



**PAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH AND APPLIED SCIENCES AND NATURAL RESOURCES**

**DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES**

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| <b>QUALIFICATION: BACHELOR OF AGRICULTURE</b> |  |
| <b>QUALIFICATION CODE: 07BAGA</b>             | <b>LEVEL: 5</b>                                |
| <b>COURSE CODE: AMC520S</b>                   | <b>COURSE NAME: AGRICULTURAL MECHANIZATION</b> |
| <b>SESSION: JUNE 2022</b>                     | <b>PAPER: THEORY</b>                           |
| <b>DURATION: 3 HOURS</b>                      | <b>MARKS: 150</b>                              |

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| <b>FIRST OPPORTUNITY EXAMINATION QUESTION PAPER</b> |                   |
| <b>EXAMINER(S)</b>                                  | Mr. H. Tjikurunda |
| <b>MODERATOR:</b>                                   | Mr. J. Amutenya   |

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| <b>INSTRUCTIONS</b>  |
| <ol style="list-style-type: none"><li>1. Answer ALL the questions.</li><li>2. Write clearly and neatly.</li><li>3. Number the answers clearly.</li></ol> |

**PERMISSIBLE MATERIALS**

1. All written work **MUST** be done in blue or black ink
2. No books, notes and other additional aids are allowed

**THIS QUESTION PAPER CONSISTS OF 2 PAGES** (excluding this front page)

**QUESTION 1: SAFETY IN THE WORKPLACE AND BASIC FIRST AID**

1.1. Explain the 4 main categories of workplace hazards and give an appropriate and relevant example for each. (12 marks)

1.2. Explain how you will control the loss of blood from a wound resulting from an accident at work. (8 marks)

SUBTOTAL: 20

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**QUESTION2: BASIC CARE AND VEHICLE MAINTENANCE**

Provide 20 tips that will help extent the life of a vehicle. (20 marks)

SUBTOTAL: 20

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**QUESTION 3: FENCING**

3.1. Provide the requirements of a good fence. (8 marks)

3.2. The most appropriate fence design will depend on a number of factors, name and explain these factors. (6 marks)

3.3. What are the main elements of a fence? (3 marks)

3.4. Write short notes to explain strainer assemblies in fencing. (3 marks)

SUBTOTAL:20

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**QUESTION 4: WATER INSTALLATION**

4.1. Provide 7 tips that will help to ensure sustainable and effective water supply for a farm operation. (7x2=14 marks)

4.2. Briefly discuss the maintenance of solar water pumps and solar panels. (6 marks)

SUBTOTAL: 20

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**QUESTION 5: ALTERNATIVE ENERGY SOURCES**

5.1. Define alternative energy. (3 marks)

5.2. Discuss the 4 major sources of alternative energy in terms of how they work and generate electricity. (17 marks)

SUBTOTAL: 20

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**QUESTION 6: BASIC ARC WELDING**

6.1. Construct a Table to explain the courses and remedial actions for a) undercut, and b) incomplete penetration, as welding defects. (20 marks)

SUBTOTAL: 20

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**QUESTION 7: BASIC CEMENT WORK**

Explain curing of cement in terms of the following;

a) What is curing? (2 marks)

b) When to cure? (2 marks)

c) Why cure? (2 marks)

d) How to cure? (2 marks)

e) How long to cure? (2 marks)

SUBTOTAL:10

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**QUESTION 8: BASIC FARM IMPLEMENTS AND TOOLS AND MAINTENANCE**

8.1. Briefly explain what preventive maintenance is. (2 marks)

8.2. In the time that equipment and machines are not being used, chemical interactions between metals and fluids can lead to more damage than normal wear and tear from active usage, this must be considered in planning machinery maintenance. Explain what you can do to ensure that equipment and machinery are maintained during the time it is not in use. (9x2=18 marks)

SUBTOTAL: 20

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**GRAND TOTAL: 150**