

ASSIGNMENT SHEET

CHAPTER 11: ANATOMY AND PHYSIOLOGY OF THE HUMAN BODY

Unit 10: The Digestive System

WORDS TO KNOW CHALLENGE

A. Word Scramble: Unscramble the following terms.

- | | |
|-----------|--|
| 1. _____ | <u>E</u> <u>D</u> <u>P</u> <u>A</u> <u>X</u> <u>I</u> <u>N</u> <u>P</u> |
| 2. _____ | <u>H</u> <u>S</u> <u>I</u> <u>O</u> <u>R</u> <u>C</u> <u>I</u> <u>S</u> <u>R</u> |
| 3. _____ | <u>I</u> <u>C</u> <u>O</u> <u>T</u> <u>S</u> <u>I</u> <u>L</u> |
| 4. _____ | <u>E</u> <u>H</u> <u>A</u> <u>R</u> <u>I</u> <u>D</u> <u>R</u> <u>A</u> |
| 5. _____ | <u>E</u> <u>I</u> <u>G</u> <u>I</u> <u>S</u> <u>O</u> <u>T</u> <u>N</u> <u>D</u> |
| 6. _____ | <u>U</u> <u>N</u> <u>D</u> <u>M</u> <u>E</u> <u>U</u> <u>O</u> <u>D</u> |
| 7. _____ | <u>H</u> <u>S</u> <u>U</u> <u>O</u> <u>G</u> <u>S</u> <u>A</u> <u>E</u> <u>P</u> |
| 8. _____ | <u>D</u> <u>L</u> <u>B</u> <u>A</u> <u>L</u> <u>R</u> <u>A</u> <u>G</u> <u>L</u> <u>D</u> <u>E</u> |
| 9. _____ | <u>S</u> <u>E</u> <u>T</u> <u>I</u> <u>H</u> <u>A</u> <u>T</u> <u>I</u> <u>P</u> |
| 10. _____ | <u>E</u> <u>I</u> <u>L</u> <u>C</u> <u>O</u> <u>E</u> <u>L</u> <u>A</u> <u>C</u> |
| 11. _____ | <u>U</u> <u>I</u> <u>S</u> <u>N</u> <u>N</u> <u>I</u> <u>L</u> |
| 12. _____ | <u>U</u> <u>C</u> <u>J</u> <u>A</u> <u>D</u> <u>N</u> <u>I</u> <u>E</u> |
| 13. _____ | <u>U</u> <u>A</u> <u>N</u> <u>S</u> <u>A</u> <u>E</u> |
| 14. _____ | <u>A</u> <u>R</u> <u>N</u> <u>P</u> <u>A</u> <u>E</u> <u>S</u> <u>C</u> |
| 15. _____ | <u>I</u> <u>D</u> <u>S</u> <u>M</u> <u>G</u> <u>I</u> <u>O</u> |
| 16. _____ | <u>E</u> <u>S</u> <u>O</u> <u>S</u> <u>N</u> <u>T</u> <u>S</u> <u>I</u> |
| 17. _____ | <u>H</u> <u>C</u> <u>T</u> <u>A</u> <u>S</u> <u>M</u> <u>O</u> |
| 18. _____ | <u>U</u> <u>O</u> <u>E</u> <u>G</u> <u>T</u> <u>N</u> |
| 19. _____ | <u>S</u> <u>V</u> <u>I</u> <u>E</u> <u>R</u> <u>A</u> <u>C</u> |

