Chapter 02 - Digestion and Absorption

True / False

1. Segmentation begins when a bolus enters the esophagus.
   a. True
   b. False

ANSWER: False
REFERENCES: 2.1 Anatomy of the Digestive System
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

2. Bacteria in the colon protect people from some infections.
   a. True
   b. False

ANSWER: True
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Understand

3. The idea of "food-combining diets," or avoiding certain combinations of food, is valid- the digestive system cannot handle more than one task at a time.
   a. True
   b. False

ANSWER: False
REFERENCES: 2.3 The Absorptive System
LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.
KEYWORDS: Bloom's: Apply

4. Low-density lipoproteins, or LDL, are often referred to as "good" cholesterol.
   a. True
   b. False

ANSWER: False
REFERENCES: 2.4 Transport of Nutrients
LEARNING OBJECTIVES: NHHE.DEBR.17.2.4 - Explain the process of nutrient delivery from the GI tract to body cells by the vascular system and the three types of lipoproteins.
KEYWORDS: Bloom's: Remember

5. Hands should be washed with soap and water often during food preparation in order to reduce the risk of foodborne illness.
   a. True
   b. False

ANSWER: True
REFERENCES: 2.5 Nutrition in Practice: Food Safety
LEARNING OBJECTIVES: NHHE.DEBR.17.2.5 - Explain the causes and effects of foodborne illnesses in humans and the methods of ensuring food safety.

KEYWORDS: Bloom's: Understand

Multiple Choice

6. Another name for the digestive tract is the:
   a. urinary tract.
   b. exocrine system.
   c. gastrointestinal tract.
   d. muscular system.
   e. gastroesophageal system.

ANSWER: c
REFERENCES: 2.1 Anatomy of the Digestive Tract
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

7. Identify the correct order of the digestive tract from beginning to end.
   a. stomach, mouth, large intestine
   b. pharynx, rectum, stomach
   c. lower esophageal sphincter, esophagus, rectum
   d. mouth, stomach, anus
   e. pharynx, large intestine, pyloric sphincter

ANSWER: d
REFERENCES: 2.1 Anatomy of the Digestive Tract
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

8. A bolus is a(n):
   a. sphincter muscle separating the stomach from the small intestine.
   b. portion of food swallowed at one time.
   c. enzyme that hydrolyzes starch.
   d. portion of partially digested food expelled by the stomach into the duodenum.
   e. blockage that closes off the trachea to prevent choking.

ANSWER: b
REFERENCES: 2.1 Anatomy of the Digestive Tract
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

9. Which of the following is formed in the mouth?
   a. bile
   b. stomach acid
   c. chyme
   d. villus

e. bolus

ANSWER: e

REFERENCES: 2.1 Anatomy of the Digestive Tract

LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.

KEYWORDS: Bloom's: Remember

10. During swallowing of food, which of the following prevents food from entering the lungs?
    a. lower esophageal sphincter
    b. pharynx
    c. ileocecal valve
    d. epiglottis
    e. appendix

ANSWER: d

REFERENCES: 2.1 Anatomy of the Digestive Tract

LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.

KEYWORDS: Bloom's: Understand

11. The stomach empties into the:
    a. ileum.
    b. cecum.
    c. jejunum.
    d. duodenum.
    e. colon.

ANSWER: d

REFERENCES: 2.1 Anatomy of the Digestive Tract

LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.

KEYWORDS: Bloom's: Understand

12. Chyme is:
    a. a semiliquid mass of partially digested food.
    b. a portion of food swallowed at one time.
    c. an enzyme in the stomach needed for the digestion of protein.
    d. an esophageal secretion.
    e. successive waves of involuntary muscular contractions passing along the wall of the GI tract.

ANSWER: a

REFERENCES: 2.1 Anatomy of the Digestive Tract

LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.

