1. The scientific discipline that deals with the processes or functions of living organisms is
   A. physiology.
   B. anatomic imaging.
   C. regional anatomy.
   D. surface anatomy.
   E. systemic anatomy.

2. Which of the following statements is TRUE?
   A. The coordinated activity of the organ systems is necessary for normal function.
   B. Because organ systems are so interrelated, dysfunction in one organ system can have profound effects on other systems.
   C. An organism is any living thing considered as a whole whether composed of one cell such as a bacteria or trillions of cells such as a human.
   D. Living things are highly organized and disruption of this organized state can lead to loss of function and death.
   E. All of these statements are true

3. ________ refers to the specific interrelationships among the parts of an organism and how those parts interact to perform functions.
   A. Organization
   B. Metabolism
   C. Responsiveness
   D. Growth
   E. Development

4. Growth refers to an increase in size of all or part of an organism. It can result from:
   A. an increase in the number of cells within the organism
   B. an increase in the size of individual cells within the organism
   C. an increase in the amount of substances surrounding the cells.
   D. all of these
   E. none of these

5. ________ includes the changes an organism undergoes through time beginning with fertilization and ending at death.
   A. organization
   B. metabolism
   C. responsiveness
   D. reproduction
   E. development

6. ________ refers the ability of an organism to sense changes in the environment and make the adjustments needed to help maintain its life.
   A. organization
   B. metabolism
   C. responsiveness
   D. growth
   E. development
7. The essential characteristics of life include all of the following except:
   A. organization
   B. metabolism
   C. responsiveness
   D. growth
   E. multicellularity

8. Which of these characteristics of life means "The ability to use energy to perform vital functions?"
   A. organization
   B. metabolism
   C. responsiveness
   D. growth
   E. differentiation

9. According to the six criteria given as characteristics of life (organization, metabolism, responsiveness, growth, development, and reproduction), is a virus such as HIV "alive"?
   A. Yes, it has all 6 characteristics.
   B. No, it has none of the 6 characteristics.
   C. Unknown, it has one characteristic (when not including its host cell's components) but does not have the rest.

10. The chemical level of organization
    A. involves the interaction between atoms and the formation of molecules
    B. is made up of organ systems that are classified as a unit by function
    C. determines the structural and functional characteristics of all organisms
    D. Involves the interaction between atoms and the formation of molecules and which determines the structural and functional characteristics of all organisms are correct.
    E. All of these are correct for the chemical level of organization.

11. Homeostasis is the condition produced by
    A. a resistance to change of any kind.
    B. the tendency for change in a body parameter to be counteracted as soon as the body parameter goes past its normal range of values.
    C. the tendency for continued change in the same direction regardless of current values of any body parameter.
    D. the presence of pathogens.
    E. all of the conditions listed here.

12. Which of these statements is true of negative feedback?
    A. Negative feedback is important for maintaining homeostasis in the body.
    B. Negative feedback makes any deviation from a normal value larger.
    C. Negative feedback occurs when the uterus contracts during birth.
    D. Negative feedback is a very unusual control mechanism in the human body.
    E. Negative feedback will usually result in illness or other disturbance of normal systems.

13. Which of these is an example of a positive-feedback mechanism?
    A. An increase in blood pressure activates mechanisms that decrease blood pressure.
    B. Increased amounts of a hormone in the blood cause a decrease in the secretion of that hormone.
    C. Increased carbon dioxide in the blood increases breathing rate, which decreases carbon dioxide in the blood.
    D. Increased amounts of fluid in the blood result in increased quantities of urine, which decreases fluid content of the blood.
    E. Increased stretch of the uterus causes it to contract, which further increases stretch.
14. A patient with a bleeding ulcer had an elevated heart rate, but his blood pressure was very low and dropping. After the bleeding was stopped and a blood transfusion was given, blood pressure increased. Which of these statements are consistent with these observations?
   A. Negative-feedback mechanisms are occasionally inadequate without medical intervention.
   B. The transfusion interrupted a positive-feedback mechanism.
   C. The transfusion interrupted a negative-feedback mechanism.
   D. The transfusion was not necessary.
   E. "Both negative-feedback mechanisms are occasionally inadequate without medical intervention" and "the transfusion interrupted a positive-feedback mechanism" are consistent.

