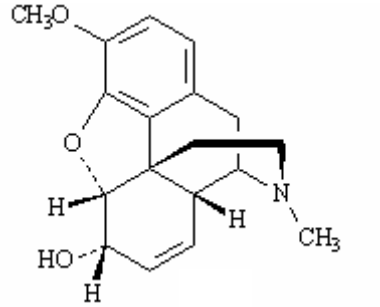
CH1010 Tutorial 4

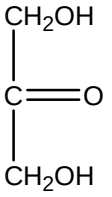
Name:

1. Place asterisks at all the chirality centers (stereocentres) in the molecule below.

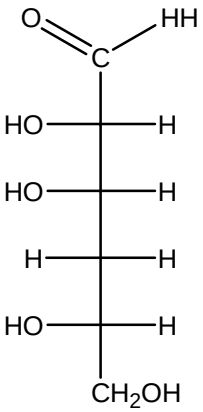


- What class of compound would you expect this molecule, which is extracted from plants, to belong to?

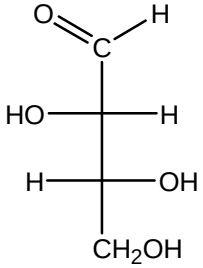
2.



Sugar 1



Sugar 2



Sugar 3

From the sugars above, choose the one that best fits each description below. Place the identifier of the sugar in the blank to the left of the description.

_____ is a **D**-sugar.

_____ a **deoxy** sugar.

_____ a **triose** sugar.

3. Draw a **Fischer projection** of D-mannose and a **Haworth projection** of α-D-mannopyranose.

4. Define the **isoelectric point** of a protein.

5. At what **pH** would you carry out a **gel electrophoresis** experiment if you wanted to separate a mixture of lysine, aspartic acid and phenylalanine? Explain your decision. (remember that an important factor in separation by electrophoresis is charge)

6. Porcine dynorphin is a neuropeptide having 17 amino acid residues:
Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-Trp-Asp-Asn-Gln

Leu^5-enkephalin is a pentapeptide contained as the N-terminal sequence of dynorphin. What is the **primary structure** of Leu^5-enkephalin?