

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR TELECOM INDUSTRY

### What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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## Introduction

### Qualifications Pack- Product Specialist Engineer

**SECTOR:** TELECOM

**SUB-SECTOR:** Network Managed Services

**OCCUPATION:** Network Operations & Maintenance

**REFERENCE ID:** TEL/Q6204

**ALIGNED TO:** NCO-2015/3114.1101

**Brief Job Description:** Product Specialist engineer is responsible for supporting field teams in prompt restoration of services in case of critical and emergency faults. He also supports roll-out of critical upgrades and new technologies and provides trainings/ reading material to ensure competence building in technical staff and customers.

**Personal Attributes:** This job requires the individual to work closely with multiple teams and be able to handle high pressure situations. He should be able to analyse, interpret data and apply professional judgement to carry out assigned responsibilities. He should be willing to continuously learn, improve his skills and stay up to date with latest technology.

|             |                          |                                  |                  |            |
|-------------|--------------------------|----------------------------------|------------------|------------|
| Job Details | Qualifications Pack Code | TEL/Q6204                        |                  |            |
|             | Job Role                 | Product specialist Engineer      |                  |            |
|             | Credits NSQF             | TBD                              | Version number   | 1.0        |
|             | Sector                   | Telecom                          | Drafted on       | 22/05/2013 |
|             | Sub-sector               | Network Managed Services         | Last reviewed on | 21/06/2018 |
|             | Occupation               | Network Operations & Maintenance | Next review date | 31/03/2019 |
|             | NSQF Clearance on        | 20/07/2015                       |                  |            |

| Job Role                                         | Product Specialist Engineer                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Role Description                                 | Product Specialist engineer is responsible for supporting field teams in prompt restoration of services in case of critical and emergency faults. He also supports roll-out of critical upgrades and new technologies and provides trainings/ reading material to ensure competence building in technical staff and customers. |
| NSQF level                                       | 5                                                                                                                                                                                                                                                                                                                              |
| Minimum Educational Qualifications*              | Bachelor in Technology (Electronics, Computer Science, IT and related field)                                                                                                                                                                                                                                                   |
| Maximum Educational Qualifications*              | Masters in Technology                                                                                                                                                                                                                                                                                                          |
| Training                                         | Training on Installation, commissioning and of network elements apart from on-job training                                                                                                                                                                                                                                     |
| Minimum Job Entry Age                            | 21 Years                                                                                                                                                                                                                                                                                                                       |
| Experience                                       | Worked as Core or Field engineer for minimum 2-3 years.                                                                                                                                                                                                                                                                        |
| Applicable National Occupational Standards (NOS) | <b>Compulsory:</b> <ol style="list-style-type: none"> <li>TEL/N6215 (<a href="#">Rectify critical faults</a>)</li> <li>TEL/N6216 (<a href="#">Assist in upgrades and new technology roll-out</a>)</li> <li>TEL/N6217 (<a href="#">Train field team and customers</a>)</li> </ol>                                               |
| Performance Criteria                             | As described in the relevant OS units                                                                                                                                                                                                                                                                                          |

## Qualifications Pack For Product Specialist Engineer

### Definitions

| Keywords /Terms               | Description                                                                                                                                                                                                                                                                                 |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sector                        | Sector is a conglomeration of different business operations having similar businesses 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.                                                                                                                                                                                            |
| Function                      | Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.                                      |
| Job Role                      | Job role defines a unique set of functions that together form a unique employment opportunity in an organization.                                                                                                                                                                           |
| 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 they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts. |
| Performance Criteria          | Performance Criteria are statements that together specify the standard of performance required when carrying out a task.                                                                                                                                                                    |
| NOS                           | NOS are Occupational Standards which apply uniquely in the Indian context.                                                                                                                                                                                                                  |
| Qualifications Pack Code      | Qualifications Pack Code is a unique reference code that identifies a qualifications pack.                                                                                                                                                                                                  |
| Qualifications Pack           | Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification 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.                                                                                                              |
| Knowledge and Understanding   | Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.                                                                         |
| Organizational Context        | Organizational Context includes the way the organization 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 or Generic Skills | Core Skills or Generic Skills are a group of skills that are key to learning and working 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.           |

## Qualifications Pack For Product Specialist Engineer

### Acronyms

| Keywords /Terms | Description                    |
|-----------------|--------------------------------|
| BSC             | Base Station Controller        |
| BTS             | Base Transceiver Station       |
| FTP             | File Transfer Protocol         |
| HLR             | Home Location Register         |
| IP network      | Internet Protocol Network      |
| MGW             | Media Gateway                  |
| MSC             | Mobile Switching Centre        |
| OHS             | Organizational Health & Safety |
| RF cable        | Radio Frequency Cable          |
| SDP             | Service Delivery Platform      |
| SHE             | Safety, Health & Environment   |
| VSWR            | Voltage Standing Wave Ratio    |



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# National Occupational Standard



## Overview

This unit is about supporting rectification of faults pertaining to own responsibility area

