Study Guide for Final Exam
Physiological Chemistry II

Hydrocarbons
alkanes, alkenes and alkynes
Isomers
properties
Nomenclature
reactions
carbon monoxide / hemoglobin
cyclic compounds and benzene
resonance
DDT
Benzopyrene

Alcohols and ethers
structure
classification
nomenclature
properties
important alcohols
alcohol metabolism and ADH
phenol
anesthesia
fetal alcohol syndrome

Aldehydes and ketones
structure
resonance
nomenclature
reactions
properties
vision / ketoacidosis and diabetes

Carboxylic acids, esters and amides
structure and properties
important carboxylic acids
Nomenclature
reactions
carboxylate ion: props, nomen, reacts
amide resonance

Amines
structure and properties
classification
decaying flesh
nomenclature and reactions

Stereochemistry
chirality
enantiomers
racemic mixture
stereoisomers
chiral centers
l and d forms

Carbohydrates
mono, di and polysaccharides
properties (ie. aldose/ketose etc)
L and D designations
important mono and disacc properties
monosacchs structures
aspartame
cyclic sugars and mutarotation
anomers
reducing sugars
tooth decay
starch, glycogen and cellulose
blood types

Lipids
properties
fatty acids
prostaglandins
triglycerides
eicosanoids
cephalins and lecithins
sphingolipids
diffusion and methods of transport
steriods
cholesterol
lipoproteins and arteriosclerosis

Proteins
central dogma
class of amino acids
structure of amino acids
structure of proteins
peptide bond
functions of proteins
levels of protein structure
interactions that stabilize proteins
alpha helix/beta sheet etc
cooperativity of hemoglobin
prions / antibodies etc.

Enzymes
catalysis
activation energy
Keq
steps of reaction
models of sub binding
regulation of enz
inhibitors
organophos
isozymes
eliza test