INSTRUCTIONS: Read each question carefully, then select the one best answer.

1. **Which of the following describes an INTERNEURON?**
	1. They connect a sensory neuron to a motor neuron.
	2. They carry sensory information to the central nervous system
	3. They carry motor information away from the central nervous system
	4. They are neurons that do not have neurotransmitters
	5. They communicate information about the internal and/or external environments of the body
2. **Neurons that carry information TOWARDS the CNS are called \_\_\_\_\_\_\_\_\_\_\_\_\_.**
	1. Somatic neurons
	2. Upper motor neurons
	3. Sensory Neurons
	4. Lower motor neurons
	5. Autonomic neurons
3. **Neurons that carry information AWAY FROM the CNS are called \_\_\_\_\_\_\_\_\_\_\_\_\_.**
	1. Somatic neurons
	2. Autonomic motor neurons
	3. Sensory Neurons
	4. Motor neurons
	5. Sympathetic neurons
4. **The spinal cord is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
	1. **Part of the peripheral nervous system**
	2. Composed of ONLY Upper and lower motor neurons
	3. Composed ONLY of upper motor neurons and upper sensory neurons
	4. Part of the central nervous system
	5. Part of the brain stem
5. Which of the following is/are considered part of the Somatic Nervous System?
	1. Motor information from the CNS to

skeletal muscles

* 1. Motor information from the CNS to

muscles **under unconscious** control

* 1. Sensory information from the glands to the CNS
	2. Sensory information from the skin to the CNS
	3. All unconscious sensory information headed to the CNS
1. Which of the following is/are considered part of the Autonomic Nervous System?
	1. The parasympathetic nervous system
	2. The sympathetic nervous system
	3. Involuntary motor information from the CNS to smooth muscle
	4. Involuntary motor information from the CNS to the glands of the body
	5. All of the above
2. Which of the following describes the Parasympathetic Nervous System?
	1. The “Rest and Digest” responses of the body only.
	2. The “Fight or Flight” responses of the body only.
	3. All of the motor functions of the body that are under **conscious** control.
	4. All of the motor functions of the body that are under **unconscious/involuntary** control.
	5. All of the sensory information that we are **consciously** aware of.
3. Which of the following describes the Sympathetic Nervous System?
	1. The “Rest and Digest” responses of the body only.
	2. The “Fight or Flight” responses of the body only.
	3. All of the motor functions of the body that are under **conscious** control.
	4. All of the motor functions of the body that are under **unconscious/involuntary** control.
	5. All of the sensory information that we are **consciously** aware of.
4. Which of the following would be the result of the activation of the Sympathetic Nervous System?
	1. An involuntary increase in heart rate
	2. Involuntary motor information from the CNS to smooth muscle
	3. Involuntary motor information from the CNS to the glands of the body
	4. An involuntary decrease in heart rate
	5. All of the above
5. Which of the following would be the result of the activation of the Parasympathetic Nervous System?
	1. An involuntary increase in heart rate
	2. An increase in digestion
	3. Pupils constrict
	4. A decrease in the rate of respiration
	5. None of the above
6. Which of the following forms the myelin sheath for neurons in the peripheral nervous system?
	1. Blastocytes
	2. Schwann Cells
	3. Oligodendrocytes
	4. Bipolar cells
	5. Neurolemmas
7. In neuronal signaling, the neuron that **releases** neurotransmitters is known as the \_\_\_\_\_\_\_\_\_\_.
	1. Communicator
	2. Postsynaptic neuron
	3. Axonal Neuron
	4. Presynaptic Neuron
	5. Dendritic Neuron
8. In neuronal signaling, the neuron that **receives** the neuronal signal from another neuron is known as the \_\_\_\_\_\_\_\_\_\_.
