

Knowledge Assessment

Qualification	National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, Water and Fertilizer Testing Lab Technician)
Competency Standard(s)	<ul style="list-style-type: none"> Handling of sophisticated level Equipment 2 Perform Ammonical Nitrogen In Soild, Liquid and Mixed Fertilizer By Kjeldahl Method Nitrate-N in soild, liquid and mixed fertilizer by kjeldahl method Perform Uric/Urease nitrogen (n) in soild, liquid and mixed fertilizer by kjeldahl method Perform Potassium (K) in Soild, Liquid and Mixed Fertilizer by Flame Photometry Method Perform water soluble micronutrients (Zn, Fe, Mn etc) in Fertilizers through AAS Method Perform Soil Micronutrient Test Perform Standard Test Method (STM) for Zinc chelated percentage Perform Standard Test Method (STM) to evaluate Gypsum Requirement in soil Generate test report Ensure Test Quality
Candidate Details	<p>Name: _____</p> <p>Registration/Roll Number: _____ Candidate Signature: _____</p>
Assessment Outcome	<p> COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> </p> <p>Name of the Assessor: _____ Assessor's code: _____</p> <p>Signature of the Assessor: _____</p>

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	Write the formula of urea?		
2.	Write the formula for standard solution calculation?		
3.	Define distilled water?		
4.	Which is the ideal temperature for lab analysis?		
5.	Define chelating agent?		
6.	Describe gravimetric analysis?		
7.	Define Humic Acid?		

Key

National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, Water and Fertilizer Testing Lab Technician)			
<ul style="list-style-type: none"> • Handling of sophisticated level Equipment 2 • Perform Ammonical Nitrogen In Soild, Liquid and Mixed Fertilizer By Kjeldahl Method • Nitrate-N in soild, liquid and mixed fertilizer by kjeldahl method • Perform Uric/Urease nitrogen (n) in soild, liquid and mixed fertilizer by kjeldahl method • Perform Potassium (K) in Soild, Liquid and Mixed Fertilizer by Flame Photometry Method • Perform water soluble micronutrients (Zn, Fe, Mn etc) in Fertilizers through AAS Method • Perform Soil Micronutrient Test • Perform Standard Test Method (STM) for Zinc chelated percentage • Perform Standard Test Method (STM) to evaluate Gypsum Requirement in soil • Generate test report • Ensure Test Quality 			
Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	Write the formula of urea?		
	CH ₄ N ₂ O		
2.	Write the formula for standard solution calculation?		
	$C_1V_1 = C_2V_2$		
3.	Define distilled water?		
	Distilled water is water that has been boiled into vapor and condensed back into liquid in a separate container.		
4.	Which is the ideal temperature for lab analysis?		
	25°C		
5.	Define chelating agent?		
	Chelating agents are chemical compounds that bond with metal ions (such as zinc) to create a stable, water-soluble product that can be easily absorbed		
6.	Describe gravimetric analysis?		
	Gravimetric analysis is the quantitative estimate of a particular species by measurement of its weight. This is usually achieved by converting the analyte into an almost insoluble compound (precipitate reaction), which can then be weighed directly or can		

	be converted into a stable form and then weighed.		
7.	Define Humic Acid?		
	Humic acid is a group of molecules that bind to, and help plant roots receive, water and nutrients. High humic acid levels can dramatically increase yields. Humic acid deficiency can prevent farmers and gardeners from growing crops with optimum nutrition.		