Economics and the Environment, 8e.
Review Questions with Answers

Chapter 1: Four Economic Questions About Global Warming

1. Greenhouse gases (GHG's) trap reflected heat from the earth's surface and cause global warming. The main GHG is carbon dioxide (CO2) .

2. The three potential consequences of a gradual global warming are:
    1) fall in agricultural output
    2) impacts on natural ecosystems
    3) sea level rise

3. An example of catastrophic impacts from global warming would be collapse of the West Antarctic Ice Sheet. This would raise sea levels by 20 feet.

4. Preindustrial CO2 levels were about 280 ppm. They are now over 400 ppm.

5. Scientists predict that global temperatures over the next 100 years will rise between 3 and 10 degrees F.

6. Positive feedback creates an acceleration of global warming; negative feedback creates a deceleration of this warming.

7. The Paris Climate Agreement requires participating countries to reduce their emissions of greenhouse gases, based on individual country commitments.

8. Three answers to the question "How much is too much?" are:
    1) Efficiency
    2) Safety
    3) Sustainability

9. The "net benefits" of environmental protection means the benefits minus the costs.

10. The two obstacles standing in the way of effective government action are:
    1) Imperfect information
    2) Opportunity for political influence

11. The three methods government could use to control carbon dioxide emissions are:
    1) command-and-control regulation
    2) Incentive-based regulation
    3) Clean technology promotion

12. Since carbon dioxide reduction is a public good, each country would prefer to see others cut back emissions and then free ride on those actions.

13. A global cap-and-trade system could transfer resources and technology from rich to poor countries as a result of a treaty governing GHG emissions.