TEL/N6215

## Rectify critical faults

National Occupational Standard

|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Unit Code</b>                                               | <b>TEL/N6215</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Unit Title (Task)</b>                                       | <b>Rectify critical faults</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Description</b>                                             | The role involves supporting rectification of critical, emergency and other escalated faults pertaining to own responsibility area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Scope</b>                                                   | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Support handling of critical, emergency and other escalated faults to ensure prompt restoration of services</li> <li>Support critical upgrades and new technology roll-out activities</li> <li>Competence building and knowledge sharing</li> </ul>                                                                                                                                                                                                                                                                                                                        |
| <b>Performance Criteria (PC) w.r.t. the Scope</b>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Element</b>                                                 | <b>Performance Criteria</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Respond to fault escalations</b>                            | <p>To be competent, the user/individual on the job must be able to</p> <p>PC1. ensure timely handling of customer/ field queries</p> <p>PC2. obtain all alarm information and determine alarm severity, SLAs and the affected network elements by collating all the information</p> <p>PC3. ensure understanding of nature of alarm, and provide information to/ seek advice from relevant parties as required</p>                                                                                                                                                                                                                                            |
| <b>Conduct remote testing and fault diagnoses</b>              | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. utilize company specific technical database to identify the root cause of fault and determine corrective steps</p> <p>PC2. in case details are not available in technical database isolate the root cause of fault by conducting appropriate remote diagnostic tests like remotely interrogating active equipments</p> <p>PC3. determine the options to rectify the fault and confirm with supervisors if required</p> <p>PC4. refer equipment manual and other vendor specific material to identify fault rectification steps if required</p>                                |
| <b>Rectify faults in coordination with the field engineers</b> | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. provide clear and concise instructions to field staff to facilitate all repair efforts and observe full implementation of the advice</p> <p>PC2. monitor the progress of the network repair effort to ensure compliance to timelines of the ticket</p> <p>PC3. ensure rectification of network problem/ fault within the alarm SLAs</p> <p>PC4. escalate unresolved faults/ instances of delays in resolution to higher authorities/ specialists</p> <p>PC5. monitor relevant alarms in co-ordination with NOC team to confirm effectiveness of the rectification process</p> |

TEL/N6215

## Rectify critical faults

|                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Report &amp; Record</b>                                                                      | <p>PC6. notify all relevant parties of the results of the fault rectification status</p> <p>PC7. prepare fault report and forward root cause analysis to the customers</p> <p>PC8. identify other documentation to be completed relating to one's role and follow reporting procedures as prescribed by the company</p> <p>PC9. ensure that all documents are available to the appropriate authorities for review and reference</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Knowledge and Understanding (K)</b>                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>A. Organizational Context</b><br>(Knowledge of the company / organization and its processes) | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. risk and impact of not following defined procedures/work instructions</p> <p>KA2. escalation matrix for reporting identified incidents, troubles and/ or emergencies e.g. system failures ,fire and power failures</p> <p>KA3. SHE and OHS guidelines and regulations as per company's norms</p> <p>KA4. protection equipments (anti-static bands, anti-static packaging, appropriate insulations) that are required to be used</p> <p>KA5. first aid requirements in case of electrical shocks, cuts and other common injuries</p> <p>KA6. electrical related hazards and precautionary measures</p> <p>KA7. usage of fire safety equipments</p>                                                                                                                                                                                                                                                                |
| <b>B. Technical Knowledge</b>                                                                   | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. basics of SOLARIS, UNIX and LINUX operating systems and commands</p> <p>KB2. basics of database management softwares</p> <p>KB3. network topology like ring structure, daisy chain structure and their traffic handling capabilities and characteristics</p> <p>KB4. functionality and working intricacies of equipments like BTS, BSC, MSC, MGW, HLR, SDP and their software versions – for own responsibility area</p> <p>KB5. O&amp;M software tools like Mini Link and NEC Passo Link</p> <p>KB6. detailed product specific knowledge</p> <p>KB7. knowledge of IP based network - IP back-hauling and IP networking</p> <p>KB8. knowledge of Network Monitoring System</p> <p>KB9. standard fault-finding (troubleshooting) techniques</p> <p>KB10. knowledge of alarm types, resolution and remedy SLAs and escalation matrix</p> <p>KB11. implications for non response to tickets within defined SLAs</p> |
| <b>Skills (S)</b>                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>A. Generic Skills</b>                                                                        | <b>Communication Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                 | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. communicate with supervisor</p> <p>SA2. provide advice and guidance to peers &amp; juniors</p> <p>SA3. respond appropriately to queries from upstream and downstream teams</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                 | <b>Project Management Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

TEL/N6215

### Rectify critical faults

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|                               | <p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. prioritize and execute tasks in a high-pressure and business critical environment</p> <p>SA5. multi-task by handling multiple tasks and completing them successfully within due timelines</p> <p>SA6. use and maintain resources efficiently and effectively</p>                                                                            |
|                               | <p><b>Analytical Skills</b></p>                                                                                                                                                                                                                                                                                                                                                                                                |
|                               | <p>The user/individual on the job needs to know and understand how to:</p> <p>SA7. keep up to date with new technology</p> <p>SA8. interpret reports, readings and numerical data</p> <p>SA9. think through to address complex problems</p> <p>SA10. source technical information by researching enterprise website or manufacturer's technical documentation</p>                                                              |
|                               | <p><b>Other Skills</b></p>                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>B. Professional Skills</b> | <p>The user/individual on the job needs to know and understand how to:</p> <p>SA11. maintain security of confidential equipment specific data</p> <p>SA12. create and maintain effective working relationships and team environment</p> <p>SA13. take initiatives and progressively assume increased responsibilities</p> <p>SA14. share knowledge with other team members and colleagues</p>                                  |
|                               | <p><b>Equipment operating Skills</b></p>                                                                                                                                                                                                                                                                                                                                                                                       |
|                               | <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. operate equipments like BTS, BSC, MSC, MGW, HLR, SDP and their various software versions – for own responsibility area</p> <p>SB2. operate operating systems and use appropriate commands to execute tasks</p> <p>SB3. utilize company specific technical database</p> <p>SB4. use appropriate Telnet and FTP commands for file sharing</p> |
|                               | <p><b>Technical interpretation Skills</b></p>                                                                                                                                                                                                                                                                                                                                                                                  |
|                               | <p>The user/individual on the job needs to know and understand how to:</p> <p>SB5. interpret VSWR, E1, power meter test results to localize faults and communicate appropriate steps to be rectify the same</p> <p>SB6. interpret technical manuals and product documentation for every upgrade or new version for own responsibility area</p> <p>SB7. analyze system and alarm logs to identify root cause of alarms</p>      |
|                               | <p><b>Problem solving skills</b></p>                                                                                                                                                                                                                                                                                                                                                                                           |
|                               | <p>The user/individual on the job needs to know and understand how to:</p> <p>SB8. troubleshoot common equipment and network related problems</p> <p>SB9. utilize appropriate tools and commands to rectify faults</p> <p>SB10. utilize appropriate communication channels to escalate unresolved problems to relevant personnel</p>                                                                                           |