B. Matching: Match the term in column I with its description in column II.

- | COLUMN I | COLUMN II |
|---------------------------|--|
| _____ 1. Alimentary canal | a. Inability to control bowel elimination |
| _____ 2. Bile | b. A backup of stomach contents |
| _____ 3. Cholelithiasis | c. The organ between the mouth and stomach |
| _____ 4. Cystic duct | d. Smooth muscle action that moves material |
| _____ 5. Duodenum | e. Engorged veins |
| _____ 6. Esophagus | f. Protrusion of an organ through an opening |
| _____ 7. Flatus | g. The chain of organs of the GI system |
| _____ 8. Gastric | h. The yellowish discoloration caused by bile in the tissues |
| _____ 9. Gastroscopy | i. An instrument to visualize the rectum |
| _____ 10. Hernia | j. Stored by the gallbladder |
| _____ 11. Incontinent | k. The first section of the small intestine |
| _____ 12. Jaundice | l. Intestinal gas |

- | | |
|-----------------------|--|
| _____ 13. Peristalsis | m. Refers to the stomach |
| _____ 14. Proctoscope | n. An instrument to view the stomach |
| _____ 15. Reflux | o. Gallstones |
| _____ 16. Varices | p. The drainage tube for the gallbladder |

UNIT REVIEW

A. Short Answer

1. Define "digestion." _____

2. List the raw materials the body requires to promote good health.

a. _____	e. _____
b. _____	f. _____
c. _____	g. _____
d. _____	

3. List, in order, the organs of the alimentary tract through which food passes.

a. _____	d. _____
b. _____	e. _____
c. _____	f. _____

4. List the accessory digestive organs of the mouth; explain their function in the digestive process.

a. _____
 b. _____
 c. _____

5. a. What are the initial teeth called? _____
 b. When do they appear? _____
 c. Initial teeth are lost beginning about age _____ and are replaced by _____.
 d. Identify the four types of "secondary" teeth and their specific duties.

a) _____
b) _____
c) _____
d) _____

6. How is swallowing accomplished? _____

7. How is food moved through the esophagus? _____

8. Describe the structure of the stomach and explain its function. _____

9. Describe the structure of the small intestine, naming its sections and explaining its function. _____

10. What functions does the liver perform, including the relationship with the portal circulation?

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____
- h. _____
- i. _____

11. What role does the gallbladder play, and how is it related to the liver? _____

12. Explain why the duodenum is vital to digestion. _____

13. Describe the location and function of the pancreas. _____

14. Where in the body are nutrients absorbed, and how is absorption accomplished? _____

15. Explain the function of the colon and name its five sections. _____

- a. _____ d. _____
b. _____ e. _____
c. _____

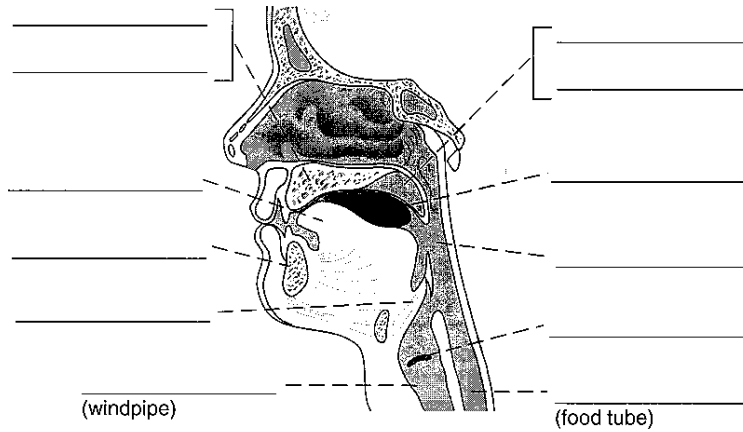
16. What function does the rectum perform? _____

17. Describe the structure and function of the anal canal. _____

B. Label the Illustration

1. Label the illustration of the structures involved in swallowing using the following terms. Refer to Figure 11-162 in the textbook.

