

## 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

#### Contact Us:

2nd Floor, C-DOT  
Campus, Mandi  
Road, Mehrauli  
New Delhi - 110030  
T: +91 11 26598711  
F: +91 11 26805318  
E-mail:  
tssc@tsscindia.com



### Contents

1. Introduction and Contacts.....1
2. Qualifications Pack.....2
3. OS Units.....5

## Introduction

### Qualifications Pack-Grass Root Telecom Provider (GRTP)

**SECTOR:** TELECOM

**SUB-SECTOR:** Network Managed Services

**OCCUPATION:** Operation & Maintenance

**REFERENCE ID:** TEL/Q6207

**ALIGNED TO:** NCO-2004/Nil

**Brief Job Description:** Individual in this role is responsible to keep ONT site operational on 24x7 basis; maintain and repair basic faults/issues at ONT site; promote use of devices among local population and provide services.

**Personal Attributes:** This job requires the individual to be technically qualified; self-disciplined; assertive; team player; action-orientated; possess analytical skills & problem solving ability; effective communication skills and ability to work under pressure.

|                    |                                 |   |                         |                   |
|--------------------|---------------------------------|---|-------------------------|-------------------|
| <b>Job Details</b> | <b>Qualifications Pack Code</b> | <b>TEL/Q6207</b>                          |                         |                   |
|                    | <b>Job Role</b>                 | <b>Grass Root Telecom Provider (GRTP)</b> |                         |                   |
|                    | <b>Credits(NSQF)</b>            |   | <b>Version number</b>   | <b>1.0</b>        |
|                    | <b>Sector</b>                   | <b>Telecom</b>                            | <b>Drafted on</b>       | <b>19/09/2014</b> |
|                    | <b>Sub-sector</b>               | <b>Network Managed Services</b>           | <b>Last reviewed on</b> | <b>08/10/2014</b> |
|                    | <b>Occupation</b>               | <b>Operations &amp; Maintenance</b>       | <b>Next review date</b> | <b>08/10/2016</b> |

|   |  |
|---|--|
| <b>Job Role</b>   | <b>Grass Root Telecom Provider (GRTP)</b>  |
| <b>Role Description</b>                                 | Maintain ONT site to keep it operational, promote use of devices and provide services  |
| <b>NSQF level</b>                                       | 4  |
| <b>Minimum Educational Qualifications</b>               | Preferably 10+2  |
| <b>Maximum Educational Qualifications</b>               |  |
| <b>Training</b>   | NA   |
| <b>Experience</b>                                       | Nil  |
| <b>Applicable National Occupational Standards (NOS)</b> | (Click to open the below hyperlinks)<br><b>Compulsory:</b><br>1. TEL/N6226 ( <a href="#">Site security and hygiene</a> )<br>2. TEL/N6227 ( <a href="#">Preventive maintenance</a> )<br>3. TEL/N6228 ( <a href="#">Promote use of devices and provide services</a> )<br><b>Optional:</b> NA |
| <b>Performance Criteria</b>                             | As described in the relevant OS units  |

| Keywords /Terms                 | Description  |  |
|---------------------------------|--|--|
| Definitions                     | 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 under which role-holders 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 (Occupational Standards)     | 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 standards of performance required when carrying out a task   |  |
| National Occupational Standards | NOS are Occupational Standards which apply uniquely in the Indian Context  |  |
| QP (Qualification 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.  |  |
| Qualification Pack Code         | Qualifications Pack Code is a unique reference code that identifies a qualifications pack  |  |
| Scope                           | Scope is a set of statements specifying the range of variables that an individual may have to deal with, in carrying out the function which has a critical impact on the quality of performance required   |  |
| 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 statements which together specify the technical , generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standards   |  |
| 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  |  |

