

CHUKA



UNIVERSITY

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UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF DOCTORATE  
OF PHILOSOPHY IN BOTANY

**BOTA 971: ADVANCES IN PLANT PHYSIOLOGY**

**STREAMS: PhD (BOTA)**

**TIME: 3 HOURS**

**DAY/DATE: TUESDAY 13/8/2019**

**8.30 A.M. – 11.30 A.M**

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**INSTRUCTIONS: Answer any THREE questions**

1. (a) Discuss the factors that increase the probability and rate of herbicide resistance and spread. [10 marks]
  - (b) Explain the concerns related to herbicide-resistant crops [10 marks]
  2. Discuss the role of the following growth regulators in abiotic stress tolerance:
    - (a) Cytokinins [5 marks]
    - (b) Abscisic acid (ABA) [5 marks]
    - (c) Polyamines [5 marks]
    - (d) Ethylene [5 marks]
  3. (a) Discuss the effects of drought on photosynthesis [5 marks]
  - (b) Explain the process of developing materials for drought tolerance [5 marks]
  - (c) Elaborate drought resistant mechanisms at different levels in plants [10 marks]
  4. Explain how plants respond to salinity stress [20 marks]
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