



MACHAKOS UNIVERSITY

University Examinations for 2018/2019

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCE MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

FIRST YEAR SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL STUDIES (RESOURCE CONSERVATION)

ERC 107: INTRODUCTION TO AGRO-ECOSYSTEMS AND NATURAL RESOURCES

DATE: 27/9/2019

TIME: 8:30 – 10:30 AM

INSTRUCTIONS: Answer question ONE and any other TWO questions

QUESTION ONE (COMPULSORY)(30 MARKS)

- a) Explain the following terms
 - i) Hydrogeochemical process (2 marks)
 - ii) Ecosystem services (2 marks)
 - iii) Agrobiodiversity (2 marks)
- b) Differentiate the following terms
 - i) Point and Non-point sources of pollution (4 marks)
 - ii) Ecosystem and agroecosystem (4 marks)
- c) Describe different trophic levels that can be found in natural ecosystems (10 marks)
- d) Discuss THREE ecosystem disservices that come about due to agroecosystems utilization (6 marks)

QUESTION TWO (20 MARKS)

- a) Explain features that distinguish agrobiodiversity from natural biodiversity (10 marks)
- b) Discuss the various roles of agrobiodiversity in Machakos County (10 marks)

QUESTION THREE (20 MARKS)

Using appropriate examples, discuss the importance of soil organic matter in Kenyan Agroecosystems.

QUESTION FOUR (20 MARKS)

Describe the water cycle and explain its linkages with agroecosystems in Kenya

QUESTION FIVE (20 MARKS)

Using local examples, discuss the categories of ecosystem services