

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/Q6500

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	Fault Management Engineer		
Proposed level of the qualification in the NSQF.	5		
Anticipated volume of training/learning required to complete the qualification.	Duration (300 Hr.)		
Entry requirements / recommendations.	ITI/Diploma (Electronics, Computer Science, IT and related field)		
Progression from the qualification.	Will give access to Network System Support (NSS) Level - 2 Engineer		
Planned arrangements for RPL.	Anybody with 1 year experience wrt. the job role		
Formal structure of the qualification			
Title of unit or other component (include any identification code used)	Mandatory/ Optional	Estimated size (learning hours)	Level
TEL/N6500 (Undertake fault rectification)	M	300 Hours	5
TEL/N6501 (Undertake configuration changes, upgrades and node back-up activities)	M		

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.

<u>PERFORMANCE CRITERIA</u>						
Job Role	: Fault Management Engineer					
Qualification Pack	: TEL/Q6500					
Sector 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 (100+100)	Total of Sub-Element	Out Of	Theory	Skills Practical

TEL/N6500 (Undertake fault rectification)	Monitor & Respond to Network Alarm	PC1. ensure that user id and password to access the alarm management system is current	1	1	0
		PC2. ensure continuous monitoring of network alarms on the NMS	5	3	2
		PC3. ensure monitoring of threshold levels to prevent occurrence of faults	5	2	3
		PC4. ensure tickets are raised for all alarms as per the priority matrix	5	3	2
		PC5. determine alarm severity, priority, SLAs and the affected network elements	6	3	3
		PC6. obtain previous day's dump of system configuration and alarm logs from the surveillance team to verify configuration changes related faults if required	6	4	2
		PC7. coordinate with the Infra NOC to verify if alarm was caused by fault with Passive infrastructure at sites	2	2	0
		PC8. prioritize actioning on alarms based on fault's service impact analysis	5	3	2
	Fault diagnosis and rectification	PC1. refer the MoPs (method of procedures) or other company specific technical database to identify root cause of alarm and to determine options to rectify the fault	4	3	1
		PC2. in case details are not available in MoPs, isolate the cause of fault by conducting	7	2	5
		100	35		

	appropriate diagnostic test like remotely interrogating the active equipments
	PC3. determine the options to rectify the fault and confirm with supervisors if required
	PC4. check applicability of system reset and other common fault resolution
	PC5. in case on field support is required, ensure dispatch of field engineers to the mechanisms
	PC6. in coordination with field team to check if any faulty hardware is required to be replaced with its spare
	PC7. ensure clear and concise instructions are given to field staff to facilitate fault rectification efforts
	PC8. ensure rectification of network problem/ fault within the alarm SLAs and monitor the activities performed by the Infra engineer and technicians
Test effectiveness & close activity	PC1. confirm effectiveness of the fault correction activity, by monitoring site's alarm status
	PC2. undertake appropriate cause and effect studies to prevent re-occurrence of problem
Report & Record	PC1. ensure that all relevant parties (field engineers, other supervisors) are

	2	2	0
	6	2	4
	3	1	2
	0	0	0
	1	1	0
	7	3	4
10	5	5	0
	5	5	0
25	3	3	0

		notified					
		PC2. ensure reasons of alarm and details of the restoration actions are filled up the in the alarm management system and the ticket is closed			10	5	5
		PC3. ensure periodic updation of the MoPs to ensure repeat faults are corrected promptly			10	5	5
		PC4. ensure timely closure of tickets and perform periodic follow-up if required			2	2	0
					100	60	40
TEL/N6501 (Undertake configuration changes, upgrades and node back-up activities)	Determine change requirement	PC1. determine change requirement as per schedule (for back-up) or as per directions from other teams (in case of configuration changes, upgrades,updates) and understand the need for change	100	45	5		
		PC2. identify criticality, and timelines for carrying out the changes			10	5	5
		PC3. develop work plan and identify dependencies if any			5	5	0
		PC4. assess the potential impact of the proposed activity and plan for possible outage condition or deferral of the activity			15	15	0
		PC5. ensure customer is informed and an approval is obtained in case of service impacting change activity			5	5	0
		PC6. ensure that Network Operating Centre (NOC) is notified prior to undertaking the			5	5	0

