

Chapter 01: Introduction to the Body
Patton: The Human Body in Health & Disease, 7th Edition

MULTIPLE CHOICE

1. Which word is derived from the Greek word meaning “cutting up”?
- Dissection
 - Physiology
 - Pathology
 - Anatomy

ANS: D PTS: 1 DIF: Memorization
REF: P. 3 TOP: Introduction

2. Which word is defined as the study of the function of living organisms and their parts?
- Dissection
 - Physiology
 - Pathology
 - Anatomy

ANS: B PTS: 1 DIF: Memorization
REF: p. 3 TOP: Introduction

3. Which word is defined as the scientific study of disease?
- Dissection
 - Physiology
 - Pathology
 - Anatomy

ANS: C PTS: 1 DIF: Memorization
REF: P. 3 TOP: Introduction

4. Cells
- are more complex than tissues.
 - are the first level of organization in the body.
 - are the smallest living units of structure and function in the body.
 - both B and C.

ANS: C PTS: 1 DIF: Application REF: p. 6
TOP: Structural levels of organization

5. A group of cells that act together to perform a function is called a(n)
- molecule.
 - organ.
 - tissue.
 - organism.

ANS: C PTS: 1 DIF: Memorization
REF: p. 6 TOP: Structural levels of organization

6. The heart is an example of a(n)

- a. organ.
- b. tissue.
- c. organism.
- d. system.

ANS: A PTS: 1 DIF: Application REF: p. 6
TOP: Structural levels of organization

7. The levels of organization from most simple to most complex are

- a. cell → chemical → organ → tissue → system.
- b. tissue → cell → chemical → organ → system.
- c. chemical → tissue → cell → organ → system.
- d. chemical → cell → tissue → organ → system.

ANS: D PTS: 1 DIF: Memorization
REF: p. 5 TOP: Structural levels of organization

8. When using directional terms to describe the body, it is assumed that the body is in what position?

- a. Supine
- b. Anatomical
- c. Lateral
- d. Prone

ANS: B PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical position

9. The supine position

- a. describes the body lying face up.
- b. is also called anatomical position.
- c. describes the body lying face down.
- d. both A and B.

ANS: A PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical position

10. The prone position

- a. describes the body lying face up.
- b. is also called the anatomical position.
- c. describes the body lying face down.
- d. both B and C.

ANS: C PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical position

11. Because humans walk upright, the term *dorsal* can be used in place of the term

- a. inferior.
- b. posterior.
- c. anterior.
- d. distal.

ANS: B PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction

12. The opposite term for *posterior* in humans is
- superior.
 - anterior.
 - ventral.
 - both B and C.

ANS: D PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical direction

13. The opposite term for *superficial* is
- deep.
 - inferior.
 - posterior.
 - medial.

ANS: A PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction

14. The body section that divides the right ear from the left ear is a _____ section.
- frontal
 - sagittal
 - coronal
 - transverse

ANS: B PTS: 1 DIF: Application REF: p. 9
TOP: Planes or body sections

15. The body section that divides the nose from the back of the head is a _____ section.
- frontal
 - sagittal
 - midsagittal
 - transverse

ANS: A PTS: 1 DIF: Application REF: p. 9
TOP: Planes or body sections

16. A section that divides the body into mirror images is a _____ section.
- frontal
 - coronal
 - midsagittal
 - transverse

ANS: C PTS: 1 DIF: Application REF: p. 9
TOP: Planes or body sections

17. The two major body cavities are called
- thoracic and abdominal.
 - thoracic and pelvic.

- c. dorsal and ventral.
- d. mediastinum and pleural.

ANS: C PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities

18. The liver can be found in the
- a. upper right quadrant.
 - b. epigastric region.
 - c. hypogastric region.
 - d. both A and B.

ANS: D PTS: 1 DIF: Application REF: p. 10
TOP: Body cavities

19. The word “leg” correctly describes the
- a. area from the hip to the foot.
 - b. area from the knee to the ankle.
 - c. area between the hip and the knee.
 - d. femoral area.

ANS: B PTS: 1 DIF: Memorization
REF: p. 13 TOP: Body regions

20. The human body tries to maintain a constant body temperature. This is an example of
- a. homeostasis.
 - b. a positive feedback loop.
 - c. an effector.
 - d. a sensor.

