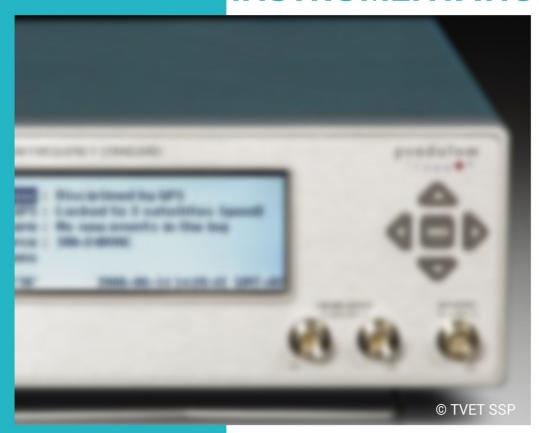








PRECISION INSTRUMENTATION



ASSESSMENT PACKAGE

National Vocational Certificate Level 4

Version 1 - November, 2019





Published by

National Vocational and Technical Training Commission Government of Pakistan

Headquarter

Plot 38, Kirthar Road, Sector H-9/4, Islamabad, Pakistan www.navttc.org

Responsible

Director General Skills Standard and Curricula, National Vocational and Technical Training Commission

National Deputy Head, TVET Sector Support Programme, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Layout & design

SAP Communications

Photo Credits

TVET Sector Support Programme

URL links

Responsibility for the content of external websites linked in this publication always lies with their respective publishers. TVET Sector Support Programme expressly dissociates itself from such content.

This document has been produced with the technical assistance of the TVET Sector Support Programme, which is funded by the European Union, the Federal Republic of Germany and the Royal Norwegian Embassy and has been commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in close collaboration with the National Vocational and Technical Training Commission (NAVTTC) as well as provincial Technical Education and Vocational Training Authorities (TEVTAs), Punjab Vocational Training Council (PVTC), Qualification Awarding Bodies (QABs)s and private sector organizations.

Document Version November, 2019 **Islamabad, Pakistan**

PRECISION INSTRUMENTATION



ASSESSMENT PACKAGE
National Vocational Certificate Level 4

Version 1 - November, 2019

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

Candidate Details	Name:								
	Registration/Roll Number:								
	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):								
Guidance for	 Assessment Task 1: Operate temperature measuring instruments. Assessment Task 2: Operate pressure measuring instruments. 								
Candidate	And complete:								
	3. Knowledge assessment test (Written or Oral)4. 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: Select the type of instrument to be operated								
	Performance Criteria 2: Select measuring range of the instrument								
	Performance Criteria 3: Connect the instrument to the process as per manual								
	Performance Criteria 4: Verify accuracy of the instrument								
	Performance Criteria 5: Record results								
	Performance Criteria 6: Ensure good housekeeping & safe working practices at all times								
	Assessment Task 2								
Minimum Evidence	Performance Criteria 1: Select the type of instrument to be operated								
Required	Performance Criteria 2: Select measuring range of the instrument								
	Performance Criteria 3: Connect the instrument to the process as per manual								
	Performance Criteria 4: Verify accuracy of the instrument								
	Performance Criteria 5: Record results								
	Performance Criteria 6: Ensure good housekeeping & safe working practices at all times								
	Portfolios required at the time of assessment (if any) for								
	Performance criteria for the evaluation of portfolio:								
	Submit note book or practical activity journal								
	 Certificates/ Experience Letter indicating relevant technical expertise (where applicable) 								
	Related work job completed during specific module								

