CHUKA  **UNIVERSITY**

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN DRYLAND AGRICULTURE

AGRI 815: POST HARVEST PHYSIOLOGY OF FIELD CROPS

STREAMS: **TIME: 3 HOURS**

DAY/DATE: WEDNESDAY 12/04/2023 **8.30 A.M – 11.30 A.M**

INSTRUCTIONS:

Attempt all questions in section I and any two questions in section II

SECTION I

1. (a) Deliberate on the factors that influence the quality of the crops. [3 marks]

   (b) As an agricultural extension agent, why would you recommend insecticide dusts for use by the small scale farmers in insect pest control. [3 marks]

   (c) All agricultural products deteriorate following harvest. Briefly explain some of the mechanisms involved in this deterioration. [4 marks]

2. (a) If grain is to remain in good condition from harvest to the time that it is to be consumed or sold, the farmer must follow the four pillars of good storage practice. Substantiate. [3 marks]

   (b) Briefly advice farmers on the harvest factors that may affect the quality of the harvested produce. [3 marks]

   (c) Storage is keeping agricultural material and preventing them from deterioration for specific period of time. Explain why storage is essential in management of agricultural produce. [4 marks]

SECTION II (40 MARKS)

3. (a) Give a detail of the non-chemical methods in insect control in any production system. [12 marks]

   (b) Advice farmers on the examples of food waste that can occur along the different stages of the postharvest chain. [8 marks]

4. (a) As a post-harvest manager what would you advice farmers are the pre harvest factors likely to affect quality of the harvest produce. [12 marks]

   (b)Dry cleaning methods in cereals management are less expensive than wet harvest factors likely to affect quality of the harvest produce. [12 marks]

5. (a) Educate farmers on the probable causes of food losses and waste and suggest how they can be prevented. [12 marks]

   (b) Elaborate on the factors that can accelerate mould growth and infestation in the postharvest system. [8 marks]
