



**PAMIBIA UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

**FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES**  
**SCHOOL OF AGRICULTURE AND NATURAL RESOURCES SCIENCES**  
**DEPARTMENT OF AGRICULTURAL SCIENCES AND AGRIBUSINESS**

<b>QUALIFICATION: BACHELOR OF SCIENCE IN AGRICULTURE</b>	
<b>QUALIFICATION CODE: 07BAGA</b>	<b>LEVEL: 7</b>
<b>COURSE CODE: AMC520S</b>	<b>COURSE NAME: AGRICULTURAL MECHANISATION</b>
<b>SESSION: JUNE 2023</b>	<b>PAPER: THEORY</b>
<b>DURATION: 3 HOURS</b>	<b>MARKS: 150</b>

<b>FIRST OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	Mr. Helmuth Tjikurunda
<b>MODERATOR:</b>	Mr. Jeremia Amutenya

<b>INSTRUCTIONS</b>
1. Answer ALL the questions. 2. Write clearly and neatly. 3. Number the answers clearly.

**PERMISSIBLE MATERIALS**

1. Examination question paper
2. Answering book

**THIS QUESTION PAPER CONSISTS OF 3 PAGES (Excluding this front page)**

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

1.1. **Name and explain with relevant examples**, the 4 main categories of possible hazards that could occur at a workplace. (8)

1.2. Excessive blood loss from an open wound due to injuries sustained at work may lead to fatalities. **Give** detailed explanations on how you would control excessive blood loss from an open wound. (8)

**SUBTOTAL: 16**

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### QUESTION 2: BASIC CARE AND VEHICLE MAINTENANCE

Daily vehicle maintenance can increase the lifespan of a vehicle. As an agricultural extension officer, **provide** 20 tips you would give to upcoming farmers to help them extend the lifespan of their vehicles. (20)

**SUBTOTAL: 20**

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### QUESTION 3: FENCING

3.1. Appropriate fencing infrastructure is necessary for commercial farming, especially with livestock. **List** 8 criteria for a good fence, which will ensure successful livestock farming. (8)

3.2. In a table format, **provide** the advantages and disadvantages of wooden posts fence and iron posts fence. (10)

**SUBTOTAL:18**

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#### QUESTION 4: WATER INSTALLATION

4.1. Multiple sources are used to provide the Agricultural sector with water to operate optimally.

**List** the sources where the sector gets its water from. (8)

4.2. **Write** comprehensive notes on **how** to maintain water pump installations to ensure they function effectifly . (16)

**SUBTOTAL: 24**

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#### QUESTION 5: ALTERNATIVE ENERGY SOURCES

5.1. Briefly **explain** what alternative energy is. (3)

5.2. **Discuss** solar power as an alternative source of energy in terms of the following.

a) How it is generated (2)

b) Its applications (3)

c) Advantages (explain, not just lists) (18)

**SUBTOTAL: 26**

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#### QUESTION 6: BASIC ARC WELDING

6.1. **Explain** the causes of the following welding defects and provide remedial action for each:

a) undercut

b) slag inclusion. (20)

**SUBTOTAL: 20**

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### QUESTION 7: BASIC CEMENT WORK

**Explain** the curing process of concrete in terms of the following.

- a) What is curing? (2)
- b) When to cure? (1)
- c) Why cure? (3)
- d) How to cure? (2)

**SUBTOTAL: 8**

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

Planning machinery maintenance and storage must take into account the possibility of more damage from chemical interactions between metals and fluids during periods when equipment and machines are not in use than from typical wear and tear from active operation.

**Provide** measures which will ensure that equipment and machinery are maintained during the time they are not in use (storage). (18)

**SUBTOTAL: 18**

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**GRAND TOTAL: 150**