

**THE OPEN UNIVERSITY OF SRI LANKA**  
**POST GRADUATE DIPLOMA IN ENVIRONMENTAL SCIENCE**  
**LEVEL - VI**  
**FINAL EXAMINATION - 2014**  
**NEP1202 - ENVIRONMENTAL ECONOMICS AND MANAGEMENT**  
**DURATION- THREE (03) HOURS**



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**Date: 22<sup>nd</sup> March 2014**

**Time: 9.30 a.m. - 12.30 p.m.**

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**Answer four (04) questions only. Each question carries 25 marks.**

1. The Government of Sri Lanka has decided to monitor and control air pollution levels caused by motor vehicles in the city limits of Colombo. Examine this decision in terms of
  - a. Opportunity cost for individuals
  - b. Production possibilities frontier for the economy
2. “Economists explain environmental degradation in terms of market failure” Explain.
3. “The demand for a good or service is influenced by many factors. However, a change in quantity demanded occurs on account of one of them” Explain with suitable examples.
4. “Boulding (1966) emphasised the need to consider earth as a closed economic system where the economy and environment are not characterized by linear interlinkages, but by a circular relationship” Explain.
5.
  - a) Outline the reasons for valuing the environment?
  - b) Distinguish “willingness to pay” (WTP) from “willingness to accept” (WTA).
  - c) What are the limitations of the Contingent Valuation Method” (CVM).
6.
  - a) Briefly discuss the various steps in Cost Benefit Analysis (CBA)
  - b) Define and explain the concepts of Net Present Value (NPV), Benefit-Cost Ratio (BCR) and Internal Rate of Return (IRR)
7. Write Short notes on ***three (03)*** of the following.
  - a) Law of diminishing returns and technical progress
  - b) Ecology and thermodynamics
  - c) Renewable resources and non-renewable resources
  - d) Sustainable income and natural resource accounting
  - e) Pollution charge and subsidy

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