

Chapter 12

Student: _____

1. The types of muscles that appear in humans include:
 - A. cardiac
 - B. smooth
 - C. skeletal
 - D. All of the choices are correct.

2. Choose the following that is NOT a function of skeletal muscles.
 - A. allows movement of bones
 - B. aids in body temperature regulation
 - C. stabilizes joints and encourages venous blood flow
 - D. moves substances through the digestive tract

3. A muscle which does most of the work of a specific action is called the:
 - A. antagonist
 - B. prime mover
 - C. synergist

4. Which of the following attaches muscle to bone?
 - A. ligaments
 - B. joints
 - C. tendons
 - D. fibrils

5. The triceps brachii are described as antagonistic to the biceps brachii because:
 - A. they both pull on the humerus
 - B. they both go across the same joint
 - C. one raises and the other lowers the forearm
 - D. they both pull on the humerus and both go across the same joint

6. Of the following, which muscle raises the arm at the shoulder?
- A. deltoid
 - B. gastrocnemius
 - C. triceps brachii
 - D. tibialis anterior
7. Which muscle or muscle group extends the forearm?
- A. triceps brachii
 - B. flexor carpi group
 - C. biceps brachii
 - D. extensor carpi group
8. Which large buttock muscle is associated with walking upright?
- A. gastrocnemius
 - B. sartorius
 - C. quadriceps femoris
 - D. gluteus maximus
9. Rigor mortis:
- A. resolves when lysosomes break down the bonds between muscle fibers
 - B. is the sustained contraction of muscles at death
 - C. occurs at death because muscles cannot relax without ATP
 - D. All of the choices are correct.
10. What muscle is called the "kissing" muscle?
- A. masseter
 - B. orbicularis oris
 - C. orbicularis oculi
 - D. deltoid

11. The contractile unit of a muscle fiber is called:
- A. myosin
 - B. actin
 - C. sarcomere
 - D. sarcolemma
 - E. None of the choices are correct.
12. During muscular contraction:
- A. both actin and myosin filaments slide
 - B. myosin filaments slide but not actin
 - C. actin filaments slide but not myosin
 - D. neither myosin nor actin filaments slide
13. Which muscle filament utilizes ATP?
- A. myosin
 - B. actin
 - C. both myosin and actin
 - D. neither myosin nor actin
14. A sarcomere:
- A. is a section of actin
 - B. gets shorter when it contracts
 - C. is myelinated
 - D. has intercalated discs
15. Nerve impulses travel to the muscles from the spinal cord through:
- A. motor muscle channels
 - B. motor activators
 - C. motor neurons
 - D. active neurons
 - E. muscle neurons

16. When Botox is injected into tissues, it prevents muscles contractions. The exact mechanism is:
- A. to prevent uptake of the neurotransmitter at synapses
 - B. to prevent release of ACH
 - C. to prevent nerve impulses from traveling past the cell body of a neuron
 - D. to prevent calcium ion release
 - E. unknown
17. Because the response of a muscle cell to a stimulus is complete, not partial, it is described as:
- A. the all-or-none reaction
 - B. tone
 - C. tetanus
 - D. the latent period
18. The maximum force of contraction a muscle can generate is called:
- A. all-or-none reaction
 - B. tone
 - C. tetanus
 - D. tonus
19. The sarcoplasmic reticulum of a muscle cell stores:
- A. calcium
 - B. sodium
 - C. potassium
 - D. iron
 - E. hemoglobin
20. Choose the following that is NOT a physiological benefit of exercise.
- A. improved muscular strength, endurance, flexibility
 - B. improved cardiorespiratory endurance
 - C. increased bone density and strength
 - D. relief from depression and increased HDLs
 - E. All of the choices are correct.

21. Choose the following that is an ATP forming reaction that requires oxygen.
- A. fermentation
 - B. creatine phosphate breakdown
 - C. cellular respiration
 - D. None of the choices are correct.
22. Choose the following substance, which is the end product of glycolytic fermentation.
- A. carbon dioxide and water
 - B. creatine
 - C. lactate
 - D. glucose
 - E. None of the choices are correct.
23. Choose the following substance(s) that is (are) the end product(s) of cellular respiration.
- A. carbon dioxide, water, and ATP
 - B. creatine
 - C. lactate
 - D. glucose
 - E. None of the choices are correct.
24. _____ are sudden and involuntary muscle contractions.
- A. Strains
 - B. Sprains
 - C. Spasms
 - D. Dystrophies
25. Which of the following best illustrates the conversion that supplies the required energy for muscle contraction?
- A. $\text{ATP} \rightarrow \text{ADP} + \text{P}$
 - B. $\text{AMP} \rightarrow \text{ATP}$
 - C. $\text{glucose} \rightarrow \text{water} + \text{lactic acid}$
 - D. $\text{oxygen} \rightarrow \text{lactic acid} + \text{carbon dioxide}$

26. Choose the following which is cited as a possible detrimental side effect from anabolic steroids.

A.liver cancer

B.kidney disease

C.sterility

D.All of the choices are correct.