

Test Bank for Basic Biomechanics 9th Hall

Basic Biomechanics 9th Edition by Hall CH01

ANSWERS ARE LOCATED IN THE SECOND PART OF THIS DOCUMENT

TRUE/FALSE - Write 'T' if the statement is true and 'F' if the statement is false.

1) Within the fields of kinesiology and exercise science, the living organism most commonly of interest to the biomechanist is the human body.

1) _____

- ☐ true
- ☐ false

Question Details

Accessibility : Keyboard Navigation

2) The kinetics of an exercise or sport skill execution is commonly known as form or technique.

2) _____

- ☐ true
- ☐ false

Question Details

Accessibility : Keyboard Navigation

3) Force can be thought of as a push or a pull acting on a body.

3) _____

- ☐ true
- ☐ false

Question Details

Accessibility : Keyboard Navigation

MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.

4) Which of the following is the most appropriate definition of biomechanics?

4) _____

Basic Biomechanics 9th Edition by Hall CH01

- A) the study of human movement
- B) the study of biological organisms
- C) the study of movement mechanics
- D) the study of the mechanical aspects of biological organisms

Question Details

Accessibility : Keyboard Navigation

5) Which of the following terms is applied to the study of systems in a constant state of motion?

5) _____

- A) statics
- B) dynamics
- C) anthropometrics
- D) plyometrics

Question Details

Accessibility : Keyboard Navigation

6) What term is given to considerations such as the size, shape, and weight of body segments?

6) _____

- A) cybernetic
- B) anthropometric
- C) kinematic
- D) kinetic

Question Details

Accessibility : Keyboard Navigation

Basic Biomechanics 9th Edition by Hall CH01

7) Which of the following is an example of a static situation?

7) _____

- A) a cyclist riding at a constant velocity
- B) a person balancing motionless on one foot
- C) both a cyclist riding at a constant velocity and a person balancing motionless on one foot
- D) neither a cyclist riding at a constant velocity nor a person balancing motionless on one foot

Question Details

Accessibility : Keyboard Navigation

8) Which of the following are anthropometric factors?

8) _____

- A) the length of a forearm
- B) the shape of a body
- C) the weight of the trunk
- D) all of these answers are correct

Question Details

Accessibility : Keyboard Navigation

9) Which of the following is included in sports medicine?

9) _____

Basic Biomechanics 9th Edition by Hall CH01

- A) clinical aspects of exercise and sport
- B) scientific aspects of exercise and sport
- C) both clinical aspects of exercise and sport and scientific aspects of exercise and sport
- D) neither clinical aspects of exercise and sport nor scientific aspects of exercise and sport

Question Details

Accessibility : Keyboard Navigation

10) Biomechanics has roots in which of the following disciplines?

10) _____

- A) physics
- B) biology
- C) both physics and biology
- D) neither physics nor biology

Question Details

Accessibility : Keyboard Navigation

11) Which of the following questions about the long jump should be answered quantitatively?

11) _____

- A) What is the horizontal velocity at take-off?
- B) What is the angle at take-off?
- C) Both what is the horizontal velocity at take-off? and what is the angle at take-off?
- D) Neither what is the horizontal velocity at take-off? nor what is the angle at take-off?

Question Details

Accessibility : Keyboard Navigation

Basic Biomechanics 9th Edition by Hall CH01

12) Which of the following characterizes a formal problem?

12) _____

- A) a goal or answer
- B) a set of given information
- C) a set of operations that can be used to arrive at the desired answer from the given information
- D) all of these answers are correct

Question Details

Accessibility : Keyboard Navigation

13) What does the word qualitative mean?

13) _____

- A) general
- B) numerical
- C) pertaining to quality
- D) all of these answers are correct

Question Details

Accessibility : Keyboard Navigation

14) Which of the following statements is true regarding qualitative analysis?

14) _____

- A) It is always of a general nature.
- B) It does not involve the use of numbers.
- C) Both it is always of a general nature and it does not involve the use of numbers.
- D) Neither it is always of a general nature nor it does not involve the use of numbers.

