



EMBU UNIVERSITY COLLEGE

(A CONSTITUENT COLLEGE OF THE UNIVERSITY OF NAIROBI)

TRIMESTER EXAMINATION 2013/2014

SECOND YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
MANAGEMENT OF AGROECOSYSTEMS AND ENVIRONMENT

AEM 203: AGROECOLOGY 2

DATE: AUGUST 4, 2014

TIME: 11.00AM – 1.00PM

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Questions.

QUESTION ONE

- a) Outline the biotic fluxes in an ecosystem (5 marks)
- b) State the factors influencing transformation and movement of materials within soil organic matter pools (4 marks)
- c) State the functions of a healthy soil (6 marks)
- d) State six forms of biomass recycling that can be done in the EUC ecosystem (6 marks)
- e) State six factors limiting agricultural production in Kenya (6 marks)
- f) State three greenhouse gases contributing to climate change (3 marks)

QUESTION TWO

- a) Describe how the following factors affect ecosystem characteristics (10 marks)
- i.) climate
 - ii.) Parent materials
 - iii.) Topography
 - iv.) Organisms
 - v.) Time
- b) Explain effect of globalization on food security (10 marks)

QUESTION THREE

- a) Write explanatory notes on the following
- i.) Impact of livestock on the environment (6 marks)
 - ii.) Microclimate (8 marks)
 - iii.) Agro-ecosystem immunity (6 marks)

QUESTION FOUR

- a) Describe the procedure for making compost using the batch method (13 marks)
- b) Describe a plastic recycling technology used in Kenya (7 marks)

QUESTION FIVE

Design a sustainable crop agro-ecosystem for EUC (20 marks)

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