ANS: A PTS: 1 DIF: Application REF: p. 14
TOP: The balance of body functions

21. The part of a feedback loop that has the direct effect on the regulated condition is called
- a. homeostasis.
 - b. the effector.
 - c. the sensor.
 - d. the control center.

ANS: B PTS: 1 DIF: Memorization
REF: p. 14 TOP: The balance of body functions

22. The part of the feedback loop that detects a change in the regulated condition is called
- a. homeostasis.
 - b. the effector.
 - c. the sensor.
 - d. the control center.

ANS: C PTS: 1 DIF: Memorization
REF: p. 14 TOP: The balance of body functions

23. The part of the feedback loop that compares the present condition within a body part or region to its homeostatic condition is called
- homeostasis.
 - the effector.
 - the sensor.
 - the control center.

ANS: D PTS: 1 DIF: Memorization
REF: p. 14 TOP: The balance of body functions

24. When your body temperature drops below normal, your muscles begin to contract rapidly, making you shiver and generating heat. In this case your muscles are acting as the
- sensor.
 - effector.
 - control center.
 - both A and C.

ANS: B PTS: 1 DIF: Synthesis REF: p. 14
TOP: The balance of body functions

25. Which of the following body functions is an example of a positive feedback loop?
- Maintaining a pH of 7.45 in the body
 - Forming a blood clot
 - Uterine contractions during labor
 - Both B and C

ANS: D PTS: 1 DIF: Application REF: pp. 15-16
TOP: The balance of body functions

26. The level of organization that precedes the organ level is the _____ level.
- system
 - cellular
 - tissue
 - chemical

ANS: C PTS: 1 DIF: Memorization
REF: p. 5 TOP: Structural levels of organization

27. Which of these terms cannot be applied to a body in the anatomical position?
- Dorsal
 - Posterior
 - Supine
 - Both A and B

ANS: C PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical position

28. Which term means *toward the head*?
- Anterior
 - Superior

- c. Superficial
- d. Ventral

ANS: B PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction

29. Which describes the anatomical relationship of the wrist to the elbow?
- a. The elbow is proximal to the wrist.
 - b. The elbow is distal to the wrist.
 - c. The elbow is superficial to the wrist.
 - d. The elbow is lateral to the wrist.

ANS: A PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical direction

30. A coronal plane or section is another term for a _____ plane.
- a. sagittal
 - b. midsagittal
 - c. transverse
 - d. frontal

ANS: D PTS: 1 DIF: Memorization
REF: p. 9 TOP: Planes or body sections

31. The muscular sheet called the diaphragm divides the
- a. right and left pleural cavities.
 - b. thoracic cavity and abdominopelvic cavities.
 - c. abdominal and pelvic cavities.
 - d. thoracic cavity and mediastinum.

ANS: B PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities

32. Which is not a part of the upper abdominopelvic region?
- a. Right hypochondriac region
 - b. Epigastric region
 - c. Hypogastric region
 - d. All of the above are part of the upper abdominopelvic region.

ANS: C PTS: 1 DIF: Memorization
REF: p. 10 TOP: Body cavities

MATCHING

Match each term with its corresponding definition or description.

- a. Chemical level
- b. Cellular level
- c. Tissue level
- d. Organ level
- e. System level
- f. Organism

1. The smallest “living” part of the body
2. A word used to denote a living thing
3. Level that includes atoms and molecules
4. Level made up of groups of tissues working together to perform a task
5. Level that is the most complex unit within the organism
6. Level that is made up of a group of cells working together to perform a task

- | | | |
|-----------|--|-------------------|
| 1. ANS: B | PTS: 1 | DIF: Memorization |
| REF: p. 6 | TOP: Structural levels of organization | |
| 2. ANS: F | PTS: 1 | DIF: Memorization |
| REF: p. 5 | TOP: Structural levels of organization | |
| 3. ANS: A | PTS: 1 | DIF: Memorization |
| REF: p. 5 | TOP: Structural levels of organization | |
| 4. ANS: D | PTS: 1 | DIF: Memorization |
| REF: p. 6 | TOP: Structural levels of organization | |
| 5. ANS: E | PTS: 1 | DIF: Memorization |
| REF: p. 6 | TOP: Structural levels of organization | |
| 6. ANS: C | PTS: 1 | DIF: Memorization |
| REF: p. 6 | TOP: Structural levels of organization | |

Match each term with its corresponding definition or description.

