

## Chapter 01 Major Themes of Anatomy and Physiology

### True / False Questions

1. Sometimes anatomical terms come from origins that do not lend any insight into their meaning.

**TRUE**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07e State some reasons why the literal meaning of a word may not lend to insight into its definition.*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*

2. Feeling for swollen lymph nodes is an example of auscultation.

**FALSE**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.01b Describe several ways of studying human anatomy.*

*Section: 01.01*

*Topic: Major Themes of Anatomy and Physiology*

3. We can see through bones with magnetic resonance imaging (MRI).

**TRUE**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.01b Describe several ways of studying human anatomy.*

*Section: 01.01*

*Topic: Major Themes of Anatomy and Physiology*

4. Histology is the study of structures that can be observed without a magnifying lens.

**FALSE**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.01b Describe several ways of studying human anatomy.*

*Section: 01.01*

*Topic: Major Themes of Anatomy and Physiology*

5. Cells were first named by microscopist Robert Hooke.

**TRUE**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.02b Describe the contributions of some key people who helped to bring about this transformation.*

*Section: 01.02*

*Topic: Major Themes of Anatomy and Physiology*

6. All functions of the body can be interpreted as the effects of cellular activity.

**TRUE**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.02b Describe the contributions of some key people who helped to bring about this transformation.*

*Section: 01.02*

*Topic: Major Themes of Anatomy and Physiology*

7. The *hypothetico-deductive method* is common in physiology, whereas the *inductive method* is common in anatomy.

**TRUE**

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.03a Describe the inductive and hypothetico-deductive methods of obtaining scientific knowledge.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*

8. An individual scientific fact has more information than a theory.

**FALSE**

*Blooms Level: 2. Understand*

*Gradable: automatic*

*Learning Outcome: 01.03c Explain what is meant by hypothesis, fact, law, and theory in science.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*

9. Evolutionary (Darwinian) medicine traces some of our diseases to our evolutionary past.

**TRUE**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.04a Explain why evolution is relevant to understanding human form and function.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

10. The terms *development* and *evolution* have the same meaning in physiology.

**FALSE**

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.04b Define evolution and natural selection.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

11. Organs are made of tissues.

**TRUE**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A06.01 Describe, in order from simplest to most complex, the major levels of organization in the human organism.*

*HAPS Topic: Module A06 Levels of organization.*

*Learning Outcome: 01.05a List the levels of human structure from the most complex to the simplest.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

12. A molecule of water is more complex than a mitochondrion (organelle).

**FALSE**

*Blooms Level: 3. Apply*

*Gradable: automatic*

*HAPS Objective: A06.01 Describe, in order from simplest to most complex, the major levels of organization in the human organism.*

*HAPS Topic: Module A06 Levels of organization.*

*Learning Outcome: 01.05a List the levels of human structure from the most complex to the simplest.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

13. Homeostasis and occupying space are both unique characteristics of living things.

**FALSE**

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.06a State the characteristics that distinguish living organisms from nonliving objects.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

14. Positive feedback helps to restore normal function when one of the body's physiological variables gets out of balance.

**FALSE**

*Blooms Level: 2. Understand*

*Gradable: automatic*

*HAPS Objective: B02.02 Compare and contrast positive and negative feedback in terms of the relationship between stimulus and response.*

*HAPS Topic: Module B02 General types of homeostatic mechanisms.*

*Learning Outcome: 01.06e Define positive feedback and give examples of its beneficial and harmful effects.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

15. Negative feedback is a self-amplifying chain of events that tends to produce rapid change in the body.

**FALSE**

*Blooms Level: 2. Understand*

*Gradable: automatic*

*HAPS Objective: B02.02 Compare and contrast positive and negative feedback in terms of the relationship between stimulus and response.*

*HAPS Topic: Module B02 General types of homeostatic mechanisms.*

*Learning Outcome: 01.06d Define negative feedback, give an example of it, and explain its importance to homeostasis.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

16. Anatomists around the world adhere to a lexicon of standard international terms, which stipulates both Latin names and accepted English equivalents.

**TRUE**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07a Explain why modern anatomical terminology is so heavily based on Greek and Latin.*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*

### Multiple Choice Questions

17. Feeling structures with your fingertips is called \_\_\_\_\_, whereas tapping on the body and listening for sounds of abnormalities is called \_\_\_\_\_.