TEL/N6215

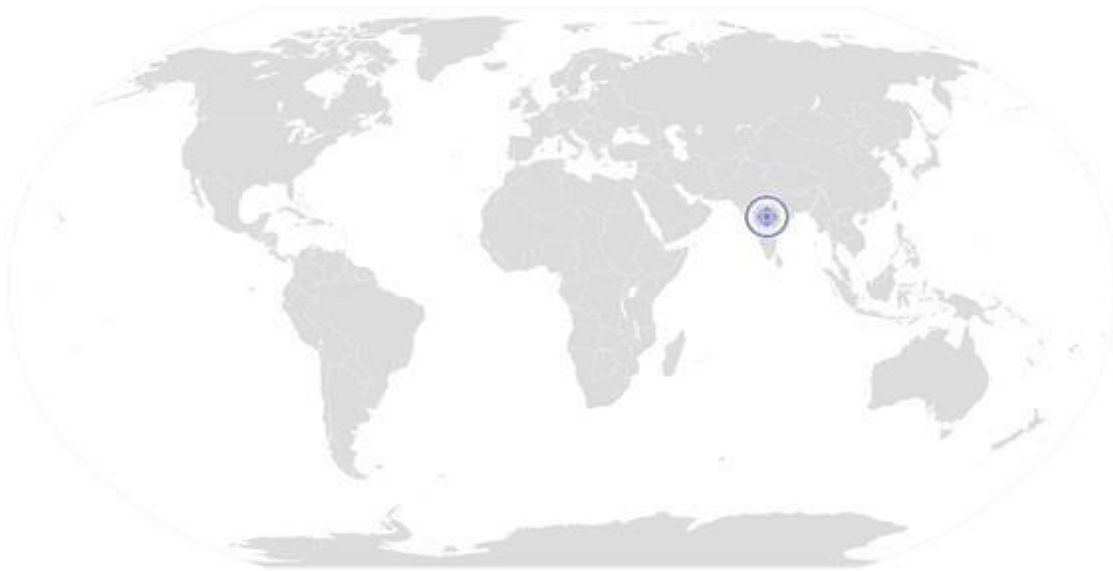
**Rectify critical faults**

## **NOS Version Control**

|                            |                          |                         |            |
|----------------------------|--------------------------|-------------------------|------------|
| <b>NOS Code</b>            | TEL/N6215                |                         |            |
| <b>Credits NSQF</b>        | TBD                      | <b>Version number</b>   | 1.0        |
| <b>Industry</b>            | Telecom                  | <b>Drafted on</b>       | 22/05/2013 |
| <b>Industry Sub-sector</b> | Network Managed Services | <b>Last reviewed on</b> | 21/06/2018 |
| <b>Occupation</b>          | Network O&M              | <b>Next review date</b> | 31/03/2019 |



# National Occupational Standard



## Overview

This unit is about assisting field teams in critical upgrade and new technology roll-out activities

TEL/N6216

## Assist in upgrades and technology roll out

National Occupational Standard

| Unit Code                                                                                | TEL/N6216                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unit Title (Task)                                                                        | Assist in upgrades and technology roll out                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Description                                                                              | The role involves assisting field teams in critical upgrade and new technology roll-out activities pertaining to own responsibility area. It is critical to ensure timely response to the change order and effectiveness of the change implemented.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Scope                                                                                    | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Ensure timely response to the change work orders</li> <li>Implement change work order while ensuring minimum/ no service outage</li> <li>Test effectiveness of change and report/ document the status</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Performance Criteria (PC) w.r.t. the Scope                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Element                                                                                  | Performance Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Determine availability of new upgrade/ technology and develop implementation plan</b> | <p>To be competent, the user/individual on the job must be able to</p> <p>PC1. maintain list of upgrades available and their due dates for implementation</p> <p>PC2. determine impact of upgrade on existing hardware as per upgrade release note</p> <p>PC3. assess need for additional/ new hardware support as per upgrade requirements and ensure availability of appropriate spare hardware</p> <p>PC4. develop implementation plan and identify dependencies</p> <p>PC5. assess the potential impact of the proposed plan on customers and network and plan for possible outage or deferral of plan</p> <p>PC6. intimate the customers in case of non-service impacting change and obtain required approvals in case the change is expected to be service impacting</p> <p>PC7. notify the network operations centre (NOC) prior to undertaking the implementation of upgrades/ new technology</p> |
| <b>Pre-testing of upgrades/ new technology</b>                                           | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. ensure testing of upgrades in test environment (test bed) prior to their roll-out</p> <p>PC2. identify parameters based on which success of upgrade results would be measured</p> <p>PC3. ensure test results are verified and documented</p> <p>PC4. ensure development of back-out plan in case of emergency/ failure during and post upgrade activity</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Implement upgrades/ new technology roll-outs and perform post testing</b>             | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. undertake implementation of upgrade/ new technology in live environment as per the manual or other technical documentation available</p> <p>PC2. ensure continuous monitoring of the activities and notify change requestor/ NOC team in case any problems are encountered</p> <p>PC3. test effectiveness of upgrade activity to ensure that the results are in line with expectations</p>                                                                                                                                                                                                                                                                                                                                                                                                                                |

