

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-3
Process Consumer Complaint
(Formative Assessment)

28th March – 1st April 2022



National Vocational & Technical
Training Commission

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level: 3	Version: 01
Competency Standard Title: Maintain Safety at Workplace Perform Consumer Complaint	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 play a role in a team, conversation on telephone with the complainer, note down the complaint in the register and forward it electronically to the concerned department and trace the feedback. 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: Check leads and cable for any visual damage before use Performance Criteria 2: Process the complaint as per organization SOP Performance Criteria 3: Maintain complaint register Performance Criteria 4: Identify the complaint to be referred Performance Criteria 5: Forward all the documents and investigation report Performance Criteria 6: Follow the reported complaint Performance Criteria 7: Provide feedback to the complainant Performance Criteria 8: 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 play a role in a team, conversation on telephone with the complainer, note down the complaint in the register and forward it electronically to the concerned department and trace the feedback.			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Checked leads and cable for any visual damage before use			
2.	Processed the complaint as per organization SOP			
3.	Maintained complaint register			
4.	Identified the complaint to be referred			
5.	Forwarded all the documents and investigation report			
6.	Followed the reported complaint			
7.	Provided feedback to the complainant			
8.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level:3	Version:01
Competency Standard Title: Maintain Safety at Workplace Perform Consumer Complaint	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. What is the purpose of complaint policy?	
2. What are 5 steps of handling a customer complaint?	
3. What is role-based process?	
4. What are four good communication skills?	
5. PPE stand for?	
6. What is Feedback?	
7. What is a complaint?	
8. What does PASS mean in Firefighting?	
9. Enlist any five Verbal communication techniques?	
10. Methods of investigation?	

ANSWER KEY

Sr.	Answers
1.	Purpose of complaint policy is to ensure that all complaints are handled fairly, consistently and resolved to the complainant's satisfaction.
2.	1.Stay Calm 2.Listen well 3.Acknowledge the problem 4.Get the facts 5.Offer a solution
3.	The planning process may be an iterative process and it may involve many people at different levels of the organization. The type of activities performed may depend on the individual job responsibilities associated with the specific role.
4.	Thinking, Non-verbal, Listening, Speaking
5.	Personal Protective Equipment
6.	Information about reaction to a person's performance on a task or a product.
7.	A statement that something is unsatisfactory.
8.	(pull, aim, squeeze, sweep)
9.	• Active listening • Clarity and conciseness • Confidence • Empathy • Friendliness • Open-mindedness • Giving and soliciting feedback • Confidence • Respectfulness
10.	• Testing • Identifying • Classifying • Modelling • Pattern Seeking • Researching

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-3
Perform Basic Plumbing
(Formative Assessment)

28th March – 1st April 2022



National Vocational & Technical
Training Commission

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level: 3	Version: 01
Competency Standard Title: Maintain Safety at workplace Perform Basic Plumbing	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 make a pattern of G.I pipes comprising of socket, tee, union, elbow, reducer and handle valve. Assessment Task 2: Candidate is required to make a pattern of PPRC pipes comprising of socket, tee, union, elbow, reducer and perform leakage test 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 hazards at work site Performance Criteria 2: Perform mock first aid treatment for minor injuries Performance Criteria 3: Identify the risk of slip, trip and fall at work place Performance Criteria 4: Draw required layout drawing Performance Criteria 5: Identify plumbing tools & equipment Performance Criteria 6: Perform pipe cutting Performance Criteria 7: Perform pipe threading Performance Criteria 8: Perform pipe reaming Performance Criteria 9: Select required pipes and fitting Performance Criteria 10: Select required die Performance Criteria 11: Perform cutting and threading of pipe Performance Criteria 12: Select required socket Performance Criteria 13: Join G.I pipe with socket Performance Criteria 14: Perform tasks within standard timeframe

