

Instruction Sheet for the Candidate

Qualification	Agricultural Machinery Technician (Level-04)
Competency Standard	Maintain sowing and planting implements
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"> • Inspect seed cum fertilizer drill • Calibrate seed drill • Operate seed drill • Replace Blades of Seed Drill • Identify Potato planter • Maintain potato planter-seed hopper • Maintain potato planter-fertilizer box • Identify potato digger • Maintain Potato digger
Time: 03 Hrs.	During a practical assessment, under observation by an assessor, you are required to
Minimum Evidence Required	<p>Inspect seed cum fertilizer drill</p> <ol style="list-style-type: none"> 1. Clean components from dust, mud, and residue 2. Inspect the components of seed drill (mainframe, furrow opener, covering device, metering unit, clutch, seed delivery unit, seed and fertilizer box, 3-point hitch point, etc.). 3. Identify various fertilizers <p>Calibrate seed drill</p> <ol style="list-style-type: none"> 1. Calibrate seed drill as follows. 2. Fix calibration area for seed metering. 3. Measure the circumference of the seed metering wheel 4. Multiply the measured circumference of wheel with 10. 5. Collect and weigh the dropped seed from each seed tube. 6. Calculate total dropped seed in measured area. 7. Calculate the seed rate for one acre on the basis of measured area: $= \frac{\text{Dropped seed(Kg)} * \text{One acre (m}^2\text{)}}{\text{measured Area (m}^2\text{)}}$ <p>Operate seed drill</p> <ol style="list-style-type: none"> 1. Adjust the seed drill with the 3-point linkage.

	<ol style="list-style-type: none"> 2. Run the seed drill at recommended RPM to drop the measured quantity of seed at desired depth. 3. Ensure uniform seed dropping in all seed tubes. 4. Ensure continuous seed dropping in all furrows. 5. Note the calibration data on sheet for future usage. <p>Replace Blades of Seed Drill</p> <ol style="list-style-type: none"> 1. Select Spanner and required tools 2. Clean components from dust, mud and residue 3. Uplift cultivator on stand 1-2 feet from ground surface 4. Open seed box 5. Open fertilizer box 6. Remove the nuts and bolts 7. Remove blades 8. Remove both tubes 9. Assemble blades with required torque <p>Identify Potato planter</p> <ol style="list-style-type: none"> 1. Identify the components of potato planter (ridger assembly, seed hopper, fertilizer box, seed treatment tank) 2. Clean potato planter components from dust, mud, and residue. 3. Check wear and tear of furrow opener <p>Maintain potato planter-seed hopper</p> <ol style="list-style-type: none"> 1. Select spanners, screwdriver, L-key, hammer, grease gun 2. Place the planter at levelled surface 3. Remove nuts and bolts of the seed hopper 4. Remove nuts and bolts of fertilizer box 5. Remove nuts and bolts of seed treatment box 6. Uplift planter on stand 1-2 feet from the ground surface 7. Remove furrow opener nuts and bolts 8. Assemble furrow opener 9. Tight nut and bolts with the required torque 10. Remove conveyor drive shaft bearings 11. Remove cup conveyor belt 12. Assemble cup conveyor belt 13. Assemble both bearings on hopper with require torque <p>Maintain potato planter-fertilizer box</p> <ol style="list-style-type: none"> 1. Select spanners, screwdriver, L-key, hammer, grease gun 2. Place at a smooth and clean surface 3. Remove nuts and bolts of fertilizer box 4. Uplift planter on stand 1-2 feet from the ground surface 5. Remove fertilizer drop assembly 6. Remove drop gear and tubes 7. Assemble drop gear and tubes 8. Assemble fertilizer drop assembly with require torque <p>Identify potato digger</p> <ol style="list-style-type: none"> 1. Identify the components of potato digger (digging shovel, conveyer chain, PTO shaft) 2. Clean components from dust, mud, and residue. 3. Check wear and tear of potato digger
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	Maintain Potato digger <ol style="list-style-type: none"> 1. Remove nuts and bolts of shovels 2. Assemble shovel nut bolts with required torque 3. Remove conveyor chain drive gearbox 4. Remove nuts and bolts of drive gearbox 5. Remove chain laying drive wheel 6. Clean with kerosene oil 7. Remove conveyer chain 8. Remove laying drive wheel 9. Remove shaft and bearings 10. Clean with kerosene oil 11. Assemble shaft and laying drive wheel 12. Assemble conveyor chain drive gearbox 13. Lubricate/ grease fill
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Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	Agricultural Machinery Technician (Level-04)
Competency Standard	Maintain sowing and planting implements
Purpose of Assessment	Formative Assessment
Assessment Task	<ul style="list-style-type: none"> • Inspect seed cum fertilizer drill • Calibrate seed drill • Operate seed drill • Replace Blades of Seed Drill • Identify Potato planter • Maintain potato planter-seed hopper • Maintain potato planter-fertilizer box • Identify potato digger • Maintain Potato digger