TEL/N6216

### Assist in upgrades and technology roll out

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|                                                                                                 | <p>PC4. abort change and implement contingency/ back-out plan should the change plan not be realised without major disruption to network</p> <p>PC5. ensure compliance with the defined SLA for carrying out changes and in case of emergency request customer for extension of period</p> <p>PC6. utilize spares if required, and send faulty equipment for repair and replacement</p> <p>PC7. monitor network alarms and functionality in co-ordination with the NOC team to confirm effectiveness of the change process</p>                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Health and Safety</b>                                                                        | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. ensure completion of pre-employment health check-up and appropriate induction trainings on basic safety, first aid, fire, electrical and height safety rules</p> <p>PC2. ensure compliance with site risk control, OHS, environmental and quality requirements as per company's norms</p> <p>PC3. ensure compliance with all organizational security arrangements (like using valid ID cards, permit to work) and approved procedures</p> <p>PC4. ensure that work is carried out in accordance to the level of competence and legal requirements</p> <p>PC5. ensure that Personal Protection Equipments like anti-static bands are appropriately used as required</p> <p>PC6. ensure adherence to emergency plans as per guidelines</p> <p>PC7. ensure escalation of safety incidents to relevant authorities as per guidelines</p> |
| <b>Report &amp; Record</b>                                                                      | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. ensure all relevant parties (including NOC team, other supervisors) are notified of the results of the activity</p> <p>PC2. ensure that documents that are required to be updated are identified and updated</p> <p>PC3. ensure that documents are available to all appropriate authorities to inspect</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Knowledge and Understanding (K)</b>                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>A. Organizational Context</b><br>(Knowledge of the company / organization and its processes) | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. risk and impact of not following defined procedures/work instructions</p> <p>KA2. whistle blowing &amp; refusal to work policy</p> <p>KA3. escalation matrix for reporting identified incidents, troubles and/ or emergencies e.g. system failures ,fire and power failures</p> <p>KA4. SHE and OHS guidelines and regulations as per company's norms</p> <p>KA5. protection equipments (anti-static bands, anti-static packaging, appropriate insulations) that are required to be used</p> <p>KA6. first aid requirements in case of electrical shocks, cuts and other common injuries</p> <p>KA7. electrical related hazards and precautionary measures</p> <p>KA8. usage of fire safety equipments</p>                                                                                                                               |
| <b>B. Technical Knowledge</b>                                                                   | <p>The user/individual on the job needs to know and understand:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

TEL/N6216

## Assist in upgrades and technology roll out

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|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                           | <p>KB1. network topology like ring structure, daisy chain structure and their traffic handling capabilities and characteristics</p> <p>KB2. parameters based on which success of upgrade activity would be tested</p> <p>KB3. detailed product specific knowledge</p> <p>KB4. functionality and working intricacies of equipments like BTS, BSC, MSC, MGW, HLR, SDP and their software versions – for own responsibility area</p> <p>KB5. O&amp;M software tools like Mini Link and NEC Passo Link</p> <p>KB6. knowledge of IP based network - IP back-hauling and IP networking</p> <p>KB7. knowledge of Network Monitoring System</p> <p>KB8. standard fault-finding (troubleshooting) techniques</p> |
| <b>Skills (S)</b>                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>A. Core Skills/<br/>Generic Skills</b> | <b>Communication Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | The user/ individual on the job needs to know and understand how to:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                           | SA1. communicate with supervisor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                           | SA2. provide advice and guidance to peers & juniors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                           | SA3. respond appropriately to queries from upstream and downstream teams                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           | <b>Project Management Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                           | The user/individual on the job needs to know and understand how to:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>A. Core Skills/<br/>Generic Skills</b> | SA4. prioritize and execute tasks in a high-pressure and business critical environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                           | SA5. multi-task by handling multiple tasks and completing them successfully within due timelines                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                           | SA6. use and maintain resources efficiently and effectively                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | <b>Analytical Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           | The user/individual on the job needs to know and understand how to:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                           | SA7. keep up to date with new technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           | SA8. interpret reports, readings and numerical data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>A. Core Skills/<br/>Generic Skills</b> | SA9. think through to address complex problems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           | SA10. source technical information by researching enterprise website or manufacturer's technical documentation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           | <b>Other Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                           | The user/individual on the job needs to know and understand how to:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                           | SA11. maintain security of confidential equipment specific data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                           | SA12. create and maintain effective working relationships and team environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                           | SA13. take initiatives and progressively assume increased responsibilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>B. Professional Skills</b>             | SA14. share knowledge with other team members and colleagues                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                           | <b>Equipment operating Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>B. Professional Skills</b>             | The user/individual on the job needs to know and understand how to:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                           | SB1. operate equipments like BTS, BSC, MSC, MGW, HLR, SDP and their various software versions – for own responsibility area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

TEL/N6216

**Assist in upgrades and technology roll out**

|  |                                                                                                                               |
|--|-------------------------------------------------------------------------------------------------------------------------------|
|  | SB2. operate equipment specific O&M softwares                                                                                 |
|  | SB3. use appropriate Telnet and FTP commands for file sharing                                                                 |
|  | <b>Technical interpretation Skills</b>                                                                                        |
|  | The user/individual on the job needs to know and understand how to:                                                           |
|  | SB4. monitor network through network monitoring system                                                                        |
|  | SB5. interpret VSWR, E1, power meter test results to localize faults and communicate appropriate steps to be rectify the same |
|  | SB6. interpret technical manuals and product documentation for every upgrade or new version for own responsibility area       |