		1								
Candid Details	ate	Name:								
Assess Outcom		COMPETENT NOT YET COMPETENT Name of the Assessor: Signature of the Assessor:								
		Accessm	ant Cu		m. /40 b.	. filled b	ov. 4b o .4			
	Activ	Assessm	ent Su	mma	Metho		by the a	155655		sult
Nature of Activity			Written	Oral	Observation	Portfolio	Role Play		Competent	Not Yet Competent
Practica	al Skill Den	nonstration		Ĭ	√	_	_			
Knowle	dge Asses	sment	✓	✓						
Other F	Requiremer	nt				✓				
Each A	ssessment	t Task (with perfo	rmance	e crite	ria)					
Assess	ment Task	:1				otion of te temp			sk 1 suring inst	truments
During followin		al assessment, c	andida	te der	monstra	ed the	Yes	No	Remarks	
1		nce criteria 1: Se nt to be operate		e typ	e of					
2	Performance criteria 2: Select measuring range of the instrument				ige of					
3	Performance criteria 3: Connect the instrument to the process as per manual				ent to					
4	Performance criteria 4: Verify accuracy of the instrument				cy of the	€				
5	Performa	nce criteria 5: Re	cord r	esult	S					
6		nce criteria 6: Er eping & safe wo			ices at	all				
Compotent Not Vot Compote					tont \square					

Assess	sment Task 2	f assessment task 2 ssure measuring instruments.			
During following	the practical assessment, candidate de	monstrated the	Yes	No	Remarks
1	Performance criteria 1: Select the typinstrument to be operated				
2	Performance criteria 2: Select measu the instrument				
3	Performance criteria 3: Connect the i the process as per manual				
4	Performance criteria 4: Verify accurationstrument				
5	Performance criteria 5: Record result				
6	Performance criteria 6: Ensure good housekeeping & safe working practimes				
Compe	etent	Not Yet Compe	tent 🗆		

Portfoli	o (if any)		Description of portfolio Performance criteria for the evaluation of portfolio			
Curren	t □ Sufficient □	Authentic E	☐ Valid			Reliable 🗆
Portfolio meet the following performance standards:					No	Remarks
1	Performance Criteria 1: Submactivity journal					
2	Performance Criteria 2: Certif Letter indicating relevant tech applicable)					
3	Performance Criteria 3: Relate during specific module					
Compe	etent	N	Not Yet Compe	etent \square		

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

Candidate Details	Name: Candidate Signature:	3
Written Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	NOT YET COMPETENT Assessor's code:

Title of Qualification:	CS Code:	Level:	Version:
Precision Instrumentation		4	1
	_		
Competency Standard Title:	Assessmen	t Date (DD/MI	M/YY):
Measure Process Variables			

Questi	on	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:	Level:	Version:
	0714001038	4	1
Competency Standard Title: Set Up Process Controller	Assessment D	Pate (DD/MM/YY):

Candidate Details	Name:							
	Registration/Roll Number:							
	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):							
Guidance for	5. Assessment Task 1: Set up & adjust advanced process control loops6. Assessment Task 2: Verify control programmes							
Candidate	And complete:							
	7. Knowledge assessment test (Written or Oral)8. 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 process variables as per requirement							
	Performance Criteria 2: Select appropriate P&ID as per job requirement							
	Performance Criteria 3: Confirm the process control loop of advance instrument as per job requirement							
	Performance Criteria 4: Ensure the location of process controller as per job requirement							
	Performance Criteria 5: Set up and adjust the advanced process controller							
	Performance Criteria 6: Verify the function of the advanced process controller as per manual							
Minimum	Performance Criteria 7: Provide feedback to the concerned personnel							
Evidence Required	Performance Criteria 8: Record the job in the logbook/relevant documents							
	Assessment Task 2							
	Performance Criteria 1: Prepare verification plan for control programmes							
	Performance Criteria 2: Verify up gradation of control programmes							
	Performance Criteria 3: Provide feedback to the concerned personnel							
	Performance Criteria 4: Record the job in the logbook & history card / relevant documents							
	Portfolios required at the time of assessment (if any) for							
	Performance criteria for the evaluation of portfolio:							
	 4. Submit note book or practical activity journal 5. Certificates/ Experience Letter indicating relevant technical expertise (where applicable) 6. Related work job completed during specific module 							

