**Circulatory and Respiratory Systems**

1. Which of these shows the correct path of air into the human respiratory system? (5.3.12.A.6 concept)
   1. Nose, Trachea, Esophagus, Bronchi, Alveoli
   2. Nose, Alveoli, Trachea, Bronchi
   3. Nose, Trachea, Esophagus, Alveoli, Bronchi
   4. Nose, Trachea, Bronchi, Alveoli
2. Which two muscles work together to transport oxygen from the air outside our bodies into our lungs to our body’s cells? (5.3.12.A.6 concept)
   1. Heart and diaphragm
   2. Trachea and diaphragm
   3. Stomach and heart
   4. Heart and lungs
3. When liquid goes “down the wrong pipe,” what is happening? (5.3.12.A.6 recall)
   1. The liquid is going down the esophagus and you must cough it back up
   2. The liquid is going down the trachea and you must cough it back up
   3. The liquid is going down too slowly and so you start coughing to try to get it down faster
   4. The liquid went down too fast and makes you cough
4. What is the respiratory system responsible for in the body? (5.3.12.A.6 recall)
   1. Bringing in nutrients and removing waste
   2. Bringing in carbon dioxide and removing oxygen
   3. Bringing in oxygen and removing carbon dioxide
   4. Bringing in waste and removing nutrients
5. The pulmonary valve is located at the entrance of the \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
   1. aorta
   2. pulmonary vein
   3. pulmonary artery
   4. superior and inferior vena cava
6. The purpose of valves within the circulatory system is to \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 concept)
   1. maintain one-way blood flow through the body
   2. maintain bi-directional blood flow through the body
   3. prevent blood from crossing the interventricular septum
   4. alternate blood flow between the lungs and body
7. The \_\_\_\_\_\_\_\_\_\_ act as collecting reservoirs for blood entering the heart. (5.3.12.A.6 recall)
   1. pulmonary arteries
   2. pulmonary veins
   3. atria
   4. ventricles
8. The largest artery in the body is the \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
   1. aorta
   2. pulmonary artery
   3. superior vena cava
   4. inferior vena cava
9. Oxygenated blood enters the heart through the \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
   1. superior and inferior vena cava
   2. aorta
   3. pulmonary artery
   4. pulmonary vein
10. The trachea is made up of \_\_\_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
    1. Cartilage
    2. Bone
    3. Fatty tissue
    4. Muscle
11. What is the scientific name for the “wind pipe”? (5.3.12.A.6 recall)
    1. Pharynx
    2. Larynx
    3. Trachea
    4. Bronchiole
12. What is most likely the reason for having about 300 million alveoli per lung? (5.3.12.A.6 strategic thinking)
    1. Humans are very large and therefore need many alveoli to process their oxygen demands.
    2. Alveoli are fragile and often do not function properly. Therefore, many backups are needed to process the demands of a human.
    3. Alveoli are tiny so that the surface area to volume ratio remains small.
    4. This allows alveoli to have specialized functions: about 100 million process O2, 100 million process CO2, and 100 million remove wastes.
13. During inhalation, the ribs move \_\_\_\_\_\_ and the diaphragm moves \_\_\_\_\_\_. (5.3.12.A.6 concept)
    1. out; up
    2. in; up
    3. out; down
    4. in; down
14. During inhalation, the movement of the diaphragm and rib cage creates \_\_\_\_\_\_\_\_ in the chest cavity? (5.3.12.A.6 recall)
    1. positive pressure
    2. negative pressure
    3. isotonic pressure
    4. equilibrium