KEYWORDS: Bloom's: Remember

13. Which two organs secrete digestive juices into the small intestine?
    a. gallbladder and pancreas

b. pancreas and liver
c. gallbladder and liver
d. duodenum and pancreas
e. liver and stomach

ANSWER: a
REFERENCES: 2.1 Anatomy of the Digestive Tract
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

14. The movement of chyme from the stomach into the small intestine is regulated by the:
a. pancreas.
b. lower esophageal sphincter.
c. ileocecal valve.
d. duodenum.
e. pyloric sphincter.

ANSWER: e
REFERENCES: 2.1 Anatomy of the Digestive Tract
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

15. Immediately before passing into the large intestine, the food mass must pass though the:
a. pyloric sphincter.
b. lower esophageal sphincter.
c. ileocecal valve.
d. bolus.
e. colon.

ANSWER: c
REFERENCES: 2.1 Anatomy of the Digestive Tract
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

16. *Peristalsis* is a term that refers to the:
a. circulation of blood in the blood vessels.
b. absorption of nutrients in the intestines.
c. mixing and moving of food through the lymphatic system.
d. last phase of digestion.
e. action of the involuntary muscles of the digestive tract.

ANSWER: e
REFERENCES: 2.1 Anatomy of the Digestive Tract
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

17. Involuntary muscle contractions move food through the intestinal tract. The movement that forces the contents back a few inches before pushing it forward again is called:

a. segmentation.
b. rotation.
c. peristalsis.
d. liquefaction.
e. kneading.

ANSWER: a
REFERENCES: 2.1 Anatomy of the Digestive Tract
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

18. Enzymes:

a. facilitate chemical reactions.
b. draw water into the small intestine.
c. are present in all parts of the GI tract.
d. encourage bacterial growth.
e. are changed during digestion.

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

19. Which enzyme breaks down starch in the mouth?

a. lingual protease
b. lipase
c. salivary amylase
d. gastric protease
e. secretin

ANSWER: c
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

20. Saliva contains an enzyme that digests:

a. proteins.
b. minerals.
c. starches.
d. vitamins.
e. fiber.

ANSWER: c
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Remember

21. What is gastric juice composed of?
    a. water, enzymes, and hydrochloric acid
    b. enzymes, water, and pancreatic acid
    c. chylomicrons, water, and bile
    d. hydrochloric acid, bile, and enzymes
    e. hydrochloric acid, insulin, and bile

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

22. The normal pH of the stomach is:
    a. very acidic.
    b. slightly acidic.
    c. neutral.
    d. slightly alkaline.
    e. strongly alkaline.

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

23. Which organ does not contribute juices during digestion?
    a. salivary glands
    b. small intestine
    c. pancreas
    d. esophagus
    e. stomach

ANSWER: d
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

24. Mucus in the stomach serves to:
    a. neutralize stomach acid.
    b. activate pepsinogen to pepsin.
    c. coat and protect stomach cells from gastric juices.
    d. emulsify fats.
    e. collect bacteria.

ANSWER: c
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Remember

25. The major digestive work in the stomach is the initial breakdown of:
    a. starch.
    b. proteins.
    c. fat.
    d. vitamins.
    e. mucus.

ANSWER: b
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

26. In addition to hydrochloric acid, the stomach cells also secrete:
    a. mucus.
    b. bile.
    c. amylase.
    d. lipoproteins.
    e. cholesterol.

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

27. Which nutrients are digested in the small intestine?
    a. carbohydrate, fat, and protein
    b. fat, water, and fiber
    c. protein, vitamins, and fiber
    d. water, fiber, and minerals
    e. carbohydrate, fat, and water

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Understand

28. Where does the digestion of proteins begin and end?
    a. begins in stomach; ends in pancreas
    b. begins in pancreas; ends in small intestine
    c. begins in stomach; ends in small intestine
    d. begins in small intestine; ends in liver
    e. begins in small intestine; ends in stomach

ANSWER: c
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Remember

29. The major digestive enzyme secreted by the stomach is:
    a. amylase.
    b. lipase.
    c. bile.
    d. disaccharidase.
    e. pepsin

ANSWER: e
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

30. A patient has lost the ability to digest the majority of carbohydrates, proteins, and fats due to a loss of enzymes. Which organ is most likely failing her?
    a. pancreas
    b. gallbladder
    c. stomach
    d. liver
    e. intestine

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Analyze

31. After the pancreatic juices have mixed with chyme in the intestine, the resulting mixture is:
    a. very acidic.
    b. slightly acidic.
    c. strongly alkaline.
    d. slightly alkaline.
    e. none of the above.

