

Pioneers of Performance

Sports Science · Answer Key · 20 Questions

1. Who is widely considered the father of biomechanics, having first analyzed human movement in 'De Motu Animalium'?

- A) Giovanni Borelli**
- B) Isaac Newton
- C) Archimedes
- D) Leonardo da Vinci

2. In which decade was the first 'heart rate monitor' for athletic training invented?

- A) 1950s
- B) 1960s
- C) 1970s**
- D) 1980s

3. What synthetic material, invented in 1935, revolutionized the production of lightweight sports clothing and swimsuits?

- A) Polyester
- B) Nylon**
- C) Rayon
- D) Spandex

4. Which company introduced the first mass-marketed 'waffle-soled' running shoe in the 1970s?

- A) Adidas
- B) Puma
- C) Nike**
- D) Reebok

5. What type of camera technology was first used in the 1948 London Olympics to determine race winners?

- A) High-speed film
- B) Digital sensor
- C) Photo finish camera**
- D) Infrared scanner

6. Which scientist is credited with publishing the first formal study on the 'oxygen debt' theory during exercise?

A) A.V. Hill

B) Louis Pasteur

C) Gregor Mendel

D) Marie Curie

7. What does the 'Cooper Test', developed by Kenneth Cooper in 1968, primarily measure?

A) Flexibility

B) Muscle mass

C) Aerobic capacity

D) Reaction time

8. The first official Sports Medicine journal was published in which country in 1954?

A) USA

B) Germany

C) Australia

D) Japan

9. What invention, first used in the 1990s, allowed swimmers to reduce drag in the water significantly?

A) Full-body tech suits

B) Silicone caps

C) Goggles with HUD

D) Magnetic fins

10. Which common piece of modern sports equipment was first patented by Albert Spalding in the late 19th century?

A) The baseball glove

B) The carbon fiber bat

C) The synthetic tennis ball

D) The soccer cleat

11. In what year was the first formal Department of Sports Science established at a university?

A) 1902

B) 1924

C) 1955

D) 1972

12. The 'Borg Scale', invented by Gunnar Borg, is used to measure what?

- A) Perceived exertion**
- B) Body fat percentage
- C) Joint range of motion
- D) Hydration levels

13. Which material replaced traditional wooden bats in many professional baseball leagues due to its durability?

- A) Titanium
- B) Aluminum**
- C) Fiberglass
- D) Carbon fiber

14. What did the 'Grip Strength Dynamometer' first allow researchers to quantify in the early 20th century?

- A) Neural fatigue
- B) Hand muscle force**
- C) Reflex speed
- D) Bone density

15. The first 'treadmill' used for medical and sports research was developed in which century?

- A) 17th century
- B) 18th century
- C) 19th century**
- D) 20th century

16. What was the primary purpose of the first sports mouthguards invented in the late 1800s?

- A) Protecting dental work**
- B) Reducing concussions
- C) Improving jaw alignment
- D) Stabilizing breathing

17. Which Olympic event was the first to use automated timing systems involving electronic touch pads?

- A) 1968 Mexico City**
- B) 1972 Munich
- C) 1980 Moscow
- D) 1984 Los Angeles

18. What did the 1920s invention of the 'isokinetic machine' help sports scientists study?

A) Constant velocity muscle contraction

B) Bone fracture healing

C) Heart rate recovery

D) Balance stability

19. The first 'gait analysis' laboratory for athletes was established to study which specific sport?

A) Tennis

B) Track and field

C) Swimming

D) Cycling

20. Which invention allows modern sports scientists to measure body composition by sending a low-level electrical current?

A) BIA (Bioelectrical Impedance Analysis)

B) MRI scan

C) X-ray

D) Calipers