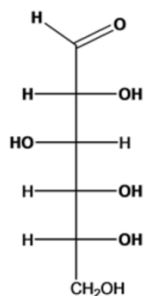


Carbohydrates Answer Key 1:

Practice Drawing Sugar Structures

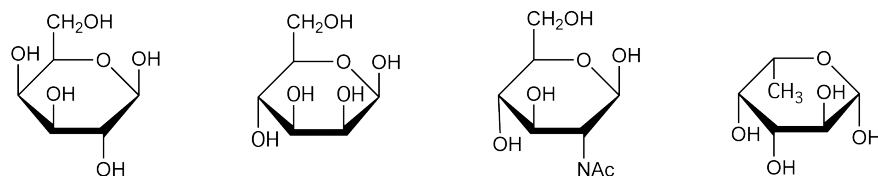
(1) D-Glucose (D-Glc) shown as a Fischer projection:



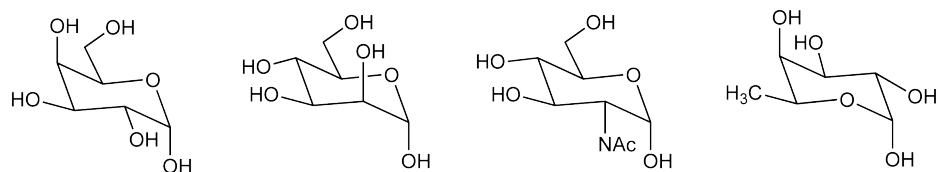
(2) From left to right, the monosaccharides shown are:

D-Galactose      D-Mannose      N-Acetyl-D-Glucose      L-Fucose

(3) Haworth projections for  $\beta$ -anomers of the monosaccharides from question 2:



(4) Stereochemical representation of  $\alpha$ -anomers from question 2:



(5) Names of the glycans shown are:

Upper left:    D-Gal- $\beta$ 1-3-D-GalNAc  
 Lower left:    D-Gal-B1-4-D-GlcNAc  
 Right side:    D-Gal- $\beta$ 1-3-(D-GlcNAc- $\beta$ 1-6)-D-GalNAc

(6) Glycans in which the shown disaccharides might be found:

Upper:          found in Heparin sulfate, or in related sulfated glycans  
 Lower:          Gal-1-3-Gal is found in most mammalian cell membranes,  
                          but not in humans where anti-alpha Gal is one of the most  
                          common IgG antibodies