

Answer all questions in the answer packet provided. Put your name on the packet. Write legibly. You may use a dictionary but no other outside material. Answers not fulfilling any of the above will not be graded. 70 total points are available on this exam. The value of each question is shown next to the question.

1. (5 points) What is general equilibrium? How does it differ from partial equilibrium? Why is it important to model climate change with general equilibrium models (instead of partial equilibrium models)?
2. Define: (2 points each = 10 points total)
 - a. Clean development mechanism
 - b. Joint implementation
 - c. Backstop technology
 - d. Mitigation
 - e. Conference of the Parties (COP)
3. (5 points) Two policies for controlling greenhouse gases are being considered. The first (policy A) gives net benefits equal to 160 in each of three periods 1, 2, and 3. The second (policy B) gives net benefits equal to 240 in periods 2 and 3, but nothing in period 1. The discount rate is 100%.
 - i. Which policy is better?
 - ii. What is the difference in present value of the two policies?
 - iii. What does a discount rate measure?
 - iv. Why might two different countries have different discount rates?
4. (5 points) The marginal cost of developing clean renewable energy is $MC = 100$. Two nations are each deciding how much to contribute towards a research project that will benefit both countries equally. Country A has a willingness to pay $WTP = 80 - Q$. Country B has a willingness to pay $WTP = 200 - Q$, where Q is resources devoted towards research.
 - i. What is the socially optimal amount of resources devoted towards research?
 - ii. How much would actually be invested by each country?
 - iii. Give a short explanation as to why the social and actual amounts differ.
5. (15 points) Question from candidate questions
6. (15 points) Question from candidate questions
7. (15 points) Question from candidate questions