1. A difference between the human nervous system and the endocrine system is that
   A. nerve responses are more rapid than endocrine responses
   B. endocrine responses are of shorter duration than nerve responses
   C. nerve impulses travel by way of the transport system while hormones travel by way of neurons
   D. the endocrine system secretes neurotransmitters and the nervous system secretes hormones

2. How do the circulatory system and the respiratory system depend on one another?
   A. Oxygen collected by the respiratory system is carried throughout the body by the circulatory system.
   B. Solid wastes collected by the circulatory system are carried throughout the body by the respiratory system.
   C. Nutrients collected by the respiratory system are carried throughout the body by the circulatory system.
   D. Carbon dioxide collected by the circulatory system is carried throughout the body by the respiratory system.

3. Which is a primary function that kidneys perform for the excretory system?
   A. They control sensory input using nerve cells.
   B. They conduct chemical digestion using hormones.
   C. They remove waste from blood using filtration structures.
   D. They exchange oxygen for carbon dioxide using capillaries.

4. Which sequence shows the pathway that food takes in the digestive system?
   A. stomach, esophagus, large intestine, small intestine
   B. esophagus, stomach, large intestine, small intestine
   C. stomach, esophagus, small intestine, large intestine
   D. esophagus, stomach, small intestine, large intestine

5. Which of the following systems breaks food into nutrients that can be used by the body?
   A. circulatory B. digestive
   C. respiratory D. reproductive

6. Which of the following is a harmful waste material that leaves the blood and travels through the lungs before leaving the body?
   A. CO₂   B. O₂   C. H₂O   D. NaCl

7. Which best describes the role of the esophagus in digestion?
   A. It releases acid and mixes food.
   B. It aids in absorption of nutrients from food.
   C. It carries food from the mouth to the stomach.
   D. It carries food from the stomach to the intestines.
8. How do nutrients, absorbed by the small intestine, travel to the individual cells of the human body?

A. The nutrients are absorbed from the small intestine into the blood and move through the circulatory system to the body cells.
B. The nutrients move from the small intestine directly to the liver and then move through the lymphatic system to the body cells.
C. The small intestine forces the nutrients into the kidneys, where the nutrients are then dissolved in fluids used by the body cells.
D. The body cells send nerve impulses indicating a lack of nutrients to the small intestine, and the small intestine sends the nutrients back to the cells.

9. Carbon dioxide is produced as cells break down nutrients for energy. Which of the following pairs of systems would participate in removing the carbon dioxide from the body?

A. endocrine and circulatory
B. circulatory and respiratory
C. respiratory and endocrine
D. reproductive and excretory

10. The respiratory system depends on the nervous system for signals to

A. enhance the amount of available oxygen in the lungs.
B. coordinate muscles controlling breathing.
C. release enzymes to increase the exchange of gases.
D. exchange gases with the circulatory system.

11. What is the greatest danger to a patient who has had damage to the skin?

A. loss of oils produced by the skin
B. excessive muscle contractions in the damaged area
C. infections in uncovered tissues
D. damaged tissue entering the blood stream

12. Use the picture below to answer the following question(s).

What does the heart do for the body?

A. It takes oxygen in from the environment.
B. It turns food into energy.
C. It removes waste from the blood.
D. It moves blood through the body.
13. Use the diagram below to answer the question.

DIGESTIVE SYSTEM

Which part of the digestive system gets nutrients from food?

A. part A  B. part B  
C. part C  D. part D

14. Which body part belongs to the skeletal system?

A. jawbone  
B. heart  
C. brain  
D. stomach

15. The students in an engineering class built a robot that stacks wooden blocks. A built-in computer controls the movement of the robot.

The computer in the robot performs a function most similar to which part of the human body?

A. lungs  B. heart  C. brain  D. arms
16. The terms gas exchange, diaphragm, and inhale are most closely associated with which system in the human body?

A. circulatory  
B. digestive  
C. excretory  
D. respiratory

17. In the human body, which system functions primarily to defend the body against disease?

A. digestive  
B. immune  
C. nervous  
D. respiratory

18. What is the primary function of the large intestine?

A. to digest proteins  
B. to absorb nutrients  
C. to break down complex carbohydrates  
D. to remove water from undigested waste

19. Capillaries are part of which body system?

A. skeletal system  
B. nervous system  
C. digestive system  
D. circulatory system

20. Which of the following organs removes extra water from the blood to keep the amount of fluid in the bloodstream at the proper level?

A. kidneys  
B. liver  
C. pancreas  
D. stomach

21. The diagram below shows the locations of the pituitary gland and the kidneys in the human body. The pituitary gland can release a substance into the bloodstream that signals target cells in the kidneys to reabsorb more water. The released substance is an example of

A. an enzyme.  
B. a hormone.  
C. a neurotransmitter.  
D. a vitamin.

22. Which of the following body systems is responsible for receiving stimuli from the environment and coordinating the body’s response to these stimuli?

A. respiratory system  
B. nervous system  
C. digestive system  
D. circulatory system

23. The cells of the nasal cavity and the trachea are lined with cilia. Which of the following describes a purpose of the cilia?

A. to cool air that is entering the respiratory system  
B. to help move trapped particles out of the respiratory system  
C. to help produce sound as air moves out of the respiratory system  
D. to increase the surface area for gas exchange in the respiratory system
24. What is the name of the connective tissue that joins skeletal muscle to bones?

A. cartilage  B. ligaments  
C. neurons  D. tendons

25. The diagrams below illustrate different levels of organization in the human nervous system. An understanding of how the nervous system works at its various levels helps doctors explain normal body functions and make proper diagnoses when patients are sick.