	1. Communicator
	2. Postsynaptic neuron
	3. Axonal Neuron
	4. Presynaptic Neuron
	5. Dendritic Neuron
9. The tiny gap that exists between neurons is called the \_\_\_\_\_\_\_\_\_\_\_\_\_.
	1. dendrite
	2. axonal bridge
	3. axonal gap
	4. synaptic cleft
	5. matrix
10. The portion of the neuron that contain the nucleus is called the \_\_\_\_\_\_\_\_\_.
	1. Cell Body or Soma
	2. Axon hillock
	3. Dendrite
	4. Reticulum
	5. Granulocyte
11. What type of channel(s) exist on the dendrites of a neuron?
	1. Voltage-gated sodium channels
	2. Ligand-gated sodium channels
	3. Ion-gated sodium channels
	4. Atom-gated sodium channels
	5. All of the above
12. What type of sodium channel(s) exist on the axon of a neuron?
	1. Voltage-gated sodium channels
	2. Ligand-gated sodium channels
	3. Ion-gated sodium channels
	4. Atom-gated sodium channels
	5. All of the above
13. What is the normal resting membrane potential of a neuron?
	1. +30 mV
	2. -40 mV
	3. 0 mV
	4. -70 mV
	5. +40 mV
14. When the membrane potential of a neuron becomes MORE NEGATIVE, we say that the membrane has become \_\_\_\_\_\_\_\_\_\_\_.
