Economics and the Environment 9th edition Goodstein Test Bank

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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.

Chapter 2: Ethics and Economics

1. A normative issue focuses our attention on what should be rather than what is.
2. The human centered or anthropocentric moral foundation underlying economic analysis is known as utilitarianism.
3. An alternative view is that, independent of the utility of doing so, people have a moral responsibility to treat the earth with respect. This is known as the environmental ethic.
4. Market goods include tomatoes, VCRs and basketball shoes. Nonmarket goods include clean air, charitable deeds, and the view from a mountain top.
5. The positive relationship between consumption of goods and utility can be expressed in a mathematical relationship known as a utility function.

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6. If "more is really better" than a utility function illustrates a trade-off for human happiness between increased material consumption and environmental quality.
8. A social welfare function is a way of adding up individual utilities.
9. The assumption of equal marginal utility of consumption – meaning a $10 change in income results in an equal change in happiness for all people— is one way to justify an efficiency standard.
10. The goal of an efficiency standard is to maximize the net benefits of projects which impact the environment, without reference to who bears the costs or gains the benefits.
11. The sustainability standard says social welfare does not rise if increases in consumption today, on balance, reduce the well-being of future generations below the level enjoyed today.
12. Proponents of a safety standard argue that people have a right to protection from unsolicited damage to their health.

Chapter 3: Pollution and Resource Degradation as Externalities:
1. Human production and consumption relies on the environment as a source of raw materials and as a sink for waste materials.
2. Both sources and sinks make up natural capital: the inputs that nature provides for our production and consumption proccesses.
3. Economists define "pollution" as a negative externality: a cost of a transaction not borne by the buyer or seller.
4. Government regulation of pollution is one way of internalizing externalities.
5. Open access to common property results in resource use that is inefficient, unsustainable, or both? Both.
6. The open acess problem arises when people weigh private benefits against private (as opposed to social) costs in their resource decisions.
7. Long-run profits generated by restricted access to natural capital are called resource rents.
8. When fisheries are regulated, some folks lose access. The resource rents that flow to the folks who retain access can be taxed by the government and used to compensate the losers.
9. Free-market environmentalists advocate eliminating many environmental regulations and relying on lawsuits by injured parties to internalities externalities.
10. The provisions of public goods is a problem for the free-market due to the existence of two factors:
    1) transaction costs
    2) free riding

Chapter 4: The Efficiency Standard:
1. A Pareto-efficient situation is a one in which it is impossible to make on person better off without making anyone else worse off.
2. At the efficient outcome, the net monetary benefits flowing from economic decisions will be maximized.
3. A Pareto-improving policy is one that actually makes all parties better off.
4. The last unit of pollution reduced is called the marginal unit; the costs of reducing that unit are called the marginal costs; and the benefits from reducing that unit are called the marginal benefits.
5. Marginal analysis is used to identify the efficient level of pollution.
5. The Coase Theorem says that if polluter and victim can bargain easily and effectively, private

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negotiation should arrive at the efficient outcome regardless of who has the initial right to pollute or prevent pollution.
6. In the real world, efficiency will generally be better served under a polluter pays principle. This is largely because if victims pay to prevent pollution, this may induce entry of polluters into the market.
7. The area under the marginal cost curve equals the total costs. The area under the marginal benefit curve equals the total benefits.
8. When total costs and benefits are equal, net benefits are zero and pollution has been reduced too much from an efficiency perspective.
9. Proponents of the efficiency standard argue that, over time, most people will benefit in their role as consumers if efficiency is pursued at every turn.
10. The EPA is required to perform benefit-cost studies known as Regulatory Impact Analyses (RIA's) on any regulation expected to cost $100 million or more.
11. The four requirements for a "good" benefit-cost study are:
    1) follows accepted procedures
    2) clearly states assumptions
    3) identifies uncertainties
    4) provides margins of error
12. The efficient option is the option that maximizes the net monetary benefits to society.
13. The three main drawbacks to benefit-cost analysis are:
    1) hard numbers illusion
    2) control of scientific agenda
    3) paralysis by analysis

