

Revision made by NSDA_25 May 2015

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

Telecom Sector Skill Council
2nd Floor, Plot NO: - 105, Sector – 44
Gurgaon – 122003 Ph.: 0124-4148029

Name and contact details of individual dealing with the submission

Name: Shiv Kumar Pandey
Position in the organisation: Manager
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List of documents submitted in support of the Qualifications File

1. [Qualification Pack](#)
2. [Assessment Criteria – Annexure in Qualification Pack](#)
3. [Occupational Mapping](#)
4. Skill Gap Report – [KPMG](#) & [JUXT](#)
5. [Industry Engagement Certificate](#)
6. [Affiliation Protocol – Assessment Agency & Assessor](#)
7. [Assessment Framework](#)

QUALIFICATION FILE SUMMARY

Qualification Title	TEL/Q0102		
Body/bodies which will assess candidates	Telecom Sector Skill Council		
Body/bodies which will award the certificate for the qualification.	Telecom Sector Skill Council		
Body which will accredit providers to offer the qualification.	Telecom Sector Skill Council		
Occupation(s) to which the qualification gives access	Broadband Technician		
Proposed level of the qualification in the NSQF.	4		
Anticipated volume of training/learning required to complete the qualification.	Duration (180 Hr.)		
Entry requirements / recommendations.	10+2 or equivalent		
Progression from the qualification.	Will give access to Supervisor and Team Leader		
Planned arrangements for RPL.	Anybody with 1 year experience wrt. the job role		
International comparability where known.	NA		
Formal structure of the qualification			
Title of unit or other component (include any identification code used)	Mandatory/ Optional	Estimated size (learning hours)	Level
TEL/N0111 (Cable/system wiring and equipment installation at customer premises)	M	200 Hours	4
TEL/N0112 (Configuration of equipment and establishing Broadband connectivity)	M		
TEL/N0113 (Trouble-shoot to localize and rectify faults)	M		
TEL/N0114 (UPS installation & Domestic Power Supply checks)	Optional		

Please attach any document giving further detail about the structure of the qualification – eg a Curriculum or Qualification Pack.

Give details of the document here: Qualification pack

SECTION 1

ASSESSMENT

Name of assessment body:

1. **Aspiring Minds**
2. **Mettl**
3. **Multi Skills Assessment Guild (MSAG)**
4. **Independent Qualitative Assessors Guild (IQAG)**
5. **Cocubes Technologies Pvt. Ltd**

Will the assessment body be responsible for RPL assessment?

Yes, assessing body is responsible for RPL assessment.

Mode of Assessment : Online

1. Theory: MCQ questions mapped with performance criteria of each NOS in a QP.
2. Viva : Scenario Based questions mapped with performance criteria of each NOS in a QP.
3. Practical: Practical test conducted wrt. Job role.

Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of the NSQF:

The Assessment Agency is affiliated through stringent measures and undergo QA process. The Assessors are certified before conducting any assessments. The Question Bank before being made online are scrutinized and validated for linkage with Performance Criteria and randomization during the assessment.

Mode of Assessment : Online

1. Theory: MCQ questions mapped with performance criteria of each NOS in a QP.
2. Viva : Scenario Based questions mapped with performance criteria of each NOS in a QP.
3. Practical: Practical test conducted wrt. Job role.

Please attach any documents giving further information about assessment and/or RPL.

Give details of the document(s) here:

ASSESSMENT EVIDENCE

Complete the following grid for each grouping of NOS, assessment unit or other component as per the assessment criteria. Insert the required number of rows.