Minimum Evidence Required	Assessment Task 2 Performance Criteria 1: Identify potential hazards at work site Performance Criteria 2: Perform mock first aid treatment for minor injuries Performance Criteria 3: Identify the risk of slip, trip and fall at work place Performance Criteria 4: Draw required layout drawing Performance Criteria 5: Identify plumbing tools & equipment Performance Criteria 6: Select required pipes and fitting Performance Criteria 7: Select required socket Performance Criteria 8: Join PPRC pipes using heating tool Performance Criteria 9: Allow the joint to cool down Performance Criteria 10: Take pipe leakage test Performance Criteria 11: 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 make a pattern of G.I pipes comprising of socket, tee, union, elbow, reducer and handle valve.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Performed mock first aid treatment for minor injuries			
3.	Identified the risk of slip, trip and fall at work place			
4.	Drawn required layout drawing			
5.	Identified plumbing tools & equipment			
6.	Performed pipe cutting			
7.	Performed pipe threading			
8.	Performed pipe reaming			
9.	Selected required pipes and fitting			
10.	Selected required die			
11.	Performed cutting and threading of pipe			
12.	Selected required socket			
13.	Joined G.I pipe with socket			
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 make a pattern of PPRC pipes comprising of socket, tee, union, elbow, reducer and perform leakage test		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Performed mock first aid treatment for minor injuries			
3.	Identified the risk of slip, trip and fall at work place			
4.	Drawn required layout drawing			
5.	Identified plumbing tools & equipment			
6.	Selected required pipes and fitting			
7.	Selected required socket			
8.	Joined PPRC pipes using heating tool			
9.	Allowed the joint to cool down			
10.	Taken pipe leakage test			
11.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level:3	Version:01
Competency Standard Title: Maintain Safety at workplace Perform Basic Plumbing	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. What are the tools used in plumbing?	
2. What is a layout drawing of plumbing?	
3. What is the tools equipment used in pipe cutting?	
4. What is the purpose of threading in plumbing?	
5. What are reaming and its objective?	
6. PPRC stands for?	
7. The device is used to join two PPRC pipes with each other?	
8. What is the temperature of heater required for joining PPRC pipes?	
9. How many types of fitting used in plumbing?	
10. How many types of tests used to identify leakage of pipes in plumbing?	
11. What is difference between PPRC pipes and G.I pipes?	
12. What is first aid?	

ANSWER KEY

Sr.	Answers
1.	pipe wrench, spanner, screw drivers, basin wrench, pipe cutter, torque wrench, adjustable spanner, hack saw, measurement tape, Steel pipe threading machine, heater etc.
2.	The layout drawing which shows the layout of systems of pipes and piping arrangement that serve the process.
3.	Hacksaw, Tubing cutter, PEX cutter, Bench vice, measurement tape,
4.	The purpose of threading pipe is to provide a good seal for pipes that will be transporting things such as liquids, gas, hydraulic fluids and other content.
5.	Enlarge the size of a previously formed hole by a small amount but with a high degree of accuracy to leave smooth sides.
6.	Polypropylene random co-polymer.
7.	PPR Heater Temperature Controlled Pipe Welding Machine
8.	260 Degree Centigrade
9.	Elbow, Reducer, Tee type, Cross type, Coupling, Unions, Adaptors, Olet, Plug, Cap
10.	Video Camera Inspection, Hydrostatic Pressure Test, Electronic Listening Device Tests, Static Leak Isolation, Digital Water Leak Detection Test
11.	PPRC pipes are non-metallic pipes and GI pipes are metallic pipes. PPR pipes light weight and GI pipes are heavy in weight.
12.	Help given to an injured person until medical treatment is available is known as first aid.

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-3
Produce Civil Engineering Drawings
(Formative Assessment)

