

Animal organization and homeostasis quiz

[Environment](#), [Animals](#)



Note: This section also includes the integumentary system

1. Which gives the correct sequence of increasing organizational complexity?

- a) organ, tissue, cell, organ system, organism
- b) cell, organ, organ system, tissue, organism
- c) cell, tissue, organ, organ system, organism
- d) organism, tissue, cell, organ system, organ
- e) tissue, cell, organ system, organism, organ

2. Which type of tissue lines body cavities and covers body surfaces?

- a) muscle tissue
- b) nervous tissue
- c) epithelial tissue
- d) connective tissue

3. Which type of tissue is responsible for contractions that allow movement of organs or the entire body?

- a) muscle tissue
- b) nervous tissue
- c) epithelial tissue
- d) connective tissue

4. Which type of tissue is responsible for receiving, interpreting, and producing a response to stimuli?

- a) muscle tissue
- b) nervous tissue
- c) epithelial tissue
- d) connective tissue

5. Which tissue includes bone and cartilage?

- a) muscle tissue
- b) nervous tissue
- c) epithelial tissue
- d) connective tissue

6. Which tissue includes the epidermis?

- a) muscle tissue
- b) nervous tissue
- c) epithelial tissue
- d) connective tissue

7. Digestive juices cannot leak between the epithelial cells lining the lumen because of

- a) muscle tissue
- b) nervous tissue
- c) epithelial tissue
- d) connective tissue

8. Which tissue includes blood and adipose tissue?

- a) muscle tissue
- b) nervous tissue
- c) epithelial tissue
- d) connective tissue

9. Which of the following statements is Not true about epithelial tissue?

- a) Flattened cells are found in squamous epithelium.
- b) Columnar epithelium is cubed-shaped with the nucleus near the upper surface of the cells.
- c) Simple epithelium has a single layer of cells in the tissue.
- d) Pseudostratified epithelium looks like it has multiple layers, but all the cells are attached to the same base.
- e) Epithelium lining the respiratory tract contains cilia that move particles along its surface.

10. Which statement about epithelial tissue is Not true ?

- a) Stratified epithelium has numerous layers of cells.
- b) Epithelial tissue has one free surface and one surface attached to a basement membrane.
- c) Connections between epithelial cells include gap junctions, tight junctions, and spot desmosomes (adhesion junctions).
- d) Cells of the human epithelium contain a waterproof protein called keratin.
- e) Glandular epithelium that secretes its product into a duct forms the endocrine glands.

11. Which is Not a function of connective tissue?

- a) line body surfaces and cavities
- b) bind and support body parts
- c) store energy in fat
- d) fill spaces
- e) produce blood cells

12. Which statement about connective tissue is Not true?

- a) Connective tissue contains cells capable of differentiating into muscle and bone in animals.

b) Loose connective tissue contains fibroblasts, different kinds of fibers, and a nonliving matrix.

c) Fibrous connective tissue includes bone and cartilage.

d) Blood is a connective tissue that contains a fluid matrix.

e) Adipose tissue provides insulation and padding, as in the skin.

13. Which is Not a structure seen in compact bone?

a) concentric circles of organization

b) Haversian canals containing blood vessels and nerves.

c) osteocytes located within lacunae

d) bony bars and plates with irregular spaces between them

e) cytoplasmic extensions of bone cells in canaliculi

14. Which statement is Not true about cartilage?

a) Cartilage cells are located in small spaces called lacunae.

b) The matrix of cartilage includes collagen and elastic fibers.

c) The matrix of cartilage includes calcium salts.

d) The original skeleton of the human embryo is made of cartilage.

e) Adults have cartilage structures that include the nose, ear, and intervertebral disks.

15. Which statement about blood is Not true?

- a) Erythrocytes carry oxygen.
- b) Platelets are not complete cells.
- c) Platelets are involved in blood clotting.
- d) Leukocytes are involved in the body's defense against infection.
- e) The fluid matrix, plasma, is made by the cells in the bloodstream.

16. Which of the following statements about muscular tissue is Not true?

- a) Skeletal muscle fibers are extremely large cells with multiple nuclei.
- b) All striated muscle is under voluntary control.
- c) Smooth muscle lacks striations.
- d) Striated muscle has bands of actin and myosin filaments perpendicular to the length of the cell.
- e) Skeletal muscle fibers form as multiple precursor cells joined to produce a single cell.

17. Which statement about heart tissue is Not correct?

- a) The heart is composed mainly of cardiac muscle tissue.
- b) Cardiac muscle is not striated.
- c) Cardiac cells have a single central nucleus.

d) Cardiac muscle movement is involuntary.

18. The heart is made of cardiac fibers that are bound together in one interconnected mass due to ?

a) shared nuclei.

b) tight junctions.

c) adhesion junctions (desmosomes).

d) gap junctions.

e) intercalated disks made of both desmosomes and gap junctions.

19. Which statement is Not true about nervous tissue?

a) Cells in the nervous system that conduct electrical impulses are called neurons.

b) Glial cells support and protect neurons.

c) The dendrites carry electrical impulses away from the cell body of the neuron.

d) Nerve fibers are long axons and dendrites bound by connective tissues to form nerves.

e) Glial cells may provide neurons with nutrients or keep them free of cellular debris.

20. Which structure is Not a part of the skin?

a) stratified squamous epithelium

b) melanocytes

c) dermis

d) connective tissue

e) subcutaneous tissue

21. The general process of gaining a tan and then losing it is best explained by which of the following?

a) Melanocytes form melanin in the dead top epidermis and it is soon washed off.

b) Melanocytes form melanin in response to sunlight but blood flow slowly carries it away.

c) Melanocytes form melanin in response to sunlight but then reabsorb it in the absence of light.

d) Melanocytes in the dividing layer of the epidermis produce melanin, but then cells divide and half are constantly being pushed to the top to flatten and be washed off.

e) Ultraviolet light damages the subcutaneous skin cells but these dark burned cells soon are dissolved and replaced by healing processes.

