

Student name: _____

1) List and define/explain the four properties of muscle tissue.

2) All of the following are provided by muscles except _____.

- A) protection
- B) posture and support

- C) body heat
- D) attachment points for other muscles

3) Which of the following is not a characteristic after which muscles are named?

- A) Nerve
- B) Shape

- C) Size
- D) Location

4) Which of the following pairs of muscles produces the strongest contractions?

- A) Sphincter and fusiform muscles
- B) Fusiform and strap muscles
- C) Bipennate and unipennate muscles

- D) Multipennate and bipennate muscles

- A) Elasticity
- B) Extensibility

- C) Excitability
- D) Contractility

6) When flexing all of the fingers joints maximally in combination with maximal wrist flexion and no further flexion of any of the involved joints may be reached, the result is _____.

- A) Active insufficiency of the extensor muscles
- B) Active insufficiency of the flexor muscles
- C) Passive insufficiency of the flexor muscles

D) Stretch-shortening of the extensor muscles

7) Which of the following statements is true about an isometric muscle contraction?

- A) It is a dynamic contraction.
- B) It causes tension to develop outside the muscle.
- C) It is used to stabilize a body segment.

D) It occurs when the muscle length changes but the muscle tension remains the same.

8) Which of the following is not a term used to classify the pennate type of muscle fiber arrangement?

- A) Unipennate
- B) Bipennate

- C) Tripennate
- D) Multipennate

9) _____ is a useful way to determine muscle action and is done through using the sense of touch to feel or examine a muscle as it contracts.

- A) Palpation

- B) Inspection
- C) Auscultation

D) Percussion

10) Which of the following is not true of concentric muscle contractions?

- A) A muscle develops active tension as it shortens.
- B) Contractions occur when a muscle develops enough force to overcome applied resistance.
- C) Contractions cause movement against gravity or

resistance.

D) Concentric muscle contractions are commonly described as being a negative type of contraction.

11) Which of the following statements is true of concentric muscle contractions?

- A) The force developed by the muscle is less than that of the resistance.
- B) Contractions cause movement against gravity or resistance.
- C) The body part remains stable against gravity or external forces when concentric muscles contract.

D) Contractions result in the joint angle changing in the opposite direction of the applied muscle force.

12) Which of the following is not true of an eccentric muscle action?

- A) It is typically called a positive type of muscle contraction.
- B) The muscle lengthens under tension.
- C) It occurs when a muscle gradually lessens in tension to control the descent of resistance.

D) Weight or resistance overcomes muscle contraction but not to the point that the muscle cannot control descending movement.

13) Which of the following is true of an eccentric muscle action?

- A) The muscle does not control the movement with gravity or resistance.
- B) It is described as a positive type of contraction.
- C) The force developed by the muscle is less than that of the resistance.

D) It results in the joint angle changing in the direction opposite to that of the resistance or external force.

14) Which of the following is not a true statement of isokinetic exercise?

- A) The speed or velocity of movement is constant.
- B) Muscular contraction occurs only through part of the movement.
- C) It is not another type or classification of muscle

contraction.

D) It can only be performed on machines such as Biodex, Cybex, and Lido.

15) Which of the following is a true statement about agonist muscles?

- A) They cause a joint motion through a specified plane of motion when contracting concentrically.
- B) They cause a joint motion through a specified plane of motion when contracting isometrically.
- C) They cause a joint motion through a specified plane of motion when contracting eccentrically.

D) They cause a joint motion through a specified plane of motion when contracting isokinetically.

16) Which of the following is not a true statement about antagonist muscles?

- A) They are typically located on the opposite side of the joint from the agonist muscles.
- B) They have the opposite concentric action from agonists when activated.
- C) They are also known as contralateral muscles.

D) They work against agonist muscles by contracting and preventing movement.

17) Which of the following is a true statement about stabilizer muscles?

A) They are essential in establishing a relatively firm base for the more distal joints to work from when carrying out movements.

B) They contract to unlock the joint to enable another limb or body segment to exert force and/or move.

C) They are also known as guiding muscles.

D) They are located opposite a joint or body part.

18) Which of the following is a true statement about synergist muscles?

A) They assist in the actions of antagonists.

B) They are always considered to be prime movers for a muscular action.

C) They are also known as guiding muscles.

D) They assist in refined movement and cause undesired motions.

19) Which of the following is the basic functional unit of the nervous system responsible for generating and

transmitting nervous impulses?

A) Dendrite

B) Neuron

C) Ganglion

D) Dermatome

20) Which of the following is not a classification of the types of neurons?

A) Sensory neurons

B) Motor neurons

C) Peripheral neurons

D) Interneurons

21) Which of the following is a proprioceptor associated with muscle tissue?

- A) Pacinian corpuscle
- B) Golgi tendon organ
- C) Meissner's corpuscle

D) Ruffini's corpuscle

22) The subconscious mechanism by which the body is able to regulate posture and movement is called _____.

- A) kinesthesia
- B) proprioception

C) equilibrioception
D) pathogenesis

23) Which of the following does not result in the contraction of the muscle fibers in a particular motor unit?

- A) Maximal stimulus
- B) Submaximal stimulus
- C) Threshold stimulus

D) Subthreshold stimulus

24) _____ occurs when an antagonistic muscle becomes stretched to the point where it can no longer lengthen and allow movement.

