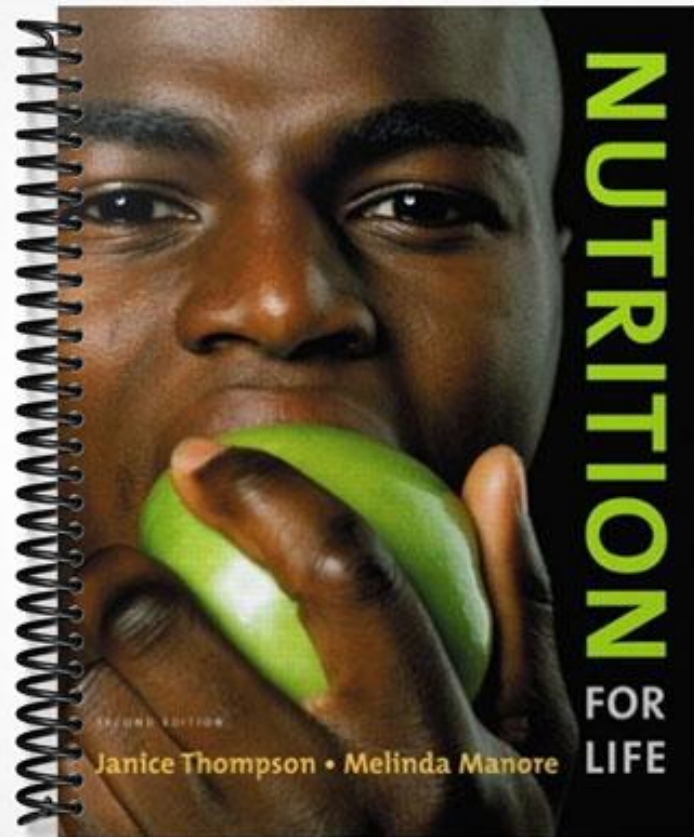


**TEST BANK**



*Nutrition for Life, 2e* (Thompson/Manore)

**Chapter 2 The Human Body: Are We Really What We Eat?**

Multiple Choice Questions

1) \_\_\_\_\_ are organs that are grouped together to perform an integrated function.

- A) Molecules
- B) Tissues
- C) Systems
- D) Organelles

Answer: C

Page Ref: 42

2) The \_\_\_\_\_ is most responsible for prompting individuals to seek food.

- A) stomach
- B) small intestine
- C) hypothalamus
- D) mouth

Answer: C

Page Ref: 42

3) Which physiological trigger(s) will result in the sensation of hunger?

- A) low glucose levels
- B) high glucose levels
- C) release of the chemical messengers leptin and serotonin
- D) eating a meal with a high satiety value

Answer: A

Page Ref: 43

4) Hunger is best described as:

- A) a physiological desire to find food and eat.
- B) a psychological desire to find food and eat.
- C) eating that is often driven by environmental cues.
- D) eating that is often driven by emotional cues.

Answer: A

Page Ref: 42

5) Which of the following is NOT a regulator of satiety in the body?

- A) GI tract
- B) hypothalamus
- C) hormones
- D) kidneys

Answer: D

Page Ref: 43

6) Which of the following snacks will have the highest satiety value, assuming the calories and relative size are similar?

- A) slice of whole-grain bread
- B) piece of cheese
- C) glass of whole milk
- D) glass of skim milk

Answer: B

Page Ref: 43

7) The smallest units of matter that cannot be broken down by natural means are:

- A) atoms.
- B) molecules.
- C) cells.
- D) lipids.

Answer: A

Page Ref: 40

8) The human body is organized into the following structural levels (smallest to largest):

- A) molecules: atoms: organs: systems: tissues: cells.
- B) atoms: molecules: cells: tissues: organs: systems.
- C) organs: tissues: molecules: systems: atoms: organs.
- D) atoms: cells: systems: tissues: molecules: organs.

Answer: B

Page Ref: 41

9) Cell membranes are:

- A) very rigid and resistant to all noncellular molecules.
- B) semi-permeable.
- C) the organelles responsible for ATP production.
- D) chemical messengers that are secreted into the bloodstream by a gland.

Answer: B

Page Ref: 40

10) In which organelle is the cell's DNA located?

