



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2017 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

REGULAR PROGRAMME

BIO 308: PLANT PHYSIOLOGY AND BIOCHEMISTRY

Date: April 2017

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) Briefly discuss hydroponics (2 marks)
b) Explain the process of Nitrogen fixation (4 marks)
c) Describe Soil water potential and its components (3 marks)
d) Briefly discuss glycolysis and distinguish its distinct steps (7 marks)
e) Highlight on the process of Water flux into the vacuole (3 marks)
f) Explain chemical reactions of photorespiration (4 marks)
g) Highlight on different pathways of IAA(Indole –3-acetic acid) biosynthesis from amino acid (4 marks)
h) Briefly explain the transport of auxins (3 marks)
- Q2. Discuss CAM, C4 and C3 pathways (20marks)
- Q3. Explain the process of Pyruvic acid oxidation (20marks)
- Q4. Discuss Cyclic photosphorylation and Non cyclic photophosphorylation (20 marks)
- Q5. Write an essay on plant hormones (20marks)

END