	1. Dead
	2. Deactivated
	3. Depolarized
	4. Unpolarized
	5. Hyperpolarized
15. Neurotransmitters are housed in which of the following structures?
	1. The endoplasmic reticulum
	2. The mitochondria
	3. Synaptic vesicles
	4. The sarcoplasm
	5. The neurolemma
16. How is the action potential initiated?
	1. Sodium channels in the axon must open
	2. The sodium channels of the dendrites must become activated
	3. Neurotransmitters must bind to receptors
	4. The threshold potential of ~ -55mV must be reached at the axon hillock
	5. The axon hillock must be hyperpolarized
17. Which of the following statements is FALSE regarding hormones?
	1. Hormones only effect cells or tissues that have receptors for that hormone
	2. Hormones travel through the circulatory system
	3. Hormones only have one effect in the body
	4. Hormones can affect different tissues and cells in different ways
	5. Hormones are secreted by glands.
18. Where are neurotransmitters stored?
	1. In the cell body
	2. In the nucleus
	3. In the reticulum
	4. In the axon hillock
	5. In the axon terminal
19. How does calcium enter the axon terminal?
	1. Through the Nodes of Ranvier
	2. Through ligand-gated calcium channels
	3. Through voltage-gated calcium channels
	4. Through ion-gated calcium channels
	5. Through the synapse
20. Which of the following is NOT a property of skeletal muscle?
	1. Skeletal muscle cells are multinucleated.
	2. Skeletal muscle cells contain many mitochondria.
	3. Skeletal muscle cells have a specialized membrane called the myolemma.
	4. Skeletal muscle cells have a specialized cytosol called the myoplasm.
	5. Skeletal muscle cells have a specialized endoplasmic reticulum called the sarcoplasmic reticulum.
21. The transverse tubules (or T-tubles) are formed from which of the following structures?
	1. sarcoplasmic reticulum
	2. sarcolemma
	3. myolemma
	4. myoplasm
	5. sarcoplasm
22. What is the main function of the t-tubules?
	1. To allow the filaments the space needed to slide past each other during muscle contraction.
	2. To allow the intracellular fluid of the muscle cell access to the deeper regions of the muscle cell.
	3. To allow the diffusion of nutrient molecules to deep region of the muscle cell.
	4. To allow the muscle action potentials to reach deep into the muscle cell.
	5. To increase the surface area of the muscle cell to assist with exocytosis and endocytosis.
23. Which of the following is an effect of glucagon?
	1. Heart rate increases
	2. Digestion processes are stopped
	3. The pancreas releases lipase
	4. The liver releases bile
	5. Blood sugar decreases
24. Where is the sarcoplasmic reticulum located?
	1. The sarcoplasmic reticulum is tightly wrapped around individual **myofilaments**.
	2. The sarcoplasmic reticulum is tightly wrapped around individual **myofibrils**.
	3. The sarcoplasmic reticulum is tightly wrapped around individual **myoblasts.**
	4. The sarcoplasmic reticulum is tightly wrapped around individual **myocytes.**
	5. The sarcoplasmic reticulum is tightly wrapped around individual **myofibers**.
25. What is the main function of the sarcoplasmic reticulum?
	1. The sarcoplasmic reticulum functions to release sodium ions in response to depolarization of the membrane to initiate an action potential.
	2. The sarcoplasmic reticulum functions to hold the ribosomes that make proteins in response to muscle activity.
	3. The sarcoplasmic reticulum functions to metabolize fats and cholesterols into signaling molecules the muscle uses to propagate the action potential.
	4. The sarcoplasmic reticulum functions to initiate the action potential in response to the depolarization of the membrane.
	5. The sarcoplasmic reticulum functions to store high concentration of Ca2+ that it releases in response to sufficient depolarization.
26. Which of the following causes diabetes type II?
	1. Having excess amounts of glucagon
	2. Destruction of beta-cells
	3. Having low blood sugar levels
	4. Having a resistance to insulin
	5. Having a resistance to glucagon
27. Myofilaments include which of the following?
	1. protective membranes
	2. actin and myosin
	3. bundles of muscle fibers
	4. bundles of muscle fascicles
	5. tendons and ligaments
28. Which of the following is NOT a gland of the endocrine system?
	1. The pancreas
	2. The ovaries
	3. The pituitary
	4. The liver
	5. The thymus
29. Each fascicle is made up of a number of \_\_\_\_\_\_\_\_\_\_\_\_.
	1. is composed of bundles of myofibrils
	2. is composed of actin and myosin
	3. is composed of bundles of muscle fibers
	4. is composed of bundles of muscle fascicles
	5. is composed of elastin and collagen
30. Which of the following channels undergo the processes known as INACTIVATION?
	1. Ligand-gated potassium channels
	2. Potassium-gated sodium channels
	3. Voltage-gated potassium channels
	4. Voltage-gated sodium channels
	5. Ligand-gated sodium channels
31. The hyperpolarization phase of the action potential is due to which of the following channels being (or remaining) OPEN?
	1. Ligand-gated potassium channels
	2. Potassium-gated sodium channels
	3. Voltage-gated potassium channels
	4. Voltage-gated sodium channels
	5. Ligand-gated sodium channels
32. What is the function of the myelin sheath?
	1. Makes the action potential go faster by insulating the axon
	2. Slows down the action potential
	3. Prevents over activation of the neuron
	4. Acts as a food source
	5. Provides additional channels for the axon
33. Which of the following causes diabetes type I?
	1. Having excess amounts of glucagon
	2. Destruction of beta-cells
	3. Having low blood sugar levels
	4. Having a resistance to insulin
	5. Having a resistance to glucagon
34. When the muscle is relaxed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	1. tropomyosin blocks the ATP-binding sites on the myosin thick filaments.
	2. tropomyosin blocks the actin-binding sites on the myosin thick filaments.
	3. tropomyosin blocks the myosin-binding sites on the actin thin filaments.
	4. troponin blocks the myosin-binding sites on the tropomyosin thick filaments.
	5. troponin blocks the actin-binding sites on the myosin thick filaments.
35. The sliding filament model of contraction states that during contraction \_\_\_\_\_\_\_\_\_\_\_\_
	1. the thick and thin filaments slide past one another so that they overlap to a greater degree.
	2. the thick and thin filaments slide past one another which triggers calcium release which leads to muscle contraction.
	3. the muscle fibers slide past one another and shorten during muscle contraction.
	4. the elastin and collagen filaments slide past one another causing muscle contraction.
