

Chapter 14 Study Guide**Multiple Choice**

Identify the letter of the choice that best completes the statement or answers the question.

- _____ 1. Skeletal muscles must work in pairs because
 - a. muscle cells can only contract.
 - b. muscle cells can only extend.
 - c. it takes two muscles to move a bone in one direction.
 - d. when muscles work in pairs, they tire less quickly.
- _____ 2. How does exercise help maintain healthy bones?
 - a. by decreasing the need for calcium in the bones
 - b. by decreasing the need for phosphorus in the bones
 - c. by making bones grow stronger and denser
 - d. by making bones produce stronger outer membranes
- _____ 3. The spaces in bones are filled with a soft connective tissue called
 - a. blood.
 - b. water.
 - c. cartilage.
 - d. marrow.
- _____ 4. A strong connective tissues that holds movable joints together is a
 - a. cartilage.
 - b. ligament.
 - c. marrow.
 - d. vertebrae.
- _____ 5. Which type of muscle tires quickly during exercise?
 - a. smooth muscle
 - b. breathing muscle
 - c. skeletal muscle
 - d. cardiac muscle
- _____ 6. Exercise is important for muscles because it
 - a. prevents muscles from becoming tired.
 - b. helps maintain strength and flexibility.
 - c. gives muscles more energy.
 - d. prevents muscle injuries.
- _____ 7. The process by which an organism's internal environment is kept stable in spite of changes in the external environment is called
 - a. healing.
 - b. digestion.
 - c. homeostasis.
 - d. respiration.
- _____ 8. Beneath the outer membrane of bone there is a layer of
 - a. blood vessels.
 - b. canals.
 - c. spongy bone.
 - d. compact bone.

Name: _____

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- ___ 9. What structure directs the activities of a cell?
- nucleus
 - cytoplasm
 - cartilage
 - cell membrane
- ___ 10. Which type of muscle is found only in the heart?
- voluntary muscle
 - cardiac muscle
 - smooth muscle
 - soft muscle
- ___ 11. How do pairs of skeletal muscles work together?
- Both muscles contract at the same time.
 - Both muscles extend at the same time.
 - While one muscle in the pair contracts, the other returns to its original length.
 - One muscle in the pair pulls on a bone, while the second muscle pulls on the first muscle.
- ___ 12. At the start of 400 m run your body releases adrenaline and carries more oxygen to the body cells. Your body is experiencing
- dermis.
 - melanin.
 - osteoporosis.
 - stress.
- ___ 13. The living cells in the epidermis are located
- above the dead cells.
 - beneath the dead cells.
 - in the fat layer.
 - only around hair follicles.
- ___ 14. Which of the following is NOT a function of the skeleton?
- providing shape and support for the body
 - obtaining oxygen
 - protecting internal organs
 - producing blood cells
- ___ 15. How does the skin help regulate body temperature?
- by removing wastes from the body
 - by blocking information about the environment
 - by enabling excess heat to escape from the body
 - by allowing body temperature to change when the weather becomes warmer or cooler
- ___ 16. The pigment melanin in the skin functions to
- keep water within the skin.
 - produce new living cells in the epidermis.
 - help protect the skin from sunburn.
 - surround and protect hair follicles.
- ___ 17. No matter what the temperature of the air around you, your internal body temperature will be close to
- 24°C.
 - 37°C.
 - 72°C.
 - 98°C.

18. Nerves and blood vessels in the skin are located in the
- pores.
 - dermis.
 - epidermis.
 - canals.
19. By eating dairy products, you are helping to maintain healthy bones because dairy products
- stimulate the growth of new bone.
 - enable nerve tissue to grow in bone.
 - help form the canals in bone.
 - are good sources of calcium.
20. Messages are carried back and forth between the brain and other parts of the body by
- respiratory tissue.
 - nervous tissue.
 - the circulatory system.
 - digestive tissue.
21. How does the skin protect the body from disease?
- by keeping disease-causing microorganisms from entering the body
 - by gathering information about the environment
 - by increasing body temperature when it is cold
 - by supplying water to the body through the pores
22. What kind of motion is possible with a hinge joint?
- rotating
 - sliding
 - backward or forward
 - side to side
23. What is the best way to prevent osteoporosis?
- Exercise regularly and include calcium in your diet.
 - Reduce exercise and add phosphorus to your diet.
 - Eat more green vegetables and red meats.
 - Get plenty of bedrest.
24. Much of a newborn baby's skeleton is made of
- hard bone.
 - soft bone.
 - cartilage.
 - ligaments.
25. Which type of human body tissue can contract, or shorten?
- nerve tissue
 - muscle tissue
 - connective tissue
 - epithelial tissue
26. Which organ system makes blood cells?
- skeletal system
 - nervous system
 - circulatory system
 - digestive system

