

Assessment Evidence Guide

For

“Urban Area Planning and Management”

Level-4

(Summative Assessment)

28th March – 1st April 2022



**National Vocational & Technical
Training Commission**

Title of Qualification: National Vocational Certificate Level 4 in Urban Area Planning and Management “Urban Area Supervisor”	CS Code:	Level: 4	Version: 01
Competency Standard Title: Establish and Maintain the Occupational Health and Safety System Perform Advance Communication Perform Environmental Management Perform 2D and 3D drawings using CAD Software Plan and Organize work Perform Setting out of Urban Project Perform Advance Survey Construct and Maintain water and waste water scheme Prepare Detailed Estimate Prepare Zone Plan Perform Basic Green Skills for Urban Area Planning and Management	Assessment Date (DD/MM/YY): Assessment Time: 5 hrs.		

Candidate Details	Name: Registration/Roll Number:.....
Guidance for Candidate	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment): Assessment Task 1: Candidate is required to perform layout of sewer line service for a small housing block using given layout plan and control points. • Sequence the job activities • Arrange tools and equipment • Establish the location points/ reference points • Establish the benchmark • Demark the alignment and excavation • Install sight rails Assessment Task 2: Candidate is required to prepare the following from drawings of one room residential quarter given by the assessor for building portion • Measurement sheet • Material statement • Rate analysis for major items of work assigned by the assessor • Abstract of cost assuming suitable rates And complete: 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)
Minimum Evidence Required	During a practical assessment, under observation by an assessor, you will complete: Assessment Task 1 Performance criteria 1: Interpret layout plan of the project Performance criteria 2: Select required PPE

	Performance criteria 3: Establish control points with total station Performance criteria 4: Establish the deflection points and offset with total station Performance criteria 5: Set earthing profiles at required distance Performance criteria 6: Establish control points along the sewer line with total station Performance criteria 7: Erect sight rails Performance criteria 8: Establish the temporary benchmark Performance criteria 9: Calculate the man hours as per job Performance criteria 10: Perform setting out of pipeline plan Performance criteria 11: Check, maintain and store equipment, tools and materials Performance criteria 12: Restore work site to meet environmental and organizational requirements. Performance criteria 13: Complete workplace records and constructed drawings Performance criteria 14: Identify and report the physical hazards at workplace Performance criteria 15: Perform tasks within standard timeframe Assessment Task 2 Performance criteria 1: Identify potential risks at workplace Performance criteria 2: Draw the center lines in plan. Performance criteria 3: Sum up the lengths of center lines. Performance criteria 4: Calculate the quantities of items of work for building Performance criteria 5: Implement the principles of deduction for surface rendering. Performance criteria 6: Draw Abstract of Cost table. Performance criteria 7: Calculate the amount of each item of work. Performance criteria 8: Identify materials and their rate Performance criteria 9: Calculate the labour charges for job Performance criteria 10: Calculate the carriage charges for the ingredients. Performance criteria 11: Add sundries lump sum charges Performance criteria 12: Sum up the amounts and add contractor's profit. Performance criteria 13: Fill the quantities in schedule of material statement Performance criteria 14: Perform tasks within standard timeframe
	Portfolios required at the time of assessment (if any) for 1. Folder includes presentation on first aid 2. Folder includes snaps of environmental management data collection activity Performance Criteria 1: Perform first aid treatment for bone fracture. Performance Criteria 2: Perform first aid treatment for accidental severe bleeding. Performance Criteria 3: Perform first aid treatment in simulated condition for eye injury. Performance Criteria 4: Perform first aid treatment for electric shock Performance Criteria 5: Select sampling locations, number of samples and timing from sampling plan Performance Criteria 6: Select required sampling tool and accessories Performance Criteria 7: De-contaminate the sample container and sampling tools

	Performance Criteria 8: Collect samples according to sampling plan Performance Criteria 9: Take temperature of water Performance Criteria 10: Measure dissolved oxygen in water Performance Criteria 11: Check turbidity of water Performance Criteria 12: Check PH Value of water Performance Criteria 13: Measure total suspended solids Performance Criteria 14: Measure Chlorides and Sulfate contents Performance Criteria 15: Measure BOD and COD Performance Criteria 16: Record the reading of sound level at specified interval Performance Criteria 17: Evaluate environment quality standards in air Performance Criteria 18: Measure air quality index Performance Criteria 19: Calculate the mass of particulate matter Performance Criteria 20: Fill in the lab sheet Performance Criteria 21: Seal and label samples in the presence of witness Performance Criteria 22: Store the waste materials according to standards Performance Criteria 23: Dispose-off waste material according to green and safety procedures
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Assessors Judgment Guide

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Name of the Assessor: Assessor's code: Signature of the Assessor:.....

