

CHUKA



UNIVERSITY

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

HORT 421: HORTICULTURAL SEED PRODUCTION

STREAMS: BSC HORT NY4S1

TIME: 2 HOURS

DAY/DATE: MONDAY 16/12/2024

2.30 P.M – 4.30 P.M.

INSTRUCTIONS

- **The paper contains section A and B**
- **Answer all questions in section A and any two from section B**
- **Marks for each question are indicated in parenthesis ()**
- **Total marks = 70**

SECTION A: (30 MARKS)

QUESTION ONE

Explain the following Terms used in seed production and their importance:

Seed pelleting	(2Marks)
Seed colouring	(2Marks)
Seed Infusion	(2Marks)
Seed cryopreservation	(2Marks)
Seed Processing	(2 Marks)

QUESTION TWO

- a) Differentiate between a monocot and a dicot seed (2 marks)
- b) Briefly explain three internal factors that affect seed germination (3 marks)

QUESTION THREE

- a) What are the harmful effects of seed-borne diseases? (2 marks)
- b) Describe three physiological changes that occur during seed changes (3 marks)

QUESTION FOUR

- a) With examples, state the methods promoting self-pollination of plants (3 marks)

- b) What is seed dormancy? Describe two types of Primary seed dormancy (4 marks)
c) What is seed drying and how is it done (3 Marks)

SECTION B: (40 MARKS)

QUESTION FIVE

Explain the following agronomic factors affecting the quality of seed production:

- Selection of seed plot (4Marks)
Depth of sowing (4Marks)
Isolation distance (4 Marks)
Season (4Marks)
Rogueing (4 Marks)

QUESTION SIX

a) Describe the following terms used for various categories of seed:

- i. Breeder seed (4 Marks)
ii. Foundation seed (4 Marks)
iii. Registered seed (4 Marks)
iv. Certified seed (4 Marks)
b) State the characteristics of a good seed protectant (4 Marks)

QUESTION SEVEN

Seed growers in Kenya provide avenues for seed acquisition. However, before the seed is released for planting it has to undergo certification. In this regard Discuss the seed certification process in Kenya (20 Marks)
