

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.

e. flow pollution must be eliminated.

8. A safe level of environmental protection

- a. is defined as a cancer risk of less than one in a million.
- b. encourages regulators to attack high risk problems first.
- c. is blind to who bears the costs and who reaps the benefits of pollution.
- d. must be determined by a cost-benefit analysis.
- e. is universally supported by economists.

9. Economists measure the benefits of environmental protection as

- a. the increase in GNP.
- b. the increase in corporate profits.
- c. the increase in consumer surplus.
- d. the increase in efficiency.
- e. the increase in productivity.

10. The opportunity cost of environmental protection is different from the engineering cost because it incorporates

- a. productivity and monopoly effects.
- b. environmental benefits.
- c. consumer surplus.
- d. the cost of compliance with regulations by private business.
- e. risk analysis.

11. If consumption is competitive

- a. than economic growth always increases general happiness.
- b. increases in the consumption of person A reduce the welfare of person B.
- c. increases in the consumption of person A increase the welfare of person B.
- d. snob, Veblen or bandwagon effects are unimportant.
- e. than "more is always better" for society as a whole.

TRUE OR FALSE AND EXPLAIN. Indicate whether the statement is true or false, and explain why. No credit will be given for an answer without an explanation; full credit will be given for a good explanation. You may want to use diagrams where appropriate.