



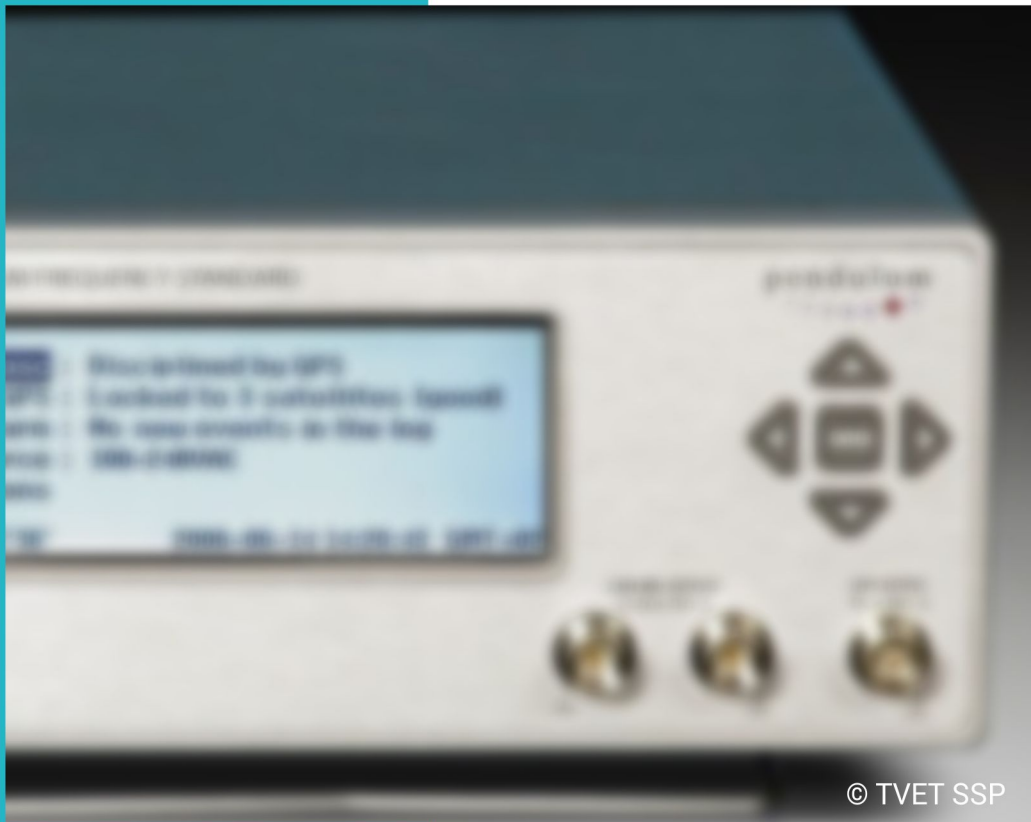
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Islamabad



PRECISION INSTRUMENTATION



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ASSESSMENT PACKAGE
National Vocational Certificate Level 4

Version 1 - November, 2019



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ASSESSMENT PACKAGE
National Vocational Certificate Level 4

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Title of Qualification: Precision Instrumentation	CS Code: 0714001037	Level: 4	Version: 1
Competency Standard Title: Measure Process Variables	Assessment Date (DD/MM/YY):		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <ol style="list-style-type: none"> Assessment Task 1: Operate temperature measuring instruments. Assessment Task 2: Operate pressure measuring instruments. <p>And complete:</p> <ol style="list-style-type: none"> Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Select the type of instrument to be operated</p> <p>Performance Criteria 2: Select measuring range of the instrument</p> <p>Performance Criteria 3: Connect the instrument to the process as per manual</p> <p>Performance Criteria 4: Verify accuracy of the instrument</p> <p>Performance Criteria 5: Record results</p> <p>Performance Criteria 6: Ensure good housekeeping & safe working practices at all times</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Select the type of instrument to be operated</p> <p>Performance Criteria 2: Select measuring range of the instrument</p> <p>Performance Criteria 3: Connect the instrument to the process as per manual</p> <p>Performance Criteria 4: Verify accuracy of the instrument</p> <p>Performance Criteria 5: Record results</p> <p>Performance Criteria 6: Ensure good housekeeping & safe working practices at all times</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria for the evaluation of portfolio:</p> <ol style="list-style-type: none"> Submit note book or practical activity journal Certificates/ Experience Letter indicating relevant technical expertise (where applicable) Related work job completed during specific module

