

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-4
Perform Environmental Management
(Formative 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 Environmental Management Perform Basic Green Skills for Urban Area Planning and Management	Assessment Date (DD/MM/YY): Assessment Time:		

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 collect sample of water and waste water as per sampling plan from nearby vicinity assigned by the assessor. Assessment Task 2: Candidate is required to perform following tests on water and waste water samples • pH Value • Dissolved Oxygen • Turbidity • Total suspended solids • Total dissolved solids • Electrical conductivity • Chlorides and Sulfur • BOD and COD Assessment Task 3: Candidate is required to evaluate Noise and Air pollution at specific location assigned by the assessor 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: Select sampling locations, number of samples and timing from sampling plan Performance Criteria 2: Identify hazards associate with the sampling Performance Criteria 3: Follow standard working posture/position at workplace Performance Criteria 4: Select required sampling tool and accessories Performance Criteria 5: De-contaminate the sample container and sampling tools Performance Criteria 6: Collect samples according to sampling plan Performance Criteria 7: Take temperature of water Performance Criteria 8: Perform physical tests as per standard procedures Performance Criteria 9: Prepare sub samples Performance Criteria 10: Seal and label samples in the presence of witness Performance Criteria 11: Take photos of sampling site and sample Performance Criteria 12: Record the data in sampling document Performance Criteria 13: Store the waste materials according to standards Performance Criteria 14: Dispose-off waste material according to green and safety procedures Performance Criteria 15: Perform tasks within standard timeframe Assessment Task 2 Performance Criteria 1: Prepare apparatus and reagents for the test Performance Criteria 2: Identify potential hazards at work place Performance Criteria 3: Measure dissolved oxygen in water Performance Criteria 4: Check turbidity of water Performance Criteria 5: Check pH Value of water Performance Criteria 6: Measure total suspended solids Performance Criteria 7: Measure Chlorides and Sulfate contents Performance Criteria 8: Measure BOD and COD Performance Criteria 9: Check Electrical conductivity of water Performance Criteria 10: Fill in the lab sheet Performance Criteria 11: Compare with the NEQS Performance Criteria 12: Prepare the test record sheet Performance Criteria 13: Store the waste materials according to standards Performance Criteria 14: Dispose-off waste material according to green and safety procedures Performance Criteria 15: Perform tasks within standard timeframe Assessment Task 3 Performance Criteria 1: Select the sampling site as per sampling plan Performance Criteria 2: Record the reading of sound level at specified interval Performance Criteria 3: Evaluate environment quality standards in air Performance Criteria 4: Measure air quality index Performance Criteria 5: Weight and load the blank filter Performance Criteria 6: Adjust the flow rate for a specific duration Performance Criteria 7: Re-weight the filter Performance Criteria 8: Calculate the mass of particulate matter
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	Performance Criteria 9: Calculate the concentration of particulate matter Performance Criteria 10: Perform tasks within standard timeframe Performance Criteria 11: Fill in the lab sheet Performance Criteria 12: Perform tasks within standard timeframe
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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 collect sample of water and waste water as per sampling plan from nearby vicinity assigned by the assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Selected sampling locations, number of samples and timing from sampling plan			
2.	Identified hazards associate with the sampling			
3.	Followed standard working posture/position at workplace			
4.	Selected required sampling tool and accessories			
5.	De-contaminated the sample container and sampling tools			
6.	Collected samples according to sampling plan			
7.	Taken temperature of water			
8.	Performed physical tests as per standard procedures			
9.	Prepared sub samples			
10.	Sealed and labelled samples in the presence of witness			
11.	Taken photos of sampling site and sample			
12.	Recorded the data in sampling document			
13.	Stored the waste materials according to standards			
14.	Disposed-off waste material according to green and safety procedures			
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 perform following tests on water and waste water samples • pH Value • Dissolved Oxygen • Turbidity • Total suspended solids • Total dissolved solids • Electrical conductivity • Chlorides and Sulfur • BOD and COD		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Prepared apparatus and reagents for the test			
2.	Identified potential hazards at work place			
3.	Measured dissolved oxygen in water			
4.	Checked turbidity of water			
5.	Checked pH Value of water			
6.	Measured total suspended solids			
7.	Measured Chlorides and Sulfate contents			
8.	Measured BOD and COD			
9.	Checked Electrical conductivity of water			
10.	Filled in the lab sheet			
11.	Compared with the NEQS			
12.	Prepared the test record sheet			
13.	Store the waste materials according to standards			
14.	Disposed-off waste material according to green and safety procedures			
15.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Each Assessment Task (with performance criteria)				
Assessment Task 3		Description of Assessment Task 3 Candidate is required to evaluate Noise and Air pollution at specific location assigned by the assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Selected the sampling site as per sampling plan			
2.	Recorded the reading of sound level at specified interval			
3.	Evaluated environment quality standards in air			
4.	Measured air quality index			
5.	Weighted and loaded the blank filter			
6.	Adjusted the flow rate for a specific duration			
7.	Re-weighted the filter			
8.	Calculated the mass of particulate matter			
9.	Calculated the concentration of particulate matter			
10.	Performed tasks within standard timeframe			
11.	Filled in the lab sheet			
12.	Performed tasks within standard timeframe			
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
Competency Standard Title: Establish and Maintain the Occupational Health and Safety System Perform Environmental Management Perform Basic Green Skills for Urban Area Planning and Management	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. Enlist types of air pollution	
2. How is noise a source of pollution?	
3. Define decontamination?	
4. Enlist test used for water testing	
5. What are the 4 major water pollutants?	
6. What are green skills?	
7. What are 5R's in waste management?	
8. What does OHS stand for?	
9. Enlist some hazards at workplace?	
10. What does ergonomic condition mean?	