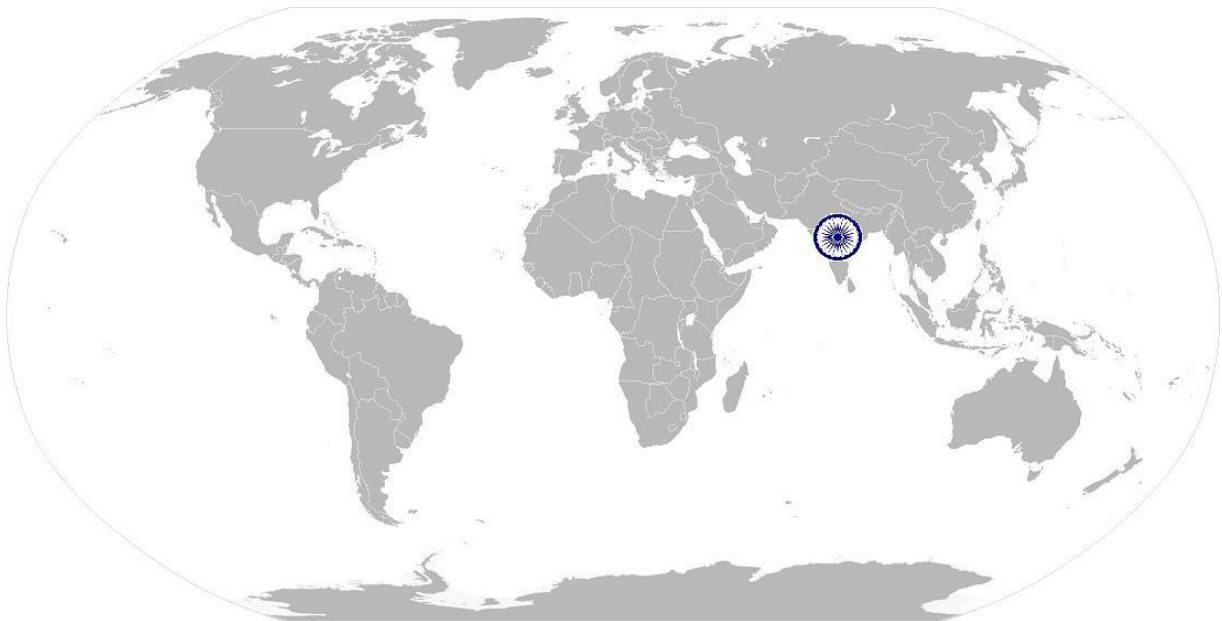
|                            |   |
|----------------------------|---|
| Technical Knowledge        | Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities   |
| Core Skills/Generic Skills | Core Skills or Generic Skills are a group of skills that are 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 |

The following acronyms/codes have been used in the nomenclature above:

| Definitions | Keywords /Terms    | Description                |
|-------------|--------------------|----------------------------|
|             | CCU                | Charge Controller Unit     |
|             | GP                 | Gram Panchayat             |
|             | NOC                | Network Operations Centre  |
|             | ONT                | Optical Network Terminal   |
|             | OLT                | Optical Line Terminal      |
|             | ODF                | Optical Distribution Frame |
|             | PM                 | Preventive Maintenance     |
|             | SLA                | Service Level Agreement    |
|             | SP                 | Service Provider           |
|             | SPV                | Solar Photo Voltaic System |
| TJB         | Terminal Joint Box |                            |

[Back to Top](#)

# National Occupational Standard



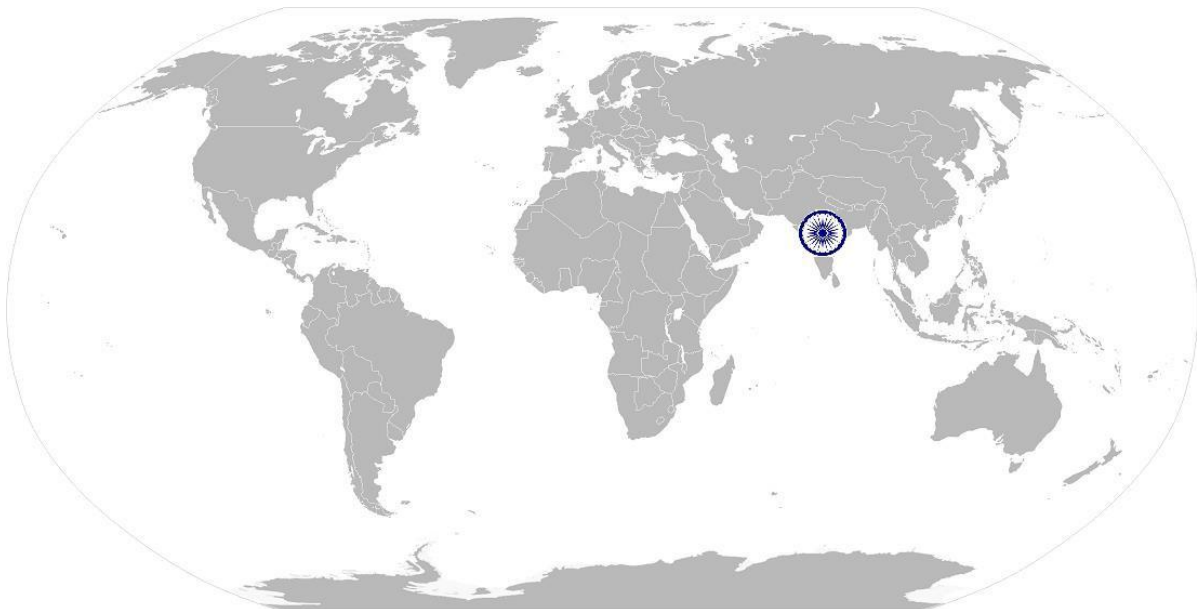
---

## **Overview**

This unit is about keeping ONT site operational by maintaining site hygiene and security.

