

Chemistry 2000 Spring 2006 problems:

Biochemistry

1. Write a balanced reaction for the condensation of the sugars erythrose ($C_4H_8O_4$) and xylose ($C_5H_{10}O_5$).
2. What is a lipid?
3. Draw the structure of the triglyceride formed by condensation of glycerol with three equivalents of dodecanoic acid, $CH_3(CH_2)_{10}COOH$.
4. Describe briefly the structure of a biological membrane.
5. Draw the structure of an omega-3 fatty acid.
6. Explain briefly the classification of protein structure into primary, secondary, tertiary and quaternary.
7. Show the chemical process involved in the formation of a disulfide bridge.
8. Explain why enzymes typically have an optimal pH operating range using distribution curves.