Diagram 1

Diagram 2

Diagram 3

Which of the following body systems provides protection for structures A and C?

A. circulatory system  B. muscular system  
C. nervous system  D. skeletal system

26. Which of the following would be the most likely effect of severe injury to the lower region of structure A?

A. loss of sight
B. paralysis of the legs
C. restricted blood flow
D. slowed reflexes in the arms

27. The diagram below shows one response pathway the human body uses to control blood pressure.

Blood pressure increases.

Receptors in arteries send signals to brain.

Brain signals heart to beat slower.

Blood pressure decreases.

Which body systems work together in this response pathway to control blood pressure?

A. digestive and nervous  
B. nervous and circulatory  
C. respiratory and digestive  
D. circulatory and excretory
28. Crohn’s disease causes inflammation of the digestive tract, particularly the small intestine. Inflammation of the small intestine would directly interfere with which of the following digestive functions?

A. liquefying food  
B. reabsorbing water  
C. absorbing nutrients  
D. moving food to the stomach

29. Examining a bone marrow sample could help a doctor diagnose problems with which of the following?

A. sense of balance  
B. speed of reflexes  
C. production of blood cells  
D. filtering of wastes from blood

30. What is the primary role of the endocrine system?

A. to produce chemicals that affect other parts of the body  
B. to remove waste products from the blood  
C. to defend the body against illness and infection  
D. to coordinate movement of the body

31. Which of these organ systems is responsible for the removal of metabolic wastes from the blood?

A. endocrine  
B. nervous  
C. respiratory  
D. excretory

32. The human body functions properly when organ systems work together. Which organ system works with the muscular system to control muscle contraction?

A. circulatory  
B. excretory  
C. nervous  
D. reproductive

33. Use the information and the diagram below to answer the following question(s).

Arteriosclerosis is a disease which clogs arteries in the human body. In arteriosclerosis, artery walls become thick. Fatty deposits build up on inner walls of arteries. This condition reduces the ability of arteries to perform their function. The diagram below shows a comparison between a healthy artery and one with arteriosclerosis.

**COMPARISON OF TWO ARTERIES**

Healthy Artery  
Artery With Arteriosclerosis

Which body function is most affected by arteriosclerosis?

A. circulating blood to tissues  
B. assembling amino acids into proteins  
C. replacing damaged cells with new cells  
D. breaking down food particles into molecules

34. Which pair of organ systems do you use when you take a bite of an apple, chew it, and swallow it?

A. nervous and circulatory  
B. muscular and digestive  
C. respiratory and skeletal  
D. skeletal and circulatory
35. Glenn is looking at a diagram that illustrates an organ system in the human body, but the system is not identified. He claims that it is the endocrine system. Glenn is correct if the diagram includes

A. a heart connected to blood vessels.
B. a brain connected to the spinal cord and nerves.
C. an air passage to the lungs and a pair of lungs.
D. glands such as the pituitary and thyroid.

36. Which other system works with the skeletal system to provide physical support for the body?

A. Muscular  B. Digestive  
C. Circulatory  D. Respiratory

37. A teacher mixed food and liquid with acids and enzymes. This mixture was filtered so that the nutrients and water were removed. Which body system does this represent?

A. Nervous  B. Digestive  
C. Circulatory  D. Respiratory

38. Which two human body systems help with the breakdown of food and absorption of nutrients?

A. Circulatory and muscular  
B. Digestive and circulatory  
C. Muscular and reproductive  
D. Reproductive and digestive

39. Look at the diagram of the human digestive system.

Which parts are responsible for most of the mechanical digestion of food?

A. 1 and 2  B. 2 and 3  
C. 3 and 4  D. 1 and 4

40. Tinea pedis is a disease caused by a fungus. It affects mainly external body parts and not internal systems.

Which of these could be a symptom of tinea pedis?

A. Difficulty breathing  
B. Pain in the intestines  
C. Headaches and dizziness  
D. Swollen and itching skin
41. Nerve cells and red blood cells have very different shapes.

How do the shapes of these cells suit their functions?

A. Nerve cells are long and branched for transmitting information, while red blood cells are small and round for traveling through capillaries to deliver oxygen.

B. Nerve cells are short and branched for providing support for skeletal muscles, while red blood cells are round with long extending arms for sending materials to body cells.

C. Nerve cells are large and round for carrying impulses to the brain, while red blood cells are small and round for carrying materials to body cells.

D. Nerve cells are long and branched so that they can be easily replaced, while blood cells are small and round so that they can last a lifetime.

42. Why is the bladder important to the human body?

A. It is used to digest food.

B. It is used to carry nutrients.

C. It is used to remove liquid waste.

D. It is used to protect against infection.

43. Which statement correctly describes a relationship between two human body systems?

A. The digestive system absorbs nutrients which are transported by the nervous system.

B. The digestive system absorbs nutrients which are transported by the circulatory system.

C. The circulatory system exchanges gases which are transported by the nervous system.

D. The circulatory system exchanges gases which are transported by the digestive system.

44. Which of the following is the best example of an organism maintaining homeostasis?

A. a wolf panting after a chase

B. a spider catching an insect in a web

C. a cricket becoming infected by a virus

D. a mole digging tunnels in the ground

45. When Lance goes jogging, his heart rate increases to pump blood faster and supply his muscles with more oxygen. Which of the following helps to maintain homeostasis in response to this increase in heart rate?

A. an increase in digestion

B. an increase in respiration

C. a decrease in perspiration

D. a decrease in bone growth
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42. Answer: C
43. Answer: B
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