|                  |  |   |
|------------------|--|---|
| Service Provider | <b>Unit Code</b>   | TEL/N6405   |
|                  | <b>Unit Title</b>  | Site security and hygiene   |
|                  | <b>Description</b>   | This OS unit is about maintaining the ONT site security and hygiene   |
|                  | <b>Scope</b>   | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Coordinating activities for site security and hygiene</li> <li>Monitoring equipment and record keeping</li> <li>Interacting with OLT/NOC supervisor, Gram Panchayat officials</li> </ul>   |
|                  | <b>Performance Criteria(PC) w.r.t. the Scope:</b>  |   |
|                  |  | <b>Performance Criteria</b>   |
|                  |  | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. function as custodian by taking responsibility of the ONT site<br/>           PC2. monitor to verify CCU,SPV,TJB and battery bank are working properly<br/>           PC3. maintain hygiene of CCU,SPV,TJB and Battery Bank based on guidelines<br/>           PC4. verify cable connectors for appropriate tightness<br/>           PC5. verify cables for damage and replace if required<br/>           PC6. use fire extinguisher to control fire in case of accident<br/>           PC7. ensure ONT remain operational and powered on 24X7 basis<br/>           PC8. fill in activity records in given format</p> |
|                  | <b>Knowledge and Understanding</b>   |   |
|                  | <b>A. Organizational Context</b><br>(Knowledge of the company / organization & its process relevant to area of responsibilities) | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. the importance of maintaining ONT site hygiene<br/>           KA2. the importance of keeping ONT operational on 24X7 basis<br/>           KA3. the importance of following procedures and instructions<br/>           KA4. escalation matrix for reporting problems with equipment and optical fiber cables<br/>           KA5. SHE guidelines as per norms</p>   |
|                  | <b>B. Technical Knowledge</b>  | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. functionality of CCU,SPV,TJB,battery bank and fire extinguisher<br/>           KB2. guidelines for maintaining hygiene of equipments at site<br/>           KB3. basic electrical wiring</p>  |

| Skills (S)                                |   |
|---|---|
| <b>A. Core Skills/<br/>Generic Skills</b> | <p>The user/ individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA1. reading skills-read and understand manuals, health and safety instructions etc</li> <li>SA2. writing skills- fill in activity record in given format</li> <li>SA3. communication skills-communicate with OLT/NOC supervisor</li> <li>SA4. Interpersonal skills-maintain working relationships with OLT/NOC supervisor and with Gram Panchayat (GP) officials</li> </ul> |
| <b>B. Professional Skills</b>             | <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB1. equipment handling skills-CCU,SPV,TJB,battery bank and fire extinguisher</li> </ul>  |



