







Model Curriculum

QP Name: Base Station Sub-system (BSS) Support Engineer

QP Code: TEL/Q6200

QP Version: 3.0

NSQF Level: 6

Model Curriculum Version: 1.0

Telecom Sector Skill Council, Estel House, 3rd Floor,Plot No:- 126, Sector 44 Gurugram, Haryana 122003







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Training Parameters

Sector	Telecom
Sub-Sector	Network Managed Services
Occupation	Network Operation and Maintenance
Country	India
NSQF Level	6
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3114.0601
Minimum Educational Qualification & Experience	Pursuing first year of 2-year PG program after completing 3-year UG degree OR Pursuing 1-year PG diploma after 3-year UG degree OR Completed 4th year UG (in case of 4-year UG) OR Pursuing 4th year UG (in case of 4-year UG) and continuing education with No Experience Required OR Completed 3-Year UG Degree with 1-year relevant experience OR Previous relevant Qualification of NSQF Level 5 with 3 years relevant experience
Pre-Requisite License or Training	Technical trainings on working principle of mobile communications, BSC and BTS site equipment and software that are to be used to access and work on site equipment
Minimum Job Entry Age	23 Years
Last Reviewed On	30/12/2021
Next Review Date	30/12/2024
NSQC Approval Date	30/12/2021
QP Version	3.0
QP Version	
Model Curriculum Creation Date	30/12/2021







Model Curriculum Version	1.0
Minimum Duration of Course	600 Hours, 0 Minutes
Maximum Duration of Course	600 Hours, 0 Minutes







Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Interpret BSS performance reports, alarm details and tickets
- Plan for corrective actions to resolve complaints
- Perform maintenance operations
- Record the maintenance status
- Perform change activities and monitor the process
- Plan work effectively, implement safety practices and optimize use of resources
- Communicate, develop interpersonal skills and develop sensitization towards gender and persons with disability

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommen ded)	Total Duration
Bridge Module	20:00	10:00	00:00	00:00	30:00
Module 1: Role and Responsibilities of a BSS Support Engineer	20:00	10:00	00:00	00:00	30:00
TEL/N6243 – Analyse performance reports and customer complaints NOS Version No. 2.0 NSQF Level 6	50:00	60:00	40:00	00:00	150:00
Module 2: Analyse performance reports and customer complaints	50:00	60:00	40:00	00:00	150:00
TEL/N6244 – Perform Maintenance at Base Station Controller (BSC) NOS Version No. 2.0 NSQF Level 6	50:00	60:00	40:00	00:00	150:00
Module 3: Perform Maintenance at Base Station Controller (BSC)	50:00	60:00	40:00	00:00	150:00







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TEL/N6245 – Perform change management activities NOS Version No. 1.0	40:00	40:00	40:00	00:00	120:00
NSQF Level 6					
Module 4: Perform operational activities atradio sites	40:00	40:00	40:00	00:00	120:00
TEL/N9103 – Implement effective interaction at workplace NOS Version No. 1.0 NSQF Level 5	10:00	20:00	00:00	00:00	30:00
Module 5: Communication and Interpersonal skills	10:00	20:00	00:00	00:00	30:00
TEL/N9104 – Manage work Resource and safety at workplace NOS Version No. 1.0 NSQF Level 5	10:00	20:00	00:00	00:00	30:00
Module 6: Working effectively and optimizing resources for a safe workplace	10:00	20:00	00:00	00:00	30:00
DGT/VSQ/N0103 Employability Skills (90 Hours)	90:00	00:00	00:00	00:00	90:00
Total Duration	270:00	210:00	120:00	00:00	600:00







Module Details

Module 1: Role and Responsibilities of a BSS Support Engineer **Bridge Module**

Terminal Outcomes:

Explain the role and responsibilities of a BSS Support Engineer

Duration : 20:00	Duration: 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Explain the role and responsibilities of a BSS support engineer. Describe the various electrical and electronic components. Discuss the list of the standard operating procedures (SOP) to be followed for use of tools and equipment and for performing service and minor repairs. Discuss the documentation involved in the different processes of maintenance. Discuss the safety, health and environmental policies and regulations for the workplace as well as for telecom sites in general. 	 Demonstrate how to assist field engineers to identify and rectify faults at BTS locations. Prepare standard checklists and schedules to be used by engineers and workers recommended by the operating companies (OPCOs). Demonstrate the use of tools and equipment required for site maintenance.