22. If you wash your skin and hair several times a day, you will soon have dry skin that easily cracks and bleeds because the oils you have removed are necessary to keep skin supple. This oil is ?

- a) pili secreted by arrectors.
- b) lymph secreted by lymphatic ducts.
- c) sebum secreted by sweat glands.
- d) sebum secreted by sebaceous glands.
- e) salty sweat secreted by sweat glands.

23. Possible indications of skin cancer are ?

- a) an open sore that will not heal.
- b) a wart that bleeds scabs.
- c) irregular shaped mole with grey, white, or red skin around it.
- d) All of the above are correct.
- e) None of the above is correct.

24. When discussing homeostasis in body temperature, it is not true to say that the body responds to ?

- a) cold by contracting the arrector pili muscles.
- b) cold by contracting skeletal muscles in shivering.

- c) cold by rerouting blood away from the skin.
- d) heat by stimulating sweat release.
- e) heat by constricting the blood vessels in the skin.

25. In which of the following structures would one most likely find smooth muscle?

- a) biceps muscle
- b) heart
- c) digestive tract
- d) quadriceps muscle
- e) gluteus maximus muscle

26. One type of cell-communicating mechanism allows materials to pass through cells and not between them. ? This is due to the nature of the cells being in direct contact with each other. An example would be found in the epithelial cells of the gut and is known as a(n) ?

- a) tight junction
- b) gap junction
- c) plasmodesmata
- d) adhesion junction

e) desmosome

27. Haversian canals and a matrix of crystals of calcium phosphate would be found in ?

a) teeth

b) nails

c) hooves

d) bone

e) cartilage

28. Cuboidal epithelium would be found ?

a) in the walls of the heart.

b) in the knees and other joints as well as in the nose and tracheal rings.

c) on the surface of the skin.

d) lining glands and kidney tubules, and covering the ovaries.

e) in tendons and the sheath around voluntary muscles.

29. An example of a positive feedback loop would be ?

a) a rise in body temperature causing a dilation of blood vessels in the skin.

b) the patellar reflex.

c) the production of epithelial cells to heal a cut.

d) blood clotting.

e) constriction of the iris of the eye in bright light.

30. Intercellular junctions are important in both plants and animals. Which of the following is Not used by animals as junctions?

a) tight junctions

b) plasmodesmata

c) desmosomes

d) gap junctions

e) communicating junctions

31. Of the items listed, which is Not required for maintenance of life?

a) water

b) food

c) carbon dioxide

d) pressure

32. Homeostasis refers to ?

a) changing external conditions.

b) stable external conditions.

c) changing internal conditions.

d) stable internal conditions.

33. Which of the following is Not one of the four basic types of body tissues?

a) epithelial

b) connective

c) brain

d) muscle

e) nervous

34. A basement membrane occurs between ?

a) muscle and nerve tissue.

b) epithelial and connective tissue.

c) connective tissue and muscle tissue

d) brain and nerve tissue.

35. Epithelial tissue functions in ?

a) secretion

b) absorption

c) protection

d) All of the above.

36. The muscle tissue that can be consciously controlled is ?

a) smooth

b) skeletal

c) cardiac

d) intercalated

e) None of these.

37. Which of the following is Not a characteristic of nerve tissue?

a) It is found in the brain, spinal cord, and nerves.

b) It contains cells that respond by transmitting impulses. ?

c) Its intercellular spaces are filled with collagen. ?

d) Functional cells are sensitive to changes in their surrounding.

38. Permanent wrinkling of the skin is usually due to changes caused by excessive exposure to ?

a) water

b) sunlight

c) dry air

d) heat

39. Which of the following cell types are least likely to reproduce?

a) endothelial cells that line the digestive tract.

b) fibroblasts of connective tissue.

c) skeletal muscle cells.

d) red bone marrow cells.

40. The subcutaneous layer is located ?

a) above the epidermis.

b) between the epidermis and dermis.

c) within the dermis.

d) beneath the dermis.

41. Which of the following is not correct concerning the skin?

a) The dermis is usually thicker than the epidermis.

b) The epidermis is composed of stratified squamous epithelium.

c) The subcutaneous layer is between the dermis and epidermis.

d) The dermis contains smooth muscle and nerve tissue.

42. Exocrine sweat glands ?

- a) are most common in the armpits and groin.
- b) respond primarily to elevated body temperature.
- c) respond primarily to emotional stress.
- d) usually are associated with hair follicles.

43. Acne is a disorder involving the ?

- a) sweat glands
- b) hair follicles
- c) sebaceous glands
- d) apocrine glands
- e) endocrine glands

44. Skin cells play an important role in the production of ?

- a) vitamin A
- b) vitamin B
- c) vitamin C
- d) vitamin D
- e) vitamin E

45. The largest organ of the human body is the ?

a) brain

b) liver

c) stomach

d) skin

e) lungs

46. Keratin ?

a) is a waterproof protein.

b) fills dead cells in the dermis.

c) is a skin pigment.

d) All of the above are true.

47. The dermis ?

a) covers the epidermis.

b) produces melanin.

c) contains nervous tissue and blood vessels.

d) consists mostly of dead cells.

48. Which of the following is secreted by sebaceous glands in the skin?

a) melanin

b) sebum

c) keratin

d) sweat

49. Hair and nails are composed primarily of ?

a) sebum

b) keratin

c) melanin

d) glands

e) living cells

50. Hair color and skin color are determined by ?

a) keratin

b) sebum

c) melanin

d) glands