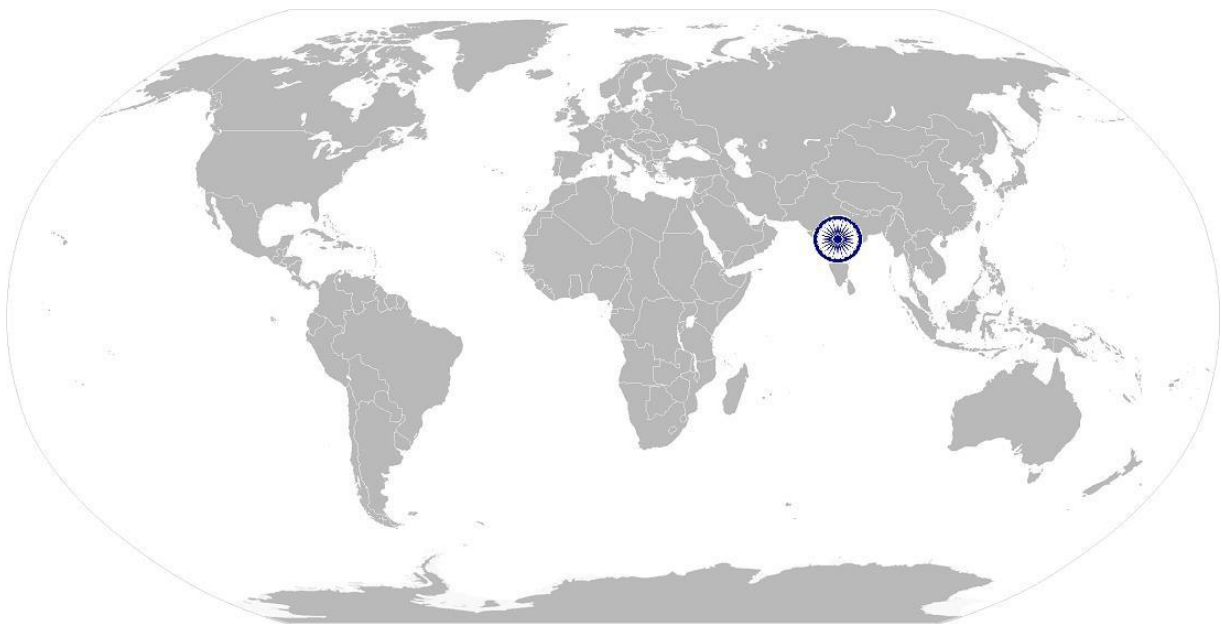


TEL/N6226

Site security and hygiene

## NOS Version Control:

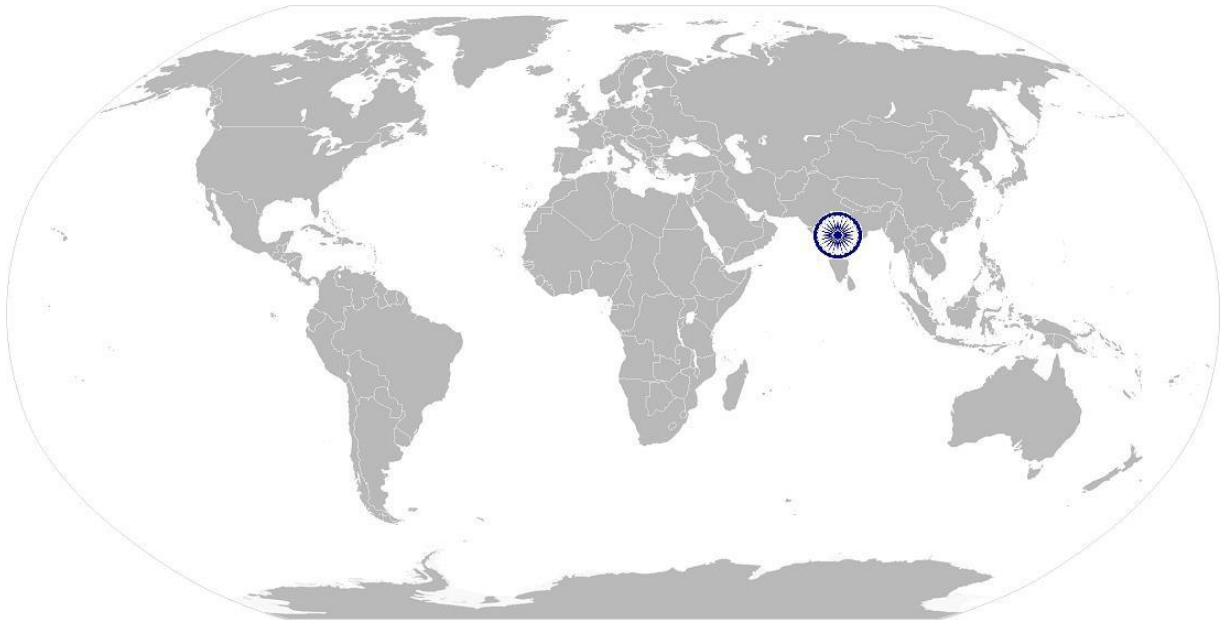
|                            |                          |                         |            |
|----------------------------|--------------------------|-------------------------|------------|
| <b>NOS Code</b>            | TEL/N6226                |                         |            |
| <b>Credits(NSQF)</b>       |                          | <b>Version number</b>   | 1.0        |
| <b>Industry</b>            | Telecom                  | <b>Drafted on</b>       | 19/09/2014 |
| <b>Industry Sub-sector</b> | Network Managed Services | <b>Last reviewed on</b> | 08/10/2014 |
|                            |                          | <b>Next review date</b> | 08/10/2016 |



[Back to Top](#)



# National Occupational Standard



---

## Overview

This unit is about conducting regular preventive maintenance activities at the ONT site.

|                  |  |  |
|------------------|--|--|
| Service Provider | <b>Unit Code</b>   | TEL/N6227  |
|                  | <b>Unit Title</b>  | Preventive maintenance   |
|                  | <b>(Task)</b>  |  |
|                  | <b>Description</b>   | This OS unit is about performing regular preventive maintenance activities   |
|                  | <b>Scope</b>   | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Coordinating activities for preventive maintenance</li> <li>• Monitoring of equipments and escalation to OLT/NOC</li> <li>• Interacting with OLT/NOC supervisor, Gram Panchayat officials</li> </ul>  |
|                  | <b>Performance Criteria (PC) w.r.t. the Scope:</b>   |  |
|                  |  | <b>Performance Criteria</b>  |
|                  |  | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. read to interpret preventive maintenance guidelines of CCU,SPV,TJB and battery bank</p> <p>PC2. ensure preventive maintenance of CCU,SPV,TJB and battery bank as per given schedule</p> <p>PC3. monitor CCU panel to observe and interpret alarm</p> <p>PC4. monitor and verify premature ageing of battery bank cells and SPV panels</p> <p>PC5. monitor patch cord and pigtailed and replace if found damaged</p> <p>PC6. escalate to OLT/NOS supervisor for reporting problems with equipments and optical fiber cables</p> |
|                  | <b>Knowledge and Understanding</b>   |  |
|                  | <b>A. Organizational Context</b><br>(Knowledge of the company / organization & its process relevant to area of responsibilities) | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. the importance of ONT remaining operational at all times</p> <p>KA2. the importance of adhering to preventive maintenance schedule</p> <p>KA3. the importance of following procedures and instructions</p> <p>KA4. escalation matrix for reporting problems with equipment and optical fiber cables</p> <p>KA5. SHE guidelines as per norms</p>  |

