CHUKA UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE

HORT 235: ORGANIC HORTICULTURAL CROPS PRODUCTION

STREAMS: BSC. HORT **TIME: 2 HOURS**

DAY/DATE: TUESDAY 04/12/2018 **11.30 A.M. – 1.30 P.M.**

INSTRUCTIONS:

- **ANSWER ALL QUESTIONS IN SECTION I AND ANY TWO IN SECTION II**

SECTION I (30 MARKS)

Q1. (a) Assume you are a production manager with Magana Roses. Advice the firm why it is important to undergo Global GAP certification. (6 marks)

(b) Briefly explain the practices that farmers can adopt to minimize risks from organic manure utilization. (3 marks)

Q2. As a horticultural extension agent, explain how organic crop producers can effectively control pests in their farms. (7 marks)

Q3. Explain the reasons for crop rotation in any production system. (6 marks)

Q4. (a) Organic farming values and enhances biological diversity. Explain the practices that can be adopted by farmers in organic farming systems to maintain natural biodiversity.
(4 marks)

(b) Outline the tillage and cultivation practices that you can recommend for use by organic plant producers in their production systems. (4 marks)

SECTION II (40 MARKS)

Q5. (a) There has been an increased adoption of organic farming in most parts of the world. Discuss why farmers should not adopt modern intensive agriculture. (12 marks)

(b) Using suitable examples, explain how Push-Pull technology can be used in pest and soil fertility management. (8 marks)

Q6. (a) As an agronomist discuss the Good Agricultural Practices (GAPs) you can apply to maintain soil fertility and increase agricultural productivity in a horticultural farm. (12 marks)

(b) Advice Modern Hort on how they can mechanically or physically manage weeds in their organic vegetable production plots. (8 marks)

Q7. (a) Discuss why you would advise organic horticultural crop producers to adopt mulching in their production systems. (10 marks)

(b) Give an account of the potential benefits of organic agriculture in relation to the following Sustainable Development Goals (SDGs):

(i) SDG 1: No poverty (4 marks)

(ii) SDG 2: Zero hunger (3 marks)

(iii) SDG 5: Gender equality (1 mark)

(iv) SDG 6: Clean water and sanitation (2 marks)
