### Digestive System Practice Test

**Section 1:**

Directions: Match the items in Column B to the definitions or explanations offered in Column A. Write the matching letter, on the line provided in Column A. All but one of the items will be used. (2 point each)

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>______ the stomach’s own acid begins to eat through the stomach</td>
<td>A. mucus</td>
</tr>
<tr>
<td>______ the break down of food through the action of enzymes</td>
<td>B. small intestine</td>
</tr>
<tr>
<td>______ stored for future use</td>
<td>C. duodenum</td>
</tr>
<tr>
<td>______ control the ends of the stomach</td>
<td>D. hydrochloric acid</td>
</tr>
<tr>
<td>______ broken down into glucose</td>
<td>E. carbohydrates</td>
</tr>
<tr>
<td>______ building blocks of cells</td>
<td>F. chemical digestion</td>
</tr>
<tr>
<td>______ food enters the stomach through the ________</td>
<td>G. the stomach</td>
</tr>
<tr>
<td>______ broken down into amino acids</td>
<td>H. fats</td>
</tr>
<tr>
<td>______ digests protein and kills bacteria</td>
<td>I. sphincter muscle(s)</td>
</tr>
<tr>
<td>______ converts into energy</td>
<td>J. amino acids</td>
</tr>
<tr>
<td>______ bile and enzymes from liver enter here</td>
<td>K. proteins</td>
</tr>
<tr>
<td>______ helps the hydrochloric acid digest proteins</td>
<td>L. esophagus</td>
</tr>
<tr>
<td>______ water goes back into the bloodstream</td>
<td>M. glucose</td>
</tr>
<tr>
<td>______ proteins, carbohydrates, vitamins, and minerals go into the bloodstream</td>
<td>N. large intestine</td>
</tr>
<tr>
<td>______ three strong layers of muscle</td>
<td>O. ulcer</td>
</tr>
<tr>
<td>______</td>
<td>P. Pepsin</td>
</tr>
</tbody>
</table>
**Section 2:**
Directions: Read the following statements. Determine if the statement is true or false. Circle your response (1 point each).

1. The digestive system functions to provide cells with proper amounts of proteins, carbohydrate or fats.
   - True
   - False

2. The so-called wisdom teeth are actually the four last molars.
   - True
   - False

3. The pyloric sphincter acts to prevent food from leaving the small intestine.
   - True
   - False

4. The following image displays the type of movement seen in the intestines.
   - True
   - False

5. Mucus is only found in the stomach.
   - True
   - False

6. Salivary glands excrete enzymes that help formulate a bolus.
   - True
   - False
Section 3:
Directions: The test items in this section are multiple-choice questions. Read each question and the corresponding responses carefully. Select the answer that provides the best response. (1 point each)

1. The small intestine is divided into three parts, the:
   a. duodenum, colon, cecum
   b. duodenum, ileum, colon
   c. duodenum, iliac, jejunum
   d. duodenum, ileum, jejunum

2. Where does mechanical digestion occur?
   a. stomach
   b. mouth
   c. small intestine
   d. a and b only
   e. a, b, c

3. The length of time it takes to completely digest food, is:
   a. 15-48 hours
   b. 10-24 hours
   c. 3-6 hours
   d. 50-62 hours

4. Which of the following is not considered a(n) purposeful organ in the human digestive system?
   a. pancreas
   b. esophagus
   c. appendix
   d. cecum

5. Chemical digestion first begins in which organ?
   a. small intestine
   b. stomach
   c. mouth
   d. large intestine

6. Hepatitis is a disease of the liver. Which of the following happens as a result of decreased liver function?
   a. The stomach produces the enzymes needed for digestion.
   b. Lipids are not broken down into smaller pieces.
   c. Proteins are not broken down into smaller pieces.
   d. The kidneys produce the enzymes needed for digestion.
7. Which of the following categories of enzymes is correctly paired with one of its functions?

a. amylase - break down dead cells  
b. lipase - break down energy into cells  
c. protease - break down protein molecules  
d. trypsin - break down skin, hair and nails into smaller components

8. Which of the following roles do an enzyme play when the body processes sucrose (table sugar) into glucose and fructose?

a. An enzyme increases the rate at which the sucrose breaks down.  
b. An enzyme decreases the body’s need for sucrose.  
c. An enzyme increases the amount of sucrose available.  
d. An enzyme decreases the amount of fructose and glucose product available.

