

***Essentials of Human Anatomy and Physiology 13th
edition Marieb Test Bank***

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Essentials of Human Anatomy and Physiology, 12e (Marieb)
Chapter 1 The Human Body: An Orientation

1.1 Multiple Choice Part I Questions

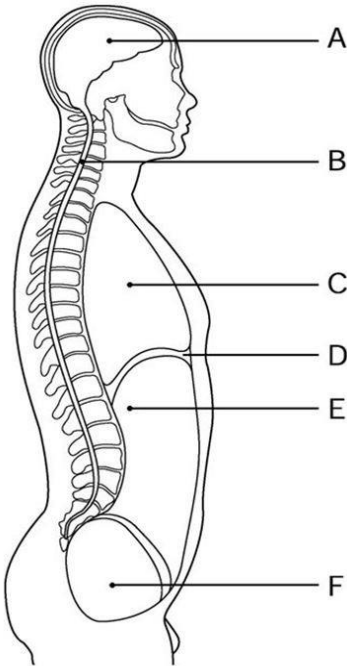


Figure 1.1

Using Figure 1.1, identify the following:

1) Identify the cavity that houses the spinal cord.

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: B

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

2) Label E points to the _____ cavity.

- A) thoracic
- B) pelvic
- C) cranial
- D) abdominal

Answer: D

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

3) Identify the cavity that houses the heart and lungs (and other organs).

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: C

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

4) Identify the structure that separates the thoracic cavity from the rest of the ventral cavity.

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: D

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

5) Label F points to the _____ cavity.

- A) thoracic
- B) pelvic
- C) cranial
- D) abdominal

Answer: B

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

6) Identify the cavity that houses the stomach, liver, and other digestive organs.

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: E

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

7) Which of the following is the smallest unit of all living things?

- A) organ
- B) tissue
- C) cell
- D) organ system

Answer: C

Page Ref: 2

Bloom's: 1-2: Remembering/Understanding

8) The heart and blood vessels are the primary organs of the _____ system.

- A) lymphatic
- B) integumentary
- C) cardiovascular
- D) muscular

Answer: C

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

9) The skeletal muscles that contract and shorten to move the bones form the _____ system.

- A) skeletal
- B) muscular
- C) endocrine
- D) reproductive

Answer: B

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

10) The _____ system rids the body of indigestible food residue in feces while the _____ system removes nitrogen-containing metabolic waste in urine.

- A) urinary; digestive
- B) cardiovascular; urinary
- C) digestive; urinary
- D) reproductive; digestive

Answer: C

Page Ref: 4, 7

Bloom's: 1-2: Remembering/Understanding

11) _____ refers to all of the chemical reactions in the body.

- A) Metabolism
- B) Homeostasis
- C) Hematopoiesis
- D) Irritability

Answer: A

Page Ref: 9

Bloom's: 1-2: Remembering/Understanding

12) What accounts for 60 to 80 percent of the body's weight?

- A) water
- B) carbon
- C) carbohydrates
- D) minerals

Answer: A

Page Ref: 9

Bloom's: 1-2: Remembering/Understanding

13) When our body temperature rises above 37°C or 98°F, a negative feedback mechanism will be triggered to lower the body temperature. As a result, our sweat glands release sweat to cool the body temperature. What part of the negative feedback mechanism is the sweat gland?

- A) stimulus
- B) effector
- C) receptor
- D) control center

Answer: B

Page Ref: 20

Bloom's: 1-2: Remembering/Understanding

14) The net effect of the effector is to shut off the original _____, or reduce its intensity, during the negative feedback mechanism to restore homeostasis.

- A) response
- B) receptor
- C) control center
- D) stimulus

Answer: D

Page Ref: 20

Bloom's: 1-2: Remembering/Understanding

15) When we imagine a person exhibiting anatomical position, the palms of the hands are assumed to be facing _____.

- A) to the side
- B) forward
- C) down
- D) behind

Answer: B

Page Ref: 12

Bloom's: 1-2: Remembering/Understanding

16) The body's ability to maintain stable internal conditions is referred to as _____.

- A) metabolism
- B) homeostasis
- C) irritability
- D) output

Answer: B

Page Ref: 19

Bloom's: 1-2: Remembering/Understanding

17) The sural region is _____ to the crural region.

