

Patton: Anatomy and Physiology, 9th Edition

Chapter 02: Homeostasis

Test Bank

MULTIPLE CHOICE

1. Of the 11 major body systems, which is the least involved in maintaining homeostasis?

- a. Circulatory
- b. Endocrine
- c. Lymphatic
- d. Reproductive

ANS: D

DIF: Application

REF:

TOP: System Level

2. *Homeostasis* can best be described as:

- a. a constant state maintained by living and nonliving organisms.
- b. a state of relative constancy.
- c. adaptation to the external environment.
- d. changes in body temperature.

ANS: B

DIF: Application

REF:

TOP: Homeostasis

3. Which of the following is not one of the basic components in a feedback control loop?

- a. Effector mechanism
- b. Transmitter
- c. Sensor
- d. Integrating center

ANS: B

DIF: Memorization

REF:

TOP: Basic Components of Control Mechanisms

4. The body's thermostat is located in the:

- a. heart.
- b. cerebellum.
- c. pituitary.
- d. hypothalamus.

ANS: D

DIF: Memorization

REF:

TOP: Basic Components of Control Mechanisms

5. The contraction of the uterus during the birth of a baby is an example of _____ feedback.

- a. negative
- b. positive
- c. inhibitory
- d. deviating

ANS: B

DIF: Memorization

REF:

TOP: Positive-Feedback Control Systems

6. Negative-feedback mechanisms:

- a. minimize changes in blood glucose levels.
- b. maintain homeostasis.
- c. are responsible for an increased rate of sweating when air temperature is higher than body temperature.
- d. All of the above are correct.

ANS: D

DIF: Memorization

REF:

TOP: Negative-Feedback Control Systems

7. *Pathogenesis* can be defined as:

- a. a specific disease.
- b. a group of diseases.
- c. the course of disease development.

d. a subgroup of viruses.

ANS: C

DIF: Memorization

REF:

TOP: Disease Terminology

8. Intracellular parasites that consist of DNA or RNA surrounded by a protein coat and sometimes by a lipoprotein envelope are called:

- a. viruses.
- b. bacteria.
- c. fungi.
- d. protozoa.

ANS: A

DIF: Memorization

REF:

TOP: Basic Mechanisms of Disease

9. The term that literally means self-immunity is:

- a. autoimmunity.
- b. homoimmunity.
- c. passive immunity.
- d. active immunity.

ANS: A

DIF: Memorization

REF:

TOP: Basic Mechanisms of Disease

10. *Epidemiology* is the study of the _____ of diseases in human populations.

- a. occurrence
- b. distribution
- c. transmission
- d. All of the above are correct.

ANS: D

DIF: Memorization

REF: Page 25 (Box 1-4)

TOP: Disease Terminology

11. Which of the following may put one at risk for developing a given disease?

- a. Environment
- b. Stress
- c. Lifestyle
- d. All of the above

ANS: D

DIF: Memorization

REF:

TOP: Mechanisms of Disease

12. Negative-feedback control systems:

- a. oppose a change.
- b. accelerate a change.
- c. have no effect on the deviation from set point.
- d. establish a new set point.

ANS: A

DIF: Memorization

REF:

TOP: Negative-Feedback Control Systems

13. Positive-feedback control systems:

- a. have no effect on the deviation from set point.
- b. accelerate a change.
- c. ignore a change.
- d. do not exist in human systems.

ANS: B

DIF: Memorization

REF:

TOP: Positive-Feedback Control Systems

14. Shivering to try to raise your body temperature back to normal would be an example of:

- a. the body trying to maintain homeostasis.
- b. a positive-feedback mechanism.
- c. a negative-feedback mechanism.

d. both A and C.

ANS: D

DIF: Synthesis

REF:

TOP: Homeostasis/Negative-Feedback Control Systems

15. Eponyms are scientific terms that:

- a. sound alike but are spelled differently.
- b. can have more than one meaning.
- c. are based on a person's name.
- d. are none of the above.

