



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

INSTITUTIONAL BASED PROGRAMME (IBP) AUGUST 2010 SESSION

EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

KCU 201: PRINCIPLES OF CROP PRODUCTION

DATE: Thursday 30th December, 2010

TIME: 11.00 a.m. – 1.00 p.m.

INSTRUCTIONS:

Answer **ALL questions in Section A** and **TWO questions in Section B**

SECTION A: ANSWER ALL QUESTIONS (40 MARKS)

1. Explain the functions of water in plant growth. **(5 marks)**
2. Define the term “soil nutrient export” and briefly explain its significance in soil fertility management. **(5 marks)**
3. Distinguish between physical and chemical weathering. **(5 marks)**
4. Briefly discuss integrated pest management. **(5 marks)**
5. Explain the difference between:
 - (i) Sexual and asexual reproduction. **(2.5 marks)**
 - (ii) Systemic and contact fungicides. **(2.5 marks)**
6. Deep ploughing is necessary for re-balancing nutrients in the eluvial and illuvial soil horizons. Discuss briefly. **(5 marks)**

7. Explain why the green lush appearance of natural tropical vegetations is not an accurate indicator of soil fertility. **(5 marks)**
8. Describe the salient features distinguishing grafting and budding. **(5 marks)**

SECTION B: ANSWER ANY TWO QUESTIONS (30 MARKS)

9. African indigenous vegetables (AIVs) have increased in importance for food and income security in Kenya. Giving appropriate examples, discuss the factors favouring the increased visibility of these crops in Kenya. **(15 marks)**
10. Water is an increasingly important limiting factor to production of crops in Kenya. Explain how each of the following can contribute to addressing this constraint:
- (a) Farmers **(5 marks)**
 - (b) Government **(5 marks)**
 - (c) Consumers of agricultural goods **(5 marks)**
11. Using maize as an example, discuss how agroecology determines the types of crops grown in different parts of Kenya. **(15 marks)**
12. Discuss the opportunities and challenges to successful implementation of greenhouse farming in Kenya. **(15 marks)**

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