

# JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY SCHOOL OF AGRICULTURAL AND FOOD SCIENCES UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE AGRIBUSINESS MANAGEMENT, AGRICULTURAL EXTENSION EDUCATION AND BACHELOR OF SCIENCE FOOD SECURITY

#### FOURTH YEAR SECOND SEMESTER 2019/2020 ACADEMIC YEAR

## REGULAR

COURSE CODE: AAE 3425

COURSE TITLE: ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS

EXAM VENUE: STREAM: BSc. Agribusiness Management &

**BSC.** Agricultural Extension Education, Food

Security

DATE: EXAM SESSION:

TIME: 2.00 HOURS

#### **Instructions:**

- 1. Answer ALL question in Section "A" (compulsory) and ANY other TWO questions in Section B.
- 2. Candidates are advised not to write on the question paper.
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.

## **SECTION A [30 MARKS]**

## Answer ALL questions from this Section.

#### **Question 1**

- a) Explain the following terms as used in Natural Resource Economics (10 marks).
  - a) Property Rights
  - b) Positive Externality
  - c) Non-excludability
  - d) Non-rival
  - e) Tragedy of the Commons.
- b) With clear examples, differentiate between the following terms as used in Natural Resource Economics (10 marks).
- i) Biological resources and exhaustible resources
- ii) Flow resources and fund resources
- iii) Resource conservation and resource preservation
- iv) Static and inter-temporal economic efficiency
- v) Resource scarcity and resource reserves

## **Question 2**

a) The increasing per-capita of consumption of raw materials currently is **not a good indicator** of increasing resource scarcity in the future? Discuss (10 marks).

## **SECTION B [40 MARKS]**

# Answer ANY TWO questions from this section.

## **Question 3**

- a) Discuss economic indicators of resource scarcity highlighting their weakness?(15 marks)
- b) What mitigates resource scarcity?

(5 marks)

# **Question 4**

- a) Explain how property rights enforcement can ensure efficiency in resource exploitation in Kenya? (10 marks)
- b) Discuss methods of controlling pollution? (10 marks)

## **Question 5**

Explain Cost-Benefit-Analysis approaches which can be used when considering Conservation of natural resources (20 marks).