

GWANDA STATE UNIVERSITY



FACULTY OF LIFE SCIENCES

DEPARTMENT OF CROP SCIENCE

BACHELOR OF SCIENCE (HONOURS) DEGREE CROP SCIENCE

CROP PROTECTION AND WEED SCIENCE

LCS 2107

First Semester Examination Paper

February 2022

This examination paper consists of 3 pages

Time Allowed: 3 hours
Total Marks: 100
Special Requirements: None
Examiner's Name: Miss A Banda

INSTRUCTIONS

1. Answer **all** questions in Section A
2. Answer **only two** questions in Section B

MARK ALLOCATION

QUESTION	MARKS
SECTION A	60
SECTION B	40
TOTAL ATTAINABLE MARKS	100

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SECTION A ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION 1

Describe the characteristics of the following plant disease pathogen with respect to Structure, reproduction, life cycles, and genetic variability.

- | | |
|-----------------|-----------|
| (i) Fungi | [6 Marks] |
| (ii) Bacteria | [5 Marks] |
| (iii) Nematodes | [4 Marks] |
| (iv) Viruses | [3 Marks] |
| (v) Phytoplasma | [2 Marks] |

QUESTION 2

Name a plant or insect pest of your choice and describe the etiology and epidemiology of the disease and recommend appropriate control measures [20 Marks]

QUESTION 3.

Comment on the prevention and suppression of harmful organisms under the following headings

- | | |
|---|-----------|
| (i) Crop rotation; inter-cropping | [5 Marks] |
| (ii) Use of adequate cultivation techniques | [5 Marks] |
| (iii) Weed control | [6 Marks] |
| (iv) Field sanitation and hygiene measures | [4 Marks] |

SECTION B ANSWER ONLY TWO QUESTIONS

QUESTION 4

- Define and describe at least two effective ways of controlling annual weeds [10 Marks]
- Describe at least two control strategies that are likely to be effective to control perennial weeds. Explain why? [10 Marks]

QUESTION 5

Write an essay on the benefits and hazards of pesticides being guided but not limited by the following points [20 Marks]

- Productivity
- Yield
- vector/disease control
- quality of food

- Impact on humans
- impact through food commodities
- impact on environment

QUESTION 6

Plant damage can be caused by either a plant disease or an abiotic disorder. Often, however, these two problems are found together, because an underlying abiotic factor often makes a plant more vulnerable to pathogen attack. Describe the abiotic disorders caused by the following factors

(i) Environmental [10 Marks]

(ii) Physical [5 Marks]

(iii) Chemical [5 Marks]

END OF EXAMINATION