- A. palpation; auscultation
- B. auscultation; percussion
- C. percussion; auscultation
- D.** palpation; percussion
- E. percussion; palpation

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.01b Describe several ways of studying human anatomy.*

*Section: 01.01*

*Topic: Major Themes of Anatomy and Physiology*

18. Known as "the father of modern anatomy," \_\_\_\_\_ was the first to publish accurate drawings of the body.

- A.** Vesalius
- B. Maimonides
- C. Harvey
- D. Aristotle
- E. van Leeuwenhoek

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.02b Describe the contributions of some key people who helped to bring about this transformation.*

*Section: 01.02*

*Topic: Major Themes of Anatomy and Physiology*

19. The most influential medical textbook of the ancient era was written by \_\_\_\_\_.

- A. Hippocrates
- B. Aristotle
- C. Galen**
- D. Vesalius
- E. Avicenna

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.02b Describe the contributions of some key people who helped to bring about this transformation.*

*Section: 01.02*

*Topic: Major Themes of Anatomy and Physiology*

20. Which of these is the best imaging technique for routinely examining the anatomical development of a fetus?

- A. Auscultation
- B. PET scan
- C. MRI
- D. Sonography**
- E. Radiography

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.01b Describe several ways of studying human anatomy.*

*Section: 01.01*

*Topic: Major Themes of Anatomy and Physiology*

21. The terms physics, physiology, and physician come from a term that \_\_\_\_\_ proposed to distinguish natural causes from supernatural causes.

- A. Hippocrates
- B. Plato
- C. Schwann
- D. Aristotle**
- E. Avicenna

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.02a Give examples of how modern biomedical science emerged from an era of superstition and authoritarianism.*

*Learning Outcome: 01.02b Describe the contributions of some key people who helped to bring about this transformation.*

*Section: 01.02*

*Topic: Major Themes of Anatomy and Physiology*

22. The process of using numerous observations to develop general principles and predictions about a specific subject is called \_\_\_\_\_.

- A. experimental design
- B. the deductive method
- C.** the inductive method
- D. a hypothesis
- E. statistical testing

*Blooms Level: 2. Understand*

*Gradable: automatic*

*Learning Outcome: 01.03a Describe the inductive and hypothetico-deductive methods of obtaining scientific knowledge.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*

23. Most people think that ulcers are caused by psychological stress. It was discovered that an acid-resistant bacterium, *Helicobacter pylori*, lives in the lining of the stomach. If these bacteria cause ulcers, then treatment with an antibiotic should reduce ulcers. This line of investigation is an example of \_\_\_\_\_.

- A. hypothetical reasoning
- B.** hypothetico-deductive reasoning
- C. the inductive method
- D. experimental design
- E. statistical analysis

*Blooms Level: 2. Understand*

*Gradable: automatic*

*Learning Outcome: 01.03a Describe the inductive and hypothetico-deductive methods of obtaining scientific knowledge.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*

24. An educated speculation or a possible answer to a question is called a(n) \_\_\_\_\_.
- A. scientific method
  - B. theory
  - C. law
  - D. hypothesis**
  - E. fact

*Blooms Level: 2. Understand*

*Gradable: automatic*

*Learning Outcome: 01.03c Explain what is meant by hypothesis, fact, law, and theory in science.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*

25. The use of controls and statistical testing are two aspects of experimental design that help to ensure \_\_\_\_\_.
- A. an adequate sample size
  - B. objective and reliable results**
  - C. experimental bias
  - D. psychosomatic effects
  - E. treatment groups

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.03b Describe some aspects of experimental design that help to ensure objective and reliable results.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*

26. \_\_\_\_\_ is a process that submits a scientist's ideas to the critical judgment of other specialists in the field before the research is funded or published.
- A. Adjudication
  - B. Statistical testing
  - C. Falsification
  - D. Peer review**
  - E. Hypothetico-deductive testing

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.03b Describe some aspects of experimental design that help to ensure objective and reliable results.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*



27. Which of the following would contain the greatest amount of information that scientists consider to be true to the best of their knowledge?