Basic Biomechanics 9th Edition by Hall CH01

Question Details

Accessibility : Keyboard Navigation

15) Which of the following professionals regularly make use of qualitative observations?

15) _____

- A) teachers
- B) coaches
- C) clinicians
- D) all of these answers are correct

Question Details

Accessibility : Keyboard Navigation

16) Which of the following are components of a structured approach to problem-solving?

16) _____

- A) writing down the given information
- B) drawing a diagram representing the problem situation
- C) rereading the problem to look for additional information that may be inferred from the problem statement
- D) all of these answers are correct

Question Details

Accessibility : Keyboard Navigation

17) Which of the following countries uses the metric system?

17) _____

Basic Biomechanics 9th Edition by Hall CH01

- A) France
- B) Germany
- C) Japan
- D) All of these answers are correct

Question Details

Accessibility : Keyboard Navigation

18) Which of the following conversions is accurate?

18) _____

- A) 2.54 cm = 1 in
- B) 2.54 in = 1 cm
- C) 4.45 lb = 1 N
- D) None of these answers is correct

Question Details

Accessibility : Keyboard Navigation

19) Which of the following is an example of equipment designed to enhance performance?

19) _____

- A) Klap skate
- B) Aerodynamic helmet
- C) Both klap skate and aerodynamic helmet
- D) None of these answers is correct

Question Details

Accessibility : Keyboard Navigation

20) Biomechanical research has contributed to which of the following?

Basic Biomechanics 9th Edition by Hall CH01

20) _____

- A) injury prevention
- B) enhanced sport performance
- C) equipment design
- D) all of these answers are correct

Question Details

Accessibility : Keyboard Navigation

21) Which of the following could be performed by a biomechanist?

21) _____

- A) quantitative analysis of human movement
- B) qualitative analysis of human movement
- C) both quantitative analysis of human movement and qualitative analysis of human movement
- D) none of these answers is correct

Question Details

Accessibility : Keyboard Navigation

22) Which type of analysis involves identifying, analyzing and answering a question of interest?

22) _____

- A) quantitative
- B) qualitative
- C) both quantitative and qualitative
- D) none of these answers is correct

Basic Biomechanics 9th Edition by Hall CH01

Question Details

Accessibility : Keyboard Navigation

23) Choose the term or phrase that is not synonymous with the others.

23) _____

- A) Metric system
- B) English system
- C) International system of units
- D) S. I.

Question Details

Accessibility : Keyboard Navigation

24) What is the base unit for mass in the metric system?

24) _____

- A) newton
- B) kilogram
- C) meter
- D) slug

Question Details

Accessibility : Keyboard Navigation

25) Which of the following is true regarding mechanics?

25) _____

Basic Biomechanics 9th Edition by Hall CH01

- A) branch of physics
- B) analyzes the actions of forces on particles
- C) both branch of physics and analyzes the actions of forces on particles
- D) none of these answers is correct

Question Details

Accessibility : Keyboard Navigation

26) Which of the following defines inference?

26) _____

- A) the process of elimination
- B) the process of forming deductions from available information
- C) the process of observation in a qualitative analysis
- D) none of these answers is correct

Question Details

Accessibility : Keyboard Navigation

27) Astronauts who travel out of the earth's gravitational field have experienced which of the following?

27) _____

- A) increased bone density
- B) reduced strength
- C) both increased bone density and reduced strength
- D) none of these answers is correct

Question Details

Accessibility : Keyboard Navigation

Basic Biomechanics 9th Edition by Hall CH01

28) Which of the following affects the flight of a discus?

28) _____

- A) speed at release
- B) projection angle
- C) orientation angle relative to the wind
- D) all of these answers are correct

Question Details

Accessibility : Keyboard Navigation

29) The high incidence of knee injuries among snow skiers is partially due to which of the following?