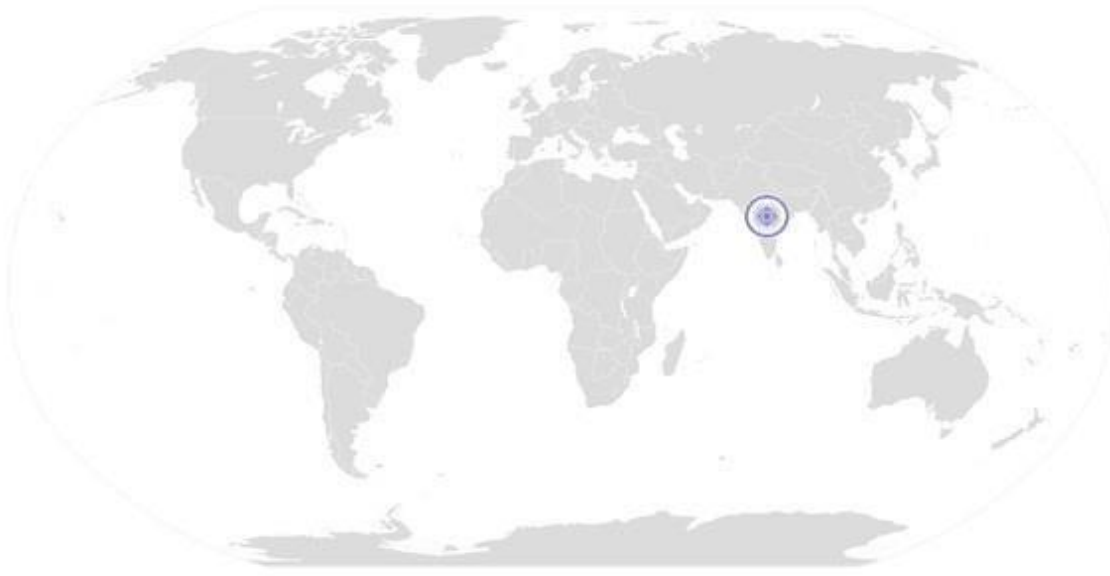


TEL/N6216

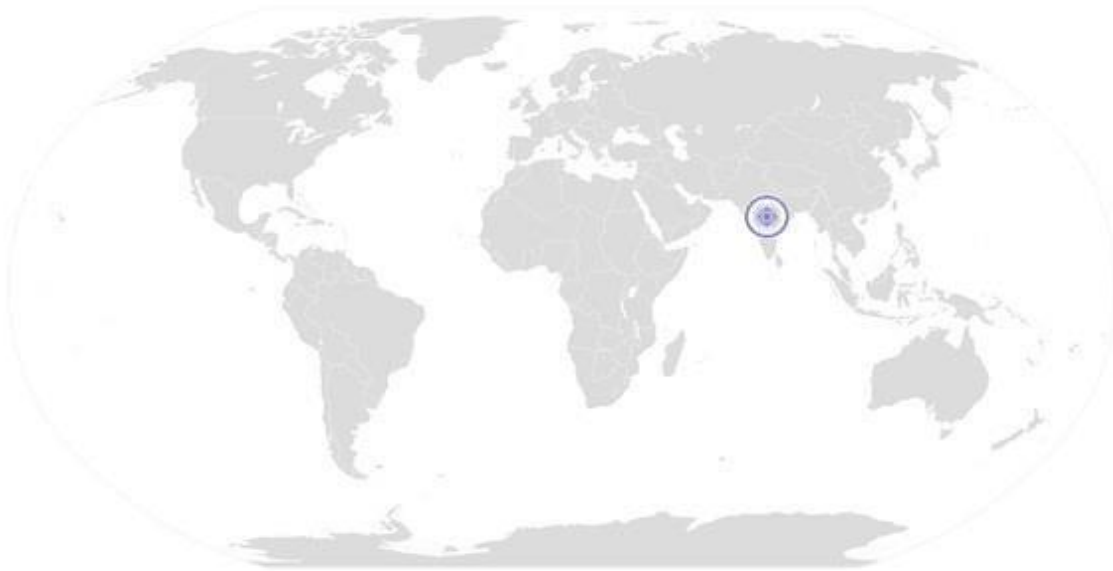
Assist in upgrades and technology roll out

## NOS Version Control

|                     |                          |                  |            |
|---------------------|--------------------------|------------------|------------|
| NOS Code            | TEL /N6216               |                  |            |
| Credits NSQF        | TBD                      | Version number   | 1.0        |
| Industry            | Telecom                  | Drafted on       | 22/05/2013 |
| Industry Sub-sector | Network Managed Services | Last reviewed on | 21/06/2018 |
| Occupation          | Network O&M              | Next review date | 31/03/2019 |



# National Occupational Standard



## Overview

This unit is about training field team and customers on new product, technology and upgrade in own responsibility area

TEL/N6217

## Train field team and customers

National Occupational Standard

|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Unit Code</b>                                               | <b>TEL/N6217</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Unit Title (Task)</b>                                       | <b>Train field team and customers</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>                                             | Train field team and customers on new product, technology and upgrade in own responsibility area                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Scope</b>                                                   | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Ensure that technical staff is informed of and trained on all new technology/ products that are rolled out</li> <li>Ensure customers are aware of the new products, upgrade versions and provide technical trainings if required</li> </ul>                                                                                                                                                                                                                                               |
| <b>Performance Criteria (PC) w.r.t. the Scope</b>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Element</b>                                                 | <b>Performance Criteria</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Identify training needs &amp; develop training schedule</b> | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. identify training needs of the field team based on feedback or post new technology/ upgrade roll-out</p> <p>PC2. develop/ Obtain material for carrying out the trainings</p> <p>PC3. confirm accuracy of information with appropriate technical staff prior to publication and distribution of material</p> <p>PC4. plan schedule and identify dependencies</p> <p>PC5. develop schedule for distribution of training manual/ material consistent with product release and list of users</p> |
| <b>Carry out trainings for the field teams</b>                 | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. deliver trainings on all new products and upgrades in own responsibility area to all impacted technical staff and customers if required</p> <p>PC2. ensure technical staff and customers are informed of the benefits of the upgrade/ new product/ technology</p> <p>PC3. indicate the changes that has been made from the previous versions and illustrate its benefits by comparing the history of complaints/ faults/ errors in the pervious versions</p>                                 |
| <b>Obtain feedback, report and record</b>                      | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. ensure monitoing of the performance of the systems post new deployment of upgrades/ new technology</p> <p>PC2. obtian feedback on the performance from technical staff and customers and escalate adverse feedback to the products team for consideration</p> <p>PC3. ensure new faults/ failures that did not occur with previous versions is promptly reported to the products team/ supervisors as per company's guidelines</p>                                                           |

