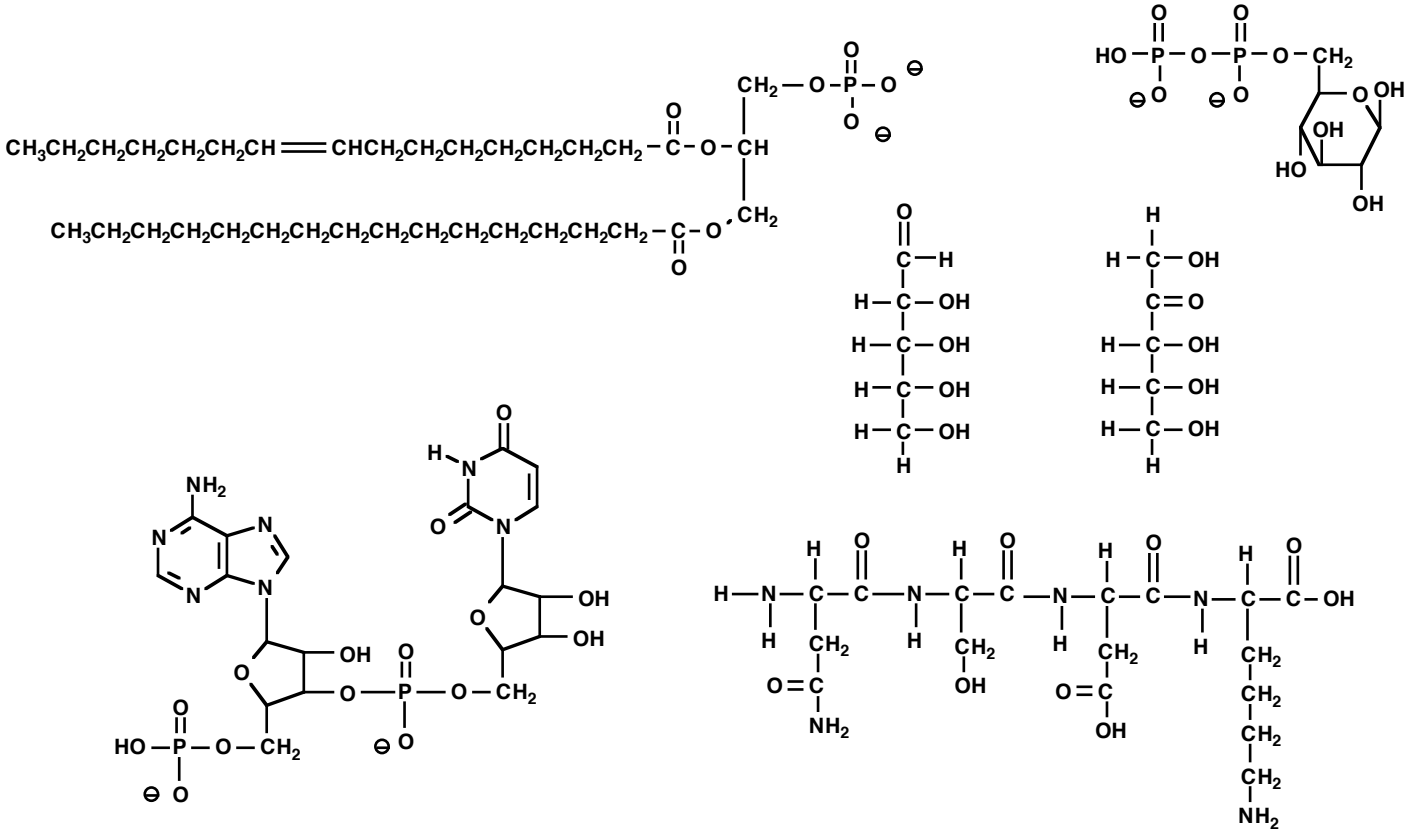
# CHEMISTRY 260 BIOCHEMISTRY
# PRACTICE QUESTIONS #1

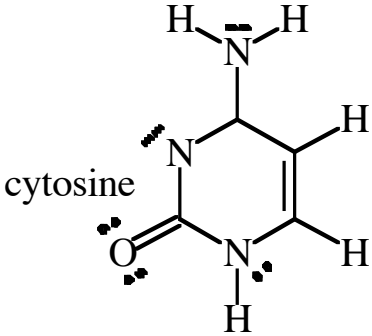
1) Textbook Chapter 1 study exercises: 4 7 8 10 11 14 19 33

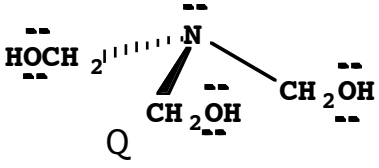
2) Identify the functional groups in the following molecules.



3) Name the product molecule(s) or draw structures for each of the following reactions:

a) acid/base reaction of an amine
b) acid/base reaction of a carboxylic acid
c) condensation of a primary amine and a carboxylic acid
d) condensation of a hydroxyl and a carboxylic acid
e) condensation of a hydroxyl and dihydrogen phosphate
f) condensation of phosphoester and a dihydrogen phosphate
g) hydrolysis of an ester
h) hydrolysis of the linkages in a protein (some linkages vs all linkages)
i) hydrolysis of all linkages in a deoxyribonucleic acid
j) hydrolysis of a phosphoanhydride




4) How many hydrogen bonding donor atoms are in cytosine? How many hydrogen bonding acceptor areas are in cytosine?

5) How many hydrogen bonding donor atoms are in structure Q? How many hydrogen bonding acceptor areas are in structure Q?