ANSWER: d
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

32. The liver:
    a. reabsorbs water and salts.
    b. secretes bile.
    c. churns food to chyme.
    d. performs enzymatic digestion.
    e. stores bile.

ANSWER: b
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Remember

33. The main function of bile is to:
    a. stimulate vitamin-producing bacteria.
    b. stimulate the activity of protein digestive enzymes.
    c. neutralize the intestinal contents.
    d. decrease the acidity of the contents of the stomach.
    e. emulsify fats.

ANSWER: e
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

34. Gallbladder disease, such as cancer, can compromise the digestion of:
    a. fat
    b. protein
    c. carbohydrate
    d. fiber
    e. minerals

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Apply

35. The gallbladder:
    a. reabsorbs water and salts.
    b. churns food to chyme.
    c. performs enzymatic digestion.
    d. stores bile.
    e. contains bacteria that produce Vitamin K.

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

36. The emulsification of fat requires:
    a. biotin.
    b. enzymes.
    c. prostaglandins.
    d. intestinal flora.
    e. bile.

ANSWER: e
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Remember

37. Which of the following contains no digestive enzymes?
    a. saliva
    b. gastric juice
    c. intestinal juice
    d. bile
    e. pancreatic juice

ANSWER: d
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

38. Which of the following does not secrete digestive juices?
    a. stomach
    b. pancreas
    c. salivary glands
    d. liver (via the gall bladder)
    e. large intestine

ANSWER: e
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

39. Which of the following nutrients takes longest to digest?
    a. fat
    b. sugar
    c. vitamin C
    d. fruit sugar
    e. glucose

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

40. Fats present in the GI tract:
    a. slow down the process of digestion and absorption.
    b. cause difficulty in digestion.
    c. stimulate and hasten digestion and absorption.
    d. are carriers of thiamin, riboflavin, and niacin.
    e. cause GI inflammation.

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Understand

41. Which of the following foods would take the most time to digest?
    a. a piece of toast with strawberry jam
    b. a grilled steak
    c. a green salad with low-fat salad dressing
    d. a cup of green beans
    e. a piece of cake with frosting

ANSWER: b
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Apply

42. Which of these foods would be digested most quickly?
    a. sugar cookies
    b. peanut butter sandwich and milk
    c. stew and cornbread
    d. hamburger, French fries, and milkshake
    e. steak and baked potato

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Apply

43. Which of the following foods would be digested most rapidly?
    a. a scoop of lemon sherbet
    b. an apple
    c. a baked potato with sour cream
    d. a piece of cheese on a cracker
    e. a hamburger

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Apply

44. Which nutrients must be broken down in order to be absorbed?
    a. vitamins, minerals, and water
    b. carbohydrate, vitamins, and minerals
    c. fat, protein, and minerals
    d. carbohydrate, protein, and fat
    e. carbohydrate, fat, water

ANSWER: d
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Understand

45. Bacteria in the GI tract perform all of the following functions *except*:
    a. producing biotin.
    b. protecting people from infection.
    c. producing vitamin K.
    d. breaking down fiber.
    e. producing bile.

ANSWER: e
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

46. Fiber functions to:
    a. aid in the absorption of vitamins.
    b. produce GI bacteria.
    c. stimulate the GI tract muscles.
    d. stimulate the absorption of nutrients.
    e. increase water absorption by the digestive tract.