		activities			
	Carry out change and perform post change monitoring from NOC location	PC1. perform required changes (configuration change, upgrade activity) as per change work order	10	5	5
		PC2. obtain back-up of nodes both pre and post performance of change activities and as per planned schedule	10	5	5
		PC3. monitor progress of change and notify change requestor of problems encountered if any	10	5	5
		PC4. abort change and implement contingency plan should the change activity leads to major service disruption	5	5	0
		PC5. ensure compliance with the defined SLA for carrying out changes	5	5	0
		PC6. confirm effectiveness of the change process, by monitoring site's alarm status	5	0	5
	Report & Record	PC1. ensure that all relevant parties (field engineers, other supervisors) are notified of the results of the change management activities	5	5	0
		PC2. ensure status of change activity is captured in the the system and the change ticket is closed	5	5	0
			45		
			10		
			100	70	25

SECTION 2

EVIDENCE OF NEED

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).

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)

What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?

- NSDC list of Approved and Under-Development QPs was checked prior to commissioning the work
- NSDC QRC team also confirmed the same

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?

- 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 5

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.

Justification of NSQF Level 5: Capable of working independently in his designated area. He must also learn new aspects of the job while executing the work assigned and manage the team.

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

Fault Management Engineer - TEL/Q6500					
Process required	Professional Knowledge	Professional Skills	Core Skills	Responsibility	Level
The job holder requires well developed skills and knowledge should be clear in decision making in terms of procedure in familiar context. He/she have to perform various task such as :	The job holder is expected to monitor equipment's and maintain hygiene as per guidelines, as mentioned in the assessment criteria. This demonstrates factual knowledge on the	Based on professional knowledge, the job holder is expected to maintain the site operational under any circumstances. His/her technical knowledge which will demonstrate his/her practical skills such as	The job holder is expected to handle all the technical issues raised at ground level and resolve it on basis of his professional knowledge. He/she need to be constantly interact with NOC team, O&M team, and FM Engg.	The job holder is largely responsible for his/her own work as evidenced in the columns for professional knowledge/skills. Additionally he is expected to respond to situations ((such as replacing the equipment and	5

<ul style="list-style-type: none"> • Undertaking fault rectification • Maintain site hygiene • Maintain site up-time • Undertaking configuration changes, upgrades and node back-up activities • Analysing the performance report and plan accordingly if any maintenance required. <p>Skill in managing the team and rolling out on field.</p>	<p>field.</p> <p>Learn to manage the team and get the desired output as required.</p> <p>Adding more: he/she will have knowledge of the company norms ie. Monitoring and respond to network alarm.</p> <p>Knowledge of identify/rectifying the fault if any wrt the hardware installed.</p> <p>Basics of Computer system (Operating system : LINUX) and command</p> <p>Network topology like ring structure, daisy chain structure and their characteristics.</p> <p>Service application characteristic and capabilities of GSM, WCDM network.</p> <p>Knowledge of service application implementation and integration processes with Access, Core, and Transport & Service Networks.</p> <p>Functionality of BSC and BTS site</p>	<ul style="list-style-type: none"> • Identifying/rectify the fault in hardware if any • Based on report generated by NOC team replacement of hardware or repairing of cables will be done. <p>Based on technical expertise the job holder will find solution to his problem faced at ground level.</p> <p>Adding more : the job holder will be skilled in performing</p> <ul style="list-style-type: none"> • Equipment operating Skill • Analytical skills • Problem solving skill. • Team management skills. 	<p>Analyse the report/log generated at NOC level and take up the necessary action for maintenance.</p> <p>He/she to be reasonably good in mathematical calculation and communicate logically when explaining to higher authority.</p>	<p>taking preventive action if required, Monitoring network from NOC location and maintaining network uptime.</p> <p>Which may demonstrate his/her ability for learning on the job as well as he/she responsible for task performed by his team.</p>	
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	equipment's like BSC node, Indoor and Outdoor BTS.				
Level :- 5	Level :- 5	Level :- 5	Level :- 5	Level :- 5	

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.

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

Give details of the document(s) here: NA