**Digestive System**

1. What organ produces bile? (5.3.12.A.6 recall)
   1. Stomach
   2. Small intestine
   3. Large intestine
   4. Liver
2. In what part of the body are most of the nutrients absorbed into the bloodstream? (5.3.12.A.6 recall)
   1. Mouth
   2. Stomach
   3. Small intestine
   4. Large intestine
3. The mouth, esophagus, stomach and intestines, function together as part of a \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
   1. Cell
   2. Tissue
   3. Organ
   4. Organ system
4. Which shows the correct path of food through the digestive system? (5.3.12.A.6 concept)
   1. Mouth, Esophagus, Large Intestine, Small Intestine, Stomach, Rectum
   2. Mouth, Esophagus, Stomach, Large Intestine, Small Intestine, Rectum
   3. Mouth, Esophagus, Rectum, Large Intestine, Small Intestine, Stomach
   4. Mouth, Esophagus, Stomach, Small Intestine, Large Intestine, Rectum
5. The submandibular salivary gland is located \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
   1. behind your cheek
   2. below your jaw
   3. under your tongue
   4. on the roof of your mouth
6. If a patient is displaying Cirrhosis of the liver, which type of Hepatitis is the most probable diagnosis? (5.3.12.A.6 concept)
   1. Hepatitis A (HAV)
   2. Hepatitis B (HBV)
   3. Hepatitis C (HCV)
   4. Hepatitis D (HDV)
7. Gastric juices contain \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that break down food. (5.3.12.A.6 recall)
   1. Acids
   2. Bases
   3. Bacteria
   4. Ammonia
8. Chyme is created in the \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
   1. Duodenum
   2. Ilium
   3. Stomach
   4. Esophagus
9. The organ that stores bile is the \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
   1. Pancreas
   2. Kidney
   3. Stomach
   4. Gall bladder
10. A patient is having pain in his abdominal region whenever he bends down or lifts objects. He is displaying symptoms of which disease? (5.3.12.A.6 concept)
    1. Crohn’s disease
    2. Hernia
    3. IBS (Irritable Bowel Syndrome)
    4. Appendicitis
11. The ureters connect which two structures of the urinary system? (5.3.12.A.6 recall)
    1. Urethra and urinary bladder
    2. Urethra and kidney
    3. Urinary bladder and kidney
    4. Stomach and duodenum
12. Which tube carries urine to the outside of the body? (5.3.12.A.6 recall)
    1. Ureter
    2. Urethra
    3. Proximal tubule
    4. Distal tubule
13. The absorptive effectiveness of the small intestine is enhanced by increasing the surface area of the mucosal lining. Which of the following accomplish this task? (5.3.12.A.6 recall)
    1. Intestinal villi
    2. Intestinal gap junctions
    3. Digestive enzymes
    4. The rugae
14. The colon contains \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that break down food. (5.3.12.A.6 recall)
    1. Lactase
    2. Urea
    3. Bacteria
    4. Bile

**Nervous System**

1. The spinal cord is part of the \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
2. Brain
3. Central Nervous System (CNS)
4. Peripheral Nervous System (PNS)
5. Somatic Nervous System
6. The basic unit of the Nervous System is a/an \_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
7. Dendrite
8. Glial Cell
9. Astrocyte
10. Neuron
11. Which of the following is **NOT** a type of neuron \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
    1. Motor neuron
    2. Sensory neuron
    3. White Blood Cell
    4. Interneuron
12. What may be the result of a problem with the myelin sheath? (5.3.12.A.6 strategic thinking)
    1. Thought processes would speed up too quickly, resulting in severe migraines
    2. The speed of neural impulses would decrease and muscle function would be impacted
    3. A chain reaction of electrical impulses would occur, resulting in the death of cells
    4. Red blood cell production will decrease
13. The major set of large nerves running down the spinal column is called the \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
14. Axon
15. Dendrite
16. Brain
17. Spinal Cord
18. Which division of the Nervous System is associated with “rest” and “maintenance”? (5.3.12.A.6 recall)
    1. Central Nervous System (CNS)
    2. Somatic Nervous System
    3. Sympathetic Nervous System
    4. Parasympathetic Nervous System
19. The “blind spot” of the eye \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 concept)
20. Only exists for some people
21. Only exists in one eye
22. Is not always there
23. Is usually filled in by the brain using surrounding information
24. The major organ of the nervous system that is encased in the skull is called the \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
    1. brain
    2. spinal cord
    3. axon
    4. dendrite
25. Phineas Gage was a railroad worker who experienced an accident in which a metal rod was blown through the frontal lobe of his brain. What may be a consequence of this accident? (5.3.12.A.6 strategic thinking)
    1. His personality may be affected
    2. He may be deaf in one ear
    3. He may experience temporary blindness
    4. The frontal lobe is not important because we only use 10% of our brain
26. Olfactory bulbs are responsible for \_\_\_\_\_\_\_\_\_\_. (5.3.12.A.6 recall)
27. Taste
28. Hearing
29. Sight
30. Smell
31. After a head injury, Susan is having difficulty with her vision. What lobe of her brain was probably affected by the injury? (5.3.12.A.6 concept)
    1. Occipital
    2. Frontal
    3. Parietal
    4. Temporal
32. Which lobe of the brain is responsible for the integration of senses? (5.3.12.A.6 recall)
    1. Occipital
    2. Frontal
    3. Parietal
    4. Temporal
33. Which lobe of the brain is responsible for hearing? (5.3.12.A.6 recall)
    1. Occipital
    2. Frontal
    3. Parietal
    4. Temporal
34. Which hemisphere if the brain is responsible for language skills? (5.3.12.A.6 recall)
    1. Left
    2. Right
    3. North
    4. South

