

Human Physiology From Cells to Systems 9th Edition Sherwood Test Bank

1. Physiology is best defined as the _____.
- a. study of all living things
 - b. study of the bodily functions of living things
 - c. study of human relationships
 - d. maintenance of body temperature
 - e. maintenance of physical fitness

ANSWER: b

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.1 Introduction to Physiology

LEARNING OBJECTIVES: HUPH.SHER.16.1.1 - Describe the physiological approach to explaining an event

2. What are the most basic building blocks of matter?
- a. tissue
 - b. cells
 - c. atoms
 - d. bones
 - e. amino acids

ANSWER: c

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2 - Explain the structure-function relationship of body parts

3. What are the four most common chemical elements in the human body?
- a. water, salt, protein, and fat
 - b. iron, carbon, oxygen, and potassium
 - c. blood, muscle, fat, and bone
 - d. collagen, glucosamine, chondroitin, and cartilage
 - e. oxygen, carbon, hydrogen, and nitrogen

ANSWER: e

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2 - Explain the structure-function relationship of body parts

4. Approximately how many red blood cells are replaced per minute in the human body on average?
- a. 150,000,000
 - b. 50,000,000
 - c. 5,000,000
 - d. 500,000
 - e. 5,000

ANSWER: a

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2 - Explain the structure-function relationship of body parts

5. Which structure encloses the cells of the human body?

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- a. a carbon shell
- b. an electron cluster
- c. microvilli
- d. a plasma membrane
- e. a protective protein sheath

ANSWER: d

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2 - Explain the structure-function relationship of body parts

6. The human body is made up of approximately how many specialized cell types?

- a. 400
- b. 200
- c. 100
- d. 50
- e. 25

ANSWER: b

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2 - Explain the structure-function relationship of body parts

7. What occurs when a cell differentiates?

- a. It becomes specialized to perform a particular function.
- b. It stops using nutrients and dies.
- c. It morphs into a faster dividing cell.
- d. It divides into other cells that contain a lesser number of chromosomes.
- e. It becomes physically larger and more complex.

ANSWER: a

DIFFICULTY: Bloom's: Understand

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2 - Explain the structure-function relationship of body parts

8. Which progression represents the correct hierarchy of organization, from simpler to more complex?

- a. atom, cell, tissue, organ, system, organism
- b. tissue, cell, system, organism, organ, body
- c. system, atom, cell, organ, tissue, organism
- d. atom, molecule, compound, cell, body, organism
- e. chemical, cell, organ, tissue, system, organism

ANSWER: a

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2 - Explain the structure-function relationship of body parts

9. What type of tissue consists of cells specialized for exchanging materials with the environment?

Chapter 01 – Introduction to Physiology and Homeostasis

- a. connective
- b. muscle
- c. bone
- d. nervous
- e. epithelial

ANSWER: e

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.1 - Describe the four specialized cell functions in multicellular organisms

10. What type of tissue consists of cells specialized for transmitting messages?

- a. connective
- b. muscle
- c. bone
- d. nervous
- e. epithelial

ANSWER: d

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.1 - Describe the four specialized cell functions in multicellular organisms

11. Which two cell types lose the ability to reproduce soon after they are formed?

- a. skin cells and heart cells
- b. epithelial cells and muscle cells
- c. nerve cells and muscle cells
- d. kidney cells and pancreatic cells
- e. connective cells and nerve cells

ANSWER: c

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.1 - Describe the four specialized cell functions in multicellular organisms

12. Of the different muscle types, which one can be voluntarily controlled?

- a. smooth
- b. arterial
- c. cardiac
- d. skeletal
- e. heart

ANSWER: d

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.2 - Identify the four primary types of tissues in the human body

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13. What are the four primary tissue types?
- muscle, nervous, epithelial, and connective
 - bone, nerves, brain, and skin
 - epithelial, nervous, cardiovascular, and alimentary
 - skin, epithelial, connective, and integumentary
 - contractile, protective, absorptive, and integumentary

ANSWER: a

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.2 - Identify the four primary types of tissues in the human body

14. Epithelial tissue is organized into what two general types of structures?
- cells and cell walls
 - ducts and nuclei
 - epithelial sheets and secretory glands
 - protective and absorptive
 - epithelial sheets and cell membranes

ANSWER: c

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.2 - Identify the four primary types of tissues in the human body

15. The two main categories of glands are called _____.
- secretive and absorptive
 - endocrine and exocrine
 - internal and external
 - embryonic and latent
 - ducted and ductless

ANSWER: b

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.3 - Distinguish between exocrine and endocrine glands