ANSWER KEY

Sr.	Answers
1.	Ozone Particulate matter Sulphur dioxide
2.	Noise pollution unwanted or disturbing sound that affects the health and well -being of human and other organisms.
3.	The process of removing or neutralizing contaminants that have accumulated on personnel and equipment.
4.	pH Value, BOD, COD, Turbidity, TDS, TSS
5.	There are four main categories of water pollution Pathogens Inorganic compounds Organic material Macroscopic pollutants
6.	Green skills are the knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resource-efficient society.
7.	Reuse, reduce, reuse, repurpose and recycle.
8.	Occupational Health and Safety
9.	Electrical, Fire, Water, Natural Disasters
10.	Ergonomic Condition mean environment designed that is fit for worker eliminating the risk of injury.

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-4

**Perform 2D & 3D Engineering Drawings using
CAD Software
(Formative 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 2D & 3D Engineering Drawings using CAD software	Assessment Date (DD/MM/YY): Assessment Time:		

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 draw a set of 2D drawings of a residential building assigned by the assessor. Assessment Task 2: Candidate is required to develop and render the 3D model of a residential building assigned by the assessor. And complete: 1.Knowledge assessment test (Written or Oral) 2.Portfolios at the time of assessment (if any)
	During a practical assessment, under observation by an assessor, you will complete: Assessment Task 1 Performance Criteria 1: Setup user interface settings for required drawing. Performance Criteria 2: Create different 2D shapes with given measurements. Performance Criteria 3: Edit different 2D shapes to meet requirement. Performance Criteria 4: Insert dimensions and symbols as per requirement Performance Criteria 5: Save the file in different drawing formats Performance Criteria 6: Develop 2D Drawing with given project specification and measurements. Performance Criteria 7: Plot drawing on scale according to required size & orientation. Performance Criteria 8: Follow standard working posture/position at workplace Performance Criteria 9: Maintain sufficient light at workplace Performance Criteria 10: Use ergonomic workstations to avoid muscle fatigue Performance Criteria 11: Follow standard exercise to avoid muscle fatigue Performance Criteria 12: Perform tasks within standard timeframe

Minimum Evidence Required	Assessment Task 2 Performance Criteria 1: Setup 3D user interface settings for required drawing. Performance Criteria 2: Create different 3D objects with given measurements. Performance Criteria 3: Modify 3D objects in line with the requirements. Performance Criteria 4: Make customized 3D models according to the requirement of given job. Performance Criteria 5: Generate orthographic views from 3D model Performance Criteria 6: Generate sectional/auxiliary views from 3D model as per requirement Performance Criteria 7: Apply material to required 3D Model as per given specification Performance Criteria 8: Render and print the 3D model according to required size & orientation. Performance Criteria 9: Apply texture to 3D model as per requirement. Performance Criteria 10: Follow standard working posture/position at workplace Performance Criteria 11: Maintain sufficient light at workplace Performance Criteria 12: Use ergonomic workstations to avoid muscle fatigue Performance Criteria 13: Follow standard exercise to avoid muscle fatigue Performance Criteria 14: Perform tasks within standard timeframe
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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 draw a set of 2D drawings of a residential building assigned by the assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Setup user interface settings for required drawing.			
2.	Created different 2D shapes with given measurements.			
3.	Edited different 2D shapes to meet requirement.			
4.	Inserted dimensions and symbols as per requirement			
5.	Saved the file in different drawing formats			
6.	Developed 2D Drawing with given project specification and measurements.			
7.	Plotted drawing on scale according to required size & orientation.			
8.	Followed standard working posture/position at workplace			
9.	Maintained sufficient light at workplace			
10.	Used ergonomic workstations to avoid muscle fatigue			
11.	Followed standard exercise to avoid muscle fatigue			
12.	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 develop and render the 3D model of a residential building assigned by the assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Setup 3D user interface settings for required drawing.			
2.	Created different 3D objects with given measurements.			
3.	Modified 3D objects in line with the requirements.			
4.	Made customized 3D models according to the requirement of given job.			
5.	Generated orthographic views from 3D model			
6.	Generated sectional/auxiliary views from 3D model as per requirement			
7.	Applied material to required 3D Model as per given specification			
8.	Rendered and printed the 3D model according to required size & orientation.			
9.	Applied texture to 3D model as per requirement.			
10.	Followed standard working posture/position at workplace			
11.	Maintained sufficient light at workplace			
12.	Used ergonomic workstations to avoid muscle fatigue			
13.	Followed standard exercise to avoid muscle fatigue			
14.	Performed tasks within standard timeframe			
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
Competency Standard Title: Establish and Maintain the Occupational Health and Safety System Perform 2D & 3D Engineering Drawings using CAD software	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. What are the main commands used in AutoCAD?	
2. What is 2D drawing?	
3. What is 3D drawing?	
4. What is the function of Limits	
5. What is the purpose of command of Array?	
6. What is function of chamfer in autoCAD?	
7. What is the purpose of Hatch in autoCAD drawing?	
8. What is function of Filet command in AutoCAD?	
9. what is the Extrude command?	
10. What is the key used for Ortho on/off?	
11. What is first aid?	