15. Increased carbon dioxide in the blood increases respiration (breathing) rate. Which of these statements would apply to this mechanism?
   A. This is a rare example of a positive-feedback system in the body, because increased carbon dioxide increases respiration rate.
   B. This is positive feedback, because an increased respiration rate increases oxygen in the blood.
   C. This is negative feedback because increased respiration rate decreases carbon dioxide in the blood.
   D. This is negative feedback because a deviation from normal is enhanced and made larger.
   E. This is negative feedback because increased respiration rate decreases carbon dioxide in the blood and this is negative feedback because a deviation from normal is enhanced and made larger apply.

16. Positive feedback mechanisms:
   A. are few in a normal healthy individual.
   B. are used to amplify the effect or response of a system.
   C. sometimes can create a deviation from homeostasis that leads to death.
   D. cause the deviation from normal to become even more pronounced.
   E. All of these are true.

17. The regulation of room temperature by a thermostat is an example of a feedback loop. In this system, a sensor within the thermostat detects a change in temperature below a programmed set point. The thermostat then sends a signal, which turns on the furnace. The furnace heats the room bringing it back up to the programmed temperature. Once the room temperature reaches the programmed set point, the thermostat "turns off" the furnace. Which of the following statements is consistent with the above scenario?
   A. This scenario is an example of a negative feedback mechanism.
   B. The thermostat is the "control center" while the furnace is the "effector".
   C. This scenario is different from how negative feedback works in the body because negative feedback in the body maintains a normal range of values instead of one specific set point.
   D. The "receptor" in this scenario is the temperature sensor within the thermostat.
   E. All of these are true.

18. The study of external features, such as bony projections that serve as landmarks to locate deeper structures is called
   A. systemic anatomy.
   B. regional anatomy.
   C. surface anatomy.
   D. physiology.
   E. anatomic imaging.

19. The study of the body's organization that considers the heart, blood and all of the associated blood vessels as a unit is called
   A. systemic anatomy
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21. In which quadrant of the abdomen would most of the liver usually located?
A. left lower quadrant
B. right lower quadrant
C. left upper quadrant
D. right upper quadrant

22. In which quadrant of the abdomen would the pain of acute appendicitis be felt?
A. left lower quadrant
B. right lower quadrant
C. left upper quadrant
D. right upper quadrant

23. The thoracic cavity is separated from the abdominal cavity by the
A. diaphragm.
B. mediastinum.
C. liver.
D. lungs.
E. pelvic muscles.

24. In which of these cavities would the urinary bladder and internal reproductive organs be found?
A. thoracic
B. pleural
C. pelvic
D. abdominal
E. pericardial

25. The pericardial cavity
A. contains the pericardial fluid.
B. surrounds the lungs.
C. is located between visceral peritoneum and parietal peritoneum.
D. is retroperitoneal.
E. All of these are true.

26. The kidneys, adrenal glands, pancreas, and urinary bladder are
A. connected to the body wall by mesenteries.
B. covered with visceral peritoneum.
C. found in the peritoneal cavity.
D. retroperitoneal.
E. surrounded by peritoneal fluid.

27. Given the cavities:
1) abdominal cavity
2) pelvic cavity
3) oral cavity
4) pericardial cavity
Which of these cavities are lined with serous membranes?
A. 1 and 2 only
B. 1, 2, 3
C. 1, 2, 4
D. 2, 3, 4
E. 1, 2, 3, 4
28. Which of the following is a cavity containing the liver, stomach, kidneys, and spleen?
   A. thoracic cavity
   B. pelvic cavity
   C. abdominal cavity
   D. pericardial cavity
   E. pleural cavity

29. A cavity containing the lungs, but not the heart is the
   A. thoracic cavity.
   B. pelvic cavity.
   C. abdominal cavity.
   D. pericardial cavity.
   E. pleural cavity.

