

# Sports Science Fundamentals

Sports Science · Answer Key · 8 Questions

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**1. Which energy system provides the primary fuel for high-intensity, short-duration activities like a 100-metre sprint?**

- A) Aerobic system
- B) ATP-PCr system**
- C) Glycolytic system
- D) Krebs cycle

**2. What is the primary function of the body's 'Type I' muscle fibres?**

- A) Rapid explosive power
- B) Short bursts of speed
- C) Endurance and aerobic capacity**
- D) Fatigue resistance with high force

**3. In biomechanics, which term describes the measure of an object's resistance to change in its rotational motion?**

- A) Moment of inertia**
- B) Angular momentum
- C) Torque
- D) Centripetal force

**4. Which physiological process is responsible for the 'burning' sensation in muscles during intense, prolonged physical activity?**

- A) Dehydration
- B) Lactic acid accumulation**
- C) Increased body temperature
- D) Reduced oxygen intake

**5. What is the primary role of the Golgi tendon organ in the muscular system?**

- A) Stimulating muscle contraction
- B) Regulating blood flow to muscles
- C) Detecting changes in muscle tension to prevent injury**
- D) Improving joint flexibility

**6. Which heart rate measurement represents the lowest number of beats per minute when the body is in a state of complete rest?**

- A) Maximum heart rate
- B) Target heart rate
- C) Resting heart rate**
- D) Recovery heart rate

**7. What is the principle of 'SAID' in sports training, which dictates how the body adapts to stress?**

**A) Specific Adaptation to Imposed Demands**

B) Standard Aerobic Intensity Development

C) Systemic Athletic Internal Development

D) Strengthening All Integrated Dynamics

**8. Which plane of motion divides the human body into left and right sides, commonly used to describe forward and backward movements?**

A) Transverse plane

B) Frontal plane

**C) Sagittal plane**

D) Coronal plane