ANSWER KEY

Sr.	Answers
1.	Line, P Line, Circle, Arc, Rectangle, Text, Linear Dimension, Zoom, Copy, Move, offset.
2.	A 2-D drawing consist of two-dimensional elements. It sits in only the X and Y axis.
3.	3D drawing consists of three dimensional models.
4.	It is used to set an invisible rectangle boundary in the drawing area.
5.	It is used to creates copies of objects arrange in a pattern.
6.	An angled line that meets the end points of two straight 2D objects.
7.	Its purpose in AutoCAD is to fill patterns inside an enclosed area.
8.	It is an Arc that creates tangent between two 2D objects. It is a curved transition between two surfaces or adjacent faces.
9.	It is the group of command that are used to convert 2D to 3D objects. It creates a 3D solid from an object that enclose an area or a 3D surface from an object with open end.
10.	F8
11.	Help given to an injured person untill medical treatment is available is known as first aid.

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-4
Plan and Organize work
(Formative 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: Plan and Organize work Perform Advance Communication	Assessment Date (DD/MM/YY): Assessment Time:		

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 plan and organize the activities and estimate the manpower required for performing the layout of services in a housing society and conduct a meeting with sub ordinates for implementation of the proposed activity plan and develop a report. And complete: 1.Knowledge assessment test (Written or Oral) 2.Portfolios at the time of assessment (if any)
	During a practical assessment, under observation by an assessor, you will complete: Assessment Task 1 Performance Criteria 1: Read job order and interpret drawings Performance Criteria 2: Measure the dimensions of site Performance Criteria 3: Verify the specification details with available resources Performance Criteria 4: Prepare list and generate the demand of the components and accessories. Performance Criteria 5: Identify manpower requirements Performance Criteria 6: Calculate the man hours as per job. Performance Criteria 7: Calculate the cost of labor services. Performance Criteria 8: Develop a plan for transportation of material Performance Criteria 9: Identify and report the physical hazards at workplace Performance Criteria 10: Provide the required facilities and utilities Performance Criteria 11: Assign housekeeping task to the sub ordinates. Performance Criteria 12: Monitor the working of sub ordinates Performance Criteria 13: Prepare meeting agenda as per instructions Performance Criteria 14: Identify meeting participants Performance Criteria 15: Maintain focus on the meeting proceedings

Minimum Evidence Required	Performance Criteria 16: Take meeting notes. Performance Criteria 17: Prepare the minutes of the meeting. Performance Criteria 18: Develop follow-up document with timelines. Performance Criteria 19: Write important points from information Performance Criteria 20: Select format and structure of the document. Performance Criteria 21: Draft document Performance Criteria 22: Perform tasks within standard timeframe
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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 plan and organize the activities and estimate the manpower required for performing the layout of services in a housing society and conduct a meeting with sub ordinates for implementation of the proposed activity plan and develop a report.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Read job order and interpret drawings			
2.	Measured the dimensions of site			
3.	Verified the specification details with available resources			
4.	Prepared list and generate the demand of the components and accessories.			
5.	Identified manpower requirements			
6.	Calculated the man hours as per job.			
7.	Calculated the cost of labor services.			
8.	Developed a plan for transportation of material			
9.	Identified and report the physical hazards at workplace			
10.	Provided the required facilities and utilities			
11.	Assigned housekeeping task to the sub ordinates.			
12.	Monitored the working of sub ordinates			
13.	Prepared meeting agenda as per instructions			
14.	Identified meeting participants			
15.	Maintained focus on the meeting proceedings			
16.	Taken meeting notes.			
17.	Prepared the minutes of the meeting.			
18.	Developed follow-up document with timelines.			
19.	Wrote important points from information			
20.	Selected format and structure of the document.			
21.	Drafted document			
22.	Performed tasks within standard timeframe			
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
Competency Standard Title: Plan and Organize work Perform Advance Communication	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. Define Job Order	
2. What do you mean by organizing?	
3. Define responsibility	
4. Define Planning	
5. What is plan and organize work flow?	
6.Why is documentation and record keeping important?	
7.How do you fulfil your responsibilities in the organization?	
8.What is minutes of meeting?	
9.What is a draft?	
10.What is an agenda?	

