

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

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

**HORT 451: POST HARVEST PHYSIOLOGY AND TECHNOLOGY**

**STREAMS: BSC(HORT)**

**TIME: 2 HOURS**

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

**11.30 AM – 1.30 PM**

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**INSTRUCTIONS:**

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

1. (a) Describe the five primary functions of a package in protecting a commodity. [5 marks]
- (b) Explain any five factors to consider in controlled atmosphere storage of horticultural commodities. [5 marks]
2. Explain six major recommendations for a horticultural commodity packhouse design. [6 marks]
3. Briefly describe cleaning and special treatments as packhouse operations. [6 marks]
4. Describe air embolism factor in cut flower postharvest management. [8 marks]

**SECTION A – ANSWER ANY TWO QUESTIONS (40 MARKS)**

5. (a) Describe sacks and nets as packaging materials for horticultural commodities. [10 marks]
- (b) Explain seven symptoms of chilling injury on horticultural commodities. [10 marks]
6. (a) Describe the relationship between respiration and crop produce deterioration. [10 marks]

- (b) Describe mineral nutrition as a pre-harvest factor that affects horticultural commodity quality. [10 marks]
7. (a) Describe any four pre-harvest conditions that affect the quality of cut flowers. [7 marks]
- (b) Giving specific cut flower examples, describe ethylene gas factor in flower quality control. [13 marks]
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