NSQF QUALIFICATION FILE
Approved in 14th NSQC Meeting – NCVET-Dated 30 December 2021
Rationalized in 17th NSQC Meeting – NCVET – Dated 17.11.2022

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

Telecom Sector Skill Council

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

NCVET Code
2022/TEL/TSSC/07005

Name and contact details of individual dealing with the submission

Name: Mr. Sumit Sinha

Position in the organisation: Manager – Standards

Address if different from above: Same as above

Tel number(s): 0124-4148029

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List of documents submitted in support of the Qualifications File

1. Model Curriculum

Model Curriculum to be added which will include the following:

- **Indicative list of tools/equipment to conduct the training**
- **Trainers' qualification**
- **Lesson Plan**

- **Distribution of training duration into theory/practical/OJT component**

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SUMMARY

1	**Qualification Title:** Optical Fiber Technician
2	**Qualification Code, if any:** TEL/Q6401
3	**NCO code and occupation:** NCO-2015/7422.0801 Operations and Maintenance – Passive Infrastructure
4	**Nature and purpose of the qualification (Please specify whether qualification is short term or long term):** **Optical Fiber Technician** Activities for installation and commissioning of Optical Fiber Cables (OFCs) and maintains the up-time and quality of the network segment by undertaking periodic preventive maintenance activities. This QP is for short term program, and it is designed based on industry demand. Easy to learn and deploy.
5	**Body/bodies which will award the qualification:** Telecom Sector Skill Council
6	**Body which will accredit providers to offer courses leading to the qualification:** Telecom Sector Skill Council
7	**Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy):** Yes. SIP norms for accreditation and SSC norms for affiliation are available on SIP portal.
8	**Occupation(s) to which the qualification gives access:** Operations and Maintenance – Passive Infrastructure
9	**Job description of the occupation**: Optical Fiber Technician coordinates the activities for installation and commissioning of Optical Fiber Cables (OFCs) and maintains the up-time and quality of the network segment (both optical media & equipment) by undertaking periodic preventive maintenance activities and ensuring effective fault management in case of fault occurrence.
10	**Licensing requirements:** N/A
11	**Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided):** N/A
12	**Level of the qualification in the NSQF:** Level 4
13	**Anticipated volume of training/learning required to complete the qualification:** 540 Hours
14	**Indicative list of training tools required to deliver this qualification:** Test Equipment – Fiber Optic Power Meter, Fiber Optic Test Source, Adapters for Power Meter (for various types of optical cables), OTDR, Cable Cutter, Cable Splitter, Reference Test Cables , Light meter, Sample as-build drawing, Cable Jacket Stripper, Connector Crimper, Fiber optic stripper, Tweezers, Cleaver, Polishing puck for connectors, Polishing Plate, Black work mats, Fusion Splicer (Splicing machine), Related Standard Operating Procedures (SOPs), Format of various related reports, Standard Operating Procedures (SOPs), Format of various related reports. Personal Protection Equipment: safety glasses, head protection, rubber gloves, safety footwear, warning signs and tapes, fire extinguisher and first aid kit. Sample of escalation matrix, organisation structure
15	**Entry requirements and/or recommendations and minimum age:**

	11th grade pass **OR** Completed 1st year of 3- year diploma (after 10th) and pursuing regular diploma **OR** 10th grade pass and pursuing continuous schooling **OR** 10th Grade Pass with 2-year relevant experience **OR** Previous relevant Qualification of NSQF Level 3.0 with minimum education as 5th Grade pass with 2-year relevant experience, 17 years		
16	**Progression from the qualification (Please show Professional and academic progression):** OSP Supervisor		
17	**Arrangements for the Recognition of Prior learning (RPL):** RPL will be based on the same approved Qualification File and Assessment Criteria mentioned in the Qualification File by Telecom Sector Skill Council.		
18	**International comparability where known (research evidence to be provided):** No		
19	**Date of planned review of the qualification:** 30 December 2024		
20	**Formal structure of the qualification** **Mandatory components**		
(i)	**Title of component and identification code/ NOSs/Learning outcomes**	**Estimated size (learning hours)**	**Level**
1	Bridge Module (Role and Responsibilities of an Optical Fiber Technician)	30	4
2	Coordinate Installations and Commissioning of Optical Fiber Cables	110	4
3	Undertake Condition Based Maintenance and Planned Repair Activities	80	4
4	Perform Corrective Maintenance/Restoration of Optical Fiber Faults	80	4
5	Organize Work and Resources as Per Safety Standard	30	4
6	Interact effectively with Team Members and Customers	30	4
7	On-the-Job Training	120	4
8	DGT/VSQ/N0102 Employability Skills (60 Hours)	60	4
	Sub Total (A)	**540**	

