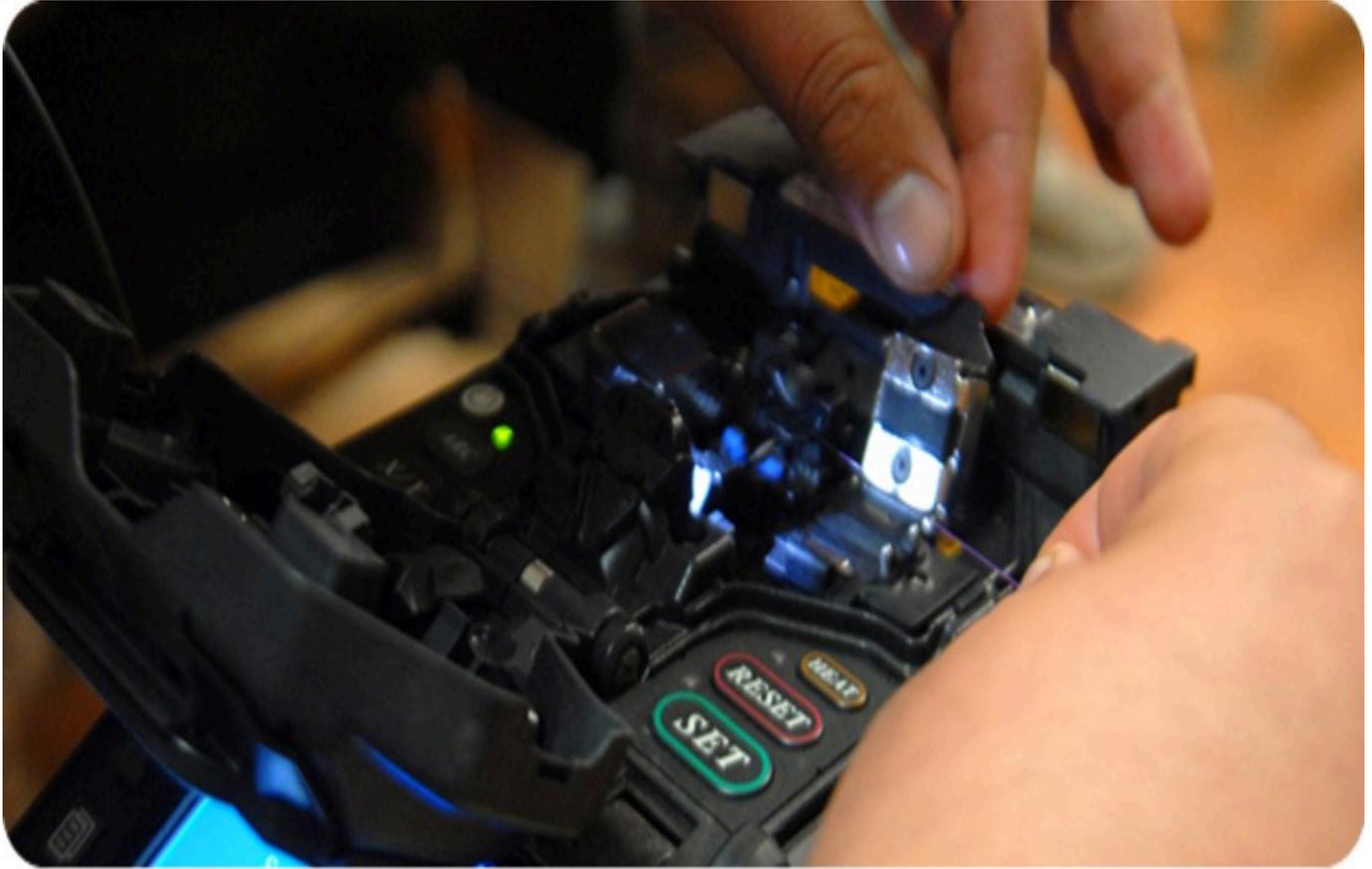


Qualification Pack



Optical Fiber Splicer

QP Code: TEL/Q6400

Version: 5.0

NSQF Level: 3

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TEL/Q6400: Optical Fiber Splicer

Brief Job Description

An Optical Fiber Splicer is responsible for splicing optical fibers with precision and testing their effectiveness using advanced tools. The individual is required to ensure high-quality connections and maintain accurate records for future reference.

