

chapter 01

True / False Questions

1. Feeling for swollen lymph nodes is an example of auscultation.
True False
2. We can see through bones with magnetic resonance imaging (MRI).
True False
3. Histology is the study of structures that can be observed without a magnifying lens.
True False
4. Cells were first named by microscopist Robert Hooke.
True False
5. All functions of the body can be interpreted as the effects of cellular activity.
True False
6. The *hypothetico-deductive method* is common in physiology, whereas the *inductive method* is common in anatomy.
True False
7. An individual scientific fact has more information than a theory.
True False
8. Evolutionary (darwinian) medicine traces some of our diseases to our evolutionary past.
True False
9. The terms development and evolution have the same meaning in physiology.
True False
10. Organs are made of tissues.
True False
11. A molecule of water is more complex than a mitochondrion (organelle).
True False
12. Homeostasis and occupying space are both unique characteristics of living things.
True False
13. Positive feedback helps to restore normal function when one of the body's physiological variables gets out of balance.
True False
14. Negative feedback is a self-amplifying chain of events that tend to produce rapid change in the body.
True False
15. Anatomists over the world adhere to a lexicon of standard international terms, which stipulates both Latin names and accepted English equivalents.
True False

Multiple Choice Questions

16. 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.
17. _____ was the first to publish accurate drawings of the body, and is thus regarded as "the father of modern anatomy."
- A. Vesalius
 - B. Maimonides
 - C. Harvey
 - D. Aristotle
 - E. van Leeuwenhoek
18. _____ wrote the most influential medical textbook of the ancient era.
- A. Hippocrates
 - B. Aristotle
 - C. Galen
 - D. Vesalius
 - E. Avicenna
19. 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
20. 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
21. The process of using numerous observations to develop general principles and predictions about a specific subject is called
- A. experimental design.
 - B. deductive method.
 - C. inductive method.
 - D. hypothesis.
 - E. statistical testing.
22. 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.

23. 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.
24. 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.
25. _____ 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
26. 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
27. The study of structure and function of cells is called
- A. cytology.
 - B. gross anatomy.
 - C. exploratory physiology.
 - D. comparative physiology.
 - E. radiology.
28. _____ established a code of ethics for physicians. He is considered the "father of medicine."
- A. Aristotle
 - B. Hippocrates
 - C. Galen
 - D. Vesalius
 - E. Hooke
29. 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.

30. 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
- A. peer group.
 - B. test group.
 - C. treatment group.
 - D. control group.
 - E. double-blind group.
31. 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.
32. 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.
33. The principal theory of how evolution works is called
- A. natural pressure.
 - B. selective pressure.
 - C. darwinian pressure.
 - D. natural adaptation.
 - E. natural selection.
34. Which of the following was an adaptation evolved in connection with human upright walking?
- A. hair
 - B. thumbs fully opposable
 - C. stereoscopic vision
 - D. color vision
 - E. spinal and pelvic anatomy
35. Stereoscopic vision provides
- A. opposable perception.
 - B. color perception.
 - C. depth perception.
 - D. bipedalism.
 - E. walking upright.
36. Humans are born before their nervous system have matured, which 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.
37. Our own species is called
- A. *Homo erectus*.
 - B. *Homo sapiens*.
 - C. *Homo habilis*.
 - D. early *Homo*.
 - E. *Australopithecus*.

38. Most primates are _____, meaning they live in trees.
- A. prehensile
 - B. bipedal
 - C. cursorial
 - D. troglodytic
 - E. arboreal
39. 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
40. 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
41. 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
42. 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
43. 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
44. _____ approaches understanding of the human body by studying interactions of its parts.
- A. Naturalism
 - B. Reductionism
 - C. Vitalism
 - D. Holism
 - E. Rationalism
45. _____ 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