28th March – 1st April 2022



National Vocational & Technical
Training Commission

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level: 3	Version: 01
Competency Standard Title: Follow Safety Rules at Field Produce Civil Engineering Drawings	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 submission drawing of a single storey (5 Marla) residential building. Assessment Task 2: Candidate is required to prepare the sanitation drawing for a public building plan provided by accessor. 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 hazards at work site Performance Criteria 2: Draw required plan with details Performance Criteria 3: Draw required front and side elevation Performance Criteria 4: Draw required site plan, layout plan Performance Criteria 5: Draw required cross section Performance Criteria 6: Perform tasks within standard timeframe Assessment Task 2 Performance Criteria 1: Identify potential hazards at work site Performance Criteria 2: Draw layout plan for water supply and sanitation for domestic building Performance Criteria 3: Draw the details of services structures Performance Criteria 4: 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 submission drawing of a single storey (5 Marla) residential building.	
During the practical assessment, candidate demonstrated the following:		Yes	No
1.	Identified potential hazards at work site		
2.	Drawn required plan with details		
3.	Drawn required front and side elevation		
4.	Drawn required site plan, layout plan		
5.	Drawn required cross section		
6.	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 sanitation drawing for a public building plan provided by accessor.	
During the practical assessment, candidate demonstrated the following:		Yes	No
1.	Identified potential hazards at work site		
2.	Drawn layout plan for water supply and sanitation for domestic building		
3.	Drawn the details of services structures		
4.	Performed tasks within standard timeframe		
Competent ☐		Not Yet Competent ☐	

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level:3	Version:01
Competency Standard Title: Follow Safety Rules at Field Produce Civil Engineering Drawings	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. Define site plan	
2. Define layout plan	
3. Enlist types of roads	
4. Define front elevation	
5. Name components of road	
6. What is crown?	
7. What is the purpose of road drainage	
8. Enlist types of drainage system	
9. Name any 3 types of building depending on its use	
10. State the different types of building drawings.	
11. Enlist types of water supply system	
12. Define sanitary fixtures	
13. What is septic tank	
14. What is the purpose of Manhole	
15. Define Invert level	

ANSWER KEY

Sr.	Answers
1.	It is a drawing which shows existing and proposed conditions for a given area which is to be modified.
2.	It is a plan of entire site showing location of plots, roads, open spaces and landscaping etc.
3.	• Flexible road • Rigid road
4.	The front elevation is a straight-on view of the object
5.	• Sub grade • Sub base • Base course • Surface/wearing course
6.	It is the highest point on road surface
7.	Road drainage maintains the surface of the road and its foundation as dry as possible with water. It maintains the stability and durability of the road.
8.	• Surface drainage • Sub surface drainage
9.	• Residential building • Institutional building • Industrial building
10.	• Architectural Drawing • Structural Drawing • Electrical Drawing • Plumbing Drawing • Finishing Drawing
11.	• Grid iron system • Radial system • Dead end system • Ring system
12.	It means a receptacle to which water is permanently supplied, and from which waste water or soil water is discharged
13.	It is a tank in which sewage is collected and allowed to decompose through bacterial activity
14.	• To perform inspection, cleaning of sewage line. • The joining of sewers • Helps the foul gases to escape. • Manholes help to lay the sewer line in the conventional lengths.
15.	It is the lowest level of any sewer line

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-3
Prepare Rough Cost Estimation
(Formative Assessment)

28th March – 1st April 2022



National Vocational & Technical
Training Commission

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level: 3	Version: 01
Competency Standard Title: Follow Safety Rules at Field Prepare Rough Cost Estimation	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 rough cost estimation of following services for a housing society using layout plan and data • Water supply scheme with tube well & water tank • Sewerage scheme with disposal • Road networks Assessment Task 2: Candidate is required to prepare the rough cost estimation of following buildings with the help of line plan by unit rate and plinth area method. • Residential building • Apartment building 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 hazards at work site Performance Criteria 2: Measure lengths of each diameter pipe. Performance Criteria 3: Prepare analysis of rate for pipe line Performance Criteria 4: Calculate amount of pipe line. Performance Criteria 5: Collect the population and hydraulic data Performance Criteria 6: Calculate the demand of water Performance Criteria 7: Calculate capacity of tank in gallons. Performance Criteria 8: Calculate length of the supply line and appurtenance Performance Criteria 9: Calculate cost of construction of tank. Performance Criteria 10: Measure lengths of each diameter pipe. Performance Criteria 11: Prepare analysis of rate for sewer line Performance Criteria 12: Prepare the analysis of rate for manhole