	5. All of the above
36. Insulin is made in which of the following organs?
	1. The pancreas
	2. The ovaries
	3. The pituitary
	4. The liver
	5. The thymus
37. Insulin has what effect on the liver?
	1. It releases insulin
	2. It breaks down glycogen
	3. It stores glycogen
	4. It releases epinephrine
	5. It releases norepinephrine
38. Non-steroidal hormones include which of the following?
	1. Peptide hormones
	2. Amino Acid hormones
	3. Amino Acid-Derived Hormones
	4. Hormones made from tyrosine
	5. None of the above
39. Which of the following structures regulates body temperature?
	1. The thymus
	2. The thalamus
	3. The hypothalamus
	4. The pituitary
	5. The adrenals
40. What is meant by the term “cross-bridge” when it comes to muscle contraction?
	1. The term “cross-bridge” refers to the interaction between **actin and myosin** during muscle contraction
	2. The term “cross-bridge” refers to the interaction between **ATP and myosin** during muscle contraction
	3. The term “cross-bridge” refers to the interaction between **ATP and actin** during muscle contraction
	4. The term “cross-bridge” refers to the interaction between **ATP and actin during a state of rigor**
	5. The term “cross-bridge” refers to the interaction between **ATP and myosin during a state of rigor**
41. The small space that exists between the muscle cell and the neuron is called the \_\_\_\_\_\_\_.
	1. Neuromuscular junction
	2. Neurotransmitter
	3. Synaptic cleft
	4. Motor Groove
	5. Motor Unit
42. Which of the following statements regarding troponin is **FALSE?**
	1. Troponin is a calcium sensor
	2. Troponin is a regulator protein
	3. Troponin interacts with Tropomyosin in the presence of calcium
	4. Troponin inhibits the binding of myosin and actin
	5. Troponin must be present for muscle contraction to occur
43. The neurotransmitter used at the neuromuscular junction is \_\_\_\_\_\_\_\_\_\_.
	1. Acetylcholine
	2. Acetyl cholinesterase
	3. Glutamate
	4. Glutaraldehyde
	5. Glycine
44. Which of the following systems is controlled through a positive feedback system?
	1. Thermoregulation
	2. Regulation of water content
	3. Regulation of blood sugar
	4. The body’s “fight or flight” or stress response
	5. Regulation of sleep/wake cycles
45. This binding of neurotransmitter to the post-synaptic receptors causes the receptors to open. The receptors allow \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	1. Potassium ions into the muscle fiber.
	2. Calcium ions into the muscle fiber.
	3. Sodium ions into the muscle fiber.
	4. Iodide ions into the muscle fiber.
	5. Nitrite ions into the muscle fiber.
46. What is rigormortis?
	1. After death, the lack of **calcium ions** locks the cross-bridges into a tightly bound state causing muscle tension.
	2. After death, the lack of **ATP** blocks the formation of new cross-bridges causing muscle tension.
	3. After death, the lack of **calcium ions** blocks the formation of new cross-bridges causing muscle tension.
	4. After death, the lack of **ATP** blocks the formation of new cross-bridges causing muscle relaxation.
	5. After death, the lack of **ATP** locks the cross-bridges into a tightly bound state causing muscle tension.
47. Metabolism is controlled by the presence of all of the following hormones EXCEPT \_\_\_\_\_\_\_\_\_\_\_\_\_.
	1. Triiodothyronine
	2. Thyroxine
	3. Thyrotropin-Releasing Hormone
	4. Thyroid-Stimulating Hormone
	5. Thyrodonine
48. What is the definition of a “twitch”?
	1. A muscle twitch is the minimum muscle response to a single action potential generated by a motor neuron.
	2. A twitch is an involuntary reflex arc response to external stimuli (such as a knee hammer in a doctor’s office).
	3. A twitch is an involuntary response that occurs due to extra neurotransmitter existing in the neuromuscular junction. It is not under the conscious control of the nervous system.