- A) nucleus
- B) mitochondria
- C) cell membrane
- D) cytoplasm

Answer: A

Page Ref: 42

11) The "powerhouses" of the cell that produces energy from food molecule are the:

- A) mitochondria.
- B) ribosomes.
- C) nuclei.
- D) cytoplasm.

Answer: A

Page Ref: 42

12) What is the term that describes the process by which the foods we eat are broken down into smaller components by either mechanical or chemical means?

- A) digestion
- B) absorption
- C) elimination
- D) peristalsis

Answer: A

Page Ref: 44

13) Which of the following is NOT a role that the liver plays in digestion and absorption of nutrients?

- A) Filters the blood removing potential toxins such as alcohol and drugs.
- B) Secretes insulin and glucagon to assist in the regulation of blood glucose concentrations.
- C) Receives the products of digestion from the small intestine and releases nutrients depending on body needs.
- D) Synthesizes bile to assist in the digestion and absorption of fat.

Answer: B

Page Ref: 52

14) Most digestion and absorption occurs in the:

- A) stomach.
- B) esophagus.
- C) small intestine.
- D) mouth.

Answer: C

Page Ref: 49

15) Juanita eats her breakfast and his GI tract will now begin the process of digesting and absorbing the nutrients from this meal. What is the order in which each of the organs of the GI tract will work to achieve this process?

- A) mouth: esophagus: small intestine: stomach: large intestine
- B) mouth: esophagus: stomach: small intestine: large intestine
- C) mouth: stomach: esophagus: small intestine: large intestine
- D) mouth: stomach: esophagus: large intestine: small intestine

Answer: B

Page Ref: 45

16) The mechanical and chemical digestion of food is initiated in the:

- A) mouth.
- B) small intestine.
- C) stomach.
- D) esophagus.

Answer: A

Page Ref: 45-46

17) Salivary amylase is a(n):

- A) hormone.
- B) antibody.
- C) bicarbonate.
- D) enzyme.

Answer: D

Page Ref: 46

18) Which best explains why carbohydrate digestion ceases when food reaches the stomach?

- A) Carbohydrate is completely digested in the mouth.
- B) Salivary amylase cannot function in the acid environment of the stomach.
- C) Carbohydrate is completely absorbed in the esophagus.
- D) Intestinal bacteria are needed for carbohydrate digestion.

Answer: B

Page Ref: 46

19) Which of the following is NOT a component of the gastric juices?

- A) hydrochloric acid
- B) pepsin
- C) insulin
- D) gastric lipase

Answer: C

Page Ref: 48

20) What is chyme?

- A) ulcerations of the esophageal lining
- B) healthy bacteria of the small intestine
- C) mixture of partially digested food, water, and gastric juices
- D) substance that allows for the emulsification of dietary lipid

Answer: C

Page Ref: 48

21) A primary function of the mucus in the stomach is to:

- A) neutralize stomach acid.
- B) activate pepsinogen to form pepsin.
- C) protect stomach cells from digestion.
- D) emulsify fats.

Answer: C

Page Ref: 48

22) Which of the macronutrients is NOT broken down chemically in the stomach?

- A) protein.
- B) carbohydrate.
- C) fat.
- D) vitamin C.

Answer: B

Page Ref: 46

23) Proteins that induce chemical changes to speed up body processes are called:

- A) hormones.
- B) peptides.
- C) enzymes.
- D) chymes.

Answer: C

Page Ref: 46

24) The brush border is located in the:

- A) esophagus.
- B) stomach.
- C) small intestine.
- D) large intestine.

Answer: C

Page Ref: 50

25) What is the name of the sphincter that separates the esophagus and the stomach?

- A) pyloric
- B) gastroesophageal
- C) ileocecal
- D) rectal

Answer: B

Page Ref: 47

26) The last section of the small intestine that connects to the ileocecal valve is called the:

- A) bile duct.
- B) duodenum.
- C) jejunum.
- D) ileum.

Answer: D

Page Ref: 49

27) Responding to the presence of fat in our meal, the gallbladder releases a substance called:

- A) lipase.
- B) pepsin.
- C) chyme.
- D) bile.

Answer: D

Page Ref: 49

28) Which of the following organs is responsible for the manufacturing and secretion of insulin and glucagon, as well as many digestive enzymes?