16. What kind of glands secrete through ducts to the outside of the body (or cavity open to the outside)?
- endocrine
 - embryonic
 - external
 - latent
 - exocrine

ANSWER: e

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.3 - Distinguish between exocrine and endocrine glands

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17. What are two examples of exocrine glands?
- sweat glands and glands that secrete digestive juices
 - mammary glands and the pancreas
 - the bladder and the kidneys
 - thyroid gland and sweat glands
 - pancreas and the pituitary gland

ANSWER: a

DIFFICULTY: Bloom's: Apply

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.3 - Distinguish between exocrine and endocrine glands

18. What are two examples of connective tissue?
- muscle and tendons
 - bone and tendons
 - ligaments and nerves
 - cartilage and skin
 - blood and muscle

ANSWER: b

DIFFICULTY: Bloom's: Apply

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.2 - Identify the four primary types of tissues in the human body

19. What compound/molecule produced by connective tissue is a rubber band-like protein fiber?
- fibrin
 - fibrinogen
 - elastin
 - glucosamine
 - chondroitin

ANSWER: c

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.2 - Identify the four primary types of tissues in the human body

20. What is the best definition of a body system?
- The containment of functional tissues
 - A collection of diverse specialized cells
 - A multi-cellular life form
 - An integrated collection of related organs
 - A living being capable of cognition

ANSWER: d

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2.1 - Describe the four specialized cell functions in multicellular organisms

Chapter 01 – Introduction to Physiology and Homeostasis

21. How many body systems does the human body contain?

- a. four
- b. five
- c. seven
- d. nine
- e. eleven

ANSWER: e

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.2 Levels of Organization in the Body

LEARNING OBJECTIVES: HUPH.SHER.16.1.2 - Explain the structure-function relationship of body parts

22. What type of fluid resides within cells?

- a. systemic
- b. extracellular
- c. ribosomal
- d. intracellular
- e. plasma

ANSWER: d

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.3 Concept of Homeostasis

LEARNING OBJECTIVES: HUPH.SHER.16.1.3.1 - Explain the roles of the external and internal environments in multicellular organisms

23. The extracellular fluid is made up of which two components?

- a. lymph and plasma
- b. cellular matrix and globular filtrate
- c. plasma and interstitial fluid
- d. white blood cells and lymph
- e. red blood cells and interstitial fluid

ANSWER: c

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.3 Concept of Homeostasis

LEARNING OBJECTIVES: HUPH.SHER.16.1.3.1 - Explain the roles of the external and internal environments in multicellular organisms

24. Broadly speaking, how many internal factors in the body must be homeostatically maintained?

- a. nine
- b. seven
- c. five
- d. four
- e. three

ANSWER: b

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.3 Concept of Homeostasis

LEARNING OBJECTIVES: HUPH.SHER.16.1.3.2 - State the seven factors that must be homeostatically maintained

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25. What do human cells require to carry out energy-yielding chemical reactions?

- a. oxygen
- b. carbon dioxide
- c. salt
- d. ATP molecules
- e. sunlight

ANSWER: a

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.3 Concept of Homeostasis

LEARNING OBJECTIVES: HUPH.SHER.16.1.3.2 - State the seven factors that must be homeostatically maintained

26. What does "pH" measure?

- a. The percentage of potassium in the extracellular fluid
- b. The amount of phosphorus in the intracellular fluid
- c. The relative amount of acidity based on hydrogen ions
- d. The energy producing ability of a cell
- e. The percentage of water in the interstitial fluid

ANSWER: c

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.3 Concept of Homeostasis

LEARNING OBJECTIVES: HUPH.SHER.16.1.3.2 - State the seven factors that must be homeostatically maintained

27. Electrolytes are best defined as _____.

- a. chemicals that form ions in solution and conduct electricity
- b. chemicals that generate electricity
- c. compounds that form molecules without electrons
- d. salts that exchange covalent electrons
- e. salts that increase pH levels

ANSWER: a

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.3 Concept of Homeostasis

LEARNING OBJECTIVES: HUPH.SHER.16.1.3.2 - State the seven factors that must be homeostatically maintained

28. What electrolyte does the heart rely on most in order to keep a rhythmic beat?

- a. potassium
- b. phosphorus
- c. magnesium
- d. iron
- e. sodium

ANSWER: a

DIFFICULTY: Bloom's: Remember

REFERENCES: 1.3 Concept of Homeostasis

LEARNING OBJECTIVES: HUPH.SHER.16.1.3.2 - State the seven factors that must be homeostatically maintained