SECTION 1
ASSESSMENT

21	**Body/Bodies which will carry out assessment:** Telecom Sector Skill Council. **Proposed Body/Bodies which will carry out assessment**: The assessment will be carried out via our affiliated assessment body.
22	**How will RPL assessment be managed and who will carry it out?** The RPL assessment will be managed by TSSC via its affiliate assessment partners.
23	**Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.** The emphasis is on practical demonstration of skills and knowledge based on the performance criteria. The assessment papers are developed by Subject Matter Experts (SME) available with the Assessment Agency as per the performance and assessment criteria mentioned in the Qualification File. The assessment papers are also checked for the various outcome-based parameters such as quality, time taken, precision, tools & equipment requirement etc. The assessment results are backed by evidence collected by assessors. 1. The assessor needs to collect a copy of the attendance for the training done under the scheme. The attendance sheets are signed and stamped by the In-charge / Head of the Training Centre. 2. The assessor needs to verify the authenticity of the candidates by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/Government. The same needs to be mentioned in the attendance sheet. In case of suspicion, the assessor should authenticate and cross verify trainee's credentials in the enrolment form. 3. The assessor needs to punch the trainee's roll number on all the test pieces. 4. The assessor can take a photograph of all the students along with the assessor standing in the middle and with the center name/banner at the back as evidence. 5. The assessor also needs to carry a photo ID card. The assessment agencies are instructed to hire assessors with integrity, reliability and fairness. Each assessor shall sign a document with its assessment agency by which they commit themselves to comply with the

	rules of confidentiality and conflict of interest, independence from commercial and other interests that would compromise impartiality of the assessments.

Please attach most relevant and recent documents giving further information about assessment and/or RPL.
Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

ASSESSMENT EVIDENCE

Complete a grid for each component as listed in "Formal structure of the qualification" in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – i.e., Learning Outcomes to be assessed, assessment criteria and the means of assessment.

24. Assessment Evidence

Title of Component: Optical Fiber Technician

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Optical Fiber Technician

Qualification File TEL/Q6401

Sector Skill Council Telecom Sector Skill Council

Guidelines for Assessment

1. Criteria for assessment for each Qualifications File will be approved by the Sector Skill Council. Each 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 PC.
2. The assessment for the theory part will be based on knowledge bank of questions approved 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 this criterion.
6. To pass the Qualifications File, every trainee should score a minimum of 70% of aggregate marks.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification File.

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
TEL/N4137: Coordinate Installation and Commissioning of Optical Fiber Cables				
Carry out inspection of route plan	**4**	**7**	**-**	**5**
PC1. obtain OFC route plan from the planning team or the supervisors	-	1	-	1
PC2. verify the proposed route to ensure that bend ratios meet manufacturer's specifications and industry standards	-	2	-	1
PC3. develop installation work plan and identify dependencies, if any	1	1	-	-
PC4. determine the statutory permissions required and the relevant authorities involved	1	1	-	1
PC5. liaise with the concerned authorities to obtain relevant clearances	1	1	-	1
PC6. determine the best suited optical fiber mode (Single Mode or Multi Mode) as per the location of the project	1	1	-	1
Coordinate cable laying and pulling	**15**	**17**	**-**	**5**
PC7. arrange tools and spares for installation	-	1	-	-
PC8. confirm placement of cable drum near the site location	1	1	-	-
PC9. test the cable on drum for optical continuity	-	1	-	-
PC10. ensure trenching is carried out by labor workers as per the detailed route plan requirements and site terrain	1	1	-	-
PC11. ensure minimum radius is maintained, where bends are necessary	-	1	-	-