- a. Superior
 - b. Anterior
 - c. Medial
 - d. Proximal
 - e. Superficial
 - f. Inferior
 - g. Posterior
 - h. Lateral
 - i. Distal
 - j. Deep
7. Nearer to the surface of the body
 8. Toward the head or above
 9. Toward the midline of the body
 10. Away from the trunk or point of origin
 11. Toward the feet or below
 12. Toward the back
 13. Farther away from the surface of the body
 14. Toward the side
 15. Toward the front
 16. Nearest to the trunk or point of origin

- | | | |
|-----------|---------------------------|-------------------|
| 7. ANS: E | PTS: 1 | DIF: Memorization |
| REF: p. 7 | TOP: Anatomical direction | |
| 8. ANS: A | PTS: 1 | DIF: Memorization |
| REF: p. 7 | TOP: Anatomical direction | |

9. ANS: C PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction
10. ANS: I PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction
11. ANS: F PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction
12. ANS: G PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction
13. ANS: J PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction
14. ANS: H PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction
15. ANS: B PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction
16. ANS: D PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction

Match each term with its corresponding definition or description.

- a. Frontal plane
 - b. Transverse plane
 - c. Sagittal plane
 - d. Diaphragm
 - e. Thoracic cavity
 - f. Abdominopelvic cavity
 - g. Cranial cavity
 - h. Mediastinum
17. A muscular sheet dividing the thoracic and abdominopelvic cavities
18. The lower part of the ventral body cavity
19. Divides the body into right and left sides
20. Part of the dorsal cavity that contains the brain
21. Divides the body into upper and lower parts
22. A subdivision of the thoracic cavity
23. Divides the body into front and rear parts
24. Cavity that is subdivided into pleural cavities
17. ANS: D PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities
18. ANS: F PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities
19. ANS: C PTS: 1 DIF: Memorization
REF: p. 9 TOP: Planes or body sections
20. ANS: G PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities
21. ANS: B PTS: 1 DIF: Memorization
REF: p. 9 TOP: Planes or body sections
22. ANS: H PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities

23. ANS: A PTS: 1 DIF: Memorization
REF: p. 9 TOP: Planes or body sections
24. ANS: E PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities

SHORT ANSWER

1. Explain the difference between anatomy and physiology.

ANS:

Answers will vary.

PTS: 1

DIF: Memorization

REF: P. 3

TOP: Introduction

2. Name and explain the structural levels of organization of the body and give an example of each.

ANS:

Answers will vary.

PTS: 1

DIF: Application REF: pp. 5-6

TOP: Structural levels of organization

3. Describe the anatomical position.

ANS:

Answers will vary.

PTS: 1

DIF: Memorization

REF: p. 7

TOP: Anatomical position

4. Define or explain the words “prone” and “supine.”

ANS:

Answers will vary.

PTS: 1

DIF: Memorization

REF: p. 7

TOP: Anatomical position

5. Name and describe the three planes or body sections.

ANS:

Answers will vary.

PTS: 1

DIF: Memorization

REF: p. 9

TOP: Planes or body sections

6. Name the two major body cavities, and describe what is in each.

ANS:

Answers will vary.

PTS: 1

DIF: Memorization

REF: p. 9

TOP: Body cavities

7. Explain the three parts of a negative feedback loop.

ANS:

Answers will vary.

PTS: 1

DIF: Memorization

REF: p. 15

TOP: The balance of body functions

8. What is meant by a negative feedback loop? Give an example of a negative feedback loop in the body.

ANS:

Answers will vary.

PTS: 1

DIF: Application REF: p. 15

TOP: The balance of body functions

9. What is meant by a positive feedback loop? Give an example of a positive feedback loop in the body.

ANS:

Answers will vary.

PTS: 1

DIF: Application REF: pp. 15-16

TOP: The balance of body functions

10. List the anatomical directions, and explain each of them. If there are alternate terms for an anatomical direction, give those terms also.

