

Foundations of Exercise Science

Exercise Science · Practice Test · 8 Questions

1. Which muscle fiber type is primarily responsible for high-intensity, short-duration activities such as sprinting?

- A) Type I fibers
- B) Type IIx fibers
- C) Type IC fibers
- D) Cardiac muscle fibers

2. What is the primary function of the Golgi tendon organ in the musculoskeletal system?

- A) Stimulating muscle contraction
- B) Monitoring muscle tension to prevent injury
- C) Increasing range of motion
- D) Storing glycogen

3. Which physiological process describes the body's ability to maintain a stable internal environment during physical activity?

- A) Homeostasis
- B) Hypertrophy
- C) Metabolism
- D) Vasodilation

4. During aerobic exercise, what is the primary byproduct produced by the breakdown of glucose when oxygen is available?

- A) Lactic acid
- B) Carbon dioxide and water
- C) Creatine phosphate
- D) Ammonia

5. Which hormone is primarily responsible for promoting muscle protein synthesis following resistance training?

- A) Cortisol
- B) Insulin-like Growth Factor 1 (IGF-1)
- C) Adrenaline
- D) Glucagon

6. What is the standard unit of measurement used to express the metabolic cost of a physical activity?

- A) Joules
- B) METs (Metabolic Equivalents)
- C) Newtons
- D) Watts

7. Which cardiac measurement is defined as the amount of blood pumped by the heart per single beat?

- A) Cardiac output
- B) Stroke volume
- C) Heart rate variability
- D) Ejection fraction

8. The principle of specificity in exercise science dictates that:

- A) Adaptations are specific to the type of training performed
- B) Exercise intensity must increase every week
- C) Training should focus only on large muscle groups
- D) Recovery is the most important phase of training