(*Knowledge for Development*)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR

FOURTH YEAR 2ND SEMESTER
MAIN EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE INAGRICULTURAL ECONOMICS & RESOURCE MANAGEMENT

COURSE CODE: IAE 483
COURSE TITLE: ENVIRONMENTAL ECONOMICS
DATE: 10TH NOVEMBER 2020 **TIME:** 2PM – 4 PM

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO (2) Questions

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over

Q1.

Case study: preservation and conservation of resources:

Article: ***Valuing cultural ecosystem services: Agricultural heritage in Chiloé island, southern Chile.***

Reference: José Barrena, Laura Nahuelhual, Andrea Báez, Ignacio Schiappacasse, Claudia Cerda (2014). Ecosystem Services Vol. **7** (2014) 66–75

Required

a) Explain the difference between preservation and conservation **(4 marks)**

b) Explain the environmental resources being preserved and conserved **(4 marks)**

c) Explain the importance of conservation of these resources **(10 marks)**

d) Explain the strategies used to preserve and conserve the environmental resources identified above **(8 marks)**

e) Explain the challenges towards preservation and conservation of these resources **(4 marks)**

Q2.

Case study: The theory of externalities:

Article: ***Environmental and Economic Costs of Pesticide Use***

Reference: David Pimentel, H. Acquay, M. Biltonen, P. Rice, M. Silva, J. Nelson, V. Lipner, S. Giordano, A. Horowitz, M. D'Amore (1992). Environmental and Economic Costs of Pesticide Use. *American Institute of Biological Sciences*, Vol. **42,** No. 10, pp. 750-760.

Required

a) Pesticides are classified as a non- point non- source pollutants. Explain the negative externalities caused by pesticide use in the US. **(20 Marks)**

Q3.

Write short notes on the following

i) Partial and general equilibrium **(4 marks)**

ii) Pareto efficiency and Pareto optimality **(4 marks)**

iii) Efficiency and cost effectiveness **(4 marks)**

iv) Deposit refund system **(4 marks)**

v) Congestible goods **(4 mark)**

Q4.

"Environmental pollution is a necessary evil'' Explain this statement in the light of environmental economics. **(20 marks)**

Q5.

a) Explain any Five types of pollutants in Kenya. **(10 marks)**

b) The following demand and supply information relates to three different markets as follows

$QD^1=23-5p_1+p_2+p_3$

$QS^1=8+6p_1$

$QD^2=15+p_1-3p_2+2p_3$

$QS^2=-11+3p_2$

$QD^3=19+p_1+2p_2-4p_3$

$QS^3=-5+3p_3$

Required

i) Calculate equilibrium prices in these markets **(5.5 Marks)**

ii) Calculate equilibrium quantities in these markets **(4.5 Marks)**