- A) Active insufficiency
- B) Countercurrent movement
- C) Passive insufficiency

D) Reciprocal innervation

25) Which of the following statements is true of Ruffini's corpuscles?

- A) They initiate rapid contraction of stretched

muscle.
B) They are

located in deep layers of the skin and the joint capsule.

- C) They are activated by subtle joint movements.
- D) They have interrupted activation even when

pressure is maintained.

26) Generally, parallel muscles will produce a lesser range of movement than similar-size muscles with a pennate arrangement.

- ☐ true
- ☐ false

27) The sartorius is an example of a strap muscle.

- ☐ true
- ☐ false

28) Each muscle in the human body may be innervated by a single nerve or multiple nerves.

- ☐ true
- ☐ false

29) Fusiform muscle fiber arrangement results in a circular pattern.

- ☐ true
- ☐ false

30) Synergist muscles are considered to be the primary movers during activities.

- ☐ true

31) Isokinetic muscle contractions involve a dynamic movement wherein the speed of movement is variable.

- ☐ true
- ☐ false

32) The two major types of fiber arrangements are parallel and pennate.

- ☐ true
- ☐ false

33) Contractility is the ability of muscle to contract and develop tension or internal force in the same direction as a

resistive force when stimulated.

- ☐ true
- ☐ false

34) The term "intrinsic" usually pertains to muscles within or belonging solely to the body part upon which they act.

- ☐ true
- ☐ false

35) The term "action" refers to a specific movement of a joint that occurs as a result of a concentric muscle contraction.

- ☐ true
- ☐ false

36) It is not possible for a muscle to cause more than one action in an associated joint.

- ☐ true
- ☐ false

37) Innervation occurs in the segment of the nervous system responsible for providing a stimulus to muscle fibers

within a specific muscle or portion of a muscle.

- ☐ true
- ☐ false

38) The peripheral nervous system (PNS) can be divided into sensory and motor divisions.

- ☐ true
- ☐ false

39) The central, fleshy portion of a muscle is called the gaster.

- ☐ true
- ☐ false

40) All muscle contractions are classified as either isometric or isotonic.

- ☐ true
- ☐ false

41) Isotonic contractions are classified

as concentric or eccentric on the basis of whether shortening or lengthening of the muscle occurs.

- ☐ true
- ☐ false

42) Joint movement may occur without any muscle contraction.

- ☐ true
- ☐ false

43) Eccentric muscle contractions are referred to as muscle actions instead of a contraction since the muscle is

shortening as opposed to lengthening.

- ☐ true
- ☐ false

44) The term "isokinetics" describes a type of dynamic exercise that uses concentric and/or eccentric muscle contractions.

- ☐ true
- ☐ false

45) Two different muscles may contract simultaneously at a joint and cause a motion that neither would cause if contracting alone.

- ☐ true
- ☐ false

46) Antagonist muscles are known as prime or primary movers and are most involved in a joint action.

- ☐ true
- ☐ false

47) The conscious awareness of the position and movement of the body in space is called kinesthesia.

- ☐ true
- ☐ false

48) The more sudden the activation of a myotatic reflex, the less significant the reflexive contraction.

- ☐ true
- ☐ false

49) When a muscle is suddenly stretched, resulting in an eccentric contraction that is followed by a concentric contraction of the same muscle, the total force generated in the concentric contraction is greater than that of an isolated concentric contraction.

- ☐ true
- ☐ false

50) Generally, longer muscles can shorten through a greater range and are more effective in moving joints through large ranges of motion.

- ☐ true
- ☐ false

Answer Key

Test name: Chapter 02

1) Irritability or excitability is the muscle property of being sensitive or responsive to chemical, electrical, or mechanical stimuli. When an appropriate stimulus is provided, muscle responds by developing tension.
Contractility is the ability of muscle to contract and develop tension or internal force against resistance when stimulated. The ability of muscle tissue to develop tension or contract is unique in that other body tissues do not have this property.
Extensibility is the ability of muscle to be passively stretched beyond its normal resting length. As an example, the triceps brachii displays extensibility when it is

stretched beyond its normal resting length by the biceps brachii and other elbow flexors contracting to achieve full elbow flexion.
Elasticity is the ability of muscle to return to its original resting length following stretching.

2) D

3) A

4) C

5) B

6) A

7) C

8) C

9) A

- 10) D
- 11) B
- 12) A
- 13) C
- 14) B
- 15) A
- 16) D
- 17) A
- 18) C
- 19) B
- 20) C
- 21) B
- 22) B
- 23) D
- 24) C
- 25) B
- 26) FALSE
- 27) TRUE
- 28) TRUE
- 29) FALSE
- 30) FALSE

- 31) FALSE
- 32) TRUE
- 33) FALSE
- 34) TRUE
- 35) TRUE
- 36) FALSE
- 37) TRUE
- 38) TRUE
- 39) TRUE
- 40) TRUE
- 41) TRUE
- 42) TRUE
- 43) FALSE
- 44) TRUE
- 45) TRUE
- 46) FALSE
- 47) TRUE
- 48) FALSE
- 49) TRUE
- 50) TRUE