

Name: _____ Pledge (sign): _____

Env Studies 201 Test #3

Point Total: 100 pts possible

- 5 pts 1. What are *confounding factors* in epidemiological studies?
- 5 pts 2. Both RCRA and CERCLA regulate hazardous waste. What is the distinction between them? Be brief (1-2 sentences).
- 5 pts 3. What is 'free riding' in environmental treaties?
- 5 pts 4. Briefly describe the 'harvesting' effect of severe pollution episodes.

5 pts 5. In pollution regulation, what is 'technology forcing?'

5 pts 6. What is the distinction, made by the EPA and other organizations, between risk *assessment* and risk *management*. In your answer, be sure to state the goal of each process.

8 pts 7. In a little detail, describe the SO₂-trading provisions (Title IV) of the 1990 Clean Air Act amendments.

8 pts 8. What is photochemical smog, and how is it formed? In your answer, be sure to identify smog's precursor pollutants, as well as the human activities that generate these pollutants.

9. Nutrient pollution is one of the main problems for water bodies in industrialized countries.

6 pts (a) What are these pollutants, and how are they released into the environment? Be complete.

6 pts (b) How does nutrient pollution degrade water quality? Answer in a little detail.

10. In Article 3 of the UNFCCC agreement, the parties agree to be guided by the precautionary principle with respect to policies to mitigate activities that cause climate change. Briefly:

4 pts (a) What is the UNFCCC?

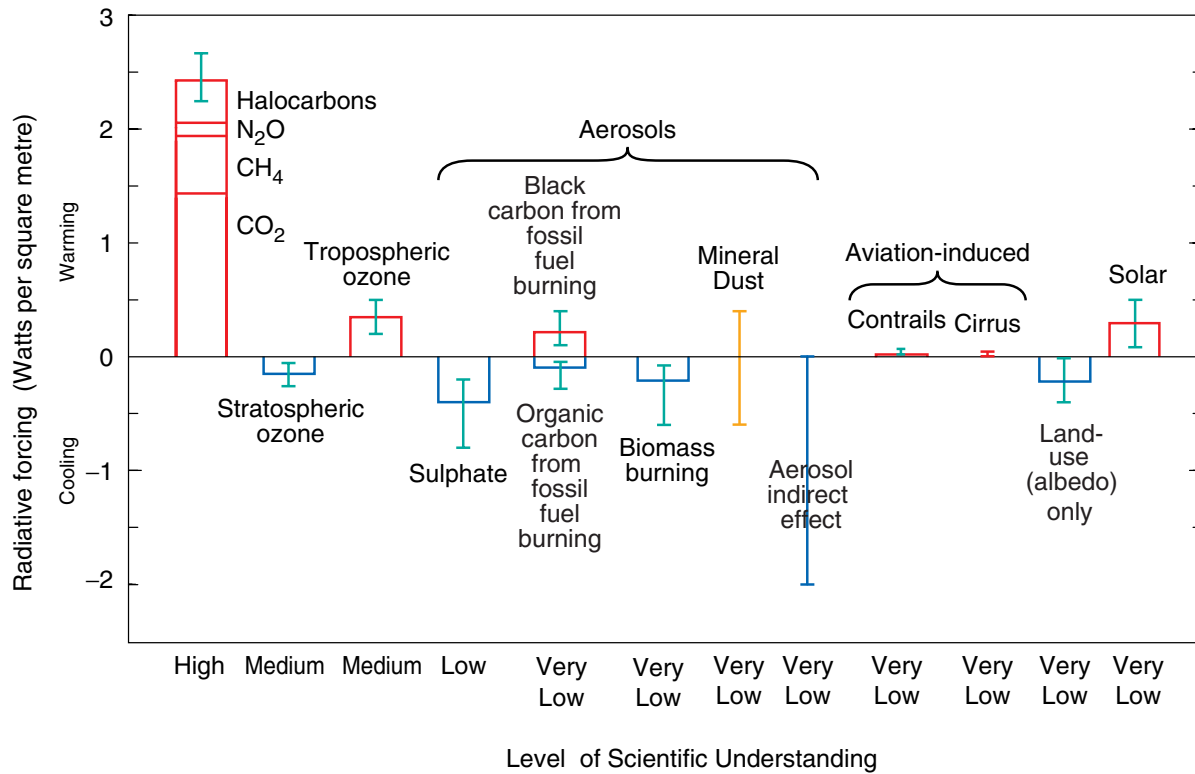
4 pts (b) What is the precautionary principle? How does it apply here?

4 pts (c) What is the main (potential) disadvantage of adopting the precautionary principle?

15 pts 11. Both *health-based* and *economics-based* approaches exist to determine the 'optimal' level of chemical pollution. Describe and contrast these two approaches in detail (use the back of these sheet if necessary). In your answer, be sure to use properly-labelled sketches to explain how dose-response and cost-benefit curves are used to set specific pollution limits.

15 pts 12. The following figure shows the effects of various factors on *radiative forcing*.

The global mean radiative forcing of the climate system for the year 2000, relative to 1750



Explain the figure in detail. In your answer, be sure to

- (i) define radiative forcing and explain how it affects global climate change;
- (ii) explain the different effects on radiative forcing of ozone in the troposphere and the stratosphere; and
- (iii) explain the effect of aerosols, both direct and indirect, on radiative forcing.