KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER
MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR SCIENCE (BIOLOGY) AND BACHELOR OF EDUCATION (SCIENCE)

COURSE CODE: SZL 411
COURSE TITLE: GENERAL ENTOMOLOGY

DATE: 15th December 2017  TIME: 3:00 – 5:00 p.m.

INSTRUCTIONS TO CANDIDATES
Answer question ONE [1] and ANY other TWO [2] questions
TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over

KIBU observes ZERO tolerance to examination cheating
1. (i) Distinguish between plumose and aristate types of antennae [4mks]

(ii) Give the succinct use of each of the following structures. [3mks]
    a. Haltere.
    b. Mandible.
    c. Malpighian tubules.

(iii) Illustrate by labeled diagrams only: [4mks]
    a. The segments of an insect thorax.
    b. The structure of insect wing.

(iv) Describe four types of pupae found in insects. [4 mks]

(v) State three beneficial roles of insects in an ecosystem [3mks]

(vi) Describe the structural functionality of the insect hindgut. [4 mks]

(vii) Explain how do nocturnal haematophagus insects locate their hosts? [4 mks]

(viii) Briefly describe with examples the role of insects to a country’s food insecurity [4 mks]

2. (a) Describe five types of mouth parts giving an example of an insect bearing each. [10mks]

(b) List four patterns of spiracles arrangement on insectan abdomen [4mks]

(c) Briefly describe three distinctive features of odonatans. [6mks]

3. (i) List three sub-layers of the procticle. [3mks]

(ii) State three excretory structures in the lepidopterans [3mks]

(iii) Discuss reproduction in insects. [14mks]

4. Write an essay on anatomical characteristics of insects. [20mks]

5. Discuss physical and chemical modes of communication in insects. [20mks].