- A. A fact
- B. A law of nature
- C. A hypothesis
- D. An equation
- E. A theory**

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.03c Explain what is meant by hypothesis, fact, law, and theory in science.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*

28. The study of the structure and function of cells is called \_\_\_\_\_.

- A. cytology**
- B. gross anatomy
- C. exploratory physiology
- D. comparative physiology
- E. radiology

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.01b Describe several ways of studying human anatomy.*

*Section: 01.01*

*Topic: Major Themes of Anatomy and Physiology*

29. \_\_\_\_\_ established a code of ethics for physicians. He is considered the "father of medicine."

- A. Aristotle
- B. Hippocrates**
- C. Galen
- D. Vesalius
- E. Hooke

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.02b Describe the contributions of some key people who helped to bring about this transformation.*

*Section: 01.02*

*Topic: Major Themes of Anatomy and Physiology*

30. A new drug apparently increases short-term memory. Students were divided randomly into two groups at the beginning of the semester. One group was given the memory pill once a day for the semester, and the other group was given a same-looking pill, but it was just sugar. The sugar pill is termed a(n) \_\_\_\_\_.
- A. controlled pill
  - B.** placebo
  - C. treatment pill
  - D. variable
  - E. effective dose

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.03b Describe some aspects of experimental design that help to ensure objective and reliable results.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*

31. Two groups of people were tested to determine whether garlic lowers blood cholesterol levels. One group was given 800 mg of garlic powder daily for four months and exhibited an average 12% reduction in the blood cholesterol. The other group was not given any garlic and after four months averaged a 3% reduction in cholesterol. The group that was not given the garlic was the \_\_\_\_\_ group.
- A. peer
  - B. test
  - C. treatment
  - D.** control
  - E. double-blind

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.03b Describe some aspects of experimental design that help to ensure objective and reliable results.*

*Section: 01.03*

*Topic: Major Themes of Anatomy and Physiology*

32. A change in the genetic composition of a population over time is called \_\_\_\_\_.

- A. mutation
- B. natural selection
- C. selection pressure
- D. evolution**
- E. adaptation

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.04b Define evolution and natural selection.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

33. The constant appearance of new strains of influenza virus is an example of \_\_\_\_\_.

- A. a model
- B. evolution**
- C. selection pressure
- D. survivorship
- E. success

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.04b Define evolution and natural selection.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

34. The principal theory of how evolution works is called \_\_\_\_\_.

- A. natural pressure
- B. selective pressure
- C. darwinian pressure
- D. natural adaptation
- E. natural selection**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.04b Define evolution and natural selection.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

35. Which of the following was an adaptation that evolved in connection with human upright walking?

- A. Hair
- B. Fully opposable thumbs
- C. Stereoscopic vision
- D. Color vision
- E. Spinal and pelvic anatomy**

*Blooms Level: 2. Understand*

*Gradable: automatic*

*Learning Outcome: 01.04d Describe some human characteristics that evolved later in connection with upright walking.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

36. Stereoscopic vision provides \_\_\_\_\_.

- A. opposable perception
- B. color perception
- C. depth perception**
- D. bipedalism
- E. opposition of thumbs

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.04c Describe some human characteristics that can be attributed to the tree-dwelling habits of earlier primates.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

37. A human is born before his/her nervous system has matured. This is traceable to \_\_\_\_\_.

- A. their inability to regulate body temperature
- B. skeletal adaptations to bipedalism**
- C. the arboreal habits of early primates
- D. the conditions of modern civilization
- E. the diet of early species of Homo

*Blooms Level: 2. Understand*

*Gradable: automatic*

*Learning Outcome: 01.04d Describe some human characteristics that evolved later in connection with upright walking.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

38. The species of modern humans is called \_\_\_\_\_.

- A. *Homo erectus*
- B. *Homo sapiens***
- C. *Homo habilis*
- D. early *Homo*
- E. *Australopithecus*

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.04d Describe some human characteristics that evolved later in connection with upright walking.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

39. Most primates are \_\_\_\_\_, meaning they live in trees.

- A. prehensile
- B. bipedal
- C. cursorial
- D. troglodytic
- E. arboreal**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.04c Describe some human characteristics that can be attributed to the tree-dwelling habits of earlier primates.*