Personal Attributes

The individual should be physically fit good communication skills. The person should have the ability to work in fast-paced environments and make critical decisions to ensure successful fiber optic network installations.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [TEL/N6400: Splice Optical Fiber](#)
2. [TEL/N6401: Test Effectiveness and Record Test Results](#)
3. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Telecom
Sub-Sector	Passive Infrastructure
Occupation	Operations and Maintenance - Passive Infrastructure
Country	India
NSQF Level	3
Credits	13
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7422.0802

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Minimum Educational Qualification & Experience	10th grade pass OR 8th grade pass with 3 Years of experience in the operations and maintenance of passive infrastructure OR Previous relevant Qualification of NSQF Level 2.5 with 1.5 years of experience in the operations and maintenance of passive infrastructure
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	15 Years
Last Reviewed On	NA
Next Review Date	30/04/2028
NSQC Approval Date	08/05/2025
Version	5.0
Reference code on NQR	QG-03-TL-04076-2025-V2-TSSC
NQR Version	2

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TEL/N6400: Splice Optical Fiber

Description

This unit focuses on preparing and executing efficient optical splicing operations. It integrates advanced fiber testing tools, automation, network troubleshooting, and sustainable practices, emphasizing precision and efficiency in high-speed optical networks.

Scope

The scope covers the following :

- Check the availability of tools, spares, and advanced equipment
- Prepare cables for splicing for new installations
- Maintain and troubleshoot laid Optical Fiber Cables (OFCs)
- Perform advanced splicing operations with automation and precision
- Utilize advanced fiber testing tools and document results
- Perform specialized splicing techniques for micro and nano fibers

Elements and Performance Criteria

Check the availability of tools, spares, and advanced equipment

To be competent, the user/individual on the job must be able to:

- PC1.** check the availability and functionality of advanced optical testing tools such as AI-enabled Optical Time-Domain Reflectometer (OTDR), power meter, Optical Spectrum Analyzer (OSA), Chromatic Dispersion (CD) Analyzer, and Polarization Mode Dispersion (PMD) Analyzer
- PC2.** check for the availability of tools for advanced splicing including automated splicers, robotic arms, precision cleavers, smart cleavers, splice trays, and inspection tools
- PC3.** check for adequate stock of splicing consumables including joint kits, connectors, patch cords, heat shrink sleeves, and environmental sealing materials along with RCC joint chambers, fiber optic enclosures, and other site-specific materials
- PC4.** ensure splicing machines and testing equipment are calibrated, updated with the latest firmware, and meet precision standards
- PC5.** handle inventory and coordinate repair or replacement of faulty tools through defined channels

Prepare cables for splicing for new installations

To be competent, the user/individual on the job must be able to:

- PC6.** locate and identify fibers for splicing as per network designs, connectivity plans and colour-coded sequences using automated mapping tools
- PC7.** check cables for physical and sheath damage using visual and advanced inspection tools
- PC8.** prepare optical fibers by removing jackets and cleaning cores using automated cleaning systems
- PC9.** secure cables and ensure compliance with bend radius and stress limits specified by manufacturers
- PC10.** install and ground joint closures, splitters, and pigtails with weatherproofing measures to minimize environmental effects

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PC11. manage routing of connectorized fibers inside junction boxes and document compliance with network plans

PC12. perform twist splicing for copper or hybrid cables where applicable

Maintain and troubleshoot laid Optical Fiber Cables (OFCs)

To be competent, the user/individual on the job must be able to:

PC13. identify fiber faults using advanced tools such as AI-enabled OTDR and real-time monitoring systems

PC14. use robotic arms, Optical Fiber Identifiers (OFIs), and smart cleavers for precise maintenance in challenging environments

PC15. coordinate with the Network Operations Center (NOC) for outage windows and route updates

PC16. access fault points safely and inspect for microbends, sheath damage, or environmental wear using advanced inspection tools

