Physiology of Sport and Exercise 7th edition Kenney Test Bank

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1. Introduction Chapter Quiz
The study of how our bodies' structures and functions are altered when we are exposed to acute and chronic exercise is an appropriate definition of

a. sport physiology

b. exercise nutrition

*c. exercise physiology

d. overtraining

2. Introduction Chapter Quiz 2
D.B. Dill was a pioneer in the field of exercise physiology and was well known for his research in

*a. human responses to exercise, heat, and high altitude

b. sliding filament theory

c. energy metabolism

d. the development of research equipment to measure oxygen consumption

3. Introduction Chapter Quiz 3
The methods and equipment for measuring oxygen consumption during exercise were first developed by

*a. John Haldane

b. D.B. Dill

c. Bengt Saltin

d. A.V. Hill

4. Introduction Chapter Quiz 4
Which Scandinavian researcher conducted research in the area of physical fitness and endurance capacity?

*a. Per-Olof Åstrand

b. Bengt Saltin

c. Dudley Sargent

d. Hohwü Christensen

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5. Introduction Chapter Quiz 5
Muscle biopsy, a technique originally used in the early 1900s to study muscular dystrophy, was later introduced in the mid-1960s as a method for studying

a. muscular strength

b. electromyography (EMG)

*c. muscle biochemistry

d. intramuscular temperatures

6. Introduction Chapter Quiz 6
Who worked with P.-O. Åstrand to publish a classic study that provided a means to predict aerobic capacity from submaximal heart rate?

*a. Irma Rhyming

b. Birgitta Essen

c. Barbara Drinkwater

d. Karen Piehl

7. Introduction Chapter Quiz 7
Homeostasis is best defined as

a. a low metabolic rate

b. a change within the internal environment

*c. organ systems, tissues, cells, and molecules working to regulate our internal environment

d. a normal external environment

8. Introduction Chapter Quiz 8
Most people achieve their highest aerobic capacity when tested with the use of

a. a cycle ergometer

*b. a treadmill

c. an arm ergometer

d. the one-mile run field test

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9. Introduction Chapter Quiz 9
Which of the following is considered the most appropriate device to evaluate changes in submaximal physiological function before and after training in people whose body weight has changed?

a. a treadmill

*b. a cycle ergometer

c. an arm ergometer

d. the one-mile run field test

10. Introduction Chapter Quiz10
A research design examining the effect of a single treatment on groups of participants aged 21 to 30 years, 31 to 40 years, and 41 to 50 years is an example of

*a. a cross-sectional design

b. a longitudinal design

c. a placebo design

d. a crossover design

11. Introduction Chapter Quiz11
Which of the following is the study of the expression of genes at the messenger RPNA?

a. genomics

*b. transcriptomics

c. metabolomics

d. proteomics

12. Chapter 1 Quiz
Muscle found in the walls of the bladder is an example of

a. cardiac muscle

b. skeletal muscle

*c. smooth muscle

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13. Chapter 1 Quiz 2
Which of these is the correct order of skeletal muscle hierarchical organization, from largest structure to smallest structure?

a. muscle fasciculus, entire muscle, myofibril, muscle fiber

*b. entire muscle, muscle fasciculus, muscle fiber, myofibril

c. muscle fiber, myofibril, entire muscle, muscle fasciculus

d. myofibril, muscle fiber, muscle fasciculus, entire muscle

14. Chapter 1 Quiz 3
Ca^{2+} ions (essential for contraction) are stored in the

a. sarcoplasm

b. sarcolemma

*c. sarcoplasmic reticulum

d. T-tubules

15. Chapter 1 Quiz 4
Which protein is sensitive to Ca^{2+} and thereby helps initiate contraction?

a. actin

b. myosin

*c. troponin

d. tropomyosin

16. Chapter 1 Quiz 5
The process of plasmalemma depolarization (increase in membrane potential) involves which ion?

*a. Na^{+}

b. K^{+}

c. Ca^{2+}

d. Cl^{-}

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17. Chapter 1 Quiz 6
Which is the correct order of events in a contraction?

