 Date _____

Toxicology Review Guide

(notes/articles pages 67-92)

1. Know the distinct difference between bioaccumulation and biomagnification and examples of the terms in context.

2. Be able to perform basic calculations (with or without using dimensional analysis) like the ones performed with ibuprofen and acetaminophen.

3. Know the major case studies (Lake Apopka and the Great Lakes), the chemicals involved, the animals affected, and how they were affected.

4. Know why the GLWQA was established between the U.S. and Canada.

5. Know the exact definition of $LD_{50.}$

6. Know the two dose-response models: threshold and non-threshold and be able to determine NOEL (NOAEL), TLV, potency, and LD_{50} using such graphs (refer to notes and example questions on page 74).

7. Know the problems with aquaculture (we watched videos on this when we were reviewing bioaccumulation).

8. Know the chemical classifications (flammables, asphyxiants, irritants/allergens) and a few examples of each.

9. Mercury in the water (Minamata disease – know the basic background story)

10. Know the methods that scientists use to determine toxicity: doctors' medical reports, controlled lab experiments (be ready to apply your knowledge of valid experimental design)

11. Mutagens and carcinogens – know how they are alike and what makes them different.

12. Teratogens and endocrine disruptors - know how they are alike and what makes them different and examples of chemicals in these categories.

13. Know how neurotoxins affect an organism

14. Know the difference between acute exposure/response and chronic exposure/response.

15. Chemical interactions: know the definitions of additive, synergistic, antagonistic

16. Why is Rachel Carson significant in the realm of environmental studies?

17. Be able to relate some knowledge gained from watching Contagion movie summary questions and pages 69a-b (remember … you were supposed to read those pages)