

## Chapter 8 – Human Organization

Complete using BC Biology 12, pages 236 – 255

### 8.1 Types of Tissues

pages 240 - 243

- The tissues in the human body can be categorized into **four** major types
  - \_\_\_\_\_ : covers body surfaces and lines body cavities
  - \_\_\_\_\_ : binds and supports body parts
  - \_\_\_\_\_ : moves the body and its parts
  - \_\_\_\_\_ : receives stimuli and conducts nerve impulses

### Epithelial Tissue

- Describe four SPECIFIC functions of the epithelium (include both external AND internal)
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
- What connects the epithelium to underlying connective tissue? \_\_\_\_\_
- Epithelial tissue is classified according to the shape of the cell it is composed of:
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
 and the number of layers in the tissue. One layer is referred to as \_\_\_\_\_<sup>(a)</sup> epithelium and more than one layer is referred to as \_\_\_\_\_<sup>(b)</sup> epithelium.
- Match the type of epithelial tissue to where it is found in the body.
 

a) simple squamous	_____ lining of kidney tubules, various glands
b) stratified squamous	_____ lining of trachea
c) simple cuboidal	_____ lining digestive tract, oviducts
d) simple columnar	_____ lining of nose, mouth, esophagus, anal canal and vagina
e) pseudostratified, ciliated columnar	_____ lining of lungs, blood vessels
- When an epithelium secretes a product, it is said to be \_\_\_\_\_<sup>(a)</sup>. A \_\_\_\_\_<sup>(b)</sup> can be a single epithelial cell or can contain many cells. Glands that secrete their product into \_\_\_\_\_<sup>(c)</sup> are called \_\_\_\_\_<sup>(d)</sup> glands and those that secrete their products into the \_\_\_\_\_<sup>(e)</sup> are called \_\_\_\_\_<sup>(f)</sup> glands.

## Connective Tissue

7. Describe the term “matrix” as it applies to connective tissues.

8. Why do some scientists consider blood as a connective tissue while others do not?

9. Give three of the many roles of blood:

a) \_\_\_\_\_

b) \_\_\_\_\_

c) \_\_\_\_\_

## Muscular Tissue

10. Muscle fibers contain \_\_\_\_\_<sup>(a)</sup> filaments and \_\_\_\_\_<sup>(b)</sup> filaments, whose interaction accounts for movement.

11. Complete the table

Type of Muscle	Fiber Appearance	Location	Control
Skeletal			
Smooth			
Cardiac			

## Nervous Tissue

12. Nerve cells are specialized cells called \_\_\_\_\_<sup>(a)</sup>, which are made up of three parts: \_\_\_\_\_<sup>(b)</sup>, \_\_\_\_\_<sup>(c)</sup> and an \_\_\_\_\_<sup>(d)</sup>

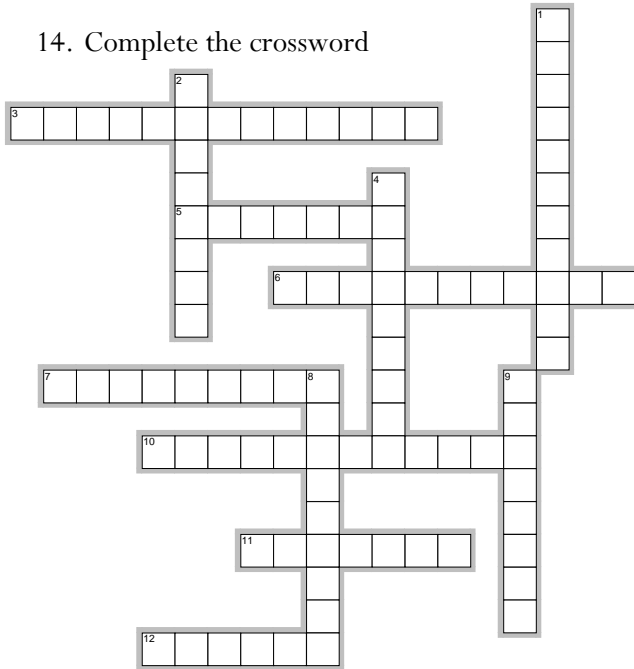
13. The nervous system has just three functions:

- a) \_\_\_\_\_  
 b) \_\_\_\_\_  
 c) \_\_\_\_\_

## 8.2 Organ Systems

pages 244 - 245

14. Complete the crossword



### Across

3. Protects the body, helps control temperature, receives sensory input.
5. Excretes metabolic wastes, helps control fluid balance, helps control pH balance.
6. Exchanges gases at lungs and tissues.
7. Ingests food, digests food, absorbs nutrients, eliminates waste.
10. Produces and transports gametes, produces sex hormones.
11. Receives sensory input initiates motor output, helps coordinate organ systems.
12. Protection from disease.

### Down

1. Transports blood, nutrients, gases, and wastes.
2. Maintains posture, moves body and internal organs, produces heat.
4. Helps control fluid balance and absorbs fats.
8. Produces hormones, helps coordinate organ systems, responds to stress.
9. Supports the body, protects body parts, stores minerals.

EclipseCrossword.com

## 8.3 Homeostasis

pages 246 - 249

15. Define *homeostasis*: \_\_\_\_\_

- a) Regular body temperature = \_\_\_\_\_  
 b) Blood pH level = \_\_\_\_\_  
 c) Blood sugar level (range) = \_\_\_\_\_

16. Explain what is meant by the “internal state of the body is in a state of *dynamic equilibrium*”

17. What is the difference between a negative and positive feedback mechanisms?

18. Give an example of each type of system, as related to the human body.

a) Negative feedback: \_\_\_\_\_

b) Positive feedback: \_\_\_\_\_

**8.4 Overview of the Endocrine System**

pages 249 - 250

19. The endocrine system consists of glands and tissues that secrete \_\_\_\_\_ which are chemicals that affect the behavior of other glands or tissues.

20. List six major human endocrine glands and at least one of the hormones released by that gland

- \_\_\_\_\_ : \_\_\_\_\_
- \_\_\_\_\_ : \_\_\_\_\_
- \_\_\_\_\_ : \_\_\_\_\_
- \_\_\_\_\_ : \_\_\_\_\_
- \_\_\_\_\_ : \_\_\_\_\_
- \_\_\_\_\_ : \_\_\_\_\_

21. How does the homeostatic response differ between the nervous and endocrine systems?

22. Most hormones are controlled by \_\_\_\_\_<sup>(a)</sup> and by the action of \_\_\_\_\_<sup>(b)</sup>. The effect of a hormone also can be controlled by the release of an \_\_\_\_\_<sup>(c)</sup> hormone.

Mark using the answer key on page 539 - 540. Ensure your written answers are in your own words.

- |          |           |           |           |
|----------|-----------|-----------|-----------|
| 1. _____ | 7. _____  | 13. _____ | 19. _____ |
| 2. _____ | 8. _____  | 14. _____ | 20. _____ |
| 3. _____ | 9. _____  | 15. _____ | 21. _____ |
| 4. _____ | 10. _____ | 16. _____ | 22. _____ |
| 5. _____ | 11. _____ | 17. _____ |           |
| 6. _____ | 12. _____ | 18. _____ |           |

23. Tissue Types: connective (**I**), epithelial (**II**), muscle (**III**) and nervous (**IV**)

- |          |          |          |
|----------|----------|----------|
| a. _____ | f. _____ | k. _____ |
| b. _____ | g. _____ | l. _____ |
| c. _____ | h. _____ | m. _____ |
| d. _____ | i. _____ | n. _____ |
| e. _____ | j. _____ | o. _____ |

31. Match description to body system (may be more than one system)

- |          |          |          |
|----------|----------|----------|
| a. _____ | e. _____ | i. _____ |
| b. _____ | f. _____ | j. _____ |
| c. _____ | g. _____ | k. _____ |
| d. _____ | h. _____ |          |

40. Positive or negative feedback: why?

- a. \_\_\_\_\_ : \_\_\_\_\_
- b. \_\_\_\_\_ : \_\_\_\_\_
- c. \_\_\_\_\_ : \_\_\_\_\_