46. 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
47. _____ are the simplest body structures considered alive.
- A. Organ systems
 - B. Organs
 - C. Cells
 - D. Organelles
 - E. Molecules
48. All of the following are human organ systems *except*
- A. skeletal.
 - B. endocrine.
 - C. epidermal.
 - D. reproductive.
 - E. lymphatic.
49. All of the following are organs *except*
- A. teeth.
 - B. skin.
 - C. nails.
 - D. liver.
 - E. digestive system.
50. Metabolism is the sum of
- A. inhalation and exhalation.
 - B. growth and differentiation.
 - C. anabolism and catabolism.
 - D. positive and negative feedback.
 - E. responsiveness and movement.
51. 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.
52. When you exercise you generate excess heat and your body temperature rises. Blood vessels dilate in the skin, warm blood flows closer to the body surface, and you lose heat. This exemplifies
- A. negative feedback.
 - B. positive feedback.
 - C. dynamic equilibrium.
 - D. integration control.
 - E. set point adjustment.

53. When a woman is giving birth, the head of the baby pushes against her cervix and stimulates 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.
54. Which of the following is most likely to cause disease?
- A. positive feedback
 - B. negative feedback
 - C. homeostasis
 - D. equilibrium
 - E. irritability
55. Blood glucose concentration rises after a meal and stimulates release of the hormone insulin. Insulin travels in the blood and stimulates body cells to uptake glucose from the bloodstream. This reduces blood glucose concentration. This is an example of
- A. negative feedback.
 - B. positive feedback.
 - C. dynamic equilibrium.
 - D. integration control.
 - E. set point adjustment.
56. The _____ is defined as a healthy male 22 years old, weighing 70 kg (154 lb), under no environmental stress, and consuming 2,800 kilocalories (kcal) per day; whereas the _____ is the same except for a weight of 58 kg (128 lb) and an intake of 2,000 kcal/day.
- A. normal man, normal woman
 - B. normal male, normal female
 - C. average man, average woman
 - D. average male, average woman
 - E. reference man, reference woman
57. 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.
58. Three common components of a feedback loop are
- A. a stimulus, an integrating (control) center, and an organ system.
 - B. a stimulus, a receptor, and an integrating (control) center.
 - C. a receptor, an integrating (control) center, and an effector.
 - D. a receptor, an organ, and an organ system.
 - E. a receptor, an integrating (control) center, and an organ system.
59. Negative feedback loops are
- A. homeostatic.
 - B. not homeostatic.
 - C. associated with "vicious circles."
 - D. self-amplifying cycles.
 - E. harmful.

60. The prefix *hypo-* means _____, whereas *hyper-* means _____.
- A. front, back
 - B. right, left
 - C. inside, outside
 - D. clear, dark
 - E. below, above
61. 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.
62. 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.
63. The plural of axilla (armpit) is _____ whereas the plural of appendix is _____.
- A. axillae; appendices
 - B. axillides; appendages
 - C. axillies; appendi
 - D. axilli; appendices
64. The plural of villus (hair) is _____ whereas the plural of diagnosis is _____
- A. villuses, diagnosises.
 - B. villi, diagnoses.
 - C. villus, diagnosis.
 - D. villi, diagnosis.
 - E. villuses, diagnosis.
65. The lexicon of standard international anatomical terms
- A. is called *Terminologia Anatomica* (TA).
 - B. is called *Nomina Anatomica* (NA).
 - C. is formed from thousands of English word roots.
 - D. is formed from thousands of Italian word roots.
 - E. is formed from thousands of French word roots.

chapter 01 Key

True / False Questions

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

FALSE

*Bloom's Level: 1. Remember
Learning Outcome: 01.01.b Describe several ways of studying human anatomy.
Section: 01.01
Topic: General*

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

TRUE

*Bloom's Level: 1. Remember
Learning Outcome: 01.01.b Describe several ways of studying human anatomy.
Section: 01.01
Topic: General*

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

FALSE

*Bloom's Level: 1. Remember
Learning Outcome: 01.01.b Describe several ways of studying human anatomy.
Section: 01.01
Topic: General*