- A) liver
- B) stomach
- C) pancreas
- D) gallbladder

Answer: C

Page Ref: 49

29) The fingerlike projections of the small intestine that increase surface area and allow for the absorption of nutrients are called:

- A) villi.
- B) lacteals.
- C) sphincters.
- D) diverticuli.

Answer: A

Page Ref: 50

30) Immediately after absorption, what circulatory system carries most of the fat-soluble nutrients?

- A) vascular
- B) mesenteric
- C) lymphatic
- D) enterohepatic

Answer: C

Page Ref: 51

31) Which large vessel transports absorbed nutrients to the liver?

- A) portal vein
- B) pulmonary vein
- C) aorta
- D) subclavian vein

Answer: A

Page Ref: 52

32) In which organ does the majority of water absorption occur?

- A) mouth
- B) stomach
- C) small intestine
- D) large intestine

Answer: D

Page Ref: 52

33) Collectively, the nerves of the gastrointestinal tract are referred to as:

- A) peptic nerves.
- B) hepatic nerves.
- C) enteric nerves.
- D) gastric nerves.

Answer: C

Page Ref: 53

34) If a person has GERD, the \_\_\_\_\_ is malfunctioning.

- A) gallbladder
- B) pancreas
- C) epiglottis
- D) gastroesophageal sphincter

Answer: D

Page Ref: 56

35) What is the primary cause of peptic ulcers?

- A) stress
- B) *H. pylori* bacteria
- C) prolonged use of aspirin
- D) eating too many spicy foods

Answer: B

Page Ref: 57

36) Which of the following would be an appropriate treatment approach for someone who has GERD?

- A) surgical removal of the gallbladder
- B) omission of all lactose foods
- C) antibiotic therapy
- D) lose weight and quit smoking

Answer: D

Page Ref: 56

37) Which of the following statements best describes irritable bowel syndrome (IBS)?

- A) an erosion of the gastrointestinal tract caused by the overproduction of hydrochloric acid
- B) an immune response resulting from the ingestion of an allergen
- C) a hypersensitivity to wheat resulting in diarrhea and bloating
- D) a bowel disorder that interferes with the colon; no definite cause is known

Answer: D

Page Ref: 61



38) Mary experiences anaphylactic shock after eating a peanut butter sandwich. What is the most appropriate treatment for Mary?

- A) IV glucose
- B) Tylenol or another pain medication
- C) antibiotics
- D) epinephrine

Answer: D

Page Ref: 59

39) What are probiotics?

- A) specialty foods to which nutrients have been added
- B) antibiotics that are specific to harmful bacteria while protecting healthful bacteria
- C) live microorganisms naturally found in or supplemented to food products
- D) foods known to have disease-fighting effects

Answer: C

Page Ref: 54

40) Which of the following food sources is a rich source of probiotics?

- A) whole-wheat bread
- B) yogurt
- C) orange juice
- D) calcium supplements

Answer: B

Page Ref: 54

#### True/False Questions

1) Atoms are the smallest units of matter.

Answer: TRUE

Page Ref: 40

2) The cell's nucleus is the organelle responsible for producing energy from food molecules.

Answer: FALSE

Page Ref: 42

3) Hunger is the physical sensation that drives humans to eat.

Answer: TRUE

Page Ref: 42

4) The primary organ producing the sensation of hunger is the stomach.

Answer: FALSE

Page Ref: 42

5) Foods containing carbohydrate have the highest satiety value.

Answer: FALSE

Page Ref: 43

6) Overall, very little digestion occurs in the human mouth.

Answer: TRUE

Page Ref: 46

7) Typically, ingested food remains in the stomach for 2 hours prior to traveling to the small intestine.

Answer: TRUE

Page Ref: 48

8) The pancreas is the largest digestive organ.

Answer: FALSE

Page Ref: 52

9) The small intestine is the longest portion of the human GI tract.

Answer: TRUE

Page Ref: 48

10) The majority of nutrient absorption takes place in the stomach.

Answer: FALSE

Page Ref: 49

11) Since they do not require further digestion, dietary vitamins and minerals are small enough to be absorbed by the gastrointestinal tract.

Answer: TRUE

Page Ref: 50-51

12) The presence of any bacteria in the large intestine indicates a potentially serious systemic allergic reaction that can be fatal if left untreated.

