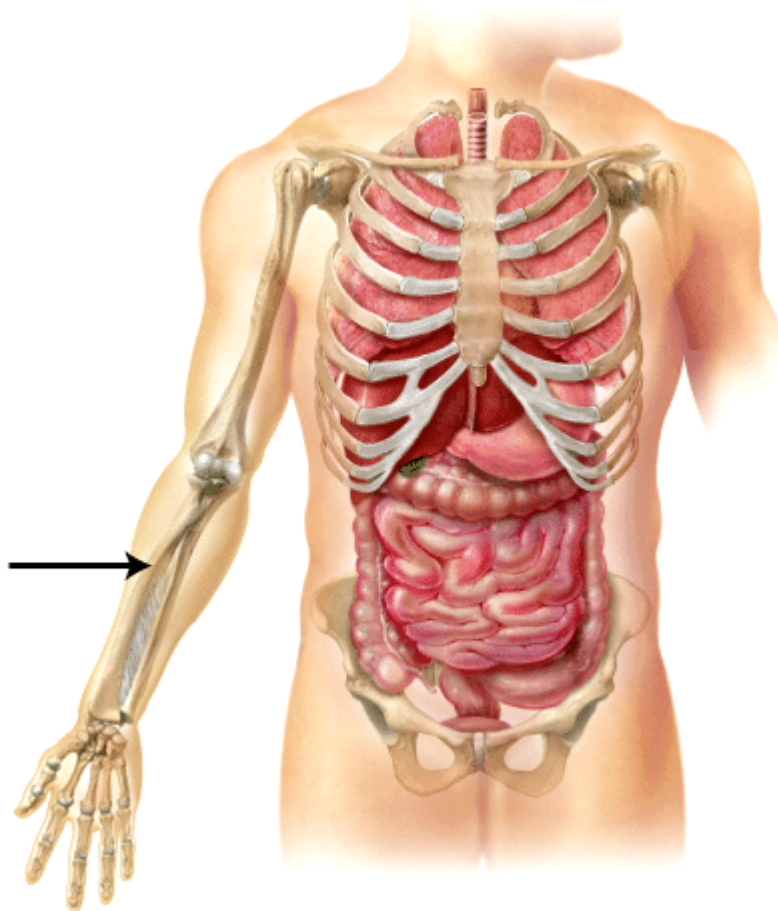


1. The spleen, thymus, and tonsils are all organs that function within the:
- A) Urinary system
 - B) Digestive system
 - C) Endocrine system
 - D) Lymphatic system
 - E) Cardiovascular system

Ans: D Difficulty: easy

2. Which of the following statements best describes the location of this bone anatomically?



- A) It is proximal to the carpal region and inferior to the manual region.
- B) It is the lateral bone of the antebrachium.
- C) It is located in the crural region.
- D) It is inferior to the femoral region and superior to the tarsal region.
- E) It is distal to the antecubital region, and is the medial bone of the crural region.

Ans: B Difficulty: medium

3. A good example of a positive feedback mechanism would be:

- A) Enhancement of labor contraction by oxytocin
- B) Blood calcium regulation
- C) Blood pressure regulation
- D) Blood glucose regulation
- E) Body temperature regulation

Ans: A Difficulty: medium

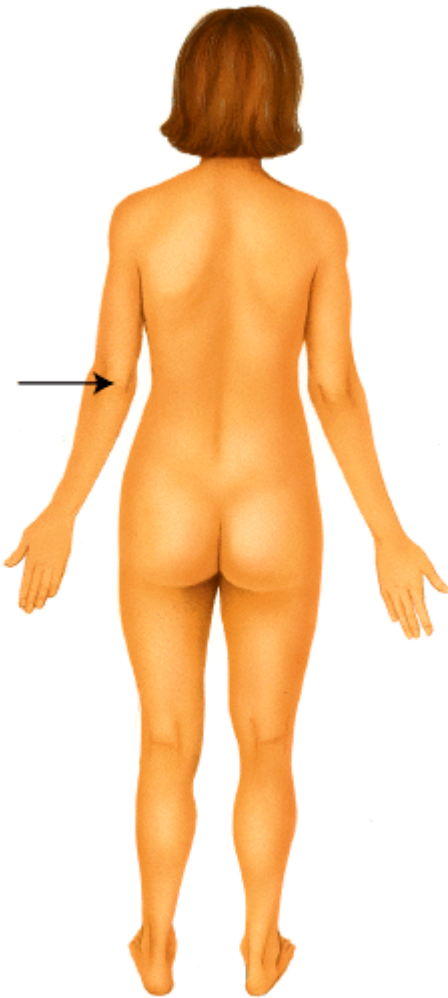
4. Along which of the following body planes has this section been made?



- A) Oblique B) Frontal C) Sagittal D) Coronal E) Transverse

Ans: C Difficulty: medium

5. Which of the following anatomical terms best describes the indicated region?



- A) Popliteal B) Mental C) Crural D) Olecranal E) Occipital
Ans: D Difficulty: medium

6. This component of a feedback system provides input to the control center.

- A) Effector B) Receptor C) Brain D) Stimulus E) Efferent
Ans: B Difficulty: easy

7. A 24 year old female presents to the ER complaining of the following symptoms:
- Acute lower right quadrant abdominal pain rated at an 9 out of 10 on the pain scale (10 being the worst pain ever!), that she characterizes as “burning and stabbing” in quality
 - Feelings of nausea, dizziness and weakness.
 - No difficulty breathing

As her physician, you notice that she exhibits the following signs:

- A very high fever (104°F)
- High blood pressure (146/90)
- A rapid heart rate (110 beats per minute)
- Clear lung sounds- although her respiratory rate is rapid.