4. Cells were first named by microscopist Robert Hooke.

TRUE

*Bloom's Level: 1. Remember
Learning Outcome: 01.02.b Describe the contributions of some key people who helped to bring about this transformation.
Section: 01.02
Topic: General*

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

TRUE

*Bloom's Level: 3. Apply
Learning Outcome: 01.02.b Describe the contributions of some key people who helped to bring about this transformation.
Section: 01.02
Topic: General*

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

TRUE

*Bloom's Level: 3. Apply
Learning Outcome: 01.03.a Describe the inductive and hypothetico-deductive methods of obtaining scientific knowledge.
Section: 01.03
Topic: General*

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

FALSE

*Bloom's Level: 2. Understand
Learning Outcome: 01.03.c Explain what is meant by hypothesis, fact, law, and theory in science.
Section: 01.03
Topic: General*

8. Evolutionary (darwinian) medicine traces some of our diseases to our evolutionary past.

TRUE

*Bloom's Level: 1. Remember
Learning Outcome: 01.04.a Explain why evolution is relevant to understanding human form and function.
Section: 01.04
Topic: General*

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

FALSE

*Bloom's Level: 3. Apply
Learning Outcome: 01.04.a Explain why evolution is relevant to understanding human form and function.
Learning Outcome: 01.04.b Define evolution and natural selection.
Section: 01.04
Topic: General*

10. Organs are made of tissues.

TRUE

*Bloom's Level: 1. Remember
Learning Outcome: 01.05.a List the levels of human structure from the most complex to the simplest.
Section: 01.05
Topic: General*

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

FALSE

*Bloom's Level: 3. Apply
Learning Outcome: 01.05.a List the levels of human structure from the most complex to the simplest.
Section: 01.05
Topic: General*

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

FALSE

*Bloom's Level: 3. Apply
Learning Outcome: 01.06.a State the characteristics that distinguish living organisms from nonliving objects.
Section: 01.06
Topic: General*

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

FALSE

*Bloom's Level: 2. Understand
Learning Outcome: 01.06.e Define positive feedback and give examples of its beneficial and harmful effects.
Section: 01.06
Topic: General*

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

FALSE

*Bloom's Level: 2. Understand
Learning Outcome: 01.06.d Define negative feedback, given an example of it, and explain its importance to homeostasis.
Section: 01.06
Topic: General*

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

TRUE

*Bloom's Level: 1. Remember
Learning Outcome: 01.07.a Explain why modern anatomical terminology is so heavily based on Greek and Latin.
Section: 01.07
Topic: General*

Multiple Choice Questions

16. 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.

*Bloom's Level: 1. Remember
Learning Outcome: 01.01.b Describe several ways of studying human anatomy.
Section: 01.01
Topic: General*

17. _____ was the first to publish accurate drawings of the body, and is thus regarded as "the father of modern anatomy."
A. Vesalius
B. Maimonides
C. Harvey
D. Aristotle
E. van Leeuwenhoek

Bloom's Level: 1. Remember
Learning Outcome: 01.02.b Describe the contributions of some key people who helped to bring about this transformation.
Section: 01.02
Topic: General

18. _____ wrote the most influential medical textbook of the ancient era.
A. Hippocrates
B. Aristotle
C. Galen
D. Vesalius
E. Avicenna

Bloom's Level: 1. Remember
Learning Outcome: 01.02.b Describe the contributions of some key people who helped to bring about this transformation.
Section: 01.02
Topic: General

19. 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

Bloom's Level: 1. Remember
Learning Outcome: 01.01.b Describe several ways of studying human anatomy.
Section: 01.01
Topic: General

20. 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

Bloom's Level: 1. Remember
Learning Outcome: 01.02.a Give examples of how modern biomedical science emerged from an era of superstition and authoritarianism.
Section: 01.02
Topic: General

21. The process of using numerous observations to develop general principles and predictions about a specific subject is called
A. experimental design.
B. deductive method.
C. inductive method.
D. hypothesis.
E. statistical testing.

