

Model Curriculum

Tower Technician

SECTOR: TELECOM
SUB-SECTOR: PASSIVE INFRASTRUCTURE
OCCUPATION: OPERATION & MAINTENANCE
REF ID: TEL/Q4100
NSQF LEVEL: 4



  

Certificate

**CURRICULUM COMPLIANCE TO
QUALIFICATION PACK – NATIONAL OCCUPATIONAL
STANDARDS**

is hereby issued by the

TELECOM SECTOR SKILL COUNCIL

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/ Qualification Pack: Tower Technician OP No. TEL/Q4100 NSQF Level 4

Date of Issuance:
Valid up to:

Authorized Signatory:
(Telecom Sector Skill Council)

* Valid up to the next review date of the Qualification Pack

TABLE OF CONTENTS

1. Curriculum	01
2. Trainer Prerequisites	04
3. Annexure: Assessment Criteria	05

Tower Technician

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Tower Technician”, in the “Telecom” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Tower Technician		
Qualification Pack Name & Reference ID.	TEL/Q4100, Version Number 1.0		
Version No.	1.0	Version Update Date	28 – 12 – 2015
Pre-requisites to Training	Preferably equivalent to 10+2		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Acquaint self with facets of preventive and corrective maintenance: Adhere to plans for PM and CM. • Identify importance of site hygiene: Maintain and monitor, DG, PIU, SMPS, battery bank and surrounding area. • Execute operational activities: scrutinize electricity bill, PIU, alarms and fuel • Aggregate potential knowledge and skill to vouchsafe the importance of health and safety: Safeguard compliance of safety regulations, personal protection, fire regulation and environmental condition. • Comprehend and initiate importance of documentation: Maintain checklist, reports, and issues for future reference. 		

This course encompasses 5 out of 5 National Occupational Standards (NOS) of “Tower Technician” Qualification Pack issued by “TSSC: Telecom Sector Skills Council”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction to Telecom Tower</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 10:00</p> <p>Corresponding NOS Code TEL/N4100 TEL/N4102</p>	<ul style="list-style-type: none"> Acquiring the knowledge of basic definitions like, Trg objective, Hierarchy, PM, CM, PM TT Flow, PM CM Schedule, Equipment Lay Out, LA, Electrical SLD, code of Conduct, BRC, Tower Loading, EMS, SME, SMS, KPI Imparting the knowledge of tools required and their uses 	Different kinds of signal antennas , modems, routers and other broadcasting equipment, Various tools used by a telecom tower technician
2	<p>AMF Panel and Diesel Generators</p> <p>Theory Duration (hh:mm) 15:00</p> <p>Practical Duration (hh:mm) 10:00</p> <p>Corresponding NOS Code TEL/N4102 TEL/N4101</p>	<ul style="list-style-type: none"> Explaining indicators, Gen Configuration, Display Measurements Learning trouble shooting, preventive maintenance, check List Learning block diagram Explaining the purpose of generators Educating various parts and principles 	Various kinds of AMF panel, Sample diesel genets
3	<p>Power Supply and Battery Bank</p> <p>Theory Duration (hh:mm) 30:00</p> <p>Practical Duration (hh:mm) 15:00</p> <p>Corresponding NOS Code TEL/N4100 TEL/N4101 TEL/N4102</p>	<ul style="list-style-type: none"> Imparting the basic principles and its related functions, settings, specifications, LVD etc. Acquiring knowledge of BD, different types of PIUs, PMUs and SPSMs, APS, AC Distribution, LED Indicators, and alarm Indicators Explaining the principles of Battery Bank and its maintenance Educating the purpose and workings of AC 	Samples of PIU/PMU/SPSM Samples of cooling panels /FCU/NCU

4	<p>Electrical Systems</p> <p>Theory Duration (hh:mm) 30:00</p> <p>Practical Duration (hh:mm) 15:00</p> <p>Corresponding NOS Code TEL/N4100 TEL/N4103 TEL/N4104</p>	<ul style="list-style-type: none"> • Training on electrical Checks, AC/DC Distributions, Earthing, DTS,CPH Guideline, Cell to TOC, External alarm at Site and OSS • Learning the working of electrical systems • Documenting monitor readings, check lists, faults, reports on changes and movements 	Tester, multi meter and electrical tools
5	<p>Health, Safety, and Maintenance</p> <p>Theory Duration (hh:mm) 15:00</p> <p>Practical Duration (hh:mm) 10:00</p> <p>Corresponding NOS Code TEL/N4100 TEL/N4101 TEL/N4102 TEL/N4104</p>	<ul style="list-style-type: none"> • Educating general safety rules and health check for site, alarms • Making the candidate understand personal protective equipment like safety Harness, helmet, gloves, eye protection glass, earplugs, nose mask etc. and their application under different working conditions • Training on various safety procedures and methods like barricading of work place, signage, safety drills, evacuation Procedures etc. • Acquiring knowledge of shelter maintenance, tower check • Understanding the importance of fault identification • Training for effective maintenance procedures 	Helmets, safety harness and gloves , eye protecting glass, earplugs Fire safety devices (Fire Extinguisher)
	<p>Total Duration</p> <p>Theory Duration 100:00</p> <p>Practical Duration 60:00</p>	Unique Equipment Required: NA	

Grand Total Course Duration: 160Hours, 0 Minutes

(This syllabus/ curriculum has been approved by TSSC: Telecom Sector Skill Council)

Trainer Prerequisites for Job role: “Tower Technician” mapped to Qualification Pack: “TEL/Q4100, Version No. 1”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “TEL/Q4100, Version No. 1.0.”
2	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.
3	Minimum Educational Qualifications	Preferably equivalent to Diploma
4	Domain Certification	Certified for Job Role: “Tower Technician” mapped to QP: “TEL/4100, Version No. 1.0.” Minimum accepted score as per respective TSSC guidelines.
4	Platform Certification	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “TEL/4100, Version No. 1.0” Minimum accepted score as per respective TSSC guidelines.
5	Experience	<ul style="list-style-type: none"> • The trainer should be certified by TSSC as ‘Train the Trainer’ and Assessor and • Worked as Tower technician for a minimum of 3-4 years if educational qualification is ITI/ Diploma or • Worked as Tower technician for 1-2 years if educational qualification is Bachelor in Technology (B.Tech. and BE.)

Annexure: Assessment Criteria

Assessment Criteria for Tower Technician	
Job Role	Tower Technician
Qualification Pack	TEL/N4100, Version No. 1.0
Sector Skill Council	Telecom

Sr. No.	Guidelines for Assessment
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. TSSC 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 TSSC.
3	Individual assessment agencies will create unique question papers for theory and skill practical part for each candidate at each examination/training center.
4	To pass the Qualification Pack, every trainee should score a minimum of 40% in every NOS and 70% pass percentage 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.

Sr. No.	NOS No.	NOS Name	Total Marks	Marks Allocation: Skills	Marks Allocation: Knowledge	Marks Allocation: behaviour
1	TEL/N4100	Site hygiene	100	15	85	
2	TEL/N4101	Preventive Maintenance	100	52	48	
3	TEL/N4102	Site Management	100	48	52	
4	TEL/N4103	Task reporting	100	45	55	
5	TEL/N4104	Corrective Maintenance	100	50	50	
Total:			500	210	290	
Percentage Weightage:				42%	58%	
Minimum Pass% to qualify:			70%	70%	70%	



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