

**UGANDA MARTYRS UNIVERSITY**  
**FACULTY OF EDUCATION**  
**BACHELOR OF EDUCATION (PRIMARY), YEAR I**  
**SEMESTER TWO SUPPLEMENTARY/SPECIAL EXAMINATIONS 2018/2019**  
**AGRICULTURAL EDUCATION**  
**PAPER I: AGRONOMY, CROP PHYSIOLOGY AND CROP IMPROVEMENT**

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**Date: Monday 26<sup>th</sup> August 2019      Duration: 3Hrs      Time: 2:00pm- 5:00pm**

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**Instructions:**

- **Attempt FOUR questions**
  - **Clearly indicate the QUESTION NUMBER you attempt**
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1. a) Discuss ways in which human being have continued to destroy the environment (10 marks)  
b) Explain the major levels of integration in ecology (15 marks)
2. a) Describe sexual and asexual reproduction in crop breeding (10 marks)  
b) Mention the common methods used in crop improvement (10 marks)  
c) State ways in which a farmer can ensure good crop yield (05 marks)
3. Write short notes on the following
  - a) Ecology
  - b) Environment
  - c) Transpiration
  - d) Hydrological Cycle
  - e) Atmosphere (25 marks)
4. a) Discuss the role of the climatic factors in an ecosystem (15 marks)  
b) Explain the factors that influence the build up of L.A.I early in the season (10 marks)
- 5a) Define Genetics? (02 marks)  
b) Describe the role played by genetics in crop improvement (13 marks)  
c) List the characteristics of an ideal crop plant (10 marks)
6. Write short notes on the following:
  - I. Topography
  - II. Leaf Area Index
  - III. Crop Index
  - IV. Flag Leaf
  - V. Assimilation (25 marks)
7. a) State the goals and objectives of plant breeding (10 marks)  
b) Identify the differences between cross pollinated plants and self pollinated plants (15 marks)
8. a) Outline the seed quality and certification process. (10 marks)  
b) Describe the certification procedure (15 marks)

**END**