Classroom Aids:

Whiteboard and markers, chart paper and sketch pens, LCD Projector and Laptop for presentations

Tools, Equipment and Other Requirements

PCs/Laptops, Internet with Wi-Fi (Min 2 Mbps Dedicated), documents of standard operating procedures, code of conduct, checklists, schedules, tools and equipment, status report







Module 2: Analyse Performance Reports and Customer Complaints Mapped to TEL/N6243 v1.0

Terminal Outcomes:

- Interpret BSS performance reports, alarm details and tickets
- Plan corrective actions to resolve given complaints

Duration: <i>50:00</i>	Duration: 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Discuss the important parameters to check network performance at a location. Explain how to compare actual 	 Analyse and interpret reports made by OSS to find common issues and faults. Interpret the results of various logs such as
performance reports with standard reports to highlight deteriorating cell-site performance.	computer and black box logs to identify faults.
 Discuss the specific maintenance activities to be performed regularly to address 	 Prepare a strategy to identify various faults using indicators or information available in BSS nodes.
customer complaints.Explain the importance of coordinating	 Perform the steps of necessary tests to diagnose the cause and alarm severity.
with the field time and infrastructure engineers.	 Prepare a report of analysing real-time alarm data to be sent to field team for
Discuss the need of sharing good work	troubleshooting purposes.
practices of one organization zone with the employees of other zones.	 Prepare a checklist to monitor the performance of field time as per given timelines.

Classroom Aids:

Whiteboard and markers, chart paper and sketch pens, LCD Projector and Laptop for presentations

Tools, Equipment and Other Requirements

Computer logs, black box logs, Power Interface Unit panel, Switch Mode Power Supply (SMPS), Battery bank, microwave, login cables, E1 tester, Ethernet tester, voltage standing wave Ratio meter etc., tools like pliers, power drill, screwdrivers, spanner, measurement tools, like multimeter and thermometer, diagnostic tools, sample of preventive and corrective maintenance formats and checklists, laptop with software such as MS Office and CRM







Module 3: Perform Maintenance at Base Station Controller (BSC) Mapped to TEL/N6244 v1.0

Terminal Outcomes:

- Perform maintenance operations
- · Record the maintenance status

Duration: 50:00	Duration: 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Discuss the factors to be considered to analyse the potential impact of maintenance plan. 	 Prepare a complete maintenance work timely plan as per the fault service impact analysis.
Explain the importance of coordinating with infrastructure engineer and logistics	 Prepare a cost sheet to compare costs of different fault solutions.
 team to repair passive infrastructure. Discuss the ways to resolve customer 	 Arrange required software and hardware as per the team use.
 Explain how to report unresolved issues to the higher authorities as per organizational structure. Describe the factors to consider the effectiveness of maintenance and administrative process. Explain the process of obtaining sign-off from all concerned parties after the completion of the maintenance activities. 	 Conduct physical and logical maintenance tasks at BSC location. Prepare a strategy to check the maintenance activities performed by infrastructure engineer team. Demonstrate how to supervise maintenance activities to be performed by third party as per NOC team requirements. Update required maintenance documents.

Classroom Aids:

Whiteboard and markers, chart paper and sketch pens, LCD Projector and Laptop for presentations

Tools, Equipment and Other Requirements

Network cables, electrical wires, alarms, indicators, tools and equipment, AC, DG, PIU, SMPS and battery bank, Auto Man Failure (AMF) panel, USB, alarm panel, tools like pliers, power drill, screwdrivers, spanner, measurement tools, like multi-meter and thermometer, diagnostic tools etc.







