

Instruction Sheet for the Candidate

Qualification	Agricultural Machinery Technician (AMT) Level-4
Competency Standard	Perform welding and soldering process on the given work piece
Purpose of Assessment	Formative Assessment
Candidate Details	Name_____
	Registration/Roll Number_____
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within 03 Hrs. time frame (for practical demonstration & assessment):</p> <ul style="list-style-type: none"> • Perform operations related to Shielded Metal Arc Welding (SMAW) • Perform post welding operations • Perform Soldering • Perform post soldering operations • Perform Brazing Operation
Time: 03 Hrs.	During a practical assessment, under observation by an assessor, you are required to
Minimum Evidence Required	<p>Perform operations related to Shielded Metal Arc Welding (SMAW)</p> <ol style="list-style-type: none"> 1. Apply specific safety precautions associated with welding job/process 2. Arrange the electrode as per welding procedure specification (WPS) / instruction sheet 3. Arrange pre-heating equipment as per welding procedure specification (WPS) / instruction sheet 4. Adjust electrical parameters as per welding procedure specification (WPS) / instruction sheet 5. Perform welding as per welding procedure 6. specification (WPS) / instruction sheet Pre heat the job, if required <ul style="list-style-type: none"> • Apply jigs and fixtures • Perform welding operation • Inter-pass cleaning • Inter-pass inspection

- Maintain inter-pass temperature

Perform post welding operations

1. Apply post weld cleaning of the job following the process
 - Removal of slag
 - Removal of jigs and fixtures
 - Removal of spatters
2. Perform visual inspection and rectify any visual imperfections of weld area
3. Perform post-heating of the job as per WPS/ instruction sheet, if required
4. Apply specific safety precautions associated with welding job/process

Perform Soldering

1. Select the solder gun according to job
2. Prepare the solder gun
3. Clean the surface of job
4. prepare the surface by Rubbing
5. Check the solder gun for proper heat
6. Apply the solder paste on surface of job

Perform post soldering operations

1. Clean the surface of soldering area
2. Perform finishing with emery paper
3. Store the solder gun proper place

Perform Brazing Operation

1. Perform marking as per drawing
2. Cut the metal sheet according to drawing using shearing machine
3. Straighten the material with help of hammer
4. File work piece before soldering
5. Open gas cylinder with the help of cylinder key
6. Adjust pressure of both gas cylinders with the help of regulator
7. Select the correct size of the nozzle

	8. Set flame to carburizing flame as per standard 9. Use bronze filler rod as filler material 10. Use flux before brazing 11. Perform brazing as per standard
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Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	Agricultural Machinery Technician (AMT) Level-4
Competency Standard	Perform welding and soldering process on the given work piece
Purpose of Assessment	Formative Assessment
Assessment Task	<ul style="list-style-type: none"> • Perform operations related to Shielded Metal Arc Welding (SMAW) • Perform post welding operations • Perform Soldering • Perform post soldering operations • Perform Brazing Operation

I can.....

Performance Criteria	Yes	No
1. Apply specific safety precautions associated with welding job/process	<input type="checkbox"/>	<input type="checkbox"/>
2. Arrange the electrode as per welding procedure specification (WPS) / instruction sheet	<input type="checkbox"/>	<input type="checkbox"/>
3. Arrange pre-heating equipment as per welding procedure specification (WPS) / instruction sheet	<input type="checkbox"/>	<input type="checkbox"/>
4. Adjust electrical parameters as per welding procedure specification (WPS) / instruction sheet	<input type="checkbox"/>	<input type="checkbox"/>
5. Perform welding as per welding procedure	<input type="checkbox"/>	<input type="checkbox"/>
6. specification (WPS) / instruction sheet Pre heat the job, if required	<input type="checkbox"/>	<input type="checkbox"/>
7. Select the solder gun according to job	<input type="checkbox"/>	<input type="checkbox"/>
8. Prepare the solder gun	<input type="checkbox"/>	<input type="checkbox"/>