*Section: 01.04*

*Topic: Major Themes of Anatomy and Physiology*

40. An \_\_\_\_\_ is composed of two or more tissues types, whereas \_\_\_\_\_ are microscopic structures in a cell.

- A. organ system; organs
- B. organ system; organelles
- C. organ; organelles**
- D. organ; molecules
- E. organelle; molecules

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A06.01 Describe, in order from simplest to most complex, the major levels of organization in the human organism.*

*HAPS Topic: Module A06 Levels of organization.*

*Learning Outcome: 01.05a List the levels of human structure from the most complex to the simplest.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

41. Which of the following lists levels of human structure from the most complex to the simplest?

- A. Organelle, cell, tissue, organ, organ system
- B. Organ system, organ, cell, tissue, organelle
- C. Organ system, organelle, tissue, cell, organ
- D. Organ system, organ, tissue, cell, organelle**
- E. Organ, organ system, tissue, cell, organelle

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A06.01 Describe, in order from simplest to most complex, the major levels of organization in the human organism.*

*HAPS Topic: Module A06 Levels of organization.*

*Learning Outcome: 01.05a List the levels of human structure from the most complex to the simplest.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

42. Which of the following lists examples of body structures from the simplest to the most complex?

- A. Mitochondrion, connective tissue, protein, stomach, adipocyte (fat cell)
- B. Protein, mitochondrion, adipocyte (fat cell), connective tissue, stomach**
- C. Mitochondrion, connective tissue, stomach, protein, adipocyte (fat cell)
- D. Protein, adipocyte (fat cell), stomach, connective tissue, mitochondrion
- E. Protein, stomach, connective tissue, adipocyte (fat cell), mitochondrion

*Blooms Level: 3. Apply*

*Gradable: automatic*

*HAPS Objective: A06.01 Describe, in order from simplest to most complex, the major levels of organization in the human organism.*

*HAPS Objective: A06.02 Give an example of each level of organization.*

*HAPS Topic: Module A06 Levels of organization.*

*Learning Outcome: 01.05a List the levels of human structure from the most complex to the simplest.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

43. A(n) \_\_\_\_\_ is a group of similar cells and their intercellular materials in a discrete region of an organ performing a specific function.

- A. macromolecule
- B. organ system
- C. organelle
- D. organism
- E.** tissue

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A06.01 Describe, in order from simplest to most complex, the major levels of organization in the human organism.*

*HAPS Topic: Module A06 Levels of organization.*

*Learning Outcome: 01.05a List the levels of human structure from the most complex to the simplest.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

44. Taking apart a clock to see how it works is similar to \_\_\_\_\_ thinking about human physiology.

- A. comparative
- B. evolutionary
- C. holistic
- D. inductive
- E.** reductionist

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.05b Discuss the value of both reductionistic and holistic viewpoints to understanding human form and function.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

45. \_\_\_\_\_ approaches understanding of the human body by studying the interactions of its parts.

- A. Naturalism
- B. Reductionism**
- C. Vitalism
- D. Holism
- E. Rationalism

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.05b Discuss the value of both reductionistic and holistic viewpoints to understanding human form and function.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

46. \_\_\_\_\_ is the view that not everything about an organism can be understood or predicted from the knowledge of its components; that is, the whole is greater than the sum of its parts.

- A. Naturalism
- B. Reductionism
- C. Holism**
- D. Materialism
- E. Science

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.05b Discuss the value of both reductionistic and holistic viewpoints to understanding human form and function.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*



47. The fact that most of us have five lumbar vertebrae, but some people have six and some have four, is an example of \_\_\_\_\_ variation among organisms.

- A. cellular
- B. holistic
- C. physiological
- D.** anatomical
- E. reductionist

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.05c Discuss the clinical significance of anatomical variation among humans.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

48. \_\_\_\_\_ are the simplest body structures considered alive.

