

Economics 5250
Spring 2001

Dr. Lozada
Final Exam

This exam has 67 points. There are eight questions on the exam; you should work all of them. Questions 1, 3, and 6 are worth 9 points each, while the other five questions are worth 8 points each.

Put your answers to the exam in the blue books you have brought. The figures and attachment for the exam appear after the questions.

Answer the questions using as much precision and detail as the time allows. Correct answers which are unsupported by explanations will not be awarded points.

You have two hours (that is, until 11:15AM) to finish this test.

Answer all of the following eight questions.

1. [9 points] Give a graphical explanation of the Coase Theorem.
2. [8 points] How could you use the hedonic pricing approach to value a potential change in the characteristics of "National Park X" (for example, building ten more miles of hiking trails there)?
3. [9 points] How can one start from Figure 1 and $H = EX$ to obtain Figure 2? Explain the meanings of X , \dot{X} , F , H , $H = EX$, and H_{ss} .
4. [8 points] Suppose an exhaustible resource firm's graph of instantaneous profit π_t versus instantaneous quantity Q_t looks like Figure 3. Why is Q_1 not the firm's optimal quantity? Tell me everything you know about the firm's optimal quantity or quantities.

Hint: You may use the following formula without any mathematical explanation of how it was derived:

$$r = \frac{-C_{X8}}{MII_7} + F'_8 \frac{MII_8}{MII_7} + \frac{MII_8 - MII_7}{MII_7}. \quad (14)$$

5. [8 points] Explain the McKelvey Box. What are the implications of the McKelvey Box for the debate on resource scarcity?
6. [9 points] Discuss the potential negative consequences of deforestation in developing countries.
7. [8 points] Nicholas Georgescu-Roegen described economic life as being characterized by an "irreversible unidirectional flow."
 - (a) What did he mean by this? (Hint: it has something to do with the Second Law of Thermodynamics.)
 - (b) How does this conception contrast with the viewpoint of most professional ecologists, who emphasize cycles?
8. [8 points] Put the enclosed newspaper article (labeled "Attachment 1") into an economic context.

Figure 1:

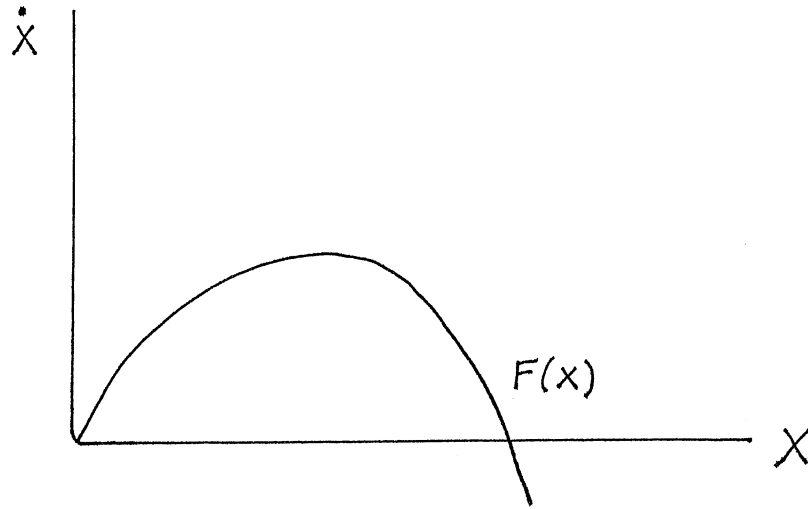


Figure 2:

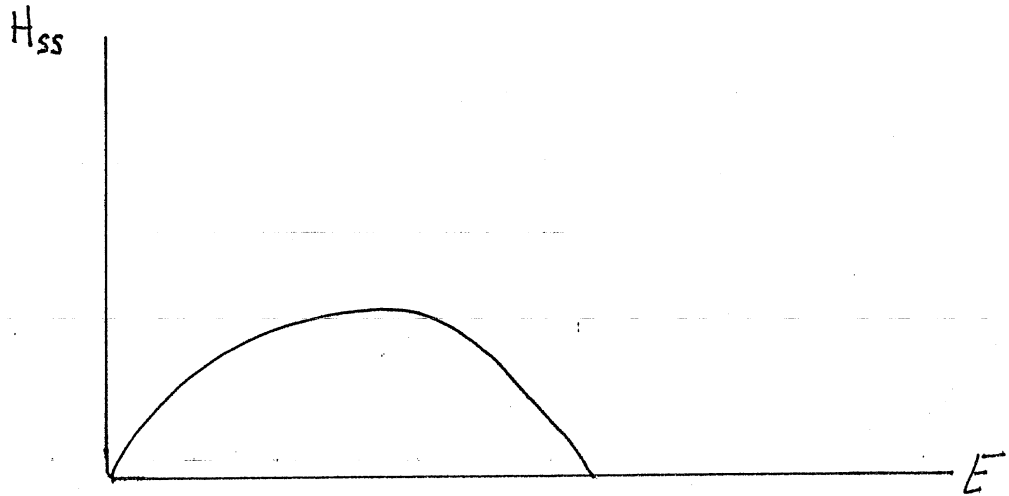
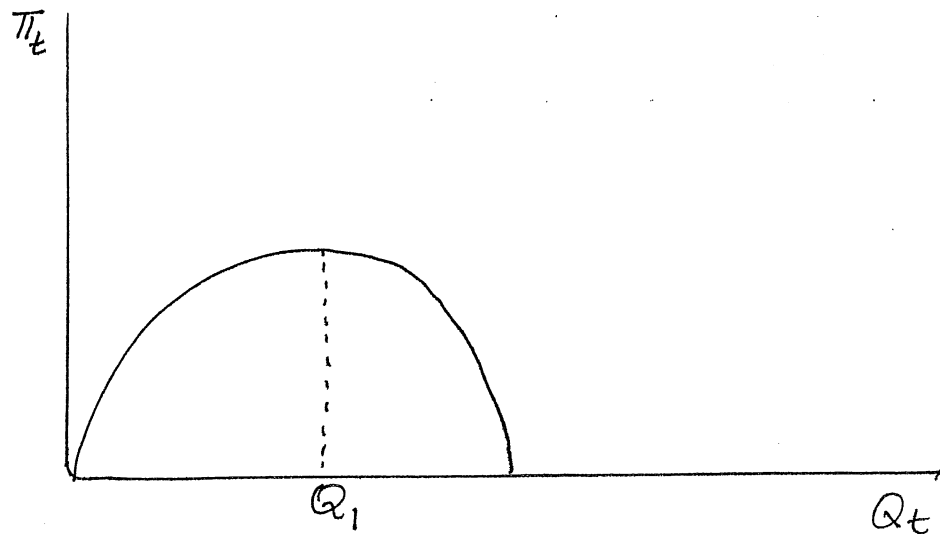


Figure 3:



Bush's Turn on Climate Treaty Breeds New Greens

Environmental fervor sweeps U.S. religious denominations

LOS ANGELES TIMES

President Bush's decision to withdraw from an international climate-change treaty has galvanized an emerging green movement within the nation's churches and synagogues.

From West Virginia to Southern California, grass-roots believers in the pews are joining national religious leaders urging Bush to reconsider, serving notice that the Earth's environment is "of paramount religious significance."

They also pointedly are reminding Bush, without saying so, that his actions risk alienating the people of faith he has courted assiduously.

In the past two weeks, protest letters have been sent to the White House

by the National Council of Churches, signed by leaders of mainline Protestant and historic black churches and the chancellor of the Jewish Theological Seminary. Other letters were dispatched by scientists with the Evangelical Environmental Network, the Coalition on the Environment and Jewish Life and the Jewish Council on Public Affairs, which represents 13 national and 122 local Jewish public affairs agencies.

At the same time:

■ The nation's Roman Catholic bishops have been studying the climate-change issue and might take a stand at their June meeting in Atlanta.

■ Faith-based climate-change coalitions in 22 states, including Bush's home state of Texas and coal-producing West Virginia, are stepping up their campaigns.

■ In Los Angeles, Jewish activists plan a petition drive June 3 when an

estimated 30,000 to 40,000 people are expected to attend the largest Jewish gathering west of Chicago, the Valley Jewish Festival. Its social-action theme this year is the environment.

In addition to announcing that the United States would withdraw from the Kyoto climate-change treaty — which requires the largest industrialized nations to reduce emissions of carbon dioxide and other gases — the Bush administration has angered environmentalists by overturning a Clinton administration ruling that would have lowered the amount of arsenic allowed in drinking water.

Climate change is an issue fast moving from science labs and the halls of diplomacy to the "pulpit and pews of the American heartland," said Paul Gorman, head of the National Religious Partnership for the Environment, which helped organize the state climate-change campaigns.

It is a point not lost on Bush's Environmental Protection Agency administrator, Christine Todd Whitman. In a memo to Bush, she wrote, "For the first time, the world's religious communities have started to engage in the issue. Their solutions vary widely, but the fervor of the focus was clear."

Religious leaders describe their disappointment as a feeling that Bush is "failing in his moral leadership that he ran on," said David Rosenstein, director of the Southern California chapter of the Coalition on the Environment and Jewish Life.

The White House said it had received the letter from the National Council of Churches.

"They're asking to have a dialogue with us. We welcome their comments," deputy White House press secretary Scott McClellan said Thursday.

In the past, environmental activism has been essentially a secular endeavor, led by groups including the Sierra Club and the Wilderness Society. But over the past decade, the green movement has been taking root in the nation's mainline Protestant, evangelical, Eastern Orthodox, Roman Catholic and Jewish denominations. There has also been a good deal of reflection by Buddhists, Hindus, Bahai and other Eastern religions.

The religious greens say the deterioration of the environment also raises traditional religious concerns about social and economic justice. The greatest impacts are likely to be felt by poor people and developing nations who are least able to cope with the kinds of global warming scenarios that scientists say are now possible.

Carbon dioxide is the principal heat-trapping gas believed to be contributing to global warming. The United States, with less than 5 percent of the world's population, is responsible for nearly 25 percent of man-made carbon dioxide emissions worldwide.

Attachment 1