Module 4: Perform Operational Activities at Radio sites Mapped to TEL/N6245 v1.0

Terminal Outcomes:

- Perform change activities and monitor the process
- Discuss how to ensure the effectiveness of change process

Duration: 40:00	Duration : 40:00		
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes		
 Discuss the relevant factors to be considered while planning maintenance 	 Prepare a maintenance plan as per given requests and timelines. 		
 Explain the importance of obtaining customer approval before starting maintenance activities. 	 Employ appropriate techniques for monitoring and supervising hardware and software related upgrades and maintenance activities. 		
 Discuss the ways to confirm effectiveness of maintenance activities as per defined standards and guidelines. 	 Prepare an alternative plan in case of service disruption as per the guidelines. Demonstrate the process of obtaining backup of BSC configuration. 		

Classroom Aids:

Whiteboard and markers, chart paper and sketch pens, LCD Projector and Laptop for presentations

Tools, Equipment and Other Requirements

BSC, BTS, Feeder cables, microwave, optical fiber cables, cable connectors, cable ties, cable tray, IP network etc.







Module 4: Communication and Interpersonal skills *Mapped to TEL/N9103 v1.0*

Terminal Outcomes:

- Communicate effectively and develop interpersonal skills
- Develop sensitivity towards differently abled people.

Duration: 10:00	Duration : 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Identify roles and responsibilities and understand organisation's policies. List organisational guidelines for dress code, time schedules, language and other soft skill aspects. List the different methods of communication. Explain the importance of effective communication and interpersonal skills. Analyse the common reasons for interpersonal conflicts and ways of managing them effectively. Identify types of information needed by colleagues and its importance. Identify the need for implementing standards, guidelines and practices pertaining to gender sensitivity, including work ethics and workplace etiquettes. Explain the work ethics, workplace etiquettes as well as standards and guidelines for all genders and PwD. List health and safety requirements for persons with disability. List the rights, duties and benefits available at workplace for person with disability. Identify the process of recruiting people with disability for a specific job. Analyse the specific ways to help persons with disability overcome the challenges. 	 Demonstrate how to interact with superiors in terms of escalating problems, reporting work completion and receiving feedback. Apply team building skills to assist colleagues in maximizing effectiveness and efficiency of carrying out tasks. Demonstrate appropriate communication skills and etiquettes while interacting with others. Resolve conflicts with colleagues and adhere to commitment. Demonstrate ideal workplace ethics while interacting with colleagues with respect to sharing information, co-ordinating work and showing respect. Follow organisation's policy for working with team members. Illustrate importance of team goals over individual goals. Use inclusive language irrespective of the gender/ disability of the person. Demonstrate appropriate behaviour towards all genders and differently abled people.
with disability overcome the challenges.	

Classroom Aids:

White board/ black board marker / chalk, duster, computer or Laptop attached to LCD projector

Tools, Equipment and Other Requirements

Sample of escalation matrix, organisation structure.







Module 6: Working effectively and optimizing resources for a safe workplace Mapped to TEL/N9104 v1.0

Terminal Outcomes:

Plan work effectively, implement safety practices and optimize use of resources

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 List the importance of following the standard operating procedures of the company w.r.t. privacy, confidentiality and security. List the key performance indicators for the new tasks. Identify the opportunities for team building workshops and motivational trainings. List and explain work requirements to be followed by the team. Identify the issues with and handle them. Discuss correct way to show emotions at workplace. Describe the importance of timely completion of tasks. Explain the importance of providing and receiving feedback constructively. Analyse ways to optimize usage of resources. List the importance, cause and effect of greening of jobs. Identify different types of hazards such as illness, accidents, fires etc. List the causes of risks and potential hazards in a work area and ways to prevent them. List the steps to report accident and health related issues as per SOP. Explain the concept of waste management. List the methods of waste disposal. Identify the different categories of waste for the purpose of segregation. Differentiate between recyclable and non-recyclable waste. 	 Demonstrate techniques to save on cost and time. Demonstrate routine cleaning of tools, equipment and machines to ensure team follows the same. Use resources such as water judiciously. Check for malfunctions in equipment and report as per SOP. Report any breaches in safety and security to the concerned person. Illustrate ways to keep work area clean such as mopping spills and leaks, cleaning grease stains etc. Check for spills and leaks and plug the same. Demonstrate segregation of types of hazardous waste. Illustrate steps to minimise waste. Illustrate proper waste disposal procedures and how to dispose-off hazardous waste. Illustrate ways to find exact cause of a problem and validate the same in case done by a team member.







