



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

INSTITUTIONAL BASED PROGRAMME (IBP) DECEMBER SESSION

EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN ENTEGRATED SOIL FERTILITY MANAGEMENT

KRM 513: AGRICULTURE AND ENVIRONMENT

DATE: Thursday, 28th April, 2011

TIME: 9.00a.m. – 12.00noon

INSTRUCTIONS: Answer question **ONE** and any other **THREE** questions.

1. (a) Differentiate between the following:
 - (i) Climate change and Global warming. (2 Marks)
 - (ii) First generation biofuels and Second generation biofuels. (2 Marks)
 - (iii) Mitigation and Adaptation strategies to address climate change. (2 Marks)
- (b) Briefly explain **five** adaptation technologies in the energy sector to climate change. (5 Marks)

- (c) Discuss environmental issues associated with the following agricultural systems;
 - (a) Paddy Rice production
 - (b) Livestock production (10 Marks)
 - (d) Explain the **three** flexible mechanisms in the Kyoto protocol for reducing greenhouse gases emission. (9 Marks)
2. Discuss the effects of climate change on ecosystems and biodiversity. (10 Marks)
3. Explain **five** likely impacts of climate change on the health sector. (10 Marks)
4. (a) What is carbon sequestration? (2 Marks)
- (b) Discuss practices in forestry and management of soils that contribute to carbon sequestration. (8 Marks)
5. (a) Explain the **three** main linkages in the Agriculture – Environment Nexus. (2 Marks)
- (b) Discuss the factors that increase complexity of Agriculture – Environment Nexus. (9 Marks)