



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2017/2018 ACADEMIC YEAR  
FOURTH YEAR SECOND SEMESTER**

**SCHOOL OF BUSINESS & ECONOMICS  
BACHELOR OF SCIENCE IN AGRICULTURAL  
ECONOMICS & RESOURCE MANAGEMENT**

**COURSE CODE: ARE 442  
COURSE TITLE: ENVIRONMENTAL ECONOMICS**

**DATE: 19<sup>TH</sup> APRIL, 2018**

**TIME: 1100 - 1300HRS**

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**INSTRUCTIONS TO CANDIDATES**

Answer Question **ONE** and any other **THREE** questions

*This paper consists of 3 printed pages. Please turn over.*

## QUESTION ONE

- (a) Does a system of perfectly competitive markets result in an efficient allocation of society's resources? Explain. **(8mks)**
- (b) Highlight the assumptions for an effective system of transferable permits. **(3mks)**
- (c) Explain the relationship between economic development and environment **(4mks)**
- (d) Discuss the causes of market failure in environmental economics. **(10 mks)**

## QUESTION TWO

- (a) Suppose that a firm marginal production costs are given by  $MC=10+3Q$ . The firm's production process generates a toxic waste, which imposes an increasing large cost on the residents of the town where it operates; the marginal external cost associated with the  $Q$ th unit of production is given by  $6Q$ . What is the marginal private cost associated with the 10<sup>th</sup> unit produced? What is the total marginal cost to society associated with producing the 10<sup>th</sup> unit (the marginal social cost of the 10<sup>th</sup> unit)? **(7mks)**
- (b) Using a suitable illustration, discuss the practicability of using liability laws in pollution abatement. **(8mks)**

### **QUESTION THREE**

- (a) Discuss the product mix efficiency in production and consumption for an environmental good. **(8mks)**
- (b) Define resource conservation. Argue the case that increased conservation is not always socially desirable. **(7mks)**

### **QUESTION FOUR**

- (a) What is sustainable development? Discuss the impact of transport development to environment. **(8mks)**
- (b) Geothermal energy sub-sector in Kenya has attracted huge investment funds. Explain the effect of the sub-sector on the environment. **(7mks)**

### **QUESTION FIVE**

- (a) Food security is a major concern in Kenya. To address the problem, irrigation projects have been initiated. Explain the effect of these projects to the environment. **(7mks)**
- (b) By use of relevant domestic and or global environmental legislature, explain the importance of environmental legislature in environmental management. **(8mks)**

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