Answer: FALSE

Page Ref: 53

13) The most common symptom of GERD is chronic diarrhea.

Answer: FALSE

Page Ref: 56

14) Irritable bowel syndrome is more common among women than men.

Answer: TRUE

Page Ref: 61

15) The sigmoid colon is the first segment of the large intestine.

Answer: FALSE

Page Ref: 52

16) Food allergies cause an immune response by the body.

Answer: TRUE

Page Ref: 59

17) Most instances of constipation are caused by intestinal bacteria.

Answer: FALSE

Page Ref: 61

18) Diarrhea and dehydration are the most serious potential reactions when consuming an allergenic food product.

Answer: FALSE

Page Ref: 59

19) Untreated diarrhea can be fatal in young children.

Answer: TRUE

Page Ref: 61

20) Currently, the only treatment for celiac disease is a diet free of wheat, barley, & rye.

Answer: TRUE

Page Ref: 60

#### Short Answer Questions

1) The \_\_\_\_\_ is the liquid within an animal cell.

Answer: cytoplasm

Page Ref: 42

2) \_\_\_\_\_ is the physiological sensation that encourages us to seek out food.

Answer: Hunger

Page Ref: 42

3) The \_\_\_\_\_ is the region of the forebrain where physiological signals are translated into thirst and hunger messages.

Answer: hypothalamus

Page Ref: 42

4) Secreted from many glands of the body, \_\_\_\_\_ are chemical messengers that trigger a physiological response.

Answer: hormones

Page Ref: 43

5) The macronutrient with the highest satiety value is \_\_\_\_\_.

Answer: protein

Page Ref: 43

6) The \_\_\_\_\_ is the smallest unit of life that exhibits the properties of growth, reproduction, and metabolism.

Answer: cell

Page Ref: 40

7) \_\_\_\_\_ are the smallest units of matter in nature.

Answer: Atoms

Page Ref: 40

8) A(n) \_\_\_\_\_ is a functional grouping of similar cells.

Answer: tissue

Page Ref: 42

9) \_\_\_\_\_ are tight rings of muscles that control the movement of food through the organs of the gastrointestinal tract.

Answer: Sphincters

Page Ref: 45

10) The human GI tract is approximately \_\_\_\_\_ feet long.

Answer: 30

Page Ref: 45

11) Chemical digestion begins in the \_\_\_\_\_.

Answer: mouth

Page Ref: 46

12) Carbohydrate digestion begins in the \_\_\_\_\_ and protein digestion begins in the \_\_\_\_\_.

Answer: mouth; stomach

Page Ref: 46 and 48

13) Once food is swallowed, the \_\_\_\_\_ keeps it from entering the trachea.

Answer: epiglottis

Page Ref: 46

14) \_\_\_\_\_ is the wavelike contractions that move food along the GI tract.

Answer: Peristalsis

Page Ref: 47

15) The major site of nutrient absorption in the body is the \_\_\_\_\_.

Answer: small intestine

Page Ref: 49

16) \_\_\_\_\_ is produced by the liver and stored in the gallbladder; emulsifies fats in the small intestine.

Answer: Bile

Page Ref: 49

17) The \_\_\_\_\_ is a term that describes the microvilli of the small intestine's lining, which greatly increase its absorptive capacity.

Answer: brush border

Page Ref: 50

18) \_\_\_\_\_ nerves are the nerves of the GI tract.

Answer: Enteric

Page Ref: 53

19) The semifluid mass consisting of partially digested food, water, and gastric juices is called \_\_\_\_\_.

