



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF COMMERCE, HUMAN SCIENCE AND EDUCATION

DEPARTMENT OF TECHNICAL, VOCATIONAL EDUCATION AND TRAINING

QUALIFICATION: MUST BRIDGING PROGRAMME-TVET AGRICULTURE SPECIALISATION	
QUALIFICATION CODE: 04DNBTA	LEVEL: 4
COURSE CODE: FOF412S	COURSE NAME: FUNDAMENTAL OF FARM MECHANISATION
SESSION: NOV 2025	PAPER: MAIN
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	MS HIJA IYAMBO
MODERATOR:	MR HELMUTH TJIKURUNDA

INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL the questions.2. Read all the questions carefully before answering.3. Number the answers clearly4. Each section must start on a new page5. This paper consist of 3 sections(A,B and C)

THIS QUESTION PAPER CONSISTS OF _7_ PAGES (Including this front page)

Section A

Question 1

(10 marks)

Select the correct answer for each question . Write down the letter corresponding to your choice , next to the question number. **1 mark per question**

1. Which of the following is not an agricultural application of hydraulics?

- a) Transport crops to the market and generate electricity
- b) Facilitate mechanical operations like lifting and adjusting implements
- c) Powering hydraulic sprayers
- d) Operating tractor brakes

2. Electrode have a brittle covering which is called:

- a) Slag
- b) Sparks
- c) Arc
- d) Flux

3. The following are defects in welding caused by excessive current, except one. Which one?

- a) Overheating of the electrode
- b) Lack of penetration
- c) Overheating and burning through of the workpiece
- d) Excessive splattering

4. Record keeping is important in agricultural mechanisation for several reasons, except:

- a) Monitoring fuel consumption and repair costs
- a) Scheduling implements/ machineries maintenance
- b) Assisting in planning future operations
- c) Providing clean working environment

5. During tractor set up, why is it important to test the wheel slip / revolution?
- a) To check if the tractor paint is not scratched.
 - b) To ensure proper traction and efficient fuel use
 - c) To increase the weight of the tractor permanently
 - d) To make the tractor move faster when ploughing
6. Which of the following implement should not be used in conservation Agriculture?
- a) Roto till drills
 - b) Slit till drill
 - c) Mold board plough
 - d) Happy seeders
7. The following are typical workplace documents required for maintenance activities, except one. Which one?
- a) Employment contract
 - b) Operator manual
 - c) Replacement manual
 - d) Decals on Machinery
8. Which of the following is a key laboratory safety precaution?
- a) Wear loose clothes when hot
 - b) Using appropriate protective clothing
 - c) Ignoring chemical labels
 - d) Handling equipment with wet hands

9. What should a tractor operator do before performing primary and secondary operations?

- a) Check and set up the tractor correctly
- b) Start operations immediately
- c) Perform hydraulic connections if necessary
- d) Skip inspection of tires and brakes

10. Types of chemical application equipment include:

- a) Ploughs and harrows
- b) Sprayers and spreaders
- c) Tractors only
- d) Seed drills

Section B

Question 2

(10 marks)

Match the descriptions in column **A** with the correct terms/words in column **B**. Write only the number and the correct term/ word next to it. **1 mark per question**

Column A	Column B
1. Proactively taking measures to prevent equipment failure or degradation before it occurs	Risk
2. Before the start of a new farming season, conduct thorough inspections of all equipment to identify and address any issues.	Wire Tension
3 Is any source that poses a potential threat of causing harm or damage to humans, property, or the environment.	Arc welding
4. Agricultural machinery moves or works, using its own power that is generated by its own engine or motor.	Pipe Wrench
5. Performs the tillage operation and directly place the seed and fertilizer in the soil opening in the stubble field	Boom sprayer
6. Used to tighten or loosen threaded pipes and fittings	Hazards
7. Used to apply liquid substances, such as herbicides, pesticides or fertilizers evenly across the crop field	Roto till drills
8.Is a process that uses an electric arc to join the metals being welded.	Self-propelled machinery
9. Used to draw wire through narrow spaces and adjust wire tension on the fence line.	Pre-season Inspection
10. Is the chance (increased possibility) that a person, equipment or the environment will be harmed or damaged resulting in a loss.	Preventative Maintenance

Section C

Question 3

(20 Marks)

3.1. List 8 safety precautions that should be followed when performing maintenance or repair on vehicles/ tractors or engines. (8)

3.2. Name 6 types of chemical application **equipment** used in agriculture- crop production. (6)

3.3. Define the following terms: **2 marks each**

- a) Routine Maintenance
- b) Personal Protective Equipments
- c) Arc welding

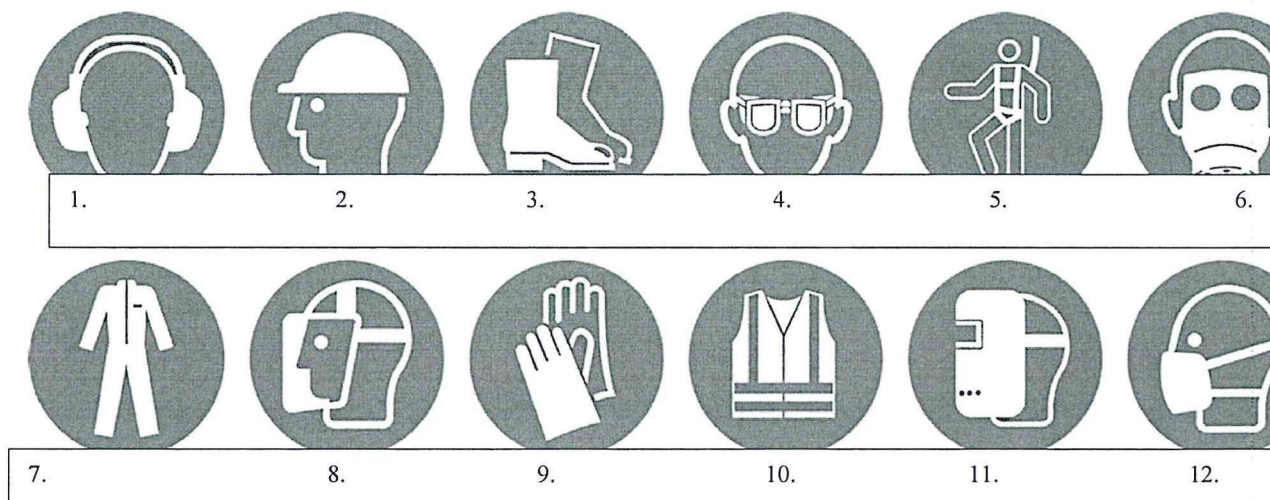
Question 4

(60 marks)

4.1. Using your understanding of tractor operation and attachments. Discuss the key areas for a tractor set up and operation for a successful planting or seeding. (20)

4.2. Briefly explain the general maintenance procedures to be followed before storing farm machinery or implements after operation. (8)

4.3. Risks in working place can be minimized using PPEs. Name the PPEs on the diagram below. (12 marks)



- 4.4. Explain the importance of calibrating machinery, equipment, tools, and materials for application in agriculture. **(5)**
- 4.5. Write brief notes to explain how you will check and refill a vehicle's engine oil. **(5)**
- 4.6. Provide the requirements for a good fence **(8)**
- 4.7. Explain why many farmers opt to use disk harrows for primary tillage than Mold board plough. **(2)**

The End!!