

## Self-Assessment Checklist

<b>Candidate Name</b>	
<b>Registration No.</b>	
<b>Qualification</b>	National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, water and fertilizer testing lab technician)
<b>Competency Standards</b>	Perform pH Test of Soil by pH Meter
<b>Assessment Task</b>	<b>Assess the PH of the soil sample using standard test method</b>

I can.....

Performance Criteria	Yes	No
1. Check sample label for required test	<input type="checkbox"/>	<input type="checkbox"/>
2. Maintain required laboratory temperature	<input type="checkbox"/>	<input type="checkbox"/>
3. Keep sample at room temperature as required	<input type="checkbox"/>	<input type="checkbox"/>
4. Prepare pH buffer solution as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
5. Arrange equipment as per test method	<input type="checkbox"/>	<input type="checkbox"/>
6. Set up pH meter and/or reagents in accordance with the specified work instructions	<input type="checkbox"/>	<input type="checkbox"/>
7. Conduct pre-use and safety checks	<input type="checkbox"/>	<input type="checkbox"/>
8. Turn on instrument as per instructions given in manual	<input type="checkbox"/>	<input type="checkbox"/>
9. Calibrate pH meter by as per standard method	<input type="checkbox"/>	<input type="checkbox"/>
10. Adjust meter with buffer solution of known pH according to SOP	<input type="checkbox"/>	<input type="checkbox"/>
11. Weigh required sample and transfer into beaker as per standard method	<input type="checkbox"/>	<input type="checkbox"/>
12. Add distilled water and stir it as per standard procedure	<input type="checkbox"/>	<input type="checkbox"/>
13. Immerse electrode and stir it until instrument gives stable pH reading	<input type="checkbox"/>	<input type="checkbox"/>
14. Perform test sample replicates as per SOP	<input type="checkbox"/>	<input type="checkbox"/>

15. Store unused reagents and dispose of wastes as per standard protocols	<input type="checkbox"/>	<input type="checkbox"/>
16. Clean and store equipment as per lab protocol	<input type="checkbox"/>	<input type="checkbox"/>
17. Perform pH meter intermediate checks as per lab quality assurance plan	<input type="checkbox"/>	<input type="checkbox"/>
18. Run blank sample accordingly	<input type="checkbox"/>	<input type="checkbox"/>
19. Run Laboratory Control samples as per standard	<input type="checkbox"/>	<input type="checkbox"/>
20. Perform replicate/re-testing as per lab standards	<input type="checkbox"/>	<input type="checkbox"/>
21. Record quality control data as per lab procedure	<input type="checkbox"/>	<input type="checkbox"/>
22. Prepare quality control charts of quality assurance activities according to lab procedure	<input type="checkbox"/>	<input type="checkbox"/>
23. Calculate and Note down the Results on analyst workbook	<input type="checkbox"/>	<input type="checkbox"/>
24. Submit the results to lab In-charge	<input type="checkbox"/>	<input type="checkbox"/>
25. Clear and restore work area	<input type="checkbox"/>	<input type="checkbox"/>
26. Calibrate instrument before taking measurement as per requirement	<input type="checkbox"/>	<input type="checkbox"/>
27. Leave probe always in distilled water	<input type="checkbox"/>	<input type="checkbox"/>
28. Submerge probe in sample to be tested while stirring it gently	<input type="checkbox"/>	<input type="checkbox"/>
29. Rinse probe tip after use according to SOP	<input type="checkbox"/>	<input type="checkbox"/>

Candidate's Signature\_\_\_\_\_

Assessor's Signature\_\_\_\_\_

Date: \_\_\_\_\_

## Instruction Sheet for the Candidate

<b>Qualification</b>	<b>National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, water and fertilizer testing lab technician)</b>
<b>Competency Standard(s)</b>	Perform pH Test of Soil by pH Meter
Candidate Details	
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>Assess the PH of the soil sample using standard test method</b></p>
Time:180 mins	<p>During a practical assessment, under observation by an assessor, you are required to</p> <p><b>Assess the PH of the soil sample using standard test method</b></p> <p>Demonstrate the following criteria:</p> <ol style="list-style-type: none"> <li>1. Check sample label for required test</li> <li>2. Maintain required laboratory temperature</li> <li>3. Keep sample at room temperature as required</li> <li>4. Prepare pH buffer solution as per requirement</li> <li>5. Arrange equipment as per test method</li> <li>6. Set up pH meter and/or reagents in accordance with the specified work instructions</li> <li>7. Conduct pre-use and safety checks</li> <li>8. Turn on instrument as per instructions given in manual</li> <li>9. Calibrate pH meter by as per standard method</li> </ol>