Minimum Evidence Required	Performance Criteria 13: Calculate amount of sewer line. Performance Criteria 14: Perform drilling to produce hole Performance Criteria 15: Calculate area of road site. Performance Criteria 16: Calculate the volume of earthworks Performance Criteria 17: Calculate volume of sub base and base course of road Performance Criteria 18: Calculate area of surfacing Performance Criteria 19: Measure items of road marking and sign boards. Performance Criteria 20: Prepare abstract of cost. Performance Criteria 21: Perform tasks within standard timeframe Assessment Task 2 Performance Criteria 1: Identify potential hazards at work site Performance Criteria 2: Interpret line plan. Performance Criteria 3: Divide plan into small units Performance Criteria 4: Calculate number of units Performance Criteria 5: Calculate unit rate Performance Criteria 6: Compile results of estimate Performance Criteria 7: Calculate covered area of building Performance Criteria 8: Calculate cost per square unit Performance Criteria 9: Calculate cost estimate Performance Criteria 10: 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 rough cost estimation of following services for a housing society using layout plan and data • Water supply scheme with water tank • Sewerage scheme with disposal • Roads networks		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Measured lengths of each diameter pipe.			
3.	Prepared analysis of rate for pipe line			
4.	Calculated amount of pipe line.			
5.	Collected the population and hydraulic data			
6.	Calculated the demand of water			
7.	Calculated capacity of tank in gallons.			
8.	Calculated length of the supply line and appurtenance			
9.	Calculated cost of construction of tank.			
10.	Measured lengths of each diameter pipe.			
11.	Prepared analysis of rate for sewer line			
12.	Prepared the analysis of rate for manhole			
13.	Calculated amount of sewer line.			
14.	Performed drilling to produce hole			
15.	Calculated area of road site.			
16.	Calculated the volume of earthworks			
17.	Calculated volume of sub base and base course of road			
18.	Calculated area of surfacing			
19.	Measured items of road marking and sign boards.			
20.	Prepared abstract of cost.			
21.	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 rough cost estimation of following buildings with the help of line plan by unit rate and plinth area method. • Residential building • Apartment building		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Interpreted line plan.			
3.	Divided plan into small units			
4.	Calculated number of units			
5.	Calculated unit rate			
6.	Compiled results of estimate			
7.	Calculated covered area of building			
8.	Calculated cost per square unit			
9.	Calculated cost estimate			
10.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level:3	Version:01
Competency Standard Title: Follow Safety Rules at Field Prepare Rough Cost Estimation	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1. Define estimate.	
2. Enlist data required for preparation of an estimate	
3. What are the types of estimates?	
4. How would you calculate rough cost by unit rate method?	
5. Define Plinth area	
6. How would you calculate rough cost by plinth area method?	
7. What is specification?	
8. State the different types of specification	
9. Describe general or brief specification	
10. Describe detailed specification	
11. Define quantity surveyor	

ANSWER KEY

Sr.	Answers
1.	An estimate is a calculation of various items of an engineering work so as to know its approximate cost and the quantities of various materials required with labor involved for its satisfactory completion.
2.	• Drawings i.e. plans, elevations, sections etc. • Specifications. • Rates.
3.	• Preliminary Estimate or Rough cost estimate • Plinth area estimate • Cube Rate Estimate or Cubical Content Estimate • Approximate Quantity Method Estimate • Detailed Estimate or Item Rate Estimate • Revised Estimate • Supplementary Estimate and Revised Estimate. • Annual Repair or Maintenances Estimate • Supplementary Estimate
4.	Approximate cost of structure by unit area method can be calculated by multiplying number of service units in a structure with cost of corresponding unit in a similar existing structure
5.	It is defined area of a building measured at floor level. It is measured by taking external dimensions excluding plinth offset if any.
6.	Rough cost estimate of a building by plinth area method can be calculated by multiplying plinth area of the building with plinth rate per meter square.
7.	Specification is an important document attached with a tender form/contract agreement, which in most cases controls the quality of materials and works.
8.	• General or brief specification • Detailed specification • Standard specification
9.	General specification gives the nature and class of work and materials in general to be used in the various parts of the works, from the foundation to the superstructure. General specifications give idea of the whole work or structure and are useful for preparing the estimate.
10.	The detailed specifications form a part of the contract document. The detailed specification of an item of the work specifies the qualities and quantities of materials proportion of mortar workmanship, the method of preparation and execution and method measurement.
11.	A qualified or experienced person who does the above-mentioned works (taking off, squaring, abstracting and billing) is called a quality surveyor