Bloom's Level: 2. Understand
Learning Outcome: 01.03.a Describe the inductive and hypothetico-deductive methods of obtaining scientific knowledge.
Section: 01.03
Topic: General

22. 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.

Bloom's Level: 2. Understand
Learning Outcome: 01.03.a Describe the inductive and hypothetico-deductive methods of obtaining scientific knowledge.
Section: 01.03
Topic: General

23. 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.

Bloom's Level: 2. Understand
Learning Outcome: 01.03.c Explain what is meant by hypothesis, fact, law, and theory in science.
Section: 01.03
Topic: General

24. 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.

Bloom's Level: 3. Apply
Learning Outcome: 01.03.b Describe some aspects of experimental design that help to ensure objective and reliable results.
Section: 01.03
Topic: General

25. _____ 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

Bloom's Level: 1. Remember
Learning Outcome: 01.03.b Describe some aspects of experimental design that help to ensure objective and reliable results.
Section: 01.03
Topic: General

26. 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**

Bloom's Level: 3. Apply
Learning Outcome: 01.03.c Explain what is meant by hypothesis, fact, law, and theory in science.
Section: 01.03
Topic: General

27. The study of structure and function of cells is called
A. cytology.
B. gross anatomy.
C. exploratory physiology.
D. comparative physiology.
E. radiology.

Bloom's Level: 1. Remember
Learning Outcome: 01.01.b Describe several ways of studying human anatomy.
Section: 01.01
Topic: General

28. _____ established a code of ethics for physicians. He is considered the "father of medicine."
A. Aristotle
B. Hippocrates
C. Galen
D. Vesalius
E. Hooke

Bloom's Level: 1. Remember
Learning Outcome: 01.02.b Describe the contributions of some key people who helped to bring about this transformation.
Section: 01.02
Topic: General

29. 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.

Bloom's Level: 3. Apply
Learning Outcome: 01.03.b Describe some aspects of experimental design that help to ensure objective and reliable results.
Section: 01.03
Topic: General

30. 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
A. peer group.
B. test group.
C. treatment group.
D. control group.
E. double-blind group.

Bloom's Level: 3. Apply
Learning Outcome: 01.03.b Describe some aspects of experimental design that help to ensure objective and reliable results.
Section: 01.03
Topic: General

31. 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.

Bloom's Level: 1. Remember
Learning Outcome: 01.04.b Define evolution and natural selection.
Section: 01.04
Topic: General

32. 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.

Bloom's Level: 3. Apply
Learning Outcome: 01.04.b Define evolution and natural selection.
Section: 01.04
Topic: General

33. The principal theory of how evolution works is called
A. natural pressure.
B. selective pressure.
C. darwinian pressure.
D. natural adaptation.
E. natural selection.

Bloom's Level: 1. Remember
Learning Outcome: 01.04.b Define evolution and natural selection.
Section: 01.04
Topic: General

34. Which of the following was an adaptation evolved in connection with human upright walking?
A. hair
B. thumbs fully opposable
C. stereoscopic vision
D. color vision
E. spinal and pelvic anatomy

Bloom's Level: 2. Understand
Learning Outcome: 01.04.d Describe some human characteristics that evolved later in connection with upright walking.
Section: 01.04
Topic: General

35. Stereoscopic vision provides
A. opposable perception.
B. color perception.
C. depth perception.
D. bipedalism.
E. walking upright.

Bloom's Level: 1. Remember
Learning Outcome: 01.04.c Describe some human characteristics that can be attributed to the tree-dwelling habits of earlier primates.
Section: 01.04
Topic: General

36. Humans are born before their nervous system have matured, which 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.

Bloom's Level: 2. Understand
Learning Outcome: 01.04.d Describe some human characteristics that evolved later in connection with upright walking.
Section: 01.04
Topic: General

37. Our own species is called
A. *Homo erectus*.
B. *Homo sapiens*.
C. *Homo habilis*.
D. early *Homo*.
E. *Australopithecus*.

