Supplementary Review Sheet for Thursday, August 5 Final Exam
Chem 1020, Summer 04, Robertson

Our exam will include material from all previous material including the content below from chapters 19, 12, 13 and 16. **Only material that I have covered in class, have assigned homework problems on, or mention on this review sheet will be tested from these chapters.**

On Thursday, you should be able to: (I do not claim that this is an exhaustive list.)

Chapter 19 – Drug Action

- Describe the metabolism of ethanol, its site of absorption, and neurotransmitter action.
- Describe effects of marijuana and give its major active ingredient.
- Describe types of chemotherapy treatments for cancer. Give examples of each type.
- Describe the action of HIV and the 3 types of drugs used against the virus. Recognize AZT.

Chapter 12 - Air

- List and explain the layers of the atmosphere.
- List the top 5 components of unpolluted air.
- List and explain the major areas of air pollution in the troposphere and give examples: CO, NO_x, SO_x, Particulates, and VOC's. Determine which are primarily made-made. Be able to write significant reactions, discuss the significance of each problem, and possible remedies.
- Explain the global problems of ozone depletion and world-wide warming. Identify what types of compounds are implicated in each problem. Be able to give reactions for the CFC's with UV light and how they contribute to ozone depletion. Be able to explain the mechanism of the greenhouse effect.

Chapter 13 - Water

- List and explain the significance of unusual water properties.
- List water sources and discuss the water problems we have in the United States. Identify major aquifers and the problems we have with them today..
- Differentiate the types of water usage.
- Define pollution with regard to water.
- List, explain and give examples of the 8 major categories of water pollution.
- Define and list sources of wastewater.
- Explain the different types of wastewater treatment.

Chapter 16 - Agriculture

- Give the approximate world's population and % growth.
- Discuss the problem of exponential (constant %) growth.
- List and define the components of soil, the horizons, and the different particle sizes.
- Explain why soils become acid, why this may be a problem, and how we can change the pH.
- List the classes of nutrients needed for plant life. Be able to explain the different nutrients in commercial fertilizers and how they are prepared.
- Define pesticides.
- List important classes of insecticides and herbicides and give the mechanism of action.
- Define organic farming and transgenic crops.