**STUDY QUESTIONS MONDAY – Hema Aboubacar**

**Session 1: Introduction: Science, Economics, and Policy**

1. Describe the “greenhouse effect.”
2. What are the primary sources of emissions of greenhouse gases?
3. Briefly describe the relationships among: emissions of greenhouse gases (GHGs), concentrations of GHGs in the atmosphere, (global average surface) temperature, and damages from climate change. Describe the chain of causality among these.
4. What are three major approaches to addressing global climate change?
5. Describe the trends in total greenhouse-gas emissions from 1980 to today for the following: the European Union, China, and the United States. Describe the trends in CO2 emissions per capita for developed and developing countries. What are the implications of your answers for fairness/justice?
6. Define “carbon [or emissions] intensity.”

**Session 2: Fundamentals of an Economic Perspective**

1. Why is an economic perspective important for understanding global climate change?
2. What is a “global commons problem”? *Why* is climate change a global commons problem? If climate change is a global commons problem, why is international cooperation therefore necessary to address climate change?
3. Are damages (adverse impacts) from climate-change a function of the concentration of greenhouse gases in the atmosphere (the "stock") or of annual emissions of greenhouse gases (the “flow”)? Why?
4. What is an “externality?” Are all externalities negative?  Can some be positive?
5. How do we define the *benefits*of policy that reduces pollution? (Hint: How do the benefits of environmental protection relate to environmental damages?) What are 1 – 2 examples of the *costs* of implementing policy to reduce pollution?
6. What is the difference between total cost, average cost, and marginal cost?
7. What is meant by the “efficient level of pollution control?”
8. Explain as precisely as you can the difference between “efficiency” and “cost effectiveness”. What are the appropriate uses of each in evaluating environmental policies?
9. Define the “social cost of carbon” (SCC). How does the choice of discount rate affect the SCC? Why is the choice of whether or not to include *global* damages so important in determining the SCC?
10. In economics, what is the difference between a “progressive” policy and a “regressive” policy?