- A) superior (proximal)
- B) inferior (distal)
- C) anterior
- D) posterior

Answer: D

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

18) Edna tore a ligament in the patellar region and anticipates having difficulty with her _____.

- A) wrist
- B) knee
- C) ankle
- D) elbow

Answer: B

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

19) The vertebral region is _____ to the sternal region.

- A) lateral
- B) dorsal (posterior)
- C) ventral (anterior)
- D) medial

Answer: B

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

20) The central region of the thoracic cavity containing the heart is called the _____.

- A) pleural cavity
- B) mediastinum
- C) quadrant
- D) visceral cavity

Answer: B

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

21) The right and left iliac (inguinal) regions are lateral to the _____ region.

- A) hypogastric (pubic)
- B) right hypochondriac
- C) right lumbar
- D) left hypochondriac

Answer: A

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

22) Andy sustained a baseball hit to his cranial cavity. Which bones were fractured?

- A) ribs
- B) vertebrae
- C) hips
- D) skull

Answer: D

Page Ref: 16-17

Bloom's: 1-2: Remembering/Understanding

23) The diaphragm creates a _____ section between the thoracic and abdominal body cavities.

- A) transverse (cross)
- B) median
- C) midsagittal
- D) frontal (coronal)

Answer: A

Page Ref: 15, 17

Bloom's: 1-2: Remembering/Understanding

24) The hypogastric (pubic) region is _____ to the umbilical region.

- A) superior
- B) inferior
- C) posterior
- D) medial

Answer: B

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

25) Ventral is a directional term synonymous with _____ in humans.

- A) posterior
- B) dorsal
- C) anterior
- D) medial

Answer: C

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

26) Which region is medial?

- A) right hypochondriac region
- B) epigastric region
- C) right lumbar region
- D) left lumbar region

Answer: B

Page Ref: 17, 18

Bloom's: 1-2: Remembering/Understanding

27) The navel is located in the _____ region of the abdominopelvic cavity.

- A) epigastric
- B) hypogastric
- C) umbilical
- D) right lumbar

Answer: C

Page Ref: 17, 18

Bloom's: 1-2: Remembering/Understanding

28) The two major body cavities are _____ and _____.

- A) abdominopelvic; thoracic
- B) ventral; dorsal
- C) cranial; dorsal
- D) thoracic; ventral

Answer: B

Page Ref: 16, 17

Bloom's: 1-2: Remembering/Understanding

29) The abdominopelvic and thoracic cavities are subdivisions of the _____ cavity.

- A) superior
- B) ventral
- C) dorsal
- D) pelvic

Answer: B

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

30) The orbital cavities house the _____.

- A) mouth
- B) nose
- C) eyes
- D) ears

Answer: C

Page Ref: 19

Bloom's: 1-2: Remembering/Understanding

31) The abdominopelvic cavity has _____ quadrants and _____ regions.

A) 6; 10

B) 9; 4

C) 4; 2

D) 4; 9

Answer: D

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

32) To perform heart surgery, an incision is made into the _____ cavity.

A) abdominal

B) pelvic

C) thoracic

D) cranial

Answer: C

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

33) The epigastric region is _____ to the right hypochondriac region of the abdominopelvic cavity.

A) medial

B) superior

C) dorsal

D) lateral

Answer: A

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

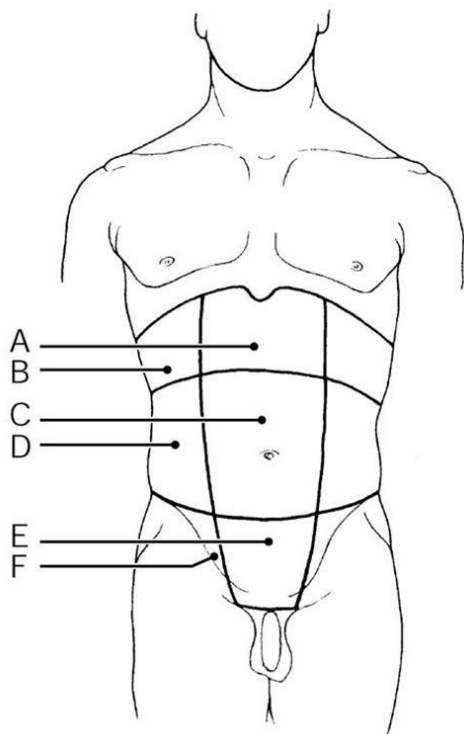


Figure 1.2

Using Figure 1.2, identify the following:

34) In which region is the stomach located?

