

## 2016/2017 ACADEMIC YEAR

# SECOND SEMESTER EXAMINATION

# FOURTH YEAR EXAMINATION FOR THE DEGREES OF BACHELOR OF SCIENCE IN AGRIBUSINESS AND MANAGEMENT

# AEB 408: ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS.

**DATE: APRIL 7, 2017** 

TIME: 8:30-10:30AM

**INSTRUCTIONS:** 

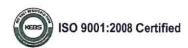
Answer Question ONE and ANY Other TWO Questions.

#### **QUESTION ONE (30 MARKS)**

a) Citing appropriate examples, define the following terms.

(6 marks).

- i) Non renewable resources
- ii) Replenishable but depletable resource
- iii) Externalities
- b) Outline five indirect inputs of the natural environment to the economy (5 marks).
- c) With the aid of a graphic illustration, explain market failure under pollution externality due to absence of a structural condition (5 marks).
- d) Explain why free access to common property resource generates an inefficient outcome (5 marks)
- e) Discuss the concept of 'cap and trade' in managing environmental pollution (5 marks).
- f) Briefly explain the concept of transferable emissions permits in natural resource management (5 marks).



# **QUESTION TWO (20 MARKS)**

- a) Using the material flow diagram, analyze the law of conservation of matter and energy (12 marks)
- b) Discuss the implications of the Material balance model at the global context (8 marks).

## **QUESTION THREE (20 MARKS)**

- a) Using a graphical illustration describe the basic economics of an emission Tax (8 marks)
- b) Demonstrate the strengths and weakness of pollution taxes in managing natural resources (8 marks)
- c) Discuss the advantages of emission standards in curbing environmental pollution (4 marks)

# **QUESTION FOUR (20 MARKS)**

- a) Describe airborne and waterborne residuals at Kenya national level (8 marks)
- b) Based on Lewis model, discuss the relationship between pollution damage and economic growth (12 marks)

#### **QUESTION FIVE (20 MARKS)**

- a) Give an account of managing forests as a renewable private property resource. (12 marks)
- b) Discuss the Conflicts and limitations in correcting market failure (8 marks)

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