Bloom's Level: 1. Remember
Learning Outcome: 01.04.d Describe some human characteristics that evolved later in connection with upright walking.
Section: 01.04
Topic: General

38. Most primates are _____, meaning they live in trees.
- A. prehensile
 - B. bipedal
 - C. cursorial
 - D. troglodytic
 - E. arboreal**

Bloom's Level: 1. Remember
Learning Outcome: 01.04.c Describe some human characteristics that can be attributed to the tree-dwelling habits of earlier primates.
Section: 01.04
Topic: General

39. 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

Bloom's Level: 1. Remember
Learning Outcome: 01.05.a List the levels of human structure from the most complex to the simplest.
Section: 01.05
Topic: General

40. 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

Bloom's Level: 1. Remember
Learning Outcome: 01.05.a List the levels of human structure from the most complex to the simplest.
Section: 01.05
Topic: General

41. 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

Bloom's Level: 3. Apply
Learning Outcome: 01.05.a List the levels of human structure from the most complex to the simplest.
Section: 01.05
Topic: General

42. 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**

Bloom's Level: 1. Remember
Learning Outcome: 01.05.a List the levels of human structure from the most complex to the simplest.
Section: 01.05
Topic: General

43. 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**

Bloom's Level: 3. Apply
Learning Outcome: 01.05.b Discuss the value of both reductionistic and holistic viewpoints to understanding human form and function.
Section: 01.05

44. _____ approaches understanding of the human body by studying interactions of its parts.
- A. Naturalism
 - B. Reductionism**
 - C. Vitalism
 - D. Holism
 - E. Rationalism

Bloom's Level: 1. Remember
Learning Outcome: 01.05.b Discuss the value of both reductionistic and holistic viewpoints to understanding human form and function.
Section: 01.05
Topic: General

45. _____ 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

Bloom's Level: 1. Remember
Learning Outcome: 01.05.b Discuss the value of both reductionistic and holistic viewpoints to understanding human form and function.
Section: 01.05
Topic: General

46. 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

Bloom's Level: 3. Apply
Learning Outcome: 01.05.c Discuss the clinical significance of anatomical variation among humans.
Section: 01.05
Topic: General

47. _____ are the simplest body structures considered alive.
- A. Organ systems
 - B. Organs
 - C. Cells**
 - D. Organelles
 - E. Molecules

Bloom's Level: 1. Remember
Learning Outcome: 01.06.a State the characteristics that distinguish living organisms from nonliving objects.
Section: 01.05
Topic: General

48. All of the following are human organ systems *except*
- A. skeletal.
 - B. endocrine.
 - C. epidermal.
 - D. reproductive.
 - E. lymphatic.

Bloom's Level: 1. Remember
Learning Outcome: 01.05.a List the levels of human structure from the most complex to the simplest.
Section: 01.05
Topic: General

49. All of the following are organs *except*
- A. teeth.
 - B. skin.
 - C. nails.
 - D. liver.
 - E. digestive system.

Bloom's Level: 1. Remember
Learning Outcome: 01.05.a List the levels of human structure from the most complex to the simplest.
Section: 01.05
Topic: General

50. Metabolism is the sum of
- A. inhalation and exhalation.
 - B. growth and differentiation.
 - C. anabolism and catabolism.
 - D. positive and negative feedback.
 - E. responsiveness and movement.

Bloom's Level: 1. Remember
Learning Outcome: 01.06.a State the characteristics that distinguish living organisms from nonliving objects.
Section: 01.06
Topic: General

51. 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.

Bloom's Level: 1. Remember
Learning Outcome: 01.06.c Define homeostasis and explain why this concept is central to physiology.
Section: 01.06
Topic: General

52. When you exercise you generate excess heat and your body temperature rises. Blood vessels dilate in the skin, warm blood flows closer to the body surface, and you lose heat. This exemplifies
- A. negative feedback.
 - B. positive feedback.
 - C. dynamic equilibrium.
 - D. integration control.
 - E. set point adjustment.