- A. Organ systems
- B. Organs
- C.** Cells
- D. Organelles
- E. Molecules

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A06.02 Give an example of each level of organization.*

*HAPS Topic: Module A06 Levels of organization.*

*Learning Outcome: 01.06a State the characteristics that distinguish living organisms from nonliving objects.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

49. All of the following are human organ systems *except* \_\_\_\_\_.

- A. skeletal
- B. endocrine
- C. epidermal**
- D. reproductive
- E. lymphatic

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A06.02 Give an example of each level of organization.*

*HAPS Objective: A07.01 List the organ systems of the human body and their major components.*

*HAPS Topic: Module A06 Levels of organization.*

*HAPS Topic: Module A07 Survey of body systems.*

*Learning Outcome: 01.05a List the levels of human structure from the most complex to the simplest.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

50. All of the following are organs *except* \_\_\_\_\_.

- A. teeth
- B. the skin
- C. nails
- D. the liver
- E. the digestive system**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A06.02 Give an example of each level of organization.*

*HAPS Objective: A07.01 List the organ systems of the human body and their major components.*

*HAPS Topic: Module A06 Levels of organization.*

*HAPS Topic: Module A07 Survey of body systems.*

*Learning Outcome: 01.05a List the levels of human structure from the most complex to the simplest.*

*Section: 01.05*

*Topic: Major Themes of Anatomy and Physiology*

51. Metabolism is the sum of \_\_\_\_\_ and \_\_\_\_\_.

- A. inhalation; exhalation
- B. growth; differentiation
- C. anabolism; catabolism**
- D. positive; negative feedback
- E. responsiveness; movement

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.06a State the characteristics that distinguish living organisms from nonliving objects.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

52. We live in an ever-changing environment outside of our body, yet our internal conditions remain relatively stable. This is called \_\_\_\_\_.

- A. homeostasis**
- B. metastasis
- C. responsiveness
- D. adaptation
- E. evolution

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: B01.01 Define homeostasis.*

*HAPS Topic: Module B01 Definition.*

*Learning Outcome: 01.06c Define homeostasis and explain why this concept is central to physiology.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

53. During exercise, one generates excess heat and the body temperature rises. As a response, blood vessels dilate in the skin, warm blood flows closer to the body surface, and heat is lost.

This is an example of \_\_\_\_\_.

- A.** negative feedback
- B. positive feedback
- C. dynamic equilibrium
- D. integration control
- E. set point adjustment

*Blooms Level: 3. Apply*

*Gradable: automatic*

*HAPS Objective: B03.01 Provide an example of a negative feedback loop that utilizes the nervous system to relay information. Describe the specific organs, structures, cells or molecules (receptors, neurons, CNS structures, effectors, neurotransmitters) included in the feedback loop.*

*HAPS Topic: Module B03 Examples of homeostatic mechanisms.*

*Learning Outcome: 01.06d Define negative feedback, give an example of it, and explain its importance to homeostasis.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

54. When a woman is giving birth, the head of the baby pushes against her cervix and stimulates the release of the hormone oxytocin. Oxytocin travels in the blood and stimulates the uterus to contract. Labor contractions become more and more intense until the baby is expelled. This is an example of \_\_\_\_\_.

- A. negative feedback
- B.** positive feedback
- C. dynamic equilibrium
- D. integration control
- E. set point adjustment

*Blooms Level: 3. Apply*

*Gradable: automatic*

*HAPS Objective: B03.03 Provide an example of a positive feedback loop in the body. Describe the specific structures (organs, cells or molecules) included in the feedback loop.*

*HAPS Topic: Module B03 Examples of homeostatic mechanisms.*

*Learning Outcome: 01.06e Define positive feedback and give examples of its beneficial and harmful effects.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

55. Which of the following is most likely to cause disease?

- A.** Positive feedback
- B. Negative feedback
- C. Homeostasis
- D. Equilibrium
- E. Irritability

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: B02.02 Compare and contrast positive and negative feedback in terms of the relationship between stimulus and response.*

*HAPS Topic: Module B02 General types of homeostatic mechanisms.*

*Learning Outcome: 01.06e Define positive feedback and give examples of its beneficial and harmful effects.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

56. Blood glucose concentration rises after a meal and stimulates the pancreas to release the hormone insulin. Insulin travels in the blood and stimulates the uptake of glucose by body cells from the bloodstream, thus reducing blood glucose concentration. This is an example of \_\_\_\_\_.

