

Human Anatomy, 9e (Martini)

Chapter 1 Foundations: An Introduction to Anatomy

1.1 Multiple Choice Questions

- 1) It is important to study the discipline of anatomy because it_____.
- A) is important to understand the link between human structure and function
 - B) develop a three-dimensional understanding of anatomical relationships
 - C) will assist individuals to make informed decisions about their personal health
 - D) provides a basis for understanding more advanced courses in anatomy, physiology, and related disciplines
 - E) All of the answers are correct.

Answer: E

Learning Outcome: 1.1

Bloom's Taxonomy: 1-2: Remembering/Understanding

- 2) Which of the following statements about anatomical information is correct?
- A) Anatomic information is all historical.
 - B) It describes external and internal structures of the body and considers probable function.
 - C) It addresses large body structures visible to the naked eye only.
 - D) Physiology and anatomy are unrelated.
 - E) The study of cells or cytology is useless to anatomy.

Answer: B

Learning Outcome: 1.1

Bloom's Taxonomy: 1-2: Remembering/Understanding

- 3) The branch of science that studies groups of specialized cells and how they work together is called_____.
- A) physiology
 - B) histology
 - C) anatomy
 - D) cytology
 - E) None of the answers are correct.

Answer: B

Learning Outcome: 1.1

Bloom's Taxonomy: 1-2: Remembering/Understanding

- 4) The analysis of the smallest units of life is called_____.
- A) embryology
 - B) cytology
 - C) physiology
 - D) histology
 - E) morphology

Answer: B

Learning Outcome: 1.1

Bloom's Taxonomy: 1-2: Remembering/Understanding

- 5) The discipline that might examine structural interactions within a sheet of muscle tissue, or groups of specialized cells and cell products that work together to perform specific functions, is

called_____.

- A) morphology
- B) radiology
- C) embryology
- D) histology
- E) cytology

Answer: D

Learning Outcome: 1.1

Bloom's Taxonomy: 1-2: Remembering/Understanding

6) The anatomical specialty that refers to the study of general form (or morphology) and superficial anatomical markings is called_____.

- A) surface anatomy
- B) comparative anatomy
- C) regional anatomy
- D) developmental anatomy
- E) systemic anatomy

Answer: A

Learning Outcome: 1.2

Bloom's Taxonomy: 1-2: Remembering/Understanding

7) Which type of anatomy refers to the study of all of the superficial and internal features in a specific area of the body?

- A) surface anatomy
- B) regional anatomy
- C) systemic anatomy
- D) gross anatomy
- E) microscopic anatomy

Answer: B

Learning Outcome: 1.2

Bloom's Taxonomy: 1-2: Remembering/Understanding

8) The study of the heart, blood, and blood vessels is which of the following approaches?

- A) systemic anatomy
- B) regional anatomy
- C) developmental anatomy
- D) surface anatomy
- E) gross anatomy

Answer: A

Learning Outcome: 1.2

Bloom's Taxonomy: 1-2: Remembering/Understanding

9) The study of the early processes during the first two months of development from conception is called_____.

- A) cytology
- B) physiology
- C) histology
- D) embryology
- E) osteology

Answer: D

Learning Outcome: 1.3

Bloom's Taxonomy: 1-2: Remembering/Understanding

10) The study of structures through specialized imaging techniques, such as ultrasounds, x-rays, or other specialized procedures performed on an intact body, is called_____.

- A) cytology
- B) embryology
- C) physiology
- D) histology
- E) radiography

Answer: E

Learning Outcome: 1.3

Bloom's Taxonomy: 1-2: Remembering/Understanding

11) Gross anatomical specialties include_____.

- A) radiographic and surgical anatomy
- B) cytology and embryology
- C) histology
- D) radiographic anatomy, surgical anatomy, cytology and embryology
- E) cytology, histology and embryology

Answer: A

Learning Outcome: 1.3

Bloom's Taxonomy: 1-2: Remembering/Understanding

12) The study of anatomical features that may undergo recognizable pathological changes during illness is called_____anatomy.

- A) clinical
- B) developmental
- C) comparative
- D) systemic
- E) regional

Answer: A

Learning Outcome: 1.3

Bloom's Taxonomy: 1-2: Remembering/Understanding

13) _____ anatomy is a new subspecialty of gross anatomy as new advances, such as computed tomography and spiral CT scans, have emerged.

- A) Surgical
- B) Developmental
- C) Cross-sectional
- D) Regional
- E) Comparative

Answer: C

Learning Outcome: 1.3

Bloom's Taxonomy: 1-2: Remembering/Understanding

14) Disease is the failure to maintain _____ conditions.