PC17. clean and prepare all fibers for splicing as per applicable specifications

PC18. replace damaged sections, re-splice fibers, and ensure all connections meet loss and reflection standards

PC19. secure and weatherproof cables following the applicable standards

PC20. document maintenance and troubleshooting activities digitally for analysis and reporting

Perform advanced splicing operations with automation and precision

To be competent, the user/individual on the job must be able to:

PC21. operate advanced fusion splicing machines with automation features to minimize human error

PC22. perform mechanical, fusion, ribbon, crimp, mass and nano fiber splicing for various network applications, including harsh environments

PC23. ensure splice quality using real-time diagnostics integrated into automated splicing machines

PC24. minimize splice loss and optimize alignment using precision cleavers and advanced imaging tools

PC25. test splice quality using real-time monitoring systems integrated into splicers

PC26. seal splices with heat-shrink or cold-shrink closures, ensuring protection against environmental factors

PC27. conduct micro and nano fiber splicing using specialized tools for high-performance, low-loss connections in specialized industries such as medical and military communications

PC28. document splicing details and results digitally for future reference

Utilize advanced fiber testing tools and document results

To be competent, the user/individual on the job must be able to:

PC29. use AI-enabled OTDR for real-time fault detection, predictive maintenance, and accurate loss measurement

PC30. test signal quality and propagation characteristics using advanced tools such as OSAs, CD analyzers, and PMD analyzers

PC31. verify performance KPIs, including attenuation, reflection, and chromatic dispersion, for spliced fibers

PC32. generate automated reports using cloud-based platforms for remote monitoring and compliance tracking

Qualification Pack

PC33. maintain proper documentation of test results for quality assurance and network optimization

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the structure, types, and materials of optical fibers, including core, cladding, and jacket properties
- KU2.** the types of splicing techniques such as mechanical, fusion, twist (for copper or hybrid cables), heat shrink, crimp, ribbon, and nano splicing, and their applications
- KU3.** use of tools and equipment for splicing including splice trays, fusion splicers, hand tools (strippers, cutters, crimpers), inspection tools (microscopes, OTDR for fiber splicing), splice closures, and safety equipment (gloves, goggles).
- KU4.** advanced characteristics of optical fibers such as dispersion, refraction, attenuation, and signal loss
- KU5.** features and functions of advanced splicing machines, robotic arms, smart cleavers, and testing equipment
- KU6.** best practices for minimizing splice loss and ensuring long-term durability of joints
- KU7.** the techniques for splicing in challenging environments such as outdoor, submarine, or underground networks
- KU8.** fiber pigtails, connectorized fiber, routing of fiber inside the junction box
- KU9.** different fiber jointing techniques
- KU10.** environmental effects on fiber and splice joints and methods for mitigating degradation
- KU11.** the applications of AI-powered tools for fault detection, predictive maintenance, and process optimization
- KU12.** the principles of cloud-based systems for remote monitoring, reporting, and troubleshooting
- KU13.** the integration of splicing tasks with IoT-enabled smart network management systems
- KU14.** the regulatory compliance and sustainability practices for optical fiber installation and maintenance
- KU15.** fiber optic cable construction, including the structure of optical fibers (core, cladding, jacket), types of fibers (single-mode vs. multi-mode), and fiber optic cable preparation
- KU16.** the advanced fusion splicing process, including an introduction to fusion splicing, fiber preparation (strip, clean, cleave), fusion splicing machine operation, and aligning fibers to create a splice
- KU17.** advanced fiber optic splicing - ribbon fiber splicing techniques, splicing in high-density and harsh environments (outdoor and submarine cables), and achieving high-performance low-loss connections
- KU18.** splice closure and protection including the proper use of splice closures, heat shrink vs. cold shrink closures, and weatherproofing and sealing techniques
- KU19.** the best practices for splicing including minimizing splice loss, accounting for environmental factors, and proper documentation and labeling for splicing
- KU20.** the techniques for crimp splicing and its applications in hybrid networks
- KU21.** cold shrink closures and their advantages in specific environments