30. A cavity containing the urinary bladder; enclosed by the bones of the pelvis is
   A. thoracic cavity.
   B. pelvic cavity.
   C. abdominal cavity.
   D. pericardial cavity.
   E. pleural cavity.

31. A cavity containing the heart, but not the lungs is
   A. thoracic cavity.
   B. pelvic cavity.
   C. abdominal cavity.
   D. pericardial cavity.
   E. pleural cavity.

32. The region designated by the letter "E" is known as the ________________ region.
   A. umbilical
   B. hypogastric
   C. lumbar
   D. hypochondriac
   E. iliac

33. The region designated by the letter "H" is known as the ________________ region.
   A. umbilical
   B. hypogastric
   C. lumbar
   D. hypochondriac
   E. iliac
34. A patient arrives at an emergency room with a traumatic pneumothorax after a car accident. In the course of the accident, the patient suffered a penetration wound, which allowed air to fill the space around one of his lungs causing it to collapse. Which cavity must the doctor remove the air from?
   A. pleural cavity
   B. thoracic cavity
   C. abdominal cavity
   D. pelvic cavity
   E. abdominopelvic cavity

35. A patient arrives at an emergency room with a traumatic pneumothorax after a car accident. In the course of the accident, the patient suffered a penetration wound, which allowed air to fill the space around one of her lungs causing it to collapse. Which serous membranes were likely damaged assuming that the lung itself was not punctured?
   A. visceral pleura
   B. visceral pericardium
   C. parietal pleura
   D. visceral peritoneum
   E. mesenteries

36. If you make a Jell-O mold that has strawberries suspended in it and whipped cream on top, the strawberries are __________ while the whip cream is _________.
   A. superficial; deep
   B. deep; superficial
   C. anterior; deep
   D. prone; deep
   E. All of these are correct

37. When you scratch a cat's back along its spine, which of the following terms would apply to the skin you are scratching?
   A. dorsal, superior, posterior, lateral
   B. ventral, inferior, anterior, medial, deep
   C. dorsal, superior, medial, superficial
   D. ventral, superior, medial, deep
   E. ventral, inferior, posterior, lateral

38. Which of the following pairs of terms are synonymous in bipedal animals such as humans but not in quadrupeds (animals that walk on all four feet)?
   A. superior and anterior
   B. anterior and superficial
   C. proximal and superficial
   D. anterior and ventral
   E. dorsal and lateral

39. Anatomical position refers to individuals that are
   A. standing erect, upper limbs at their sides and palms facing inward.
   B. standing erect, upper limbs at their sides and palms facing anterior.
   C. laying supine, upper limbs at their sides and palms facing inward.
   D. laying supine, upper limbs at their sides and palms facing anterior.
   E. laying supine, upper limbs extended over their head.

40. Which of the sections below separates the body into superior and inferior parts?
   A. frontal section
   B. sagittal section
   C. longitudinal section
   D. transverse section
   E. oblique section
41. Which of the sections below separates the body into dorsal and ventral parts?
   A. frontal section
   B. sagittal section
   C. longitudinal section
   D. transverse section
   E. oblique section

42. Which of the sections below separates the body into right and left parts?
   A. frontal section
   B. median plane/(sagittal) section
   C. longitudinal section
   D. transverse section
   E. oblique section

43. Which of the following is a cut through the long axis of an organ?
   A. frontal section
   B. sagittal section
   C. longitudinal section
   D. transverse section
   E. oblique section

44. Which of the following is a cut through an organ at right angles to the long axis?
   A. frontal section
   B. sagittal section
   C. longitudinal section
   D. transverse section
   E. oblique section

45. When a person is in anatomical position, the wrist is _____ to the elbow.
   A. proximal
   B. dorsal
   C. distal
   D. ventral
   E. superior

46. From the anatomical position, the scapula (shoulder blade) is always _____ to the ribs.
   A. dorsal
   B. posterior
   C. superficial
   D. both dorsal and posterior
   E. dorsal, posterior, and superficial

47. The guillotine, a medieval instrument for beheading criminals, could be described as passing along a
   _______ plane through the neck.
   A. frontal
   B. sagittal
   C. transverse
   D. longitudinal
   E. superior

48. A cut across the long axis of an organ at an angle other than a right angle is described as a(n)
   A. longitudinal section.
   B. oblique section.
   C. transverse section.
   D. cross section.
   E. horizontal section.
49. The fluid found between serous membrane layers
   A. is blood.
   B. reduces friction.
   C. is secreted by digestive glands.
   D. appears only after an injury.
   E. is blood and appears only after an injury.

