Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Only Multiple Choice

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

____ 1. The hip joint is what type of joint?
a. Ball-and-socket joint
b. Hinge joint
c. Pivot joint
d. Cartilaginous joint

____ 2. Which muscles does the Pectoral Fly work?
a. Traps
b. Back
c. Abdomen
d. Chest

____ 3. What are the three types of muscle tissue?
a. Cardiac, smooth, rough
b. Cardiac, smooth, skeletal
c. Cardiac, type I, type II
d. Smooth, rough, skeletal

____ 4. Static stretching is considered what type of flexibility training?
a. corrective
b. active
c. Dynamic
d. Functional

____ 5. Trauma to the tissue of the body creates inflammation resulting in muscle spasm and adhesions. If left unchecked these adhesions can begin to form permanent structural changes in the soft tissue evident by which law?
a. Law of specificity
b. Davis's Law
c. -
d. -

____ 6. Which of the following assessments BEST measures cardiovascular efficiency?
a. Davies Test
b. Step Test
c. Shark Skill Test
d. Waist to Hip Ratio

____ 7. Which of the following facts is not true about skeletal muscles?
a. They account for 36-45% of total body weight.
b. Skeletal muscle is the most plentiful tissue type in the body.
c. They can be stretched to up to 250% of their resting length.
d. They usually operate together with other muscles in functional groups.

____ 8. _____ are used best for opposing muscle groups.
a. Supersets
b. Drop Sets
c. Push-Pull Sets
d. Staggered Sets

____ 9. The primary function of the respiratory system is
a. Delivering nutrients to tissues in the body
b. Regulating the body's pH level
c. Facilitating the exchange of oxygen and carbon dioxide
d. Maintaining fluid volume to prevent dehydration

____ 10. Which of the three types of muscle action has a constant speed of shortening and lengthening?
a. Concentric
b. Eccentric
c. Isometric
d. Antagonistic

____ 11. Which of the following sensory receptors are MOST sensitive to change in length of muscle and the rate of that change?
a. Join receptors
b. Golgi Tendon organs
c. Muscle spindles
d. Chemoreceptors

____ 12. Which of the following statements is not true regarding the "Kinetic Chain Concept"?
a. a system can be both open and closed simultaneously
b. bony segments and their linkage system of joints may be likened to a chain
c. any one link in an extremity may be moved individually without significantly affecting other links if the chain is open
d. if the chain is closed then substantial movement of any one link cannot occur without substantial movement of the other links

____ 13. What is the correct order of structures of a muscle from smallest to largest?
a. Muscle fiber, endomysium, fascicles, perimysium, epimysium
b. Muscle fiber, epimysium, fascicles, perimysium, endomysium
c. Muscle fiber, endomysium, perimysium, fascicles, epimysium
d. Muscle fiber, epimysium, endomysium, fascicles, perimysium

____ 14. The type of stretching that requires assistance from a personal trainer is called
a. Active stretching
b. Passive stretching
c. Ballistic stretching
d. Static stretching

____ 15. Which of these is a determinant of VO2 max?
a. Cardiac output
b. Strength
c. Metabolism
d. Flexibility

____ 16. The "reverse crunch" is considered what type of exercise?
a. core stabilization
b. Core strength
c. Balance power
d. Dynamic flexibility

____ 17. When a muscle is exerting less force than being placed on it, resulting in the lengthening of the muscle this is known as what type of contraction?
a. Eccentric
b. Concentric
c. Isometric
d. Excitation Contraction Coupling

____ 18. An anatomical location reffering to a position described as being closer to the middle of the body from a reference point is known as
a. superior
b. Lateral
c. inferior
d. medial

____ 19. Which of the following statements is not valid regarding an "Open Kinetic Chain"?
a. allows any one joint in the extremity to move or function separately
b. upper extremity examples include a shoulder shrug, shoulder abduction, or a biceps curl
c. requires the movement of other joints in the extremity
d. lower extremity examples include seated hip flexion, knee extension, and ankle dorsiflexion

____ 20. Which of the following statements is not valid regarding an "Open Kinetic Chain"?
a. the core of the body is more stabilized while the distal segment is free to move in single plane
b. the proximal segment is not fixed while the distal segment is free to move in a single plane
c. not considered to be as functional as closed chain work for most lower extremity activities
d. beneficial in isolating a particular joint to concentrate on specific muscle groups

____ 21. Which of the following statements is not valid regarding a "Closed Kinetic Chain"?
a. involves the body moving in relation to the relatively unfixed distal segment
b. movement of one joint cannot occur without causing movements of the other joints
c. multiple joints are involved
d. multiple muscles are involved

____ 22. Which of the following statements is not true regarding the "Kinetic Chain Concept"?
a. open-chain exercises generally isolate only one segment
b. closed-chain exercises work all body segments in the chain
c. both of the above choices are correct
d. none of the above choices are correct

____ 23. Which muscular structure surrounds the actual muscle fiber and is responsible for depolarization of the surface of the fiber and protection and insulation of the fiber from others around it?
a. Satellite cells
b. Sarcoplasm
c. Fascia
d. Sarcolemma

____ 24. What part within the muscle fiber stores glycogen and myoglobin and is made up of lipids, enzymes and various types of cellular organelles?
a. Sarcolemma
b. Sarcoplasm
c. Transverse tubules
d. Myofibrils

____ 25. The condition that involves rapid breakdown of muscle tissue due to too much exercise, which can potentially result in kidney failure, is called
a. Myoglobinuria
b. Rhabdomyolysis
c. Dialysis
d. Proteinuria