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Performance Criteria	Yes	No
1. Clean components from dust, mud, and residue	<input type="checkbox"/>	<input type="checkbox"/>
2. Inspect the components of seed drill (mainframe, furrow opener, covering device, metering unit, clutch, seed delivery unit, seed and fertilizer box, 3-point hitch point, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
3. Identify various fertilizers	<input type="checkbox"/>	<input type="checkbox"/>
4. Calibration of seed drill.	<input type="checkbox"/>	<input type="checkbox"/>
5. Fix calibration area for seed metering.	<input type="checkbox"/>	<input type="checkbox"/>
6. Measure the circumference of the seed metering wheel	<input type="checkbox"/>	<input type="checkbox"/>
7. Collect and weigh the dropped seed from each seed tube.	<input type="checkbox"/>	<input type="checkbox"/>
8. Calculate total dropped seed in measured area.	<input type="checkbox"/>	<input type="checkbox"/>
9. Calculate the seed rate for one acre on the basis of measured area:	<input type="checkbox"/>	<input type="checkbox"/>
10. Adjust the seed drill with the 3-point linkage.	<input type="checkbox"/>	<input type="checkbox"/>

11. Run the seed drill at recommended RPM to drop the measured quantity of seed at desired depth.	<input type="checkbox"/>	<input type="checkbox"/>
12. Ensure uniform seed dropping in all seed tubes.	<input type="checkbox"/>	<input type="checkbox"/>
13. Ensure continuous seed dropping in all furrows.	<input type="checkbox"/>	<input type="checkbox"/>
14. Note the calibration data on sheet for future usage.	<input type="checkbox"/>	<input type="checkbox"/>
15. Remove the nuts and bolts	<input type="checkbox"/>	<input type="checkbox"/>
16. Remove blades	<input type="checkbox"/>	<input type="checkbox"/>
17. Remove both tubes	<input type="checkbox"/>	<input type="checkbox"/>
18. Assemble blades with required torque	<input type="checkbox"/>	<input type="checkbox"/>
19. Identify the components of potato planter (ridger assembly, seed hopper, fertilizer box, seed treatment tank)	<input type="checkbox"/>	<input type="checkbox"/>
20. Clean potato planter components from dust, mud, and residue.	<input type="checkbox"/>	<input type="checkbox"/>
21. Check wear and tear of furrow opener	<input type="checkbox"/>	<input type="checkbox"/>
22. Select spanners, screwdriver, L-key, hammer, grease gun	<input type="checkbox"/>	<input type="checkbox"/>
23. Place the planter at levelled surface	<input type="checkbox"/>	<input type="checkbox"/>
24. Remove nuts and bolts of the seed hopper	<input type="checkbox"/>	<input type="checkbox"/>
25. Remove nuts and bolts of fertilizer box	<input type="checkbox"/>	<input type="checkbox"/>
26. Remove nuts and bolts of seed treatment box	<input type="checkbox"/>	<input type="checkbox"/>
27. Assemble furrow opener	<input type="checkbox"/>	<input type="checkbox"/>
28. Tight nut and bolts with the required torque	<input type="checkbox"/>	<input type="checkbox"/>
29. Remove conveyor drive shaft bearings	<input type="checkbox"/>	<input type="checkbox"/>
30. Remove cup conveyor belt	<input type="checkbox"/>	<input type="checkbox"/>
31. Assembled cup conveyor belt	<input type="checkbox"/>	<input type="checkbox"/>
32. Assemble both bearings on hopper with require torque	<input type="checkbox"/>	<input type="checkbox"/>
33. Remove fertilizer drop assembly	<input type="checkbox"/>	<input type="checkbox"/>