Which of the following choices is the most likely the correct diagnosis?

- A) Hypoglycemia (low blood sugar)
- B) A pulmonary embolus (blood clot in the lungs)
- C) Acute appendicitis
- D) Meningitis
- E) Pneumonia

Ans: C Difficulty: hard

8. This component of a feedback system receives output from the control center.

- A) Effector
- B) Stimulus
- C) Receptor
- D) Central Nervous System
- E) Afferent

Ans: A Difficulty: easy

9. The study of structure is called:

- A) Physiology
- B) Histology
- C) Embryology
- D) Biology
- E) Anatomy

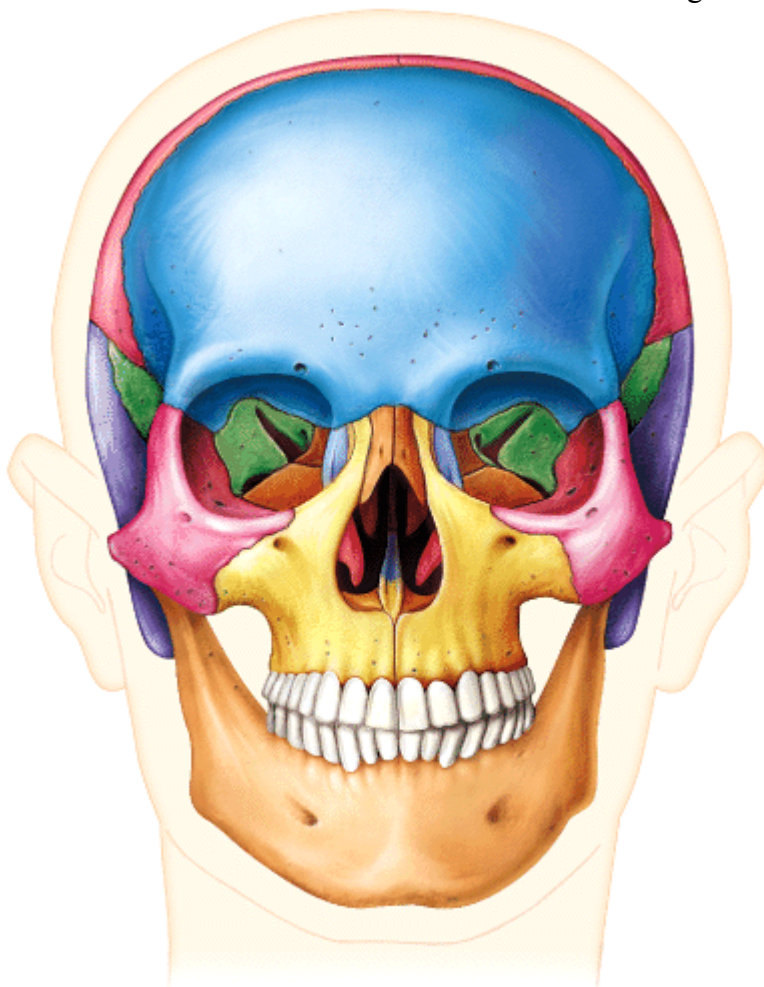
Ans: E Difficulty: easy

10. The study of function is called:

- A) Physiology
- B) Biology
- C) Histology
- D) Embryology
- E) Anatomy

Ans: A Difficulty: easy

11. Which term best describes the view shown in this image of the human skull?



- A) Anterior B) Medial C) Posterior D) Ipsilateral E) Lateral
Ans: A Difficulty: medium

12. Which of the following choices is NOT considered to be a basic life process?

- A) Reproduction D) Responsiveness
B) Metabolism E) Pathology
C) Growth

Ans: E Difficulty: easy

13. The basic structural and functional units of an organism are:

- A) Molecules B) Cells C) Tissues D) Protons E) Organs

Ans: B Difficulty: easy

14. Organs:

- A) function independently from one another.
- B) are made of a single tissue type.
- C) are the smallest living units in the human body.
- D) include examples such as the bones, the skin, the heart and the lungs.
- E) can only contribute to the function of a single organ system, such as the stomach to the digestive system.

Ans: D Difficulty: medium

15. The pancreas is an organ that plays a role in the:

- A) Digestive and urinary systems.
- B) Respiratory and digestive systems.
- C) Endocrine and lymphatic systems.
- D) Respiratory and lymphatic systems.
- E) Endocrine and digestive systems.