- A.** negative feedback
- B. positive feedback
- C. dynamic equilibrium
- D. integration control
- E. set point adjustment

*Blooms Level: 3. Apply*

*Gradable: automatic*

*HAPS Objective: B03.02 Provide an example of a negative feedback loop that utilizes the endocrine system to relay information. Describe the specific cells or molecules (production cells, hormones, target cells) included in the feedback loop.*

*HAPS Topic: Module B03 Examples of homeostatic mechanisms.*

*Learning Outcome: 01.06d Define negative feedback, give an example of it, and explain its importance to homeostasis.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

57. Which of the following is *not* an aspect that could result in physiological variation?

- A. Age
- B. Gender
- C. Environment
- D. Physical activity
- E.** These are all aspects that can cause physiological variation.

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.06b Explain the importance of physiological variation among persons*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

58. The change in size of the bone marrow (where blood cells are produced) as an infant matures is an example of \_\_\_\_\_, whereas the transformation of blood stem cells into white blood cells is an example of \_\_\_\_\_.

- A. development; differentiation
- B. growth; development
- C.** growth; differentiation
- D. differentiation; growth
- E. differentiation; development

*Blooms Level: 3. Apply*

*Gradable: automatic*

*Learning Outcome: 01.06a State the characteristics that distinguish living organisms from nonliving objects.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

59. Three common components of a feedback loop are \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

- A. stimulus; integrating (control) center; organ system
- B. stimulus; receptor; integrating (control) center
- C.** receptor; integrating (control) center; effector
- D. receptor; organ; organ system
- E. receptor; integrating (control) center; organ system

*Blooms Level: 2. Understand*

*Gradable: automatic*

*HAPS Objective: B02.01 List the components of a feedback loop and explain the function of each.*

*HAPS Topic: Module B01 Definition.*

*Learning Outcome: 01.06c Define homeostasis and explain why this concept is central to physiology.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

60. Negative feedback loops are \_\_\_\_\_.

- A.** homeostatic mechanisms
- B. not homeostatic mechanisms
- C. associated with "vicious circles"
- D. self-amplifying cycles
- E. usually harmful

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: B01.01 Define homeostasis.*

*HAPS Objective: B02.02 Compare and contrast positive and negative feedback in terms of the relationship between stimulus and response.*

*HAPS Objective: B02.03 Explain why negative feedback is the most commonly used mechanism to maintain homeostasis in the body.*

*HAPS Topic: Module B01 Definition.*

*HAPS Topic: Module B02 General types of homeostatic mechanisms.*

*Learning Outcome: 01.06d Define negative feedback, give an example of it, and explain its importance to homeostasis.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

61. The prefix *hypo-* means \_\_\_\_\_, whereas *hyper-* means \_\_\_\_\_.
- A. front; back
  - B. right; left
  - C. inside; outside
  - D. clear; dark
  - E.** below; above

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A05.03 Describe the location of structures of the body, using basic regional and systemic terminology.*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07d Break medical terms down into their basic word elements.*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*

62. The term *fallopian* tube (uterine tube) is an example of \_\_\_\_\_.
- A. a Latin root used in medical terminology
  - B. the use of prefixes to name an anatomical structure
  - C. the use of suffixes to name an anatomical structure
  - D.** an eponym
  - E. an acronym

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07b Recognize eponyms when you see them.*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*

63. Hypercalcemia means \_\_\_\_\_.
- A.** elevated calcium levels in blood
  - B. lowered calcium levels in bone
  - C. elevated sodium levels in blood
  - D. elevated calcium levels in bone
  - E. lowered calcium levels in the blood

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07d Break medical terms down into their basic word elements.*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*



64. The plural of axilla (armpit) is \_\_\_\_\_, whereas the plural of appendix is \_\_\_\_\_.

- A.** axillae; appendices
- B. axillides; appendages
- C. axillies; appendi
- D. axilli; appendices

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07f Relate singular noun forms to their plural and adjectival forms.*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*

65. The plural of villus (hair) is \_\_\_\_\_, whereas the plural of diagnosis is \_\_\_\_\_.

- A. villuses; diagnoseses
- B.** villi; diagnoses
- C. villus; diagnosis
- D. villi; diagnosis
- E. villuses; diagnosis