TEL/N6217

## Train field team and customers

|                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Health and Safety</b>                                                                        | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. ensure compliance with site risk control, OHS, environmental and quality requirements as per company's norms</p> <p>PC2. ensure compliance with all organizational security arrangements (like using valid ID cards) and approved procedures</p> <p>PC3. ensure that work is carried out in accordance to the level of competence and legal requirements by the field team</p> <p>PC4. ensure that Personal Protection Equipments like anti-static bands, harness, belts and helmets are appropriately used as required by the field team</p> <p>PC5. ensure escalation of safety incidents to relevant authorities as per guidelines</p>     |
| <b>Knowledge and Understanding (K)</b>                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>A. Organizational Context</b><br>(Knowledge of the company / organization and its processes) | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. risk and impact of not following defined procedures/work instructions</p> <p>KA2. escalation matrix for reporting identified incidents, troubles and/ or emergencies e.g. system failures ,fire and power failures</p> <p>KA3. SHE and OHS guidelines and regulations as per company's norms</p> <p>KA4. protection equipments (anti-static bands, anti-static packaging, appropriate insulations) that are required to be used</p> <p>KA5. first aid requirements in case of electrical shocks, cuts and other common injuries</p> <p>KA6. electrical related hazards and precautionary measures</p> <p>KA7. usage of fire safety equipments</p> |
| <b>B. Technical Knowledge</b>                                                                   | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. network topology like ring structure, daisy chain structure and their traffic handling capabilities and characteristics</p> <p>KB2. functionality and working intricacies of equipments like BTS, BSC, MSC, MGW, HLR, SDP and their software versions – for own responsibility area</p> <p>KB3. knowledge of IP based network - IP back-hauling and IP networking</p> <p>KB4. knowledge of Network Monitoring/ Management System</p>                                                                                                                                                                                                              |
| <b>Skills (S)</b>                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>A. Core Skills/ Generic Skills</b>                                                           | <b>Communication Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                 | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. communicate with supervisor</p> <p>SA2. provide advice and guidance to peers &amp; juniors</p> <p>SA3. respond appropriately to queries from upstream and downstream teams</p> <p>SA4. train and Mentor teams and individuals to build their skills/ competency levels</p>                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                 | <b>Analytical Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                 | <p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. keep up to date with new technology</p> <p>SA6. interpret reports, readings and numerical data</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

TEL/N6217

### Train field team and customers

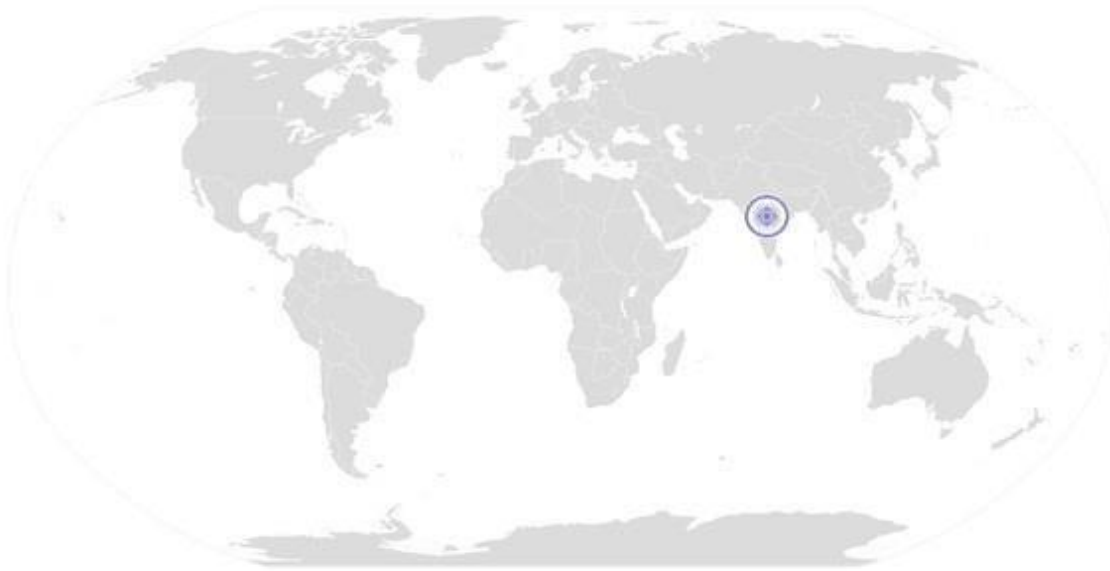
|                               |                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               | SA7. think through to address complex problems<br>SA8. source technical information by researching enterprise website or manufacturer's technical documentation                                                                                                                                                                                                       |
|                               | <b>Other Skills</b>                                                                                                                                                                                                                                                                                                                                                   |
|                               | The user/individual on the job needs to know and understand how to:<br>SA9. maintain security of confidential equipment specific data<br>SA10. create and maintain effective working relationships and team environment<br>SA11. take initiatives and progressively assume increased responsibilities<br>SA12. share knowledge with other team members and colleagues |
| <b>B. Professional Skills</b> | <b>Equipment operating Skills</b>                                                                                                                                                                                                                                                                                                                                     |
|                               | The user/individual on the job needs to know and understand how to:<br>SB1. operate equipments like BTS, BSC, MSC, MGW, HLR, SDP and their various software versions – for own responsibility area<br>SB2. operate equipment specific O&M softwares<br>SB3. use appropriate Telnet and FTP commands for file sharing                                                  |
|                               | <b>Technical interpretation Skills</b>                                                                                                                                                                                                                                                                                                                                |
|                               | The user/individual on the job needs to know and understand how to:<br>SB4. interpret technical manuals and product documentation for every upgrade or new version for own responsibility area<br>SB5. develop training documents/ material catering to needs and understanding of technical staff                                                                    |