ANSWER: c
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

47. A benefit of fiber is that it:
    a. promotes mineral absorption.
    b. aids in keeping stools soft.
    c. prevents diarrhea.
    d. keeps individual foods from getting mixed together.
    e. promotes fat absorption.

ANSWER: b
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

48. Once the digestive process is complete, the colon retrieves materials that the body must recycle. These materials are:
    a. water and dissolved salts.
    b. iron and water.
    c. protein and sodium.
    d. water and fiber.
    e. fat and fiber.

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Remember

49. One of the functions of the colon is to absorb:
    a. salts.
    b. vitamins.
    c. sugars.
    d. fiber.
    e. fats.

ANSWER: a
REFERENCES: 2.2 The Process of Digestion
LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.
KEYWORDS: Bloom's: Remember

50. The primary site of nutrient absorption is the:
    a. stomach.
    b. pancreas.
    c. small intestine.
    d. large intestine.
    e. mouth.

ANSWER: c
REFERENCES: 2.3 The Absorptive System
LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.
KEYWORDS: Bloom's: Remember

51. Villi are part of the structure of the
    a. esophagus.
    b. stomach.
    c. colon.
    d. large intestine.
    e. small intestine.

ANSWER: e
REFERENCES: 2.3 The Absorptive System
LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.
KEYWORDS: Bloom's: Remember

52. The microscopic hairs that cover the surface of each cell lining the small intestine are called:
    a. intestinal folds.
    b. villi.
    c. microvilli.
    d. lymphatics.
    e. chylomicrons.

ANSWER: c
REFERENCES: 2.3 The Absorptive System

LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.
KEYWORDS: Bloom's: Remember

53. Which of the following nutrients is/are absorbed into the lymphatic system?
    a. fat-soluble vitamins
    b. water
    c. amino acids
    d. glucose
    e. minerals

ANSWER: a
REFERENCES: 2.3 The Absorptive System
LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.
KEYWORDS: Bloom's: Understand

54. After absorption, the water-soluble nutrients are released directly into the:
    a. bloodstream.
    b. kidneys.
    c. liver.
    d. lymph.
    e. villi.

ANSWER: a
REFERENCES: 2.3 The Absorptive System
LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.
KEYWORDS: Bloom's: Remember

55. After absorption, the larger fats and fat-soluble vitamins are first released into which transport system?
    a. excretory
    b. mesentery
    c. vascular
    d. lymphatic
    e. cardiovascular

ANSWER: d
REFERENCES: 2.3 The Absorptive System
LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.
KEYWORDS: Bloom's: Remember

56. After digestion, lipids are packaged for transport as lipoproteins known as:
    a. HDL.
    b. VLDL.
    c. LDL.
    d. chylomicrons.

e. triglycerides.

ANSWER: d
REFERENCES: 2.3 The Absorptive System
LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.
KEYWORDS: Bloom's: Remember

57. Chylomicrons are composed of:
a. phospholipid, cholesterol, and lymph
b. proteins, triglyceride, and water-soluble vitamins
c. triglyceride, phospholipid, and proteins
d. water-soluble vitamins, phospholipid, and cholesterol
e. fat-soluble vitamins, water-soluble vitamins, and proteins

ANSWER: c
REFERENCES: 2.3 The Absorptive System
LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.
KEYWORDS: Bloom's: Remember

58. The lymphatic system:
a. contains fluid with the same composition as blood.
b. eventually drains into the blood circulatory system.
c. carries chylomicrons to the intestines.
d. is where metabolism of nutrients takes place.
e. conveys the products of digestion toward the brain.

ANSWER: b
REFERENCES: 2.4 Transport of Nutrients
LEARNING OBJECTIVES: NHHE.DEBR.17.2.4 - Explain the process of nutrient delivery from the GI tract to body cells by the vascular system and the three types of lipoproteins.
KEYWORDS: Bloom's: Remember

59. When nutrients enter the blood vessels from the small intestine, they are first transported to the:
a. kidney.
b. liver.
c. cells throughout the body.
d. thoracic duct.
e. gallbladder.