Bloom's Level: 3. Apply
Learning Outcome: 01.06.d Define negative feedback, given an example of it, and explain its importance to homeostasis.
Section: 01.06
Topic: General

53. When a woman is giving birth, the head of the baby pushes against her cervix and stimulates 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.

Bloom's Level: 3. Apply
Learning Outcome: 01.06.e Define positive feedback and give examples of its beneficial and harmful effects.
Section: 01.06
Topic: General

54. Which of the following is most likely to cause disease?
- A. positive feedback**
 - B. negative feedback
 - C. homeostasis
 - D. equilibrium
 - E. irritability

Bloom's Level: 1. Remember
Learning Outcome: 01.06.e Define positive feedback and give examples of its beneficial and harmful effects.
Section: 01.06
Topic: General

55. Blood glucose concentration rises after a meal and stimulates release of the hormone insulin. Insulin travels in the blood and stimulates body cells to uptake glucose from the bloodstream. This reduces blood glucose concentration. This is an example of
- A. negative feedback.**
 - B. positive feedback.
 - C. dynamic equilibrium.
 - D. integration control.
 - E. set point adjustment.

Bloom's Level: 3. Apply
Learning Outcome: 01.06.d Define negative feedback, given an example of it, and explain its importance to homeostasis.
Section: 01.06
Topic: General

56. The _____ is defined as a healthy male 22 years old, weighing 70 kg (154 lb), under no environmental stress, and consuming 2,800 kilocalories (kcal) per day; whereas the _____ is the same except for a weight of 58 kg (128 lb) and an intake of 2,000 kcal/day.
- A. normal man, normal woman
 - B. normal male, normal female
 - C. average man, average woman
 - D. average male, average woman
 - E. reference man, reference woman**

Bloom's Level: 1. Remember
Learning Outcome: 01.06.b Explain the importance of defining a reference man and woman.
Section: 01.06
Topic: General

57. 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.

Bloom's Level: 3. Apply
Learning Outcome: 01.06.a State the characteristics that distinguish living organisms from nonliving objects.
Section: 01.06
Topic: General

58. Three common components of a feedback loop are
A. a stimulus, an integrating (control) center, and an organ system.
B. a stimulus, a receptor, and an integrating (control) center.
C. a receptor, an integrating (control) center, and an effector.
D. a receptor, an organ, and an organ system.
E. a receptor, an integrating (control) center, and an organ system.

Bloom's Level: 2. Understand
Learning Outcome: 01.06.c Define homeostasis and explain why this concept is central to physiology.
Section: 01.06
Topic: General

59. Negative feedback loops are
A. homeostatic.
B. not homeostatic.
C. associated with "vicious circles."
D. self-amplifying cycles.
E. harmful.

Bloom's Level: 1. Remember
Learning Outcome: 01.06.d Define negative feedback, given an example of it, and explain its importance to homeostasis.
Section: 01.06
Topic: General

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

Bloom's Level: 1. Remember
Learning Outcome: 01.07.d Break medical terms down into their basic word elements.
Section: 01.07
Topic: General

61. 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.

Bloom's Level: 1. Remember
Learning Outcome: 01.07.b Recognize eponyms when you see them.
Section: 01.07
Topic: General

62. 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.

Bloom's Level: 1. Remember
Learning Outcome: 01.07.d Break medical terms down into their basic word elements.
Section: 01.07
Topic: General

63. The plural of axilla (armpit) is _____ whereas the plural of appendix is _____.
A. axillae; appendices
B. axillides; appendages
C. axillies; appendi
D. axilli; appendices

Bloom's Level: 1. Remember
Learning Outcome: 01.07.f Relate singular noun forms to their plural and adjectival forms.
Section: 01.07
Topic: General

64. The plural of villus (hair) is _____ whereas the plural of diagnosis is _____
- A. villuses, diagnoses.
 - B. villi, diagnoses.**
 - C. villus, diagnosis.
 - D. villi, diagnosis.
 - E. villuses, diagnosis.