**Integration of Systems**

1. Connect the digestive system to the urinary system. (5.3.12.A.6 extended thinking)
   1. Food is processed in the stomach and then separated into solid and liquid waste in the intestines. Solid waste is expelled by the digestive system and liquid waste is expelled by the urinary system.
   2. In the large intestines, solid waste continues through the digestive system and is expelled while water is absorbed into the blood stream (circulatory system). Blood, along with cellular wastes and excess water, is then filtered through the kidneys and continues through the urinary system to be expelled.
   3. The blood is filtered through the kidneys. Nutrients remain in the blood, while solid waste is sent to the digestive system to be expelled and liquid waste is sent to the urinary system to be expelled.
   4. The process of breaking down foods into nutrients and wastes requires that it is transferred back and forth between the digestive system and urinary system until only simple molecules remain. Then, solid waste is expelled through the digestive system and liquid waste is expelled through the urinary system.
2. Connect the skeletal system to the muscular system. (5.3.12.A.6 extended thinking)
   1. The circulatory system delivers nutrients to the muscular system. Because the muscles surround bones, nutrients are diffused directly into bones, and wastes are removed.
   2. Muscles are on top of bones. When muscles contract, a signal is sent through the nervous system to the skeletal system, resulting in movement.
   3. Muscles are connected to bones through tendons. When a muscle contracts, it pulls on bones and thus makes the body move.
   4. The nervous system sends a signal directly to the skeletal system, resulting in the movement of bones. As bones move, they pull on the muscles through ligaments resulting in contracted muscles.
3. Connect the respiratory system to the circulatory system. (5.3.12.A.6 extended thinking)
   1. When you inhale, oxygen moves through the bronchi of the lungs into the alveoli. There, it is transferred to capillaries of the circulatory system for distribution to cells around the body. At the same time, carbon dioxide is transferred from the capillaries to the alveoli so that it may be expelled upon exhalation.
   2. When you inhale, oxygen moves through the bronchi of the lungs into the left lung only. There, capillaries of the circulatory system distribute it to cells around the body. At the same time, capillaries in the right lung diffuse carbon dioxide into alveoli to be expelled upon exhalation.
   3. When you inhale, oxygen moves from the esophagus of the digestive system into the lungs of the respiratory system. The trachea of the lungs then carries the oxygen to the heart so that the heart may pump the oxygen-rich blood to cells around the body. The reverse process occurs to remove carbon dioxide form the body during exhalation.
   4. The lungs are organs of the respiratory system that are filled with blood. When you inhale, oxygen is forced into the blood reservoir of the lungs and transferred to the heart through capillaries to be pumped to cells around the body. When you exhale, carbon dioxide is forced out of the blood reservoir of the lungs and expelled from the body.