Criteria for Assessment of Trainee							
Job Role	: Optical Fibre Splicer						
Qualification Pack	: TEL/Q6400						
Sector Skill Council	: Telecom Sector Skill Council						
1. Criteria for assessment for each Qualification Pack 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 and skill practical part for each candidate at each examination/training center.							
4. To pass the Qualification Pack, every trainee should score a minimum of 40% in every NOS and Overall 50% pass percentage.							
5. 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 Pack.							
6. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria.							
Assessable Outcome	Assessment Criteria		Total Mark (400)	Sub Element Weightage	Out of	Theory	Skills Practical
1. TEL/N0111 (Cable/system wiring and equipment installation at customer premises)	Prepare for wiring and equipment installation	PC1. arrange access to site according to required procedure	100	40	5	5	0
		PC2. organize tools, equipment and materials for a given work			10	5	5
		PC3. match cable type and connectors to installation environment and customer requirements			5	0	5
		PC4. check cable length for continuity			5	0	5
		PC5. verify cable route is free of electrical hazards and obstructions both outdoors and indoors			5	0	5
		PC6. verify that the cable running length is within the permissible limit to ensure			5	0	5
		PC7. select suitable location for equipment installation wrt power point and signal coverage			5	5	0
		Undertake wiring & Install system hardware			PC8. ensure structured wiring from PoP to Customer premise JB	10	10
	PC9. ensure neat wiring and clipping within customer premise			5	5	0	
	PC10. ensure proper cable termination and use of appropriate connectors			5	5	0	
	PC11. test the cable & joints for transmission loss and strength. Re-terminate if loss exceeds prescribed limits			5	0	5	
		PC12. install equipment following electrical safety principals and		10	0	10	

		manufacturer's instructions					
		PC13. power-up the system ensuring proper earthing arrangement			5	0	5
	Clean up worksite and complete documentation	PC14. removal and proper dispose of installation waste		20	5	5	0
		PC15. restore worksite to customer's satisfaction			5	5	0
		PC16. update plans and records with details of installation and test results			5	5	0
		PC17. complete all installation documents and customer signoff			5	5	0
			Total		100	55	45
2. TEL/N0112 (Configuration of equipment and establishing Broadband connectivity)	Configuring CPE	PC1. connect up laptop/PC, Smart/IP TV and other appropriate device to the CPE (modem, router, switch) and establish connectivity	100	20	10	0	10
		PC2. access CPE setting using default login credentials			5	0	5
		PC3. configure CPE as per the base setting (IP, Gateway, Mask etc.)			5	0	5
	Establishing connectivity with service provider gateway	PC4. ensure all cables/connectors are		20	5	0	5
		PC5. ping service provider gateway			5	0	5
		PC6. analyze test results for connectivity and throughput parameters			10	10	0
		PC7. configure end user device to establish LAN connectivity with the CPE			30	15	5
	PC8. ping CPE from end user device and analyze response	15		5		10	
	Record configuration setting and testing steps for customer	PC9. record CPE configuration settings		30	10	10	0
		PC10. record end user device configuration setting			5	5	0
		PC11. record pinging procedure and expected result parameters			5	5	0
		PC12. brief customer on basic trouble- shooting steps/self-help			10	0	10
					100	40	60
3.TEL/N0113 (Trouble-shoot to localize and rectify faults)	Locate and trouble shoot cable & connector fault	PC1. differentiate between types of cables	100	20	5	5	0
		PC2. Identify correct cable pairs			5	0	5
		PC3. Undertake continuity check and localize fault distance			10	0	10
	Troubleshoot CPE fault	40		5	5	0	

		PC5. connect CPE to laptop/CPU/portable device for fault diagnostic			5	0	5		
		PC6. install CPE access software, if required			10	0	10		
		PC7. access CPE through browser/software application and run diagnostic application			10	0	10		
		PC8. decipher results to localize fault			10	5	5		
	Rectify the faults with cable, connectors and CPE	PC9. carry out re-conectorization/crimping (of cable pairs with connector) or replace cable, if required		20	5	0	5		
		PC10. re-configure the CPE to correct settings			10	0	10		
		PC11. reset CPE, if required.			5	0	5		
	Complete documentation and clean up worksite	PC12. record steps undertaken for fault localization/isolation		20	10	10	0		
		PC13. record changes undertaken for fault rectification			5	5	0		
		PC14. Restore any changes made to the worksite during fault repair to the client's satisfaction			5	5	0		
							100	35	65
	4. TEL/N0114 (UPS installation & Domestic Power Supply checks)	Scope		PC1. carry out voltage, current checks	100	100	15	5	10
				PC2. carry out earthing checks			15	5	10
				PC3. installation of ups			10	5	5
PC4. routing of power supply through ups			15	5			10		
PC5. calculate equipment load vis-à-vis ups rating			15	15			0		
PC6. exercise precautions whilst handling power supplies			15	10			5		
PC7. UPS battery checks & replacement			15	5			10		
					100	50	50		

