

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