ANSWER KEY

Sr.	Answers
1.	The written authority given a worker or shop to perform certain work.
2.	Organizing involves coordinating and allocating a firm's resources in order to carry out its plans. It includes developing a structure for the people, positions, departments, and activities within the firm
3.	Keeping promises and honoring our commitments. It is accepting the consequences for what we say and do. It also means developing our potential.
4.	Planning may be defined as deciding in advance what to be done in future. It is the process of thinking before doing. It involves determination of goals as well as the activities required to be undertaken to achieve the goals. An orderly or step-by-step conception or proposal for accomplishing an objective
5.	Helping team members plan and organize work activities set routines, providing direction on how to prioritize daily tasks and deal with potential obstacles. When employees have organized days, there is less time spent trying to figure out the next thing to do.
6.	Good recordkeeping can help you to find the information you need. It promotes the creation of full and accurate records in the first place. It also involves storing and managing records appropriately so that the information will be available to you when you need it.
7.	Be honest and open: It is essential to have a good understanding of yourself, your needs, and others around you.
8.	Written record of everything that happened in the meeting
9.	Draft is a preliminary version of a piece of writing
10.	It is a list of matters to be discussed in the meeting

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-4
Perform Setting out of Urban Project
(Formative 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 Setting out of Urban Project	Assessment Date (DD/MM/YY): Assessment Time:		

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 prepare layout of road, water supply and sewer line services for a small housing scheme using given layout plan and control points assigned by accessor. Assessment Task 2: Candidate is required to prepare layout of a small frame structure using survey control points data assigned by accessor. And complete: 1.Knowledge assessment test (Written or Oral) 2.Portfolios at the time of assessment (if any)
	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 tools and equipment Performance criteria 3: Select required PPE Performance criteria 4: Plan the sequence of the work Performance criteria 5: Establish control points with total station Performance criteria 6: Establish the deflection points and offset with total station Performance criteria 7: Set earthing profiles at required distance Performance criteria 8: Establish control points along the sewer line with total station Performance criteria 9: Mark the deflection points and manhole of the supply line Performance criteria 10: Mark the center line Performance criteria 11: Erect sight rails Performance criteria 12: Establish the temporary benchmark Performance criteria 13: Calculate the invert levels of supply line Performance criteria 14: Set the invert level with boning rod

Minimum Evidence Required	Performance criteria 15: Calculate the man hours as per job Performance criteria 16: Identify and report the physical hazards at workplace Performance criteria 17: Perform tasks within standard timeframe Assessment task 2 Performance criteria 1: Interpret layout plan of the project Performance criteria 2: Select required tools and equipment Performance criteria 3: Select required PPE Performance criteria 4: Plan the sequence of the work Performance criteria 5: Assign duties among the sub ordinates Performance criteria 6: Establish control points in the surrounding with total station Performance criteria 7: Mark the grid points with total station Performance criteria 8: Establish the temporary benchmark Performance criteria 9: Mark out the excavation with lime powder Performance criteria 10: Establish the profile boards/offset pegs Performance criteria 11: Mark out bed level pegs Performance criteria 12: Perform tasks within standard timeframe
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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 prepare layout of road, water supply and sewer line services for a small housing scheme using given layout plan and control points assigned by accessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Interpreted layout plan of the project			
2.	Selected required tools and equipment			
3.	Selected required PPE			
4.	Planned the sequence of the work			
5.	Established control points with total station			
6.	Established the deflection points and offset with total station			
7.	Set earthing profiles at required distance			
8.	Established control points along the sewer line with total station			
9.	Marked the deflection points and manhole of the supply line			
10.	Marked the center line			
11.	Erected sight rails			
12.	Established the temporary benchmark			
13.	Calculated the invert levels of supply line			
14.	Set the invert level with boning rod			
15.	Calculated the man hours as per job			
16.	Identified and report the physical hazards at workplace			
17.	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 layout of a small frame structure using survey control points data assigned by accessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Interpreted layout plan of the project			
2.	Selected required tools and equipment			
3.	Selected required PPE			
4.	Planned the sequence of the work			
5.	Assigned duties among the sub ordinates			
6.	Established control points in the surrounding with total station			
7.	Marked the grid points with total station			
8.	Established the temporary benchmark			
9.	Marked out the excavation with lime powder			
10.	Established the profile boards/offset pegs			
11.	Marked out bed level pegs			
12.	Performed tasks within standard timeframe			
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
Competency Standard Title: Establish and Maintain the Occupational Health and Safety System Perform Setting out of Urban Project	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. What is a layout plan?	
2. What is a bench mark?	
3. What is center line?	
4. Define Catchment area	
5. Enlist types of sewers?	
6. What is self-cleansing velocity?	
7. What is bed level?	
8. What is excavation	
9. Enlist any two general safety rules?	
10. How do you maintain safety at workplace?	

