

Chapter 01 The Human Organism

Multiple Choice Questions

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.

Difficulty: Easy
Type: Knowledge

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 the above statements are true

Difficulty: Moderate
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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 the above
- E. none of the above.

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

7. The essential characteristics of life include all of the following except:

- A. organization
- B. metabolism
- C. responsiveness
- D. growth
- E. multicellularity**

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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's 'machinery') but does not have the rest.

Difficulty: Hard
Type: Theoretical

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.** Both involves the interaction between atoms and the formation of molecules and determines the structural and functional characteristics of all organisms are correct.
 - E. All of these are correct for the chemical level of organization.

Difficulty: Easy
Type: Knowledge

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.

Difficulty: Moderate
Type: Knowledge

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.

Difficulty: Easy

Type: Knowledge

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.

Difficulty: Moderate

Type: Comprehension

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.

Difficulty: Hard

Type: Application

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. Both 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.

Difficulty: Moderate
Type: Application

16. Positive feedback mechanisms:

- A. are rare in a normal healthy individual.
- B. are used to amplify the effect or response of a system.
- C. 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.

Difficulty: Easy
Type: Knowledge

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.

Difficulty: Moderate
Type: Application

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.

Difficulty: Easy
Type: Knowledge

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
- B. regional anatomy
- C. surface anatomy
- D. physiology
- E. anatomic imaging

Difficulty: Easy
Type: Knowledge

20. The study of the body's organization by areas (the approach used in most medical schools) is called

- A. systemic anatomy
- B. regional anatomy**
- C. surface anatomy
- D. physiology
- E. anatomic imaging

Difficulty: Easy
Type: Knowledge

21. In which quadrant of the abdomen would is most of the liver usually located?

- A. left lower quadrant
- B. right lower quadrant
- C. left upper quadrant
- D. right upper quadrant**

Difficulty: Easy
Type: Comprehension

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

Difficulty: Moderate
Type: Comprehension

23. The thoracic cavity is separated from the abdominal cavity by the

- A. diaphragm.
- B. mediastinum.
- C. liver.
- D. lungs.
- E. pelvic muscles.

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Comprehension

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.

Difficulty: Easy
Type: Knowledge

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.

Difficulty: Easy
Type: Knowledge

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

Difficulty: Moderate
Type: Comprehension

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

Difficulty: Easy
Type: Knowledge

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.

Difficulty: Easy
Type: Knowledge

30. A cavity containing the urinary bladder; enclosed by the bones of the pelvis is

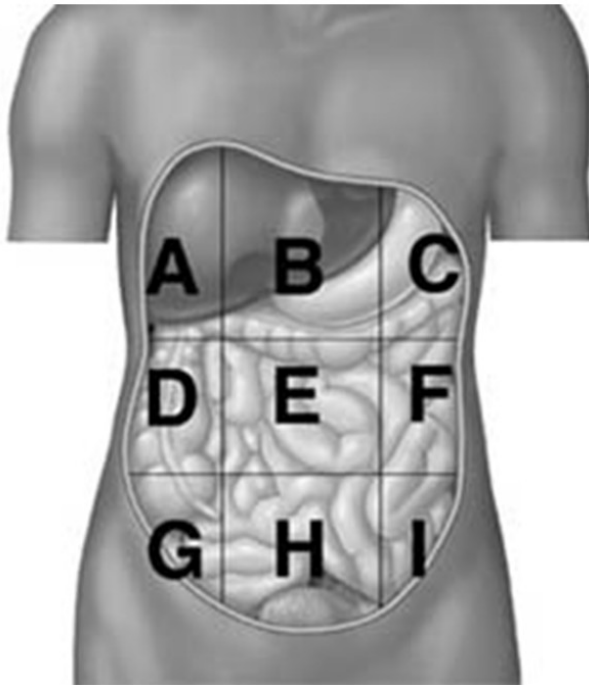
- A. thoracic cavity.
- B.** pelvic cavity.
- C. abdominal cavity.
- D. pericardial cavity.
- E. pleural cavity.

Difficulty: Easy
Type: Knowledge

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.

Difficulty: Easy
Type: Knowledge



32. The region designated by the letter "E" is known as the _____ region.

- A. umbilical
- B. hypogastric
- C. lumbar
- D. hypochondriac
- E. iliac

Difficulty: Easy
Type: Knowledge

33. The region designated by the letter "H" is known as the _____ region.

- A. umbilical
- B. hypogastric
- C. lumbar
- D. hypochondriac
- E. iliac

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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

Difficulty: Moderate
Type: Application

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

Difficulty: Moderate
Type: Application

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.

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

45. When a person is in anatomical position, the wrist is _____ to the elbow.

- A. proximal
- B. dorsal
- C. distal
- D. ventral
- E. superior

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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

Difficulty: Easy
Type: Knowledge

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.

Difficulty: Easy
Type: Knowledge

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. Both is blood and appears only after an injury.

Difficulty: Easy
Type: Knowledge

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.**

Difficulty: Moderate
Type: Comprehension

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.

Difficulty: Moderate
Type: Comprehension

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.
- E. both A and C are correct.

Difficulty: Easy
Type: Knowledge

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

Difficulty: Moderate
Type: Comprehension

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.

Difficulty: Easy
Type: Knowledge

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.

Difficulty: Easy
Type: Knowledge