9. Your teeth are specialized. Each tooth is designed to execute a specific task. Which of the following is not an accurate representation of its function?

a. premolars - chewing  
b. incisors - biting  
c. molars - grinding  
d. canines - biting

10. What is the average length of the human digestive tract?

a. 25-35 feet  
b. 15-25 feet  
c. 35-40 feet  
d. 10-20 feet

11. Which of these is not one of the ways the body uses dietary proteins?

a. to help regulate osmotic balance of the blood  
b. as an energy source  
c. for building and repairing tissue  
d. to synthesize bile

12. A diet that contains ________________ will have sufficient amino acids.

a. rice and potatoes  
b. rice and beans  
c. corn and potatoes  
d. rice and corn

13. The digestive system consists of ________________, which extends from the mouth to the anus, and ________________ connected to the canal to assist with digestion.
14. Digestion in the stomach is limited to:
   a. carbohydrates
   b. proteins
   c. fats
   d. none of the above, all foods are digested here

15. Which of the following statements of digestion is true?
   a. expulsion occurs in the stomach
   b. digestion occurs in only one chamber of the digestive system
   c. humans can synthesize all of the vitamins they need
   d. it is typical and health that humans have colonies of bacteria that live in their digestive tracts.

16. Damage to which of the following would affect fat but not protein or carbohydrate absorption?
   a. microvilli
   b. appendicitis
   c. gallstones
   d. rugae of the stomach

Section 4:
Directions: The following section is short answer. Read each question carefully. Answer each question to the best of your ability. Please write your response using complete sentences. (3 points each)

1. What is the purpose of saliva?

2. In the large intestine, ____________ and ____________ are absorbed back into the blood to be reused.

3. According to the new government guidelines, a balanced diet consists of the following food groups:
4. Draw a diagram of the inside of a small intestine. Explain the function of this organ. Label all of the components.

5. The scientific term for “chewing” is _____________________________.

6. In the human digestive system, the enzyme pepsin acts on proteins. The optimal temperature for the enzyme is approximately 40°C. Create a graph that displays the relationship between the rate at which the molecules break down and the temperature.
7. Arrange these events in the order in which they occur in the digestive process: excretion, lipase, protease, amylase, absorption, ingestion, hydrochloric acid. Some items may occur more than once.

8. If a person is suffering from an intestinal blockage and consumes 2Tbsp. of Miralax, how would the human body maintain homeostasis in the digestive system?

Section 5:
Directions: Use the following information to answer questions 9 and 10. (8 points each).

A teacher displayed some nutrition fact labels for students to examine. Portions of the labels for two different foods are shown below.

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
<th>Nutrition Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving Size: 140 g</td>
<td>Serving Size: 140 g</td>
</tr>
<tr>
<td>Amount Per Serving</td>
<td>Amount Per Serving</td>
</tr>
<tr>
<td>Calories: 231</td>
<td>Calories: 220</td>
</tr>
<tr>
<td>Calories from Fat: 45</td>
<td>Calories from Fat: 11</td>
</tr>
<tr>
<td>Total Fat: 5g</td>
<td>Total Fat: 1g</td>
</tr>
<tr>
<td>Saturated Fat: 1g</td>
<td>Saturated Fat: 0g</td>
</tr>
<tr>
<td>Trans Fat:</td>
<td>Trans Fat: 0g</td>
</tr>
<tr>
<td>Cholesterol: 119mg</td>
<td>Cholesterol: 0mg</td>
</tr>
<tr>
<td>Sodium: 104mg</td>
<td>Sodium: 183mg</td>
</tr>
<tr>
<td>Total Carbohydrate: 0g</td>
<td>Total Carbohydrate: 43g</td>
</tr>
<tr>
<td>Dietary Fiber: 0g</td>
<td>Dietary Fiber: 3g</td>
</tr>
<tr>
<td>Sugars: 0g</td>
<td>Sugars: 1g</td>
</tr>
<tr>
<td>Protein: 43g</td>
<td>Protein: 8g</td>
</tr>
<tr>
<td>Vitamin A: 1%</td>
<td>Vitamin A: 0%</td>
</tr>
<tr>
<td>Vitamin C: 0%</td>
<td>Vitamin C: 0%</td>
</tr>
<tr>
<td>Calcium: 2%</td>
<td>Calcium: 1%</td>
</tr>
<tr>
<td>Iron: 6%</td>
<td>Iron: 10%</td>
</tr>
</tbody>
</table>