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

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of Assessment task 1 Candidate is required to perform layout of sewer line service for a small housing block using given layout plan and control points. • Sequence the job activities • Arrange tools and equipment • Establish the location points/ reference points • Establish the benchmark • Demark the alignment and excavation • Install sight rails		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Interpreted layout plan of the project			
2.	Selected required PPE			
3.	Established control points with total station			
4.	Established the deflection points and offset with total station			
5.	Set earthing profiles at required distance			
6.	Established control points along the sewer line with total station			
7.	Erected sight rails			
8.	Established the temporary benchmark			
9.	Calculated the man hours as per job			
10.	Performed setting out of pipeline plan			
11.	Checked, maintained and stored equipment, tools and materials			
12.	Restored work site to meet environmental and organizational requirements.			
13.	Completed workplace records and constructed drawings			
14.	Identified and report the physical hazards at workplace			
15.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Each Assessment Task (with performance criteria)				
Assessment Task 2		Description of Assessment Task 2 Candidate is required to prepare the following from drawings of one room residential quarter given by the assessor for building portion • Measurement sheet • Material statement • Rate analysis for major items of work assigned by the assessor • Abstract of cost assuming suitable rates		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential risks at workplace			
2.	Drawn the center lines in plan.			
3.	Summed up the lengths of center lines.			
4.	Calculated the quantities of items of work for building			
5.	Implemented the principles of deduction for surface rendering.			
6.	Drawn Abstract of Cost table.			
7.	Calculated the amount of each item of work.			
8.	Identified materials and their rate			
9.	Calculated the labour charges for job			
10.	Calculated the carriage charges for the ingredients.			
11.	Added sundries lump sum charges			
12.	Summed up the amounts and add contractor's profit.			
13.	Filled the quantities in schedule of material statement			
14.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Portfolio		Description of Portfolio		
		1. Folder includes presentation on first aid 2. Folder includes snaps of environmental management data collection activity		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Performed first aid treatment for bone fracture.			
2.	Performed first aid treatment for accidental severe bleeding.			
3.	Performed first aid treatment in simulated condition for eye injury.			
4.	Performed first aid treatment for electric shock			
5.	Selected sampling locations, number of samples and timing from sampling plan			
6.	Selected required sampling tool and accessories			
7.	De-contaminated the sample container and sampling tools			
8.	Collected samples according to sampling plan			
9.	Taken temperature of water			
10.	Measured dissolved oxygen in water			
11.	Checked turbidity of water			
12.	Checked pH Value of water			
13.	Measured total suspended solids			
14.	Measured Chlorides and Sulfate contents			
15.	Measured BOD and COD			
16.	Recorded the reading of sound level at specified interval			
17.	Evaluated environment quality standards in air			
18.	Measured air quality index			
19.	Calculated the mass of particulate matter			
20.	Filled in the lab sheet			
21.	Sealed and labelled samples in the presence of witness			
22.	Stored the waste materials according to standards			
23.	Disposed-off waste material according to green and safety procedures			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 4 in Urban Area Planning and Management "Urban Area Supervisor"	CS Code:	Level:4	Version:01
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Question	Candidate's answer
1. Enlist five components of total station	
2. Write down different Methods of traversing	
3. Explain Disinfection Procedure of Pipe Before Use	
4. Enlist Steps for pipe laying.	
5. Enlist five layout of distribution system	
6. Enlist types of pipes?	
7. How pipe corrosion can be prevented.	
8. What does BOQ stands for?	
9. Define abstract of cost.	

Question	Candidate's answer
10. Briefly explain about Out to Out and in to in method.	
11. What is fire extinguisher?	
12. What is earthling?	
13. What is unit of area?	
14. Enlist types of site plan?	
15. What is an approach road?	

ANSWER KEY

Sr.	Answers
1.	• Handle • Handle screwing screw • Data input /output terminal • Instrument height mark • Battery cover • Operational panel • Tribrach clamp/shifting clamp • Base plate • Leveling foot screw • Circular level • Circular level adjusting screws • Display
2.	• Chain traversing • Chain and compass traversing • Transit type traversing a)By fast needle method b)By measurement of angles between the lines • Plane table traversing
3.	The pipeline is disinfected by keeping it full with water and adding chlorine in such amounts that a residue of 50 mg/l is maintained for 12 hours. The pipe is then emptied, flushed with fresh water and put into service for carrying water to the consumers or to the storage tank.
4.	• Marking of center line and the width of the trench. • Evacuation of Trench • Side protection of Trench • Preparation of Subgrade • Laying and joining of pipes • Testing Filling up the trench.
5.	• Dead-End or Tee System • Grid Iron System • Ring System or Circular System • Radial System Two Main System
6.	• Asbestos Cement pipe • Cast iron pipe • Cement Concrete pipe • Galvanized Iron Pipe • Steel Pipe • Copper Pipe Plastic Pipe Wrought Pipe
7.	Pipe corrosion can be controlled by taking following measures: • Cathodic Protection • Proper selection of pipe Material • Protective Linings and Coating Treatment of water

8.	Bill of Quantities
9.	The cost of each item of work is worked out from the quantities that are already computed in the details measurement form at workable rate.
10.	In this method the longer walls in a building (generally in one direction) are considered as long walls and measured from out to out: and the shorter or partition walls, in a perpendicular direction of the long walls, are considered as short walls and are measured from in-to-in for a particular layer of work. These lengths of long and short walls are multiplied separately by the breadth and height of the corresponding layer and are added to get the quantity.
11.	Dry chemical fire extinguishers work with a pressurized spray of a dry chemical that will blanket a fire and extinguish it.
12.	The process in which the instantaneous discharge of the electrical energy takes place by transferring charges directly to the earth through low resistance wire.
13.	m ² , cm ² , in ²
14.	Residential site plan. Landscape site plan. Construction site plan
15.	A road leading to particular feature or place