a method of pain control during labor and delivery.
B) It affects only the spinal nerves in the immediate area of the injection.
C) It can provide sensory and motor anesthesia, depending on the anesthetic selected.
D) It can provide mainly sensory anesthesia, depending on the anesthetic selected.
E) All of the answers are correct.

46) Cerebrospinal fluid flows within the
A) filum terminale.
B) subarachnoid space.
C) dura mater.
D) pia mater.
E) arachnoid mater.

47) Bill contracts a viral disease that destroys cells in the posterior gray horns in his spinal cord. As a result, which of the following would you expect?
A) loss of sensation in his torso
B) inability to breathe
C) problems with moving his arms
D) uncontrollable sweating of his feet
E) problems moving his legs

48) Which of the following is not true about a positive Babinski reflex?
A) normal in newborns
B) abnormal in adults
C) a sign of injury to descending spinal tracts
D) why you close your eyes when you sneeze
E) flaring of the toes when the sole is stroked

49) The flexor reflex
A) prevents a muscle from overstretching.
B) prevents a muscle from generating damaging tension.
C) moves a limb away from a painful stimulus.
D) usually depends on cranial neurons.
E) is an example of a monosynaptic reflex.
50) Tina falls while climbing a tree and lands on her back. Her frightened parents take her to the emergency room, where she is examined. Her knee-jerk reflex is normal and she exhibits a plantar reflex (negative Babinski reflex). These results suggest that Tina has
A) injured one of her descending nerve tracts.
B) injured one of her ascending nerve tracts.
C) a spinal injury in the lumbar region.
D) a spinal injury in the cervical region.
E) suffered no damage to her spinal cord.

Assignment is due on Monday 12/1/2014

Best!