



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2015/2016

**FOURTH YEAR SECOND SEMESTER EXAMINATIONS FOR
THE DEGREE OF BACHELOR OF ARTS IN ECONOMICS
WITH INFORMATION TECHNOLOGY**

(CITY CAMPUS – DAY)

AEC 413: ENVIRONMENTAL ECONOMICS

Date: 4th December, 2015

Time: 9.00 – 11.00am

INSTRUCTIONS:

- Answer Question ONE and any other TWO Questions.
- Question ONE (1) carries 30 marks and the rest 20 marks each.

Question One (Compulsory)

- a) Discuss the benefits of applying environmental economics in an African context (7 marks)
- b) Explain the term maximum sustainable yield as used in Environmental resource management. What are its pitfalls in the management of the environment? (6 marks)
- c) New Nyanza Paper mill releases pollution into the nearby wetlands, and associated health and ecological damages are not considered in the private market. Suppose you are an environmental economist working with the following marginal benefits and costs for this market, where Q is thousands of quantity and P is price per in shillings.

$$MPB = 42.0 - 0.125Q$$

$$MPC = 10.0 + 0.075Q$$

$$MEB = 0$$

$$MEC = 0.05Q$$

where: MPB-Marginal Private Benefit
MPC-Marginal Private Cost
MEC-Marginal External Cost
MEB-Marginal External Benefit

Required:

- i) Find the competitive equilibrium Q_c and P_c ; and the efficient equilibrium, Q_e and P_e (6 marks)
- ii) Suppose the paper mill owned the rights to the wetlands and is negotiating with private environmental group that is willing to pay the mill to produce less output. For the 42nd unit of output, determine the range within which a payment would be acceptable to both parties. (6 marks)
- d) Explain the Coase Theorem, stating the underlying assumptions of this theorem. (5 marks)

Question Two

- a) Discuss the environmental problems of the developing nations. What recommendations would you give for controlling such environmental problems (15 marks)
- b) State and explain any five economic manifestation of environmental degradation (5 marks)

Question Three

- a) What are the general guidelines in conducting an Environmental Impact Assessment (EIA) (5 marks)
- b) What are the important steps in Environmental Impact Study? (5 marks)
- c) State and explain the criteria set by the World conservation strategy for identifying significant impacts on the environment (6 marks)
- d) Discuss the crucial elements in formulating the environment strategy in a developing country like Kenya (4 marks)

Question Four

- a) What is the importance of conserving forests like Mau forests in Kenya (5 marks)
- b) Explain the signs of Environmental Resource unsustainability in Kenya (5 marks)
- c) Why are the forests being harvested so rapidly ,in apparent violation of both efficiency and sustainability criteria (10 marks)

Question Five

- a) Environmental quality is considered to be a public good that must be consumed by all in equal amounts. With reference to environmental quality explain the characteristics of a public good. (4 marks)
- b) Using a diagram, explain the objectives of sustainable development (6 marks)
- c) Macroeconomic policies have wide spread impact on the use of a country's Environmental resources and ecological services. Discuss. (10 marks)