

Fundamentals of Exercise Science

Exercise Science · Answer Key · 15 Questions

1. Which muscle fiber type is primarily responsible for explosive, short-duration movements like sprinting?

- A) Type I fibers
- B) Type IIb fibers**
- C) Cardiac muscle
- D) Smooth muscle

2. What is the primary energy substrate used by the body during high-intensity anaerobic exercise?

- A) Glycogen**
- B) Stored fat
- C) Protein
- D) Fiber

3. Which heart rate zone is typically associated with the 'anaerobic threshold'?

- A) 50-60% of Max HR
- B) 60-70% of Max HR
- C) 80-90% of Max HR**
- D) 40-50% of Max HR

4. What is the anatomical name for the large muscle located on the back of the upper arm?

- A) Biceps brachii
- B) Deltoid
- C) Triceps brachii**
- D) Brachialis

5. What is the process called when muscles increase in size due to resistance training?

- A) Atrophy
- B) Hypertrophy**
- C) Flexibility
- D) Aerobic capacity

6. Which nutrient is most critical for the repair and growth of muscle tissue after exercise?

- A) Carbohydrates
- B) Fats
- C) Protein**
- D) Vitamin C

7. What is the term for the maximum amount of oxygen the body can utilize during intense exercise?

- A) Vital capacity
- B) VO2 max**
- C) Cardiac output
- D) Stroke volume

8. Which plane of motion divides the body into front (anterior) and back (posterior) halves?

- A) Sagittal plane
- B) Frontal plane**
- C) Transverse plane
- D) Horizontal plane

9. What connective tissue attaches muscle to bone?

- A) Ligament
- B) Cartilage
- C) Tendon**
- D) Fascia

10. Which of the following is a benefit of static stretching performed after a workout?

- A) Increased explosive power
- B) Immediate muscle growth
- C) Improved range of motion**
- D) Higher resting heart rate

11. What does the 'F' in the FITT principle of exercise prescription stand for?

- A) Force
- B) Frequency**
- C) Fatigue
- D) Flexibility

12. Which organ is responsible for the removal of waste products like lactic acid from the blood?

A) Lungs

B) Liver

C) Stomach

D) Pancreas

13. What is the term for exercise performed without the presence of sufficient oxygen?

A) Aerobic

B) Anaerobic

C) Isometric

D) Isokinetic

14. Which bone is commonly known as the 'thigh bone'?

A) Tibia

B) Fibula

C) Humerus

D) Femur

15. What is the primary function of red blood cells during physical activity?

A) Clotting the blood

B) Transporting oxygen

C) Storing energy

D) Fighting infection