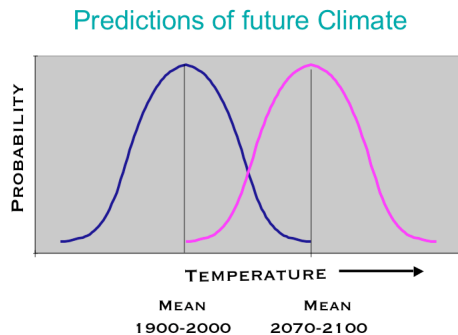


Final exam review questions – ENVIR 100 Winter 2008

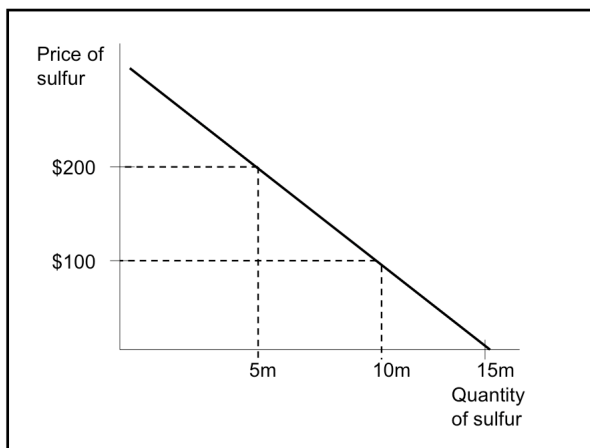
Below are some sample questions that should give you a good sense of the type and scope of questions that will appear on the final. *You should also look at past midterms and finals* on the class website (in the section on Grades, at the very bottom of the webpage) *All class material from lectures, guest speakers, discussions and activities in section, and readings are fair game for the exam. The final exam is comprehensive, but it will have a stronger emphasis on material covered since the midterm.*

- 1) Briefly describe the environmental issues surrounding stratospheric ozone and ground-level ozone and their connection (if any) with climate change.
- 2) Dan Jaffe indicated that background levels of ozone and PM in Washington State included what? And why didn't background levels of SO₂ also include this? And what are "background" levels anyway?
- 3) What is PM_{2.5} and why is it thought to be more dangerous than PM₁₀?
- 4) What law created the NAAQS (National Ambient Air Quality Standards), what are two examples of pollutants covered by NAAQS, and what is an important pollutant *not* covered by NAAQS?
- 5) True or false: Cost-benefit analysis suggests that the benefits of the Clean Air Act outweigh the costs. (True False) Explain the relevance (if any) of this result.
- 6) How important is background air in determining local air quality? Circle one: (Not important at all / Important, but not as important as local emissions / More important than local emissions.)
- 7) What's the difference between acute and chronic air pollution, and which one featured in the case of Oetzi, the 5000-year-old body found in the Alps?
- 8) Acid rain is related to which of the following? (More than one may be correct.) SO₂, NO_x, CO₂, PM_{2.5}.
- 9) True or false: All pesticides bioaccumulate. Briefly explain your answer.
- 10) True or false: It's easy to determine the relationship between the use of any kind of chemical and human health. Then name the scientific discipline that studies these relationships.
- 11) What are two reasons that suggest that there will *more* malnourished people in the world at the end of this century than there are now, and what are two reasons that suggest that there will be *fewer* malnourished people in the world at the end of this century than there are now?
- 12) At least for the next few decades, increased levels of CO₂ will do what to plant growth (holding everything else constant)? Then give two examples of other things that affect plant growth that likely *won't* be constant with climate change.
- 13) Describe the Precautionary Principle and give two reasons it's difficult to put the Precautionary Principle into action.
- 14) What is the difference between oil reserves and oil resources? (Hint: Resources are larger than reserves.) Which one changes as the price of oil increases?
- 15) What is Hubbert's Peak?

- 16) Describe as best as possible in words the main lesson from the graph below, from David Battisti's lecture on Feb 25.



- 17) Why is the “cap” part of cap-and-trade important, and why is the “trade” part important?
- 18) What is the difference between grandfathered permits and auctioned permits? Which one is most like a tax?
- 19) Explain why taxes and cap-and-trade systems are similar to each other. (It might help to draw a demand curve.)
- 20) Based on the graph below, what kind of cap-and-trade system would be most like a sulfur tax of \$100 per ton? (Your answer should include two important elements of cap-and-trade programs.)



- 21) Conservation biology is defined by a goal. What is that goal?
- 22) Define biodiversity and give two examples of the value of biodiversity.
- 23) Why is modern agriculture called a “simplified biological system”?
- 24) The Yellowstone to Yukon project attempts to create a corridor of protected natural areas from the Yellowstone (in Wyoming/Montana/Idaho) to the Yukon (in Canada). Why does climate change make it particularly important to create such a corridor?
- 25) “Based upon the concepts you learned about conservation biology, mountains and mountain ranges can be thought of as islands.” Is this true? Why or why not?