Ans: E Difficulty: medium

16. A group of cells with similar emergent functional properties is defined as a(n):

- A) Organism
- B) Compound
- C) Tissue
- D) Organ
- E) Molecule

Ans: C Difficulty: easy

17. The sum of all chemical reactions that occur in the body is known as:

- A) Metabolism
- B) Catalyst
- C) Anabolism
- D) Catabolism
- E) Homeostasis

Ans: A Difficulty: medium

18. The term brachial refers to the:

- A) chin
- B) fingers
- C) arm
- D) forearm
- E) calf

Ans: C Difficulty: easy

19. The term sacral refers to the:

- A) chin
- B) area between the shoulder blades.
- C) area at the base of the skull.
- D) area inferior to the lumbar region and medial to the coxae.
- E) calf

Ans: D Difficulty: medium

20. The term mental refers to the:

- A) cranium
- B) fingers
- C) chin
- D) ear
- E) calf

Ans: C Difficulty: easy

21. The term otic refers to the:

- A) eye
- B) fingers
- C) chin
- D) ear
- E) calf

Ans: D Difficulty: medium

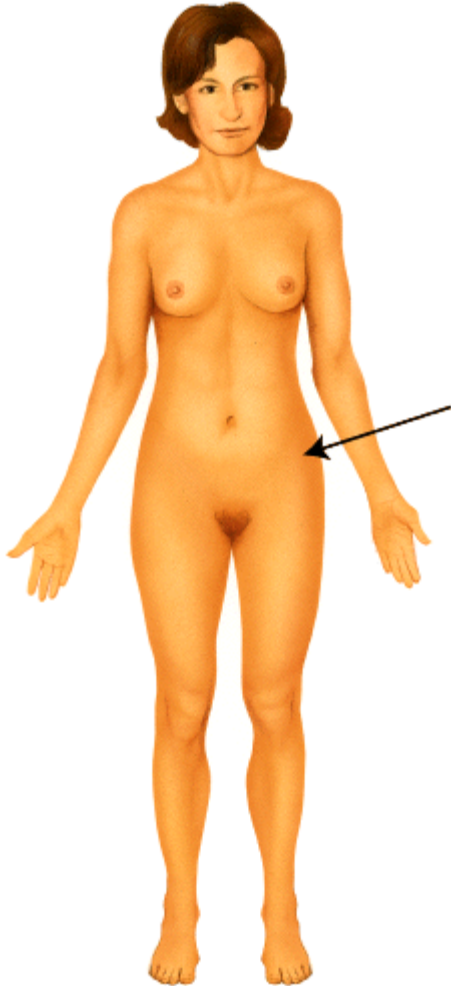
22. The mental region is _____ to the orbital region.
A) Inferior B) Deep C) Superficial D) Lateral E) Contralateral
Ans: A Difficulty: easy
23. The carpal region is _____ to the antebrachium.
A) Proximal B) Superior C) Deep D) Distal E) Medial
Ans: D Difficulty: medium
24. The pancreas and liver are organs that are part of the _____ system.
A) Integumentary B) Lymphatic C) Digestive D) Reproductive E) Skeletal
Ans: C Difficulty: medium
25. Which of the following organs would NOT be visible if the body was sectioned along a mid-sagittal plane?
A) Heart B) Adrenal gland C) Small intestine D) Liver E) Uterus
Ans: B Difficulty: medium
26. Which of the following is the term used to describe the body's ability to detect and respond to changes in the internal or external environment?
A) Responsiveness D) Metabolism
B) Reproduction E) Catabolism
C) Differentiation
Ans: A Difficulty: easy
27. The term sural refers to the:
A) skin B) fingers C) chin D) ear E) calf
Ans: E Difficulty: medium
28. Which of the following is a TRUE statement concerning the selected feedback mechanism in a healthy individual?
A) Positive feedback mechanisms are stable, and the most common means to maintain homeostasis in the body.
B) Blood glucose levels are regulated by positive feedback mechanisms.
C) Elevated blood sugar levels (hyperglycemia) result in the release of glucagon from the pancreas, which stimulates the breakdown of glycogen into glucose—resulting in more glucose in the bloodstream.
D) Blood pressure regulation is a good example of positive feedback, because the response to the initial stimulus increases the stimulus.
E) Stretch receptors in the cervix, stimulated by the fetus during labor and delivery, result in the release of a hormone that stimulates more forceful uterine contractions and additional “stretch” or dilation of the cervix.
Ans: E Difficulty: hard

29. The thoracic region is _____ to the inguinal region.

- A) Superior B) Deep C) Distal D) Lateral E) Supine

Ans: A Difficulty: medium

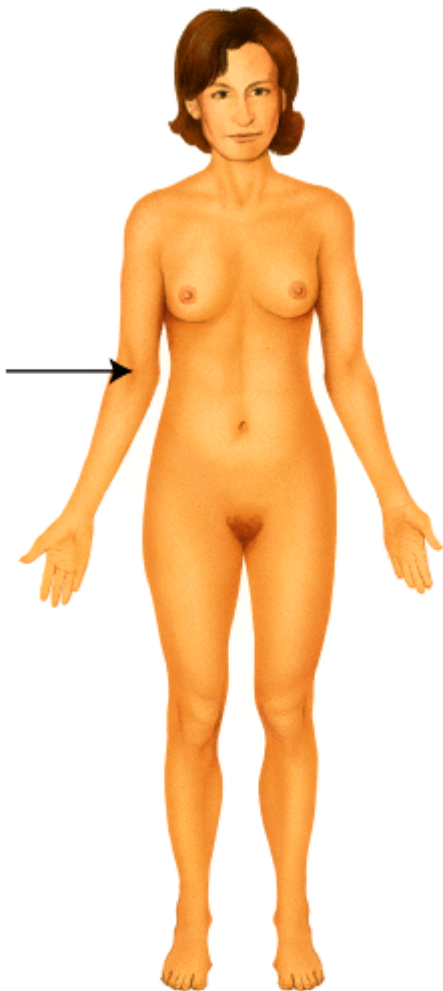
30. Which of the following anatomical terms best describes the indicated region?