TEL/N6217

**Train field team and customers**

## **NOS Version Control**

|                            |                                 |                         |                   |
|----------------------------|---------------------------------|-------------------------|-------------------|
| <b>NOS Code</b>            | <b>TEL/N6217</b>                |                         |                   |
| <b>Credits NSQF</b>        | <b>TBD</b>                      | <b>Version number</b>   | <b>1.0</b>        |
| <b>Industry</b>            | <b>Telecom</b>                  | <b>Drafted on</b>       | <b>22/05/2013</b> |
| <b>Industry Sub-sector</b> | <b>Network Managed Services</b> | <b>Last reviewed on</b> | <b>21/06/2018</b> |
| <b>Occupation</b>          | <b>Network O&amp;M</b>          | <b>Next review date</b> | <b>31/03/2019</b> |



TEL/Q6204

Qualification Pack for Product Specialist Engineer

**Criteria for Assessment of Trainee**

**Job Role** Product Specialist Engineer

**Qualification Pack** TEL/Q6204

**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. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
- 4a. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/ training center (as per assessment criteria below).
- 4b. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

| Assessable Outcome                                                                             | Assessment Criteria                                                                                                                                                                          | Total Mark (300) | Out Of     | Theory    | Skills Practical |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------|-----------|------------------|
| TEL/N6215<br>Respond to fault escalations                                                      | PC1. ensure timely handling of customer/ field queries                                                                                                                                       | 100              | 2          | 2         | 0                |
|                                                                                                | PC2. obtain all alarm information and determine alarm severity, SLAs and the affected network elements by collating all the information                                                      |                  | 5          | 5         | 0                |
|                                                                                                | PC3. ensure understanding of nature of alarm, and provide information to/ seek advice from relevant parties as required                                                                      |                  | 10         | 5         | 5                |
| Conduct remote testing and fault diagnoses                                                     | PC1. utilize company specific technical database to identify the root cause of fault and determine corrective steps                                                                          |                  | 10         | 5         | 5                |
|                                                                                                | PC2. in case details are not available in technical database isolate the root cause of fault by conducting appropriate remote diagnostic tests like remotely interrogating active equipments |                  | 15         | 7         | 8                |
|                                                                                                | PC3. determine the options to rectify the fault and confirm with supervisors if required                                                                                                     |                  | 5          | 5         | 0                |
|                                                                                                | PC4. refer equipment manual and other vendor specific material to identify fault rectification steps if required                                                                             |                  | 10         | 10        | 0                |
| Rectify faults in coordination with the field engineers                                        | PC1. provide clear and concise instructions to field staff to facilitate all repair efforts and observe full implementation of the advice                                                    |                  | 5          | 5         | 0                |
|                                                                                                | PC2. monitor the progress of the network repair effort to ensure compliance to timelines of the ticket                                                                                       |                  | 5          | 5         | 0                |
|                                                                                                | PC3. ensure rectification of network problem/ fault within the alarm SLAs                                                                                                                    |                  | 5          | 5         | 0                |
|                                                                                                | PC4. escalate unresolved faults/ instances of delays in resolution to higher authorities/ specialists                                                                                        |                  | 5          | 5         | 0                |
|                                                                                                | PC5. monitor relevant alarms in co-ordination with NOC team to confirm effectiveness of the rectification process                                                                            |                  | 10         | 5         | 5                |
| Report & Record                                                                                | PC6. notify all relevant parties of the results of the fault rectification status                                                                                                            |                  | 3          | 3         | 0                |
|                                                                                                | PC7. prepare fault report and forward root cause analysis to the customers                                                                                                                   |                  | 3          | 3         | 0                |
|                                                                                                | PC8. identify other documentation to be completed relating to one's role and follow reporting procedures as prescribed by the company                                                        |                  | 4          | 4         | 0                |
|                                                                                                | PC9. ensure that all documents are available to the appropriate authorities for review and reference                                                                                         |                  | 3          | 3         | 0                |
| <b>Total</b>                                                                                   |                                                                                                                                                                                              |                  | <b>100</b> | <b>77</b> | <b>23</b>        |
| TEL/N6216<br>Determine availability of new upgrade/ technology and develop implementation plan | PC1. maintain list of upgrades available and their due dates for implementation                                                                                                              | 100              | 2          | 0         | 2                |
|                                                                                                | PC2. determine impact of upgrade on existing hardware as per upgrade release note                                                                                                            |                  | 2          | 2         | 0                |
|                                                                                                | PC3. assess need for additional/ new hardware support as per upgrade requirements and ensure availability of appropriate spare hardware                                                      |                  | 2          | 2         | 0                |
|                                                                                                | PC4. develop implementation plan and identify dependencies                                                                                                                                   |                  | 3          | 3         | 0                |
|                                                                                                | PC5. assess the potential impact of the proposed plan on customers and network and plan for possible outage or deferral of plan                                                              |                  | 2          | 2         | 0                |
|                                                                                                | PC6. intimate the customers in case of non-service impacting change and obtain required approvals in case the change is expected to be service impacting                                     |                  | 3          | 2         | 1                |