• List electronic waste disposal procedures.

Classroom Aids:

White board/ black board marker / chalk, duster, computer or Laptop attached to LCD projector

Tools, Equipment and Other Requirements

Personal Protection Equipment: safety glasses, head protection, rubber gloves, safety footwear, warning signs and tapes, fire extinguisher and first aid kit







Module 7: On-the-Job Training Mapped to Base Station Sub-system (BSS) Support Engineer

Mandatory Duration: 120:00 **Recommended Duration**: 00:00

Location: On-Site

Terminal Outcomes

- 1. Examine the reports made by OSS to find common issues and faults.
- 2. Interpret the results of various logs.
- 3. Develop a strategy to identify various faults in BSS nodes.
- 4. Conduct tests to diagnose the cause and alarm severity.
- 5. Create a report analyzing real-time alarm data to be sent to the field team for troubleshooting purposes.
- 6. Create a complete maintenance work schedule.
- 7. Formulate a cost sheet to compare the costs of different fault solutions.
- 8. Ensure that required software and hardware is available as per the team use.
- 9. Perform physical and logical maintenance tasks.
- 10. Observe maintenance activities to be performed by a third party.
- 11. Revise required maintenance documents as per the changes.
- 12. Plan maintenance activities as per given requirements and timelines.
- 13. Monitor and supervise hardware and software-related upgrades and maintenance activities.
- 14. Set up an alternative plan for possible service disruption as per the guidelines.
- 15. Ensure proper backup is obtained of BSC configuration.







Module 8: DGT/VSQ/N0103 Employability Skills (90 hours) Mapped to Base Station Sub-system (BSS) Support Engineer

Mandatory Duration: 90:00 **Location: On-Site** S.N Duration **Module Name Key Learning Outcomes** ο. (hours) Introduction to 3 Outline the importance of Employability Skills for the **Employability Skills** current job market and future of work. List different learning and employability related GOI and 1. private portals and their usage. Research and prepare a note on different industries, trends, required skills and the available opportunities. Constitutional 1.5 Explain the constitutional values, including civic rights and values - Citizenship duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, 2. caring and respecting others that are required to become a responsible citizen. Demonstrate how to practice different environmentally sustainable practices. Becoming a Discuss relevant 21st century skills required for 5 Professional in the employment. 21st Century Highlight the importance of practicing 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative 3. thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life. Create a pathway for adopting a continuous learning mindset for personal and professional development. **Basic English Skills** 10 Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone. 4. Read and understand text written in basic English. Write a short note/paragraph / letter/e -mail using correct basic English. 4 Career Create a career development plan. 5. **Development &** Identify well-defined short- and long-term goals. **Goal Setting** Communication Demonstrate how to communicate effectively using 10 Skills verbal and nonverbal communication etiquette. Write a brief note/paragraph on a familiar topic. 6. Explain the importance of communication etiquette including active listening for effective communication. Role play a situation on how to work collaboratively with others in a team. Diversity & Demonstrate how to behave, communicate, and conduct 2.5 Inclusion appropriately with all genders and PwD. 7. Discuss the significance of escalating sexual harassment issues as per POSH act. Financial and Legal Discuss various financial institutions, products, and 10 8. Literacy