PC12. ascertain usage of special designed dispensers to place the ducts in the trench asstraight as possible	-	1	-	-
PC13. assess the depths of the pipe/ ducts as perthe laying standards after approval from competent personnel	-	1	-	-
PC14. verify the ducts are free from twists and collapsed portions and ensure rectification of all such portions using appropriate couplers	1	1	-	-
PC15. check proper uncoiling of PLB (permanently lubricated) ducts	-	1	-	-
PC16. examine duct joints for airtightness to ensure smooth cable blowing using cable blowing machines	1	-	-	-
PC17. ascertain carrying out the cable blowing/ jetting using rodder as per the standard process	1	-	-	-
PC18. ensure availability of additional cable length (loop) at jointing locations, for future use in case of failures	-	1	-	1
PC19. confirm that the ends of the ducts are closed with end plugs to avoid ingress of mud,water or dust	1	1	-	-
PC20. examine that the entire length of the duct is cleaned to remove sand and dust that may damage the optical fiber cable	1	-	-	-
PC21. check the cables are appropriately prepared for jointing based on color and/ or sequence matching	-	1	-	-
PC22. determine alignment errors during splicing of optical fibers	1	1	-	1
PC23. assess any drop in signal due to attenuation	1	-	-	1
PC24. verify the cables are spliced as per the standard fusion/ mechanical splicing mechanisms	1	-	-	-
PC25. ascertain usage of proper protection material for cables such as GI (galvanised iron)pipes, RCC (reinforced cement concrete) pipes,RCC half cut	-	1	-	-

pipes etc.				
PC26. ensure use of push fit couplers as duct joints	1	-	-	-
PC27. confirm usage of appropriate optical connectors as per the terminating equipment requirements	1	-	-	-
PC28. check ducts to confirm requirement of additional protection like cover of RCC pipes, chambering and concreting based on site location and terrain	1	-	-	-
PC29. ensure completion of installation activity within the defined SLAs (Service Level Agreements)	-	1	-	-
PC30. monitor activities performed by the labor workers and optical splicers for timely completion of work	1	1	-	1
PC31. escalate instance of delay as per organization policy	1	1	-	1
Test effectiveness and close the activity	**9**	**11**	**-**	**5**
PC32. determine the availability of test equipment like Optical Time Domain Reflectometer (OTDR) and power meter for carrying out optical tests	1	-	-	-
PC33. use appropriate colour for route and joint indicators as per the standards	1	1	-	-
PC34. check the splices are within quality assurance/AT standards	1	1	-	-
PC35. identify instances of cross fiber using power source and power meter tests and ensure their elimination	1	1	-	1
PC36. test the joint for transmission loss and strength and re-terminate it if the transmission loss exceeds the manufacturer specifications	1	1	-	1
PC37. ensure backfilling and crowning in coordination with the labour workers as per standard requirements	-	1	-	1

PC38. confirm placement of a stone marker at the jointing pit for identification of route and jointing pit	1	1	-	1
PC39. check cables markings for appropriateness as per the guidelines	1	1	-	-
PC40. update as-build documents based on joint location and installed fiber route	1	2	-	1
PC41. clear site from debris and other items	1	2	-	-
Follow Health and Safety related to fiber operations	**4**	**5**	**-**	**4**
PC42. comply with site risk control, OHS (Occupation Health and Safety), environmental and quality and legal requirements as per organization norms	1	1	-	1
PC43. confirm use of personal protective equipment like helmets, knee pads, safety boots, safety glasses and trench guards as per standards	1	1	-	1
PC44. establish environmental conditions and hazards like Earth Potential Rise (EPR) while carrying out the work	1	1	-	1
PC45. ascertain adherence to emergency plans incase of safety incidents	1	2	-	1
Report and record installation status of OFCs	**3**	**5**	**-**	**1**
PC46. ensure cable id/drum numbers are recorded for future fault localization	1	1	-	1
PC47. document the OTDR report and summary of tests and share with appropriate teams	1	1	-	-
PC48. obtain sign-off from the projects team and communicate status to NOC for cable integration	1	2	-	-
PC49. ensure all documents available for appropriate authorities to inspect	-	1	-	-
NOS Total	**35**	**45**	**-**	**20**