Candida Details		Name:									
Assess Outcom		COMPETENT Name of the Assessor: Signature of the Assessor:					. Asses	sor's c			
		Assessm	ont Su		r\/	(to be	filled b	w the s	26666	or)	
	Activ		ent ou	IIIIIa		Method		y tile a	133033		sult
Nature of Activity			Written			Observation	Portfolio	Role Play	Competent		Not Yet Competent
Practica	al Skill Den	nonstration				✓					
Knowle	edge Asses	sment	✓	✓							
Other R	Requiremer	nt					✓				
		t Task (with perfo	ormanc	e crite	Т	•					
Assess	sment Task	(1				Descrip Set up					control loops
During followin		cal assessment, c	andida	ate de	m	onstrate	ed the	Yes	No	Remarks	
1		nce criteria 1: Ide equirement	entify	proce	989	s varia	bles				
2		ince criteria 2: Se ob requirement	ect a	pprop	ori	iate P8	kID			1	
3	Performance criteria 3: Confirm the process control loop of advance instrument as per job requirement					ob					
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		ince criteria 7: Pr ed personnel	ovide	feedk	эa	ick to tl	he				
8		nce criteria 8: Re relevant docum		the jo	b	in the					
Compe	etent \square				١	Not Yet	Compe	tent 🗆	•	<u>-</u>	

Assess	ment Task 2	Description of a Verify control			
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				
Compe	etent	Not Yet Compe	tent 🛘		

Portfolio (if any)			Description of p Performance cr			evaluation of portfolio
Current	t ☐ Sufficient ☐	Authentic E	□ Valid			Reliable 🗆
Portfolio meet the following performance standards:				Yes	No	Remarks
1	Performance Criteria 1: Subractivity journal	k or practical				
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 □			Not Yet Compe	etent \square	i	

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

Candidate Details	Name: Candidate Signature:	3
Written Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	NOT YET COMPETENT Assessor's code:

Title of Qualification: Precision Instrumentation	CS Code:	Level:	Version:
Competency Standard Title: Set Up Process Controller	Assessmen	t Date (DD/MI	M/YY):

Question	Candidate's answer
7. What are the types of control loop	
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:	Level:	Version:	
	0714001039	4	1	
Competency Standard Title: Perform Fault Diagnosis	Assessment Date (DD/MM/YY):			

Candidate Details	Name:						
	Registration/Roll Number:						
	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):						
Guidance for Candidate	9. Assessment Task 1: Verify fault10. Assessment Task 2: Determine cause of fault/ Perform root cause analysis						
Canadato	And complete:						
	11. Knowledge assessment test (Written or Oral)12. 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 faults through fault indicators in accordance with the work plan						
	Performance Criteria 2: Identify abnormalities in the system						
	Performance Criteria 3: Verify abnormalities in the system						
	Performance Criteria 4: Ensure personnel safety & plant security according to the work plan						
Minimum	Assessment Task 2						
Evidence	Performance Criteria 1: Collect relevant data regarding the fault						
Required	Performance Criteria 2: Asses the acquired information for root cause analysis						
	Performance Criteria 3: Make conclusion about the nature and cause of the fault from available evidence & generate report						
	Portfolios required at the time of assessment (if any) for						
	Performance criteria for the evaluation of portfolio:						
	 7. Submit note book or practical activity journal 8. Certificates/ Experience Letter indicating relevant technical expertise (where applicable) 9. Related work job completed during specific module 						
	5. Related work job completed during specific module						

Continued on following page

Candid Details	ate	Name:									
Assess Outcom		Signature of the			NOT YET COMPETENT Assessor's code:						
		Assessm	ent Su	mmar	ry	(to be	filled b	oy the	assess	or)	
	Activ					Method				Res	sult
Nature of Activity			Written	Oral		Observation	Portfolio	Role Play	Competent		Not Yet Competent
Practica	al Skill Den	nonstration				√					
Knowle	edge Asses	sment	✓	✓							
Other F	Requiremer	nt					√				
Each A	ssessment	t Task (with perfo	rmance	e crite	ria	a)					
Assess	ment Task	. 1				Descrip		assessi	ment ta	sk 1	
During followin		al assessment, c	andidat	te den	nc	onstrate	ed the	Yes	No	Remarks	
1	Performance criteria 1: Identify faults throindicators in accordance with the work										
2	Performance criteria 2: Identify abnormalities in the system					in					
3	Performal system	erformance criteria 3: Verify abnorm				lities ir	the				
4		nce criteria 4: En curity according					ety &				
Compe	Competent □ Not Yet Competent □										