Bloom's Level: 1. Remember
Learning Outcome: 01.07.f Relate singular noun forms to their plural and adjectival forms.
Section: 01.07
Topic: General

65. The lexicon of standard international anatomical terms
- A. is called *Terminologia Anatomica* (TA).**
 - B. is called *Nomina Anatomica* (NA).
 - C. is formed from thousands of English word roots.
 - D. is formed from thousands of Italian word roots.
 - E. is formed from thousands of French word roots.

Bloom's Level: 1. Remember
Learning Outcome: 01.07.c Describe the efforts to achieve an internationally uniform anatomical terminology.
Section: 01.07
Topic: General

chapter 01 Summary

| <u>Category</u> | <u># of Questions</u> |
|---|-----------------------|
| Bloom's Level: 1. Remember | 39 |
| Bloom's Level: 2. Understand | 9 |
| Bloom's Level: 3. Apply | 17 |
| Learning Outcome: 01.01.b Describe several ways of studying human anatomy. | 6 |
| Learning Outcome: 01.02.a Give examples of how modern biomedical science emerged from an era of superstition and authoritarianism. | 1 |
| Learning Outcome: 01.02.b Describe the contributions of some key people who helped to bring about this transformation. | 5 |
| Learning Outcome: 01.03.a Describe the inductive and hypothetico-deductive methods of obtaining scientific knowledge. | 3 |
| Learning Outcome: 01.03.b Describe some aspects of experimental design that help to ensure objective and reliable results. | 4 |
| Learning Outcome: 01.03.c Explain what is meant by hypothesis, fact, law, and theory in science. | 3 |
| Learning Outcome: 01.04.a Explain why evolution is relevant to understanding human form and function. | 2 |
| Learning Outcome: 01.04.b Define evolution and natural selection. | 4 |
| Learning Outcome: 01.04.c Describe some human characteristics that can be attributed to the tree-dwelling habits of earlier primates. | 2 |
| Learning Outcome: 01.04.d Describe some human characteristics that evolved later in connection with upright walking. | 3 |
| Learning Outcome: 01.05.a List the levels of human structure from the most complex to the simplest. | 8 |
| Learning Outcome: 01.05.b Discuss the value of both reductionistic and holistic viewpoints to understanding human form and function. | 3 |
| Learning Outcome: 01.05.c Discuss the clinical significance of anatomical variation among humans. | 1 |
| Learning Outcome: 01.06.a State the characteristics that distinguish living organisms from nonliving objects. | 4 |
| Learning Outcome: 01.06.b Explain the importance of defining a reference man and woman. | 1 |
| Learning Outcome: 01.06.c Define homeostasis and explain why this concept is central to physiology. | 2 |
| Learning Outcome: 01.06.d Define negative feedback, given an example of it, and explain its importance to homeostasis. | 4 |
| Learning Outcome: 01.06.e Define positive feedback and give examples of its beneficial and harmful effects. | 3 |
| Learning Outcome: 01.07.a Explain why modern anatomical terminology is so heavily based on Greek and Latin. | 1 |
| Learning Outcome: 01.07.b Recognize eponyms when you see them. | 1 |
| Learning Outcome: 01.07.c Describe the efforts to achieve an internationally uniform anatomical terminology. | 1 |
| Learning Outcome: 01.07.d Break medical terms down into their basic word elements. | 2 |
| Learning Outcome: 01.07.f Relate singular noun forms to their plural and adjectival forms. | 2 |
| Section: 01.01 | 6 |
| Section: 01.02 | 6 |
| Section: 01.03 | 10 |
| Section: 01.04 | 10 |
| Section: 01.05 | 13 |
| Section: 01.06 | 13 |
| Section: 01.07 | 7 |
| Topic: General | 65 |