	4. A twitch is a small muscular movement caused by the inactivation of post-synaptic receptors due to inhibition stimuli.
	5. A twitch is an involuntary response of any kind that is not under conscious control.
49. Individuals with abnormally high body temperature have a condition called \_\_\_\_\_\_\_\_\_\_\_\_.
	1. Hyperthermia
	2. Hypothermia
	3. Hypoglycemia
	4. Glycemic Index
	5. Hyperglycemia
50. TRH is released by which of the following structures?
	1. The thymus
	2. The adrenal gland
	3. The pituitary gland
	4. The hypothalamus
	5. The thalamus
51. Which of the following is NOT one of the body’s responses to being too cold?
	1. Redirection of blood flow away from its surface
	2. Shivering
	3. Metabolism increases
	4. Thyroid hormone levels increase
	5. Adrenal levels decrease
52. What is “threshold stimulation” in a muscle fiber?
	1. The largest amount of stimulation that results in sarcomere shortening or muscle contraction.
	2. The smallest amount of stimulation that results in tetanus
	3. The largest amount of stimulation that results in a muscle twitch
	4. The smallest amount of stimulation that results in sarcomere shortening or muscle contraction.
	5. None of the above
53. Glucagon is released by which of the following cell types?
	1. Alpha cells
	2. Beta cells
	3. Gamma cells
	4. Delta cells
	5. Sigma cells
54. Insulin is released by which of the following cell types?
	1. Alpha cells
	2. Beta cells
	3. Gamma cells
	4. Delta cells
	5. Sigma cells
55. The latent period of a “muscle twitch” has all of the following characteristics ***EXCEPT:***
	1. The action potential spreads through the sarcolemma
	2. Calcium is released from the sarcoplasmic reticulum
	3. Cross-bridges are starting to form
	4. The tension or force produced by the muscle is zero
	5. The tension or force produced by the muscle increases
56. Individuals with abnormally low body temperature have a condition called \_\_\_\_\_\_\_\_\_\_\_\_.
	1. Hyperthermia
	2. Hypothermia
	3. Hypoglycemia
	4. Glycemic Index
	5. Hyperglycemia
57. TSH is released by which of the following structures?
	1. The thymus
	2. The adrenal gland
	3. The pituitary gland
	4. The hypothalamus
	5. The thalamus
58. Glucagon has what effect on the liver?
	1. It releases insulin
	2. It breaks down glycogen
	3. It stores glycogen
	4. It releases epinephrine
	5. It releases norepinephrine
59. What causes “tetanus”?
	1. Lead poisoning
	2. The rapid summation of twitch stimulation
	3. The impairment of receptors at the neuromuscular junction
	4. The state of physiological inability to contract even though the muscle still may be receiving stimuli
	5. A state of permanent muscle fatigue due to low calcium
60. When the membrane potential of a neuron becomes LESS NEGATIVE / MORE POSITIVE, we say that the membrane has become \_\_\_\_\_\_\_\_\_\_\_.