Assess	ment Task 2	Description of assessment task 2 Determine cause of fault/ Perform root cause analysis				
During followin	the practical assessment, candidate del ag:	monstrated the	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 □		Not Yet Competent □				

Portfoli		Description of portfolio Performance criteria for the evaluation of portfolio				
Current	tic 🗆 🛝	/alid			Reliable 🛘	
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					
Compe	Not Yet Co	ompe	etent 🗆			

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

Candidate Details	Name: Candidate Signature:	•
Written Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	NOT YET COMPETENT . Assessor's code:

Title of Qualification: Precision Instrumentation	CS Code:	Level: 4	Version:
Competency Standard Title: Perform Fault Diagnosis	Assessmen	t Date (DD/M	M/YY):

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:	Level:	Version:
	0714001040	4	1
Competency Standard Title: Carryout Repair & Maintenance of Instruments	Assessment [Date (DD/MM/YY):

Candidate Details	Name:
	Registration/Roll Number:
	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):
Guidance for	13. Assessment Task 1: Perform Preventive Maintenance14. Assessment Task 2: Perform Corrective Maintenance
Candidate	And complete:
	15. Knowledge assessment test (Written or Oral)16. 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: 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
	Assessment Task 2
	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
Minimum Evidence Required	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
	Portfolios required at the time of assessment (if any) for
	Performance criteria for the evaluation of portfolio:
	10. Submit note book or practical activity journal11. Certificates/ Experience Letter indicating relevant technical expertise (where applicable)
	12. Related work job completed during specific module

Candid Details		Name:								
Assess Outcom		COMPETENT Name of the Assessor: Signature of the Assessor:				Asses	ssor's c			
		Assessm	ont Su	mma	ry (to be	filled k	ov the :			
	Activ		ent Su	IIIIIai	Method		Jy tile a	122622	Res	sult
Nature of Activity		Written	Oral	Observation	Portfolio	Role Play		Competent	Not Yet Competent	
Practica	al Skill Den	monstration			√	_	_			_
Knowle	edge Asses	sment	✓	✓						
Other Requirement						✓				
Each A	ssessment	t Task (with perfo	rmance	e crite	ria)					
Assess	sment Task	: 1		Description of assessment task 1 Perform Preventive Maintenance						
During followin		al assessment, c	:andida	te der	nonstrate	ed the	Yes	No	Remarks	
1	Performance Criteria 1: Prepare inspection plan for preventive maintenance					an				
2	Performance Criteria 2: Perform inspectaccording to plan				ections					
Performance Criteria 3: Perform Service equipment				icing of						
4		nce Criteria 4: Er eping & safe wo				all				
Compe	etent \square				Not Yet	Compe	etent \square	_		

Assessment Task 2 Description of a Perform Corre					
During followin	the practical assessment, candidate der ng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Prepare plan maintenance Performance Criteria 2 alternate/ backup system at breakc	Arrange			
2	Performance Criteria 3: Study the log history card thoroughly before corre maintenance				
3	Performance Criteria 4: Arrange tools equipment according to the job	and			
4	Performance Criteria 5: Raise work peach job	ermit for			
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				
Compe	etent 🗆	Not Yet Compe	tent 🗖		

			portfolic riteria fo		evaluation of portfolio
Current ☐ Sufficient ☐ Authentic ☐					Reliable
Portfoli	io meet the following performance stand	Yes	No	Remarks	
1	Performance Criteria 1: Submit note be activity journal				
2	Performance Criteria 2: Certificates/ Experience Letter indicating relevant technical expertise (where applicable)				
3	Performance Criteria 3: Related work juding specific module				
Compe	etent 🗆	Not Yet Compe	etent \square	l	

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

Candidate Details	Name: Candidate Signature:	3
Written Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	NOT YET COMPETENT Assessor's code:

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

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:	CS Code:	Level:	Version:
Precision Instrumentation		4	1
Competency Standard Title:	Assessment D	ate (DD/MM/YY):
Competency Standard Title: Integrated Assessment Level IV	Assessment D	Pate (DD/MM/YY):
	Assessment D	Pate (DD/MM/YY):

