Write all answers in your blue book and show all work there. Return your exam in your blue book.

14 pts.
1) a) Complete the following table.
   \[
   \begin{array}{ccc}
   L & Q & MP_L & MC (P_L = 2) \\
   1 & 5 & & \\
   2 & 9 & & \\
   3 & 11 & & \\
   \end{array}
   \]
b) Are there diminishing returns in the table? Why?

14 pts.
2) a) Draw a well-labeled diagram that shows the efficient level of production and consumption.
b) Is your model competitive or monopolistic?
c) What does your model assume about external costs?

14 pts.
3) Describe 2 ways to estimate the value of environmental goods like parks or clean air. Are these methods as reliable as ordinary market data? Why?

14 pts.
4) When it comes to a resource like clean air, there’s a problem with property rights. Explain. If we have a regulation that says firms can’t pollute the air, does that create a property right? Explain.

15 pts.
5) Draw a well-labeled diagram that shows three supply curves, private, social and controlled, where an environmental cost like pollution is present. Show the efficient level of production.

15 pts.
6) a) Why is present value important when discussing a sustainable economy?
b) Draw a well-labeled diagram that shows the effect of discounting on efficient quantities over time.

14 pts.
7) What is the effect of the standard of living on population growth? Give one reason for this.

I have neither given nor received unfair aid on this test.