29) _____

- A) rigid boot which limit ankle motion
- B) bindings which release during a fall
- C) both rigid boot which limit ankle motion and bindings which release during a fall
- D) none of these answers is correct

Question Details

Accessibility : Keyboard Navigation

30) After age 50, what percentage of fractures are osteoporosis related?

30) _____

- A) 10%
- B) 30%
- C) 50%
- D) 90%

Question Details

Basic Biomechanics 9th Edition by Hall CH01

31) After age 60, what percentage of fractures are osteoporosis related?

31) _____

- A) 10%
- B) 30%
- C) 50%
- D) 90%

Question Details

FILL IN THE BLANK. Write the word or phrase that best completes each statement or answers the question.

32) _____ refers to an excessive loss of bone mineral mass and strength resulting in one or more fractures.

32) _____

Question Details

Accessibility : Keyboard Navigation

33) The branch of biomechanics which studies the actions of forces is called _____.

33) _____

Question Details

Accessibility : Keyboard Navigation

34) A field that focuses on the prevention of work-related injuries and the improvement of working conditions and worker performance is known as _____ biomechanics.

34) _____

Basic Biomechanics 9th Edition by Hall CH01

Question Details

Accessibility : Keyboard Navigation

35) Sport shoes are designed to prevent _____ and enhance _____.

35) _____

Question Details

Accessibility : Keyboard Navigation

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

36) List four innovations in sport equipment developed by biomechanists.

Question Details

Accessibility : Keyboard Navigation

37) Explain how equipment innovation has improved performance and/or prevented injury.

Question Details

Accessibility : Keyboard Navigation

38) Name three professions related to kinesiology and explain how each will benefit from a knowledge of biomechanics.

Basic Biomechanics 9th Edition by Hall CH01

Question Details

Accessibility : Keyboard Navigation

39) Explain the difference between qualitative and quantitative problems and give an example of each one that is related to a kinesiology topic.

Question Details

Accessibility : Keyboard Navigation

40) Provide the letters for the terms that match the following definitions.

- A. biomechanics
- B. dynamics
- C. English system
- D. kinematics
- E. kinesiology
- F. kinetics
- G. mechanics
- H. metric system
- I. qualitative
- J. quantitative
- K. sports medicine
- L. statics
- M. tennis elbow

application of mechanical principles in the study of living organisms

branch of mechanics dealing with systems in a constant state of motion

branch of mechanics dealing with systems subject to acceleration

study of the description of motion, including considerations of space and time

study of the action of forces

study of human movement

involving the use of numbers

involving non-numeric description of quality

system of weights and measures used internationally in scientific applications

Basic Biomechanics 9th Edition by Hall CH01

Question Details

Accessibility : Keyboard Navigation

Basic Biomechanics 9th Edition by Hall CH01

Answer Key

Test name: CH01

- 1) TRUE
- 2) FALSE
- 3) TRUE
- 4) D
- 5) A
- 6) B
- 7) C
- 8) D
- 9) C
- 10) C
- 11) C
- 12) D
- 13) C
- 14) B
- 15) D
- 16) D
- 17) D
- 18) A
- 19) C
- 20) D
- 21) C
- 22) C
- 23) B
- 24) B
- 25) C
- 26) B

Basic Biomechanics 9th Edition by Hall CH01

- 27) B
- 28) D
- 29) A
- 30) C
- 31) D
- 32) Osteoporosis
- 33) kinetics
- 34) occupational
- 35) [excessive loading, performance]
- 36) Answer may vary.
- 37) Answer may vary.
- 38) Answer may vary.
- 39) Answer may vary.
- 40) application of mechanical principles in the study of living organisms
 - (A)
branch of mechanics dealing with systems in a constant state of motion
 - (M)
branch of mechanics dealing with systems subject to acceleration (C)
 - study of the description of motion, including considerations of space and time (E)
 - study of the action of forces (G)
 - study of human movement (F)
 - involving the use of numbers (K)
 - involving non-numeric description of quality (J)
 - system of weights and measures used internationally in scientific applications (I)