



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

INSTITUTIONAL BASED PROGRAMME (DECEMBER SESSION)

EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

(ENVIRONMENTAL HEALTH)

HEH 405: ENVIRONMENTAL HEALTH ECONOMICS

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DATE: THURSDAY 3RD MAY 2012

TIME: 2.00 P.M. – 4.00 P.M.

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INSTRUCTIONS

SECTION A

Answer ALL Questions

Q.1 Define the following terms:

- Opportunity cost
- Social cost
- Marginal cost
- WTP

(2 marks)

Q.2 Define tragedy of commons, how does it occur and how can it be solved. (3 marks)

Q.3 Protection from the risk of climate is a public good. Explain. (3 marks)

Q.4 Explain briefly, how the following act as economic instruments in terms of regulators or externalities

- Environmental governance
- Property rights
- Tradable permits
- Environmental tax

(8 marks)

- Q.5 A farm produces 30 units, which each cost \$4 to produce. It is producing 35th unit. The marginal cost is \$3 . Calculate the cost of extra units produced. (4 marks)

SECTION B

Answer Q.6 and any other 2

6. Identify and discuss the causes of market failure, in environmental health economics. (20 marks)

7. Describe the methods of environmental valuation. (15 marks)

8. i) John, an environmental health student, undertook a task of calculating solidly efficient level for a case of pollution. He found out two marginal damage functions for urban and rural areas respectively.

$$MD_R = 5E_R ;$$

$$MD_U = 10E_U$$

$$MA_C = 600 - 5E$$

Calculate the efficient equilibria for two MD functions for pollutions, using an illustration. (10 marks)

- ii) Total solid cost of pollution can be minimized or reduced leading to social efficient level. What can be achieved by reducing pollution. (5 marks)
9. A project results in an increased air pollution, with rising outputs of SO₂ and particulates, Environment health economist would wish to estimate for such pollution. Write an essay on how such pollution can be estimated. (15 marks)