Continued on following page

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Nature of Activity							
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			
Each Assessment Task (with performance criteria)							
Assessment Task 1			Description of assessment task 1 Operate temperature measuring instruments				
During the practical assessment, candidate demonstrated the following:					Yes	No	Remarks
1	Performance criteria 1: Select the type of instrument to be operated						
2	Performance criteria 2: Select measuring range of the instrument						
3	Performance criteria 3: Connect the instrument to the process as per manual						
4	Performance criteria 4: Verify accuracy of the instrument						
5	Performance criteria 5: Record results						
6	Performance criteria 6: Ensure good housekeeping & safe working practices at all times						
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>				

Assessment Task 2		Description of assessment task 2 Operate pressure measuring instruments.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance criteria 1: Select the type of instrument to be operated			
2	Performance criteria 2: Select measuring range of the instrument			
3	Performance criteria 3: Connect the instrument to the process as per manual			
4	Performance criteria 4: Verify accuracy of the instrument			
5	Performance criteria 5: Record results			
6	Performance criteria 6: Ensure good housekeeping & safe working practices at all times			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Performance criteria for the evaluation of portfolio			
Current <input type="checkbox"/>		Sufficient <input type="checkbox"/>	Authentic <input type="checkbox"/>	Valid <input type="checkbox"/>	Reliable <input type="checkbox"/>
Portfolio meet the following performance standards:		Yes	No	Remarks	
1	Performance Criteria 1: Submit note book or practical activity journal				
2	Performance Criteria 2: Certificates/ Experience Letter indicating relevant technical expertise (where applicable)				
3	Performance Criteria 3: Related work job completed during specific module				
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>			

Title of Qualification: Precision Instrumentation	CS Code: 0714001037	Level: 4	Version: 1
Competency Standard Title: Measure Process Variables	Assessment Date (DD/MM/YY):		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Title of Qualification: Precision Instrumentation	CS Code:	Level: 4	Version: 1
Competency Standard Title: Measure Process Variables	Assessment Date (DD/MM/YY):		

WRITTEN ASSESSMENT

Question	Candidate's answer
1. Enlist/ Name different types of pressure	
2. Enlist the primary elements of pressure measurements	
3. Name units of pressure, any four	
4. Enlist different types of temperature measuring methods	
5. Mention (any three) types of thermocouple	
6. Define working principle of RTD's	

Title of Qualification: Precision Instrumentation	CS Code: 0714001038	Level: 4	Version: 1
Competency Standard Title: Set Up Process Controller	Assessment Date (DD/MM/YY):		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>5. Assessment Task 1: Set up & adjust advanced process control loops</p> <p>6. Assessment Task 2: Verify control programmes</p> <p>And complete:</p> <p>7. Knowledge assessment test (Written or Oral)</p> <p>8. Portfolios at the time of assessment (if any)</p>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Identify process variables as per requirement</p> <p>Performance Criteria 2: Select appropriate P&ID as per job requirement</p> <p>Performance Criteria 3: Confirm the process control loop of advance instrument as per job requirement</p> <p>Performance Criteria 4: Ensure the location of process controller as per job requirement</p> <p>Performance Criteria 5: Set up and adjust the advanced process controller</p> <p>Performance Criteria 6: Verify the function of the advanced process controller as per manual</p> <p>Performance Criteria 7: Provide feedback to the concerned personnel</p> <p>Performance Criteria 8: Record the job in the logbook/relevant documents</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Prepare verification plan for control programmes</p> <p>Performance Criteria 2: Verify up gradation of control programmes</p> <p>Performance Criteria 3: Provide feedback to the concerned personnel</p> <p>Performance Criteria 4: Record the job in the logbook & history card / relevant documents</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria for the evaluation of portfolio:</p> <p>4. Submit note book or practical activity journal</p> <p>5. Certificates/ Experience Letter indicating relevant technical expertise (where applicable)</p> <p>6. Related work job completed during specific module</p>

Continued on following page

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Nature of Activity							
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			
Each Assessment Task (with performance criteria)							
Assessment Task 1			Description of assessment task 1 Set up & adjust advanced process control loops				
During the practical assessment, candidate demonstrated the following:					Yes	No	Remarks
1	Performance criteria 1: Identify process variables as per requirement						
2	Performance criteria 2: Select appropriate P&ID as per job requirement						
3	Performance criteria 3: Confirm the process control loop of advance instrument as per job requirement						
4	Performance criteria 4: Ensure the location of process controller as per job requirement						
5	Performance criteria 5: Set up and adjust the advanced process controller						
6	Performance criteria 6: Verify the function of the advanced process controller as per manual						
7	Performance criteria 7: Provide feedback to the concerned personnel						
8	Performance criteria 8: Record the job in the logbook/relevant documents						
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>				