ANS:

Answers will vary.

PTS: 1

DIF: Memorization

REF: p. 7

TOP: Anatomical direction

TRUE/FALSE

1. Anatomy is defined as the study of the structure of an organism.

ANS: T

PTS: 1

DIF: Memorization

REF: P. 3

TOP: Introduction

2. The word “dissection” comes from Greek word meaning “cutting up.”

ANS: F PTS: 1 DIF: Memorization
REF: P. 3 TOP: Introduction

3. Anatomy deals with the study of structure, whereas physiology deals with the study of function.

ANS: T PTS: 1 DIF: Memorization
REF: P. 3 TOP: Introduction

4. Pathology is the scientific study of disease.

ANS: T PTS: 1 DIF: Memorization
REF: P. 3 TOP: Introduction

5. A protein molecule is considered to be at the cellular level of organization.

ANS: F PTS: 1 DIF: Analysis REF: pp. 5-6
TOP: Structural levels of organization

6. The cell is the simplest level of organization in the human body.

ANS: F PTS: 1 DIF: Memorization
REF: p. 6 TOP: Structural levels of organization

7. Cells are considered to be the smallest living unit of structure and function in the body.

ANS: T PTS: 1 DIF: Memorization
REF: p. 6 TOP: Structural levels of organization

8. A group of cells working together to perform a specific function is called an organ.

ANS: F PTS: 1 DIF: Memorization
REF: p. 6 TOP: Structural levels of organization

9. A group of several different tissues working together to perform a specific function is called an organ.

ANS: T PTS: 1 DIF: Memorization
REF: p. 6 TOP: Structural levels of organization

10. The organ is the highest level of organization in the human body.

ANS: F PTS: 1 DIF: Memorization
REF: p. 6 TOP: Structural levels of organization

11. Anatomical position is the reference position for the directional terms of the body.

ANS: T PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical position

12. If you like to sleep on your stomach, you prefer sleeping in the supine position.

ANS: F PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical position

13. Doctors recommend putting babies to sleep on their backs to help prevent breathing problems. This is the supine position.

ANS: T PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical position

14. The anatomical position can be described as the body being erect with the arms held at shoulder level with the palms of the hands facing down.