ANSWER: b
REFERENCES: 2.4 Transport of Nutrients
LEARNING OBJECTIVES: NHHE.DEBR.17.2.4 - Explain the process of nutrient delivery from the GI tract to body cells by the vascular system and the three types of lipoproteins.
KEYWORDS: Bloom's: Remember

60. Which of the following is the body’s major metabolic organ?
a. pancreas

b. small intestine
c. gallbladder
d. heart
e. liver

ANSWER: e
REFERENCES: 2.4 Transport of Nutrients
LEARNING OBJECTIVES: NHHE.DEBR.17.2.4 - Explain the process of nutrient delivery from the GI tract to body cells by the vascular system and the three types of lipoproteins.
KEYWORDS: Bloom's: Remember

61. Elevated LDL concentrations are associated with a high risk of heart disease because they:
a. transport cholesterol and triglycerides from the liver to the tissues.
b. carry excessive amounts of fat that is deposited around the heart.
c. encourage high levels of iron in the blood.
d. take excess cholesterol back to the liver, which increases the production of cholesterol.
e. are a different, less complex, type of cholesterol.

ANSWER: a
REFERENCES: 2.4 Transport of Nutrients
LEARNING OBJECTIVES: NHHE.DEBR.17.2.4 - Explain the process of nutrient delivery from the GI tract to body cells by the vascular system and the three types of lipoproteins.
KEYWORDS: Bloom's: Remember

62. Elevated HDL concentrations are associated with a low risk of heart disease because they:
a. transport newly absorbed lipids from intestinal cells to the rest of the body.
b. carry cholesterol and triglycerides from the liver to the rest of the body.
c. carry lipids around in the blood more often than LDL.
d. scavenge excess cholesterol and phospholipids from the tissues and return them to the liver.
e. are a more complex type of cholesterol.

ANSWER: d
REFERENCES: 2.4 Transport of Nutrients
LEARNING OBJECTIVES: NHHE.DEBR.17.2.4 - Explain the process of nutrient delivery from the GI tract to body cells by the vascular system and the three types of lipoproteins.
KEYWORDS: Bloom's: Remember

63. Chylomicrons contain the greatest proportion of:
a. protein.
b. cholesterol.
c. phospholipid.
d. water.
e. triglyceride.

ANSWER: e
REFERENCES: 2.4 Transport of Nutrients
LEARNING OBJECTIVES: NHHE.DEBR.17.2.4 - Explain the process of nutrient delivery from the GI tract to body cells by the vascular system and the three types of lipoproteins.
KEYWORDS: Bloom's: Understand

64. Health and performance of the digestive system can be positively affected by:
    a. adequate sleep
    b. enzyme supplements
    c. colon cleansing treatments
    d. a high-fat diet
    e. foodborne illness

ANSWER: a
REFERENCES: 2.4 Transport of Nutrients
LEARNING OBJECTIVES: NHHE.DEBR.17.2.4 - Explain the process of nutrient delivery from the GI tract to body cells by the vascular system and the three types of lipoproteins.
KEYWORDS: Bloom's: Understand

65. Which of the following will cause a foodborne intoxication?
    a. *Listeria*
    b. *Clostridium perfringens*
    c. *Campylobacter jejuni*
    d. *Staphylococcus aureus*
    e. Norovirus

ANSWER: d
REFERENCES: 2.5 Nutrition in Practice : Food Safety
LEARNING OBJECTIVES: NHHE.DEBR.17.2.5 - Explain the causes and effects of foodborne illnesses in humans and the methods of ensuring food safety.
KEYWORDS: Bloom's: Apply

66. To prevent bacterial growth when holding cooked foods, they should be kept at what temperature until served?
    a. 40 or under
    b. 140 or over
    c. 165
    d. above 200