Assessment Task 2		Description of assessment task 2 Verify control programmes		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance criteria 1: Prepare verification plan for control programmes			
2	Performance criteria 2: Verify up gradation of control programmes			
3	Performance criteria 3: Provide feedback to the concerned personnel			
4	Performance criteria 4: Record the job in the logbook & history card / relevant documents			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Performance criteria for the evaluation of portfolio		
Current <input type="checkbox"/>	Sufficient <input type="checkbox"/>	Authentic <input type="checkbox"/>	Valid <input type="checkbox"/>	Reliable <input type="checkbox"/>
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance Criteria 1: Submit note book or practical activity journal			
2	Performance Criteria 2: Certificates/ Experience Letter indicating relevant technical expertise (where applicable)			
3	Performance Criteria 3: Related work job completed during specific module			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: Precision Instrumentation	CS Code: 0714001038	Level: 4	Version: 1
Competency Standard Title: Set Up Process Controller	Assessment Date (DD/MM/YY):		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Title of Qualification: Precision Instrumentation	CS Code:	Level: 4	Version:
Competency Standard Title: Set Up Process Controller	Assessment Date (DD/MM/YY):		

WRITTEN ASSESSMENT

Question	Candidate's answer
7. What are the types of control loop	
8. Enlist necessary elements required for setting up a controller	
9. Draw a block diagram of open loop	
10. Draw a block diagram of closed loop	
11. State the standard range of pneumatic signal	
12. State the standard range of electrical signal	

Title of Qualification: Precision Instrumentation	CS Code: 0714001039	Level: 4	Version: 1
Competency Standard Title: Perform Fault Diagnosis	Assessment Date (DD/MM/YY):		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>9. Assessment Task 1: Verify fault</p> <p>10. Assessment Task 2: Determine cause of fault/ Perform root cause analysis</p> <p>And complete:</p> <p>11. Knowledge assessment test (Written or Oral)</p> <p>12. Portfolios at the time of assessment (if any)</p>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Identify faults through fault indicators in accordance with the work plan</p> <p>Performance Criteria 2: Identify abnormalities in the system</p> <p>Performance Criteria 3: Verify abnormalities in the system</p> <p>Performance Criteria 4: Ensure personnel safety & plant security according to the work plan</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Collect relevant data regarding the fault</p> <p>Performance Criteria 2: Asses the acquired information for root cause analysis</p> <p>Performance Criteria 3: Make conclusion about the nature and cause of the fault from available evidence & generate report</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria for the evaluation of portfolio:</p> <p>7. Submit note book or practical activity journal</p> <p>8. Certificates/ Experience Letter indicating relevant technical expertise (where applicable)</p> <p>9. Related work job completed during specific module</p>

Continued on following page

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Nature of Activity							
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			
Each Assessment Task (with performance criteria)							
Assessment Task 1			Description of assessment task 1				
			Verify fault				
During the practical assessment, candidate demonstrated the following:					Yes	No	Remarks
1	Performance criteria 1: Identify faults through fault indicators in accordance with the work plan						
2	Performance criteria 2: Identify abnormalities in the system						
3	Performance criteria 3: Verify abnormalities in the system						
4	Performance criteria 4: Ensure personnel safety & plant security according to the work plan						
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>				

Assessment Task 2		Description of assessment task 2 Determine cause of fault/ Perform root cause analysis		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance criteria 1: Collect relevant data regarding the fault			
2	Performance criteria 2: Asses the acquired information for root cause analysis			
3	Performance criteria 3: Make conclusion about the nature and cause of the fault from available evidence & generate report			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Performance criteria for the evaluation of portfolio			
Current <input type="checkbox"/>		Sufficient <input type="checkbox"/>	Authentic <input type="checkbox"/>	Valid <input type="checkbox"/>	Reliable <input type="checkbox"/>
Portfolio meet the following performance standards:		Yes	No	Remarks	
1	Performance Criteria 1: Submit note book or practical activity journal				
2	Performance Criteria 2: Certificates/ Experience Letter indicating relevant technical expertise (where applicable)				
3	Performance Criteria 3: Related work job completed during specific module				
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>			

Title of Qualification: Precision Instrumentation	CS Code: 0714001039	Level: 4	Version:
Competency Standard Title: Perform Fault Diagnosis	Assessment Date (DD/MM/YY):		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Title of Qualification: Precision Instrumentation	CS Code:	Level: 4	Version: 1
Competency Standard Title: Perform Fault Diagnosis	Assessment Date (DD/MM/YY):		

WRITTEN ASSESSMENT

Question	Candidate's answer
13. Diagnose commonly used techniques during fault finding	
14. What are the common faults observed in electronic card?	
15. What can be reason behind hunting of control valve?	
16. State different reasons behind zero reading of flow during normal operation?	
17. Why PT-100 is called PT-100?	