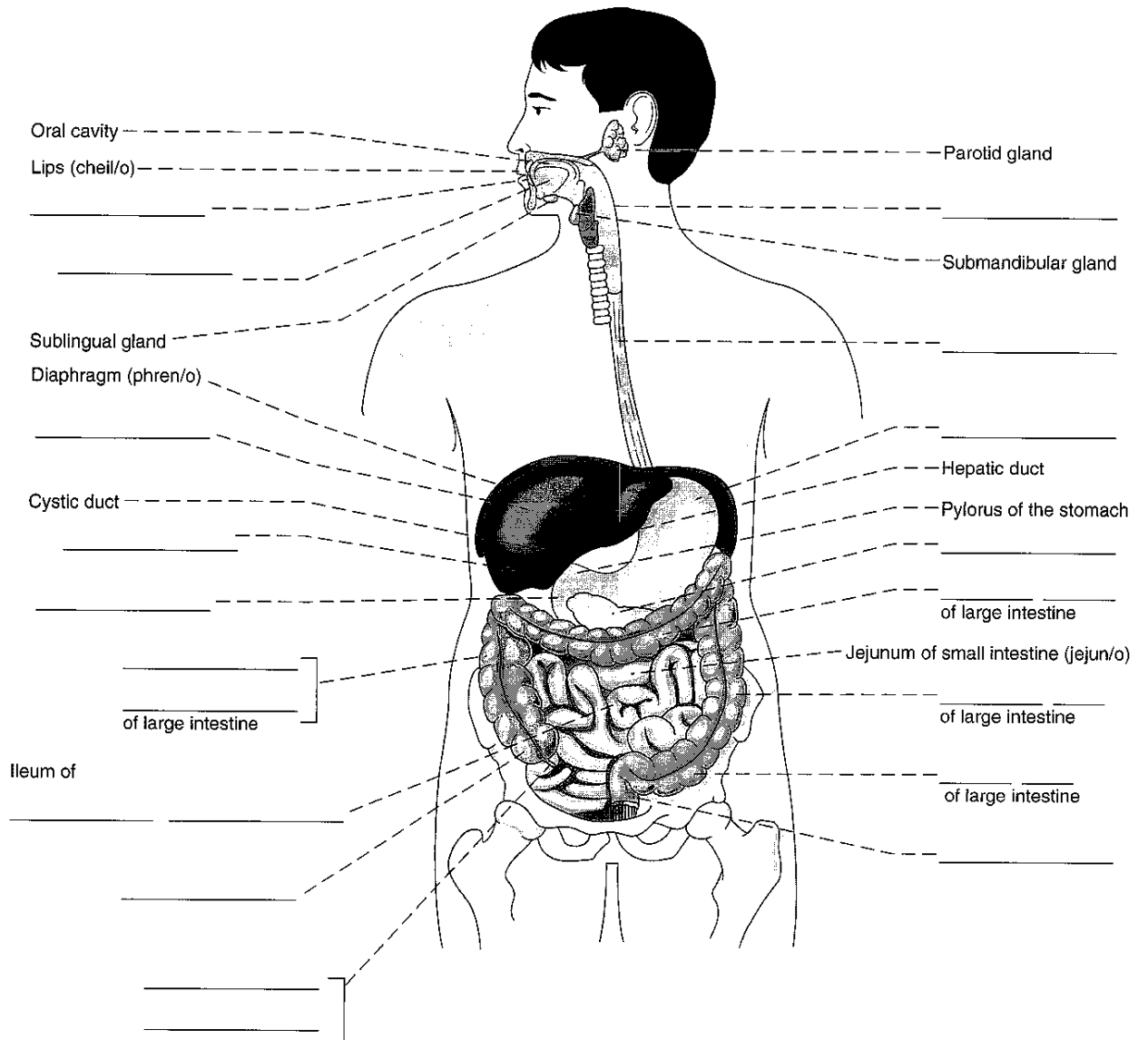
- Epiglottis
- Food
- Hard palate
- Jawbone
- Pharynx
- Soft palate
- Tongue



2. Label the organs of digestion on the illustration using the following terms. Refer to Figure 11-159 in the textbook.

- Ascending colon
- Cecum
- Descending colon
- Duodenum
- Esophagus
- Gallbladder
- Liver
- Pancreas
- Pharynx