50. The mesenteries
   A. are double-layered membranes.
   B. anchor some abdominal organs to the body wall.
   C. are not connected to retroperitoneal organs.
   D. are continuous with the parietal and visceral peritoneum.
   E. All of these are true.

51. Which of these statements about serous membranes is true?
   A. Serous membranes line cavities that open to the outside of the body.
   B. Visceral serous membranes are in contact with internal organs.
   C. Retroperitoneal organs are surrounded by both parietal and visceral serous membranes.
   D. Serous membranes surround the pleural and peritoneal cavities, but not the pericardial cavity.
   E. All of these are true.

52. In studying physiology, it is important to recognize that structures within the body are:
   A. static.
   B. dynamic and mutable.
   C. fixed.
   D. unchanging.

53. Given these structures:
   1) cell
   2) organ
   3) chemical
   4) organ system
   5) organism
   6) tissue
   Arrange the structures in the correct order from smallest to largest:
   A. 3, 1, 6, 2, 4, 5
   B. 1, 2, 3, 4, 5, 6
   C. 2, 3, 1, 6, 4, 5
   D. 4, 5, 3, 1, 6, 2
   E. 4, 3, 1, 6, 2, 5

54. The basic structural and functional units of an organism, such as plant or animal, is the
   A. organ.
   B. cell.
   C. organelle.
   D. organ system.
   E. tissue.

55. "A group of cells with similar structure and function plus the extracellular substances located between
   them," describes
   A. organelles.
   B. organisms.
   C. organs.
   D. organ systems.
   E. tissues.
1 Key

1. The scientific discipline that deals with the processes or functions of living organisms is
   A. physiology.
   B. anatomic imaging.
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4. Growth refers to an increase in size of all or part of an organism. It can result from:
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7. The essential characteristics of life include all of the following except:
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14. A patient with a bleeding ulcer had an elevated heart rate, but his blood pressure was very low and dropping. After the bleeding was stopped and a blood transfusion was given, blood pressure increased. Which of these statements are consistent with these observations?
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15. Increased carbon dioxide in the blood increases respiration (breathing) rate. Which of these statements would apply to this mechanism?
   A. This is a rare example of a positive-feedback system in the body, because increased carbon dioxide increases respiration rate.
   B. This is positive feedback, because an increased respiration rate increases oxygen in the blood.
   C. This is negative feedback because increased respiration rate decreases carbon dioxide in the blood.
   D. This is negative feedback because a deviation from normal is enhanced and made larger.
   E. This is negative feedback because increased respiration rate decreases carbon dioxide in the blood and this is negative feedback because a deviation from normal is enhanced and made larger apply.

   Blooms Level: 04. Analyze
   HAPS Learning Outcome: B02.1 List the components of a feedback loop and explain the function of each.
   HAPS Learning Outcome: B02.2 Compare and contrast positive and negative feedback in terms of the relationship between stimulus and response.
   HAPS Learning Outcome: B03.1 Provide an example of a negative feedback loop in the body. Describe the specific structures (organs, cells or molecules) included in the feedback loop.
   HAPS Learning Outcome: B04.1 Provide specific examples to demonstrate how organ systems respond to maintain homeostasis.

   Learning Objective: 1.05C. Describe a positive-feedback mechanism and give an example.

