Internet Assignment:

Protein Trafficking (Golgi Apparatus)

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_

Go to the website below and watch the movie answering the questions as you go

<http://vcell.ndsu.nodak.edu/animations/proteintrafficking/movie-flash.htm>

1. What is the main role of the golgi apparatus?
2. Where do the proteins sent to the golgi come from
3. What happens to proteins as they move through the golgi apparatus
4. Why is the Golgi sometimes considered the post office of the cell?
5. Sketch and label the 3 main portions of the Golgi
6. Which end is nearest the nucleus?
7. How do translated proteins reach the golgi
8. What forms the cis cisternae?
9. As proteins move through the Golgi stacks, what happens to them
10. What is the purpose of these modifications?
11. How are proteins carried through the Golgi (explain)
12. This process is collectively known as what?
13. What occurs in the trans golgi network?
14. What causes two different proteins to be delivered to the same cellular location?
15. Identify 2 locations vesicles can be sent

Now go to Protein Modifications

<http://vcell.ndsu.nodak.edu/animations/proteinmodification/movie-flash.htm>

1. What do protein modifications for targeting to cellular locations consist of?
2. What is one example of this used in this animation
3. Where do sugar side chain modifications take place?
4. What is the role of hydrolase enzymes
5. What is an endosome
6. Where is hydrolase synthesized
7. What is the term for the process of modifying the oligosaccharide?
8. What is the destination of the mannose 6 phosphate signal?
9. Once modified, what does hydrolase do
10. What do endosomes mature into
11. Why are other proteins not delivered to endosomes?
12. What causes the hydrolase to be released?
13. What happens to M6P receptors