

Middle School Sports Science Fundamentals

Sports Science · Practice Test · 25 Questions

1. Which primary organ is responsible for pumping blood throughout the human body during physical activity?

- A) Lungs
- B) Heart
- C) Liver
- D) Kidneys

2. What is the main source of energy that muscles use for contraction during short, intense bursts of exercise?

- A) Adenosine triphosphate (ATP)
- B) Vitamin C
- C) Iron
- D) Calcium

3. Which type of tissue connects muscles to bones?

- A) Ligament
- B) Cartilage
- C) Tendon
- D) Nerve

4. What is the primary function of red blood cells during exercise?

- A) To digest food
- B) To carry oxygen to muscles
- C) To produce hormones
- D) To repair broken bones

5. Which term describes the body's ability to maintain a stable internal environment during exercise?

- A) Homeostasis
- B) Evolution
- C) Digestion
- D) Photosynthesis

6. What is the primary role of the skeletal system in sports?

- A) Oxygen transport
- B) Providing structural support and protection
- C) Regulating body temperature
- D) Storing glucose

7. Which gas do humans inhale to support aerobic cellular respiration during exercise?

- A) Carbon dioxide
- B) Nitrogen
- C) Oxygen
- D) Helium

8. What are the units commonly used to measure the energy content in food?

- A) Celsius
- B) Calories
- C) Newtons
- D) Grams

9. Which nutrient is considered the primary building block for muscle repair and growth?

- A) Carbohydrates
- B) Fats
- C) Protein
- D) Fiber

10. What is the name of the joint movement that increases the angle between two body parts, like straightening the arm?

- A) Flexion
- B) Extension
- C) Rotation
- D) Adduction

11. Which of the following is a physical benefit of regular aerobic exercise?

- A) Decreased bone density
- B) Increased heart efficiency
- C) Slower reaction time
- D) Increased resting blood sugar

12. What process helps remove waste products like carbon dioxide from the muscles during physical activity?

- A) Circulation
- B) Photosynthesis
- C) Osmosis
- D) Digestion

13. Which type of muscle is found in the walls of internal organs and blood vessels?

- A) Skeletal muscle
- B) Cardiac muscle
- C) Smooth muscle
- D) Striated muscle

14. What do ligaments connect in the human body?

- A) Muscle to bone
- B) Bone to bone
- C) Nerve to muscle
- D) Skin to bone

15. What is the primary reason for a 'warm-up' before intense physical activity?

- A) To increase heart rate and muscle temperature
- B) To decrease blood flow
- C) To empty the stomach
- D) To lower body temperature

16. Which part of the brain is primarily responsible for coordinating movement and balance?

- A) Cerebellum
- B) Brain stem
- C) Occipital lobe
- D) Hypothalamus

17. What is the chemical waste product created by muscles during intense anaerobic exercise?

- A) Lactic acid
- B) Citric acid
- C) Glucose
- D) Oxygen

18. Which of these is a macronutrient that provides the body with its main fuel for physical activity?

- A) Vitamin A
- B) Carbohydrates
- C) Iron
- D) Calcium

19. What measures how much force a muscle can exert against a resistance?

- A) Flexibility
- B) Muscular strength
- C) Agility
- D) Endurance

20. Which of these activities is best for building cardiovascular endurance?

- A) Weightlifting
- B) Running
- C) Stretching
- D) Yoga

21. What is the term for the range of motion around a specific joint?

- A) Flexibility
- B) Strength
- C) Power
- D) Speed

22. Which part of the respiratory system is the site of gas exchange between the lungs and the blood?

- A) Trachea
- B) Bronchi
- C) Alveoli
- D) Diaphragm

23. What does the 'FITT' principle in exercise science stand for?

- A) Fast, Intense, Total, Time
- B) Frequency, Intensity, Time, Type
- C) Fitness, In, Top, Training
- D) Form, Increase, Test, Tendon

24. Which of these is a primary function of sweat during exercise?

- A) To increase body heat
- B) To cool the body through evaporation
- C) To remove protein from the blood
- D) To lubricate joints

25. What is the purpose of a cooling-down period after exercise?

- A) To increase blood pressure
- B) To help the heart rate return to resting levels gradually
- C) To stop muscle growth
- D) To increase lactic acid production