



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY
FACULTY OF HEALTH AND APPLIED SCIENCES AND NATURAL RESOURCES**

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES

QUALIFICATION: BACHELOR OF AGRICULTURE	
QUALIFICATION CODE: 07BAGA	LEVEL: 5
COURSE CODE: AMC520S	COURSE NAME: AGRICULTURAL MECHANIZATION
SESSION: JULY 2022	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 150

SUPPLEMENTARY / SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Mr. H. Tjikurunda
MODERATOR:	Mr. J. Amutenya

INSTRUCTIONS
1. Answer ALL the questions. 2. Write clearly and neatly. 3. Number the answers clearly.

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 how you can safely handle the equipment listed below to avoid accidents in the workplace.

a) Hand tools (5 marks)

b) Portable electric equipment (5 marks)

c) Drilling machines (5 marks)

1.2. Briefly, explain how you would treat a snake bite. (5 marks)

SUBTOTAL: 20

QUESTION 2: BASIC CARE AND VEHICLE MAINTENANCE

Provide 10 tips that will help extend the life of a vehicle. (10 marks)

SUBTOTAL: 10

QUESTION 3: FENCING

Explain the process of installing a fence on a farm. (20 marks)

SUBTOTAL: 20

QUESTION 4: WATER INSTALLATION

4.1. Provide the essential elements of farm water planning. (9 marks).

4.2. Do not use an overheated water pump. Briefly explain how you can achieve this. (3 marks)

SUBTOTAL: 20

QUESTION 5: ALTERNATIVE ENERGY SOURCES

5.1. Define alternative energy. (3 marks)

5.2. Discuss the advantages of solar energy. (20 Marks)

SUBTOTAL: 23

QUESTION 6: BASIC ARC WELDING

- 6.1. Explain the process of striking an arc in welding. (6 marks)
- 6.2. Provide general notes to explain butt welds. (7 marks)
- 6.3. Provide the functions of the following items:
- a) Electrode holder (1 mark)
 - b) Earthing clamp (1 mark)
 - c) Chipping harmer and wire brush (2 marks)
- 6.4. Most important factor in arc welding is the selection of the correct current. Explain what happens if the current is a) too low and b) excessive.
- a) Too low current (3 marks)
 - b) Excessive current (3 marks)

SUBTOTAL: 23

QUESTION 7: BASIC CEMENT WORK

- 7.1. Name and explain the 3 states of concrete. (11 Marks)
- 7.2. Briefly, explain how you would store cement to avoid damage and theft. (3 marks)

SUBTOTAL:14

QUESTION 8: BASIC FARM IMPLEMENTS AND TOOLS AND MAINTENANCE

- 8.1. Explain the term maintenance. (1 mark)
- 8.2. Explain what good maintenance includes. (6 marks).
- 8.3. Explain the 2 types of maintenance. (4 marks)
- 8.4. Before winter every year, it's important to make sure your equipment is ready for the colder months, which often involves long-term storage for certain machines. What are some of the winterization tasks a farmer can perform to ensure that equipment can be used past winter months? (9 marks)

SUBTOTAL: 20

GRAND TOTAL: 150