

Exam 4 Review Sheet for Monday, August 2 Exam Chem 1020, Summer 04, Robertson

Our exam will include material from chapters 16, 17, 20 and 19. **Only material that I have covered in class, have assigned homework problems on, or mention on this review sheet will be tested.**

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

Chapter 16

- List the classes of food additives and give examples of each.

Chapter 17

- List and give examples of the ingredients in laundry detergents.
- List and give examples of products in shampoos and conditioners
- Explain the natural protection of the atmosphere to x-rays and some forms of ultraviolet radiation. Explain the SPF system of rating sunscreens and the biological harm of UVB and UVA. List and give examples of sunscreen ingredients.
- List the causes of bad breath and the efficacy of mouthwashes against these causes.
- List and explain the ingredients of mouthwashes. Give examples.
- Discuss the equilibrium demineralization reaction of tooth enamel and how eating acidic foods accelerates the process. Define plaque and tartar. List the functions and ingredients (with examples) of toothpaste.
- Explain the moisture content and pH of skin and the role of sebum in skin protection. How does the cosmetic industry attempt to help skin? Define and give examples of emollients and humectants.
- Explain the body odor problem and how deodorants and antiperspirants attempt to solve the problem. Give examples of compounds used in these products.
- List the common components of lipstick.
- Differentiate perfumes and colognes. List the function and type of compounds found in perfumes.
- Define the term aftershave. Give a sample composition. Explain the action of menthol.

Chapter 20

- List and explain the modes of action for toxic substances. Give examples of each.
- In regard to the above be able to identify the following terms:

corrosive	strong acids and bases	
metabolic	CO, CN	heavy metals
neurotoxins	acetylcholine, cholinesterase	different types of neurotoxins
teratogens	different types	sensitive periods
mutagens	mode of action and examples	
carcinogens	characteristics and stages, examples, changes in death rates in the past 20 years	carcinomas, sarcomas, lymphomas, leukemia, seminomas

- Give examples of chemical warfare agents
- Identify the importance of the Delaney Amendment with regard to food additive carcinogens. (page 494, Chapter 16)
- List and describe the 3 ways that chemicals are tested for their possible carcinogenic behavior.

Chapter 19

- Describe the regulatory classification system of drugs.
- List commonly used OTC pain relievers (aspirin, acetaminophen, ibuprofen, naproxen, and ketoprofen) and identify their structures. Be able to give advantages and disadvantages of each and mode of action. Be able to write the reaction for the production of aspirin from salicylic acid.
- Identify the names and structures of the new arthritis drugs as well as mode of action.
- Identify the structures of narcotic analgesics such as morphine and codeine derived from opium as well as synthetics such as heroin, meperidine, and propoxyphene. Rank OTC and narcotic analgesics as to effectiveness.
- Define endorphins and give examples of production.
- Give sample ingredients and side effects of common antacids.
- Associate generic and brand names of OTC medications that regulate stomach acidity. Recognize structures.
- List classes of OTC laxatives and give examples.
- List classes of ingredients found in cough and cold and give examples. Recognize structures given in notes.
- List types of drugs used to treat cardiovascular conditions and give descriptions of action and examples. Recognize any structures given in notes.
- List classes of antibacterial drugs, identify modes of action and give examples. Identify structures.
- Recognize the names of different neurotransmitters as well as structures. Describe the mode of action of neurotransmitters and how they are affected by drugs such as depressants, anti-depressants and stimulants.
- Identify structures of stimulants such as amphetamines, caffeine, nicotine, and cocaine. Give mode of action (what neurotransmitters are affected?) and the effects of each.
- Explain the general action of antidepressants with regard to neurotransmitter action. Identify the structure of Prozac and explain its specific mode of action.
- Identify structures of depressants such as the barbiturates and benzodiazepines. Give general effects of barbiturates and neurotransmitter action.
- Describe the metabolism of ethanol, its site of absorption, and neurotransmitter action.
- Describe effects of marijuana and give its major active ingredient. Recognize structure.
- Describe types of chemotherapy treatments for cancer. Give examples of each type. Recognize structures.
- Describe the action of HIV and the 3 types of drugs used against the virus. Recognize AZT.