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Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** record and report all splicing and testing activities using digital tools
- GS2.** work collaboratively with team members, supervisors, and NOC teams for efficient network management
- GS3.** prioritize tasks to meet deadlines during installation, maintenance, and splicing activities
- GS4.** troubleshoot fiber faults and tool malfunctions effectively to minimize downtime
- GS5.** ensure compliance with safety protocols and environmental standards during splicing and testing operations
- GS6.** adapt to emerging tools and technologies to enhance splicing precision and efficiency
- GS7.** communicate clearly and foster positive working relationships with stakeholders
- GS8.** implement sustainability practices, including recycling fiber waste and optimizing resource use

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Check the availability of tools, spares, and advanced equipment</i>	4	10	-	4
PC1. check the availability and functionality of advanced optical testing tools such as AI-enabled Optical Time-Domain Reflectometer (OTDR), power meter, Optical Spectrum Analyzer (OSA), Chromatic Dispersion (CD) Analyzer, and Polarization Mode Dispersion (PMD) Analyzer	1	2	-	0.5
PC2. check for the availability of tools for advanced splicing including automated splicers, robotic arms, precision cleavers, smart cleavers, splice trays, and inspection tools	1	2	-	0.5
PC3. check for adequate stock of splicing consumables including joint kits, connectors, patch cords, heat shrink sleeves, and environmental sealing materials along with RCC joint chambers, fiber optic enclosures, and other site-specific materials	1	2	-	1
PC4. ensure splicing machines and testing equipment are calibrated, updated with the latest firmware, and meet precision standards	0.5	2	-	1
PC5. handle inventory and coordinate repair or replacement of faulty tools through defined channels	0.5	2	-	1
<i>Prepare cables for splicing for new installations</i>	5	12	-	4
PC6. locate and identify fibers for splicing as per network designs, connectivity plans and colour-coded sequences using automated mapping tools	0.5	2	-	1
PC7. check cables for physical and sheath damage using visual and advanced inspection tools	1	2	-	0.5
PC8. prepare optical fibers by removing jackets and cleaning cores using automated cleaning systems	1	2	-	0.5
PC9. secure cables and ensure compliance with bend radius and stress limits specified by manufacturers	0.5	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. install and ground joint closures, splitters, and pigtails with weatherproofing measures to minimize environmental effects	0.5	2	-	1
PC11. manage routing of connectorized fibers inside junction boxes and document compliance with network plans	0.5	1	-	0.5
PC12. perform twist splicing for copper or hybrid cables where applicable	1	1	-	0.5
<i>Maintain and troubleshoot laid Optical Fiber Cables (OFCs)</i>	8	12	-	4
PC13. identify fiber faults using advanced tools such as AI-enabled OTDR and real-time monitoring systems	1	2	-	0.5
PC14. use robotic arms, Optical Fiber Identifiers (OFIs), and smart cleavers for precise maintenance in challenging environments	1	1	-	0.5
PC15. coordinate with the Network Operations Center (NOC) for outage windows and route updates	1	1	-	0.5
PC16. access fault points safely and inspect for microbends, sheath damage, or environmental wear using advanced inspection tools	1	1	-	0.5
PC17. clean and prepare all fibers for splicing as per applicable specifications	1	2	-	0.5
PC18. replace damaged sections, re-splice fibers, and ensure all connections meet loss and reflection standards	1	2	-	0.5
PC19. secure and weatherproof cables following the applicable standards	1	2	-	0.5
PC20. document maintenance and troubleshooting activities digitally for analysis and reporting	1	1	-	0.5
<i>Perform advanced splicing operations with automation and precision</i>	8	10	-	4
PC21. operate advanced fusion splicing machines with automation features to minimize human error	1	1	-	0.5