ANSWER KEY

Sr.	Answers
1.	A plan of the entire site showing location of plot/ building/roads and parking etc
2.	A standard point of reference against which things may be compared
3.	A line passing through the center of something
4.	The area from which rainfall flows into a river or reservoir
5.	Sanitary sewer, storm sewer and combined sewer
6.	Minimum velocity at which sewage should flow that there is no deposition or accumulation of particles along the length of drain
7.	Mud level is also known as bed level
8.	Work involving removal of soil or rock from a site using tools and machinery
9.	Keep the area clean Use proper tools for the job Always wear proper PPE
10.	Understand the risks. Reduce workplace stress. Take regular breaks. Avoid stooping or twisting. Use mechanical aids whenever possible. Protect your back. Wear protective equipment to suit the task. Stay sober

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-4
Perform Advance Survey
(Formative 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 Survey	Assessment Date (DD/MM/YY): Assessment Time:		

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 prepare a topographic map of a locality by traversing and measure the area. 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: Select required tools and equipment Performance criteria 2: Select required PPE Performance criteria 3: Plan the sequence of the work Performance criteria 4: Identify and report the physical hazards at workplace Performance criteria 5: Setup total station on a point Performance criteria 6: Input data (coordinates, instrument and prism height) Performance criteria 7: Orientate the total station horizontally and vertically Performance criteria 8: Measure horizontal angles of the station Performance criteria 9: Select coding for station point Performance criteria 10: Target the locations in the vicinity one by one Performance criteria 11: Calculate area by using area mode of total station Performance criteria 12: Measure the perimeter of traverse by MLM mode Performance criteria 13: Download data to the computer Performance criteria 14: Plot the topographic plan Performance criteria 15: Monitor the working of sub ordinates Performance criteria 16: Perform tasks within standard timeframe

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 prepare a topographic map of a locality by traversing and measure the area.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Selected required tools and equipment			
2.	Selected required PPE			
3.	Planned the sequence of the work			
4.	Identified and report the physical hazards at workplace			
5.	Setup total station on a point			
6.	Input data (coordinates, instrument and prism height)			
7.	Orientated the total station horizontally and vertically			
8.	Measured horizontal angles of the station			
9.	Selected coding for station point			
10.	Targeted the locations in the vicinity one by one			
11.	Calculated area by using area mode of total station			
12.	Measured the perimeter of traverse by MLM mode			
13.	Downloaded data to the computer			
14.	Plotted the topographic plan			
15.	Monitored the working of sub ordinates			
16.	Performed tasks within standard timeframe			
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
Competency Standard Title: Establish and Maintain the Occupational Health and Safety System Perform Advance Survey	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. Define centering	
2. Define transiting	
3. Define face left observation	
4. Define horizontal & vertical angle	
5. What is REM	
6. Define MLM mode	
7. Enlist five components of total station	
8. What is Stadia survey	
9. Write down different Methods of traversing	
10.Enlist 3 first aid	

ANSWER KEY

Sr.	Answers
1.	Centering means bringing the vertical axis of the theodolite exactly over the station mark.
2.	Transiting is to pass across or through surveying to turn the telescope of a transit in a vertical plane in order to reverse direction.
3.	While taking the reading, if the vertical side is towards the left of the observer, then it is called face left observation.
4.	Horizontal angles are used to determine bearings and directions in control surveys, for locating detail when mapping and for setting out all types of structure. Vertical angles are used when determining the heights of points and to calculate slope corrections.
5.	The process of finding the height of objects without actually going to the top of the object is known as Remote Elevation Measuring (REM)
6.	Missing line measurement is the process of finding the distance between two points A & B (which are not inter-visible from each other) from another point 'I' (instrument position) is known as MLM.
7.	• 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
8.	A method of surveying in which distances and elevations are obtained by observing the interval on a graduated, upright rod (stadia rod) intercepted by two parallel horizontal lines (stadia hairs or stadia wires) in a surveyor's transit set up at a distance from the rod.
9.	• 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
10.	• Cut/Bleeding • Broken bone • Eye injury • Minor burning

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-4

**Construct and Maintain water and waste water scheme
(Formative 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 Construct and Maintain water and waste water scheme	Assessment Date (DD/MM/YY): Assessment Time:		

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 plan and execute the laying a sewer line in a specific reach. It must include the following activities • Sequence the job activities • Arrange materials and tools • Identify and report potential hazards • Demark the line and excavation • Laying and jointing the pipe • Restore the work site Assessment Task 2: Candidate is required to perform leakage test on pre laid pipelines and rectify the leakage. And complete: 1.Knowledge assessment test (Written or Oral) 2.Portfolios at the time of assessment (if any)
	During a practical assessment, under observation by an assessor, you will complete: Assessment Task 1 Performance criteria 1: Identify work requirements Performance criteria 2: Perform site check to prevent damage to utilities Performance criteria 3: Select the required equipment Performance criteria 4: Calculate required manpower Performance criteria 5: Identify potential risks to public and environment Performance criteria 6: Select required PPE Performance criteria 7: Perform setting out of pipeline plan Performance criteria 8: Check Excavation alignment and invert level Performance criteria 9: Join pipes and fittings