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: A

Page Ref: 18

Bloom's: 1-2: Remembering/Understanding

35) Which region is the umbilical region?

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: C

Page Ref: 18

Bloom's: 1-2: Remembering/Understanding

36) Which region is lateral to the umbilical region?

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: D

Page Ref: 18

Bloom's: 1-2: Remembering/Understanding

37) Which region is associated with the lower ribs?

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: B

Page Ref: 18

Bloom's: 1-2: Remembering/Understanding

38) The hypogastric (pubic) region is _____.

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: E

Page Ref: 18

Bloom's: 1-2: Remembering/Understanding

39) Which region is situated inferior to the right lumbar region?

- A) Label A
- B) Label B
- C) Label C
- D) Label D
- E) Label E
- F) Label F

Answer: F

Page Ref: 18

Bloom's: 1-2: Remembering/Understanding

1.2 Multiple Choice Part II Questions

1) The study of the structure and shape of the body and its parts and their relationships to one another is called _____.

- A) anatomy
- B) physiology
- C) homeostasis
- D) negative feedback
- E) irritability

Answer: A

Page Ref: 1

Bloom's: 1-2: Remembering/Understanding

2) Which of the following activities represents a physiological study?

- A) making a section through the kidney to observe its interior
- B) examining the surface of a bone
- C) viewing muscle tissue through a microscope
- D) studying how the layers of the skin are organized
- E) observing how the heart contracts to pump blood

Answer: E

Page Ref: 2

Bloom's: 1-2: Remembering/Understanding

3) Which of the following levels of organization is inclusive of all others?

- A) chemical level
- B) tissue level
- C) organ level
- D) organ system level
- E) cellular level

Answer: D

Page Ref: 2

Bloom's: 1-2: Remembering/Understanding

4) Which of the following represents the chemical level of structure in the human body?

- A) organs
- B) tissues
- C) atoms
- D) cells
- E) organ systems

Answer: C

Page Ref: 2

Bloom's: 1-2: Remembering/Understanding

5) The major organs of the cardiovascular system are the _____.

- A) skeletal muscles
- B) pharynx, larynx, trachea, bronchi and lungs
- C) bones, cartilages, ligaments, and joints
- D) brain, spinal cord, nerves, sensory receptors
- E) heart and blood vessels

Answer: E

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

6) The main function of the respiratory system is to _____.

- A) transport oxygen, nutrients, and wastes to and from body cells and tissues
- B) produce sperm and eggs
- C) supply the body with oxygen and remove carbon dioxide
- D) control body activities through hormones released into the blood
- E) break down food and deliver the products to the blood for dispersal

Answer: C

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

7) The system that controls and coordinates the body using hormones is the _____.

- A) integumentary system
- B) skeletal system
- C) nervous system
- D) endocrine system
- E) digestive system

Answer: D

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

8) The muscular system consists of the _____.

- A) skeletal muscles
- B) muscles of the heart
- C) muscles in the walls of hollow organs
- D) skeletal muscles and the muscles of the heart
- E) muscles of the heart and those in the walls of the hollow organs

Answer: A

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

9) Which two organ systems include the pancreas?

- A) digestive and endocrine systems
- B) urinary and respiratory systems
- C) reproductive and urinary systems
- D) digestive and respiratory systems
- E) endocrine and respiratory systems

Answer: A

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

10) Which system covers the external surface of the body and protects deeper tissues?

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

Answer: B

Page Ref: 3

Bloom's: 1-2: Remembering/Understanding

11) What is the major function of the lymphatic system?

- A) return leaked fluids back to the cardiovascular system
- B) produce offspring
- C) eliminate nitrogen-containing metabolic wastes from the body
- D) break down food into absorbable units
- E) secrete hormones to regulate body processes such as growth and reproduction

Answer: A

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

12) What are two organ systems that are involved in the excretion of wastes from the body?