	T
Candidate Details	Name:
	Registration/Roll Number:
	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):
	17. Assessment Task 1: Perform calibration of instruments by using
Guidance for	 appropriate tools and equipment 18. Assessment Task 2: Perform set-up PID controller by using appropriate tools and equipment
Candidate	19. Assessment Task 3: Diagnose fault in the existing loop of TC/ RTD
	And complete:
	20. Knowledge assessment test (Written or Oral) 21. 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: Apply relevant health and safety requirements during completion of task
	Performance Criteria 2: Select tools and equipment for the given task
	Performance Criteria 3: Perform calibration of instrument(s)
	Performance Criteria 4: Compare results with given standards and generate final report
	Assessment Task 2
	Performance Criteria 1: Apply relevant health and safety requirements during completion of task
	Performance Criteria 2: Select tools and equipment for the given task
Minimum	Performance Criteria 3: Set-up controller by establishing necessary connections as per SOP
Evidence Required	Performance Criteria 4: Verify control action of controller as per control modes
	Performance Criteria 5: Generate final report by verifying control action
	Assessment Task 3
	Performance Criteria 1: Apply relevant health and safety requirements during completion of task
	Performance Criteria 2: Select tools and equipment for the given task
	Performance Criteria 3: Identify fault existing in control loop
	Performance Criteria 4: Generate final report and list down findings
	Portfolios required at the time of assessment (if any) for
	Performance criteria for the evaluation of portfolio:
	13. Submit note book or practical activity journal14. Certificates/ Experience Letter indicating relevant technical expertise (where applicable)
	15. Related work job completed during specific module

Candid Details	ate	Name:									
Assess Outcom		COMPETENT Name of the Assessor: Signature of the Assessor:					Asses	sor's c			
		Accessm	ant Cu			/40 bo	filled h				
	Activ	Assessm	ent Su	mmai		(to be Method		by the a	assess	sor) Res	 sult
Nature	of Activity		Written	Oral		Observation	Portfolio	Role Play	Competent Not Yet Competent		
Practica	al Skill Den	monstration				✓					
Knowle	dge Asses	sment	✓	✓							
Other F	Requiremer	nt					✓				
Each A	ssessment	t Task (with perfo	rmanc	e crite	eria	a)					
Assessment Task 1 Description of as Perform calibration tools and equipment tools are supported by the support of the support				ation of			ing appropriate				
During the practical assessment, candidate demonstrated the following: No Remarks											
1	Performance Criteria 1: Apply relevant health and safety requirements during completion of task					nd					
2	Performance Criteria 2: Select tools and for the given task				nd	equipn	nent				
Performance Criteria 3: Perform calibra instrument(s)			at	tion of							
Performance Criteria 4: Compare resul standards and generate final report				lts	with gi	ven					
Competent ☐ Not Yet Compe				tent \square							

Perform set		Description of a Perform set-up and equipment	PID co		sk 2 r by using appropriate tools
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 a controller as per control modes	action of			
5	Performance Criteria 5: Generate final report by verifying control action				
Compe	etent	Not Yet Compe	tent \square		
Assess	sment Task 3	Description of a Diagnose fault			sk 3 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 excontrol loop	xisting in			
4	Performance Criteria 4: Generate final down findings	report and list			
Compe	etent 🗆	Not Yet Compe	tent 🗆		
		Description of performance c	•		evaluation of portfolio
Curren	nt □ Sufficient □ Authention	c □ Valid			Reliable
Portfoli	Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance Criteria 1: Submit note be activity journal	ook or practical			
2	Performance Criteria 2: Certificates/ E: Letter indicating relevant technical exp applicable)				
3	Performance Criteria 3: Related work j during specific module	job completed			
Compe	etent 🗆	Not Yet Compe	etent C]	

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

Candidate Details	Name: Candidate Signature:	3
Written Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	NOT YET COMPETENT Assessor's code:

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

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 offset?	
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	

National Vocational and Technical Training Commission (NAVTTC)

- Plot 38. Kirthar Road, Sector H-9/4, Islamabad, Pakistan
- +92 51 9044 322
- info@navttc.org
- www.navttc.org