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		 Demonstrate how to conduct offline and online financial transactions, safely and securely and check 	
		passbook/statement.	
		Explain the common components of salary such as Basic,	
		PF, Allowances (HRA, TA, DA, etc.), tax deductions.	
		Calculate income and expenditure for budgeting	
		 Discuss the legal rights, laws, and aids. 	
	Essential Digital	Describe the role of digital technology in day-to-day life	20
	Skills	and the workplace.	
		Demonstrate how to operate digital devices and use the	
		associated applications and features, safely and securely.	
		Demonstrate how to connect devices securely to internet	
		using different means.	
		 Follow the dos and don'ts of cyber security to protect 	
9.		against cyber-crimes.	
		Discuss the significance of displaying responsible online	
		behavior while using various social media platforms.	
		Create an e-mail id and follow e- mail etiquette to	
		exchange e -mails.	
		Show how to create documents, spreadsheets and	
		presentations using appropriate applications.	
		Utilize virtual collaboration tools to work effectively.	
	Entrepreneurship	Explain the types of entrepreneurship and enterprises.	7
		Discuss how to identify opportunities for potential	
		business, sources of funding and associated financial and	
10.		legal risks with its mitigation plan.	
		Describe the 4Ps of Marketing-Product, Price, Place and	
		Promotion and apply them as per requirement.	
		Create a sample business plan, for the selected business	
-	6 4 4 4 4 4	opportunity.	
	Customer Service	Classify different types of customers.	9
		Demonstrate how to identify customer needs and	
11		respond to them in a professional manner	
		Discuss various tools used to collect customer feedback.	
		Discuss the significance of maintaining hygiene and	
<u></u>	C.III. B. I. f.	dressing appropriately.	
	Getting Ready for	Draft a professional Curriculum Vitae (CV).	
	Apprenticeship &	Use various offline and online job search sources to find	
	Jobs	and apply for jobs.	
12		Discuss the significance of maintaining hygiene and	8
		dressing appropriately for an interview.	
		Role play a mock interview.	
		List the steps for searching and registering for	
		apprenticeship opportunities	







	LIST OF TOOLS & EQUIPMENT FOR EMPLOYABILITY SKILLS						
S No.	Name of the Equipment	Quantity					
1.	Computer (PC) with latest configurations – and Internet connection with standard operating system and standard word processor and worksheet software (Licensed) (all software should either be latest version or one/two version below)	As required					
2.	UPS	As required					
3.	Scanner cum Printer	As required					
4.	Computer Tables	As required					
5.	Computer Chairs	As required					
6.	LCD Projector	As required					
7.	White Board 1200mm x 900mm	As required					
Note: Abo	Note: Above Tools &Equipment not required, if Computer LAB is available in the institute.						







ANNEXURE

Trainer Requirements (Base Station Sub-system (BSS) Support Engineer)

Trainer Prerequisites							
Minimum Educational	Specialization	Relevant Industry Experience		Training Experience		Remarks	
Qualification		Years	Specialization	Years	Specialization		
B.E./B.Tech/ BCA/B.SC	Science/Electronics/ Telecom/IT and other relevant fields	3	Network Management	0	NA	Eligible for ToT Program	

Trainer Certification				
Domain Certification	Platform Certification			
Job Role: "BSS Support Engineer" "TEL/Q6200 v3.0", Minimum accepted score is 80%	Job Role: "Trainer (VET and Skills) ", "MEP/Q2601" v2.0,Minimum accepted score is 80%			







Assessor Requirements (Base Station Sub-system (BSS) Support Engineer)

Assessor Prerequisites							
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks	
		Years	Specialization	Years	Specialization		
B.E./B.Tech/ BCA/B.SC	Science/Electronics/ Telecom/IT and other relevant fields	3	Network Management	0	NA	Eligible for ToA Program	

Assessor Certification					
Domain Certification	Platform Certification				
Job Role: "BSS Support Engineer "TEL/Q6200 v3.0", Minimum accepted score is 80%	Job Role: "Assessor (VET and Skills)" "MEP/Q2701" v2.0, Minimum accepted score is 80%				