Title of Qualification: Precision Instrumentation	CS Code: 0714001040	Level: 4	Version: 1
Competency Standard Title: Carryout Repair & Maintenance of Instruments	Assessment Date (DD/MM/YY):		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>13. Assessment Task 1: Perform Preventive Maintenance 14. Assessment Task 2: Perform Corrective Maintenance</p> <p>And complete:</p> <p>15. Knowledge assessment test (Written or Oral) 16. Portfolios at the time of assessment (if any)</p>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Prepare inspection plan for preventive maintenance Performance Criteria 2: Perform inspections according to plan Performance Criteria 3: Perform Servicing of equipment Performance Criteria 4: Ensure good housekeeping & safe working practices at all times</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Prepare plan for corrective maintenance Performance Criteria 2: Arrange alternate/ backup system at breakdown Performance Criteria 3: Study the log sheet/ history card thoroughly before corrective maintenance Performance Criteria 4: Arrange tools and equipment according to the job Performance Criteria 5: Raise work permit for each job Performance Criteria 6: Perform maintenance according to the SOP Performance Criteria 7: Check/ Run as per standard Performance Criteria 8: Provide feedback to the concerned personnel Performance Criteria 9: Prepare maintenance report of performed job Performance Criteria 10: Ensure good housekeeping & safe working practices at all times</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria for the evaluation of portfolio:</p> <p>10. Submit note book or practical activity journal 11. Certificates/ Experience Letter indicating relevant technical expertise (where applicable) 12. Related work job completed during specific module</p>

Continued on following page

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Nature of Activity							
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			
Each Assessment Task (with performance criteria)							
Assessment Task 1			Description of assessment task 1 Perform Preventive Maintenance				
During the practical assessment, candidate demonstrated the following:					Yes	No	Remarks
1	Performance Criteria 1: Prepare inspection plan for preventive maintenance						
2	Performance Criteria 2: Perform inspections according to plan						
3	Performance Criteria 3: Perform Servicing of equipment						
4	Performance Criteria 4: Ensure good housekeeping & safe working practices at all times						
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>				

Assessment Task 2		Description of assessment task 2 Perform Corrective Maintenance		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Prepare plan for corrective maintenance Performance Criteria 2 Arrange alternate/ backup system at breakdown			
2	Performance Criteria 3: Study the log sheet/ history card thoroughly before corrective maintenance			
3	Performance Criteria 4: Arrange tools and equipment according to the job			
4	Performance Criteria 5: Raise work permit for each job			
5	Performance Criteria 6: Perform maintenance according to the SOP			
6	Performance Criteria 7: Check/ Run as per standard			
7	Performance Criteria 8: Provide feedback to the concerned personnel			
8	Performance Criteria 9: Prepare maintenance report of performed job			
9	Performance Criteria 10: Ensure good housekeeping & safe working practices at all times			
10	Performance Criteria 1: Prepare plan for corrective maintenance Performance Criteria 2 Arrange alternate/ backup system at breakdown			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Performance criteria for the evaluation of portfolio		
Current <input type="checkbox"/>	Sufficient <input type="checkbox"/>	Authentic <input type="checkbox"/>	Valid <input type="checkbox"/>	Reliable <input type="checkbox"/>
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance Criteria 1: Submit note book or practical activity journal			
2	Performance Criteria 2: Certificates/ Experience Letter indicating relevant technical expertise (where applicable)			
3	Performance Criteria 3: Related work job completed during specific module			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: Precision Instrumentation	CS Code: 0714001040	Level: 4	Version:
Competency Standard Title: Carryout Repair & Maintenance of Instruments	Assessment Date (DD/MM/YY):		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Title of Qualification: Precision Instrumentation	CS Code:	Level: 4	Version: 1
Competency Standard Title: Carryout Repair & Maintenance of Instruments	Assessment Date (DD/MM/YY):		

WRITTEN ASSESSMENT

Question	Candidate's answer
18. What are the different types of maintenance?	
19. How do you define frequency of preventive maintenance?	
20. What is the difference between corrective and preventive maintenance?	
21. Briefly describe the sequence of fault diagnoses during corrective maintenance	
22. What are the benefits of preventive maintenance?	