Chapter 5: Measuring the Benefits of Environmental Protection
1. The benefits of pollution control can be divided into two broad categories:
    1) market benefits
    2) non-market benefits
2. The three categories of values from environmental protection are:
    1) use value
    2) option value
    3) existence value

The sum of these three categories equals the total value of an environmental resource.
3. Consumer surplus is the difference between what one is willing to pay and what one actually has to pay for a service or product.
4. We can measure the benefits of environmental improvement by determining people's maximum willingness-to-pay (WTP) for such improvements or by determing people's minimum willingness-to-accept (WTA) compensation in exchange for a degradation in environmental quality.
5. Prospect theory states that people may adopt the status quo as their reference point and demand higher compensation to allow environmental degradation than they are willing to pay for making improvements.
6. Because risk assesments are far from precise, researchers often adopt a conservative modeling stance, meaning that every assumption made in the modeling process is likely to overstate the true risk.
7. Economists know that people in general are risk-averse, meaning they dislike risky situations.

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1._____ (GHG's) trap reflected heat from the earth's surface and cause global warming. The main GHG is_____.

2. The three potential consequences of a gradual global warming are:
   1) _____
   2) _____
   3) _____

3. An example of catastrophic impacts from global warming would be collapse of the _____ _____. This would raise sea levels by _____.

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

5. Scientists predict that global temperatures overr the next 100 years will rise between _____ _____ degrees F.

6. _____creates an acceleration of global warming; _____creates a deceleration of this warming.

7. The_____Treaty requires participating countries to reduce their emissions of greenhouse gases to around 5% below 1990 levels by about 2012.

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

9. The "net benefits" of environmental protection means the _____minus the ____ _____.

10. The two obstacles standing in the way of effective government action are:
   1) _____
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11. The three methods government could use to control carbon dioxide emissions are:
   1) _____
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12. Since carbon dioxide reduction is a _____, each country would prefer to see others cut back emissions and then _____ on those actions.

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Chapter 2: Ethics and Economics

1. A _____ focuses our attention on what should be rather than what is.

2. The human centered or anthropocentric moral foundation underlying economic analysis is known as _____ .

3. An alternative view is that, independent of the utility of doing so, people have a moral responsibility to treat the earth with respect. This is known as the _____.

4. _____ goods include tomatoes, VCRs and basketball shoes. _____ goods include clean air, charitable deeds, and the view from a mountain top.

5. The positive relationship between consumption of goods and utility can be expressed in a

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mathematical relationship known as a _____ .
6. If "more is really better" than a utility function illustrates a trade-off for human happiness between _____ and _____.
8. A _____ is a way of adding up individual utilities.
9. The assumption of _____ – meaning a $10 change in income results in an equal change in happiness for all people— is one way to justify an efficiency standard.
10. The goal of an _____ standard is to maximize the net benefits of projects which impact the environment, without reference to who bears the costs or gains the benefits.
11. The _____ standard says social welfare does not rise if increases in consumption today, on balance, reduce the well-being of future generations below the level enjoyed today.
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4. Government regulation of pollution is one way of _____ externalities.
5. Open access to common property results in resource use that is inefficient, unsustainable, or both? _____.
6. The open acess problem arises when people weigh _____ benefits against _____ (as opposed to social) costs in their resource decisions.
7. Long-run profits generated by restricted access to natural capital are called _____.
8. When fisheries are regulated, some folks lose access. The _____ that flow to the folks who retain access can be _____ by the government and used to compensate the losers.
9. _____ advocate eliminating many environmental regulations and relying on lawsuits by injured parties to internalities externalities.
10. The provisions of public goods is a problem for the free-market due to the existence of two factors:
    1) _____
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1. A _____ situation is a one in which it is impossible to make on person better off without making anyone else worse off.
2. At the efficient outcome, the _____ flowing from economic decisions will be maximized.
3. A _____ policy is one that actually makes all parties better off.
4. The last unit of pollution reduced is called the _____ unit; the costs of reducing that unit are called the _____; and the benefits from reducing that unit are called the _____.
5. Marginal analysis is used to identify the _____ level of pollution.

