Section 38–2 The Process of Digestion (pages 978–984)

This section describes the organs of the digestive system and explains their functions.

The Mouth (pages 978–979)

1. What is the function of the organs of the digestive system? Their function is to help convert foods into simpler molecules that can be absorbed and used by the cells of the body.

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

3. The breakdown of large food molecules into smaller molecules that can be absorbed into the bloodstream is called chemical digestion.
4. Label the drawing of the digestive system with the following structures: mouth, esophagus, stomach, liver, small intestine, and large intestine.

![Digestive System Diagram]

5. What is the role of teeth in digestion? _They do much of the mechanical work of digestion by cutting, tearing, and crushing food into small fragments._

The Esophagus (page 980)

Match each term with its definition.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>bolus</td>
<td>a. Contractions of smooth muscle that aid in swallowing</td>
</tr>
<tr>
<td>esophagus</td>
<td>b. Clump of chewed food</td>
</tr>
<tr>
<td>peristalsis</td>
<td>c. Food tube connecting the mouth and stomach</td>
</tr>
</tbody>
</table>

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

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.
Chapter 38, Digestive and Excretory Systems (continued)

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

12. A hole in the stomach wall is known as a(an) _____ peptic ulcer ______.

13. A mixture of stomach fluids and food is referred to as ______ chyme ______.

The Pancreas and Liver (pages 981–982)

14. Where does most chemical digestion take place? __It takes place in the duodenum, the first of three parts of the small intestine.__

15. 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. ___

16. What role does the liver play in digestion? __It produces bile, which dissolves and disperses the droplets of fat found in fatty foods so that enzymes can reach the fat molecules and break them down.__

17. Bile is stored in a small pouchlike organ called the __gallbladder__.

The Small Intestine (page 983)

18. Name the two parts of the small intestine where nutrients are absorbed.
   a. Jejunum ____________  b. Ileum ____________

19. Projections that cover the folds of the small intestine are called __villi__.

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

The Large Intestine (page 984)

21. What is the primary job of the large intestine? __The primary job is to remove water from undigested material.__

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

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