34. Remove drop gear and tubes	<input type="checkbox"/>	<input type="checkbox"/>
35. Assemble drop gear and tubes	<input type="checkbox"/>	<input type="checkbox"/>
36. Assemble fertilizer drop assembly with require torque	<input type="checkbox"/>	<input type="checkbox"/>
37. Identify the components of potato digger (digging shovel, conveyer chain, PTO shaft)	<input type="checkbox"/>	<input type="checkbox"/>
38. Remove nuts and bolts of shovels	<input type="checkbox"/>	<input type="checkbox"/>
39. Remove conveyor chain drive gearbox	<input type="checkbox"/>	<input type="checkbox"/>
40. Remove nuts and bolts of drive gearbox	<input type="checkbox"/>	<input type="checkbox"/>
41. Remove chain laying drive wheel	<input type="checkbox"/>	<input type="checkbox"/>
42. Clean with kerosene oil	<input type="checkbox"/>	<input type="checkbox"/>
43. Remove conveyer chain	<input type="checkbox"/>	<input type="checkbox"/>
44. Remove laying drive wheel	<input type="checkbox"/>	<input type="checkbox"/>
45. Remove shaft and bearings	<input type="checkbox"/>	<input type="checkbox"/>
46. Assemble shaft and laying drive wheel	<input type="checkbox"/>	<input type="checkbox"/>
47. Assemble conveyor chain drive gearbox	<input type="checkbox"/>	<input type="checkbox"/>
48. Lubricate/ grease fill	<input type="checkbox"/>	<input type="checkbox"/>

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Assessors Judgment Guide

Qualification	Agricultural Machinery Technician (Level-04)
Competency Standard	Maintain sowing and planting implements
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Signature: _____
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> 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"> • Inspect seed cum fertilizer drill • Calibrate seed drill • Operate seed drill • Replace Blades of Seed Drill • Identify Potato planter • Maintain potato planter-seed hopper • Maintain potato planter-fertilizer box • Identify potato digger • Maintain Potato digger 		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Clean components from dust, mud, and residue			
2.	Inspect the components of seed drill (mainframe, furrow opener, covering device, metering unit, clutch, seed delivery unit, seed and fertilizer box, 3-point hitch point, etc.).			
3.	Identify various fertilizers			
4.	Calibration of seed drill.			
5.	Fix calibration area for seed metering.			
6.	Measure the circumference of the seed metering wheel			
7.	Collect and weigh the dropped seed from each seed tube.			
8.	Calculate total dropped seed in measured area.			
9.	Calculate the seed rate for one acre on the basis of measured area:			
10.	Adjust the seed drill with the 3-point linkage.			
11.	Run the seed drill at recommended RPM to drop the measured quantity of seed at desired depth.			
12.	Ensure uniform seed dropping in all seed tubes.			
13.	Ensure continuous seed dropping in all furrows.			
14.	Note the calibration data on sheet for future usage.			
15.	Remove the nuts and bolts			
16.	Remove blades			

17.	Remove both tubes			
18.	Assemble blades with required torque			
19.	Identify the components of potato planter (ridger assembly, seed hopper, fertilizer box, seed treatment tank)			
20.	Clean potato planter components from dust, mud, and residue.			
21.	Check wear and tear of furrow opener			
22.	Select spanners, screwdriver, L-key, hammer, grease gun			
23.	Place the planter at levelled surface			
24.	Remove nuts and bolts of the seed hopper			
25.	Remove nuts and bolts of fertilizer box			
26.	Remove nuts and bolts of seed treatment box			
27.	Assemble furrow opener			
28.	Tight nut and bolts with the required torque			
29.	Remove conveyor drive shaft bearings			
30.	Remove cup conveyor belt			
31.	Assembled cup conveyor belt			
32.	Assemble both bearings on hopper with require torque			
33.	Remove fertilizer drop assembly			
34.	Remove drop gear and tubes			
35.	Assemble drop gear and tubes			
36.	Assemble fertilizer drop assembly with require torque			
37.	Identify the components of potato digger (digging shovel, conveyer chain, PTO shaft)			
38.	Remove nuts and bolts of shovels			
39.	Remove conveyor chain drive gearbox			
40.	Remove nuts and bolts of drive gearbox			
41.	Remove chain laying drive wheel			

42.	Clean with kerosene oil			
43.	Remove conveyer chain			
44.	Remove laying drive wheel			
45.	Remove shaft and bearings			
46.	Assemble shaft and laying drive wheel			
47.	Assemble conveyor chain drive gearbox			
48.	Lubricate/ grease fill			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Qualification	Agricultural Machinery Technician (Level-04)
Competency Standard	Maintain sowing and planting implements
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.	Name three main parts of potato planter		
2.	What is Difference between planters and diggers		
3.	Name five parts of seed drill cum fertilizer		

4.	What is difference between seed drill and seed drill cum fertilizer		

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