SECTION 2

EVIDENCE OF NEED

<p>What evidence is there that the qualification is needed? As per Industry requirement and recommendations, we TSSC have followed in order to prepare the qualification pack and got vetted by NSDC during the QRC. (Attached –Industry Engagement Certificate).</p>
<p>What is the estimated uptake of this qualification and what is the basis of this estimate? Skills Gap analysis Reports for industry demand and secondary research data, though these do not lend to accurate demand projection. Feedback from industry for demand though again sample size may not lend to accurate figures and depends on Industry quarterly requirements. (Attached Skill Gap Study Report)</p>
<p>What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?</p> <ul style="list-style-type: none"> • NSDC list of Approved and Under-Development QPs was checked prior to commissioning the work • NSDC QRC team also confirmed the same
<p>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?</p> <ul style="list-style-type: none"> • Agencies have been appointed by the SSC to interact with training providers to gather feedback in implementation. • Monitoring of results of assessments • A formal review is scheduled in two year time

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here: NA

SECTION 3

SUMMARY EVIDENCE OF LEVEL

Level of qualification: NSQF Level 4

Summary of Direct Evidence (from learning outcomes):

Justify the NSQF level allocated to the QP by building upon the five descriptors of NSQF. Explain the reasons for allocating the level to the QP

Level 4: Capable of working independently in his designated area. He must also learn new aspects of the job while executing the work assigned.

Generic NOS is/are linked to the overall authority attached to the job role.

Broadband Technician - TEL/Q0102					
Process required	Professional Knowledge	Professional Skills	Core Skills	Responsibility	Level
The job holder have to perform number of task to make the site On Air /operational such as checking the cable connectors between	Job holder is expected to have factual knowledge (Theory and Hands on practice) of	Based on the professional knowledge, the jobholder will perform the task on ground level and expected to	Job holder is expected to perform : <ul style="list-style-type: none"> • Installing of the equipment at customer premises. • Testing of the cable & joint for 	Jobholder based on his own learning and experience, plans the method of	4

<p>the customer premises and the Junction box, Configuration setting of the equipment installed and troubleshooting if equipment fail to respond all this rely to his routine and familiar process. The assessment criteria also illustrates the machines/equipment installed to be used by the candidate, thereby indicating situation where clear choice maybe be exercised accordingly.</p>	<p>the equipment/hardware installed at the customer premises, maintaining the hygiene of installed equipment as per the guidelines and Quality check before handover to the customer.</p> <p>Adding more he will gain the conceptual and field knowledge of</p> <ol style="list-style-type: none"> 1. Identifying different types of cables (i.e. various version of CAT cables. 2. Laying of broadband cable, equipment. 3. Network topologies, IP ver.4 and 6 (include TCP/IP protocol) 4. UPS and SMPS installation, Electrical wiring and working. 	<p>operate equipment's such as (router, laptops, UPS,SMPS) etc. Which demonstrate his/her practical skills. It also require to operate and maintain clearly listed equipment's using appropriate tools.</p> <p>Adding more the job holder have to adhere the health and safety norms as laid down by the company while performing task on electrical equipment i.e. SMPS,UPS,Router .</p>	<p>transmission loss</p> <ul style="list-style-type: none"> • Completing the documentation part • Establishing connectivity with service provider • Maintaining the record of the faulty equipment, calculating the load on the equipment via load testing. <p>All of this requires <i>application of basic arithmetic principles.</i></p> <p>They are expected to be good in communication skills (written and oral) and clarity need to be maintained while interacting with the customer.</p>	<p>executing the daily task. He is in process of continuous self-learning and responsible for its own work.</p> <p>He is responsible for maintaining the uptime of the network at customer premises and keep it operational & in case of emergency report to his supervisor for intervention.</p> <p>Adding more: responsible to follow the health and safety norms laid down by the company.</p>	
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Level :- 4					
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OTHER EVIDENCE OF LEVEL [This need only be filled in where evidence other than primary outcomes was used to allocate a level] **(Optional)**

Summary of other evidence (if used): NA

SECTION 4

EVIDENCE OF RECOGNITION OR PROGRESSION

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?

Horizontal and vertical mobility options have been articulated. Broadband technician has a vertical movement to Broadband Technician & then to the Team Leader next level.

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here: NA