- Rectum
- Sigmoid colon
- Small intestine
- Stomach
- Teeth
- Tongue
- Transverse colon
- Vermiform appendix



3. Label the illustration using the following terms. Refer to Figure 11-165 in the textbook.

Common bile duct

Cystic duct

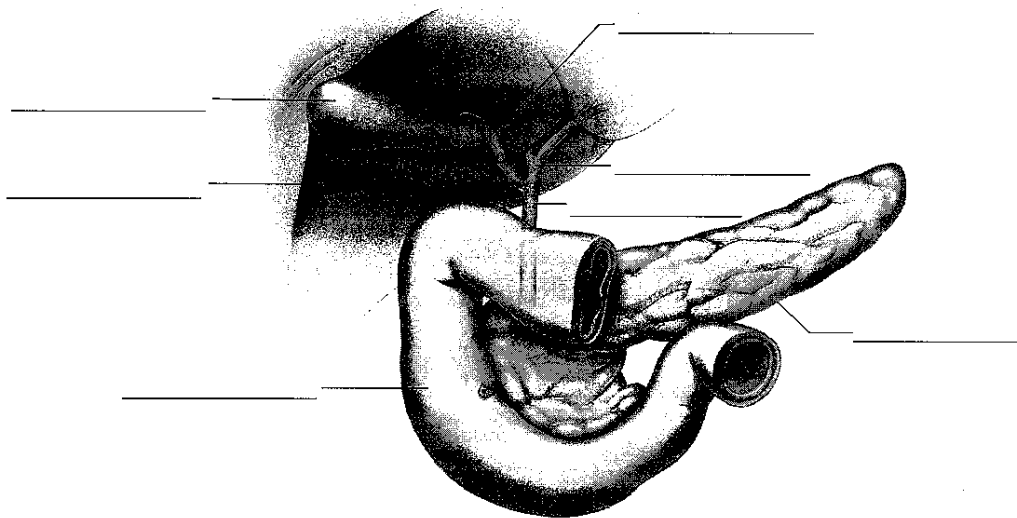
Duodenum

Gallbladder

Hepatic duct

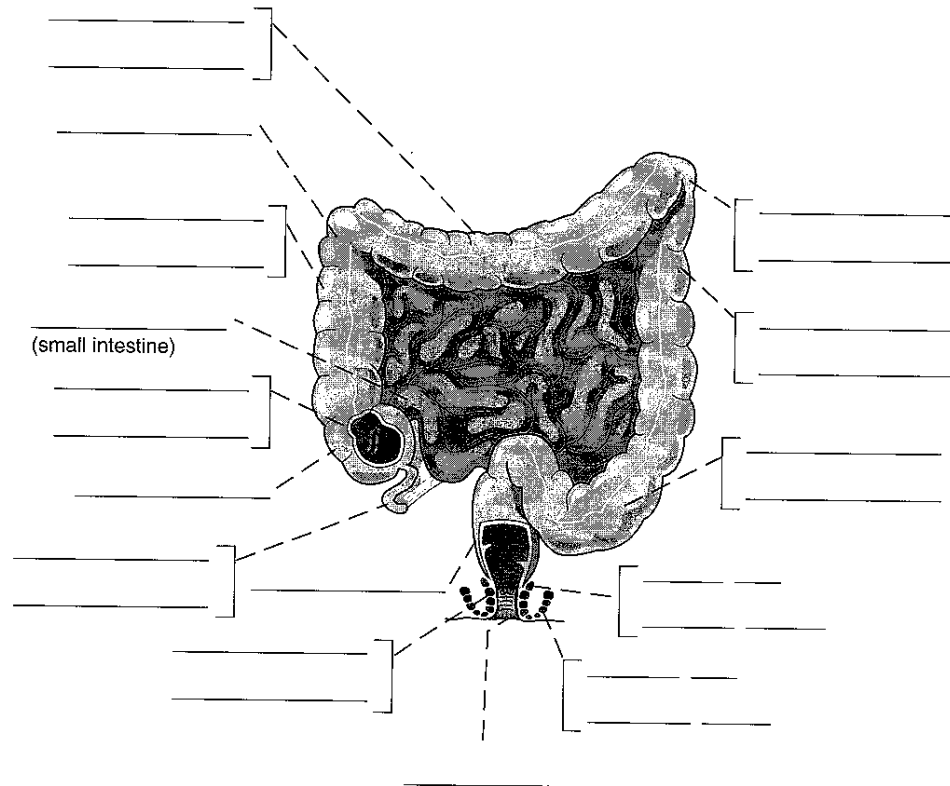
Liver

Pancreas



4. Label the illustration below using the following terms. Refer to Figure 11-168 in the textbook.

- | | |
|--------------------------------|--------------------------------|
| Anal canal | Ileum |
| Anus | Internal anal sphincter muscle |
| Ascending colon | Rectum |
| Cecum | Sigmoid colon |
| Descending colon | Splenic flexure |
| External anal sphincter muscle | Transverse colon |
| Hepatic flexure | Vermiform appendix |
| Ileocecal valve | |



C. Matching: Match the disease or conditions in column I with the appropriate symptoms or description in column II.

- | COLUMN I | COLUMN II |
|---------------------------------------|--|
| _____ 1. Anorectal abscess or fistula | a. Frequent, liquid stools |
| _____ 2. Cirrhosis | b. Enlarged spleen, ascites, bloody emesis and stools, reduced platelets |
| _____ 3. Colitis | c. Dilated anal veins, painful defecation, bleeding |
| _____ 4. Colostomy | d. Protruding mass at inguinal area or loop of intestine in scrotum |
| _____ 5. Diarrhea | e. Tenderness and discomfort of the colon |
| _____ 6. Diverticulitis | f. Jaundice, hepatomegaly, loss of appetite, fatigue, clay-colored stools, weight loss |
| _____ 7. Esophageal varices | g. Absence of peristalsis, abdominal distention, distress, vomiting |
| _____ 8. Anal fissure | |
| _____ 9. Gastroenteritis | |

- | | |
|------------------------------|---|
