**Hole’s Essentials of Human A&P 14e**

**ANSWERS TO INTEGRATIVE ASSESSMENTS/CRITICAL THINKING**

**CHAPTER 1**

1. Movement, responsiveness to stimuli, respiration to produce energy, circulation of energy substrates, and excretion of waste products are all characteristics of life seen in a computer. A computer is not alive because it does not experience growth, reproduction, and digestion. (Outcomes 1.2, 1.3, 1.4, 1.5)
2. Atom, molecule, macromolecule, organelle, cell, tissue, organ, organ system, organism. (Outcomes 1.2, 1.3, 1.4, 1.5, 1.6)
3. Human needs include water, food, oxygen, and heat. In order to survive on another planet, a human would have to fill these needs from the new environment. (Outcomes 1.4, 1.5)
4. Treatment of:
   1. Body temperature-increased fluid intake, hypothermia blanket, antipyretic medications, antibiotics if fever is due to an infection, rest, and maintaining nutritional intake.
   2. Blood oxygen-oral tracheal suction to keep airway open, administering oxygen.
   3. Water content-increased fluid intake, administering intravenous fluid, controlling room temperature and humidity. (Outcomes 1.5, 1.6)
5. An unconscious person would need: oral tracheal suctioning (to keep the airway open and administer oxygen); nasogastric, gastric, or intravenous feedings; urinary catheter (for urine collection); turning in bed (to prevent decubitus ulcers, or bedsores); elastic stockings (to prevent blood clots and thrombophlebitis); stool softeners or suppositories; range-of-motion exercises to the extremities; and possibly a hypothermia or hyperthermia blanket to maintain body temperature. (Outcomes 1.5, 1.6, 1.7)
6. The individual with the tumor in the thoracic cavity would probably develop symptoms first. Since the thoracic cavity is smaller and the tumor would exert pressure against the lungs and/or heart which would cause great distress to the individual. (Outcome 1.6)
7. The organs in the umbilical region that could be the source of pain include the small intestine (obstruction), pancreas (pancreatitis), abdominal aorta (aneurysm), transverse colon (diverticulitis), or a distended urinary bladder. (Outcomes 1.6, 1.7)
8. In order to see both kidneys in an image, the radiologist should request a frontal section and a transverse section view. (Outcome 1.7)