



FACULTY	EDUCATION AND HUMAN SCIENCES
SCHOOL	EDUCATION
DEPARTMENT	APPLIED SCIENCES
SUBJECT	AGRICULTURAL TECHNOLOGY
SUBJECT CODE	E3512AT
DATE	OCTOBER 2024
DURATION	3HRS MARKS: 100

FIRST OPPORTUNITY

EXAMINER: MS. NAMASIKU KACELO

INTERNAL MODERATOR: DR. PERCY MASHEBE

INSTRUCTIONS TO CANDIDATE:

1. This question paper consists of (4) pages including the cover page.
2. Answer ALL the questions.
3. Number your questions correctly.
4. Read the questions carefully before you answer.
5. Please note that cheating in the examination will result in a fail.

UNIVERSITY OF NAMIBIA
EXAMINATION QUESTION PAPER

SECTION A

MULTIPLE CHOICE QUESTIONS

1. What is the primary advantage of farm mechanization?
A. Increased labour cost
B. Reduced crop yield
C. Improved efficiency and productivity
D. Decreased soil fertility
[1]
2. What impact does mechanization have on labor in agriculture?
A. It completely removes the need for labor
B. It increases the number of workers needed
C. It reduces the number of laborers needed for certain tasks
D. It has no impact on labor needs
[1]
3. What is the main function of a combine harvester?
A. Planting seeds
B. Irrigating fields
C. Harvesting and threshing grain
D. Fertilizing soil
[1]
4. Which environmental issue is often associated with increased mechanization in agriculture?
A. Improved soil structure
B. Increased soil erosion
C. Enhanced biodiversity
D. Reduced greenhouse gas emissions
[1]
5. Which of the following is a primary environmental concern associated with genetically modified (GM) crops?
A. Increased crop yield
B. Development of herbicide-resistant weeds
C. Improved nutritional content
D. Reduced water usage
[1]
6. What is a knapsack sprayer primarily used for?
A. Planting seeds
B. Applying fertilizers
C. Spraying pesticides and herbicides
D. Irrigating crops
[1]
7. What is the primary factor to consider when selecting farm machinery?
A. Brand popularity
B. Availability of spare parts
C. Aesthetic design
D. Colour options

[1]

8. How might the use of biotechnology affect food security?
- A. It always leads to increased food prices.
 - B. It has no impact on food security.
 - C. It can potentially improve food security by increasing crop yields and resistance.
 - D. It exclusively benefits developed countries.

[1]

9. What is a knapsack sprayer primarily used for?
- A. Planting seeds
 - B. Applying fertilizers
 - C. Spraying pesticides and herbicides
 - D. Irrigating crops

[1]

10. Which technique is commonly used in plant biotechnology to introduce new traits?
- A. Traditional breeding
 - B. Genetic engineering
 - C. Soil amendment
 - D. Crop rotation

[1]

Total

[10]

SECTION B

QUESTION 1

- 1.1 Justify the importance of regular maintenance and repair of tractors on a farm. [10]
- 1.2 Discuss four factors to consider when selecting farm machinery for a new farming operation. [8]
- 1.3 Briefly explain the significance of agriculture mechanization in modern farming. [10]
- [28]**

QUESTION 2

- 2.1 How does agriculture mechanization contribute to environmental pollution? [6]
- 2.2 Elaborate any four uses of a knapsack sprayer on a farm. [8]
- 2.3 Explain the functions of the following knapsack sprayer parts.
- a. Tank [2]
 - b. Pump [2]
 - c. Spraying nozzle [2]
- [20]**

QUESTION 3

- 3.1 Differentiate between primary tillage and secondary tillage in terms of depth and purpose? [4]
- 3.2 What is the main purpose of primary tillage? [4]
- 3.3 Name any two common implements used for primary tillage and describe their functions. [6]
- 3.4 What are the key benefits of using a precision planter in crop production? [8]
- [22]**

QUESTION 4

- 4.1 Briefly explain the benefits of agricultural biotechnology in modern farming? [10]
- 4.2 What are two environmental concerns associated with the use of genetically modified crops? [4]
- 4.3 Briefly elaborate on the primary application of tissue culture in agriculture [6]
- [20]**

[Total: 100]