Minimum Evidence Required	Performance criteria 10: Calculate backfill excavation 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: Perform tasks within standard timeframe Assessment Task 2 Performance criteria 1: Identify work requirements Performance criteria 2: Perform site check to prevent damage to utilities Performance criteria 3: Select the required equipment Performance criteria 4: Calculate required manpower Performance criteria 5: Identify potential risks to public and environment Performance criteria 6: Select required PPE Performance criteria 7: Perform water leakage test Performance criteria 8: Perform leakage test as per requirement Performance criteria 9: Isolate the work area. Performance criteria 10: Select required repair method Performance criteria 11: Decontaminate material before installing Performance criteria 12: Perform tasks within standard timeframe
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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 plan and execute the laying a sewer line in a specific reach. It must include the following activities • Sequence the job activities • Arrange materials and tools • Identify and report potential hazards • Demark the line and excavation • Laying and jointing the pipe • Restore the work site		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified work requirements			
2.	Performed site check to prevent damage to utilities			
3.	Selected the required equipment			
4.	Calculated required manpower			
5.	Identified potential risks to public and environment			
6.	Selected required PPE			
7.	Performed setting out of pipeline plan			
8.	Checked Excavation alignment and invert level			
9.	Joined pipes and fittings			
10.	Calculated backfill excavation			
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.	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 perform leakage test on pre laid pipelines and rectify the leakage.	
During the practical assessment, candidate demonstrated the following:		Yes	No
1.	Identified work requirements		
2.	Performed site check to prevent damage to utilities		
3.	Selected the required equipment		
4.	Calculated required manpower		
5.	Identified potential risks to public and environment		
6.	Selected required PPE		
7.	Performed water leakage test		
8.	Performed leakage test as per requirement		
9.	Isolated the work area.		
10.	Selected required repair method		
11.	Decontaminated material before installing		
12.	Performed tasks within standard timeframe		
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
Competency Standard Title: Follow Safety Rules at Field Perform Basic Survey and Leveling	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
Explain Disinfection Procedure of Pipe Before Use.	
Enlist any four tests for detection of leakage of water in Pipe.	
Enlist Steps for pipe laying.	
Enlist method of distribution of Water Supply Scheme,	
Enlist five layout of distribution system	
Enlist different types of pipe joints	
Enlist types of pipes?	
What is per capita demand?	
How pipe corrosion can be prevented.	
Define Self-cleaning velocity	

ANSWER KEY

Sr.	Answers
1.	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.
2.	• Compressed Air • Hydraulic Gradient • Sound Test • Direct Observation
3.	• 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.
4.	• Gravity System • Combined Gravity and Pumping System • Pumping System.
5.	• Dead-End or Tee System • Grid Iron System • Ring System or Circular System • Radial System • Two Main System
6.	• Bell and Spigot Joint • Collar Joint • Flanged or Threaded Joint • Expansion Joint • Flexible Joint
7.	• Asbestos Cement pipe • Cast iron pipe • Cement Concrete pipe • Galvanized Iron Pipe • Steel Pipe • Copper Pipe • Plastic Pipe Wrought Pipe
8.	The demand of water per person per day is known as per capita demand or per capita consumption.
9.	Pipe corrosion can be controlled by taking following measures: • Cathodic Protection • Proper selection of pipe Material • Protective Linings and Coating • Treatment of water
10.	Self-cleansing velocity is defined as the minimum velocity at which sewage should flows such that there is no deposition or accumulation of particles along the drain length.

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-4
Prepare Detailed Estimate
(Formative 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 Prepare Detailed Estimate	Assessment Date (DD/MM/YY): Assessment Time:		

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 prepare detailed estimate for a domestic building. This activity must include the following • Measurement sheets for building portion and sanitation • Material statements • Rate analysis for major item of work assigned by the assessor • Abstract of cost Assessment Task 2: Candidate is required to prepare detailed estimate of road for a small reach using the given profile levelling data and jobs. It must include the calculation of earthworks. Assessment Task 3: Candidate is required to prepare an annual and special repair estimates for road using the standards measurement book/ BOQ of the set works. And complete: 1.Knowledge assessment test (Written or Oral) 2.Portfolios at the time of assessment (if any)
	During a practical assessment, under observation by an assessor, you will complete: Assessment Task 1 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: Calculate the quantity of water and sanitary item of works Performance criteria 6: Calculate the quantity of electrical item of works Performance criteria 7: Add other overhead charges for the building. Performance criteria 8: Implement the principles of deduction for surface rendering.