TEL/N6403: Undertake Condition based Maintenance and Planned Repair Activities

Obtain maintenance schedule and patrol assigned route	**5**	**13**	**-**	**4**
PC1. obtain as-build drawing from NOC/supervisors and identify the route assigned for maintenance of Optical Fiber Cables (OFCs)	1	2	-	-
PC2. ensure patrolling and surveillance of OFCs route as per the maintenance plan	1	2	-	1
PC3. monitor the jobs undertaken by other agencies in the vicinity of the network to ensure the safety of OFCs.	1	3	-	1
PC4. coordinate with authorities regarding any planned construction/activity in the vicinity of the OFCs	1	2	-	1
PC5. ensure sample check of as-build drawings	1	2	-	1
PC6. communicate any changes made to as-build drawings to the NOC/supervisors for updating the document	-	2	-	-
Carry out planned maintenance testing of dark/spare Optical Fiber Cables (OFCs)	**5**	**10**	**-**	**4**
PC7. ensure availability of optical test tools like Optical Time Domain Reflectometer (OTDR), Powermeter, Light meter etc.	1	3	-	1
PC8. check performance of OTDR and power meter tests for all the dark/spare fibers as per required periodicity	1	3	-	1
PC9. test end-to-end link for adherence to link budget and identify loss and reflection points	1	2	-	1
PC10. advise planning team for developing route strengthening workplan based on test results	2	2	-	1
Repair OFCs as per plan	**4**	**12**	**-**	**4**
PC11. arrange outage for carrying out activity by coordinating with Network Operation Centre (NOC)prior to undertake the planned repair activities	-	3	-	1
PC12. ensure completion of planned repair activities within defined timelines	1	2	-	1

PC13. conduct optical tests on spare fibers to confirm effectiveness of the planned repair process	1	2	-	1
PC14. ensure taking precautions with regard to the power launched on to the fiber, in case active fibers are used for testing	1	2	-	1
PC15. escalate instances of delays and emergency/unresolved issues according toestablished organisation procedure	1	3	-	-
Carry out maintenance of equipment at Points of Presence (POPs)	**6**	**12**	-	**4**
PC16. conduct periodic (monthly, quarterly, half yearly) maintenance activities	1	3	-	2
PC17. maintain co-located electronic equipment and ensure testing of alarms in coordination with NOC	1	2	-	1
PC18. ensure active fibers are not disturbed while testing	1	3	-	-
PC19. carry out planned repairs on existing joints and terminations in co-ordination with NCC (Network Color Code) for improvement of link margin	1	2	-	1
PC20. ensure raising of the tickets to the respective vendors by the NOC for the maintenance of third party elements	2	2	-	-
Report to concerned authorities and record fiber test results	**5**	**8**	-	**4**
PC21. ensure completion of OFC/OTDR register with record of all fiber tests	1	1	-	1
PC22. maintain account of diesel oil at respective stations	1	2	-	-
PC23. ensure maintenance of assets register for sites under super vision	1	2	-	-
PC24. dispatch OTDR test results to supervisors for planning and monitoring of OFCs	1	2	-	1
PC25. ensure availability of the documents to allappropriate authorities for inspection	1	1	-	2

NOS Total	**25**	**55**	**-**	**20**
TEL/N6404: Perform Corrective Maintenance/Restoration of Optical Fiber Faults				
Handle fault notifications promptly	**5**	**5**	-	-
PC1. receive fault notifications from Network Operation Center (NOC)/supervisors	1	2	-	-
PC2. obtain Turn Around Time (TAT) for fault rectifications as defined in Service Level Agreements (SLAs)	2	1	-	-
PC3. obtain latest as-build drawing from the NOC/supervisors	2	2	-	-
Rectify the fault at POP (point of presence) location	**25**	**30**	-	**15**
PC4. make available test equipment (Optical Time Domain Reflectometer (OTDR), Power meter, etc.)for carrying out optical tests	5	5	-	4
PC5. identify exact fault location using OTDR tests on fiber at POP location	5	2	-	1
PC6. analyze as-build drawing to locate the physical site on the ground	1	2	-	1
PC7. coordinate excavation, pulling of appropriate cables (if feasible) and preparation of jointing pit at site through laborers	2	1	-	1
PC8. coordinate with the optical splicer to carry out splicing as per standard process	1	3	-	1
PC9. assess effectiveness of the jointing activity by reviewing OTDR and power test results	1	3	-	1
PC10. ensure joints are protected and strengthened appropriately using couplers, sleeves and FRPs (Fiber Reinforced Plastic) as required	2	2	-	1
PC11. verify if ducts require additional protection like cover of Reinforced Cement Concrete (RCC) pipes, chambering, etc. based on site location and terrain	1	4	-	1
PC12. coordinate back-filling of the trench through laborers	2	2	-	1