- A) digestive and urinary
- B) cardiovascular and skeletal
- C) muscular and skeletal
- D) endocrine and nervous
- E) cardiovascular and nervous

Answer: A

Page Ref: 4, 7

Bloom's: 1-2: Remembering/Understanding

13) Which of the following systems is matched most accurately to the life function it provides?

- A) integumentary system - movement
- B) nervous system - excretion
- C) muscular system - maintaining boundaries
- D) nervous system - responsiveness
- E) respiratory system - digestion

Answer: D

Page Ref: 8, 9

Bloom's: 1-2: Remembering/Understanding

14) Which of the following is NOT considered a nutrient?

- A) carbohydrates
- B) proteins
- C) water
- D) minerals
- E) vitamins

Answer: C

Page Ref: 9

Bloom's: 1-2: Remembering/Understanding

15) What are the three main components of a homeostatic control system?

- A) receptor, responder, effector
- B) receptor, stimulus, effector
- C) stimulus, control center, input
- D) receptor, control center, effector
- E) control center, responder, output

Answer: D

Page Ref: 19

Bloom's: 1-2: Remembering/Understanding

16) Which of the following elements of a control system detects a change?

- A) control center
- B) stimulus
- C) effector
- D) receptor
- E) efferent pathway

Answer: D

Page Ref: 19

Bloom's: 1-2: Remembering/Understanding

17) Milk production during breastfeeding is increased by the suckling of a newborn from his mother's nipple. This type of feedback mechanism best describes _____.

- A) negative feedback
- B) an abnormal physiological mechanism
- C) homeostatic imbalance
- D) positive feedback
- E) both negative and positive feedback

Answer: D

Page Ref: 20

Bloom's: 1-2: Remembering/Understanding

18) A body part that is considered lateral is assumed to be _____.

- A) toward the head end of the body
- B) toward or at the front of the body
- C) away from the midline of the body
- D) close to the origin of a body part
- E) toward the midline of the body

Answer: C

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

19) When correctly situated in anatomical position, where are your feet in relation to your knees?

- A) proximal
- B) medial
- C) superior
- D) distal
- E) deep

Answer: D

Page Ref: 12, 13

Bloom's: 1-2: Remembering/Understanding

20) Which of the following orientation and directional terms have the same meaning (in humans)?

- A) superior and caudal
- B) inferior and cranial
- C) inferior and cephalic
- D) anterior and ventral
- E) anterior and dorsal

Answer: D

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

21) Which directional term best describes the location of the human nose?

- A) distal
- B) posterior
- C) inferior
- D) anterior
- E) lateral

Answer: D

Page Ref: 13, 14

Bloom's: 1-2: Remembering/Understanding

22) Jerome plays football and broke a bone in the tarsal region. This region is in the _____.

- A) calf
- B) thigh
- C) groin
- D) ankle
- E) wrist

Answer: D

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

23) Sudie works as an administrative assistant and has developed carpal tunnel syndrome. What part of her body is affected?

- A) elbow
- B) wrist
- C) shoulder
- D) neck
- E) lower back

Answer: B

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

24) In reference to the relationship between the patellar and popliteal regions, which of the following statements is correct?

- A) The patellar region is superior to the popliteal region.
- B) The patellar region is proximal to the popliteal region.
- C) The patellar region is distal to the popliteal region.
- D) The patellar region is lateral to the popliteal region.
- E) The patellar region is anterior to the popliteal region.

Answer: E

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

25) Which body cavity is included in the dorsal cavity?

- A) thoracic cavity
- B) spinal cavity
- C) nasal cavity
- D) orbital cavity
- E) abdominopelvic cavity

Answer: B

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

26) The lungs and heart are situated in the _____ body cavity.

- A) dorsal
- B) spinal
- C) thoracic
- D) cranial
- E) abdominopelvic

Answer: C

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

27) Which of these body regions is located on the posterior body surface?

- A) antebrachial
- B) umbilical
- C) gluteal
- D) plantar
- E) pubic

Answer: C

Page Ref: 14-15

Bloom's: 1-2: Remembering/Understanding

28) The region that refers to the fingers and toes is the _____.

