



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)
MAIN**

**UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR**

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE
DEGREE OF MASTER OF SCIENCE IN GENETICS AND PLANT
BREEDING**

COURSE CODE: APB 827

COURSE TITLE: ADVANCED SEED SCIENCE AND TECHNOLOGY

DATE: 22ND APRIL, 2022

TIME: 12-3PM

INSTRUCTION TO CANDIDATES

Answer all questions in section A and 2 questions from section B

TIME: 3 hours

MMUST observes ZERO tolerance to examination cheating

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Question 1. (15 Marks)

- a) Briefly describe the seed industry in Kenya
- b) What are the challenges facing the seed industry in Kenya?
- c) What are the opportunities in the seed industry?

Question 2.

- a) Distinguish between actual demand, perceived demand and what the government expects the farmers to buy. **(5 Marks)**
- b) List factors to be considered while assessing and forecasting demand for certified seed **(10 Marks)**
- c) Briefly mention demand forecasting techniques used in seed production **(5 Marks)**

Question 3.

Briefly describe the following under seed production**(20 Marks)**

- i. Nucleus seed
- ii. Breeder seed
- iii. Foundation seed
- iv. Certified seed

Question 4

- a) Differentiate between seed and grain**(10 Marks)**
- b) Describe the major seed quality characters using the headings below**(10 Marks)**
 - i. Physical Quality
 - ii. Genetic purity
 - iii. Physiological Quality
 - iv. Seed Health

Question 5

- a) List the significance of quality seed**(10 Marks)**
- b) Mention seed treatments used against storage pests and diseases **(5 Marks)**
- c) Briefly describe hybrid seed production**(5 Marks)**
- d) How has male sterility been exploited in hybrid seed production?**(2 Marks)**

Question 6

- a) List the plant variety protection steps used in Kenya **(10 Marks)**
- b) List methods used in seed drying**(5 Marks)**
- c) List five seed processing equipment**(5 Marks)**

Question 7

- a) What are the principles of seed storage**(5 Marks)**
- b) List factors affecting seed longevity in storage **(5 Marks)**

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