____ 26. Actin and myosin are the primary components of myofilaments that make which of the following
a. sarcormere
b. fascicle
c. myofibril
d. endomysium

____ 27. Within the myofibril, which of the following is the lighter band that contains only actin?
a. H zone
b. M line
c. A band
d. I band

____ 28. All of the following are benefits of increased flexibility EXCEPT
a. Improved circulation
b. Increased range of motion
c. Improved coordination
d. Increased chance of muscle injury

____ 29. Which of the following is not true regarding the "Valsalva Manuver"?
a. is considered to be proper when performing maximal lifts
b. causes dramatic blood pressure increase followed by equally dramatic drop
c. can cause lightheadedness and fainting
d. leads to complications in heart disease patients

____ 30. Which of the following correctly describes what happens within the muscle fiber during contraction?
a. Myosin cross-bridges bind, actin slides over myosin, Z lines are pulled together
b. Z lines are pulled together, myosin slides over actin, myosin cross-bridges bind
c. Myofilaments shorten in length, sarcomere lengthens, Z lines are pulled together
d. Myosin filaments shorten, actin slides over myosin, A band shortens

Only Multiple Choice
Answer Section

MULTIPLE CHOICE

1. ANS: A
   The hip joint as well as the shoulder joint can move in all directions. They are ball-and-socket joints. A hinge joint can only move in one plane, such as with knee flexion and extension. A cartilaginous joint is a strong joint that is very slightly movable, such as intervertebral joints. A pivot joint is a joint in one plane that permits rotation, such as the humeroradial joint.
2. ANS: D
3. ANS: B
   The three types of muscle tissue are cardiac, smooth and skeletal. Cardiac and smooth are involuntary muscles, which perform basic bodily functions, whereas skeletal muscles move by conscious stimulation.
4. ANS: A
5. ANS: B
6. ANS: B
7. ANS: C
   All these facts are true about skeletal muscles except for C. Skeletal muscles can only be stretched up to 150% of their resting length, not up to 250%. There are over 600 different skeletal muscles in the body and they work in pairs and groups to perform movement.
8. ANS: A
9. ANS: C
   The respiratory system involves the lungs and is where the exchange of oxygen for carbon dioxide occurs. The cardiovascular system, which involves the heart and blood vessels, is responsible for delivering oxygen and nutrients to all tissues in the body, regulating the body's pH level to prevent acidosis or alkalosis, and maintaining fluid volume to prevent dehydration.
10. ANS: C
    Of the three types of muscle action, the one that has a speed of shortening and lengthening that is constant is isometric muscle action. In this type of motion, the muscle is able to resist the force exerted against it, but it cannot overcome that force; therefore there is no discernible movement, but rather there is stability. This action does not cause joint movement.
11. ANS: C
12. ANS: A
13. ANS: A
14. ANS: B
    In passive stretching, a client remains relaxed, allowing a trainer to stretch the client's muscles. Ballistic stretching, which involves a bouncing-like movement, can cause injury to muscles if not performed carefully. Static stretching involves movements that are deliberate and sustained. Active stretching involves stretching muscles throughout their range of motion.
15. ANS: A
16. ANS: B
17. ANS: A
18. ANS: D
19. ANS: C
20. ANS: B

21. ANS: A
22. ANS: C
23. ANS: D
    The sarcolemma is responsible for depolarization of the surface of the fiber and protection and insulation of the fiber from others around it. The sarcolemma is a thin membrane that connects with the endomysium and contains structures that are important for internal functions and growth.
24. ANS: B
    The sarcoplasm stores glycogen and myoglobin and is made up of lipids, enzymes and cellular organelles. It is comparable to the cytoplasm in other cells, but has more specific functions. The stored glycogen is a source of energy, and the myoglobin is used for oxygen binding.
25. ANS: B
    Rhabdomyolysis, caused when an individual exercises too excessively, results in muscle damage and breakdown. These breakdown products, which can include protein and myoglobin, then enter the bloodstream and have the potential to harm the kidneys. Kidney failure, and possibly death, can result. Symptoms of rhabdomyolysis can include muscle swelling, pain, and soreness. Myoglobinuria and proteinuria describe the conditions of having myoglobin and protein in the urine. However, they do necessarily reflect a cause. Dialysis is a treatment for kidney failure.
26. ANS: C
27. ANS: D
    The lighter band containing only actin within the myofibril is called the I band. The I band region becomes smaller during concentric muscle actions.
28. ANS: D
    Flexibility training has a number of benefits, including increased circulation, increased range of motion, improved muscle coordination, and decreased future chance of muscle injury.
29. ANS: A
30. ANS: A
    During muscle contraction, the myosin cross-bridges bind, actin slides over myosin and Z lines are pulled together. Myofilaments do not change in length, but the sarcomere does.

Only Multiple Choice [Answer Strip] **ID: A**

__A__ 1.

__D__ 2.

__B__ 3.

__A__ 4.

__B__ 5.

__B__ 6.

__C__ 7.

__A__ 8.

__C__ 9.

__C__ 10.

__C__ 11.

__A__ 12.

__A__ 13.

__B__ 14.

__A__ 15.

__B__ 16.

__A__ 17.

__D__ 18.

__C__ 19.

__B__ 20.

__A__ 21.

__C__ 22.

__D__ 23.

__B__ 24.

__B__ 25.

__C__ 26.

__D__ 27.

__D__ 28.

__A__ 29.

__A__ 30.

Name: _____ **Class:** _____ **Date:** _____ **ID: A**

MULTIPLE CHOICE

1.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
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8.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
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11.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
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27.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
28.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
29.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
30.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