

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF
SCIENCE IN MICROBIOLOGY AND BIOTECHNOLOGY**

ZOOL 336: PESTICIDE AND MICROBIAL CONTROL

STREAMS: BSc. MICB & BIOTECH (Y3S1)

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 20/12/2023

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS:

- Answer ALL the questions in section A and any two in section B

SECTION A (30 MARKS)

1. a) Explain the meaning of the following terminologies on a pesticide label
 - i) Systemic insecticide (1 mark)
 - ii) Pre-plant herbicide (1 mark)
 - iii) Biodegradable (1 mark)
 - iv) Bactericide (1 mark)b) Mention four mechanisms that can lead to resistance of herbicides. (2 marks)
2. a) Describe the mode of action of the following insecticides groups. (3 marks)
 - i) Organochlorines
 - ii) Organophosphates
 - iii) Insect growth regulatorsb) List six types of pesticide formulations. (3 marks)
3. a) Explain the role of anti-parasitics in pest management. (3 marks)
b) Give three reasons why fungicides are necessary in crop protection. (3 marks)

4. Elaborate on the following preventive methods used in Integrated Pest Management (IPM)
- a) Physical methods (2 marks)
 - b) Mechanical methods (2 marks)
 - c) Legal method (2 marks)
5. a) Describe three major classes of bio-pesticides (3 marks)
- b) Describe three mechanisms of Host Plant Resistance. (3 marks)

SECTION B (40 MARKS)

6. a) Discuss classification of pesticides on the basis of mode of entry. (10 marks)
- b) Elaborate on mode of action of herbicides. (10 marks)
7. a) Discuss the qualities of an effective natural enemy. (12 marks)
- b) Elaborate on the requirements for successful pest management program. (8 marks)
8. Discuss components of biotechnology in pest management. (20 marks)
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