a. T-tubule action potential, Ca^{2+} gathered in, cross-bridging, Ca^{2+} released

b. Ca^{2+} released, cross-bridging, Ca^{2+} gathered in, T-tubule action potential

c. cross-bridging, Ca^{2+} released, Ca^{2+} gathered in, T-tubule action potential

*d. T-tubule action potential, Ca^{2+} released, cross-bridging, Ca^{2+} gathered in

18. Chapter 1 Quiz 7
ATP is required for

a. muscle contraction only

b. muscle relaxation only

*c. both muscle contraction and muscle relaxation

d. neither muscle contraction nor muscle relaxation

19. Chapter 1 Quiz 8
Type I muscle fibers

*a. have a high oxidative capacity

b. store large quantities of glycogen

c. generate force quickly

d. fatigue quickly

20. Chapter 1 Quiz 9
The speed of muscle fiber contraction is determined primarily by the

a. amount of actin and myosin

b. amount of actin ATPase

c. diameter of the muscle fiber

*d. speed of myosin ATPase

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21. Chapter 1 Quiz10
Why does a sarcomere that is too short or too stretched produce less force?

a. Thick filaments get damaged.

b. Thin filaments become unraveled.

*c. Not as many cross-bridges can form.

d. The reduction in force is negligible and can be ignored.

22. Chapter 1 Quiz11
The spring-like characteristic of titan regulates force generation and prevents

a. shortening

*b. overstretch

c. cross-bridge binding

d. calcium release

23. Chapter 2 Quiz
An example of an energy substrate is

a. ATP

*b. palmitic acid

c. phosphofructokinase

d. creatine kinase

24. Chapter 2 Quiz 2
Which of these substrate stores in the body can provide the most overall kilocalories?

a. glycogen

b. phospholipids

c. proteins

*d. triglycerides

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25. Chapter 2 Quiz 3
Protein can serve as an energy substrate if

a. certain amino acids are present

b. it is utilized by the brain

c. it is phosphorylated first

*d. it is first converted to glucose

26. Chapter 2 Quiz 4
Which of the following is responsible for lowering the activation energy of a chemical reaction?

a. ATP

b. additional buildup of substrate

*c. enzyme activity

d. ADP accumulation

27. Chapter 2 Quiz 5
The anaerobic glycolytic system would be the primary source of ATP for which running event?

a. 100 m

*b. 800 m (1/2 mi)

c. 3,200 m (2 mi)

d. marathon

28. Chapter 2 Quiz 6
In the absence of oxygen, the final product of glycolysis is

a. pyruvic acid

b. acetyl CoA

c. glucose-1-phosphate

*d. lactic acid

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29. Chapter 2 Quiz 7
For aerobic metabolism, free fatty acids must be converted to acetyl-CoA via

a. the Krebs cycle

b. the electron transport chain

*c. β-oxidation

d. the citric acid cycle

30. Chapter 2 Quiz 8
Taking into account both oxygen requirements *and* ATP yield, which substrate is more efficient, fat or glucose?

a. Fat is more efficient.

*b. Glucose is more efficient.

c. They are equally efficient.

31. Chapter 2 Quiz 9
In which part of the cell does oxidative phosphorylation occur?

a. plasma membrane

b. nucleus

c. cytosol

*d. mitochondria

32. Chapter 2 Quiz10
An athlete with a high percentage of type II fibers would exhibit which characteristics?

a. more mitochondria, higher oxidative enzymes

b. more mitochondria, lower oxidative enzymes

c. fewer mitochondria, higher oxidative enzymes

*d. fewer mitochondria, lower oxidative enzymes

33. Chapter 2 Quiz11
Men and individuals with a higher body mass index have _____ brown adipose tissue than women and individuals with a lower body mass index.

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