



*(Knowledge for Development)*

**KIBABII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**  
**2020/2021 ACADEMIC YEAR**

**FOURTH YEAR 2ND SEMESTER**  
**MAIN EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE  
AND BIOTECHNOLOGY, BACHELOR OF SCIENCE AGRICULTURE  
ECONOMICS AND RESOURCE MANAGEMENT, BACHELOR OF  
SCIENCE AGRICULTURE EDUCATION AND EXTENSION**

**COURSE CODE: IAE 400**  
**COURSE TITLE: NATURAL RESOURCE MANAGEMENT**

**DATE: 6<sup>TH</sup> OCTOBER 2021**

**TIME: 2 – 4 PM**

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**INSTRUCTIONS TO CANDIDATES**

Answer Question ONE and any other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

### Question 1

a) Suppose the inverse demand function of a fish is  $P = 40 - 5q$ , and the marginal cost of producing it is  $MC = 2q + 3$ , where  $P$  is the price of the good and  $q$  is the quantity demanded and/or supplied.

- i. How much would be supplied in a static efficient allocation? (6 Marks)
- ii. Draw a graph showing the demand curve and the marginal cost curve. (8 Marks)
- iii. What would be the magnitude of the net benefits (6 Marks)
- b) Explain the challenges to resource conservation in Nakuru County (6 Marks)
- c) Write short notes on Non-use values as used in natural resource management (4 Marks)

### Question 2

Discuss the approaches of natural resource management in your county (20 Marks)

### Question 3

- a) Explain the indicators of resource scarcity (8 Marks)
- b) Explain the regimes of resource property rights in Kenya (8 Marks)
- c) State any four methods of environmental valuation (4 Marks)

### Question 4

Assume that the inverse demand function for the depletable resource is  $P = 10 - 0.2q$  and the marginal cost of supplying it is \$8.

- a. If 30 units are to be allocated between two periods, in a dynamic efficient allocation how much would be allocated to the first period and how much to the second period when the interest rate is 0.15? (8Marks)
- b. What would be the efficient price in the two periods? (6Marks)
- c. What would be the marginal user cost in each period? (6Marks)

### Question 5

Explain the properties of natural resources and environmental services (20 Marks)