Minimum Evidence Required	Performance criteria 9: Draw Abstract of Cost table. Performance criteria 10: Calculate the amount of each item of work. Performance criteria 11: Add contractor's profit on amounts of relevant rates. Performance criteria 12: Add contingencies. Performance criteria 13: Add building Services charges for the building. Performance criteria 14: Calculate quantities of pipes. Performance criteria 15: Calculate the quantities of appurtenance Performance criteria 16: Calculate the quantities of tank & taps. Performance criteria 17: Identify materials and their rate Performance criteria 18: Calculate materials and their cost by input rates (MRS). Performance criteria 19: Calculate the labour charges for job Performance criteria 20: Calculate the carriage charges for the ingredients. Performance criteria 21: Add sundries lump sum charges Performance criteria 22: Sum up the amounts and add contractor's profit. Performance criteria 23: Add water charges Performance criteria 24: Fill the quantities in schedule of material statement Performance criteria 25: Perform tasks within standard timeframe Assessment Task 2 Performance criteria 1: Identify potential risks at workplace Performance criteria 2: Calculate the quantity of vegetation Performance criteria 3: Calculate area of site for surveying and levelling. Performance criteria 4: Calculate area of permanent land. Performance criteria 5: Calculate the volume of earth work. Performance criteria 6: Calculate area of temporary land. Performance criteria 7: Calculate volume of sub-base and base course of site. Performance criteria 8: Calculate area of surfacing Performance criteria 9: Perform tasks within standard timeframe Assessment Task 3 Performance criteria 1: Take the manual measurements from site. Performance criteria 2: Calculate the volume of dismantling base & sub-base. Performance criteria 3: Calculate volume of sub-base and base course of road. Performance criteria 4: Calculate area of surfacing Performance criteria 5: Identify the items of work for Annual Repair of road. Performance criteria 6: Calculate quantities of items of work for Annual Repair. Performance criteria 7: Prepare abstract of cost Performance criteria 8: Perform tasks within standard timeframe
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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							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of Assessment Task 1 Candidate is required to prepare detailed estimate for a domestic building. This activity must include the following • Measurement sheets for building portion and sanitation • Material statements • Rate analysis for major item of work assigned by the assessor • Abstract of cost		
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.	Calculated the quantity of water and sanitary item of works			
6.	Calculated the quantity of electrical item of works			
7.	Added other overhead charges for the building.			
8.	Implemented the principles of deduction for surface rendering.			
9.	Drawn Abstract of Cost table.			
10.	Calculated the amount of each item of work.			
11.	Added contractor's profit on amounts of relevant rates.			
12.	Added contingencies.			
13.	Added building Services charges for the building.			
14.	Calculated quantities of pipes.			
15.	Calculated the quantities of appurtenance			
16.	Calculated the quantities of tank & taps.			
17.	Identified materials and their rate			
18.	Calculated materials and their cost by input rates (MRS).			
19.	Calculated the labour charges for job			
20.	Calculated the carriage charges for the ingredients.			
21.	Added sundries lump sum charges			
22.	Summed up the amounts and add contractor's profit.			
23.	Added water charges			
24.	Filled the quantities in schedule of material statement			
25.	Performed tasks within standard timeframe			

Competent ☐	Not Yet Competent ☐
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Each Assessment Task (with performance criteria)				
Assessment Task 2		Description of Assessment Task 2 Candidate is required to prepare detailed estimate of road for a small reach using the given profile levelling data and jobs. It must include the calculation of earthworks.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential risks at work place			
2.	Calculated the quantity of vegetation			
3.	Calculated area of site for surveying and levelling.			
4.	Calculated area of permanent land.			
5.	Calculated the volume of earth work.			
6.	Calculated area of temporary land.			
7.	Calculated volume of sub-base and base course of site.			
8.	Calculated area of surfacing			
9.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Each Assessment Task (with performance criteria)				
Assessment Task 3		Description of Assessment Task 3 Candidate is required to prepare an annual and special repair estimates for road using the standards measurement book/ BOQ of the set works.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Taken the manual measurements from site.			
2.	Calculated the volume of dismantling base & sub-base.			
3.	Calculated volume of sub-base and base course of road.			
4.	Calculated area of surfacing			
5.	Identified the items of work for Annual Repair of road.			
6.	Calculated quantities of items of work for Annual Repair.			
7.	Prepared abstract of cost			
8.	Performed tasks within standard timeframe			
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
Competency Standard Title: Establish and Maintain the Occupational Health and Safety System Prepare Detailed Estimate	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. Define detailed estimate	
2. What does BOQ stands for?	
3. What is procedure of estimating?	
4. Define abstract of cost.	
5. What are the methods of taking out estimates?	
6. Explain Out to Out and IN to IN method.	
7. Explain about bay method.	
8.What is fire extinguisher?	
9.Define electrical shock.	
10.What is earthing?	
11. Explain center line method.	

