Chapter 14
The Digestive System and Body Metabolism
Review Questions

Multiple Choice:

1. Which of the following terms are synonyms?
   a. Gastrointestinal tract
   b. Digestive system
   c. Digestive tract
   d. Alimentary canal

2. A digestive organ that is *not* part of the alimentary canal is the:
   a. stomach
   b. liver
   c. small intestine
   d. large intestine
   e. pharynx

3. The closure of which valve is assisted by the diaphragm?
   a. Ileocecal
   b. Cardioesophageal
   c. Pyloric
   d. Upper esophageal

4. Which of these organs lies in the right hypochondriac region of the abdomen?
   a. Stomach
   b. Cecum
   c. Spleen
   d. Liver

5. Release of CCK leads to:
   a. contraction of smooth muscle in the duodenal papilla
   b. increased activity of liver cells
   c. contraction of the gallbladder wall
   d. release of enzymes by the pancreas

6. The pH of chyme entering the duodenum is adjusted by:
   a. bile
   b. intestinal juice
   c. enzyme secretions from the pancreas
   d. bicarbonate-rich secretions from the pancreas
7. Which of the following is NOT one of the carbohydrates that our digestive system breaks down to simple sugars:
   a. cellulose
   b. sucrose
   c. lactose
   d. starch
   e. maltose

8. A 3-year-old girl is rewarded with a hug because she is now completely toilet trained. Which muscle is one that she has learned to control?
   a. Levator ani
   b. Internal anal sphincter
   c. Internal and external obliques
   d. External anal sphincter

9. Hormones that act to decrease blood glucose level include:
   a. insulin
   b. glucagon
   c. epinephrine
   d. growth hormone

10. The “gatekeeper” of the small intestine that regulates food movement into it is the:
    a. jejunum
    b. pyloric sphincter
    c. ileum
    d. hepatopancreatic sphincter
    e. cardiosophageal sphincter

11. The primary function of the small intestine is:
    a. vitamin conversion
    b. mineral secretion
    c. water absorption
    d. waste secretion
    e. food absorption

12. Mumps is inflammation of the:
    a. thyroid gland
    b. parotid glands
    c. temporal glands
    d. sublingual glands
    e. submandibular glands

13. Pancreatic enzymes for digestion are secreted into the:
    A) stomach   B) ileum   C) mouth   D) jejunum   E) duodenum
14. Buildup of bile in the liver leading to bile pigments circulation through the body would lead to:
A) cirrhosis
B) cyanosis
C) erythematosis
D) jaundice
E) hepatitis

15. Digestion is primarily controlled by the:
A) fight-or-flight mechanism
B) somatic nervous system
C) central nervous system
D) autonomic nervous system
E) enterogastric reflex

16. Which of the following is NOT absorbed by the large intestine:
A) ions
B) water
C) protein
D) vitamin K
E) some of the B vitamins

Short Answer Essay

17. Make a simple line drawing of the organs of the alimentary tube and label each organ.
18. Add three labels to your drawing—salivary glands, liver, and pancreas—and use arrows to show where each of these organs empties its secretion into the alimentary tube.

19. Name the subdivisions of the small intestine in a proximal to distal direction. Do the same for all the subdivisions of the large intestine.

20. Name the three pairs of salivary glands. Name two functions of saliva.
21. Name two regions of the digestive tract where mechanical food breakdown occurs.

22. Name the organ where protein digestion begins.

23. Why is it necessary for the stomach contents to be so acidic? How does the stomach protect itself from being digested?
24. Only one organ produces enzymes capable of digesting all groups of foodstuffs. What organ is this?

25. Where does most nutrient absorption occur?

26. What substances are absorbed in the large intestine?
27. Where is the body’s thermostat?

28. What is fever? What does it indicate?

NOTES FOR CLASSROOM DISCUSSION

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Using Figure 14.1, identify the following:

29. The mouth (oral cavity) is indicated by letter __________.

30. The large intestine is indicated by letter ____________.

31. The salivary glands are indicated by letter _____________.

32. The small intestine is indicated by letter ______________.

33. The liver is indicated by letter ___________.

34. The tongue is indicated by letter ____________.

35. The stomach is indicated by letter ____________.

36. The esophagus is indicated by letter ______________.

37. The rectum is indicated by letter ____________.

38. The spleen is indicated by letter ____________.

39. The pharynx is indicated by letter ______________.

40. The anus is indicated by letter ____________.

41. The appendix is indicated by letter ______________.

42. The pancreas is indicated by letter ____________.