9. Clean the surface of job	<input type="checkbox"/>	<input type="checkbox"/>
10. prepare the surface by Rubbing	<input type="checkbox"/>	<input type="checkbox"/>
11. Check the solder gun for proper heat	<input type="checkbox"/>	<input type="checkbox"/>
12. Apply the solder paste on surface of job	<input type="checkbox"/>	<input type="checkbox"/>
13. Clean the surface of soldering area	<input type="checkbox"/>	<input type="checkbox"/>
14. Perform finishing with emery paper	<input type="checkbox"/>	<input type="checkbox"/>
15. Store the solder gun proper place	<input type="checkbox"/>	<input type="checkbox"/>
16. Perform marking as per drawing	<input type="checkbox"/>	<input type="checkbox"/>
17. Cut the metal sheet according to drawing using shearing machine	<input type="checkbox"/>	<input type="checkbox"/>
18. Straighten the material with help of hammer	<input type="checkbox"/>	<input type="checkbox"/>
19. File work piece before soldering	<input type="checkbox"/>	<input type="checkbox"/>
20. Open gas cylinder with the help of cylinder key	<input type="checkbox"/>	<input type="checkbox"/>
21. Adjust pressure of both gas cylinders with the help of regulator	<input type="checkbox"/>	<input type="checkbox"/>
22. Select the correct size of the nozzle	<input type="checkbox"/>	<input type="checkbox"/>
23. Set flame to carburizing flame as per standard	<input type="checkbox"/>	<input type="checkbox"/>
24. Use bronze filler rod as filler material	<input type="checkbox"/>	<input type="checkbox"/>
25. Use flux before brazing	<input type="checkbox"/>	<input type="checkbox"/>

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Assessors Judgment Guide

Qualification	Agricultural Machinery Technician (AMT) Level-4
Competency Standard	Perform welding and soldering process on the given work piece
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Signature: _____
Assessment Outcome	<div style="display: flex; justify-content: space-between; align-items: center;"> COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> </div> Name of the Assessor _____ Assessor's code: _____ Signature: _____

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

Observation Checklist

Assessment Task		<ul style="list-style-type: none">• Perform operations related to Shielded Metal Arc Welding (SMAW)• Perform post welding operations• Perform Soldering• Perform post soldering operations• Perform Brazing Operation		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Apply specific safety precautions associated with welding job/process			
2.	Arrange the electrode as per welding procedure specification (WPS) / instruction sheet			
3.	Arrange pre-heating equipment as per welding procedure specification (WPS) / instruction sheet			
4.	Adjust electrical parameters as per welding procedure specification (WPS) / instruction sheet			
5.	Perform welding as per welding procedure			
6.	specification (WPS) / instruction sheet Pre heat the job, if required			
7.	Select the solder gun according to job			
8.	Prepare the solder gun			
9.	Clean the surface of job			
10.	prepare the surface by Rubbing			
11.	Check the solder gun for proper heat			
12.	Apply the solder paste on surface of job			
13.	Clean the surface of soldering area			
14.	Perform finishing with emery paper			
15.	Store the solder gun proper place			
16.	Perform marking as per drawing			
17.	Cut the metal sheet according to drawing using shearing machine			

18.	Straighten the material with help of hammer			
19.	File work piece before soldering			
20.	Open gas cylinder with the help of cylinder key			
21.	Adjust pressure of both gas cylinders with the help of regulator			
22.	Select the correct size of the nozzle			
23.	Set flame to carburizing flame as per standard			
24.	Use bronze filler rod as filler material			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Qualification	Agricultural Machinery Technician (AMT) Level-4
Competency Standard	Perform welding and soldering process on the given work piece
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Candidate Signature: _____
Assessment Outcome	<div style="display: flex; justify-content: space-around; align-items: center;"> COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> </div> Name of the Assessor: _____ Assessor's code: _____ Signature of the Assessor: _____

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	What are the essential safety measures for welding?		
2.	Name basic welding and soldering tools.		
3.	Name three types of welding		

Feedback to the Candidate			
Candidate's Signature _____ Assessor's Signature _____			