   Section: 01.05
   Topic: General

   VanPutte - Chapter 01 #13
16. Positive feedback mechanisms:
   A. are few in a normal healthy individual.
   B. are used to amplify the effect or response of a system.
   C. sometimes can create a deviation from homeostasis that leads to death.
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   C. This scenario is different from how negative feedback works in the body because negative feedback in the body maintains a normal range of values instead of one specific set point.
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18. The study of external features, such as bony projections that serve as landmarks to locate deeper structures is called
   A. systemic anatomy.
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Blooms Level: 01. Remember
HAPS Learning Outcome: A05.1 Define the terms anatomy and physiology.
Learning Objective: 1.01A Define anatomy and describe the levels at which anatomy can be studied.
Section: 01.01
Topic: General
VanPutte - Chapter 01 #19

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Learning Objective: 1.01A Define anatomy and describe the levels at which anatomy can be studied.
Section: 01.01
Topic: General
VanPutte - Chapter 01 #20

21. In which quadrant of the abdomen would most of the liver usually located?
A. left lower quadrant
B. right lower quadrant
C. left upper quadrant
D. right upper quadrant

Blooms Level: 01. Remember
HAPS Learning Outcome: A04.1 List and define the major directional terms used in anatomy.
HAPS Learning Outcome: A04.2 Describe the location of body structures, using appropriate directional terminology.
HAPS Learning Outcome: A05.3 Describe the location of structures of the body, using basic regional and systemic terminology.
Learning Objective: 1.06B. Define the directional terms for the human body, and use them to locate specific body structures.
Section: 01.06
Topic: General
VanPutte - Chapter 01 #21

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A. left lower quadrant
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Section: 01.06
Topic: General
VanPutte - Chapter 01 #22
23. The thoracic cavity is separated from the abdominal cavity by the
A. diaphragm.
B. mediastinum.
C. liver.
D. lungs.
E. pelvic muscles.

24. In which of these cavities would the urinary bladder and internal reproductive organs be found?
A. thoracic
B. pleural
C. pelvic
D. abdominal
E. pericardial

25. The pericardial cavity
A. contains the pericardial fluid.
B. surrounds the lungs.
C. is located between visceral peritoneum and parietal peritoneum.
D. is retroperitoneal.
E. All of these are true.

26. The kidneys, adrenal glands, pancreas, and urinary bladder are
A. connected to the body wall by mesenteries.
B. covered with visceral peritoneum.
C. found in the peritoneal cavity.
D. retroperitoneal.
E. surrounded by peritoneal fluid.
27. Given the cavities:
1) abdominal cavity
2) pelvic cavity
3) oral cavity
4) pericardial cavity
Which of these cavities are lined with serous membranes?
A. 1 and 2 only
B. 1, 2, 3
C. 1, 2, 4
D. 2, 3, 4
E. 1, 2, 3, 4

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32. The region designated by the letter "E" is known as the _______________ region.
   A. umbilical
   B. hypogastric
   C. lumbar
   D. hypochondriac
   E. iliac

33. The region designated by the letter "H" is known as the _______________ region.
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34. A patient arrives at an emergency room with a traumatic pneumothorax after a car accident. In the course of the accident, the patient suffered a penetration wound, which allowed air to fill the space around one of his lungs causing it to collapse. Which cavity must the doctor remove the air from?
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   B. visceral pericardium
   C. parietal pleura
   D. visceral peritoneum
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36. If you make a Jell-O mold that has strawberries suspended in it and whipped cream on top, the strawberries are ___________ while the whip cream is _________.
   A. superficial; deep
   B. deep; superficial
   C. anterior; deep
   D. prone; deep
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37. When you scratch a cat's back along its spine, which of the following terms would apply to the skin you are scratching?
   A. dorsal, superior, posterior, lateral
   B. ventral, inferior, anterior, medial, deep
   C. dorsal, superior, medial, superficial
   D. ventral, superior, medial, deep
   E. ventral, inferior, posterior, lateral
38. Which of the following pairs of terms are synonymous in bipedal animals such as humans but not in quadrupeds (animals that walk on all four feet)?
A. superior and anterior
B. anterior and superficial
C. proximal and superficial
D. anterior and ventral
E. dorsal and lateral

