THE OPEN UNIVERSITY SRI LANKA

MASTER OF SCIENCE DEGREE IN ENVIRONMENTAL SCIENCE

LEVEL 7

FINAL EXAMINATION -2015/2016

NEP1208 / 1202: ENVIRONMENTAL ECONOMICS AND MANAGEMENT



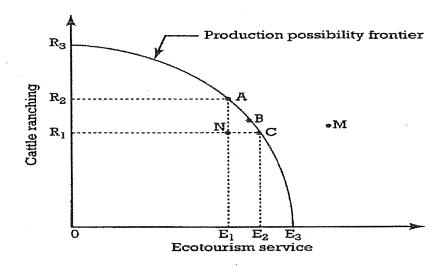
DURATION -THREE (03) HOURS

Date: 23rd October 2016

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

Instructions:

- > Answer any five (05) questions. Each question carries 20 marks.
- 01. Answer the questions using the following diagram



- (a) What can we learn about choice, opportunity cost, efficiency and inefficiency from the concept of the Production Possibility Frontier? (10 marks)
- (b) What is the opportunity cost of producing OR₃ of cattle ranching? (05 marks)
- (c) What factors will lead to reach the .M situation? (05 marks)
- 02. (a) "Where markets do not exist for an environmental good or service, its value (i.e. opportunity cost) is not evident" Explain. (10 marks)
 - (b) What happens to the level of output produced when there is a discrepancy between private and social costs? Use a diagram to answer this question.

(10 marks)

- 03. (a) Define "Transaction Cost" (05 marks)
 - (b) "The Coase Theorem suggests that efficient solutions to externalities can be determined through bargaining". Explain. (05 marks)
 - (c) Examine the problems with Coasian Solutions. (10 marks)

- 04. (a) What is a Pigouvian tax and how can it be used to restore socially efficient outcome when a negative externality is present? Use a diagram to answer this question. (10 marks)
 - (b) Explain the following on a given environmental objective.

 Consider a situation where two firms of domestic production cause transboundary pollution. To address this problem, the government decides to use a tradable permits system, where the total number of tradable permits issued each year equals the annual target for emissions.

 (10 marks)
- 05. (a) Distinguish willingness-to-pay (WTP) from willingness-to-accept (WTA) with an example for each. (05 marks)
 - (b) Imagine a proposal to build a new high-speed train between city A and city B. Imagine that the new line would cut through a national park. Would you advise the government to commission a contingent valuation study? Give reasons for your answer.

 (15 marks)
- 06. (a) Define Sustainable Development. (05 marks)
 - (b) Discuss the degree of success claimed by the Central Environmental Authority (CEA) of Sri Lanka in dealing with cases of environmental damage. Cite at least two cases in Sri Lanka to illustrate the points you are making in your answer.

(15 marks)

- 07. (a) Define and explain the concepts of Net Present Value (NPV), Benefit-Cost Ratio (BCR), and Internal Rate of Return (IRR). (10 marks)
 - (b) "Cost-benefit analysis provides a framework for identifying, quantifying, and comparing the costs and benefits (measured in rupees) of a proposed policy action". Explain. (10 marks)
- 08. (a) Distinguish Environmentally adjusted Domestic Product (EDP) from Gross Domestic Product (GDP) (10 marks)
 - (b) "Cities are growing almost everywhere and they are seen as powerful engines of economic growth". Do you agree with this statement? Give reasons.

 (10 marks)

*****Copyrights Reserved*****