

**W1-2-60-1-6**

## JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

**UNIVERSITY EXAMINATIONS 2018/2019**

**YEAR 2 SEMESTER 2 EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ENVIRONMENTAL HORTICULTURE**

**AHL 2306: ORNAMENTAL PLANT PROPAGATION AND SEED SCIENCE**

**DATE: APRIL 2019 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS (TOTAL – 70 MARKS)**

QUESTION ONE (30 MARKS)

Define and explain the following terms as applied in plant propagation:

a) Apomixis (3 marks)

b) Totl-potency (3 marks)

c) Seed vigour (3 marks)

d) Propagation media (3 marks)

e) Seed dormancy (3 marks)

f) Genetic purity (3 marks)

g) “Benting test” (3 marks)

h) Polyembryony (3 marks)

i) Hot bed (3 marks)

j) Air layering (3 marks)

QUESTION TWO (20 MARKS)

a) Using relevant examples of ornamental plants discuss the techniques of asexual propagation.

b) Discuss how temperature, humidity, C/N ratio, state of development of the explants and health of the stock plants influence success of asexual propagation.

QUESTION THREE (20 MARKS)

a) Giving relevant examples, discuss the factors that a propagator would consider when choosing appropriate propagation media materials.

b) Discuss the factors influencing the success of sexual propagation.

QUESTION FOUR

a) Explain the essential quality parameters considered when choosing seeds for propagation purposes. (5 marks)

b) Briefly explain the seed laws and their significance in Kenya (5 marks)

c) Demonstrate how seed harvesting, processing and storage in influences quality of seeds (5 marks)

d) Illustrate how lath and screen houses are used in the propagation of ornamental plants

(5 marks)