Human Body Review #5: Respiration and Nervous Systems

Modified True/False

Indicate whether the sentence or statement is true or false. If false, change the identified word or phrase to make the sentence or statement true.

_____ 1. The respiratory system removes oxygen and water from the body.

_____ 2. Oxygen and carbon dioxide are exchanged in capillaries that surround tiny sacs called bronchi.

_____ 3. In gas exchange, oxygen passes from the alveoli into the blood.

_____ 4. The body’s reaction to a change in the environment is a response.

_____ 5. The peripheral nervous system is composed of the brain and the spinal cord.

_____ 6. A reflex is an involuntary response that occurs very rapidly.

_____ 7. Voluntary actions are controlled by the autonomic nervous system.

_____ 8. The brain interprets nerve impulses that carry information about the environment.
Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

___ 9. Which substances are produced during respiration?
   a. water and oxygen
   b. oxygen and red blood cells
   c. carbon dioxide and water
   d. carbon dioxide and red blood cells

___ 10. In which part of the respiratory system is the air first cleaned, moistened, and warmed?
   a. nose
   b. lungs
   c. pharynx
   d. bronchi

___ 11. Which part of the respiratory system is also part of the digestive system?
   a. nose
   b. bronchi
   c. pharynx
   d. trachea

___ 12. Where in the respiratory system does gas exchange occur?
   a. in the heart
   b. in the alveoli
   c. in the pharynx
   d. in the trachea

___ 13. The role of the respiratory system is to bring what substance into the body?
   a. water
   b. oxygen
   c. carbon dioxide
   d. red blood cells

___ 14. During gas exchange, which substance moves from the alveoli into the blood?
   a. carbon dioxide
   b. oxygen
   c. water
   d. nitrogen

___ 15. What is the name of the small flap of tissue that seals off the trachea during swallowing?
   a. pharynx
   b. larynx
   c. epiglottis
   d. alveoli
____ 16. Which parts of the respiratory system divide into smaller and smaller tubes in a pattern that resembles the branches of a tree?
   a. pharynx
   b. trachea
   c. bronchi
   d. epiglottis

____ 17. Hairlike structures that line the nasal cavities and trachea are called
   a. cilia.
   b. mucus.
   c. bronchi.
   d. capillaries.

____ 18. Each alveolus is surrounded by a network of
   a. cilia.
   b. veins.
   c. arteries.
   d. capillaries.

____ 19. When the nervous system makes you feel thirsty, what body process is it helping to carry out?
   a. delivering oxygen to cells
   b. maintaining homeostasis
   c. moving the body
   d. supporting the body

____ 20. A change or signal in the environment that can make an organism react is called a(n)
   a. stimulus.
   b. reaction.
   c. impulse.
   d. response.

____ 21. What part of a neuron carries nerve impulses away from the cell body?
   a. axon
   b. synapse
   c. dendrite
   d. nucleus

____ 22. A motor neuron sends an impulse to
   a. a muscle.
   b. a sensory neuron.
   c. an interneuron.
   d. another motor neuron.

____ 23. The thick column of nerve tissue that links the brain to most of the nerves in the peripheral nervous system is the
   a. brain.
   b. spinal cord.
   c. cerebellum.
   d. cornea.

____ 24. What part of the brain controls memory?
   a. cerebrum
   b. brainstem
   c. cerebellum
   d. spinal cord

____ 25. The somatic nervous system controls
   a. artistic ability.
   b. logical thinking.
   c. involuntary actions, such as the digestion of food.
   d. voluntary actions, such as turning a television on.
26. An automatic response of the body that occurs very rapidly and without conscious control is called a(n)
   a. stimulant.           c. reflex.
   b. interneuron.         d. reaction.

27. The sense organs send information about the environment to the
   a. brain.              c. somatic nervous system.
   b. autonomic nervous system.  d. semicircular canals.

28. Which of the following is NOT one of the major senses?
   a. touch                 c. taste
   b. balance              d. pressure

29. What produces sound?
   a. light waves          c. chemicals in the air
   b. vibrating material   d. rods and cones

30. The senses of smell and taste both depend on
   a. chemicals.          c. the semicircular canals.
   b. waves.              d. the optic nerve.

31. Pain is an important sensation, because
   a. it makes the sense of smell function better.
   b. it helps the immune system function.
   c. it can alert the body to danger.
   d. it is a depressant.

32. Suppose that you close a window because you notice that rain is falling. Your action in closing the window is
   a(n)
   a. involuntary reaction.  c. stimulus.
   b. depressant.           d. response.

33. If the semicircular canals are damaged, which sense will be affected?
   a. hearing                c. balance
   b. touch                 d. smell

34. A synapse is the space between
   a. the cell body and the next structure.  c. a dendrite and the cell body.
   b. an axon and the cell body.            d. an axon and the next structure.

35. The brain and spinal cord make up the
   a. central nervous system.  c. somatic nervous system.
   b. peripheral nervous system.  d. autonomic nervous system.

36. What is the function of the brainstem?
   a. receiving input from the senses
   b. controlling involuntary processes such as breathing
   c. coordinating the actions of muscles
   d. protecting the cerebrum
Completion

Complete each sentence or statement.

37. The respiratory system moves air into and out of the lungs through the process of ____________________.
38. After flowing through the nasal cavities, air enters the ________________, or throat.
39. Dust in the air is trapped by a sticky substance called ________________ in the nose.
40. Carbon dioxide and ________________ pass from the blood into the alveoli.
41. Alveoli have a large surface area that enables them to absorb a large amount of ________________.
42. The ________________, or windpipe, leads from the pharynx toward the lungs.
43. The process in which energy is released from glucose is called cellular ________________.
44. The traffic light turns green, and the driver steps on the gas pedal to make the car move forward. The green traffic light acted as a(n) ________________ that caused a response in the driver.
45. The type of neurons known as ________________ neurons pick up stimuli from the external or internal environment and convert those stimuli to nerve impulses.
46. The part of the brain that controls balance is the ________________.
47. In order for a nerve impulse to pass from an axon tip to the next structure, it must cross a space called a(n) ________________.
48. Each specific ________________ organ picks up a different kind of information about the environment.
49. The skin is the organ associated with the sense of ________________.
50. A muscle contracts in response to an impulse carried by the type of neuron known as a(n) ________________ neuron.
51. The peripheral nervous system consists of ________________ that link the central nervous system with all parts of the body.
52. One function of the nervous system is to maintain ________________, or stability within the body.
Human Body Review #5: Respiration and Nervous Systems
Answer Section

MODIFIED TRUE/FALSE

1. F, carbon dioxide
2. F, alveoli
3. T
4. T
5. F, central
6. T
7. F, somatic
8. T

MULTIPLE CHOICE

9. C
10. A
11. C
12. B
13. B
14. B
15. C
16. C
17. A
18. D
19. B
20. A
21. A
22. A
23. B
24. A
25. D
26. C
27. A
28. D
29. B
30. A
31. C
32. D
33. C
34. D
35. A
36. B
COMPLETION

37. breathing
38. pharynx
39. mucus
40. water
41. oxygen
42. trachea
43. respiration
44. stimulus
45. sensory
46. cerebellum
47. synapse
48. sense
49. touch
50. motor
51. nerves
52. homeostasis