Name: _____

ID: B

- _____ 27. The bones that form the backbone are called
- vertebrae.
 - metatarsals.
 - tibia.
 - carpals.
- _____ 28. Which type of tissue lines your digestive track and allows you to digest and absorb the nutrients from food?
- epithelial
 - connective
 - muscle
 - nervous

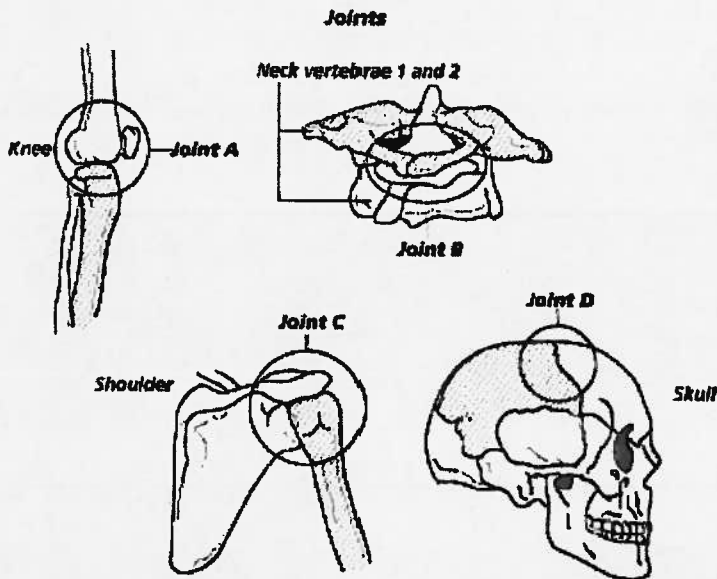
Completion

Complete each sentence or statement.

29. Homeostasis can be upset by _____, which is the reaction of the body and mind to a threatening, challenging, or disturbing event.
30. Bones are strong and hard because they contain the minerals _____ and phosphorus.
31. A muscle is attached to a bone by a connective tissue called a(n) _____.
32. Organs join to form a(n) _____ that performs a major function.
33. Your wrist is able to bend and flex because it has a(n) _____ joint.
34. The _____ protects the delicate tissue of the brain.
35. Fat is one type of _____ tissue.

Short Answer

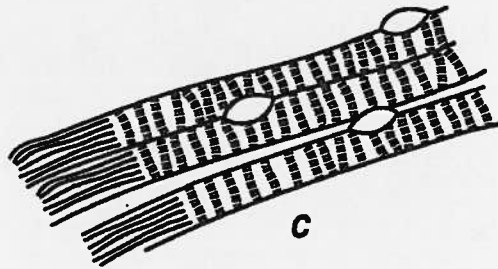
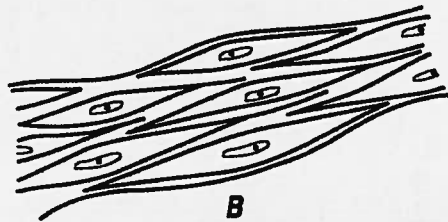
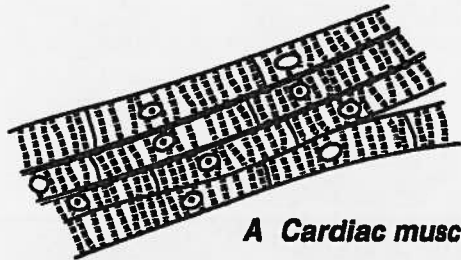
Use the diagram to answer each question.



36. Which joint is a pivot joint?
37. Which joint provides the greatest range of movement?
38. Which joints are movable? Which are immovable?
39. Which type of joint is Joint C?
40. Which type of joint is Joint A?
41. What kind of motion does Joint A allow?

Use the diagram to answer each question.

Types of Muscle Tissue



42. Which type of muscle is indicated by C?
43. Where in the body is muscle type A (cardiac muscle) found?
44. Tell whether each type of muscle tissue is voluntary or involuntary.
45. Which type of muscle is indicated by B?
46. When you use a pencil for writing, which type of muscle — A, B, or C — moves your fingers?
47. Which type of muscle tissue — A, B, or C — is found in the stomach? What is this type of muscle tissue called?

Essay

48. Explain how shivering and sweating help maintain homeostasis.
49. List and describe the four levels of organization of the human body.
50. Describe how skin helps maintain body temperature if a person becomes too warm.