



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY  
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**THIRD YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE  
DEGREE OF BACHELOR OF SCIENCE IN AGRIBUSINESS MANAGEMENT**

**2019/2020 ACADEMIC YEAR  
SPECIAL EXAM/RESIT**

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**COURSE CODE: APT 3313**

**COURSE TITLE: Crop Protection**

**EXAM VENUE:**

**STREAM: BSc. Agribusiness Management /  
BSc. Agricultural Extension Education**

**DATE:**

**EXAM SESSION:**

**TIME: 2 HOURS**

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**Instructions:**

- 1. Answer ALL questions in section A and ANY other 2 Questions in section B.**
- 2. Candidates are advised not to write on question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

**SECTION A [30 MARKS]**

**Answer ALL questions from this Section**

- 1. Explain the following terminologies in relation to Crop Protection [10 MARKS]**
  - (a) Exotic weed**
  - (b) Biological control**
  - (c) Nematicide**
  - (d) Integrated Pest Management (IPM)**
  - (e) Host range**

- (f) Non-target organisms
- (g) Beneficial insect
- (h) Risk assessment
- (i) Mechanical control
- (j) ELISA

2. Explain the similarity between fungal hyphae and plant roots **[2 MARKS]**
3. Distinguish between an (a) epiphyte, (b) hemiparasite and (c) true parasite. **[3 MARKS]**
4. All plant parasitic nematodes belong to the Phylum Nematoda. There are several orders, sub-orders and families into which they are classified mainly according to their Describe the morphological features for classifying orders, suborders and families of the Phylum Nematoda **[4 MARKS]**
5. Describe FIVE agronomic and cultural practices that can be effective for creating unfavorable conditions for development of fungal diseases. **[5 MARKS]**
6. Explain the meaning of the following terms as they apply to the mode of action of insecticides: (a) Non-systemic and systemic; (b) Selective and non-selective; (c) Contact, stomach and fumigant action **[6 MARKS]**

### **SECTION B (40 MARKS)**

**Answer ANY TWO questions in this section**

5. List and Describe TEN harmful effects of weeds to agricultural industry. **[20 MARKS]**
6. Describe TEN evolutionary traits playing major role in success of insects as serious biotic constraints to agricultural productivity **[20 MARKS]**
7. Three of you have hired as consultants to help a country that gained independence recently establish an effective regulatory body that ensures food security and safety. As a lead consultant, what TEN activities would you recommend as essential functions of this regulatory body?  
EXPLAIN **[20 MARKS]**