- A) Mental B) Popliteal C) Antecubital D) Olecranal E) Coxal

Ans: E Difficulty: medium

31. Which of the following anatomical terms best describes the indicated region?



- A) Otic B) Popliteal C) Antecubital D) Olecranal E) Occipital
Ans: C Difficulty: medium

32. Which of the following terms best describes the location of the stomach relative to the pancreas?

- A) Deep B) Serous C) Distal D) Transverse E) Anterior
Ans: E Difficulty: medium

33. Which of the following statements is TRUE?

- A) The cranial cavity houses the brain and is lined by the pleural membranes.
B) The pericardial cavity lies within the superior portion of the mediastinum.
C) The pleural cavities are lined by a membrane called the parietal peritoneum.
D) The visceral layer of a serous membrane covers the organ it protects.
E) The superior border of the pelvic cavity is the diaphragm.

Ans: D Difficulty: medium

34. The name for the serous membrane lining the cavity which houses the lungs is the:

- _____.
- | | |
|------------------------|--------------------|
| A) dura mater | D) parietal pleura |
| B) parietal peritoneum | E) visceral pleura |
| C) visceral peritoneum | |

Ans: D Difficulty: medium

35. The name for the serous membrane lining the cavity which houses the liver is the:

- _____.
- | | |
|-------------------------|-------------------------|
| A) parietal pericardium | D) parietal pleura |
| B) parietal peritoneum | E) parietal mediastinum |
| C) dura mater | |

Ans: B Difficulty: medium

36. An example of a retroperitoneal organ is the:

- | | |
|-------------|-----------------------------------------|
| A) pancreas | D) stomach |
| B) liver | E) lower 2/3rd's of the small intestine |
| C) heart | |

Ans: A Difficulty: medium

37. In which cavity is the brain located?

- | | |
|-----------------------|---------------------|
| A) Cranial cavity | D) Pelvic cavity |
| B) Mediastinal cavity | E) Vertebral cavity |
| C) Pleural cavity | |

Ans: A Difficulty: easy

38. In which cavity is the spleen located?

- | | |
|-----------------------|---------------------|
| A) Cranial cavity | D) Pelvic cavity |
| B) Mediastinal cavity | E) Abdominal cavity |
| C) Pleural cavity | |

Ans: E Difficulty: easy

39. Which of the following organs is NOT retroperitoneal?

- | | |
|------------------|--------------------------------|
| A) pancreas | D) duodenum of small intestine |
| B) adrenal gland | E) kidney |
| C) stomach | |

Ans: C Difficulty: medium

40. An individual has been in a traumatic motor vehicle accident and has been ejected from the vehicle because they were not wearing their seatbelt. The person is conscious, and complaining of left upper quadrant pain. When you visualize the area, it has some significant bruising and is painful to palpation. Which of the following organs are located in that area and might be of concern?

A) appendix B) urinary bladder C) brain D) spleen E) gall bladder

Ans: D Difficulty: medium

41. An individual has been in a traumatic motor vehicle accident and has been ejected from the vehicle because they were not wearing their seatbelt. The person is unconscious, pulseless, and apenic (not breathing). You see some significant lacerations in the cranial region, and the bleeding is profuse. You also notice some clear fluid leaking from the otic region. Where is the otic region?

A) ear B) base of the skull C) eye D) nose E) mouth

Ans: A Difficulty: medium

42. This is a change in body function that can be measured objectively.

A) Symptom B) Disorder C) Disease D) X-ray E) Sign

Ans: E Difficulty: easy

43. This plane divides the body into anterior and posterior portions.

A) Oblique B) Frontal C) Horizontal D) Transverse E) Midsagittal

Ans: B Difficulty: easy

44. Which cavity would enclose the heart?

A) Cranial cavity D) Abdominal cavity
B) Mediastinal cavity E) Pleural cavity
C) Vertebral cavity

Ans: B Difficulty: medium

45. A female is having pain in her hypogastric region. Which organ is NOT located in this region?

A) Uterus D) Large intestines
B) Spleen E) Small intestines
C) Urinary bladder

Ans: B Difficulty: medium

46. The function of serous fluid is to:

- A) Protect the central nervous system
- B) Separate the abdominal and pelvic cavities
- C) Reduce friction between organs
- D) Circulate respiratory gases
- E) Carry nervous impulses