PC13. ensure rectification of network problem/fault alarms within SLA	1	3	-	1
PC14. monitor activities for timely completion of work by laborers and Optical Splicers	2	2	-	1
PC15. ensure compliance with the organisation policy while escalating unresolved faults/instances of delays	2	1	-	1
Report and document the status	**5**	**10**	**-**	**5**
PC16. ensure appropriate cable marking and route marker for direction and route identification	1	2	-	1
PC17. prepare jointing record for future reference	2	2	-	1
PC18. ensure identification of the documents tobe updated	1	3	-	1
PC19. ascertain completion of OTDR register showing complete record of jointing tests	1	3	-	2
NOS Total	**35**	**45**	**-**	**20**
TEL/N9101: Organise Work and Resources as per Health and Safety Standards				
Perform work as per quality standards	**4**	**9**	**-**	**2**
PC1. keep workspace clean and tidy	-	1	-	-
PC2. perform individual role and responsibilities asper the job role while taking accountability for the work	1	1	-	1
PC3. record/document tasks completed as per the requirements within specific timelines	-	1	-	1
PC4. implement schedules to ensure timely completion of tasks	-	2	-	-
PC5. identify the cause of a problem related to own work and validate it	2	2	-	-
PC6. analyse problems accurately and communicate different possible solutions to the problem	1	2	-	-
Maintain safe, healthy and secure working environment	**16**	**27**	**-**	**4**
PC7. comply with organisation's current health, safety, security policies and procedures	1	1	-	-

PC8. check for water spills in and around the workspace and escalate these to the appropriate authority	1	2	-	1
PC9. report any identified breaches in health, safety, and security policies and procedures to the designated person	1	2	-	1
PC10. use safety materials such as goggles, gloves, ear plugs, caps, ESD pins, covers, shoes, etc.	1	2	-	1
PC11. avoid damage of components due to negligence in ESD procedures or any other loss dueto safety negligence	2	3	-	1
PC12. identify hazards such as illness, accidents, fires or any other natural calamity safely, as per organisation's emergency procedures, within the limits of individual's authority	2	1	-	-
PC13. participate regularly in fire drills or other safety related workshops organised by the company	1	3	-	-
PC14. report any hazard outside the individual'sauthority to the relevant person in line with organisational procedures and warn others who may be affected	1	3	-	-
PC15. maintain appropriate posture while sitting/standing for long hours	1	1	-	-
PC16. handle heavy and hazardous materials with care, while maintaining appropriate posture	1	1	-	-
PC17. sanitize workstation and equipment regularly	1	2	-	-
PC18. clean hands with soap, alcohol-based sanitizer regularly	-	1	-	-
PC19. avoid contact with anyone suffering from communicable diseases and take necessary precautions	-	1	-	-
PC20. take safety precautions while travelling e.g. maintain 1m distance from others, sanitize hands regularly, wear masks, etc.	1	2	-	-

PC21. report hygiene and sanitation issues to appropriate authority	1	1	-	-
PC22. follow recommended personal hygiene and sanitation practices, for example, washing/sanitizing hands, covering face with a bentelbow while coughing/sneezing, using PPE, etc.	1	1	-	-
Conserve material/energy/electricity	**7**	**16**	**-**	**3**
PC23. optimize usage of material including water invarious tasks/activities/processes	1	2	-	-
PC24. use resources such as water, electricity and others responsibly	1	2	-	1
PC25. carry out routine cleaning of tools, machineand equipment	1	2	-	-
PC26. optimize use of electricity/energy in various tasks/activities/processes	1	3	-	1
PC27. perform periodic checks of the functioning ofthe equipment/machine and rectify wherever required	1	3	-	1
PC28. report malfunctioning and lapses in maintenance of equipment	1	2	-	-
PC29. use electrical equipment and appliances properly	1	2	-	-
Use effective waste management/recycling practices	**3**	**8**	**-**	**1**
PC30. identify recyclable, non-recyclable and hazardous waste	1	2	-	1
PC31. deposit recyclable and reusable material atidentified location	1	3	-	-
PC32. dispose non-recyclable and hazardous wasteas per recommended processes	1	3	-	-
NOS Total	**30**	**60**	**-**	**10**
TEL/N9102: Interact Effectively with Team Members and Customers				
Interact effectively with superiors	**7**	**15**	**-**	**2**
PC1. receive work requirements from superiors and customers and interpret them correctly	1	2	-	-