ANS: C

DIF: Memorization

REF:

TOP: The Language of Science and Medicine

16. Which of the following is a protein substance with no DNA or RNA and is thought to be the cause of mad cow disease?

- a. Virus
- b. Bacteria
- c. Prion
- d. Protozoan

ANS: C

DIF: Memorization

REF:

TOP: Pathogenic Organisms

17. Of the pathogenic organisms, which of the following are the most complex?

- a. Viruses
- b. Tapeworms
- c. Bacteria
- d. Protozoa

ANS: B

DIF: Memorization

REF:

TOP: Pathogenic Organisms

18. If the secretion of oxytocin during childbirth operated as a negative-feedback control loop, what effect would it have on uterine contractions?

- a. Oxytocin would stimulate stronger uterine contractions.
- b. Oxytocin would inhibit uterine contractions.
- c. There would be no changes in the strength of the uterine contractions.
- d. Uterine contractions would initially be weak and then gain strength after the release of the hormone.

ANS: B

DIF: Application

REF:

TOP: Positive-Feedback Control Systems

19. Intrinsic control:

- a. usually involves the endocrine or nervous system.
- b. operates at the cellular level.
- c. is sometimes called *autoregulation*.
- d. operates at the system or organism level.

ANS: C

DIF: Memorization

REF:

TOP: Levels of Control

MATCHING

Match each term with its corresponding definition or explanation

- a. Prion
- b. Tumor
- c. Fungi
- d. Gene mutation
- e. Bacteria
- f. Virus
- g. Protozoa

1. An intracellular parasite that consists of an RNA or DNA core surrounded by a protein coat

2. A type of protein that converts normal protein in the nervous system into abnormal proteins that cause loss of function

3. A tiny, primitive cell that lacks a nucleus and can cause infection
4. An abnormal growth or neoplasm
5. Altered DNA that causes abnormal proteins to be made that do not perform their intended function
6. A one-celled organism whose DNA is organized into a nucleus that can parasitize human tissue
7. Simple organisms that are similar to plants but lack chlorophyll, which allows plants to make their own food; because these organisms cannot make their own food, they parasitize human tissue

1. ANS: F

DIF: Memorization

REF:

TOP: Basic Mechanisms of Disease

2. ANS: A

DIF: Memorization

REF:

TOP: Basic Mechanisms of Disease

3. ANS: E

DIF: Memorization

REF:

TOP: Basic Mechanisms of Disease

4. ANS: B

DIF: Memorization

REF:

TOP: Basic Mechanisms of Disease

5. ANS: D

DIF: Memorization

REF:

TOP: Basic Mechanisms of Disease

6. ANS: G

DIF: Memorization

REF:

TOP: Basic Mechanisms of Disease

7. ANS: C

DIF: Memorization

REF:

TOP: Basic Mechanisms of Disease

SHORT ANSWER

1. Diagram a homeostatic control mechanism, including the three basic components.

ANS: Answers will vary.

DIF: Synthesis

REF:

TOP: Homeostatic Control Mechanisms

2. How does childbirth demonstrate positive feedback?

ANS: Answers will vary.

DIF: Synthesis

REF:

TOP: Positive-Feedback Control Systems

3. Give an example of how categories of risk factors or predisposing conditions could overlap.

ANS: Answers will vary.

DIF: Synthesis

REF:

TOP: Basic Mechanisms of Disease

4. Explain the feed-forward control system, and give an example of one in the body.

ANS: Answers will vary.

DIF: Application

REF:

TOP: Feed-Forward in Control Systems

ESSAY

1. Give an example of a system, either living or nonliving, that is designed to maintain a relatively constant condition by using a negative-feedback mechanism. Explain briefly how the system works to accomplish this.

ANS: Answers will vary.

DIF: Synthesis

REF:

TOP: Basic Components of Control Mechanisms