Minimum Evidence Required	<ol style="list-style-type: none"> <li>10. Adjust meter with buffer solution of known pH according to SOP</li> <li>11. Weigh required sample and transfer into beaker as per standard method</li> <li>12. Add distilled water and stir it as per standard procedure</li> <li>13. Immerse electrode and stir it until instrument gives stable pH reading</li> <li>14. Perform test sample replicates as per SOP</li> <li>15. Store unused reagents and dispose of wastes as per standard protocols</li> <li>16. Clean and store equipment as per lab protocol</li> <li>17. Perform pH meter intermediate checks as per lab quality assurance plan</li> <li>18. Run blank sample accordingly</li> <li>19. Run Laboratory Control samples as per standard</li> <li>20. Perform replicate/re-testing as per lab standards</li> <li>21. Record quality control data as per lab procedure</li> <li>22. Prepare quality control charts of quality assurance activities according to lab procedure</li> <li>23. Calculate and Note down the Results on analyst workbook</li> <li>24. Submit the results to lab In-charge</li> <li>25. Clear and restore work area</li> <li>26. Calibrate instrument before taking measurement as per requirement</li> <li>27. Leave probe always in distilled water</li> <li>28. Submerge probe in sample to be tested while stirring it gently</li> <li>29. Rinse probe tip after use according to SOP</li> </ol>
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## Assessors Judgment Guide

<b>Qualification</b>	National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, water and fertilizer testing lab technician)
<b>Competency Standard(s)</b>	Perform pH test for water by pH Meter
<b>Candidate Details</b>	Name: _____  Registration/Roll Number: _____ Signature: _____
<b>Assessment Outcome</b>	<div style="display: flex; justify-content: space-around; align-items: center;"> <span>COMPETENT <input type="checkbox"/></span> <span>NOT YET COMPETENT <input type="checkbox"/></span> </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		Assess the PH of the soil sample using standard test method		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Checked sample label for required test			
2.	Maintained required laboratory temperature			
3.	Kept sample at room temperature as required			
4.	Prepared pH buffer solution as per requirement			
5.	Arranged equipment as per test method			
6.	Set up pH meter and/or reagents in accordance with the specified work instructions			
7.	Conducted pre-use and safety checks			
8.	Turned on instrument as per instructions given in manual			
9.	Calibrated pH meter by as per standard method			
10	Adjusted meter with buffer solution of known pH according to SOP			
11	Weight required sample and transfer into beaker as per standard method			
12	Add distilled water and stir it as per standard procedure			
13	Immersed electrode and stir it until instrument gives stable pH reading			
14	Performed test sample replicates as per SOP			
15	Stored unused reagents and dispose of			

	wastes as per standard protocols			
16	Cleaned and stored equipment as per lab protocol			
17	Performed pH meter intermediate checks as per lab quality assurance plan			
18	Ran blank sample accordingly			
19	Ran Laboratory Control samples as per standard			
20	Performed replicate/re-testing as per lab standards			
21	Recorded quality control data as per lab procedure			
22	Prepared quality control charts of quality assurance activities according to lab procedure			
23	Calculated and Note down the Results on analyst workbook			
24	Submitted the results to lab In-charge			
25	Cleared and restored work area			
26	Calibrated instrument before taking measurement as per requirement			
27	Left probe always in distilled water			
28	Submerged probe in sample to be tested while stirring it gently			
29	Rinsed probe tip after use according to SOP			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

**Feedback to the Candidate**

<b>Candidate's Signature</b> _____
<b>Assessor's Signature</b> _____