39. Anatomical position refers to individuals that are
A. standing erect, upper limbs at their sides and palms facing inward.
B. standing erect, upper limbs at their sides and palms facing anterior.
C. laying supine, upper limbs at their sides and palms facing inward.
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   B. sagittal section
   C. longitudinal section
   D. transverse section
   E. oblique section

44. Which of the following is a cut through an organ at right angles to the long axis?
   A. frontal section
   B. sagittal section
   C. longitudinal section
   D. transverse section
   E. oblique section

45. When a person is in anatomical position, the wrist is _____ to the elbow.
   A. proximal
   B. dorsal
   C. distal
   D. ventral
   E. superior
46. From the anatomical position, the scapula (shoulder blade) is always _____ to the ribs.
  A. dorsal
  B. posterior
  C. superficial
  D. both dorsal and posterior
  E. dorsal, posterior, and superficial

47. The guillotine, a medieval instrument for beheading criminals, could be described as passing along a _______ plane through the neck.
  A. frontal
  B. sagittal
  C. transverse
  D. longitudinal
  E. superior

48. A cut across the long axis of an organ at an angle other than a right angle is described as a(n)
  A. longitudinal section.
  B. oblique section.
  C. transverse section.
  D. cross section.
  E. horizontal section.

49. The fluid found between serous membrane layers
  A. is blood.
  B. reduces friction.
  C. is secreted by digestive glands.
  D. appears only after an injury.
  E. is blood and appears only after an injury.

50. The mesenteries
  A. are double-layered membranes.
  B. anchor some abdominal organs to the body wall.
  C. are not connected to retroperitoneal organs.
  D. are continuous with the parietal and visceral peritoneum.
  E. All of these are true.
51. Which of these statements about serous membranes is true?
A. Serous membranes line cavities that open to the outside of the body.
B. Visceral serous membranes are in contact with internal organs.
C. Retroperitoneal organs are surrounded by both parietal and visceral serous membranes.
D. Serous membranes surround the pleural and peritoneal cavities, but not the pericardial cavity.
E. All of these are true.

52. In studying physiology, it is important to recognize that structures within the body are:
A. static.
B. dynamic and mutable.
C. fixed.
D. unchanging.

53. Given these structures:
1) cell
2) organ
3) chemical
4) organ system
5) organism
6) tissue
Arrange the structures in the correct order from smallest to largest:
A. 3, 1, 6, 2, 4, 5
B. 1, 2, 3, 4, 5, 6
C. 2, 3, 1, 6, 4, 5
D. 4, 5, 3, 1, 6, 2
E. 4, 3, 1, 6, 2, 5

54. The basic structural and functional units of an organism, such as plant or animal, is the
A. organ.
B. cell.
C. organelle.
D. organ system.
E. tissue.

55. "A group of cells with similar structure and function plus the extracellular substances located between them," describes
A. organelles.
B. organisms.
C. organs.
D. organ systems.
E. tissues.
## 1 Summary