| _____ 10. Hemorrhoids | h. Severe epigastric pain, not relieved by vomiting; a rigid abdomen, rales, tachycardia, fever, cold, perspiring extremities |
| _____ 11. Hepatitis | i. Asymptomatic growths protruding from the intestinal lining |
| _____ 12. Hiatal hernia | j. Painful, throbbing lump near the anus, with or without drainage |
| _____ 13. Inguinal hernia | k. Fever, nausea and vomiting, abdominal cramps, travelers' diarrhea |
| _____ 14. Ileostomy | l. Forceful vomiting, dilation of stomach, difficulty emptying contents of stomach into duodenum |
| _____ 15. Pancreatitis | m. Recurrent bloody diarrhea with mucus and exudate, weight loss, weakness, anorexia, nausea, vomiting, abdominal pain |
| _____ 16. Paralytic ileus | n. Itching of anal area, especially following bowel movement, reddened skin, weeping and thickened skin, darkening of tissue |
| _____ 17. Peptic ulcer | o. Lack of appetite, indigestion, nausea, vomiting, nosebleeds, bleeding gums, enlarged and firm liver, jaundice, ascites |
| _____ 18. Polyps | p. Alternating periods of constipation and diarrhea, lower abdominal pain, daytime diarrhea, mucus stools |
| _____ 19. Pruritus ani | q. A single or double opening on the abdomen through which solid fecal material passes |
| _____ 20. Pyloric stenosis | r. Heartburn, epigastric pain relieved by food, weight gain, bubbling hot water sensation |
| _____ 21. Spastic colon | s. Opening of small intestine into the abdomen through which liquid stool is expelled |
| _____ 22. Ulcerative colitis | t. Bulging pouches in the intestine that cause abdominal pain, nausea, flatus, irregular bowel movements, high white blood cell count |
| | u. Burning rectal pain with a few drops of blood with passing of stool, sentinel pile |
| | v. Heartburn, regurgitation, vomiting, fullness, stomach spasms, difficulty swallowing, gastric reflux |

