Carbohydrates CW NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Use your PPt and book to answer the following :

1. What does the word carbohydrate mean?

2. What are the simplest sugars?

3. What is the empirical formula for a monosaccharide?

4. What are the functional groups in monosaccs?

5. Give an exp of structural isomers in monosaccs.

6. Distinguish between an aldose sugar and a ketose sugar and give an exp of each.

7. What is an enantiomer? Give an exp.

8. What is a Fischer projection?( Include the words stereocenter and chiral)

9. Draw a Fischer projection of glyceraldehyde.

10. What do D and L refer to?

11. Draw both D and L- glceraldehyde. Circle the chiral carbon in each.

12. What is a hemiacetal and how is it formed? (See p. 522)

13. What are the 3 most important monosaccharides?

14. Give the functions of #13.

15. a)What is a disaccharide?; b) By which kind of reaction does it form?; c) Give 2 examples

16. DRAW the reaction for the formation of maltose. Circle where dehydration occurs. Show the 1-4 glycosidic linkage.

17. Follow directions for #16 for sucrose formation.

18. Define polysaccharide.

19. a)Which polysaccs are found in plants? B)Where are they found in the plant? C)Which is not digestable by man?

20. What is fiber?

21. What is glycogen?

22. a)Where does carb digestion begin? B) By what enzyme?

23. a)Where does most chemical digestion occur? B) What enzymes are involved?

24. What hormone is necessary to transport glucose into the cells?

25. What is the fate of excess monosaccs in the body?