Trainer Requirements (Employability Skills 90 hours)

Trainer Prerequisites							
Minimum Educational	Specialization	Relevant Industry Experience		Training Experience		Remarks	
Qualification		Years	Specialization	Years	Specialization		
Graduate/CITS	Any discipline			2	Teaching experience	Prospective ES trainer should:	
Current ITI trainers	Employability Skills Training (3 days full-time course done between 2019-2022)					 have good communication skills be well versed in English have digital skills 	
Certified current EEE trainers (155 hours)	from Management SSC (MEPSC)					 have attention to detail be adaptable have willingness to 	
Certified Trainer	Qualification Pack: Trainer (MEP/Q0102)					learn	

Trainer Certification					
Domain Certification	Platform Certification				
Certified in 90-hour Employability NOS (2022), with a minimum score of 80%	NA				
OR					
Certified in 120-hour Employability NOS (2022), with a minimum score of 80 %					







Master Trainer Requirements (Employability Skills 90 hours)

Master Trainer Prerequisites							
Minimum Educational	Specialization	Relevant Industry Experience		Trainir	ng Experience	Remarks	
Qualification		Years	Specialization	Years	Specialization		
Graduate/CITS	Any discipline			3	Employability Skills curriculum training experience with an interest to train as well as orient other peer trainers	Prospective ES Master trainer should: • have good communication skills • be well versed in English	
Certified Master Trainer	Qualification Pack: Master Trainer (MEP/Q2602			3	EEE training of Management SSC (MEPSC) (155 hours)	 have basic digital skills have attention to detail be adaptable have willingness to learn be able to grasp concepts fast and is creative with teaching practices and likes sharing back their learning with others 	

Master Trainer Certification					
Domain Certification	Platform Certification				
Certified in 90-hour Employability NOS (2022), with a minimum score of 90% .	NA				
OR					
Certified in 120-hour Employability NOS (2022), with a minimum score of 90 %					







Assessment Strategy

- 1. Assessment System Overview:
 - Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email
 - Assessment agencies send the assessment confirmation to VTP/TC looping SSC
 - Assessment agency deploys the ToA certified Assessor for executing the assessment
 - SSC monitors the assessment process & records

2. Testing Environment:

- Confirm that the centre is available at the same address as mentioned on SDMS or SIP
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.
- 3. Assessment Quality Assurance levels / Framework:
 - Question papers created by the Subject Matter Experts (SME)
 - Question papers created by the SME verified by the other subject Matter Experts
 - Questions are mapped with NOS and PC
 - Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
 - Assessor must be ToA certified & trainer must be ToT Certified
 - Assessment agency must follow the assessment guidelines to conduct the assessment
- 4. Types of evidence or evidence-gathering protocol:
 - Time-stamped & geotagged reporting of the assessor from assessment location
 - Center photographs with signboards and scheme specific branding
 - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
 - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos
- Method of verification or validation:
 - Surprise visit to the assessment location
 - Random audit of the batch
 - Random audit of any candidate
- 6. Method for assessment documentation, archiving, and access
 - Hard copies of the documents are stored
 - Soft copies of the documents & photographs of the assessment are uploaded / accessed from **Cloud Storage**
 - Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

Assessment Strategy (Employability Skills 90 hours)

The trainee will be tested for the acquired skill, knowledge and attitude through formative/summative assessment at the end of the course and as this NOS and MC is adopted across sectors and qualifications, the respective AB can conduct the assessments as per their requirements.







References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training .
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.











Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
SOP	Standard Operating Procedures
SCM	Supply Chain Manager
AC	Air Conditioner
DG	Diesel Generator
PIU	Power Interface Unit
SMPS	Switch Mode Power Supply
ВВ	Battery Bank
PwD	Persons with Disabilities
SLA	Service Level Agreement
PR	Public Relations
OPCOs	Operating Companies
ES	Employability Skills