	1. Dead
	2. Deactivated
	3. Depolarized
	4. Unpolarized
	5. Hyperpolarized
61. The junction in which a motor neuron communicates with a muscle fiber is called the \_\_\_\_\_\_\_\_\_\_\_\_\_
	1. Neuromuscular Junction
	2. Musculoskeletal Synapse
	3. Axial-muscular Synapse
	4. Synaptic Muscle Junction
	5. Musculo-synaptic Junction
62. Which of the following is the neurotransmitter that is used to stimulate muscle fibers?
	1. Glutamate
	2. Acetylcholine
	3. Dopamine
	4. Epinephrine
	5. Norepinephrine
63. Which of the following maintains the resting membrane potential in a neuron?
	1. The binding of neurotransmitters to receptors
	2. The opening of ligand-gated sodium channels
	3. ATP pumps
	4. The Sodium-Potassium Pump
	5. The electrochemical gradient
64. What of the following statements is FALSE?
	1. A sodium ion carries a +1 charge
	2. A calcium ion carries a +2 charge
	3. A potassium ion carries a +1 charge
	4. A potassium ion carries a -1 charge
	5. Opposite charges attract
65. Which of the following is considered “the functional unit of muscle contraction”?
	1. Sliding-filament theory
	2. The motor neuron
	3. The neuromuscular junction
	4. The myelin sheath
	5. The sarcomere
66. At the peak of the action potential, the membrane voltage reaches around \_\_\_\_\_\_\_\_\_\_\_\_.
	1. -10 mV
	2. -70 mV
	3. -90 mV
	4. +10 mV
	5. +30 mV
67. The sodium-potassium pump does which of the following?
	1. 3 Na+ are pumped INTO the cell for every 2 K+ pumped OUT OF the cell
	2. 3 Na+ are pumped OUT OF the cell for every 2 K+ pumped INTO the cell
	3. 2 Na+ are pumped INTO the cell for every 3 K+ pumped OUT OF the cell
	4. 2 Na+ are pumped OUT OF the cell for every 3 K+ pumped INTO the cell
	5. None of the above
68. Which of the following is NOT a property of a **graded potential**?
	1. small
	2. short-lived
	3. decreases in strength as you get further away
	4. occurs in dendrites
	5. it is “all or none”
69. Individuals who have relatively high blood sugar levels have a condition called \_\_\_\_\_\_\_\_\_\_\_\_.
	1. Hyperthermia
	2. Hypothermia
	3. Hypoglycemia
	4. Glycemic Index
	5. Hyperglycemia
70. Which of the following is considered “all-or-none”?
	1. Hyperpolarization
	2. Graded potential
	3. Action potential
	4. Depolarization
	5. hyperpolarization
71. What occurs during the “refractory period”?
	1. The neuron will not fire another action potential
	2. The neuron will fire a bunch of action potentials in rapid succession
	3. The neuron will be hypersensitive to stimulation and will easily fire more action potentials
	4. The neuron has completely run out of neurotransmitters
	5. All of the above
72. At the hyperpolarization phase of the action potential, the membrane voltage reaches around \_\_\_\_\_\_\_\_\_\_\_\_.