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5. The _____ Theorem says that if polluter and victim can bargain easily and effectively, private negotiation should arrive at the efficient outcome regardless of who has the initial right to pollute or prevent pollution.
6. In the real world, efficiency will generally be better served under a _____ principle. This is largely because if victims pay to prevent pollution, this may induce _____ of polluters into the market.
7. The area under the marginal cost curve equals the _____. The area under the marginal benefit curve equals the _____.
8. When total costs and benefits are equal, net benefits are _____and pollution has been reduced too _____ from an efficiency perspective.
9. Proponents of the efficiency standard argue that, over time, _____ will benefit in their role as consumers if _____ is pursued at every turn.
10. The EPA is required to perform benefit-cost studies known as _____ on any regulation expected to cost $100 million or more.
11. The four requirements for a "good" benefit-cost study are:
    1) _____
    2) _____
    3) _____
    4) _____
12. The efficient option is the option that maximizes the _____ to society.
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1. The benefits of pollution control can be divided into two broad categories:
    1) _____
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2. The three categories of values from environmental protection are:
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The sum of these three categories equals the _____ of an environmental resource.
3. _____ is the difference between what one is willing to pay and what one actually has to pay for a service or product.
4. We can measure the benefits of environmental improvement by determining people's maximum _____ for such improvements or by determing people's minimum _____compensation in exchange for a degradation in environmental quality.
5. _____ states that people may adopt the status quo as their reference point and demand higher compensation to allow environmental degradation than they are willing to pay for making improvements.
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SAMPLE EXAM MATERIAL

PART I. How Much Pollution is too Much?

There are 11 basic ideas that students should understand in order to earn a passing grade for this part:

Externality
Internalizing an externality
Open access to common property
The public goods problem
Net benefits from environmental protection
An efficient level of environmental protection
A safe level of environmental protection
A sustainable level of environmental protection (neoclassical vs ecological)
Consumer surplus from environmental protection
Opportunity cost of environmental protection
Competitive and non-competitive consumption

MULTIPLE CHOICE. The following multiple choice questions are designed to test for the basic competence discussed above.

1. If the production of computers generates a negative externality

a. computer buyers bear this cost.
b. this is part of the full social cost of production.
c. the externality is reflected in the price of computers.
d. computer manufacturers bear this cost.
e. computer retailers bear this cost.

2. From an economic point of view, the primary goal of environmental regulation is to

a. eliminate pollution.
b. encourage productivity growth.
c. provide jobs in a dynamic sector of the economy.
d. internalize externalities.
e. promote environmental consciousness among citizens.

3. A "tragedy of the commons" occurs for resources like the air that are commonly owned

a. because users weigh the full social costs against private

benefits.
b. when there is free access to the resource.
c. when there is effective regulation of resource use.
d. when the population is small and stable.
e. because users internalize the negative externality associated with the resource use.

4. The public goods problem can be stated as follows: pollution victims have a hard time internalizing environmental externalities through lawsuits because of

a. transactions costs and free-riding.
b. transactions costs and free access.
c. free access and inefficiency.
d. free-riding and social costs.
e. externalities and transactions costs.

5. The net benefits of environmental protection refer to

a. the total benefits reaped by society from a cleaner environment.
b. the difference between the total benefits and total costs of environmental protection.
c. the change in total benefits from a small improvement in environmental quality.
d. the difference between the marginal benefits and marginal costs of environmental protection.
e. the benefits captured by the safety net of environmental regulation.

6. At an efficient level of environmental protection

a. The marginal benefits of reducing pollution exceed the marginal costs by a large margin.
b. The difference between the total benefits and total costs of pollution reduction are maximized.
c. The net benefits of pollution reduction are zero.
d. No one suffers from exposure to pollution.
e. Social welfare is maximized.

7. To achieve a sustainable level of environmental protection

a. average welfare for future generations must be higher than average welfare today.
b. non-renewable resources must be preserved at all costs.
c. natural capital can be depleted if it is replaced with created capital generating similar services.
d. stock pollution must be eliminated.

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