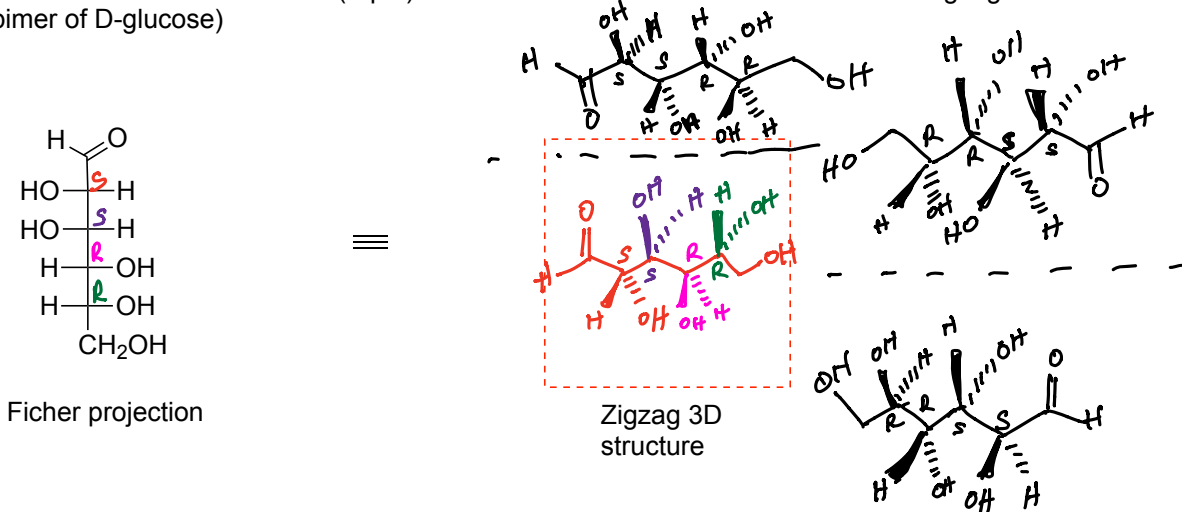


CEM 251 (730)
Home Work — Extra Credit
10 points

1) **(7-points)** Assign R and S to all the chiral centers (4-pts) in the structure below and convert it to the zigzag 3D form (3-points). (Hint; its an epimer of D-glucose)



2) **(3-points)** Benzoic acid, C_6H_5COOH has a pK_a of 4.19. Write an equilibrium reaction equation (1-pt) and calculate the K_a of the reaction (2-pts).



$$pK_a = 4.19$$

$$-\log_{10} K_a = 4.19$$

$$K_a = 10^{-4.19}$$