Assessment Evidence Guide

for

“Urban Area Planning and Management”

Level-3
Collect and Organize Field Survey Data
(Formative Assessment)

28th March – 1st April 2022



**National Vocational & Technical
Training Commission**

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level: 3	Version: 01
Competency Standard Title: Follow Safety Rules at Field Collect and Organize Field Survey Data	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 play a role to perform traffic survey at nearby locality, select traffic count points, distribute the duties, conduct count, segregate and organize the data electronically. 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 hazards at work site Performance Criteria 2: Select appropriate PPEs Performance Criteria 3: Identify expected data outcomes Performance Criteria 4: Select the population Performance Criteria 5: Select data collection method Performance Criteria 6: Prepare the survey vehicle/questionnaire Performance Criteria 7: Identify sample size Performance Criteria 8: Collect required data using tools Performance Criteria 9: Segregate collected data Performance Criteria 10: Record the data in required format Performance Criteria 11: Record the data outcome Performance Criteria 12: 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 play a role to perform traffic survey at nearby locality, select traffic count points, distribute the duties, conduct count, segregate and organize the data electronically.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Selected appropriate PPEs			
3.	Identified expected data outcomes			
4.	Selected the population			
5.	Selected data collection method			
6.	Prepared the survey vehicle/questionnaire			
7.	Identified sample size			
8.	Collected required data using tools			
9.	Segregated collected data			
10.	Recorded the data in required format			
11.	Recorded the data outcome			
12.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level:3	Version:01
Competency Standard Title: Follow Safety Rules at Field Collect and Organize Field Survey Data	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Question	Candidate's answer
1.State importance of field survey data	
2.Enlist surveys used to collect data	
3.State equipment used in manual traffic count	
4.How to collect field data	
5.Define quantitative data	
6.Define qualitative data	
7.What is primary data	
8.What is secondary data	
9.State limitation of secondary data	
10.Define census data	
11.Define survey data	
12. How do you maintain safety in the workplace?	

ANSWER KEY

Sr.	Answers
1.	It helps to provide the data of the existing town and thus planning work becomes easy. It helps to know exactly what is lacking and what is needed for the development of the town.
2.	1. Functional survey 2. Social survey 3. Territorial survey 4. Vital survey
3.	• tally sheets • mechanical count boards • electronic count boards
4.	Interviews, Surveys, Questionnaires, Observations, Ethnographies, Oral histories, or case studies, or reviewing documents and records
5.	Quantitative data is expressed in numbers and graphs and is analyzed through statistical methods.
6.	Qualitative data is expressed in words and analyzed through interpretations and categorizations.
7.	Primary data is a type of data that is collected by researchers directly from main sources through interviews, surveys, experiments, etc
8.	Secondary data means data collected by someone else earlier.
9.	Quality of research may be poor; not specific to researcher's needs; possible incomplete information and not timely
10.	In a census, data about all individual units (e.g. people or households) are collected in the population.
11.	In a survey, data are only collected for a sub-part of the population; this part is called a sample. These data are then used to estimate the characteristics of the whole population
12.	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-3
Perform Basic Survey and Leveling
(Formative Assessment)

28th March – 1st April 2022



National Vocational & Technical
Training Commission

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor”	CS Code:	Level: 3	Version: 01
Competency Standard Title: Follow Safety Rules at Field Perform Basic Survey and Leveling	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 measure the area of given strip of land by pace land and offsetting method Assessment Task 2: Candidate is required to play a role in a team to demark the boundary of specific property through Conventional demarking system (Shajrah) Assessment Task 3: Candidate is required to prepare the plan of specific locality, through compass closed traverse and pick up detail by plane tabling and ink it. Assessment Task 4: Candidate is required to perform profile and cross section leveling on a specific strip of land after shifting the benchmark at site, draw profile and cross sections Assessment Task 5: Candidate is required to prepare a contour plan of specific area by squaring method. 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 hazards at work site Performance Criteria 2: Select the measuring instruments Performance Criteria 3: Wear PPE according to job Performance Criteria 4: Measure distance on horizontal surface Performance Criteria 5: Measure distance on sloppy surface Performance Criteria 6: Perform corrections in linear measurements Performance Criteria 7: Take offsets and record data