- A) carpal region
- B) digital region
- C) antebrachial region
- D) brachial region
- E) axillary region

Answer: B

Page Ref: 14-15

Bloom's: 1-2: Remembering/Understanding

29) The dorsal body cavity houses the _____.

- A) urinary and reproductive organs
- B) heart and lungs
- C) digestive and reproductive organs
- D) tongue
- E) spinal cord and brain

Answer: E

Page Ref: 17-18

Bloom's: 1-2: Remembering/Understanding

30) Which region is associated with the lower limb?

- A) brachial
- B) antebrachial
- C) axillary
- D) popliteal
- E) sacral

Answer: D

Page Ref: 14-15

Bloom's: 1-2: Remembering/Understanding

31) Which of these regions is NOT associated with the ventral (anterior) portion of the head?

- A) buccal
- B) oral
- C) orbital
- D) occipital
- E) nasal

Answer: D

Page Ref: 14-15

Bloom's: 1-2: Remembering/Understanding

32) The surgeon created an opening in the chest during surgery. The incision was made along a plane that equally separated the right and left halves of the thoracic cavity. This section is known as a(n) _____.

- A) median (midsagittal) section
- B) frontal section
- C) transverse section
- D) horizontal section
- E) parasagittal section

Answer: A

Page Ref: 15

Bloom's: 1-2: Remembering/Understanding

33) Which type of section could be used to separate the thoracic cavity from the abdominopelvic cavity?

- A) coronal
- B) sagittal
- C) dorsal
- D) ventral
- E) transverse

Answer: E

Page Ref: 15, 17

Bloom's: 1-2: Remembering/Understanding

34) Which cavity houses the mediastinum?

- A) thoracic
- B) pelvic
- C) abdominal
- D) cranial
- E) spinal

Answer: A

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

35) Which set of regions in the abdominopelvic cavity is medial?

- A) umbilical, right lumbar, and left lumbar regions
- B) epigastric, umbilical, and hypogastric (pubic) regions
- C) iliac (inguinal), lumbar, and hypogastric (pubic) regions
- D) epigastric, right, and left hypochondriac regions
- E) right and left iliac (inguinal), and hypogastric (pubic) regions

Answer: B

Page Ref: 17-18

Bloom's: 3-4: Applying/Analyzing

36) The thoracic cavity is _____ to the abdominopelvic cavity.

- A) inferior
- B) lateral
- C) proximal
- D) superior
- E) dorsal

Answer: D

Page Ref: 17

Bloom's: 3-4: Applying/Analyzing

37) Which regions of the abdominopelvic cavity house the lower ribs?

- A) right and left iliac (inguinal) regions
- B) right and left lumbar regions
- C) right and left pubic regions
- D) right and left hypochondriac regions
- E) right and left inguinal regions

Answer: D

Page Ref: 18

Bloom's: 1-2: Remembering/Understanding

38) Four quadrants and nine regions further subdivide the _____ body cavity.

- A) abdominopelvic
- B) thoracic
- C) pelvic
- D) cranial
- E) spinal

Answer: A

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

1.3 True/False Questions

1) Cells are the building blocks of all matter.

Answer: FALSE

Page Ref: 2

Bloom's: 1-2: Remembering/Understanding

2) Tissues are made up of different types of organs.

Answer: FALSE

Page Ref: 3

Bloom's: 1-2: Remembering/Understanding

3) The adrenals, pancreas, thyroid, and parathyroids are glands of the endocrine system.

Answer: TRUE

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

4) The cardiovascular system delivers oxygen, nutrients, hormones, and other substances to, and picks up wastes such as carbon dioxide from, cells near sites of exchange.

Answer: TRUE

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

5) Responsiveness, or irritability, is the major responsibility of the skeletal system.

Answer: FALSE

Page Ref: 4

Bloom's: 1-2: Remembering/Understanding

6) Most homeostatic control mechanisms are negative feedback mechanisms.

Answer: TRUE

Page Ref: 19

Bloom's: 1-2: Remembering/Understanding

7) Survival needs include nutrients, oxygen, water, and appropriate temperature and atmospheric pressure.

