Advanced Exercise Physiology 1st edition Ehrman Test Bank

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1. Muscle hypertrophy is thought to be caused by an

a. increase in the number of muscle fibers

*b. increase in the number of myofibrils

c. increase in both the number of muscle fibers and myofibrils

d. increase in the number of fascicles

2. All of the following are isoforms of myosin heavy chains except

a. Type I

*b. Type Ix

c. Type IIa

d. Type IIx

3. To initiate muscle contraction

*a. calcium is released from the sarcoplasmic reticulum

b. sodium enters the cytoplasm

c. actin binds to troponin

d. actin binds to tropomyosin

4. Which protein is not involved in the process of muscle contraction?

a. myosin

b. actin

*c. fibrin

d. tropomyosin

5. The myelin sheath helps to

*a. speed up the transmission of action potentials

b. act as a barrier between the neuron and dendrites

c. enhance communication between the CNS and glial cells

d. slow the speed of transmission of action potentials

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6. The ATPase pump does all of the following except

a. maintain resting membrane potential

b. exchange three Na^+ molecules for two K^+ molecules

c. require energy

*d. prevent Na^+ molecules from entering the cell

7. Neurotransmitters are stored in

a. axons

*b. synaptic vesicles

c. nodes of Ranvier

d. calcium channels

8. A motor unit is made up of

a. myofibrils and muscle fibers

*b. a motor neuron and the muscles it innervates

c. Type IIa and Type IIx muscle fibers

d. a group of sarcomeres

9. Which muscle fibers are recruited first during incremental exercise?

a. fast twitch (Type IIa)

*b. slow twitch (Type I)

c. fast twitch (Type IIx)

d. slow twitch (Type Ib)

10. Which is not a type of muscle contraction?

a. eccentric

b. concentric

*c. isotonic

d. isokinetic

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11. Type I muscle fibers contain a higher percentage of what compared to Type II muscle fibers?

a. hemoglobin

*b. myoglobin

c. myosin ATPase

d. calsequestrin

12. The force-length relationship states that

a. the faster a muscle shortens, the less force is produced

b. the slower a muscle shortens, the more force is produced

c. a sarcomere that is stretched very thin will produce the most force

*d. there exists an optimal length to produce the greatest force

13. Migrating motor complexes coordinate

*a. peristalsis

b. interstitial cells of Cajal

c. enteric nervous system

d. norepinephrine

14. Calcium signaling is used in which type of muscle cells?

a. skeletal muscle only

b. cardiac muscle only

c. skeletal and cardiac muscles

*d. skeletal, cardiac, and smooth muscles

15. The stomach's main roles include all of the following except

a. breaking down food

b. storing food

*c. absorbing the majority of food before it passes to the intestines

d. killing bacteria

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16. Gastric emptying is faster with

a. greater volume, higher osmolarity, and lower glucose concentration

b. lower volume, higher osmolarity, and lower glucose concentration

*c. greater volume, lower osmolarity, and lower glucose concentration

d. lower volume, lower osmolarity, and lower glucose concentration

17. Which substance helps to neutralize stomach acid?

a. bile

*b. bicarbonate

c. hydrochloric acid

d. insulin

18. Ideally, sport beverages should contain which types of carbohydrate?

a. glucose only

*b. fructose and glucose

c. fructose only

d. none of the above

19. An adult human body contains 660 skeletal muscles.

*a. True
b. False

20. Exercise has been shown to decrease satellite cell production.

a. True
*b. False

21. Troponin and tropomyosin regulate the binding of myosin to actin.

*a. True
b. False

22. Neurotransmitters in the central nervous system are only excitatory.

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a. True
*b. False

23. At similar speeds of contraction, a Type I fiber will have a greater force than a Type II fiber.

a. True
*b. False

24. A greater amount of myosin ATPase will result in a slower contraction velocity.

a. True
*b. False

25. The gastrointestinal system contains specialized cells that act similar to the sinoatrial node in the heart.

*a. True
b. False

26. The parasympathetic nervous system can increase peristalsis.

*a. True
b. False

27. Smooth muscle is the main type of muscle found in the GI tract.

*a. True
b. False

28. Decreasing physical activity has been shown to improve constipation.

a. True
*b. False

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