Answer: chyme

Page Ref: 48

### Matching Questions

***Match the following items.***

1) Cell

Page Ref: 40

2) Nucleus

Page Ref: 42

3) Mitochondria

Page Ref: 42

4) Cell membrane

Page Ref: 40-42

5) Cytoplasm

Page Ref: 42

6) Atom

Page Ref: 40

A) Gatekeeper

B) Smallest unit of life

C) Smallest unit of matter

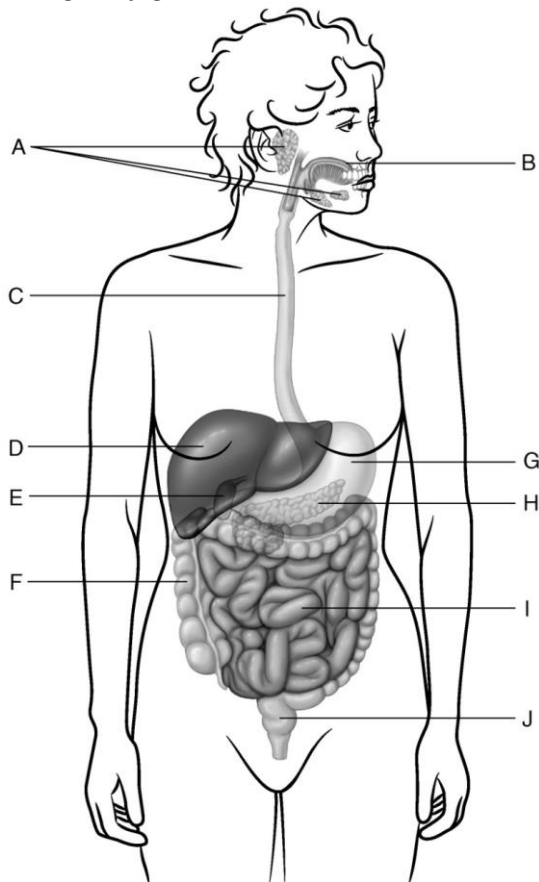
D) Organelles that converts nutrients into energy

E) Fluid material of the cell

F) DNA material found here

Answers: 1) B 2) F 3) D 4) A 5) E 6) C

Using the figure, label A - J.



7) \_\_\_\_\_ Gallbladder

Answer: E

Page Ref: 49

8) \_\_\_\_\_ Small intestine

Answer: I

Page Ref: 48

9) \_\_\_\_\_ Esophagus

Answer: C

Page Ref: 47

10) \_\_\_\_\_ Liver

Answer: H

Page Ref: 52

11) \_\_\_\_\_ Pancreas

Answer: D

Page Ref: 49

12) \_\_\_\_\_ Large intestine

Answer: F

Page Ref: 52-53

13) \_\_\_\_\_ Stomach

Answer: G

Page Ref: 48

14) \_\_\_\_\_ Salivary glands

Answer: A

Page Ref: 46

15) \_\_\_\_\_ Mouth

Answer: B

Page Ref: 46

16) \_\_\_\_\_ Rectum

Answer: J

Page Ref: 53

17) \_\_\_\_\_ Secretes digestive enzymes, insulin, and glucagon

Answer: H

Page Ref: 52

18) \_\_\_\_\_ Most digestion and absorption occurs here.

Answer: I

Page Ref: 49

19) \_\_\_\_\_ Most water is absorbed here.

Answer: F

Page Ref: 52-53

20) \_\_\_\_\_ Stores bile

Answer: E

Page Ref: 49

## Essay Questions

1) Starting at the mouth and ending at the rectum, describe the process of human digestion and absorption.

Page Ref: 44-53

2) Describe the symptoms and treatment of irritable bowel syndrome (IBS).

Page Ref: 61-62

3) Describe the lining of the small intestine. How does its unique structure contribute to the process of nutrient absorption?

Page Ref: 50-53

4) What is the difference between a food intolerance and a food allergy?

Page Ref: 58-59

## Questions from Chapter Boxes

1) Probiotics have been shown to be effective in treating all of the following health problems EXCEPT:

- A) Travelers' diarrhea
- B) Irritable bowel syndrome
- C) Childhood eczema
- D) Diabetes mellitus

Answer: D

Page Ref: 54

2) When traveling outside the country, which of the following are good strategies to help prevent Travelers' diarrhea?

- A) Drink only brand-name bottled beverages.
- B) Do not eat raw meat, fish or shellfish.
- C) Avoid eating food purchased from street vendors.
- D) All of the above are good strategies to help prevent Travelers' diarrhea.

Answer: D

Page Ref: 62

3) Because the activity of probiotics in the GI tract is short-lived, they need to be consumed on a daily basis to be effective.

Answer: TRUE

Page Ref: 54

4) Alcohol, stress, and spicy foods are the leading causes of peptic ulcers.

Answer: FALSE

Page Ref: 57

5) What are probiotics and how are they involved in keeping us healthy?

Page Ref: 54