Title of Qualification: Precision Instrumentation	CS Code:	Level: 4	Version: 1
Competency Standard Title: Integrated Assessment Level IV	Assessment Date (DD/MM/YY):		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>17. Assessment Task 1: Perform calibration of instruments by using appropriate tools and equipment</p> <p>18. Assessment Task 2: Perform set-up PID controller by using appropriate tools and equipment</p> <p>19. Assessment Task 3: Diagnose fault in the existing loop of TC/ RTD</p> <p>And complete:</p> <p>20. Knowledge assessment test (Written or Oral)</p> <p>21. Portfolios at the time of assessment (if any)</p>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Apply relevant health and safety requirements during completion of task</p> <p>Performance Criteria 2: Select tools and equipment for the given task</p> <p>Performance Criteria 3: Perform calibration of instrument(s)</p> <p>Performance Criteria 4: Compare results with given standards and generate final report</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Apply relevant health and safety requirements during completion of task</p> <p>Performance Criteria 2: Select tools and equipment for the given task</p> <p>Performance Criteria 3: Set-up controller by establishing necessary connections as per SOP</p> <p>Performance Criteria 4: Verify control action of controller as per control modes</p> <p>Performance Criteria 5: Generate final report by verifying control action</p>
	<p>Assessment Task 3</p> <p>Performance Criteria 1: Apply relevant health and safety requirements during completion of task</p> <p>Performance Criteria 2: Select tools and equipment for the given task</p> <p>Performance Criteria 3: Identify fault existing in control loop</p> <p>Performance Criteria 4: Generate final report and list down findings</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria for the evaluation of portfolio:</p> <p>13. Submit note book or practical activity journal</p> <p>14. Certificates/ Experience Letter indicating relevant technical expertise (where applicable)</p> <p>15. Related work job completed during specific module</p>

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Nature of Activity							
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			
Each Assessment Task (with performance criteria)							
Assessment Task 1			Description of assessment task 1 Perform calibration of instruments by using appropriate tools and equipment				
During the practical assessment, candidate demonstrated the following:					Yes	No	Remarks
1	Performance Criteria 1: Apply relevant health and safety requirements during completion of task						
2	Performance Criteria 2: Select tools and equipment for the given task						
3	Performance Criteria 3: Perform calibration of instrument(s)						
4	Performance Criteria 4: Compare results with given standards and generate final report						
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>				

Assessment Task 2		Description of assessment task 2 Perform set-up PID controller by using appropriate tools and equipment		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Apply relevant health and safety requirements during completion of task			
2	Performance Criteria 2: Select tools and equipment for the given task			
3	Performance Criteria 3: Set-up controller by establishing necessary connections as per SOP			
4	Performance Criteria 4: Verify control action of controller as per control modes			
5	Performance Criteria 5: Generate final report by verifying control action			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 Diagnose fault in the existing loop of TC/ RTD		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Apply relevant health and safety requirements during completion of task			
2	Performance Criteria 2: Select tools and equipment for the given task			
3	Performance Criteria 3: Identify fault existing in control loop			
4	Performance Criteria 4: Generate final report and list down findings			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Performance criteria for the evaluation of portfolio		
Current <input type="checkbox"/>		Sufficient <input type="checkbox"/>		Authentic <input type="checkbox"/>
		Valid <input type="checkbox"/>		Reliable <input type="checkbox"/>
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance Criteria 1: Submit note book or practical activity journal			
2	Performance Criteria 2: Certificates/ Experience Letter indicating relevant technical expertise (where applicable)			
3	Performance Criteria 3: Related work job completed during specific module			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: Precision Instrumentation	CS Code:	Level: 4	Version: 1
Competency Standard Title: Integrated Assessment Level IV	Assessment Date (DD/MM/YY):		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Title of Qualification: Precision Instrumentation	CS Code:	Level: 4	Version: 1
Competency Standard Title: Integrated Assessment Level IV	Assessment Date (DD/MM/YY):		

WRITTEN ASSESSMENT

Question	Candidate's answer
23. What is the difference between range and span?	
24. Differentiate between accuracy and precision?	
25. What are the standard ranges of pneumatic/ electrical signal used in industry?	
26. What is the difference between deviation and off-set?	
27. Define gain and proportional band	
28. Define set point and process value	
29. Difference between two wire and three wire RTD	

Question	Candidate's answer
30. State the effects of ambient temperature on the reading of thermo-couple?	
31. Define PT 100	