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC22. perform mechanical, fusion, ribbon, crimp, mass and nano fiber splicing for various network applications, including harsh environments	1	2	-	0.5
PC23. ensure splice quality using real-time diagnostics integrated into automated splicing machines	1	1	-	0.5
PC24. minimize splice loss and optimize alignment using precision cleavers and advanced imaging tools	1	1	-	0.5
PC25. test splice quality using real-time monitoring systems integrated into splicers	1	2	-	0.5
PC26. seal splices with heat-shrink or cold-shrink closures, ensuring protection against environmental factors	1	1	-	0.5
PC27. conduct micro and nano fiber splicing using specialized tools for high-performance, low-loss connections in specialized industries such as medical and military communications	1	1	-	0.5
PC28. document splicing details and results digitally for future reference	1	1	-	0.5
<i>Utilize advanced fiber testing tools and document results</i>	5	6	-	4
PC29. use AI-enabled OTDR for real-time fault detection, predictive maintenance, and accurate loss measurement	1	2	-	1
PC30. test signal quality and propagation characteristics using advanced tools such as OSAs, CD analyzers, and PMD analyzers	1	1	-	0.5
PC31. verify performance KPIs, including attenuation, reflection, and chromatic dispersion, for spliced fibers	1	1	-	0.5
PC32. generate automated reports using cloud-based platforms for remote monitoring and compliance tracking	1	1	-	1

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC33. maintain proper documentation of test results for quality assurance and network optimization	1	1	-	1
NOS Total	30	50	-	20

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N6400
NOS Name	Splice Optical Fiber
Sector	Telecom
Sub-Sector	Network Managed Services
Occupation	Operations and Maintenance - Passive Infrastructure
NSQF Level	3
Credits	5
Version	7.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025

Qualification Pack

TEL/N6401: Test Effectiveness and Record Test Results

Description

This unit is about testing the effectiveness of the spliced optical fiber using advanced tools like AI-enabled OTDR and power meters, documenting results, and ensuring adherence to health, safety, and eco-friendly practices.

Scope

The scope covers the following :

- Test the effectiveness of the splice using advanced tools
- Record test results for traceability and analysis
- Follow health, safety, and sustainable practices during fiber splicing

Elements and Performance Criteria

Test the effectiveness of the splice using advanced tools

To be competent, the user/individual on the job must be able to:

- PC1.** use AI-enabled OTDR to analyze splice joints, diagnose faults, and ensure conformance to design specifications
- PC2.** ensure optical losses (e.g., reflectance, return, insertion losses) are within acceptable thresholds
- PC3.** seal joint closures using appropriate methods (heat shrinking, multi-diameter seals, or mechanical seals) to ensure protection under adverse environmental conditions
- PC4.** strengthen splices using appropriate reinforcement materials like Fiber Reinforced Plastic (FRP)
- PC5.** conduct power source and power meter tests at both ends of the fiber to detect and eliminate cross-fiber issues
- PC6.** ensure proper placement of joints in the chamber and coiling of spare cables (loop) within the joint enclosure
- PC7.** perform predictive maintenance using data insights from AI-enabled tools to identify potential faults proactively
- PC8.** integrate eco-friendly deployment techniques, minimizing material waste during the testing process

Record test results for traceability and analysis

To be competent, the user/individual on the job must be able to:

- PC9.** maintain a comprehensive jointing record for future reference
- PC10.** record OTDR and power meter test results in the prescribed format
- PC11.** submit test and jointing records to the appropriate authorities for validation and inspection
- PC12.** update documentation on predictive maintenance and fault diagnostics conducted during testing

Follow health, safety, and sustainable practices during fiber splicing

To be competent, the user/individual on the job must be able to:

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- PC13.** check sites for potential health, safety, and environmental risks before beginning work
- PC14.** use Personal Protective Equipment (PPE) such as helmets, safety glasses, gloves, and trench guards while splicing
- PC15.** comply with site-specific risk controls, OHS standards, and environmental guidelines
- PC16.** identify and address environmental hazards like Earth Potential Rise (EPR) during testing and splicing
- PC17.** incorporate recycling of fiber waste and adopt eco-friendly materials to align with global sustainability goals
- PC18.** dispose of waste materials such as cut fibers in a safe and eco-friendly manner

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the procedures for documentation, reporting, and record-keeping as per company policies
- KU2.** the protocols for testing optical fiber and ensuring quality assurance
- KU3.** functions and applications of advanced optical testing tools, including AI-enabled OTDR and power meters
- KU4.** techniques for sealing and protecting splice closures using heat shrinking and multi-diameter seals
- KU5.** threshold values for optical losses and how to mitigate them effectively
- KU6.** predictive maintenance concepts and the role of AI-driven tools in minimizing downtime
- KU7.** the risks associated with improper testing or splicing, including long-term impacts on network reliability
- KU8.** the procedures for recycling fiber waste and deploying eco-friendly materials during fiber splicing
- KU9.** Health, Safety, and Environment (HSE) protocols, including handling Earth Potential Rise (EPR)
- KU10.** safe disposal of waste materials and adherence to global sustainability practices
- KU11.** first-aid procedures for injuries such as electrical shocks, cuts, and falls

