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University Examinations 2013/2014

SECOND YEAR, FIRST SEMESTER EXAMINATIONS FOR DIPLOMA IN
AGRICULTURE

BIO 0112: ENTOMOLOGY AND PLANT PATHOLOGY

DATE: APRIL 2014

TIME: 1 ½ HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE – (30 MARKS)

- (a) Define the following terms:
- (i) Pathogenesis
 - (ii) Ecdysis
 - (iii) Biotrophs
 - (iv) Oligophagous pests (5 Marks)
- (b) List five characteristics of organisms in class insecta. (5 Marks)
- (c) Explain the importance of metamorphosis in insects. (5 Marks)
- (d) Briefly discuss the concept of disease triangle highlighting three factors that influence disease development. (6 Marks)
- (e) Explain the difference between signs and symptoms of a plant disease. (4 Marks)

QUESTION TWO – (15 MARKS)

Insects largely dominate the earth, discuss to factors leading to their success. (15 Marks)

QUESTION THREE – (15 MARKS)

While giving examples in each case, explain plant damage caused by insect pests possessing the following:

- (a) Biting and chewing mouthparts
- (b) Rasping mouthparts
- (c) Piercing and sucking mouthparts

QUESTION FOUR – (15 MARKS)

- (a) State the three basic principles of integrated pest management (IPM) (5 Marks)
- (b) Explain the main features of IPM. (10 Marks)

QUESTION FIVE – (15 MARKS)

Discuss five control measures that can be used to reduce or eliminate plant pests and diseases. (15 Marks)