(*Knowledge for Development*)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR

THIRD YEAR 1ST SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE AND BIOTECHNOLOGY

COURSE CODE: SAB 333
COURSE TITLE: CROP PHYSIOLOGY

DATE: 17/02/2021. **TIME:** 2-4PM.

INSTRUCTIONS TO CANDIDATES

Answer Questions ONE and ANY other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over

1. (a) Differentiate between Ca and Mg deficiency symptoms in plants (4 marks)
   (b) Explain why the difference in (a) occurs (4 marks)
   (c) Identify two methods of evaluating the nutrient requirements of plants (2 marks)
   (d) State five factors that influence the chemical composition of plants (5 marks)
   (e) Identify five types of tropisms in plants (5 marks)
   (f) Differentiate between the following:
      (i) Potential and reference evapotranspiration (6 marks)
      (ii) Explain how the relationship between the soil-plant-atmosphere affects plant water loss and uptake (4 marks)
2. Exhaustively discuss the factors that may influence flowering in *Saccharum* species (20 marks)
3. Identify nine (9) essential microelements in plants and clearly explain the major role played by each in plant growth and development (20 marks)
4. Describe the modifications that can be made to the meteorological factors to influence plant physiological processes and crop yield (20 marks)
5. Explain the role of crop physiology in expanding crop yields (20 marks)