<table>
<thead>
<tr>
<th>Category</th>
<th># of Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blooms Level: 01. Remember</td>
<td>7</td>
</tr>
<tr>
<td>Blooms Level: 02. Understand</td>
<td>18</td>
</tr>
<tr>
<td>Blooms Level: 03. Apply</td>
<td>18</td>
</tr>
<tr>
<td>Blooms Level: 04. Analyze</td>
<td>7</td>
</tr>
<tr>
<td>Blooms Level: 05. Evaluate</td>
<td>5</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A01.1 Describe a person in anatomical position.</td>
<td>5</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A01.2 Describe how to use the terms right and left in anatomical reference.</td>
<td>5</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A02.1 Identify the various planes in which a body might be dissected.</td>
<td>4</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A02.2 Describe the appearance of a body presented along various planes.</td>
<td>4</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A03.1 Describe the location of the body cavities and identify the major organs found in each cavity.</td>
<td>13</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A03.2 List and describe the location of the major anatomical regions of the body.</td>
<td>13</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A03.3 Describe the location of the four abdominopelvic quadrants and the nine abdominopelvic regions and list the major organs located in each.</td>
<td>13</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A04.1 List and define the major directional terms used in anatomy.</td>
<td>3</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A04.2 Describe the location of body structures, using appropriate directional terminology.</td>
<td>3</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A05.1 Define the terms anatomy and physiology.</td>
<td>6</td>
</tr>
<tr>
<td>HAPS Learning Outcome: A05.3 Describe the location of structures of the body, using basic regional and systemic terminology.</td>
<td>8</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B01 Define homeostasis.</td>
<td>2</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B02.1 List the components of a feedback loop and explain the function of each.</td>
<td>5</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B02.2 Compare and contrast positive and negative feedback in terms of the relationship between stimuli and response.</td>
<td>7</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B02.3 Explain why negative feedback is the most commonly used mechanism to maintain homeostasis in the body.</td>
<td>5</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B03.1 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.</td>
<td>3</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B03.2 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.</td>
<td>3</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B03.3 Provide an example of a positive feedback loop in the body. Describe the specific structures (organs, cells or molecules) included in the feedback loop.</td>
<td>2</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B04.1 Provide specific examples to demonstrate how organ systems respond to maintain homeostasis.</td>
<td>5</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B04.2 Explain how different organ systems relate to one another to maintain homeostasis.</td>
<td>2</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B05.1 Predict factors or situations affecting various organ systems that could disrupt homeostasis.</td>
<td>2</td>
</tr>
<tr>
<td>HAPS Learning Outcome: B05.2 Predict the types of problems that would occur in the body if various organ systems could not maintain homeostasis and allowed regulated variables (body conditions) to move away from normal.</td>
<td>2</td>
</tr>
<tr>
<td>Learning Objective: 1.01A Define anatomy and describe the levels at which anatomy can be studied.</td>
<td>4</td>
</tr>
<tr>
<td>Learning Objective: 1.02A. Define physiology.</td>
<td>1</td>
</tr>
<tr>
<td>Learning Objective: 1.02B. State two major goals of physiology.</td>
<td>1</td>
</tr>
<tr>
<td>Learning Objective: 1.03A. Describe the six levels of organization of the body, and describe the major characteristics of each level.</td>
<td>4</td>
</tr>
<tr>
<td>Learning Objective: 1.04A. List and define six characteristics of life.</td>
<td>7</td>
</tr>
<tr>
<td>Learning Objective: 1.05A. Define homeostasis, and explain why it is important for proper body function.</td>
<td>2</td>
</tr>
<tr>
<td>Learning Objective: 1.05B. Describe a negative-feedback mechanism and give an example.</td>
<td>3</td>
</tr>
<tr>
<td>Learning Objective: 1.05C. Describe a positive-feedback mechanism and give an example.</td>
<td>2</td>
</tr>
<tr>
<td>Learning Objective: 1.06A. Describe a person in anatomical position.</td>
<td>5</td>
</tr>
<tr>
<td>Learning Objective: 1.06B. Define the directional terms for the human body, and use them to locate specific body structures.</td>
<td>3</td>
</tr>
<tr>
<td>Learning Objective: 1.06C. Know the terms for the parts and regions of the body.</td>
<td>5</td>
</tr>
<tr>
<td>Learning Objective: 1.06D. Name and describe the three major planes of the body and the body organs.</td>
<td>4</td>
</tr>
<tr>
<td>Learning Objective: 1.06E. Describe the major trunk cavities and their divisions.</td>
<td>8</td>
</tr>
<tr>
<td>Learning Objective: 1.06F. Describe the serous membranes, their locations, and their functions.</td>
<td>6</td>
</tr>
<tr>
<td>Section: 01.01</td>
<td>4</td>
</tr>
<tr>
<td>Section: 01.02</td>
<td>2</td>
</tr>
<tr>
<td>Section: 01.03</td>
<td>4</td>
</tr>
<tr>
<td>Section: 01.04</td>
<td>7</td>
</tr>
<tr>
<td>Section: 01.05</td>
<td>7</td>
</tr>
</tbody>
</table>