**Worksheet on Sugars**

1. For the monosaccharide shown on the right, answer the following questions:

a) Which carbon is the anomeric carbon? \_\_\_\_\_\_C1\_\_\_\_\_\_\_

b) Is the glycosidic hydroxyl group up or down? \_\_\_\_up\_\_\_\_\_\_\_\_

c) Is the sugar drawn as the α- or the β-form? \_\_\_\_ β-form \_\_\_

d) When the sugar is in the open chain form, which carbon determines, if the

 sugar is L or D? \_\_\_\_C5\_\_\_\_\_\_\_

e) When the sugar is in the open chain form, does this sugar contain a ketone or an aldehyde? \_ aldehyde \_\_

1. For each of the following disaccharide, determine the nature of the glycosidic linkage (ex: α (1🡪4)).

a) b)

 β(1 🡪4) α(1 🡪6)

1. Draw the two sugars that result from hydrolysis of the disaccharide shown in 2 b).



1. Does furanose indicate a 5- or 6-membered sugar ring structure? \_\_\_5-membered ring\_\_\_\_\_\_\_
2. Draw the Fisher projection of D-Mannose, shown on the right.





1. Draw a disaccharide resulting from 2 D-Mannose sugars being connected in a α(1🡪4) linkage.

