

Study Sheet of Structures You Must Know for Exam 2

BCMB/BIOL/CHEM 3100
Fall 2010, (10:10-11:00 class)

Note: below is a list that includes structures that you are responsible to know for Exam 2 (see both sides of the sheet). This list does not guarantee that you will be asked about the structures, nor does the exclusion of a structure mean you will not be asked about it. It is meant only to be a helpful guide.

In addition to knowing the structures listed below, it is expected that you have read the entirety of Chapters 6-9. Exam 2 will cover Chapters 6, 7, 8, and 9 (and possibly Chapter 19, I will let you know for sure on Friday). It is expected that you understand all of the material in these chapters. The emphasis of the exam will be on the material that was covered in the lectures. See also Coenzyme study guide sheet.

STRUCTURES YOU SHOULD BE ABLE TO DRAW

Monosaccharides

Aldoses: linear & cyclic form (when applicable)

Glyceraldehyde

Erythrose

Ribose

Glc, Man, Gal

Ketoses: linear & cyclic form (when applicable)

Dihydroxyacetone

Xylulose

Ribulose

Fructose

Modified sugars:

sugar phosphates

deoxy sugars

sugar alcohols

uronic acids

aldonic acids

Amino sugars (GlcNAc, GlcN, GalNAc, GalN)

Disaccharides: Cellobiose, lactose, maltose, sucrose

Lipids:

Fatty acids: myristate, palmitate, stearate, oleate, linoleate, linolenate

Other Lipids:

phosphatidate, phosphatidylethanolamine, phosphatidylserine,

phosphatidylcholine

Sphingomyelin

Triacylglycerols

Sphingosine

Ceramide

STRUCTURES YOU SHOULD BE ABLE TO RECOGNIZE

Vitamin C
Nucleotide-sugars
S-adenosylmethionine
NAD⁺ (H), NADP⁺ (H)
FAD, FMN, FADH₂, FMNH₂
Coenzyme A
Thiamine pyrophosphate
Pyridoxal phosphate
Biotin
Tetrahydrofolate
Adenosyl & methylcobalamin
Lipoamide
Ubiquinone
Soluble vitamins
Niacin
Riboflavin
Pantothenate
Thiamine
Pyridoxine
Biotin
Folate
Cobalamin
Cellulose
Chitin
Starch (glycogen)
Acetylmuramic Acid (MurNAc)
Sialic acid (neuraminic acid)
O-linked glycopeptides
N-linked glycopeptides
 High mannose type
 Hybrid type
 Complex type
cholesterol
phosphatidylinositol
diphosphatidylglycerol
cerebroside
ganglioside