Chapter 35

The Digestive and Endocrine Systems

Reinforcement and Study Guide

Section 35.1 Following Digestion of a Meal

In your textbook, read about the functions of the digestive tract, the mouth, and the stomach.

Complete each statement.

1. The entire process of digestion involves first _____ food, then _____ it into simpler compounds, then _____ nutrients for use by body cells, and, finally, _____ wastes.

2. By chewing your food, you _____ its surface area.

3. Various enzymes play a role in _____ digestion, while the action of teeth, tongue, and muscles are involved in _____ digestion.

4. In your mouth, the enzyme _____ is released from _____ glands to begin the chemical breakdown of _____ .

5. Your _____ are adapted for cutting food, while your _____ are best suited for grinding food.

If the statement is true, write *true*. If it is not, rewrite the italicized part to make it true.

6. During swallowing, the epiglottis covers the *esophagus* to prevent choking.

_____

7. Food is moved through the digestive tract by rhythmic waves of *voluntary muscle contractions* called peristalsis.

_____

8. The churning actions of the stomach help mix the food with *pancreatic juices*.

_____

9. Pepsin is a *protein-digesting enzyme* that only works in an acidic environment.

_____

10. The stomach releases its contents into the small intestine *suddenly*, *all at once*.

_____

Chapter 35

The Digestive and Endocrine Systems, *continued*

Reinforcement and Study Guide

Section 35.1 Following Digestion of a Meal

In your textbook, read about the small intestine and the large intestine.

Answer the following questions.

11. What role do the enzymes secreted by the pancreas play in the digestive process?

_____

_____

_____

12. Explain the relationship between the liver, the gallbladder, and bile.

_____

_____

_____

13. Once in the small intestine, what happens to

a. digested food?

_____

_____

b. indigestible materials?

_____

_____

Complete the table by checking the correct column(s) for each function.

Function	Small Intestine	Large Intestine
14. Water is absorbed through walls.		
15. Digestion is essentially completed.		
16. Vitamin K is produced.		
17. Nutrients are absorbed by villi.		
18. Contents are moved by peristalsis.		
19. Indigestible material is collected.		
20. Bile and pancreatic juices are added.		

In your textbook, read about carbohydrates, fats, and proteins.

Complete the table by checking the correct column(s) for each description.

Description	Carbohydrates	Fats	Proteins
1. the most energy-rich nutrients			
2. sugars, starches, and cellulose			
3. broken down into amino acids			
4. part of a nutritious, balanced diet			
5. normally used for building muscle, but can be used for energy			
6. broken down into glucose, fructose, and other simple sugars			
7. used to insulate the body from cold			

In your textbook, read about minerals and vitamins, water, and metabolism and calories.

Complete each statement.

8. _____ are inorganic substances that help to build tissue or take part in chemical reactions in the body.

9. Unlike minerals, _____ are organic nutrients that help to regulate body processes.

10. The two major vitamin groups are the _____ and the _____ vitamins.

11. The energy content of food is measured in _____ , each of which is equal to _____ calories.

12. Despite the claims of many fad diets, the only way to lose weight is to _____ more calories than you _____ .

Chapter 35

The Digestive and Endocrine Systems, *continued*

Reinforcement and Study Guide

Section 35.3 The Endocrine System

In your textbook, read about control of the body and negative feedback control.

Complete each statement.

1. Internal control of the body is handled by the _____ system and the _____ system.
2. Most endocrine glands are controlled by the action of the _____ , or master gland.
3. A(n) _____ is a chemical released in one part of the body that affects another part.
4. The amount of hormone released by an endocrine gland is determined by the body's _____ for that hormone at a given time.
5. A _____ system is one in which hormones are fed back to inhibit the original signal.
6. When your body is dehydrated, the pituitary releases ADH hormone, which reduces the amount of _____ in your urine.
7. When you have just eaten and your blood glucose levels are high, your pancreas releases the hormone _____ , which signals the liver to take in glucose, thereby lowering blood glucose levels.

In your textbook, read about hormone action, adrenal hormones and stress, and other hormones.

For each item in column A, write the letter of the matching item from Column B.

Column A		Column B
_____	**8.** Determines the body's food intake requirements	**a.** steroid hormones
_____	**9.** Made from lipids and diffuse freely into cells through the plasma membrane	**b.** glucocorticoids and aldosterone
_____	**10.** Bind to receptors embedded in the plasma membrane of the target cell.	**c.** calcitonin and parathyroid hormone
_____	**11.** Produce a feeling called "adrenaline rush"	**d.** epinephrine and norepinephrine
_____	**12.** Help the body prepare for stressful situations	**e.** amino acid hormones
_____	**13.** Regulate calcium levels in blood	**f.** thyroxine