ANSWER: b
REFERENCES: 2.5 Nutrition in Practice : Food Safety
LEARNING OBJECTIVES: NHHE.DEBR.17.2.5 - Explain the causes and effects of foodborne illnesses in humans and the methods of ensuring food safety.
KEYWORDS: Bloom's: Apply

67. What is a good recommendation to prevent foodborne illnesses?
    a. Fresh produce should be washed before it is eaten.
    b. Only new sponges and towels should be used in the kitchen.
    c. Leftovers can safely be covered and left at room temperature until the next meal.
    d. Meats should be marinated at room temperature.
    e. All meat should be washed before cooking.

ANSWER: a
REFERENCES: 2.5 Nutrition in Practice: Food Safety
LEARNING OBJECTIVES: NHHE.DEBR.17.2.5 - Explain the causes and effects of foodborne illnesses in humans and

the methods of ensuring food safety.

KEYWORDS: Bloom's: Apply

68. Cold food should be stored at:
    a. 40°F or colder
    b. 55°F or colder
    c. 80°F or colder
    d. 140°F or colder
    e. 40°F or warmer

ANSWER: a

REFERENCES: 2.5 Nutrition in Practice: Food Safety

LEARNING OBJECTIVES: NHHE.DEBR.17.2.5 - Explain the causes and effects of foodborne illnesses in humans and the methods of ensuring food safety.

KEYWORDS: Bloom's: Remember

69. Leftovers should be used within how many days?
    a. 5-7
    b. 3-4
    c. 2-3
    d. 1-2
    e. 10-12

ANSWER: b

REFERENCES: 2.5 Nutrition in Practice: Food Safety

LEARNING OBJECTIVES: NHHE.DEBR.17.2.5 - Explain the causes and effects of foodborne illnesses in humans and the methods of ensuring food safety.

KEYWORDS: Bloom's: Apply

Matching

Matching

a. the oral cavity containing the tongue and teeth.
b. the passageway leading from the nose and mouth to the larynx and esophagus, respectively.
c. a cartilage structure in the throat that prevents fluid or food from entering the trachea when a person swallows.
d. the passageway from the mouth and nose to the lungs.
e. the conduit from the mouth to the stomach.
f. the sphincter muscle at the junction between the esophagus and the stomach.
g. the sphincter muscle separating the stomach from the small intestine.
h. the organ that stores and concentrates bile.
i. a gland that secretes enzymes and digestive juices into the duodenum.
j. a 10-foot length of small-diameter (1-inch) intestine that is the major site of digestion of food and absorption of nutrients.
k. the top portion of the small intestine.
l. the first two-fifths of the small intestine beyond the duodenum.
m. the last segment of the small intestine.
n. the sphincter muscle separating the small and large intestines.

o. the last portion of the intestine, which absorbs water.
p. a narrow blind sac extending from the beginning of the large intestine; stores lymphocytes.
q. the muscular terminal part of the GI tract extending from the sigmoid colon to the anus.
r. the terminal sphincter muscle of the GI tract.

REFERENCES: 2.1 Anatomy of the Digestive Tract
LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.
KEYWORDS: Bloom's: Remember

70. anal sphincter
ANSWER: r

71. appendix
ANSWER: p

72. duodenum
ANSWER: k

73. epiglottis
ANSWER: c

74. esophagus
ANSWER: e

75. gallbladder
ANSWER: h

76. ileocecal valve
ANSWER: n

77. ileum
ANSWER: m

78. jejunum
ANSWER: l

79. large intestine
ANSWER: o

80. lower esophageal sphincter
ANSWER: f

81. mouth
ANSWER: a

82. pancreas
ANSWER: i

83. pharynx
ANSWER: b

84. pyloric sphincter
ANSWER: g

85. rectum
ANSWER: q

86. small intestine
ANSWER: j

87. trachea
ANSWER: d

Essay

88. Outline and trace the path food follows through the digestive tract from one end to the other.

ANSWER: Mouth (chewing and moving food around with the tongue) àpharynx (shared by digestive and respiratory system) àesophagus àstomach (food becomes chyme) àsmall intestine (gallbladder and pancreas secrete fluids into small intestine) àlarge intestine (colon) àrectum

REFERENCES: 2.1 Anatomy of the Digestive Tract

LEARNING OBJECTIVES: NHHE.DEBR.17.2.1 - Describe the path that food takes during digestion and the muscular actions of digestion.

