

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**THIRD YEAR EXAMINATION FOR THE AWARD OF DEGREE OF  
BACHELOR OF SCIENCE IN AGRICULTURE**

**AGRI 411: POST HARVEST TECHNOLOGY OF FIELD CROPS**

**STREAMS: BSC (AGRI)**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 14/04/2020**

**11.30 AM – 2.30 PM**

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**INSTRUCTIONS:**

**Answer ALL Questions in Section One and any other Two in Sections II**

**SECTION A (30 MARKS): ANSWER ALL QUESTIONS**

1. (a) What is dryeration? Why is it advisable to use dryeration that heated air drying with in dryer cooling? [4 marks]
- (b) Explain briefly to farmers the importance for cleaning harvested grain. [4 marks]
2. (a) Explain briefly the major health concerns than are related to utilization of cereals in Africa. [2 marks]
- (b) Food safety is linked to food security and nutrition. Describe the major food safety concerns when using food products in any society. [6 marks]
3. (a) Describe important aspects of mass transfer that must occur to facilitate grain drying. [2 marks]
- (b) Explain why farmers can consider using a metal silo for storage of maize. [5 marks]
4. In a postharvest system, improper drying and storage practices result to reduction in grain quantity and quality. Describe the limitations of incomplete drying and improper storage of grain. [7 marks]

**SECTION II (40 MARKS)**

5. (a) Commercial grain handling and warehousing companies offer services to grain depositors in the warehouse for a fee. Discuss the need for such services to maize farmers and traders. [12 marks]
- (b) Discuss the conditions that must be met by modern packages for successful produce handling and storage. [8 marks]
6. (a) Grain standards specify the grain characteristics, the limits that are acceptable for each characteristics, and to measure them. Discuss the importance of enhancing grain standards in a trading system. [10 marks]
- (b) Discuss the strategies that can be adopted by farmers to minimize aflatoxin contamination within the maize production system. [10 marks]
7. (a) Food loss is unavoidable while food waste is avoidable. Discuss the key factors that contribute to food loss and waste in Kenya. [10 marks]
- (b) Discuss the conditions that determine the drying process of maize in bulk handling. [10 marks]
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