

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

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

**HORT 421: HORTICULTURAL SEED PRODUCTION**

**STREAMS: BSC HORTICULTURE Y4S1**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 11/12/2018**

**11.30 A.M. – 1.30 P.M.**

**INSTRUCTIONS:**

**Section A – Answer all questions (30 marks)**

1. (a) Describe the four basic parameters of seed quality attributes. (4 marks)
- (b) Describe the hypocotyl and cotyledon structures in seed and explain their roles. (4 marks)
- (c) Describe the roguing stages for pumpkin seed production. (4 marks)
2. Explain the major differences between perisperm and endosperm structures in a seed. (5 marks)
3. Describe seed health and its importance in seed production. (5 marks)
4. Describe the factors that necessitate cross pollination in plants and give examples of vegetable crops. (8 marks)

**Section B – Answer any 2 questions (40 marks)**

5. (a) Describe the typical flowering sequence in cucurbits. (3 marks)
- (b) Describe five major factors to consider when collecting fruit tree seeds from mother trees. (5 marks)
- (c) Describe how photoperiod affects vegetable seed production. (12 marks)

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6. (a) Describe the seed certification process and its importance in maintaining seed genetic purity. (10 marks)
- (b) Describe the importance of isolation distance in maintaining genetic purity in crop seed production. (10 marks)
7. (a) Describe how a farmer can successfully store seeds in an open storage facility without temperature and humidity control. (8 marks)
- (b) Discuss the cabbage plant its floral biology, pollination and why its seeds are not locally produced in Kenya. (12 marks)
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