

# Some General Exam 3 Topics

- Ch 12.6: Chirality - recognizing chiral atoms, pairs of enantiomers, using Fisher projections, and how stereoisomers are biochemically important
- Ch 13: Properties of carboxylic acids, esters, amines, and amides; reactions of these four functional groups; knowledge of how soaps work; the importance of amine salts; reactivity differences of primary, secondary and tertiary amines
- Ch 14: recognizing types of monosaccharides (specifically knowing the structures of glucose, galactose, and fructose – see pg 490); drawing Haworth structures; knowing the difference between D and L sugars,  $\alpha$  &  $\beta$  forms, making the common disaccharides and polysaccharides from the monosaccharide building blocks (and the reverse hydrolysis processes); specifically knowing the three disaccharides and polysaccharides discussed in class; reactivity of sugars; determining the position of the glycosidic bond and how it is important in metabolism
- Ch 15: be familiar with the two main lipid classes; knowing the difference in the properties and reactivity of saturated fatty acids and *cis* & *tran* unsaturated fatty acids; structure and properties of waxes and triacylglycerols (fat and oil); reactivity of fats and oils; structures and utility of glycerophospholipids in living systems; recognizing the basic steroid structure and general features and properties of cholesterol including HDL & LDL discussion

*Note: There will not be a blood type question on this test. Also, be ready to identify any functional group listed in Table 10.9 in a molecule.*