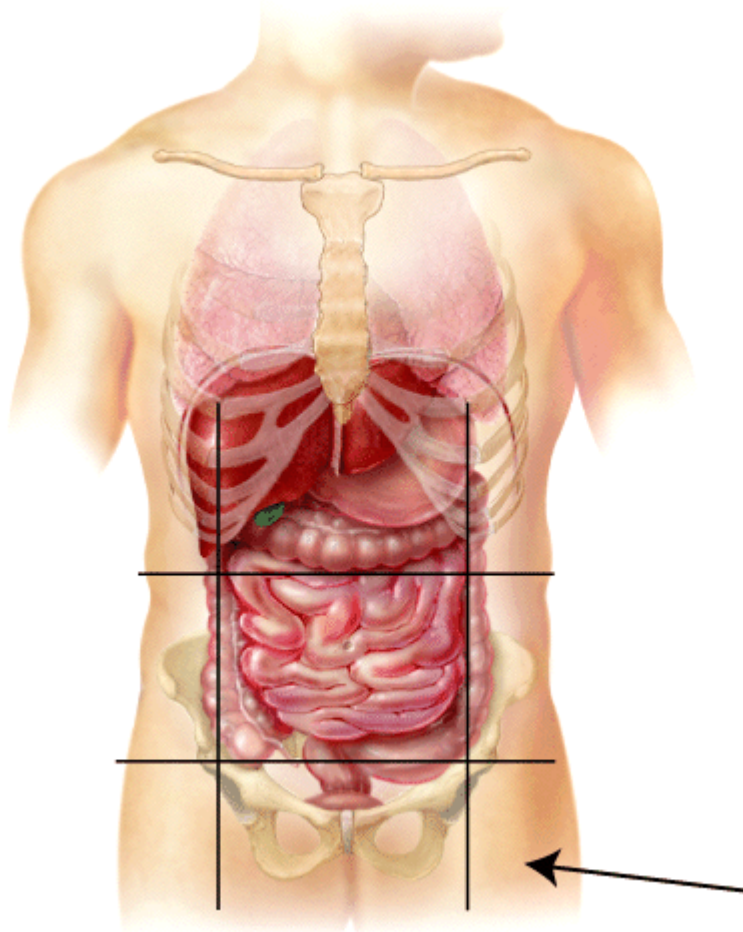
Ans: C Difficulty: medium

47. Choose the directional term that would make the sentence correct: The sternum is _____ to the heart.

- A) Deep B) Anterior C) Inferior D) Distal E) Transverse

Ans: B Difficulty: medium

48. What is the name of this region?



- A) Left hypochondriac
- B) Right Lumbar
- C) Left inguinal
- D) Hypogastric
- E) Mental