ANSWER KEY

Sr.	Answers
1.	The estimate, which provides the item wise quantities of works, item wise unit rates and item wise expenditure anticipated in the project/construction, is called a detailed estimate
2.	Bill of Quantities
3.	• Preparing detailed Estimate. • Calculating the rate of each unit of work • Preparing abstract of estimate
4.	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.
5.	• Centre line method • Crossing method • Out to Out and in to in method • Bay method • Service unit method
6.	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.
7.	The cost of the typical bay is worked out and is then multiplied by the number of bays in that building. The extra cost for the end walls and difference in framing, if there is any, should be made, so as to arrive at the correct cost
8.	Dry chemical fire extinguishers work with a pressurized spray of a dry chemical that will blanket a fire and extinguish it.
9.	An electric shock occurs when a person comes into contact with an electrical energy source. Electrical energy flows through a portion of the body causing a shock.
10.	The process in which the instantaneous discharge of the electrical energy takes place by transferring charges directly to the earth through low resistance wire.
11.	In this method of estimation, the total center line length of walls in a building is first calculated, and then the center line length is multiplied with the breadth and depth of respective item to get the total quantity at a time.

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-4
Prepare Zone Plan
(Formative 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 Prepare Zone Plan	Assessment Date (DD/MM/YY): Assessment Time:		

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 prepare the layout plan for a small housing society using the survey map data and housing standards including • Location map of a society • Mark the zone allocation • Draw road network plan • Draw services network plan • Waste disposal plan • Calculate the zoning percentage and rectify the layout plans as per standard 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: Identify potential risks at workplace Performance Criteria 2: Draw scale for location plan Performance Criteria 3: Select location of site on survey map Performance Criteria 4: Draw main features on site plan Performance Criteria 5: Draw outline of site plan Performance Criteria 6: Draw legend and North direction on site plan Performance Criteria 7: Draw surrounding properties on site plan Performance Criteria 8: Draw boundary line on survey map Performance Criteria 9: Calculate site map Performance Criteria 10: Mark different zone on survey map Performance Criteria 11: Draw land use percentage legend

	Performance Criteria 12: Compare the calculated zone area with standards Performance Criteria 13: Draw ultimate waste disposal of scheme Performance Criteria 14: Prepare land use percentage legend Performance Criteria 15: Perform tasks within standard timeframe
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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

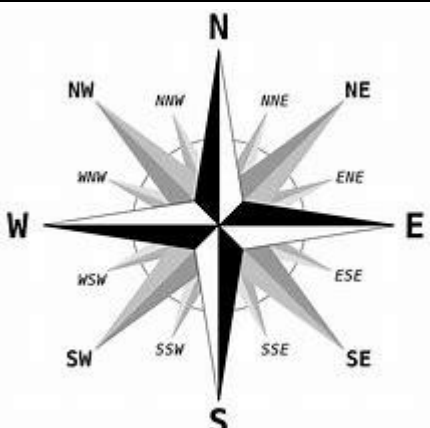
Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of Assessment Task 1 Candidate is required to prepare the layout plan for a small housing society using the survey map planning data and housing standards including • Location map of a society • Mark the zone allocation • Draw road network plan • Draw services network plan • Waste disposal plan • Calculate the zoning percentage and rectify the layout plans as per standard		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential risks at workplace			
2.	Drawn scale for location plan			
3.	Selected location of site on survey map			
4.	Drawn main features on site plan			
5.	Drawn outline of site plan			
6.	Drawn legend and North direction on site plan			
7.	Drawn surrounding properties on site plan			
8.	Drawn boundary line on survey map			
9.	Calculated site map			
10.	Marked different zone on survey map			
11.	Drawn land use percentage legend			
12.	Compared the calculated zone area with standards			
13.	Drawn ultimate waste disposal of scheme			
14.	Prepared land use percentage legend			
15.	Performed tasks within standard timeframe			
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
Competency Standard Title: Establish and Maintain the Occupational Health and Safety System Prepare Zone Plan	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1.What is legend of survey symbol	
2.Define Area?	
3.What is unit of area?	
4.Define Site plan?	
5.Enlist types of site plan?	
6.Define scale	
7. What is an approach road?	
8.What is north direction?	
9.Draw North mark	
10. Enlist Important factors of workplace ergonomics	

ANSWER KEY

Sr.	Answers
1.	A key or legend is a list of symbols that appear on the map. For example, a church on the map may appear as a cross, a cross attached to a circle.
2.	Area is the region occupied by a shape
3.	m ² , cm ² , in ²
4.	A site plan or a plot plan is a type of drawing used by architects, landscape architects, urban planners, and engineers which shows existing and proposed conditions for a given area.
5.	Residential site plan. Landscape site plan. Construction site plan
6.	A drawing that shows a real object with accurate sizes reduced or enlarged by a certain amount (called the scale). The scale is shown as the length in the drawing, then a colon (":"), then the matching length on the real thing.
7.	A road leading to particular feature or place
8.	North is one of the four compass point or cardinal directions.it is the opposite of south and is perpendicular to east and west.
9.	
10.	Proper illumination Proper sitting posture Exercise to avoid muscle fatigue Lumbar support chairs