ANS: F PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical position

15. The ankle is distal to the knee.

ANS: T PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical direction

16. Dorsal and anterior are interchangeable terms when referring to humans.

ANS: F PTS: 1 DIF: Memorization
REF: p. 7 TOP: Anatomical direction

17. The lungs are medial to the heart.

ANS: F PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical direction

18. The elbow is proximal to the wrist.

ANS: T PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical direction

19. The skin is superficial to the muscles.

ANS: T PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical direction

20. Proximal and medial are opposite terms.

ANS: F PTS: 1 DIF: Memorization

REF: p. 7 TOP: Anatomical direction

21. The knee is distal to the ankle.

ANS: F PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical direction

22. The middle toe is medial to the big toe but lateral to the smallest toe.

ANS: F PTS: 1 DIF: Application REF: p. 7
TOP: Anatomical direction

23. Frontal and coronal sections refer to the same thing.

ANS: T PTS: 1 DIF: Memorization
REF: p. 9 TOP: Planes or body sections

24. Sagittal and midsagittal sections refer to the same thing.

ANS: F PTS: 1 DIF: Memorization
REF: p. 9 TOP: Planes or body sections

25. A plane dividing a body into upper and lower portions is a transverse plane.

ANS: T PTS: 1 DIF: Memorization
REF: p. 9 TOP: Planes or body sections

26. A plane dividing the body into front and back portions is a sagittal plane.

ANS: F PTS: 1 DIF: Memorization
REF: p. 9 TOP: Planes or body sections

27. A midsagittal plane divides the right shoulder from the left shoulder.

ANS: T PTS: 1 DIF: Application REF: p. 9
TOP: Planes or body sections

28. A transverse plane divides the eyes from the back of the head.

ANS: F PTS: 1 DIF: Application REF: p. 9
TOP: Planes or body sections

29. A frontal section divides the eyes from the back of the head.

ANS: T PTS: 1 DIF: Application REF: p. 9
TOP: Planes or body sections

30. The ventral cavity is one of the main cavities of the body.

ANS: T PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities

31. The mediastinum is a subdivision of the abdominal cavity.

ANS: F PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities

32. The pleural cavities are subdivisions of the thoracic cavity.

ANS: T PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities

33. The abdominal cavity is inferior to the thoracic cavity.

ANS: T PTS: 1 DIF: Application REF: p. 9
TOP: Body cavities

34. The abdominal cavity and the pelvic cavity are separated by a muscle called the diaphragm.

ANS: F PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities

35. The thoracic cavity and the abdominal cavity are separated by a muscle called the diaphragm.

ANS: T PTS: 1 DIF: Memorization
REF: p. 9 TOP: Body cavities

36. The right hypochondriac region is completely in the right upper quadrant of the abdomen.

ANS: T PTS: 1 DIF: Application REF: p. 10
TOP: Body cavities

37. The left hypochondriac region is completely in the left lower quadrant of the abdomen.

ANS: F PTS: 1 DIF: Application REF: p. 10
TOP: Body cavities

38. The right lumbar region is superior to the right iliac region.

ANS: T PTS: 1 DIF: Application REF: p. 10
TOP: Body cavities

39. The dorsal cavity includes the spinal cavity.

ANS: T PTS: 1 DIF: Memorization

REF: p. 10 TOP: Body cavities

40. The brain is located in the dorsal cavity.

ANS: T PTS: 1 DIF: Memorization
REF: p. 10 TOP: Body cavities

41. Homeostasis is the relative consistency of the internal environment of the body.

ANS: T PTS: 1 DIF: Memorization
REF: p. 14 TOP: The balance of body functions

42. One method the body has of maintaining homeostasis is a positive feedback loop.

ANS: F PTS: 1 DIF: Memorization
REF: p. 14 TOP: The balance of body functions

43. In a feedback loop, the part of the system that compares the actual condition to the controlled condition is called the sensor.

ANS: F PTS: 1 DIF: Memorization
REF: p. 14 TOP: The balance of body functions

44. In a feedback loop, the part of the system that effects a change in the controlled condition is called the effector.

ANS: T PTS: 1 DIF: Memorization
REF: p. 14 TOP: The balance of body functions

45. In a feedback loop, the part of the system that detects a change in the controlled condition is called the sensor.

ANS: T PTS: 1 DIF: Memorization
REF: p. 14 TOP: The balance of body functions

46. A negative feedback loop stimulates and amplifies a change in the internal environment.

ANS: F PTS: 1 DIF: Memorization
REF: p. 15 TOP: The balance of body functions

47. A negative feedback loop opposes or negates a change in the internal environment.

ANS: T PTS: 1 DIF: Memorization
REF: p. 15 TOP: The balance of body functions

48. The body has more positive feedback loops than negative feedback loops.

ANS: F PTS: 1 DIF: Memorization
REF: p. 15 TOP: The balance of body functions

49. The formation of a blood clot is an example of a negative feedback loop.

ANS: F PTS: 1 DIF: Application REF: p. 16
TOP: The balance of body functions

50. The pH of the body must remain within a very narrow range. It would more likely be controlled by a negative feedback loop.

ANS: T PTS: 1 DIF: Application REF: p. 15
TOP: The balance of body functions

51. Women have one more positive feedback loop than do men.

ANS: T PTS: 1 DIF: Synthesis REF: p. 15
TOP: The balance of body functions

52. Both the heart and the blood vessels are considered to be organs in the cardiovascular system.

ANS: T PTS: 1 DIF: Application REF: p. 14
TOP: Structural levels of organization

53. An “L” on an anatomical compass rosette can stand for “Left” or “Lateral” depending on what is opposite it.

ANS: T PTS: 1 DIF: Memorization
REF: p. 8 TOP: Anatomical direction

54. An “S” on an anatomical compass rosette can stand for “Superior” or “Supine” depending on what is opposite it.

ANS: F PTS: 1 DIF: Memorization
REF: p. 8 TOP: Anatomical direction

55. When you look at an anatomical compass rosette in the text, the “R” on the rosette is on your right side.

ANS: F PTS: 1 DIF: Application REF: p. 8
TOP: Anatomical direction