- A) metabolic
- B) homeostatic
- C) allostatic
- D) physiological
- E) pathological

Answer: B

Learning Outcome: 1.3

Bloom's Taxonomy: 1-2: Remembering/Understanding

15) Which of the following is the highest level of organization?

- A) chemical
- B) organelles
- C) cellular
- D) tissues
- E) organs

Answer: E

Learning Outcome: 1.4

Bloom's Taxonomy: 1-2: Remembering/Understanding

16) The study of disease is _____.

- A) radiology
- B) pathology
- C) histology
- D) neurology
- E) cardiology

Answer: B

Learning Outcome: 1.4

Bloom's Taxonomy: 1-2: Remembering/Understanding

17) Choose the correct arrangement of items 1-5, ranking them from the highest to the lowest level of complexity.

- (1) organism
 - (2) tissue
 - (3) chemical or molecular
 - (4) cellular
 - (5) organ system
- A) 1, 2, 3, 4, 5
B) 5, 4, 3, 2, 1
C) 1, 5, 2, 4, 3
D) 5, 3, 2, 4, 1
E) 2, 4, 1, 5, 3

Answer: C

Learning Outcome: 1.4

Bloom's Taxonomy: 1-2: Remembering/Understanding

18) The basic functions performed by all living humans include(s)_____.

- A) excretion
- B) metabolism
- C) growth and differentiation
- D) movement
- E) All of the answers are correct.

Answer: E

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

19) The vital ability of an organism to take certain actions when changes occur in its immediate environment is called_____.

- A) movement
- B) growth
- C) responsiveness
- D) metabolism
- E) excretion

Answer: C

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

20) Which of the following refers to all the chemical operations under way in the body?

- A) anabolism
- B) respiration
- C) absorption
- D) metabolism
- E) excretion

Answer: D

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

21) Excretion involves _____.

- A) changes to adjust to an organism's environment
- B) creation of a new generation of individuals
- C) transport of substances within an organism
- D) elimination of unnecessary or potentially harmful materials metabolic waste from the body
- E) locomotion of the body

Answer: D

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

22) Growth and differentiation often include_____.

- A) specialization of individual cells
- B) increase in cell size
- C) increase in cell numbers
- D) changes in form and function
- E) All of the answers are correct.

Answer: E

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

23) Support, protection of soft tissues, mineral storage, and blood cell formation are all functions of the_____.

- A) skeletal system
- B) cardiovascular system
- C) immune system
- D) reproductive system
- E) excretory system

Answer: A

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

24) Directing immediate responses to stimuli, usually by coordinating the activities of other organ systems is the function of the_____.

- A) integumentary system
- B) endocrine system
- C) urinary system
- D) nervous system
- E) reproductive system

Answer: D

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

25) The major functions of the _____ system are temperature control and protection of the body from the external environmental hazards.

- A) digestive
- B) cardiovascular
- C) urinary
- D) respiratory
- E) integumentary

Answer: E

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

26) The primary site of blood cell production is within the _____.

- A) cardiovascular system
- B) skeletal system
- C) integumentary system
- D) lymphatic system
- E) endocrine system

Answer: B

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

27) Components of the urinary system include _____.

- A) ureters and kidneys
- B) liver and pancreas
- C) thymus and spleen
- D) bronchi and alveoli
- E) None of the answers are correct.

Answer: A

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

28) Organs systems are a component of the integumentary system which includes _____.

- A) anatomical units with related functions
- B) formed by two or more organs
- C) often large enough to be studied without magnification
- D) interdependent on each other
- E) All of the answers are correct.

Answer: E

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

- 29) Which of the following is the primary function of the thymus in the lymphatic system?
- A) controls the development and maintenance of one class of lymphocytes
 - B) engulfs pathogens
 - C) monitors circulating blood
 - D) carries lymph and lymphocytes from peripheral tissues to the veins of the cardiovascular system
 - E) monitors the composition of lymph

Answer: A

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

- 30) Which of the following is NOT a primary function of the kidneys in the urinary system?
- A) form and concentrate urine
 - B) regulate blood pH and ion concentrations
 - C) perform endocrine functions
 - D) All are primary functions of the kidneys.
 - E) None of the answers are primary functions of the kidneys.

Answer: D

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

- 31) The process of creating subsequent generations, either unicellular or multicellular, is referred to as _____.

- A) growth
- B) reproduction
- C) metabolism
- D) differentiation
- E) responsiveness

Answer: B

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

- 32) The process of cellular specialization to perform particular functions is called _____.

- A) reproduction
- B) differentiation
- C) growth
- D) irritability
- E) anabolism

Answer: B

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

33) The property of living things to transport food, blood, or other materials inside the body is called _____.

