

Human Body Study Guide

Body Organization & Homeostasis

1. What is the basic unit of structure and function of an organism?

~Cell

2. A group of organs that function together to perform a certain role in the body is called a:

~organ system

3. **True or False:** Cells in stomach tissue are different from cells in bone tissue because they have to do different jobs.

~True

4. Put the following in order from *least* complex to *most* complex: cell, organ, organism, organ system, tissue.

~cell

~tissue

~organ

~organ system

~organism

5. What is tissue?

~A group of cells that work together to perform the same function.

6. The process by which an organism's internal environment is kept stable in spite of changes in the external environment is called:

~homeostasis

7. Place a checkmark next to each example of the body maintaining homeostasis

- Sweating when you are hot.
- Breathing harder when you exercise.
- Smiling when you're happy.
- Going to the bathroom.

Human Body

8. Why would tear ducts, and glands which produce tears, be considered part of the immune system?

~Tears wash pathogens out of the eyes.

9. How does the skeletal system work with the circulatory system?

~Bones produce blood cells

10. How does the skeletal system work with the nervous system?

~The skeletal system helps protect the spinal cord and brain.

11. What is the function of each type of muscle tissue?

~Skeletal – provides movement for the body

~Cardiac – makes the heart beat

~Smooth – moves substances inside the body

12. What is the function of the excretory system?

~Removing wastes and excess fluid from the body.

13. Blood, part of the circulatory system, transports many materials, including nutrients, gases, and wastes. Which body system interacts with the circulatory system to get rid of wastes found throughout the body?

~excretory

14. What is the function of the respiratory system?

~Take in oxygen

~Get rid of carbon dioxide

15. How does the respiratory system interact with the circulatory system?

~The respiratory system brings in oxygen so the circulatory system can transport it through the body.

16. Which body system controls body processes and functions through electrical impulses?

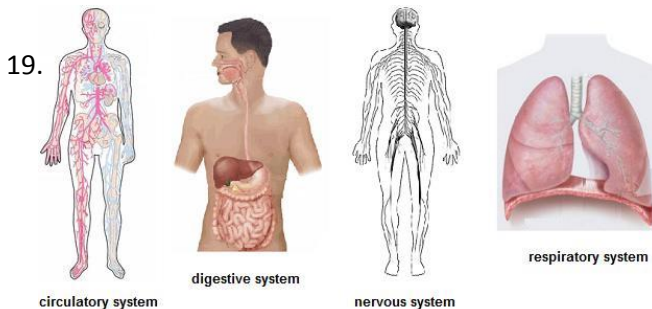
~nervous

17. When a person eats, a hormone is released. This hormone signals the stomach to start breaking down the food. Which two systems are involved in this process?

~endocrine and digestive

18. When a person exercises, the cells of the body need more oxygen. This is achieved by the _____ system increasing the amount of oxygen that is supplied to the blood and the _____ system increasing the rate of delivery of the blood to the cells of the body.

~respiratory; circulatory



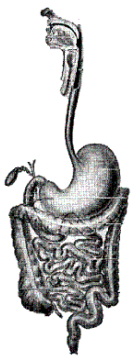
Which two body systems interact with each other to break down and transport the nutrients found in food?

~circulatory and digestive

20. Which of the systems carries out the following function: To break down food into nutrients that can be circulated throughout the body?

~digestive

21. Place a checkmark next to the function of the digestive system?



- To exchange oxygen and carbon dioxide gases within the body.
- To protect the body against foreign substances, such as bacteria and viruses.
- To send signals from one part of the body to other parts of the body.
- To eliminate solid waste materials not absorbed by the body.

22. What is the purpose of the skeletal and muscular systems working together?

~To provide the force that moves your body

23. Place a checkmark next to the true statement.

- Cardiac muscles are voluntary muscles that are found only in your heart.
- Skeletal muscles are involuntary muscles that pull on your bones to move your bones.
- Smooth muscles and cardiac muscles are involuntary muscles that you have little or no control over.
- Smooth muscles are involuntary muscles that are found only in your heart.

24. What are the functions of the immune system?

~T-cells distinguish between different kinds of pathogens.

~B-cells produce antibodies against the pathogens.

~Phagocytes destroy the pathogens

25. Place a checkmark next to the statement that is NOT a function of the skeletal system?

- Providing shape and support for the body.
- Obtaining oxygen.
- Protecting internal organs.
- Producing blood cells.

26. How does the nervous system interact with other systems?

- A. Skeletal – ~It controls the voluntary skeletal muscles coordinating your movements.
- B. Endocrine – ~It tells the endocrine system when to release hormones into the bloodstream.
- C. Respiratory – ~It controls the involuntary action of breathing.
- D. Circulatory – ~It controls the involuntary action of the heartbeat.

27. Which body system protects the body against foreign substances?

~immune

28. **True or False:** In order for cells to have energy, oxygen must be supplied by the respiratory system and nutrients must be supplied by the digestive system.

~True

29. Cells routinely release wastes as they perform their functions. In the human body, this waste is often released into the bloodstream. Which system and organ are responsible for removing much of this waste from the bloodstream so that it can be removed from the body?

~the kidneys in the excretory system

30. What system is most responsible for maintaining homeostasis by directing the body to respond appropriately to the messages it receives?

~Nervous

31. Which system produces chemicals (hormones) that control many of the body's daily processes such as sleep and hunger?

~endocrine

32. The _____ system, shown below, is made up of the heart, veins, arteries, and capillaries. The main function of this system to transport nutrients and gases, such as carbon dioxide and oxygen, throughout the body.

~circulatory