	1. -10 mV
	2. -70 mV
	3. -90 mV
	4. +10 mV
	5. +30 mV
73. What is homeostasis?
	1. The ability of the body to maintain its physiological parameters within a relatively narrow range of values.
	2. The ability of the body to release hormones
	3. The ability of the body to sense the internal and external environments
	4. The processes involved in metabolism
	5. The processes involved in heart rate
74. Individuals who have relatively low blood sugar levels have a condition called \_\_\_\_\_\_\_\_\_\_\_\_.
	1. Hyperthermia
	2. Hypothermia
	3. Hypoglycemia
	4. Glycemic Index
	5. Hyperglycemia
75. The adrenal glands release which of the following?
	1. Epinephrine
	2. Cortisol
	3. Thyroid Stimulating Hormone
	4. Thyroxine
	5. Glucagon
76. Which of the following is known as the “master gland”?
	1. The pituitary
	2. The thymus
	3. The thalamus
	4. The hypothalamus
	5. None of the above
77. Which of the following types of channels undergo INACTIVATION?
	1. Voltage-gated calcium channels
	2. Voltage-gated potassium channels
	3. Voltage-gated sodium channels
	4. Ligand-gated potassium channels
	5. Ligand-gated sodium channels
78. What does the sarcoplasmic reticulum do when the presence of sarcoplasmic sodium is high?
	1. Calcium is taken up from the extracellular space
	2. Calcium is release into the extracellular space
	3. Calcium is release into the sarcolemma
	4. Calcium is released into the sarcoplasm
	5. Calcium is taken up from the sarcoplasm
79. A diagnosis of diabetes is given when fasting blood glucose levels are \_\_\_\_\_\_\_\_\_\_\_\_\_.
	1. Over 125
	2. Over 110
	3. Over 100
	4. Between 80 and 100
	5. Between 60 and 100
80. Which of the following forms the myelin sheath for neurons in the central nervous system?
	1. Blastocytes
	2. Schwann Cells
	3. Oligodendrocytes
	4. Bipolar cells
	5. Neurolemmas

**Use the Figure Provided and the Answer Bank to For questions numbered 82 thru 87, use the above image to answer the questions:**

1. At #1, which of the following is occurring?
	* + - 1. Action Potential
				2. Resting Membrane Potential
				3. Hyperpolarization
				4. Depolarization
				5. Repolarization
2. At #2, which of the following is occurring?
	1. Action Potential
	2. Resting Membrane Potential
	3. Hyperpolarization
	4. Depolarization
	5. Repolarization
3. At #3, which of the following is occurring?
	1. inactivation
	2. reactivation
	3. calcium influx
	4. trepidation
	5. saltatory conduction
4. At #4, which of the following is occurring?
	1. Action Potential
	2. Resting Membrane Potential
	3. Hyperpolarization
	4. Depolarization
	5. Repolarization
5. At #5, which of the following is occurring?
	1. Action Potential
	2. Resting Membrane Potential
	3. Hyperpolarization
	4. Depolarization
	5. Repolarization
6. Which of the following types of channels stays open at #5?
	1. Voltage-gated calcium channels
	2. Voltage-gated potassium channels
	3. Voltage-gated sodium channels
	4. Ligand-gated potassium channels
	5. Ligand-gated sodium channels
7. An action potential in a neuron is initiated at threshold voltage which is around \_\_\_\_\_\_\_\_\_\_\_\_.
	1. -55 mV
	2. -70 mV
	3. -90 mV
	4. +10 mV
	5. +30 mV
8. Normal fasting blood glucose levels are \_\_\_\_\_\_\_\_\_\_\_\_\_.
	1. Below 125
	2. Below 110
	3. Below 100
	4. Below 80
	5. Below 60
9. Which of the following would be an action of the autonomic nervous system?
	1. Maintaining your heart rate
	2. Feeling hungry
	3. Hitting something
	4. Imagining your favorite vacation spot
	5. walking
10. Normal body temperature is about \_\_\_\_\_\_\_\_\_\_\_\_\_.
	1. 52 degrees C
	2. 37 degrees C
	3. 22 degrees C
	4. 98 degrees C
	5. 75 degrees C
11. What is glycogenolysis?
	1. When the liver makes glucose
	2. When the liver makes glycogen
	3. When the liver makes bile
	4. When the liver makes glucagon
	5. When the liver makes insulin
12. What is glycogenesis?
	1. The making of glycogen
	2. The break down of glycogen into glucose in the liver.
	3. the synthesis of fatty acids.
	4. The breakdown of glycogen into glucose
	5. The formation of glucose from lactic acid and amino acids
13. How does the presence of insulin affect the cells of the body?
	1. Cells create more glucose receptors in order to take up more glucose
	2. Cells create more glucose molecules
	3. Cells create more glycogen receptors in order to take up more glucose
	4. Cells create glycogen out of glucose molecules
	5. Cells create glucagon
14. Which of the following channels are activated when the axon terminal is depolarized?
	1. Voltage-gated sodium channels
	2. Voltage-gated potassium channels
	3. Voltage-gated calcium channels
	4. Ligand-gated sodium channels
	5. Ligand-gated potassium channels
15. Which of the following is considered the “latent phase” of a muscle twitch?
	1. The period of time between muscle fiber stimulation and formation of cross-bridges
	2. The period of time when calcium is being taken up from the sarcoplasm and going back into the sarcoplasmic reticulum
	3. The period of time between release of acetylcholine and receptor activation
	4. The maximal amount of overlapping cross-bridge formation and muscle contraction
	5. None of the above