TEL/N6227

**Preventive maintenance**

|  |   |
|--|---|
| <p><b>B. Technical Knowledge</b></p>             | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. functionality of CCU,SPV,TJB,battery bank, fire extinguisher and alarms<br/>         KB2. guidelines for preventive maintenance of equipments<br/>         KB3. basic electrical wiring, ,patch cord and pigtails<br/>         KB4. FAQ for basic troubleshooting of equipment</p>  |
| <p><b>Skills (S)</b></p>                         |   |
| <p><b>A. Core Skills/<br/>Generic Skills</b></p> | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. reading skills-read and understand manuals, health and safety instructions<br/>         SA2. writing skills- fill records as per given format<br/>         SA3. communication skills-communicate with OLT/NOC supervisor<br/>         SA4. Interpersonal skills-maintain working relationships with OLT/NOC supervisor and with Gram Panchayat (GP) officials</p> |
| <p><b>B. Professional Skills</b></p>             | <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. equipment handling skills-CCU,SPV,TJB,battery bank and fire extinguisher<br/>         SB2. problem solving skills-basic trouble shooting with CCU,SPV,TJB,battery bank</p>   |

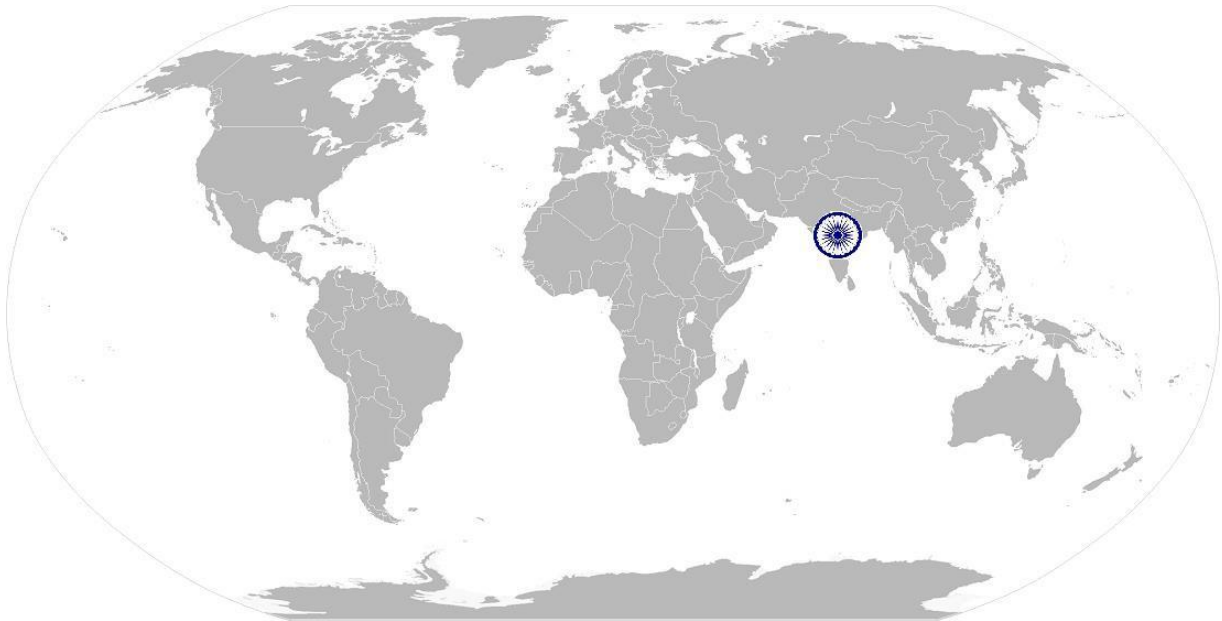


TEL/N6227

Preventive maintenance

**NOS Version Control:**

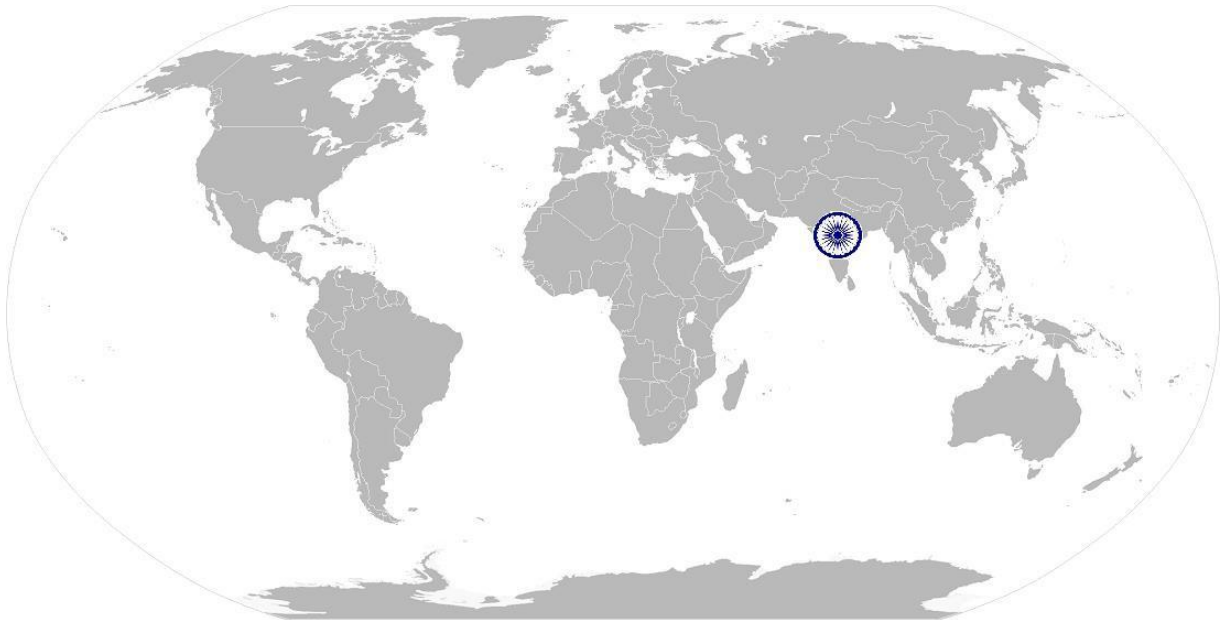
|                            |                          |                         |            |
|----------------------------|--------------------------|-------------------------|------------|
| <b>NOS Code</b>            | TEL/N6227                |                         |            |
| <b>Credits(NSQF)</b>       |                          | <b>Version number</b>   | 1.0        |
| <b>Industry</b>            | Telecom                  | <b>Drafted on</b>       | 19/09/2014 |
| <b>Industry Sub-sector</b> | Network Managed Services | <b>Last reviewed on</b> | 08/10/2014 |
|                            |                          | <b>Next review date</b> | 08/10/2016 |



[Back to Top](#)

---

# National Occupational Standard



---

## Overview

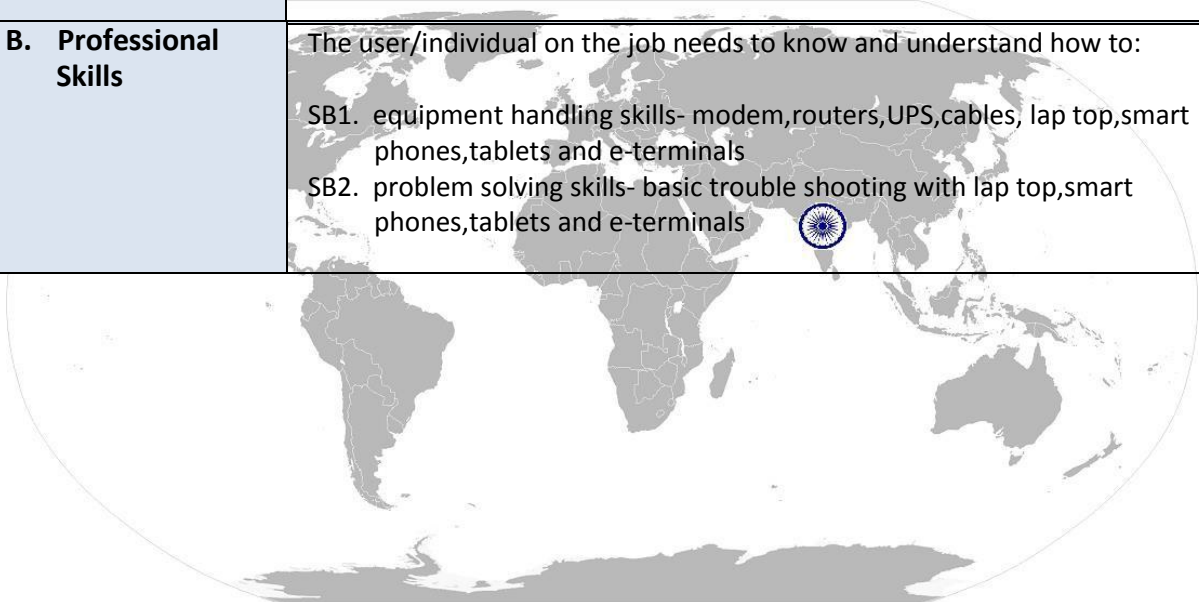
This unit is about acquainting local population about use of local devices (smart phone, tablets and e- terminals) and provisioning of services.

