

Unit 6—Digestive System Notes
Chemical and Chemical Digestion: Protein and Lipid Digestion
Textbook: Marieb Chapter 23 (Online PDF available).

Expectation: Read the sections outlined below by page and topic. Complete the questions that follow. Turn in this assignment on March 9, 2018. At the beginning of class on Monday, March 12th, you will complete a warm up—measuring your understanding of the questions from this assignment. The warm up will be worth 2x the points of the notes. It does not benefit you to simply copy the answers—you must understand why they are the answers.

| Page(s) | Section | Sub-Section |
|-----------------|--|--|
| 893; 894-895 | Physiology of Digestion and Absorption | Digestion of Proteins Figure 23.32 + Prior Background Knowledge from Unit 2 + Prior Reading from this Chapter |
| 893; 895 | Physiology of Digestion and Absorption (for our purposes—we will ignore any oral or gastinal digestion of lipids) | Digestion of Lipids Figure 23.32 + Prior Background Knowledge from Unit 2 + Prior Reading from this Chapter |

Reading Questions: Answers must be numbered. Typed or neatly hand written.

1. What type of protein digestion occurs in the stomach?
 - a. What specific macromolecule can be broken down?
 - b. What enzyme is responsible for this digestion?
 - c. Where does this enzyme come from? How is this enzyme activated?
 - d. What is the product of this digestion?
2. Explain how both mechanical and chemical digestion work together in the stomach to achieve the chemical digestion of proteins and other macromolecules.
3. Where do pancreatic Trypsin, Chymotrypsin and Carboxypeptidase do its work of digesting proteins?
 - a. What specific macromolecule can be broken down?
 - b. What is the product of this digestion?
4. How are small polypeptides/peptides digested further?
 - a. What enzyme is responsible for the digestion of small peptides?
 - b. Where do these enzymes come from?
 - c. What is the product of their digestion?
5. What specific parts of proteins can be absorbed by the body?
6. Where is the first stop for digested proteins once absorbed by the blood?
7. What is the purpose of bile salts? What would happen if someone didn't produce bile salts?
8. What type of fat digestion occurs in the small intestine?
 - a. What specific macromolecule(s) can be broken down?
 - b. What is the mechanical process by which fat is broken down in the small intestine?
 - c. What is the enzyme responsible for the digestion of fat?
 - d. Where does the enzyme come from?
 - e. What is the product of this digestion?