

Model Questions for Natural Resource and Environment Management Course,
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1)

- a) Discuss the importance of well-defined property right for the efficiency in a market economy
- b) Critically evaluate the statement “creation of private property rights is a solution for natural resources degradation”.
- c) Describe the Coase Theorem and explain how it lays the foundation for economics of pollution control.

2. Suppose that a paper mill is located in a riverbank. The private marginal cost of producing paper (Rs. Per Kg) is given by

$$MPC = 10 + 0.5Y, \quad Y \text{ is the output of paper in Kg}$$

In addition to the private marginal cost an external cost is incurred. Each Kg of paper release pollutants into the river, which causes the damage of Rs 10 per Kg of paper. This external cost is borne by the community living in the downstream but not by the owner of the paper mill. The marginal benefit of a Kg of paper (MB) is given by:

$$MB = 30 - 0.5Y$$

- a) Draw a diagram illustrating the marginal private cost (MPC) and Marginal Social Cost (MSC), and Marginal Benefits (MB) functions
- b) Find the profit maximizing output of paper in absence of any intervention of the government to internalize this pollution externality.
- c) Find the socially efficient output of paper.
- d) Explain the difference in the answer to b and c above.

3. Market failures are the root causes of environment and natural resources degradation problems. Discuss this statement giving examples of market failures and environment or natural resource degradation problems.

4. The Coase theorem claims that a unique and efficient allocation of resources would follow from rational bargaining between polluter and a victim, irrespective of how property rights are initially allocated. Explain how the initial allocation of property rights affects the net gains to the polluter and the victim.

5. Define Command and Control and Market based approaches to pollution control. Compare the advantages and disadvantages of the two approaches.

6. Describe the green taxes and tradable permits for pollution control. Explain how they ensure socially optimal control of pollution using graphs.
6. Discuss the relationship between economic value and social welfare. Elaborate different types of economic values.
7. Generally, revealed preference environmental valuation methods are more accurate compared to stated preference methods. Explain why?
8. Describe the potential application of productivity change, replacement cost, averting cost methods to value environmental services giving examples.
9. Describe the use of Travel Cost methods to value recreational resources. Provide a brief account of the difficult issues encountered in using travel cost method.
10. Describe the Hedonic Pricing method to value environment. What are the potential limitation in using this method in Sri Lanka.
11. Describe how you design and conduct contingent valuation survey to estimate the benefits of a rural electrification scheme.
12. What are the potential biases in contingent valuation (CV) studies? Explain how you design and conduct CV survey to minimize these biases.