Minimum Evidence Required	Performance Criteria 8: Wear PPE according to job
	Performance Criteria 9: Perform tasks within standard timeframe
	Assessment Task 2
	Performance Criteria 1: Identify potential hazards at work site
	Performance Criteria 2: Select the measuring instruments
	Performance Criteria 3: Wear PPE according to job
	Performance Criteria 4: Interpret land map (shajrah)
	Performance Criteria 5: Trace the reference burji
	Performance Criteria 6: Mark the khasra number
	Performance Criteria 7: Demark the required property
	Performance Criteria 8: Perform tasks within standard timeframe
	Assessment Task 3
	Performance Criteria 1: Identify potential hazards at work site
	Performance Criteria 2: Select the measuring instruments
	Performance Criteria 3: Wear PPE according to job
	Performance Criteria 4: Select the traverse station
	Performance Criteria 5: Read bearings of point
	Performance Criteria 6: Record the data
	Performance Criteria 7: Perform adjustments of data
	Performance Criteria 8: Draw the traverse
	Performance Criteria 9: Perform reconnaissance survey of the area
	Performance Criteria 10 Select the required method for plane tabling
	Performance Criteria 11: Perform centering and orientation of plane table
	Performance Criteria 12: Draw conventional symbols of object
	Performance Criteria 13: Draw the plan
	Performance Criteria 14: Perform tasks within standard timeframe
	Assessment Task 4
	Performance Criteria 1: Identify potential hazards at work site
	Performance Criteria 2: Select the measuring instruments
	Performance Criteria 3: Wear PPE according to job
	Performance Criteria 4: Perform temporary adjustment of level near permanent benchmark
	Performance Criteria 5: Take staff readings on benchmark and station points
	Performance Criteria 6: De-mark the center line and cross sections at appropriate distance
	Performance Criteria 7 Draw the table for entering the staff reading
	Performance Criteria 8: Record the staff readings

Performance Criteria 9: Calculate reduced levels

Performance Criteria 10: Apply arithmetic checks

Performance Criteria 11: Perform centering and orientation of plane table

Performance Criteria 12: Draw conventional symbols of object

Performance Criteria 13: Draw the plan

Performance Criteria 14: Draw the profile

Performance Criteria 15: Draw cross section

Performance Criteria 16: Perform tasks within standard timeframe

Assessment Task 5

Performance Criteria 1: Identify potential hazards at work site

Performance Criteria 2: Select the measuring instruments

Performance Criteria 3: Wear PPE according to job

Performance Criteria 4: Mark the grid points on the required site

Performance Criteria 5: Perform temporary adjustment of level near permanent benchmark

Performance Criteria 6: Draw the table for entering the staff reading

Performance Criteria 7 Take staff readings on grid points

Performance Criteria 8: Calculate reduced levels

Performance Criteria 9: Apply arithmetic checks

Performance Criteria 10: Draw grid plan on graph paper and mark R.L of each grid points

