



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

**FOURTH YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE
DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE AND**

2019/2020 ACADEMIC YEAR

REGULAR

COURSE CODE: AHT 3422

COURSE TITLE: SEED SCIENCE AND TECHNOLOGY

EXAM VENUE: STREAM: BSc. Horticulture

DATE: EXAM SESSION:

TIME: 2HOURS

Instructions:

- 1. Answer ALL questions in Section A (compulsory) and ANY TWO questions in Section B**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

SECTION A [30 MARKS]

Answer ALL questions from this section

- 1) Explain the following terms as used in seed science and technology. **(5 marks)**
 - i) Androecium
 - ii) Seed certification
 - iii) Seed purity
 - iv) Breeders seed
 - v) Mucilage

- 2) State the importance of seeds to humanity. **(2 marks)**

- 3) a) State factors which influence seed viability. **(5 marks)**
b) Outline methods of reducing hard seed dormancy. **(5 marks)**

- 4 a) Outline FOUR desirable characteristics/traits considered before production of any new seed variety. **(3 marks)**
b) Describe factors desirable in a farmer's field that you will consider before you contract him to produce seed. **(5 marks)**
d) State six (6) components used to determine seed quality. **(5 marks)**

SECTION B [40 MARKS]

Answer any TWO QUESTIONS in this Section.

- 5) With aid of a diagram/illustration, describe ovule development from floral initiation up to fertilization. **(20 marks)**

- 6) Discuss the general seed germination processes use diagram(s) illustration where applicable. **(8marks)**
b) State six (6) factors which negatively influence seed germination. **(12marks)**

- 7) Discuss the general seed processing under the following: -
 - a) Seed drying. **(8 marks)**
 - b) Seed cleaning **(6 marks)**
 - c) Seed treatment **(6 marks)**

4. a) Discuss seed samples and sampling processes. **(10marks)**
b) Discuss the general qualities of a good seed store and seed storage principles.**(10marks)**