Name_____ Class_____ Date _____

Section 38–2 The Process of Digestion

(pages 978–984)

Key Concepts

- What are the organs of the digestive system?
- What is the function of the digestive system?

Introduction (page 978)

1. What is the function of the organs of the digestive system? _____

_____

_____

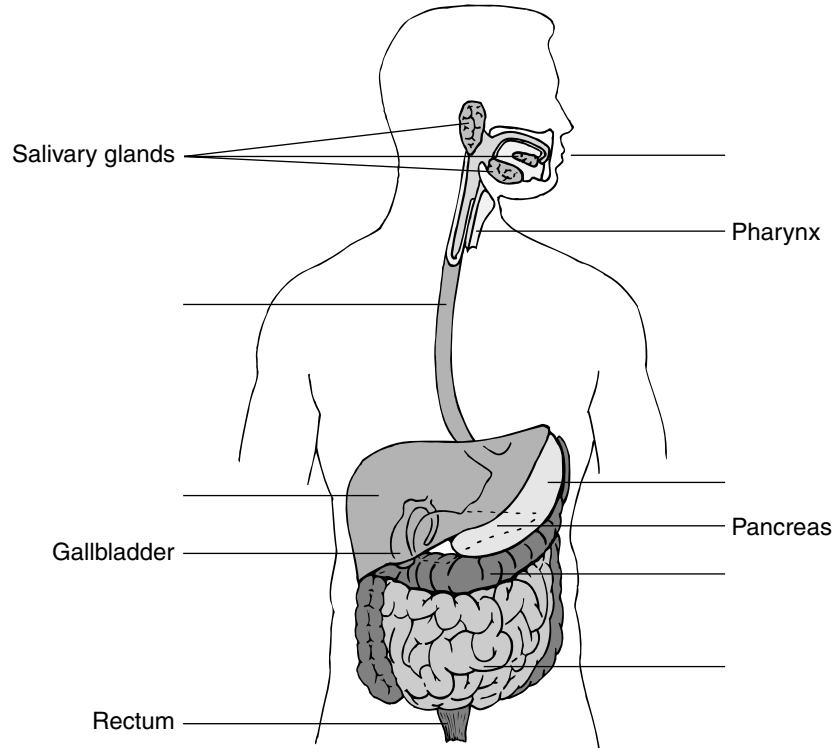
_____

The Mouth (pages 978–979)

2. The physical breakdown of large pieces of food into smaller pieces is referred to as _____ digestion.

3. The breakdown of large food molecules into smaller molecules that can be absorbed into the bloodstream is called _____ digestion.

4. Label the drawing of the digestive system with the following structures: mouth, esophagus, stomach, liver, small intestine, and large intestine.



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5. What is the role of teeth in digestion? _____

_____

_____

_____

The Esophagus (page 980)

Match each term with its definition.

	Term	Definition
_____	**6.** bolus	**a.** Contractions of smooth muscle that aid in swallowing
_____	**7.** esophagus	**b.** Clump of chewed food
_____	**8.** peristalsis	**c.** Food tube connecting the mouth and stomach

9. Is the following sentence true or false? The pyloric valve prevents the contents of the stomach from moving back up into the esophagus. _____

The Stomach (pages 980–981)

10. Circle the letter of each sentence that is true about the stomach.

a. It produces hydrochloric acid.

b. It produces trypsin.

c. It helps in the mechanical digestion of food.

d. It produces amylase.

11. Is the following sentence true or false? Pepsin cannot work under the acidic conditions present in the stomach. _____

12. A mixture of stomach fluids and food is referred to as _____.

The Small Intestine (pages 981–982)

13. Where does most chemical digestion take place? _____

_____

_____

14. Circle the letter of each sentence that is true about the pancreas.

a. It produces amylase.

b. It produces sodium bicarbonate.

c. Its enzymes help break down lipids and nucleic acids.

d. It produces lactase.

15. What role does the liver play in digestion? _____

_____

_____

_____

16. Bile is stored in a small pouchlike organ called the _____.

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Use the table to answer the questions.

Digestive Enzymes			
Enzyme	**Site of Action**	**Site of Production**	**Nutrient Digested**
Amylase	Mouth	Salivary glands	Carbohydrate
Pepsin	Stomach	Lining of stomach	Protein
Lipase	Small intestine	Pancreas	Fat
Amylase	Small intestine	Pancreas	Carbohydrate
Trypsin	Small intestine	Pancreas	Protein
Lactase	Small intestine	Lining of small intestine	Carbohydrate
Maltase	Small intestine	Lining of small intestine	Carbohydrate
Sucrase	Small intestine	Lining of small intestine	Carbohydrate
Peptidase	Small intestine	Lining of small intestine	Protein

17. Where are the majority of digestive enzymes active? _____

_____

18. Which organ or gland produces the greatest number of different digestive enzymes?

_____

19. Which digestive enzyme has more than one site of action and production? _____

_____

20. Which digestive enzymes are active at a site different from the site where they are produced? _____

21. Which nutrient is digested by more enyzmes than any other nutrient? _____

_____

Absorption in the Small Intestine (pages 982–983)

22. Name the two parts of the small intestine where nutrients are absorbed.

a. _____

b. _____

23. Projections that cover the folds of the small intestine are called _____.

24. Is the following sentence true or false? Molecules of undigested fat and some fatty acids are absorbed by lymph vessels called lacteals. _____

25. Is the following sentence true or false? The appendix plays an important role in human digestion. _____

The Large Intestine (page 984)

26. What is the primary job of the large intestine? _____

_____

_____

_____

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Digestive System Disorders (page 984)

27. A hole in the stomach wall is known as a(an) _____.

28. When something happens that interferes with the removal of water by the large intestine, a condition known as _____ results.

Reading Skill Practice

When you read about a complex process, representing the process with a flowchart can help you better understand and remember it. Make a flowchart to show how food travels through the digestive system and is broken down into simpler molecules that the body can use. For more information on flowcharts, see Appendix A of your textbook. Do your work on a separate sheet of paper.