Promote use of devices and provide services

|  |   |  |
|--|---|--|
| Service Provider   | <b>Unit Code</b>  | TEL/N6228  |
|  | <b>Unit Title (Task)</b>  | Promote use of devices and provide services  |
|  | <b>Description</b>  | This OS unit is about promotion of local devices and service provisioning  |
|  | <b>Scope</b>  | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Acquainting local population about use of devices</li> <li>• Configuring devices and basic trouble shooting</li> <li>• Distribution of bills and collection of revenue from users</li> </ul>  |
|  | <b>Performance Criteria</b>   |  |
|  |   | <p>To be competent, the user/individual on the job must be able to:</p> <ul style="list-style-type: none"> <li>PC1. create awareness by informing local population features of local devices (smart phone tablets and e- terminals)</li> <li>PC2. acquaint local population about use of local devices</li> <li>PC3. operate and configure smart phone tablets and e- terminals</li> <li>PC4. install to operate modem using routers,UPS,cables</li> <li>PC 5. perform basic trouble shooting with devices</li> <li>PC 5. distribute bills and collect revenue from users</li> <li>PC 6. keep a record of rent agreement and electricity bill for ONT site</li> <li>PC7. report superior for timely payment of rent and electricity bill for the site</li> </ul> |
|  | <b>Knowledge and Understanding</b>  |  |
| <b>A. Organizational Context</b><br>(Knowledge of the company / organization & its process relevant to area of | <p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> <li>KA1. the importance of promotion of digital devices</li> <li>KA2. the importance of creating awareness among people for services offered</li> <li>KA3. the importance of following procedures and instructions</li> <li>KA4. escalation matrix for reporting problems with services</li> <li>KA5. SHE guidelines as per norms</li> </ul> |  |

**Promote use of devices and provide services**

|  |  |
|--|--|
| <p><b>B. Technical Knowledge</b></p>             | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. functionality of lap top,smart phones,tablets and e-terminals<br/>         KB2. functionality of modem,routers,UPS,cables<br/>         KB3. hardware and software configuration<br/>         KB4. FAQ for basic troubleshooting of equipment<br/>         KB5. benefits of broadband for people</p>                                    |
| <p><b>Skills (S)</b></p>                         |  |
| <p><b>A. Core Skills/<br/>Generic Skills</b></p> | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. reading skills-read and understand manuals,instructions,bills etc<br/>         SA2. writing skills- fill records as per format<br/>         SA3. communication skills-communicate with SP,local population and users<br/>         SA4. interpersonal skills-maintain working relationships with service provider and users</p> |
| <p><b>B. Professional Skills</b></p>             | <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. equipment handling skills- modem,routers,UPS,cables, lap top,smart phones,tablets and e-terminals<br/>         SB2. problem solving skills- basic trouble shooting with lap top,smart phones,tablets and e-terminals</p>  |