PC2. inform the supervisor and/or concerned person about any unforeseen disruptions or delays	2	4	-	1
PC3. participate in decision making by providing facts and figures, giving/accepting constructive suggestions	2	5	-	1
PC4. rectify errors as per feedback and ensure the errors are not repeated	2	4	-	-
Interact effectively with colleagues and customers	**7**	**26**	**-**	**4**
PC5. comply with organisation's policies and procedures for working with team members	1	2	-	-
PC6. communicate professionally using appropriate mode of communication such as face-to-face, telephonic and written	2	4	-	1
PC7. respond to queries and seek/provide clarifications if required	2	4	-	1
PC8. co-ordinate with team to integrate work asper requirements	-	3	-	-
PC9. resolve conflicts within the team/with customers to achieve smooth workflow	1	5	-	1
PC10. recognize emotions accurately in self and others to build good relationships	1	4	-	-
PC11. prioritize team and organization goals above personal goals	-	4	-	1
Respect differences of gender and ability	**11**	**24**	**-**	**4**
PC12. maintain a conducive environment for all the genders at the workplace	2	5	-	1
PC13. encourage appropriate behavior and conduct with people across gender	2	5	-	1
PC14. assist team members with disability in overcoming any challenges faced in work	3	4	-	1
PC15. practice appropriate verbal and non-verbal communication while interacting with People with Disability (PwD)	2	4	-	1

PC16. ensure equal participation of the people across genders in discussions	2	6	-	-
NOS Total	**25**	**65**	**-**	**10**
Assessment Criteria for Outcomes	**Theory Marks**	**Practical Marks**	**Project Marks**	**Viva Marks**
DGT/VSQ/N0102: Employability Skills (60 Hours)				
Introduction to Employability Skills	**1**	**1**	**-**	**-**
PC1. identify employability skills required for jobsin various industries	-	-	-	-
PC2. identify and explore learning andemployability portals	-	-	-	-
Constitutional values – Citizenship	**1**	**1**	**-**	**-**
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. andpersonal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	**2**	**4**	**-**	**-**
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
Basic English Skills	**2**	**3**	**-**	**-**
PC7. use basic English for everyday conversationin different contexts, in person and over the telephone	-	-	-	-

PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mailsetc. in English	-	-	-	-
Career Development & Goal Setting	**1**	**2**	-	-
PC10. understand the difference between job andcareer	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
Communication Skills	**2**	**2**	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	**1**	**2**	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	**2**	**3**	-	-
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary andcompute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	**3**	**4**	-	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms andvirtual collaboration tools to work effectively	-	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-
Entrepreneurship	**2**	**3**	-	-
PC23. identify different types of Entrepreneurshipand Enterprises and assess opportunities for potential business through	-	-	-	-

research				
PC24. develop a business plan and a work model,considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	**1**	**2**	**-**	**-**
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requestsand needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	**2**	**3**	**-**	**-**
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offlineand online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	**20**	**30**	**-**	**-**

Outcomes to be assessed/NOSs to be assessed	**Assessment criteria for the outcome**
Provided in the above section	

Means of assessment 1

1. Criteria for assessment for each Qualification File will be created by the Sector Skill Council. Each 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 PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.

3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below.) 4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on these criteria.
Means of assessment 2 Add boxes as required.
Pass/Fail 1. To pass the Qualification File, every trainee should score a minimum of 70% in every Qualification. 2. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification File.