KEYWORDS: Bloom's: Remember

89. Describe the role of the stomach in the process of digestion.

ANSWER: The stomach is a muscular, elastic, saclike portion of the digestive tract that grinds and churns swallowed food, mixing it with acid and enzymes to form chyme. The major digestive event that occurs in the stomach is the initial breakdown of proteins. The highly acidic environment (hydrochloric acid) in the stomach serves to denature proteins so that enzymes, such as pepsin, can further break them down. While the majority of digestion in the stomach is protein, there is some fat digestion by gastric lipase, a small amount of sucrose digestion by stomach acid, and the attachment of a protein carrier to vitamin B_{12}.

REFERENCES: 2.3 The Process of Digestion

LEARNING OBJECTIVES: NHHE.DEBR.17.2.3 - Describe the anatomical details of the GI tract and the features and activities of intestinal cells that facilitate nutrient absorption.

KEYWORDS: Bloom's: Remember

90. Should antacids be taken to decrease the strong acidity of the stomach? Explain your answer.

ANSWER: The highly acidic environment of the stomach is required for proper protein breakdown. When protein enters the stomach, it has had no breakdown other than being crushed and mixed with saliva in the mouth. In the stomach, the acid helps to uncoil the proteins so that stomach enzymes can attack and break the bonds. Antacids reduce the acidity of the stomach, thereby preventing protein breakdown. Antacid use should be carefully considered, especially for those on a high-protein diet.

REFERENCES: 2.2 The Process of Digestion

LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Apply

Chapter 02 - Digestion and Absorption

91. Explain what determines the rate of digestion of the energy nutrients.

ANSWER: The rate of digestion of carbohydrate, fat, and protein depends on the contents of the meal. If the meal is high in simple sugars (bread, cookies, crackers), digestion proceeds fairly rapidly. A meal that is high in fat will slow digestion.

REFERENCES: 2.2 The Process of Digestion

LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Apply

92. Explain the benefits of intestinal microflora to health.

ANSWER: The intestines contain beneficial bacteria that produce vitamins, such as biotin and vitamin K, as well as protect the body from infectious organisms. As long as the normal intestinal flora are present, infectious bacteria have a difficult time establishing and attacking the digestive system.

REFERENCES: 2.2 The Process of Digestion

LEARNING OBJECTIVES: NHHE.DEBR.17.2.2 - Describe the actions and origins of the digestive secretions.

KEYWORDS: Bloom's: Understand

93. Describe the difference between low-density lipoproteins (LDL) and high-density lipoproteins (HDL). What is the relationship between blood levels of these lipoproteins and risk of heart disease?

ANSWER: LDL are cholesterol-rich lipoproteins (the more lipids in the molecule, the lower the density) and HDL contain cholesterol that is returning to the liver for metabolism or excretion from other parts of the body. Both LDL and HDL carry lipids in the blood, but LDL are larger, lighter, and filled with more lipid; HDL are smaller, denser, and packaged with more protein. LDL deliver cholesterol and triglycerides from the liver to the tissues and contribute negatively to heart disease. HDL scavenge excess cholesterol from the tissues and dispose of it and can have a positive impact on heart health.

REFERENCES: 2.4 Transport of Nutrients

LEARNING OBJECTIVES: NHHE.DEBR.17.2.4 - Explain the process of nutrient delivery from the GI tract to body cells by the vascular system and the three types of lipoproteins.

KEYWORDS: Bloom's: Analyze