

The Open University of Sri Lanka
 Department of Zoology,
 BSc Degree programme- Level 6
 Course Title - Management of insect pests & vectors
 Course code - ZLU4180
 Final Examination - Academic year 2016 / 2017



Date - 22nd January, 2018

Time - 1.30 - 3.30 pm

Answer any **four (4)** questions.

Wherever necessary illustrate your answers with clearly labeled diagrams.

1. Describe the life cycles and biology of Coleopteran pests of coconut and explain the damage they cause to coconut palms. (100 marks)
2. *Aedes aegypti* and *Musca domestica* are insect vectors of human diseases.
 - 2.1 Name the human diseases each insect vector transmit to non- infected hosts and state the causative pathogens. (20 marks)
 - 2.2 Explain **in detail** the method of transmission of these diseases to non- infected hosts. (40 marks)
 - 2.3 Describe the environmental factors that increase the population size of *Aedes aegypti* and *Musca domestica*. (40 marks)
3. Write an essay on insects inhabiting stored grain and their control. (100 marks)
4. Explain the different types of cultural control methods that can be used in crop fields, clearly stating the major principles of each application. Support your answers with examples. (100 marks)
5. 5.1) Explain the differences between DDT and Bti with respect to their composition, mode of action, their effect on non -target organisms and the environment. (50 marks)
- 5.2) Explain very briefly the process of "Development of resistance to insecticides" in insect populations. (50 marks)
6. Write short notes on any **three (3)** of the following;
 - a) Sterile insect technique (SIT)
 - b) *Leptocoriza oratorius*
 - c) *Xyleborus fornicates*
 - d) Economic injury level in crop pest management. (100 marks)

