

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FOURTH YEAR EXAMINATION FOR THE AWARD OF BACHELOR
OF SCIENCE IN AGRICULTURE

AGRI 441: SEED SCIENCE AND TECHNOLOGY

STREAMS: BSC (AGRIC) Y4S1

TIME: 2 HOURS

DAY/DATE: MONDAY 09/12/2019

8.30 A.M. – 10.30 A.M.

INSTRUCTIONS:

SECTION A (30 MARKS) – ANSWER ALL QUESTIONS

1. Describe the constituents of a typical embryo sac and three types of embryo sacs that can be formed. [6 marks]
2. Describe the four vital roles played by the seed industry in modern agriculture and three key factors to consider when describing a seed market. [7 marks]
3. Describe dormancy and explain the benefits of distribution of germination in space in seeds. [8 marks]
4. Describe vivipary and agamospermy apomixes phenomenon in plants. [9 marks]

SECTION B (40 MARKS) – ANSWER ANY TWO QUESTIONS

5. (a) Explain five factors that affect seed vigor. [5 marks]
(b) Describe the five major steps of a seed certification process. [15 marks]
6. (a) Describe the factors that predispose seeds to deterioration. [10 marks]
(b) Describe the five types of hybrids that can be made depending on genetic constitution of the parents. [10 marks]
7. (a) Describe the three types of water in a dry seed. [6 marks]
(b) Describe the phase III end of seed development stage (PM). [14 marks]