9. Determine which of the following foods would be best for an athlete to consume? Why?

10. Evaluate each food label and determine which food the label is describing. Give evidence to support your answer.
Answer Guide/Key

Section 1 (1 point each):
O
F
H
I
E
J
L
K
D
M
C
P
N
B
G

Section 2 (1 point each):
1. True
2. True
3. False
4. False
5. False
6. True

Section 3 (1 point each):
1. D
2. D
3. A
4. C
5. C
6. B
7. C
8. A
9. D
10. A
11. D
12. B
13. Alimentary canal (digestive tract), accessory organs
14. B
15. D
16. C
Section 4 (3 points each):

1. To secrete amylase into the mouth to start the breakdown process of starch and to soften/liquefy the food, making it easier to transport.
2. Water, vitamin K
3. Dairy, vegetables, fruit, protein, grains
4. 

<table>
<thead>
<tr>
<th>3</th>
<th>2</th>
<th>1-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using complete and accurate detail to draw and label the image, representing the following characteristics: villi, microvilli, crypts, and blood vessels. Clearly explains function of small intestine, using specific details.</td>
<td>Accurately draws and labels image, missing one of the following characteristics: villi, microvilli, crypts, and blood vessels. Explains the function of small intestine, using some details.</td>
<td>Does not accurately draw and label image. Missing two or more of the following characteristics: villi, microvilli, crypts, and blood vessels. Provides little or no explanation of the function of small intestine.</td>
</tr>
</tbody>
</table>

5. mastication

<table>
<thead>
<tr>
<th>3</th>
<th>2</th>
<th>1-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correctly labels both axes, rate of break down and temperature, with appropriate units. The highest point of the graph (or the most lateral point depending on axis display) is at 40ºC. The rate of breakdown decreases at a 1:1 ratio, on either side of 40ºC.</td>
<td>Correctly labels both axes, missing temperature units. The highest point of the graph (or most lateral point, depending on the axis display) is at 40ºC. The rate of breakdown declines sharply on either side of 40ºC.</td>
<td>Labels one or no axes, missing units. The rate of breakdown is a vague, declining across the range of several degrees.</td>
</tr>
</tbody>
</table>

7. ingestion, amylase, protease and HCl, absorption, lipase and amylase, absorption, excretion.

<table>
<thead>
<tr>
<th>3</th>
<th>2</th>
<th>1-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearly describes how blockage impedes digestive process, preventing homeostasis. Provides detailed description of contents of Mirilax and analyzes the effects it will have on the digestive system, countering the blockage to maintain homeostasis.</td>
<td>Clearly describes the contents of Mirilax and analyzes the effects with will have on the digestive system, countering the blockage. Limited references to the body’s ability to maintain homeostasis or prevention of homeostasis from occurring (as a result from the blockage).</td>
<td>Provides limited reasoning for why Mirilax works (e.g., laxative), however, does not provide details supporting digestive process and maintaining homeostasis.</td>
</tr>
</tbody>
</table>

Section 5 (8 points each):

9. 

<table>
<thead>
<tr>
<th>8-7</th>
<th>6-5</th>
<th>4-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifies the specific nutrient(s) that an athlete requires and provides strong reasoning to support the selection. Analyzes the food labels to determine which label best fits the nutrients necessary for an athlete. Explains their food selection, using specific information from the food label to support selection.</td>
<td>Identifies the nutrient that an athlete requires and provides some reasoning to support the selection. Analyzes food labels to determine which label best fits the nutrients necessary for an athlete. Makes a food selection, but offers limited explanation as to the reason for selection.</td>
<td>Makes a food selection, providing vague or no reasoning to support nutrition needs of an athlete.</td>
</tr>
</tbody>
</table>
10.

<table>
<thead>
<tr>
<th>8-7</th>
<th>6-5</th>
<th>4-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzes food labels and nutrient quantities. Provides strong reasoning, based on label and information from class, to determine the type of food the label represents. Correctly identifies the food that corresponds to each label.</td>
<td>Analyzes food labels and nutrient quantities. Provides reasoning, based on label and information from class, to determine the type of food the label represents. Offers a plausible food, though not correct, that corresponds to each label.</td>
<td>Analyzes food labels and nutrient quantities. Provides little or no reasoning to determine the type of food the label represents. Offers an impossible food choice that does not correspond to the nutrients on the label.</td>
</tr>
</tbody>
</table>