Answer: TRUE

Page Ref: 9

Bloom's: 1-2: Remembering/Understanding

8) In anatomical position, a person is assumed to be standing erect.

Answer: TRUE

Page Ref: 12

Bloom's: 1-2: Remembering/Understanding

9) The regional term pedal refers to the foot.

Answer: TRUE

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

10) *Proximal* means farther from the origin of a body part.

Answer: FALSE

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

11) The hypogastric (pubic) region is directly superior to the umbilical region.

Answer: FALSE

Page Ref: 18

Bloom's: 1-2: Remembering/Understanding

12) The thoracic cavity is separated from the abdominopelvic cavity by the diaphragm.

Answer: TRUE

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

13) The spinal cavity is part of the ventral body cavity.

Answer: FALSE

Page Ref: 16-17

Bloom's: 1-2: Remembering/Understanding

14) Transverse or cross sections divide the body into anterior and posterior parts.

Answer: FALSE

Page Ref: 15

Bloom's: 1-2: Remembering/Understanding

15) There is no physical structure that separates the abdominal cavity from the pelvic cavity.

Answer: TRUE

Page Ref: 17

Bloom's: 1-2: Remembering/Understanding

1.4 Matching Questions

Match the following:

- A) farther from the origin of a body part or the point of attachment of a limb to the body trunk
- B) toward the midline
- C) external
- D) above
- E) internal
- F) anterior
- G) behind
- H) close to the origin of the body part or the point of attachment of a limb to the body trunk
- I) away from the midline

1) Superior

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

2) Dorsal

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

3) Lateral

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

4) Deep

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

5) Distal

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

6) Medial

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

7) Superficial

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

8) Proximal

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

9) Ventral

Page Ref: 13

Bloom's: 1-2: Remembering/Understanding

Answers: 1) D 2) G 3) I 4) E 5) A 6) B 7) C 8) H 9) F

Match the following:

A) leg

B) arm

C) forearm

D) hip

E) groin

F) curve of shoulder

G) thigh

H) calf

I) armpit

J) ankle

10) Axillary

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

11) Tarsal

Page Ref: 15

Bloom's: 1-2: Remembering/Understanding

12) Deltoid

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

13) Antebrachial

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

14) Femoral

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

15) Sural

Page Ref: 15

Bloom's: 1-2: Remembering/Understanding

16) Coxal

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

17) Inguinal

Page Ref: 15

Bloom's: 1-2: Remembering/Understanding

18) Brachial

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

19) Crural

Page Ref: 14

Bloom's: 1-2: Remembering/Understanding

Answers: 10) I 11) J 12) F 13) C 14) G 15) H 16) D 17) E 18) B 19) A

Match the following organ systems with their functions:

A) digestive system

B) integumentary system

C) lymphatic system

D) muscular system

E) endocrine system

F) urinary system

20) Glands secrete hormones to regulate other structures

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Bloom's: 1-2: Remembering/Understanding

21) Breaks down food for distribution by blood to the body's cells

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22) Movement of the body as a whole

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23) Removes nitrogen-containing wastes from the blood and disposes of them in the urine

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24) Picks up fluids leaked from blood vessels and returns it to blood

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25) Excretes salts in perspiration and helps regulate body temperature

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Answers: 20) E 21) A 22) D 23) F 24) C 25) B

1.5 Essay Questions

1) Explain the relationship between anatomy and physiology.

Answer: Anatomy is the study of the structure and shape of the body and its parts and their relationships to one another. Physiology is the study of how the body and its parts work or function. Structure (anatomy) determines what functions (physiology) can take place in the human body.

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Bloom's: 1-2: Remembering/Understanding

2) List, and briefly define, the human body's organization levels from smallest to largest.

Answer:

1. chemical level:

- a. atoms are the basic building blocks of matter
- b. molecules are units formed by atoms combining

2. cellular level: cells are the smallest living unit in living organisms

3. tissue level: tissues are groupings of cells performing a common function

4. organ level: an organ is a structure consisting of two or more tissue types

5. organ system level: an organ system describes a group of organs functioning cooperatively for a common purpose

6. organism level: a human organism consists of all of the organ systems of the body working together to promote healthy functioning (homeostasis)

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Bloom's: 1-2: Remembering/Understanding

3) Identify the organ system that bears the major responsibility for responsiveness, one of the necessary life functions, and briefly explain the system's role in the body.