CASE STUDIES

Scenario 1

A male patient called to schedule an appointment. He is complaining about what he thinks is an ulcer. Almost every time he eats he gets a feeling of indigestion and discomfort. He usually has heartburn and sometimes brings food up into his throat. The doctor is away on vacation for the next 10 days and you cannot schedule an appointment.

Critical Thinking Questions

1. How would you decide if this situation is an emergency? _____

2. What can you advise the patient to do? _____

3. Should he be offered an alternative physician since his current physician is away? _____

Scenario 2

Your neighbor tells you her 14-year-old daughter has not felt well for the past couple days. The neighbor explains that her daughter first had a general discomfort in her abdomen, but then it became more severe and seemed to be located just below her umbilicus on her right side. She was nauseated and couldn't eat. She also had a slight fever. However, she had a good night sleep and the pain has gone away; she is feeling better today. The mother thinks she probably ate something that didn't agree with her.

Critical Thinking Questions

1. Why do you think she should be advised to have the daughter examined? _____

2. What else could be causing her symptoms? _____

3. What are the possible complications that could develop if nothing is done? _____

UNIT APPLICATION

Research Activity

The condition known as GERD is very common, though it is not well known. Go online to www.GERD.com and click the "The GERD FAQs" link to find the answers to the following questions.

1. What is the cause of GERD?
2. What happens to the esophagus?
3. How many people in the United States have GERD?
4. Who is most prone to develop GERD?
5. Can children have GERD?
6. What is the difference between GERD and heartburn?
7. What is the difference between hiatal hernia and GERD?
8. What is an endoscopic examination, when should it be done, and why?
9. Can GERD cause cancer?

CERTIFICATION AND REGISTRATION PREPARATION

- _____ 1. Cholecystography can detect:
- a. a properly functioning gallbladder
 - b. a non-functioning gallbladder
 - c. cholelithiasis
 - d. bile duct operation
 - e. all of these answers
- _____ 2. Barium swallow can detect all of the following except:
- a. condition and function of esophagus
 - b. esophageal varices
 - c. hiatal hernia
 - d. esophageal stricture
 - e. cholelithiasis
- _____ 3. Upper GI series can detect a:
- a. gastric ulcer
 - b. tumor of the stomach
 - c. polyp of the colon
 - d. both a and b
 - e. both b and c
- _____ 4. Lower GI series can detect all of the following except:
- a. a duodenal ulcer
 - b. tumors of the colon
 - c. polyps
 - d. ulcerative areas
 - e. diverticula
- _____ 5. Gastroscopy makes it possible to:
- a. view growth for biopsy
 - b. remove foreign objects
 - c. obtain cells for study
 - d. both a and c
 - e. all of the above
- _____ 6. Nuclear and ultrasonography studies can:
- a. screen for disease processes
 - b. obtain cells for study
 - c. locate cysts and tumors
 - d. both a and b
 - e. both a and c
- _____ 7. Occult blood test will:
- a. detect mucous in feces
 - b. detect blood in feces
 - c. determine location of bleeding
 - d. determine enzymes in stool
 - e. all of the above
- _____ 8. Proctoscopy will permit viewing of:
- a. hemorrhoids
 - b. colitis
 - c. polyps of the sigmoid
 - d. gastric ulcers
 - e. diverticula
- _____ 9. Sigmoidoscopy will permit viewing of:
- a. duodenal ulcers
 - b. condition of ileocecal valve
 - c. tumor of the lower colon
 - d. gastric ulcers
 - e. both a and b