SECTION 2

25. EVIDENCE OF LEVEL

Title/Name of qualification/component: Optical Fiber Technician **Level:** 4			
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relates to the NSQF level descriptors**	**NSQF Level**
Process	**Demands a wide range of specialised technical skill, clarity of knowledge and practice in broad range of activity involving standard and non-standard practices.** • Coordinate Installation and Commissioning of Optical Fiber Cables (OFCs) • Undertake Condition based Maintenance and Planned Repair Activities • Perform Corrective Maintenance/Restoration of Optical Fiber Faults	Job holder is expected to monitor the task performed by the optical fibre splicer and the team which lay down the cables. Responsible for performing routine and predictable task. The optical fibre technician has to perform various task i.e., Co-ordination with the team for installation and commission of optical fibre cable. Plan and maintain the repairing activities Perform corrective maintenance/restoration of optical fault if any. The applicant has clear choice of taking decision as per circumstances. Hence, this is level 4.	4
Professional knowledge	**Factual and theoretical knowledge in broad contexts within a field of work or study.**	Job holder is expected to have basic knowledge which are crucial to the occupation such as knowledge of OTDR machine and power meter.	4

Title/Name of qualification/component: Optical Fiber Technician **Level:** 4			
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relates to the NSQF level descriptors**	**NSQF Level**
		The jobholder should also be aware of the principles such as to why the inspection is mandatory and how it is performed for example: Monitor the bending ratio of the cable. Knowledge of process involved such as method for splicing and maintaining the hygiene while performing the splicing are also essential. As per the report generated on daily basis, he/she have to analysis and perform the routine activities as required. obtain sign-off from the projects team and communicate status to NOC for cable integration. Hence, this is level 4.	
Professional skill	**A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.**	Based on applicant professional knowledge the technician will run the routine process and monitor. Accordingly, which will demonstrate the practical skills at ground level. Adding more: the technician has to make sure of following	4

Title/Name of qualification/component: Optical Fiber Technician **Level:** 4			
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relates to the NSQF level descriptors**	**NSQF Level**
		activities (based on his/her knowledge) such as OFC testing skills technical interpretation skills. Problem solving skills. He will be skilled in operating the equipment testing, splicing testing skills, and utilisation of the appropriate tool to rectify the fault via OTDR machine. Hence, this is level 4.	
Core skill	Domain Skills	Jobholder is expected to perform • As per GPS survey the cable laid down is correct. • Carry out the inspection on routine basis • Arranging the tools and spare part. • Maintain and plan the repair work by informing NOC team and an outage has been raised. • Ensure performance of OTDR, Power Meter tests for all the dark/ spare fibers. • Ensure testing of end-to-end link for adherence to link budget and identify loss and reflection points	4

Title/Name of qualification/component: Optical Fiber Technician **Level:** 4			
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relates to the NSQF level descriptors**	**NSQF Level**
		• Take corrective action on faulty cables via splicing techniques. All this is expected to be carried out in a manner which show a basic understanding of the social and professional environment of working. Furthermore, the jobholder is required to Interpret data sheet (i.e., Splicing sheet wrt. the cables, reading). All of this requires application of basic arithmetic principles. Hence, this is level 4.	
Responsibility	Responsibility of completing the work assigned and reporting the same as per standards.	Jobholder based on his own learning and experience, plans the method of executing the daily task. He is in process of continuous self-learning and responsible for its own work. He is responsible for maintaining the uptime of the network and keep it operational & in case of emergency plan the team accordingly by informing relevant person. Hence Level 4.	4

SECTION 3
EVIDENCE OF NEED

26	**What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?** 1. Feedback from industry was collected with respect to roles for which qualification File development was to be prioritized. 2. Skills Gap analysis reports for industry demand Training duration w.r.t current and potential capacity envisaged for potential supply
27	**Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidence** We have received the line ministry (DoT) approval for this QF.
28	**What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification** NCVET list of Approved and Under-Development QFs was checked prior to commencement the work.
29	**What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here** • Agencies have been appointed by the SSC to interact with training providers to gather feedback in implementation • Monitoring of results of assessments • Employer feedback will be sought post-placement • A formal review is scheduled by 2024

Please attach most relevant and recent documents giving further information about any of the topics above.
Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

SECTION 4
EVIDENCE OF PROGRESSION

30	**What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?** 1. Endorsed and accepted by the industry players 2. Formal recognition from the industry players 3. Horizontal and vertical mobility options are available