GOVERNMENT OF TAMILNADU

DIRECTORATE OF TECHNICAL EDUCATION, CHENNAI-25

STATE PROJECT COORDINATION UNIT

(Established under Canada India Institutional Cooperation Project)

CURRICULUM

Course Name	**TELECOM TOWER TECHNICIAN**
Course Code	**EC/2020/028**
Course Duration	60 Hours
Minimum Eligibility Criteria	10th/+2/ITI/Diploma/Graduate
Pre-requisites (if any)	-
Course Objectives	Training module has been designed for the participants to • Maintain Telecom Tower Site. • Undertake preventive and corrective maintenance • Prepare the site report
Course Outcomes	At the end of training, the trainees will be able to • Perform Preventive and corrective maintenance of Tower • Prepare report and documentation
Expected Job Roles	Tower Technician

TEACHING AND SCHEME OF EXAMINATION

Course Code	Course Name	Hours		Assessment Marks		Duration of Examination
				Min	Max	
EC/2020/028	TELECOM TOWER TECHNICIAN	Theory	24	10	20	3 Hours
		Practical	36	40	80	
		Total	60	50	100	

DETAILED SYLLABUS

Unit No	Modules	No.of.Hours	
		Theory	Practical
I	**Introduction to Components at Tower Site**	**20 Hours**	
1.1	Telecom Industry in India - Types of Communication - Types of Cellular Network	10	10
1.2	Introduction to Components at Tower Site		
1.3	Telecom Tower - Telecom Shelter Unit - PIU - Power Interface Unit - Battery Bank		
1.4	Power Plant/Rectifier Unit - Air Conditioning - – Fire Extinguisher and Smoke Detectors		
1.5	EB Supply – Earthing – Aviation Lamp – Diesel Generator – Guidelines for First Aid Facilities		
II	**Preventive and Corrective Maintenance**	**20 Hours**	
2.1	Guidelines for Maintenance Activities	10	10
2.2	Routine Preventive Maintenance		
2.3	Maintenance of Batteries		
2.4	Maintenance of a Diesel Generator		
2.5	Maintenance of the Tower & Shelter		
2.6	Maintenance of AC Plant		
2.7	Maintenance of the Tower & Shelter		
2.8	Maintenance of AMF/PIU		
2.9	Maintenance of SMPS Power Plant		
III	**Site Management & Task Reporting**	**20 Hours**	
3.1	Introduction to Site Management - Operating Equipment at Site - Fault Management System.	04	16
3.2	Introduction to Task Reporting - Site Check List - Alarm Management Report		
3.3	Preventive Maintenance Report - Acceptance Testing Reporting - Fuel and Energy Management Report		
3.4	Outage Analysis Report - Outage Management Report - Site Equipment Data Management - Battery Testing Report		
	Total Theory / Practical Hours	**24**	**36**
	Total hours	**60**	

HARDWARE REQUIREMENT

S.NO	LIST OF TOOLS /EQUIPMENTS
1	Batteries, Gloves, Voltmeter, spanners, screw driver set
2	Cable and Lugs, Jelly, Hydrometer, Ammeter
3	Tower Equipments Field Visit

SOFTWARE REQUIREMENT

S.NO	NAME OF THE SOFTWARE
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REFERENCE BOOKS

S.NO	NAME OF THE BOOK	AUTHOR	PUBLISHER
1	Telecom, Datacom and Networking for Non-Engineers:	Eric Coll	Teracom Training Institute.
2	Facilitator Guide – Tower Technician	Telecom Sector Skill Council	Telecom Sector Skill Council

ASSESSMENT AND CERTIFICATION

S.No	Criteria for assessment
1.	A trainee will be assessed based on the performance in End Examination for Theory and Practical conducted internally in the CIICP Project Polytechnic College for a duration of 3 hours
2.	A trainee must have 75% of attendance to appear for End examination in Theory and Practical.
3.	The assessment for theory part will be based on the marks scored in the end examination on the knowledge bank of questions (1 word/objective type questions)
4.	The assessment for practical part will be based on the marks scored in the end examination conducted by the CIICP Project Polytechnic and assessed by the Examiners approved by Strategic Plan Implementation Committee (SPIC) of the project polytechnic.
5.	The passing criteria for successful completion of training is every trainee should score 50% of marks in theory and practical examination.
6.	On successful completion of training, certificate will be issued to the participants by the Directorate of Technical Education through the Project Polytechnics.

END EXAMINATION

ALLOCATION OF MARKS

S.NO	Description	Max. Marks
1.	Theory Examination	20
2.	Practical Examination	
	a)Objective and Circuit Diagram	20
	b)Procedure and Connections / Execution	20
	c)Result and Viva	20
	d)Record	20
	Total Marks	**100**

THEORY MODEL QUESTION PAPER

EC/2020/028 – TELECOM TOWER TECHNICIAN

(Maximum Marks: 20)

(N.B: Answer any Twenty questions)   **20x1= 20 Marks**

1. Write any two types of cellular network.
2. Expand GPRS.
3. Define Mobitex.
4. Write any two general requirement of Shelter.
5. Define Earthing.
6. Write any basic rules of Aviation Lamp.
7. What is a Diesel Generator?
8. Write the any two modes for starting DG set.
9. Write any two general safety instructions.
10. What is Gel battery?
11. Write any two reasons for batteries death.
12. Define Flat charger.
13. Write any two points to maintain the Diesel Generator in daily.
14. Write any two key elements to maintain the tower and shelter.
15. What is Window Air Conditioner?
16. Expand PIU.
17. What is use of SMPS power plant?
18. What is site management?
19. What is function of fault management system?
20. Define task reporting.
21. What are the tools are used in task reporting?
22. What is Acceptance Testing Reporting?
23. What is Outage Analysis Report?
24. What are the tests performed on batteries for efficient working?
25. What is the use of Site Equipment Data Management?