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** read and interpret work orders, equipment manuals, and health/safety guidelines
- GS2.** record test data accurately in OTDR registers and maintain detailed activity logs
- GS3.** communicate test results and maintenance observations clearly with supervisors and team members
- GS4.** adapt to advanced testing techniques, including the use of AI-enabled diagnostic tools
- GS5.** collaborate with peers to ensure efficient and effective fiber splicing operations
- GS6.** optimize resource usage to minimize material wastage and reduce environmental impact
- GS7.** execute tasks in high-pressure environments with accuracy and efficiency



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- GS8.** respond flexibly to changes in schedules, job requirements, and environmental challenges
- GS9.** demonstrate awareness of sustainable practices and global environmental goals
- GS10.** maintain composure and professionalism during troubleshooting or emergency situations

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Test the effectiveness of the splice using advanced tools</i>	13	25	-	9
PC1. use AI-enabled OTDR to analyze splice joints, diagnose faults, and ensure conformance to design specifications	2	4	-	2
PC2. ensure optical losses (e.g., reflectance, return, insertion losses) are within acceptable thresholds	2	3	-	1
PC3. seal joint closures using appropriate methods (heat shrinking, multi-diameter seals, or mechanical seals) to ensure protection under adverse environmental conditions	2	3	-	1
PC4. strengthen splices using appropriate reinforcement materials like Fiber Reinforced Plastic (FRP)	2	3	-	1
PC5. conduct power source and power meter tests at both ends of the fiber to detect and eliminate cross-fiber issues	2	3	-	1
PC6. ensure proper placement of joints in the chamber and coiling of spare cables (loop) within the joint enclosure	1	3	-	1
PC7. perform predictive maintenance using data insights from AI-enabled tools to identify potential faults proactively	1	3	-	1
PC8. integrate eco-friendly deployment techniques, minimizing material waste during the testing process	1	3	-	1
<i>Record test results for traceability and analysis</i>	7	10	-	4
PC9. maintain a comprehensive jointing record for future reference	2	3	-	1
PC10. record OTDR and power meter test results in the prescribed format	2	3	-	1

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. submit test and jointing records to the appropriate authorities for validation and inspection	2	2	-	1
PC12. update documentation on predictive maintenance and fault diagnostics conducted during testing	1	2	-	1
<i>Follow health, safety, and sustainable practices during fiber splicing</i>	10	15	-	7
PC13. check sites for potential health, safety, and environmental risks before beginning work	2	3	-	2
PC14. use Personal Protective Equipment (PPE) such as helmets, safety glasses, gloves, and trench guards while splicing	2	3	-	1
PC15. comply with site-specific risk controls, OHS standards, and environmental guidelines	2	3	-	1
PC16. identify and address environmental hazards like Earth Potential Rise (EPR) during testing and splicing	2	2	-	1
PC17. incorporate recycling of fiber waste and adopt eco-friendly materials to align with global sustainability goals	1	2	-	1
PC18. dispose of waste materials such as cut fibers in a safe and eco-friendly manner	1	2	-	1
NOS Total	30	50	-	20

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N6401
NOS Name	Test Effectiveness and Record Test Results
Sector	Telecom
Sub-Sector	Network Managed Services
Occupation	Operations and Maintenance - Passive Infrastructure
NSQF Level	3
Credits	7
Version	4.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025

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DGT/VSQ/N0101: Employability Skills (30 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

To be competent, the user/individual on the job must be able to:

PC1. understand the significance of employability skills in meeting the job requirements

Constitutional values - Citizenship

To be competent, the user/individual on the job must be able to:

PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

Becoming a Professional in the 21st Century

To be competent, the user/individual on the job must be able to:

PC3. explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

Basic English Skills

To be competent, the user/individual on the job must be able to:

PC4. speak with others using some basic English phrases or sentences

Communication Skills

To be competent, the user/individual on the job must be able to:

PC5. follow good manners while communicating with others

PC6. work with others in a team

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Diversity & Inclusion

To be competent, the user/individual on the job must be able to:

PC7. communicate and behave appropriately with all genders and PwD

PC8. report any issues related to sexual harassment

Financial and Legal Literacy

To be competent, the user/individual on the job must be able to:

PC9. use various financial products and services safely and securely

PC10. calculate income, expenses, savings etc.