TEL/Q6204

**Qualification Pack for Product Specialist Engineer**

|                                                                               |                                                                                                                                                                                     |     |            |           |           |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------|-----------|-----------|
|                                                                               | PC7. notify the network operations centre (NOC) prior to undertaking the implementation of upgrades/ new technology                                                                 |     | 2          | 2         | 0         |
| Pre-testing of upgrades/<br>new technology                                    | PC1. ensure testing of upgrades in test environment (test bed) prior to their rollout                                                                                               |     | 10         | 0         | 10        |
|                                                                               | PC2. identify parameters based on which success of upgrade results would be measured                                                                                                |     | 5          | 5         | 0         |
|                                                                               | PC3. ensure test results are verified and documented                                                                                                                                |     | 4          | 4         | 0         |
|                                                                               | PC4. ensure development of back-out plan in case of emergency/ failure during and post upgrade activity                                                                             |     | 10         | 5         | 5         |
| Implement upgrades/ new<br>technology rollouts and<br>perform<br>post testing | PC1. undertake implementation of upgrade/ new technology in live environment as per the manual or other technical documentation available                                           |     | 5          | 5         | 0         |
|                                                                               | PC2. ensure continuous monitoring of the activities and notify change requestor/NOC team in case any problems are encountered                                                       |     | 15         | 8         | 7         |
|                                                                               | PC3. test effectiveness of upgrade activity to ensure that the results are in line with expectations                                                                                |     | 10         | 5         | 5         |
|                                                                               | PC4. abort change and implement contingency/ back-out plan should the change plan not be realised without major disruption to network                                               |     | 2          | 2         | 0         |
|                                                                               | PC5. ensure compliance with the defined SLA for carrying out changes and in case of emergency request customer for extension of period                                              |     | 5          | 5         | 0         |
|                                                                               | PC6. utilize spares if required, and send faulty equipment for repair and replacement                                                                                               |     | 5          | 3         | 2         |
|                                                                               | PC7. monitor network alarms and functionality in co-ordination with the NOC team to confirm effectiveness of the change process                                                     |     | 3          | 3         | 0         |
| Health and Safety                                                             | PC1. ensure completion of pre-employment health check-up and appropriate induction trainings on basic safety, first aid, fire, electrical and height safety rules                   |     | 1          | 1         | 0         |
|                                                                               | PC2. ensure compliance with site risk control, OHS, environmental and quality requirements as per company's norms                                                                   |     | 1          | 1         | 0         |
|                                                                               | PC3. ensure compliance with all organizational security arrangements (like using valid ID cards, permit to work) and approved procedures                                            |     | 1          | 1         | 0         |
|                                                                               | PC4. ensure that work is carried out in accordance to the level of competence and legal requirements                                                                                |     | 1          | 1         | 0         |
|                                                                               | PC5. ensure that Personal Protection Equipments like anti-static bands are appropriately used as required                                                                           |     | 1          | 1         | 0         |
|                                                                               | PC6. ensure adherence to emergency plans as per guidelines                                                                                                                          |     | 1          | 1         | 0         |
|                                                                               | PC7. ensure escalation of safety incidents to relevant authorities as per guidelines                                                                                                |     | 1          | 1         | 0         |
| Report & Record                                                               | PC1. ensure all relevant parties (including NOC team, other supervisors) are notified of the results of the activity                                                                |     | 1          | 1         | 0         |
|                                                                               | PC2. ensure that documents that are required to be updated are identified and updated                                                                                               |     | 1          | 1         | 0         |
|                                                                               | PC3. ensure that documents are available to all appropriate authorities to inspect                                                                                                  |     | 1          | 1         | 0         |
| <b>Total</b>                                                                  |                                                                                                                                                                                     |     | <b>100</b> | <b>68</b> | <b>32</b> |
| TEL/N6217<br>Identify training needs &<br>develop training<br>schedule        | PC1. identify training needs of the field team based on feedback or post new technology/ upgrade roll-out                                                                           |     | 1          | 1         | 0         |
|                                                                               | PC2. develop/ Obtain material for carrying out the trainings                                                                                                                        |     | 5          | 2         | 3         |
|                                                                               | PC3. confirm accuracy of information with appropriate technical staff prior to publication and distribution of material                                                             |     | 1          | 1         | 0         |
|                                                                               | PC4. plan schedule and identify dependencies                                                                                                                                        |     | 3          | 3         | 0         |
|                                                                               | PC5. develop schedule for distribution of training manual/ material consistent with product release and list of users                                                               |     | 2          | 2         | 0         |
| Carry out trainings for<br>the field teams                                    | PC1. deliver trainings on all new products and upgrades in own responsibility area to all impacted technical staff and customers if required                                        | 100 | 10         | 5         | 5         |
|                                                                               | PC2. ensure technical staff and customers are informed of the benefits of the upgrade/ new product/ technology                                                                      |     | 5          | 5         | 0         |
|                                                                               | PC3. indicate the changes that has been made from the previous versions and illustrate its benefits by comparing the history of complaints/ faults/ errors in the pervious versions |     | 5          | 5         | 0         |
| Obtain feedback, report<br>and record                                         | PC1. ensure monitoing of the performance of the systems post new deployment of upgrades/ new technology                                                                             |     | 20         | 10        | 10        |
|                                                                               | PC2. obtian feedback on the performance from technical staff and customers and escalate adverse feedback to the products team for consideration                                     |     | 10         | 10        | 0         |

TEL/Q6204

**Qualification Pack for Product Specialist Engineer**

|                   |                                                                                                                                                               |  |     |    |    |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----|----|----|
|                   | PC3. ensure new faults/ failures that did not occur with previous versions is promptly reported to the products team/ supervisors as per company's guidelines |  | 10  | 10 | 0  |
| Health and Safety | PC1. ensure compliance with site risk control, OHS, environmental and quality requirements as per company's norms                                             |  | 10  | 10 | 0  |
|                   | PC2. ensure compliance with all organizational security arrangements (like using valid ID cards) and approved procedures                                      |  | 10  | 5  | 5  |
|                   | PC3. ensure that work is carried out in accordance to the level of competence and legal requirements by the field team                                        |  | 5   | 5  | 0  |
|                   | PC4. ensure that Personal Protection Equipments like anti-static bands, harness, belts and helmets are appropriately used as required by the field team       |  | 3   | 3  | 0  |
|                   | PC5. ensure escalation of safety incidents to relevant authorities as per guidelines                                                                          |  | 0   | 0  | 0  |
| Total             |                                                                                                                                                               |  | 100 | 77 | 23 |