



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF MASTER OF SCIENCE IN ENVIRONMENTAL
SCIENCES
(HOMA BAY CAMPUS)**

**NES 829: ECONOMIC ANALYSIS FOR ENVIRONMENTAL
DECISION MAKING**

Date: 5th April, 2014

Time: 9.00 - 12.00 noon

INSTRUCTIONS:

- Answer ANY FOUR questions.
- Each question carries 15 marks.



HOMABAY CAMPUS

**NES 829: ECONOMIC ANALYSIS FOR ENVIRONMENTAL DECISION
MAKING**

DATE:

TIME: 3 HOURS

INSTRUCTIONS:

Answer any **FOUR** questions.

1. Analyze the features of an efficient property rights marking system. [15 mks]
2. Violet is an environmental economist who has been recruited by the Homa-Bay County Government to provide guidance and advice on the best economic and policy instruments that can be used for environmental management. Elucidate the selection criteria that Violet would put into consideration so as to achieve the best results. [15 mk]
3. (a) Define a production function [5 mks]
(b) Portray the relationship in a production function and hence the costs incurred and the benefits that accrue from the production process. [15 mks]
4. Discuss the causes of market failure. [15 mks]

5. Analyze the factors that:

- a) Determine supply of environmental goods. [6 mks]
- b) Affect demand for environmental resources [9 mks]

6. The Following table shows hypothetical results obtained by observing consumer behavior and by varying the price of a visit and seeing how many visits an average consumer makes per annum to Nairobi's zero priced Arboretum. The value of the park will be determined by individual preference expressed through Willingness To Pay.

- a) Using the Travel Cost Method explain how you would determine the total value of the Arboretum. [4 mks]
- b) Explain how you would calculate total consumer surplus of the Arboretum [4 mks]
- c) Tabulate the hypothetical responses and fill in the blank spaces appropriately. [3 mks]

Number of visits	WTP (K.sh.)	Price paid (K.sh.)	Consumer surplus (K.sh.)
0	1000		
1	850		
2	700		
3	550		
4	300		
5	0		
Totals			

- d) Construct a D Recreation curve from the results of (c) above. [4 mks]