



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN BIOCHEMISTRY AND BIOTECHNOLOGY

SBC 510: ECOLOGICAL BIOCHEMISTRY II

DATE: MONDAY, 2ND APRIL 2012

TIME: 9.00 A.M. – 12.00 P.M.

Section A. Answer all questions (Total marks = 40)

1. A) The production of the female sex pheromones may sometimes be triggered by a chemical signal from the host plant. Using specific examples justify this statement. (3 marks)
B) Differentiate allomones from pheromones. (2 marks)
2. Briefly describe allelopathy as an alternative weed management strategy for crop production as well as environmental benefits. (5 marks)
3. Describe the chemical defence used by termites. (5 marks)
4. Name and briefly explain four ways in which allelochemicals are released to the soil. (5 marks)
5. Citing a specific example, describe allelopathy in desert plants. (5 marks)
6. Describe an experimental procedure that can be employed to confirm phytoalexin synthesis in plants. (5 marks)
7. Water beetles use higher quinones in defence. Explain. (5 marks)
8. Phytochemicals are advantageous to host plant. Justify this statement. (5 marks)

Section B: Answer any Three questions. Each question is 20 marks.

1. Discuss allelopathy in rice crop.
2. Using specific examples, discuss the role of pheromones as defence tools in arthropods.
3. Discuss antifungal pre-infection compounds in plants.
4. Detoxification is a reality in all living organisms. Discuss how microbes detoxify antimicrobial agents from plants.