TEL/N6228

# NOS

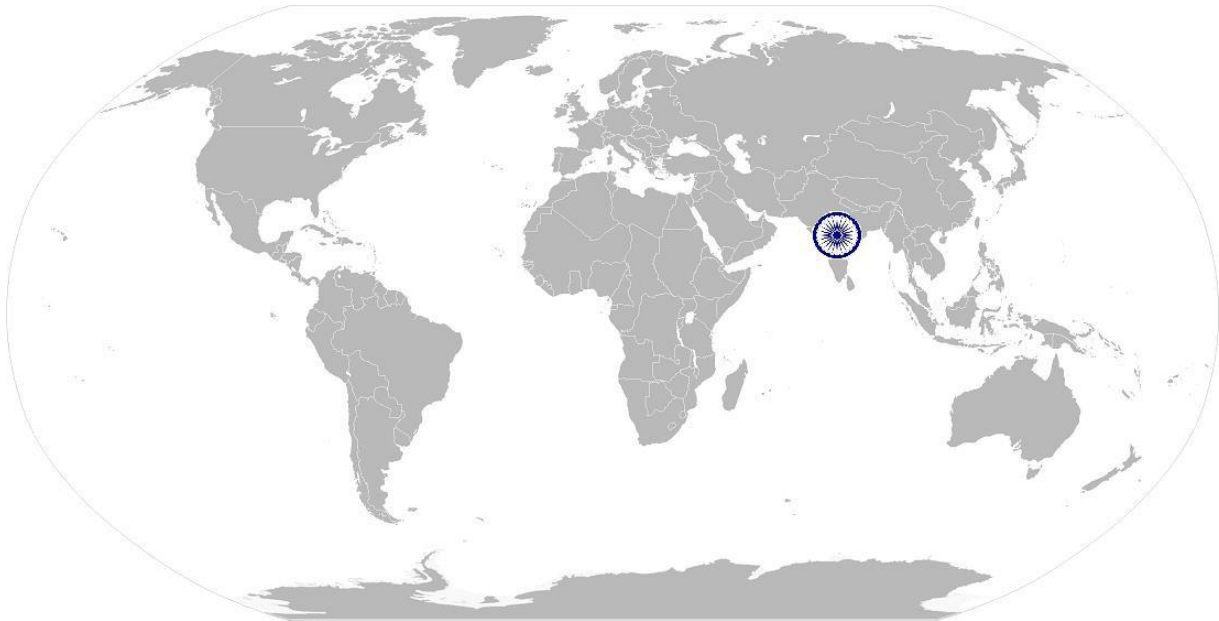
National Occupational Standards



Promote use of devices and provide services

## NOS Version Control:

|                            |                                 |                         |                   |
|----------------------------|---------------------------------|-------------------------|-------------------|
| <b>NOS Code</b>            | <b>TEL/N6228</b>                |                         |                   |
| <b>Credits(NSQF)</b>       |                                 | <b>Version number</b>   | <b>1.0</b>        |
| <b>Industry</b>            | <b>Telecom</b>                  | <b>Drafted on</b>       | <b>19/09/2014</b> |
| <b>Industry Sub-sector</b> | <b>Network Managed Services</b> | <b>Last reviewed on</b> | <b>08/10/2014</b> |
|                            |                                 | <b>Next review date</b> | <b>08/10/2016</b> |



[Back to Top](#)



**Job Role** Grass Root Telecom Provider (GRTP)  
**Qualification Pack** TEL/Q6202  
**Sector Skill Council** : Telecom

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.

2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.

3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)

4. To pass the Qualification Pack, every trainee should score a minimum of 40% in every NOS and 50% overall.

5. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

| NOS                       | PC   | Total Mark (300) | Out of     | Theory    | Skills Practical |
|---------------------------|--|------------------|------------|-----------|------------------|
| Site Security and hygiene | PC1. function as custodian by taking responsibility of the ONT site                      | 100              | 10         | 10        | 0                |
|                           | PC2. monitor to verify CCU,SPV,TJB and battery bank are working properly                 |                  | 15         | 3         | 12               |
|                           | PC3. maintain hygiene of CCU,SPV,TJB and Battery Bank based on guidelines                |                  | 15         | 3         | 12               |
|                           | PC4. verify cable connectors for appropriate tightness                                   |                  | 10         | 2         | 8                |
|                           | PC5. verify cables for damage and replace if required                                    |                  | 10         | 2         | 8                |
|                           | PC6. use fire extinguisher to control fire in case of accident                           |                  | 10         | 2         | 8                |
|                           | PC7. ensure ONT remain operational and powered on 24X7 basis                             |                  | 20         | 5         | 15               |
|                           | PC8. fill in activity records in given format  |                  | 10         | 5         | 5                |
|                           |  | <b>Total</b>     | <b>100</b> | <b>32</b> | <b>68</b>        |
| Preventive Maintenance    | PC1. read to interpret preventive maintenance guidelines of CCU,SPV,TJB and battery bank | 100              | 20         | 10        | 10               |
|                           | PC2. ensure preventive maintenance of CCU,SPV,TJB and battery bank as per given schedule |                  | 30         | 10        | 20               |
|                           | PC3. monitor CCU panel to observe and interpret alarm                                    |                  | 10         | 2         | 8                |

|   |  |              |            |           |           |
|---|--|--------------|------------|-----------|-----------|
|   | PC4. monitor and verify premature ageing of battery bank cells and SPV panels  |              | 10         | 2         | 8         |
|   | PC5. monitor patch cord and pigtails and replace if found damaged  |              | 10         | 2         | 8         |
|   | PC6. escalate to OLT/NOS supervisor for reporting problems with equipments and optical fiber cables                  |              | 20         | 10        | 10        |
|   |  | <b>Total</b> | <b>100</b> | <b>36</b> | <b>64</b> |
| Promote use of devices and provide services | PC1. create awareness by informing local population features of local devices (smart phone tablets and e- terminals) | 100          | 15         | 5         | 10        |
|   | PC2. acquaint local population about use of local devices  |              | 20         | 5         | 15        |
|   | PC3. operate and configure smart phone, tablets and e- terminals   |              | 20         | 5         | 15        |
|   | PC4. install to operate modem using routers,UPS,cables   |              | 15         | 5         | 10        |
|   | PC 5. perform basic trouble shooting with devices  |              | 15         | 5         | 10        |
|   | PC 5. distribute bills and collect revenue from users  |              | 5          | 2         | 3         |
|   | PC 6. keep a record of rent agreement and electricity bill for ONT site  |              | 5          | 4         | 1         |
|   | PC7. report superior for timely payment of rent and electricity bill for the site                                    |              | 5          | 3         | 2         |
|   |  | <b>Total</b> | <b>100</b> | <b>34</b> | <b>66</b> |