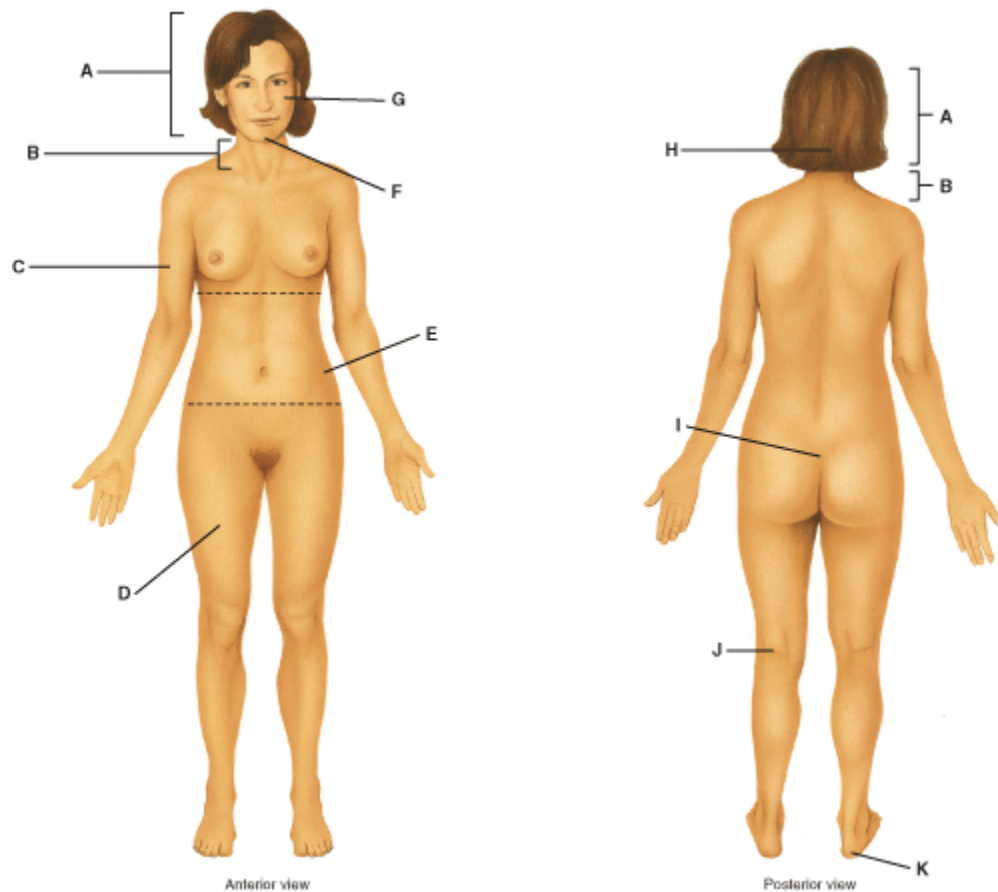
Ans: C Difficulty: medium

49. A transverse plane will section a body or organ into
A) Anterior and posterior D) Unequal left and right sides
B) Left and right E) Proximal and distal
C) Superior and inferior
Ans: C Difficulty: medium
50. This is the study of the functions of body structures.
A) Anatomy B) Physiology C) Dissection D) Histology E) Immunology
Ans: B Difficulty: easy
51. This is defined as a group of cells with similar structure and function.
A) Tissue B) Organ C) Molecules D) Compounds E) Organism
Ans: A Difficulty: easy
52. This is the process of breaking down larger substances into simpler ones.
A) Metabolism B) Anabolism C) Catabolism D) Auscultation
E) Palpation
Ans: C Difficulty: hard
53. This is the regulation of body conditions within normal limits.
A) Palpation B) Percussion C) Homeostasis D) Autopsy E) Histology
Ans: C Difficulty: easy
54. This body fluid directly affects the proper functioning of cells.
A) Lymph D) Aqueous humor
B) Blood E) Vitreous body
C) Interstitial fluid
Ans: C Difficulty: medium
55. This is the structure of a feedback system that receives output from the control center.
A) Receptor B) Body fluids C) Brain D) Effector E) Afferent
Ans: D Difficulty: medium
56. A condition NOT regulated by a negative feedback loop would be:
A) Childbirth D) Heart rate
B) Body temperature E) Blood sugar
C) Blood pressure
Ans: A Difficulty: medium

57. This is a change in body function that is subjective, and described by the patient to the clinician.
A) Symptom B) Disorder C) Disturbance D) Disease E) Sign
Ans: A Difficulty: medium
58. In which cavity is the brain located?
A) Cranial cavity D) Pericardial cavity
B) Vertebral cavity E) Pleural cavity
C) Abdominal cavity
Ans: A Difficulty: Easy
59. In which cavity are the lungs located?
A) Cranial cavity D) Pericardial cavity
B) Vertebral cavity E) Pleural cavity
C) Abdominal cavity
Ans: E Difficulty: Easy
60. In which cavity is the stomach located?
A) Cranial cavity D) Pericardial cavity
B) Vertebral cavity E) Pleural cavity
C) Abdominal cavity
Ans: C Difficulty: Easy
61. This cavity is inferior to the abdominal cavity.
A) Vertebral canal D) Pericardial cavity
B) Cranial cavity E) Pelvic cavity
C) Abdominal cavity
Ans: E Difficulty: medium
62. Which cavity would include the heart?
A) Cranial cavity D) Pericardial cavity
B) Vertebral cavity E) Pleural cavity
C) Abdominal cavity
Ans: D Difficulty: Easy
63. This plane divides the body into right and left halves.
A) Frontal B) Sagittal C) Transverse D) Oblique E) Coronal
Ans: B Difficulty: medium
64. This plane divides the body into unequal left and right sides.
A) Frontal B) Midsagittal C) Transverse D) Oblique E) Parasagittal
Ans: E Difficulty: medium

65. An oblique plane will cut a body or organ into
A) Anterior and posterior D) Sections along an angle
B) Left and right E) Unequal left and right sides
C) Superior and inferior
Ans: D Difficulty: medium
66. This directional term means farthest from the midline.
A) Medial B) Anterior C) Proximal D) Deep E) Lateral
Ans: E Difficulty: medium
67. Membranes that cover lung tissue are called:
A) meninges D) parietal serosa
B) visceral pleura E) dura mater
C) parietal mesenteries
Ans: B Difficulty: medium
68. This directional term means farther from the attachment of a limb to the trunk or farther from the origination of a structure.
A) Deep B) Contralateral C) Lateral D) Cephalic E) Distal
Ans: E Difficulty: medium
69. This directional term is the opposite of deep.
A) Superficial B) Superior C) Inferior D) Distal E) Proximal
Ans: A Difficulty: medium
70. Choose the directional term that would make the sentence correct. The heart is _____ to the liver.
A) Inferior B) Anterior C) Contralateral D) Superior E) Superficial
Ans: D Difficulty: medium
71. Which of the following organs is not found in the abdominal cavity?
A) Stomach B) Spleen C) Liver D) Gallbladder E) Diaphragm
Ans: E Difficulty: medium
72. This covers the viscera within the thoracic and abdominal cavities and lines the walls of the thorax and abdomen.
A) Pericardium D) Diaphragm
B) Pleura E) Serous membrane
C) Mediastinum
Ans: E Difficulty: medium

Use the following to answer questions 73-77:



73. Where on the diagram is the femoral area?

- A) D B) E C) F D) J E) K

Ans: A Difficulty: medium

74. Where on the diagram is the sacral area?

- A) C B) D C) E D) I E) J

Ans: D Difficulty: medium

75. Where on the diagram is the cervical area?

- A) C B) E C) J D) K E) B

Ans: E Difficulty: medium

76. Where on the diagram is the brachial area?

- A) C B) E C) I D) K E) D

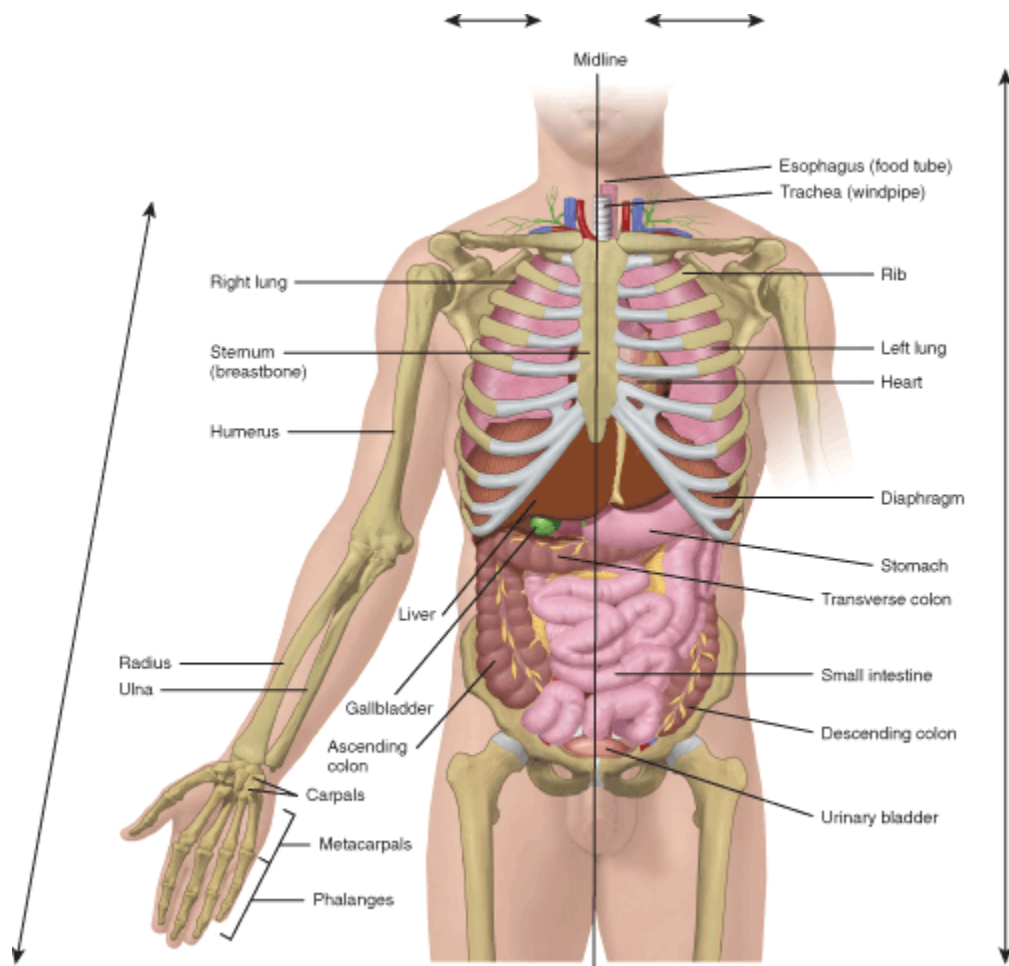
Ans: A Difficulty: medium

77. Where on the diagram is the popliteal area?

- A) H B) I C) J D) D E) E

Ans: C Difficulty: medium

Use the following to answer questions 78-80:



78. The gallbladder is _____ to the sternum.

- A) Superficial B) Medial C) Proximal D) Distal E) Inferior

Ans: E Difficulty: medium

79. The stomach is _____ to the bladder.

- A) Lateral B) Medial C) Distal D) Inferior E) Superior

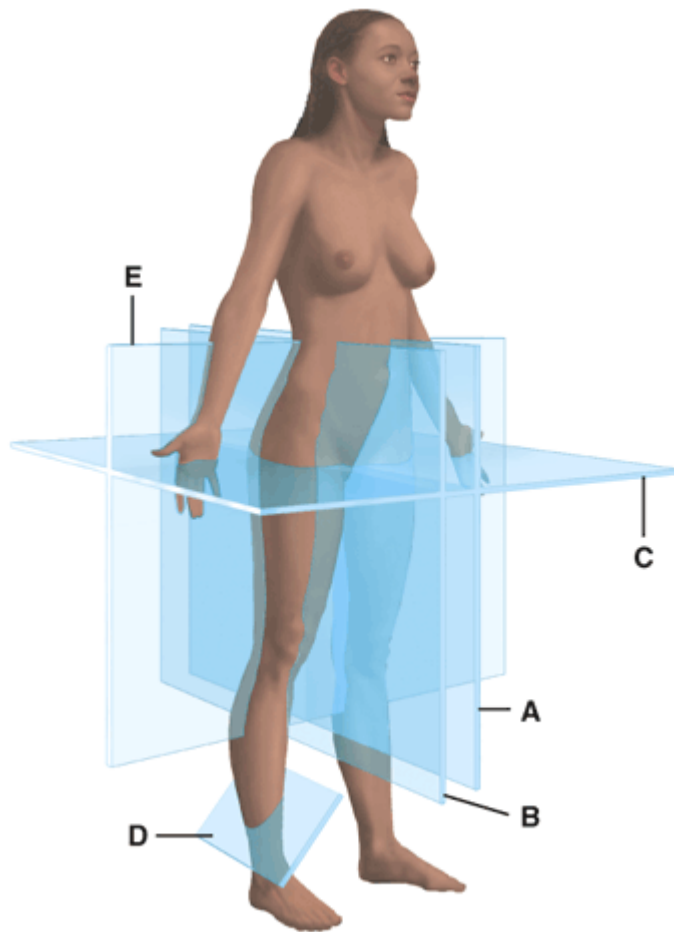
Ans: E Difficulty: medium

80. The humerus is _____ to the radius.

- A) Proximal B) Distal C) Medial D) Superior E) Anterior

Ans: A Difficulty: medium

Use the following to answer questions 81-84:



Right anterolateral view

81. Which plane is parasagittal?
A) A B) B C) C D) D E) E
Ans: B Difficulty: medium
82. Which plane is frontal?
A) A B) B C) C D) D E) E
Ans: E Difficulty: medium
83. Which plane is transverse?
A) A B) B C) C D) D E) E
Ans: C Difficulty: medium
84. Which plane is oblique?
A) A B) B C) C D) D E) E
Ans: D Difficulty: medium

85. Name the cavities of the trunk and the serous membranes that line them.

Ans: The cavities are the thoracic, abdominal and pelvic. The thoracic is subdivided into the pleural and mediastinal cavities. The heart is enclosed within the pericardial cavity, a smaller subdivision of the mediastinum. The pericardial cavity is lined by the pericardium. The pleurae line the pleural cavity. The abdominal and pelvic cavities are lined by the peritoneum.

Difficulty: medium

86. List the eleven systems of the human body.

Ans: The eleven systems of the human body include the integumentary, skeletal, muscular, nervous, digestive, urinary, respiratory, immune/lymphatic, cardiovascular, endocrine, and reproductive systems.

Difficulty: medium

87. Describe the anatomical position.

Ans: In the anatomical position the subject stands erect facing the observer with the head level and the eyes facing forward. The feet are flat on the floor and directed forward and the arms are at the sides with the palms turned forward.

Difficulty: medium

88. List the basic processes of life.

Ans: The basic processes of life include metabolism, responsiveness, movement, growth, differentiation and reproduction.

Difficulty: medium

89. Name the structural levels of the body and describe each level.

Ans: The chemical level consists of atoms and molecules which are formed from the atoms. The cellular level consists of cells which are the smallest structural and functional units of the body. The tissue level consists of groups of cells that work to provide an emergent function or functions. The organ level consists of organs, constructed of different types of tissue, which can provide several different specific functions. The systems level consists of many organs that are interlinked in general functions. The organism is made up of all of the systems which work to provide homeostasis.

Difficulty: Hard

90. List and briefly describe the six basic life processes.

Ans: The six basic life processes include metabolism, which is the sum of all chemical processes in the body. Responsiveness is the body's ability to detect and respond to internal and external stimuli. Movement includes motion of an individual cell to the entire body. Growth means an increase in body size or an increase in the number of cells. Differentiation is the process of taking a cell from unspecialized to specialized. Reproduction refers to formation of new cells for growth and repair or production of a new individual.

Difficulty: hard

91. Describe a feedback system and list the components.

Ans: A feedback loop is a cycle of events in which the status of the body condition is monitored, evaluated and changed to maintain homeostasis. A feedback system will include a receptor that detects the stimuli, a control center that receives the input from the receptor and generates an output and an effector that produces a response.

Difficulty: medium

92. Compare and contrast a positive and a negative feedback system.

Ans: A positive feedback system will enhance the original stimulus while a negative feedback system negates the initial stimulus. Negative feedback systems are more stable, and more common in terms of the maintaining overall body homeostasis. Positive feedback systems are inherently unstable, but necessary to maintain life, examples of which include hemostasis (the ability to clot blood).

Difficulty: hard

93. Describe why maintaining the volume and composition of bodily fluids is important to homeostasis.

Ans: Dissolved in the water of intracellular and extracellular fluid are solutes necessary to maintaining life, such as oxygen, glucose, proteins, electrolytes and ions. The fluid volumes must be maintained in order to maintain proper hydrostatic pressures. The composition of the fluids must be maintained in order to maintain proper osmotic gradients. If fluid balance is not maintained, the body cells, tissues, and organs cannot sustain life.

Difficulty: hard

94. Describe the positive feedback mechanism that regulates labor contractions during the birth of a baby.

Ans: Uterine contractions force the baby's head against the cervix, causing stretching. Stretch receptors in the cervix send a signal along afferent pathways to the control center (the brain). The brain releases oxytocin, a hormone which targets the uterus to produce more forceful contractions. The baby's head is thus pushed again against the cervix, causing more stretching. The cycle repeats until the birth of the baby breaks the positive feedback loop.

Difficulty: hard

95. Explain the difference between signs and symptoms and provide examples.

Ans: Symptoms are subjective changes in body functions that are not apparent to an observer, for example a sore throat, a headache, or nausea. Signs are objective, measurable changes that a clinician can observe, such as redness and swelling in the throat, a fever, or high blood pressure.

Difficulty: hard

96. Compare and contrast the disciplines of anatomy and physiology, and explain why they are studied together in courses such as the one you are now taking.

Ans: Anatomy is the study of structure, the parts of the body and how they fit together. Physiology is the study of how those parts work. What is interesting is how structure and function are often reflections of each other. For example a red blood cell's structural features (anucleate, flexible, anaerobic) reflect its function (carry hemoglobin proteins without using the bound oxygen through the smallest body vessels). Just as you would never take your vehicle to a mechanic who knew the names of all the car parts, but not how they worked (or vice versa), the study of form and function are complementary to each other, and thus go hand in hand.

Difficulty: medium