Performance Criteria 11: Interpolate the contours at specified contour interval

Performance Criteria 12: 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 measure the area of given strip of land by pace land and offsetting method		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Selected the measuring instruments			
3.	Wore PPE according to job			
4.	Measured distance on horizontal surface			
5.	Measured distance on sloppy surface			
6.	Performed corrections in linear measurements			
7.	Taken offsets and record data			
8.	Wore PPE according to job			
9.	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 play a role in a team to demark the boundary of specific property through Shajrah		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Selected the measuring instruments			
3.	Wore PPE according to job			
4.	Interpreted land map (shajrah)			
5.	Traced the reference burji			
6.	Marked the khasra number			
7.	Demarked the required property			
8.	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 the plan of specific locality, through compass closed traverse and pick up detail by plane tabling and ink it.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Selected the measuring instruments			
3.	Wore PPE according to job			
4.	Selected the traverse station			
5.	Read bearings of point			
6.	Recorded the data			
7.	Performed adjustments of data			
8.	Drawn the traverse			
9.	Performed reconnaissance survey of the area			
10.	Selected the required method for plane tabling			
11.	Performed centering and orientation of plane table			
12.	Drawn conventional symbols of object			
13.	Drawn the plan			
14.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Each Assessment Task (with performance criteria)				
Assessment Task 4		Description of Assessment Task 4 Candidate is required to perform profile and cross section leveling on a specific strip of land after shifting the benchmark at site, draw profile and cross sections		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Selected the measuring instruments			
3.	Wore PPE according to job			
4.	Performed temporary adjustment of level near permanent benchmark			
5.	Taken staff readings on benchmark and station points			
6.	De-marked the centre line and cross sections at appropriate distance			
7.	Drawn the table for entering the staff reading			
8.	Recorded the staff readings			
9.	Calculated reduced levels			
10.	Applied arithmetic checks			
11.	Performed centering and orientation of plane table			
12.	Drawn conventional symbols of object			
13.	Drawn the plan			
14.	Drawn the profile			
15.	Draw cross section			
16.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Each Assessment Task (with performance criteria)				
Assessment Task 5		Description of Assessment Task 5 Candidate is required to prepare a contour plan of specific area by squaring method.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Identified potential hazards at work site			
2.	Selected the measuring instruments			
3.	Wore PPE according to job			
4.	Marked the grid points on the required site			
5.	Performed temporary adjustment of level near permanent benchmark			
6.	Drawn the table for entering the staff reading			
7.	Taken staff readings on grid points			
8.	Calculated reduced levels			
9.	Applied arithmetic checks			
10.	Drawn grid plan on graph paper and mark R.L of each grid points			
11.	Interpolated the contours at specified contour interval			
12.	Performed tasks within standard timeframe			
Competent ☐		Not Yet Competent ☐		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Urban Area Planning and Management “Assistant Supervisor “	CS Code:	Level:3	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
1. Define plane table survey.	
2. What is the principle of plane tabling?	
3. Name the instruments used in plane table survey.	
4. What is compass survey	
5. Differentiate between triangulation and traversing.	
6. Enlist the types of traverse	
7. Name types of meridian.	
8. Define bearing	
9. Name types of bearing	
10. Define levelling	
11. Define datum	
12. Define bench mark	
13. What is back sight	
14. What is fore sight	

Question	Candidate's answer
15. Define contouring	
16. What is contour line	

ANSWER KEY

Sr.	Answers
1.	Plane table surveying is a graphical method of survey in which the field observations and plotting are done simultaneously
2.	Plane table surveying is based on the principle that lines drawn during plotting always lie parallel to the corresponding lines actually present on the ground i.e the principle of plane table surveying is parallelism
3.	The plane table The alidade (plain, telescopic) Spirit level Compass Plumb bob
4.	Compass surveying is a type of surveying in which the directions of surveying lines are determined with a magnetic compass
5.	Triangulation is a surveying method that measures the angles in a triangle formed by three survey control points. Traversing is the type of surveying connecting a number of survey lines that form a framework.
6.	Closed traverse Open traverse
7.	True meridian Magnetic meridian Arbitrary meridian Grid meridian
8.	A bearing is the clockwise or counterclockwise angle between north or south and a direction
9.	True bearings. Grid bearings. Magnetic bearings. Compass bearings
10.	It is used to measure levels of different points with respect to a fixed point such as elevation of a building, height of one point from ground etc.
11.	The point or the surface with respect to which levels of other points or planes are calculated is called Datum
12.	Bench mark is a relatively permanent point of reference whose Elevation w.r.t some assumed datum is known.
13.	The first sight taken on a levelling staff held at a point of known elevation
14.	It is the last staff reading taken from a setting of the level
15.	Contouring in surveying is the determination of elevation of various points on the ground and fixing these points of same horizontal positions in the contour map
16.	A contour line may also be defined as the intersection of a level surface with the surface of the earth.

