

### **Answers to WHAT DID YOU LEARN?**

1. Anatomy is the study of structure, and physiology is the study of the function of the structures.
2. A microscopic anatomist would investigate structures that cannot be seen by the unaided eye and therefore require magnification to be observed.
3. Subdisciplines of gross anatomy include regional anatomy, systemic anatomy, surface anatomy, developmental anatomy, and embryology.
4. Surface anatomy examines both superficial anatomic markings and internal body structures as they relate to the skin covering them, and regional anatomy examines all the structures in one defined region of the body.
5. Cells are the smallest living things. They contain specialized structural and functional units called organelles. Variations in the structure and unique functions of cells reflect their specializations.
6. Similar cells that work together to perform a common function represent the tissue level of organization.
7. Characteristics common to all living things are organization, metabolism, growth, responsiveness, regulation, and reproduction.
8. Homeostasis is the name given to the processes for maintaining a constant internal environment.
9. A transverse (horizontal) plane would separate the nose and mouth into superior and inferior structures.
10. The thoracic cavity will be exposed by an incision superior to the diaphragm and inferior to the neck.
11. The hypogastric region is the inferior region in the middle column of the abdominopelvic cavity. It usually houses part of the small intestine, the urinary bladder, and the sigmoid colon of the large intestine.
12. The elbow is proximal to the wrist. The neck is medial to the shoulders.

1. Cytology is the study of single body cells and their internal structures. Histology is the study of tissues.
2. The characteristics common to all living things are organization, metabolism, growth and development, responsiveness, regulation, and reproduction.
3. The levels of organization in a living thing, from the simplest to the most complex are: chemical → cell → tissue → organ → organ system → organismal.
4. The major organ systems are the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems.
5. The anatomic position is a specific body position in which the individual stands upright with the feet parallel and flat on the floor. The head is level, with the eyes looking forward. The arms are at the sides of the body with the palms facing forward and the thumbs pointing away from the body.
6. Superior means the head or upper end; inferior means the tail or lower end.
7. Forearm=*antebrachial*; wrist=*carpal*; chest=*thoracic*; armpit=*axillary*; thigh=*femoral*; foot=*pedal*.
8. The cranial cavity houses the brain, and the vertebral cavity houses the spinal cord.
9. Serous membranes line both the thoracic and abdominopelvic cavities. They are composed of two distinct layers: a parietal layer that lines the internal surface of the body wall, and a visceral layer that covers the external surface of organs (viscera) within the cavity. The fluid produced by cells in these membranes reduces the friction created by the movement of body organs and helps them move smoothly against each other and the body wall.
10. Best suited for examining soft tissues are sonography, CT, DSA, MRI, DSR, and PET. Best suited for examining hard tissues is radiography.