- A) digestion
- B) respiration
- C) catabolism
- D) growth
- E) movement

Answer: E

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

34) The _____ system contains glandular structures that direct long-term changes in the activities of other organ systems.

- A) nervous
- B) cardiovascular
- C) integumentary
- D) endocrine
- E) lymphatic

Answer: D

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

35) The _____ system allows for locomotion, provides support, and produces heat.

- A) integumentary
- B) skeletal
- C) muscular
- D) cardiovascular
- E) digestive

Answer: C

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

36) The _____ system allows for gas exchange between the air and circulating blood.

- A) respiratory
- B) urinary
- C) digestive
- D) lymphatic
- E) cardiovascular

Answer: A

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

37) Gas exchange is also facilitated by the _____ system, which is responsible for the internal transport of cells and dissolved materials, including nutrients, wastes, and gases.

- A) urinary
- B) digestive
- C) cardiovascular
- D) respiratory
- E) lymphatic

Answer: C

Learning Outcome: 1.5

Bloom's Taxonomy: 1-2: Remembering/Understanding

38) In the prone position, _____.

- A) the body faces posteriorly
- B) the body is lying in anatomical position face up
- C) the body is lying in anatomical position face down
- D) the head is turned to the left, and the eyes are closed
- E) the body is situated facing posteriorly and the eyes are open.

Answer: C

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

39) In anatomical position, a person stands with the legs together and the feet flat on the floor. Additionally, the _____.

- A) hands are raised above the head
- B) hands are facing posteriorly
- C) hands are hanging naturally at the person's sides
- D) hands are at the sides, and the palms face anteriorly
- E) hands are facing laterally

Answer: D

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

40) A frontal (coronal) section is in a plane that _____.

- A) divides the body along the midline
- B) divides the body into left and right sections
- C) divides the body into anterior and posterior sections
- D) divides the body into superior and inferior sections
- E) divides the body into frontal sections

Answer: C

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

41) Which of the following directional reference pairs consists of anatomical equivalents when referring to the human body?

- A) distal, medial
- B) proximal, lateral
- C) cranial, caudal
- D) cephalic, posterior
- E) anterior, ventral

Answer: E

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

42) Which of the following is the most inferior of the nine abdominopelvic regions?

- A) hypochondriac region
- B) hypogastric region
- C) umbilical region
- D) left lumbar region
- E) epigastric region

Answer: B

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

43) Which of the following includes only structures enclosed within the mediastinum?

- A) lungs, esophagus, heart
- B) heart, trachea, lungs
- C) esophagus, trachea, thymus
- D) pharynx, thymus, major vessels
- E) brain, spinal cord

Answer: C

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

44) The serous membrane that covers the outer surface of a lung is called the _____.

- A) visceral peritoneum
- B) parietal pericardium
- C) visceral pleura
- D) parietal mesentery
- E) None of the answers are correct.

Answer: C

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

45) The _____ lines the body wall within the abdominopelvic peritoneal cavity.

- A) visceral pleura
- B) parietal pericardium
- C) mesentery proper
- D) superficial fascia
- E) parietal peritoneum

Answer: E

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

46) Mesenteries _____.

- A) provide support and stability to the stomach and small intestine
- B) allow movement of abdominal structures
- C) support and stabilize organs such as the kidneys
- D) All of the answers are correct.
- E) None of the answers are correct.

Answer: A

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

47) The thoracic cavity is separated from the abdominopelvic cavity by _____.

- A) the inferior border of the rib cage
- B) a sheet of connective tissue
- C) the diaphragm
- D) the liver
- E) None of the answers are correct.

Answer: C

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

48) The space that contains organs of the respiratory, cardiovascular, digestive, urine, and reproductive systems is called the _____.

- A) mediastinum
- B) pleural cavity
- C) mesentery proper
- D) pelvic cavity
- E) None of these choices are correct.

Answer: E

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

49) The pericardial cavity contains which of the following?

- A) heart
- B) liver
- C) intestines
- D) brain
- E) both the heart and the liver

Answer: A

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

50) A person lying down in the anatomical position is said to be _____ when lying face up.

- A) homeostatic
- B) prone
- C) superficial
- D) supine
- E) ventral

Answer: D

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

51) Which of the following organs occupies the pleural cavity?

- A) trachea
- B) heart
- C) lungs
- D) esophagus
- E) thyroid gland

Answer: C

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding

52) Which of the following is considered a radiological procedure?

- A) CT (computerized tomography)
- B) MRI (magnetic resonance imaging)
- C) ultrasound
- D) angiography
- E) All of the answers are correct.

Answer: E

Learning Outcome: 1.6

Bloom's Taxonomy: 1-2: Remembering/Understanding