PC11. approach the concerned authorities for any exploitation as per legal rights and laws

Essential Digital Skills

To be competent, the user/individual on the job must be able to:

PC12. operate digital devices and use its features and applications securely and safely

PC13. use internet and social media platforms securely and safely

Entrepreneurship

To be competent, the user/individual on the job must be able to:

PC14. identify and assess opportunities for potential business

PC15. identify sources for arranging money and associated financial and legal challenges

Customer Service

To be competent, the user/individual on the job must be able to:

PC16. identify different types of customers

PC17. identify customer needs and address them appropriately

PC18. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

To be competent, the user/individual on the job must be able to:

PC19. create a basic biodata

PC20. search for suitable jobs and apply

PC21. identify and register apprenticeship opportunities as per requirement

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

KU4. Twenty first (21st) century skills and their importance

KU5. how to use basic spoken English language

KU6. Do and dont of effective communication

KU7. inclusivity and its importance

KU8. different types of disabilities and appropriate communication and behaviour towards PwD

KU9. different types of financial products and services

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- KU10.** how to compute income and expenses
- KU11.** importance of maintaining safety and security in financial transactions
- KU12.** different legal rights and laws
- KU13.** how to operate digital devices and applications safely and securely
- KU14.** ways to identify business opportunities
- KU15.** types of customers and their needs
- KU16.** how to apply for a job and prepare for an interview
- KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** communicate effectively using appropriate language
- GS2.** behave politely and appropriately with all
- GS3.** perform basic calculations
- GS4.** solve problems effectively
- GS5.** be careful and attentive at work
- GS6.** use time effectively
- GS7.** maintain hygiene and sanitisation to avoid infection

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values - Citizenship</i>	1	1	-	-
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
PC3. explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	1	1	-	-
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	3	4	-	-
PC9. use various financial products and services safely and securely	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. calculate income, expenses, savings etc.	-	-	-	-
PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	4	6	-	-
PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-
PC13. use internet and social media platforms securely and safely	-	-	-	-
<i>Entrepreneurship</i>	3	5	-	-
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	2	2	-	-
PC16. identify different types of customers	-	-	-	-
PC17. identify customer needs and address them appropriately	-	-	-	-
PC18. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	1	3	-	-
PC19. create a basic biodata	-	-	-	-
PC20. search for suitable jobs and apply	-	-	-	-
PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
NOS Total	20	30	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each Element/ PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Qualification Pack

Minimum Aggregate Passing % at QP Level : 50

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
TEL/N6400.Splice Optical Fiber	30	50	-	20	100	45
TEL/N6401.Test Effectiveness and Record Test Results	30	50	-	20	100	45
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	10
Total	80	130	-	40	250	100

Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
NCVET	National Council for Vocational Education and Training
QP	Qualification Pack
MC	Model Curriculum
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
NCO	National Classification of Occupations
ES	Employability Skills
TSSC	Telecom Sector Skill Council
TRAI	Telecom Regulatory Authority of India

Qualification Pack

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.

Qualification Pack

Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
PON	Passive Optical Network
GPON	Gigabit Passive Optical Network
OTDR	Optical Time Domain Reflectometer
OSA	Optical Spectrum Analyzer
CD	Chromatic Dispersion
PMD	Polarization Mode Dispersion
OFIs	Optical Fiber Installations
NOC	Network Operations Center
OSP	Outside Plant
WDM	Wavelength Division Multiplexing
TDMA	Time Division Multiple Access
ONT	Optical Network Terminal
VFL	Visual Fault Locator
CPE	Customer Premises Equipment