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

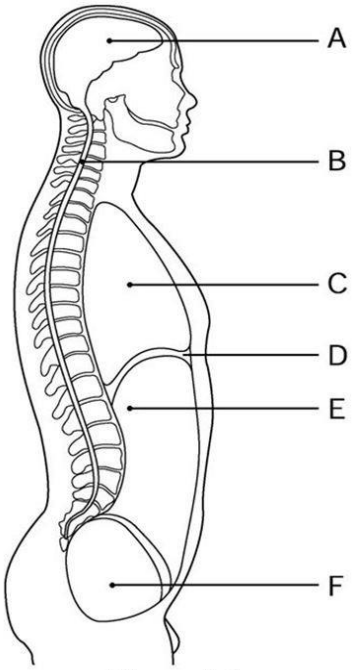


Figure 1.1

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

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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

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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
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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

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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
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Bloom's: 1-2: Remembering/Understanding

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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

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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

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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
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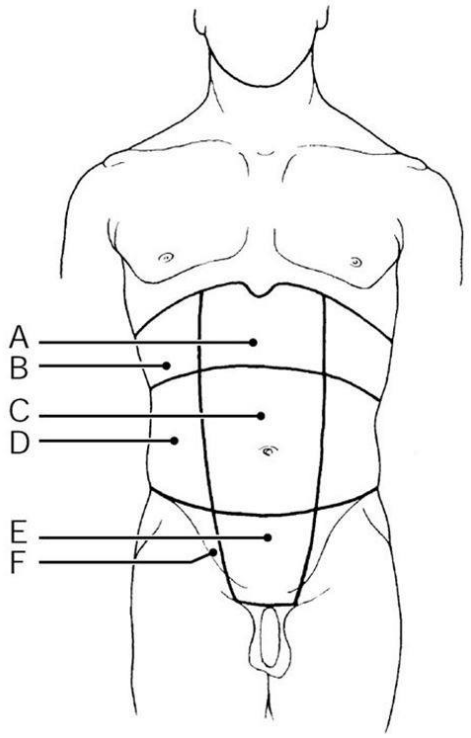


Figure 1.2

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
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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
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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
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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
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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
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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
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Bloom's: 1-2: Remembering/Understanding

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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

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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
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Bloom's: 1-2: Remembering/Understanding

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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

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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

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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

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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

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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

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15) There is no physical structure that separates the abdominal cavity from the pelvic cavity.
Answer: TRUE
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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
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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
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11) Tarsal
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12) Deltoid
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13) Antebrachial
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14) Femoral
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15) Sural
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16) Coxal
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17) Inguinal
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18) Brachial
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19) Crural
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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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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.
Page Ref: 1-2
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)
Page Ref: 2-3
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.
Page Ref: 9, 12
Bloom's: 1-2: Remembering/Understanding

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.
Page Ref: 15, 17
Bloom's: 1-2: Remembering/Understanding

7) You are preparing to given 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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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.
Page Ref: 19
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.
Page Ref: 13
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.
Page Ref: 12
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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