Answer: The nervous system bears the major responsibility for responsiveness (or irritability), the ability to sense changes (stimuli) in the environment and then react to them. Nerve cells are highly irritable and can communicate rapidly via electrical and is thus the fast-acting control system of the body. This system responds to internal and external changes by activating appropriate muscles and glands.

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4) List and explain the five survival needs of humans.

Answer:

1. Nutrients include carbohydrates, proteins, fats, and vitamins and minerals, which are taken in via the diet for energy and cell building.
2. Oxygen is required to release energy from food.
3. Water accounts for 60 to 80 percent of the body weight, and provides the basis for various body fluids.
4. Normal body temperature should be around 37°C or 98°F. When body temperature becomes too high or too low, physiological activities cease, primarily because chemical reactions are affected.
5. Appropriate atmospheric pressure is the force exerted on the surface of the body by the weight of air; it is essential for normal operation of the respiratory system and breathing.

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5) In your clinical rotations, you watch as an ultrasound is performed on the pelvic region of a pregnant woman. The technician presses the ultrasound wand against the patient's skin inferior to the umbilical region. Your classmate mentions that the image produced is a transverse plane, but you disagree. Explain to your classmate what type of plane was likely used.

Answer: The ultrasound image produced was from a frontal, or coronal, plane, not a transverse plane. The image created an anterior view of the internal organs of the abdomen rather than an inferior view of the abdomen. Transverse planes are created along horizontal planes and separate the body into superior and inferior parts while frontal planes divide the body into anterior and posterior parts.

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Bloom's: 3-4: Applying/Analyzing

6) Identify the two dorsal body cavities, and state their locations and the organs contained therein.

Answer:

1. Cranial cavity—the superior posterior space inside the bony skull that houses the brain.
2. Spinal cavity—the inferior posterior space inside the bony vertebral column that houses the spinal cord.

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Bloom's: 1-2: Remembering/Understanding

7) You are preparing to give an injection to a patient in his deltoid region. Explain specifically where you will administer this injection.

Answer: The deltoid region is a visible landmark on the anterior body surface. The injection will be administered into the area formed by the large deltoid muscle and the curve of the shoulder.

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Bloom's: 1-2: Remembering/Understanding

8) Explain how the roles of the receptor and effector differ in the negative feedback mechanism to maintain homeostasis.

Answer: In the negative feedback mechanism, the receptor is a type of sensor that monitors and responds to changes, called stimuli, in the environment. The receptor sends input information to a control center in the feedback loop. The control center analyzes the information it receives and determines an appropriate course of action. The effector provides the means for the control center's response (output) to the stimulus. The results of the response then feed back to influence the stimulus.

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Bloom's: 1-2: Remembering/Understanding

9) Explain the terms *distal* and *proximal* using an example.

Answer: The term distal means farther from the origin of a body part or point or the attachment of a limb to the trunk. The *ankle is distal to the knee* means the ankle is further from the leg's attachment to the trunk than the knee. The term proximal means closer to the origin of a body part of the point of attachment of a limb to the trunk. The *knee is proximal to the ankle* means the knee is closer to the leg's attachment to the trunk than the ankle.

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Bloom's: 1-2: Remembering/Understanding

10) Describe anatomical position. Explain why anatomical position is used.

Answer: Anatomical position is defined as standing erect, feet parallel,, the arms hanging at the sides with the palms facing forward. Anatomical position is used because it is a standard position; it also helps us to avoid confusion. Additionally, anatomical position is a reference point that helps us accurately describe body parts and position no matter the actual position the body happens to be in.

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Bloom's: 1-2: Remembering/Understanding

11) Explain homeostasis as it relates to the human body.

Answer: Homeostasis is the body's ability to maintain relative stable internal conditions even though the outside world is continuously changing. Homeostasis is a dynamic state of equilibrium, or a balance in which internal conditions change and vary but always within relatively narrow limits. The body demonstrates homeostasis when its needs are being adequately met and it is functioning smoothly.

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