

**Exam : 040-444**

**Title : ACSM Registered Clinical  
Exercise Physiologist**

**Version : Demo**

1 .The C-shaped cartilages of the trachea allow all of the following to occur EXCEPT

- A. Ciliated movement of mucus-secreting cells.
- B. Distention of the esophagus.
- C. Maintenance of open airway.
- D. Prevention of tracheal collapse during pressure changes.

Answer: A

2 .Functions of bone include all of the following EXCEPT

- A. Support for the body.
- B. Protection of organs and tissues.
- C. Production of red blood cells.
- D. Production of force.

Answer: D

3 .In the organization of skeletal muscle, the muscle cell contains the contractile proteins.

Which of the following is a contractile protein?

- A. Myosin.
- B. Muscle fascicle.
- C. Myofibril.
- D. Muscle fiber.

Answer: A

4 .A client in your exercise class has been complaining of back pain with no radicular symptoms. This person has been treated medically and is now joining the exercise program to improve flexibility in the low back. Which exercise would be most appropriate for this person to address the stated goal?

- A. Hip flexor stretch.
- B. Knee-to-chest stretch.
- C. Gastrocnemius stretch.
- D. Lateral trunk stretch.

Answer: B

5 .All of the following statements are true regarding long bones EXCEPT

- A. The diaphysis is composed of compact bone.
- B. The epiphysis consists of spongy bone.
- C. Most bones of the axial skeleton are of this type.
- D. The central shaft encases the medullary canal.

Answer: C

6 .The arm is capable of performing all of the following motions EXCEPT

- A. Flexion.
- B. Abduction.
- C. Inversion.
- D. Supination.

Answer: C

7 .The prime movers for extension of the knee are the

- A. Bicepsfemoris.
- B. Bicepsbrachii.
- C. Quadricepsfemoris.
- D. Gastrocnemius.

Answer: C

8 .A baseball pitcher has been complaining of weakness in the lateral rotation motions of the shoulder. You have been asked to evaluate him for a strengthening program. Which of the following muscles would you have him concentrate on strengthening?

- A. Subscapularis.
- B. Teres major.
- C. Latissimus dorsi.
- D. Teres minor.

Answer: D

9 .Cartilage is categorized as which of the following types of connective tissue?

- A. Loose.
- B. Dense.
- C. Fluid.
- D. Supporting.

Answer: D

10 .Blood leaving the heart to be oxygenated in the lungs must first pass through the right atrium and ventricle. Through which valve does blood flow when moving from the right atrium to the right ventricle?

- A. Bicuspid valve.
- B. Tricuspid valve.
- C. Pulmonic valve.
- D. Aortic valve.

Answer: B

11 .An abnormal curve of the spine with lateral deviation of the vertebral column is called

- A. Lordosis.
- B. Scoliosis.
- C. Kyphosis.
- D. Primary curve.

Answer: B

12 .Which of the following is considered to be a "balland-socket" joint?

- A. Ankle.
- B. Elbow.

C. Knee.

D. Hip.

Answer: D

13 .Which of the following is the ability of a force to cause rotation of a lever?

A. Center of gravity.

B. Base of support.

C. Torque.

D. Stability.

Answer: C

14 .Standard sites for the measurement of skinfolds include the

A. Medial thigh.

B. Biceps.

C. Infrailiac.

D. Forearm.

Answer: B

15 .A standard site for the measurement of circumfer- ences is the

A. Abdomen.

B. Neck.

C. Wrist.

D. Ankle.

Answer: A

16 .The most common site used for measurement of the pulse during exercise is the

A. Popliteal.

B. Femoral.

C. Radial.

D. Dorsalis pedis.

Answer: C

17 .Blood from the peripheral anatomy flows to the heart through the superior and inferior venae cavae into the

A. Right atrium.

B. Left atrium.

C. Right ventricle.

D. Left ventricle.

Answer: A

18 .rteries are large-diameter vessels that carry blood away from the heart. As they course through the body, they progressively decrease in size until they become

A. Arterioles.

B. Anastomoses.

C. Venules.

D. Veins.

Answer: A

19 .The law of inertia

A. States that a body at rest tends to remain at rest, whereas a body in motion tends to continue to stay in motion with consistent speed and in the same direction unless acted on by an outside force

B. States that the velocity of a body is changed only when acted on by an additional force

C. States that the driving force of the body is doubled and that the rate of acceleration is also doubled.

D. States that the production of any force will create another force that will be opposite and equal to the first force.

Answer: A

20 .Running is a locomotor activity similar to walking but with some differences. In comparison to walking, running requires greater

A. Balance.

B. Muscle strength.

C. Range of motion.

D. All of the above

Answer: D

21 .Who first described that a body immersed in fluid is buoyed up with a force equal to the weight of the displaced fluid?

A. Einstein.

B. Freud.

C. Whitehead.

D. Archimedes.

Answer: D

22 .Which of the following bones articulates proximally with the sternal manubrium and distally with the scapula and is helpful to palpate in electrode placement?

A. Scapula.

B. Sternum.

C. Clavicle.

D. Twelfth rib.

Answer: C

23 .Which of the following is NOT a characteristic of the "power position" used for lifting with proper body mechanics?

A. Shoulders slouched.

B. Back straight.

C. Body bent forward from the hips.

D. Knees slightly bent.

Answer: A

24 .The intervertebral disks have which of the following characteristics?

- A. Calcified outer ring.
- B. Gelatinous inner nucleus portion.
- C. Gray matter surrounding the neural cell bodies.
- D. All of the above.

Answer: B

25 .Pain caused by low back muscle guarding and spasm in the absence of signs of disk herniation is often treated with muscle stretching. Which of the following is (are) helpful stretching activities for the low back?

- A. Knee to chest.
- B. Double-knee to chest.
- C. Lower trunk rotation.
- D. All of the above.

Answer: D

26 .Which of the following will increase stability?

- A. Lowering the center of gravity.
- B. Raising the center of gravity.
- C. Decreasing the base of support.
- D. Moving the center of gravity farther from the edge of the base of support.

Answer: A

27 .Which type of musculoskeletal lever is most common?

- A. First-class.
- B. Second-class.
- C. Third-class.
- D. Fourth-class.

Answer: C

28 .Angular motion occurs when

- A. A force is applied off-center to a freely- moveable object.
- B. A freely-movable object moves in a straight line when a force is applied on-center.
- C. An object is free to move only in a linear path.
- D. All of the above.

Answer: A

29 .In second-class lever,

- A. The Axis is located between the effort force and the resistance.
- B. The resistance is located between the effort force and the axis.
- C. The effort force is located between the resistance and the axis.

D. None of the above.

Answer: B

30 .Slapping of the foot during heel strike and increased knee and hip flexion during swing are characteristic of

A. Weakness in the gluteusmedius and minimus.

B. Weakness in the quadricepsfemoris.

C. Weakness in theplantarflexors.

D. Weakness in the dorsiflexors.

Answer: D