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07f Relate singular noun forms to their plural and adjectival forms.*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*

66. The lexicon of standard international anatomical terms is \_\_\_\_\_.

- A. formed from thousands of Italian word roots
- B. formed from thousands of French word roots
- C. called *Nomina Anatomica* (NA)
- D. formed from thousands of English word roots
- E.** called *Terminologia Anatomica* (TA)

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07c Describe the efforts to achieve an internationally uniform anatomical terminology.*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*

67. The study of normal body structures is called \_\_\_\_\_.

- A. microscopy
- B. pathology
- C. physiology
- D.** anatomy
- E. biology

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A05.01 Define the terms anatomy and physiology.*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.01a Define anatomy and physiology and relate them to each other.*

*Section: 01.01*

*Topic: Major Themes of Anatomy and Physiology*

68. The study of how hormones function is called \_\_\_\_\_.

- A. histology
- B. neuroanatomy
- C. neurophysiology
- D. pathophysiology
- E.** endocrinology

*Blooms Level: 3. Apply*

*Gradable: automatic*

*HAPS Objective: A05.01 Define the terms anatomy and physiology.*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.01c Define a few subdisciplines of human physiology.*

*Section: 01.01*

*Topic: Major Themes of Anatomy and Physiology*

69. The study of how the body functions is called \_\_\_\_\_.

- A. histology
- B. neuroanatomy
- C. anatomy
- D. chemistry
- E.** physiology

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Objective: A05.01 Define the terms anatomy and physiology.*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.01a Define anatomy and physiology and relate them to each other.*

*Section: 01.01*

*Topic: Major Themes of Anatomy and Physiology*

70. A physiological \_\_\_\_\_ is a difference in chemical concentration, electrical charge, physical pressure, temperature, or other variables between one point and another.

- A. membrane
- B. feedback loop
- C. imbalance
- D. barrier
- E.** gradient

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.06f Define gradient, describe the variety of gradients in human physiology, and identify some forms of matter and energy that flow down gradients.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

71. Chemicals in a solution can move down a concentration gradient. This means the chemical will move from the area of \_\_\_\_\_ concentration to the area of \_\_\_\_\_ concentration.

- A. high; high
- B. low; low
- C. equal; equal
- D. low; high
- E. high; low**

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.06f Define gradient, describe the variety of gradients in human physiology, and identify some forms of matter and energy that flow down gradients.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

72. Which of the following is *not* an example of a physiological gradient?

- A. Pressure
- B. Tissue**
- C. Concentration
- D. Electrical
- E. Thermal

*Blooms Level: 1. Remember*

*Gradable: automatic*

*Learning Outcome: 01.06f Define gradient, describe the variety of gradients in human physiology, and identify some forms of matter and energy that flow down gradients.*

*Section: 01.06*

*Topic: Major Themes of Anatomy and Physiology*

73. DNA is an example of an \_\_\_\_\_, whereas PET scan is an example of an \_\_\_\_\_.

- A.** abbreviation; acronym
- B. acronym; abbreviation
- C. acronym; eponym
- D. eponym; abbreviation
- E. eponym; acronym

*Blooms Level: 3. Apply*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07e State some reasons why the literal meaning of a word may not lend to insight into its definition.*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*

74. Precise spelling is important in anatomy because \_\_\_\_\_.

- A.** there are many similar terms in anatomy that refer to different structures
- B. it's easier to remember acronyms when spelled correctly
- C. it's important to practice language skills
- D. eponyms are difficult to memorize
- E. there are many different ways to spell certain terms

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07g Discuss why precise spelling is important in anatomy and physiology*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*

75. The ileum is \_\_\_\_\_, where are the ilium is \_\_\_\_\_.

- A. a muscle; a bone
- B. a bone; a muscle
- C. part of the hip bone; part of the small intestine
- D. a bone in the wrist; a muscle of the back
- E.** part of the small intestine; part of the hip bone

*Blooms Level: 1. Remember*

*Gradable: automatic*

*HAPS Topic: Module A05 Basic terminology.*

*Learning Outcome: 01.07g Discuss why precise spelling is important in anatomy and physiology*

*Section: 01.07*

*Topic: Major Themes of Anatomy and Physiology*