

EXERCISE 13

Chem 100

(Due date \_\_\_\_\_)

10 points

Name \_\_\_\_\_

(last)

(first)

Lecture Section # \_\_\_\_\_

Instructor \_\_\_\_\_

**KEY**

A. Write the correct word or letter in the blank at the right.

1. The term used for a large molecule that is hydrophobic on one end and hydrophilic on the other.

1. Amphipathic

2. Is the fatty acid  $C_{19}H_{33}COOH$  (A) saturated or (B) unsaturated

2. (B) -unsat

3. The name of the monosaccharide most commonly found in glycolipids.

3. galactose

4. The name for the type of linkage between the amino acids in a polypeptide chain.

4. peptide Bond (Amide linkage)

5. The term used for a compound that can act both as an acid and a base.

5. amphoteric

6. One of the amino alcohol groups in cephalins.

6. Serine + ethanolamine

7. The name of the polysaccharide used for carbohydrate storage in humans.

7. glycogen

8. The special name for the ether linkage between two monosaccharides in a disaccharide.

8. glycosidic linkage  
~~hemiacetal~~

9. The general name for a protein that acts as a catalyst.

9. Enzyme

10. The name of the type of functional group that forms in a monosaccharide to give a closed ring.

10. hemiacetal

11. Which fatty acid would have a lower melting point? (A)  $C_{17}H_{31}COOH$  (B)  $C_{17}H_{33}COOH$

11. A) -  $C_{17}H_{(31)}COOH$

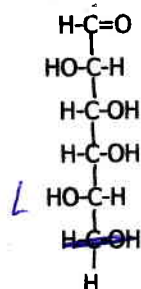
12. The name of the monosaccharide found in the three polysaccharides, starch, glycogen, and cellulose.

12. glucose

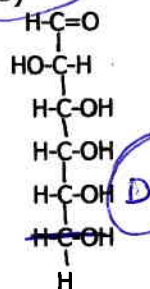
13. Which of the following is a D isomer?

13. B

(A)

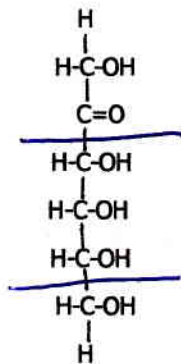


(B)



(over)

14. How many asymmetric carbon atoms are there in the ketohexose?



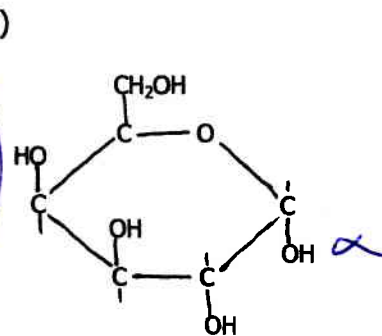
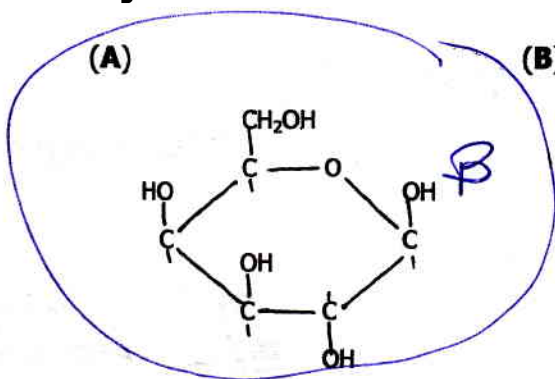
14. 3

15. For the ketohexose in #14 above, how many stereoisomers are possible?

15.  $2^3 = 8$

16. Which of the two compounds below is the  $\beta$  anomer of D-galactose?

16. A



17. The term used when a globular protein unfolds when it is treated with a nonpolar solvent, heavy metal salt, or high temperature or pH.

17. Denature

18. What kind of bonds maintain protein secondary structure?

18. Hydrogen Bonds

19. The general term used for a 4-carbon monosaccharide.

19. Tetrose

20. A class of lipids which does not contain a fatty acid component.

20. Steroids + Fat Soluble Vitamins