

Syllabus of Two Weeks Vocational Training Online Mode

Day	Topic	Mode
1.	Telecom Switching Network <ul style="list-style-type: none"> • Telecommunication Network • Evolution Of Electronic Exchange • Components Of PSTN Network • PCM Principles 	Online- Cisco Webex/Google Meet
	Job Aid 1&2 <ul style="list-style-type: none"> • Identification of different telecom components • Identification of different customer premise equipment & Outdoor Equipment 	Supported by Video
2.	Overview of Digital Transmission Technology <ul style="list-style-type: none"> • Evolution of transmission systems • Transmission fundamentals, Types of multiplexing, Pulse Code Modulation • Evolution of digital multiplexing • Transport network and the road analogy 	Online- Cisco Webex/Google Meet
	JobAid-3(Identification of different types of Transmission Media) <ul style="list-style-type: none"> • Standard Installation practice used for equipment • Identify the different types of Transmission media like CAT-5/CAT-6,Optical Fiber Cable, Antenna • Understand application of different Transmission media and Components. • Identify the different types of feeder Cable used in Radio Communication 	Supported by Video
	JobAid-4 (Identification of different types of Transmission System) <ul style="list-style-type: none"> • Identify the different types of Transmission media like PDH,SDH, Radio Systems, VSATe • Understand the Network Architecture and application of different Transmission System 	
3.	Overview of Telecom Infrastructure & PowerPlant <ul style="list-style-type: none"> • Components of telecom support infrastructure • Sources of power • Commercial ac power supplies • Major subsystems of power plants 	Online- Cisco Webex/Google Meet

	<p>Job Aid 5& 6 Identify different Components of telecom support infrastructure and their role</p>	
	<ul style="list-style-type: none"> • Identify different parts of SMPS power plant • To trouble shoot with the help of trouble shooting chart 	Supported by Video
4.	<p>Networking Concepts, TCP/IP & IP addressing</p> <ul style="list-style-type: none"> • Networking protocols • IP Addressing, Subnetting and Supernetting 	Online- Cisco Webex/Google Meet
	<p>Job Aid 3 & 4 [Managing Large network by dividing into smaller logical networks using concepts of subnetting & supernetting.]</p> <ul style="list-style-type: none"> • Convert Binary to Decimal and vice-versa • Assigning IPv4 & IPv6 Address to computer Check IP address assigned • Determine Network Address from an IP address • Create subnets from the given network address 	Supported by Video

5.	<p style="text-align: center;">Router Architecture & Routing Principles</p> <ul style="list-style-type: none"> • Router components and its functions • Routing principles 	Online- Cisco Webex/Google Meet
	<p style="text-align: center;">Job Aid 5 & 6 [Preliminary configuration of router for internetworking of different networks.]</p> <p style="text-align: center;">Types of routing, Routing algorithm</p> <ul style="list-style-type: none"> • Understanding the working of a router • Different types of show commands & their purpose • Assignment of IP address and enabling layer 3 connectivity 	Supported by Video
6.	<p style="text-align: center;">Optical Fiber Communication-an Overview</p> <ul style="list-style-type: none"> • Application area • Principle of operation • Types of fiber, types of cable, • FDF, FDMS, connectors, splice closures etc 	Online- Cisco Webex/Google Meet
	<p style="text-align: center;">JobAid-11 (Identification of different types of Optical Fiber Cables, ducts and their applications)</p> <ul style="list-style-type: none"> • Different types of cable application wise <ul style="list-style-type: none"> • Laying methods • Types of ducts <p style="text-align: center;">JobAid-12 (Identification of components of OF cable, splice closures, Single mode and multimode pig tails and patch cord)</p> <ul style="list-style-type: none"> • Identification of component of OF cable <ul style="list-style-type: none"> • Types of Splice closures • Single mode and multi-mode pigtail and patch cord 	Supported by Video
7.	<p style="text-align: center;">Optical fiber splicing, connectors and couplers</p> <ul style="list-style-type: none"> • Different splicing techniques • Intrinsic and extrinsic splice losses <ul style="list-style-type: none"> • Principle of fusion splicing • Optical fiber cable splicing procedure 	Online- Cisco Webex/Google Meet

	<p>Job Aid 13 (Cleaving of Optical fiber before splicing and operation of fusion splicing machine) Cleaving of Optical fiber before splicing</p>	
	<ul style="list-style-type: none"> • Operation of fusion splicing machine Method of cable end preparation <p>Job Aid 14 (Splicing of OF Cable)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Splicing of OF Cable by Automatic Fusion Splicing Machine 	Supported by Video
8.	<p>Overview of Mobile Communication</p> <ul style="list-style-type: none"> • Overview of Mobile Communication <ul style="list-style-type: none"> • Feeder Cable & VSWR • Mobile Antenna System <p>Cellular Concept and propagation model</p>	Online-
	<ul style="list-style-type: none"> • JobAid-15[Mobile Antenna System] <ul style="list-style-type: none"> <input type="checkbox"/> Identify various parts/ in Mobile Antenna system <input type="checkbox"/> Explain the functions of these Mobile Antenna system parts. <input type="checkbox"/> Explain about the ports and operating Bandwidths of the Antenna <input type="checkbox"/> Know about the electrical tilt and mechanical tilts of the Antenna <p>JobAid-16 [BTS Testing - Feeder Cable & VSWR]</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify various types of feeder cable <ul style="list-style-type: none"> <input type="checkbox"/> Explain the importance of VSWR <input type="checkbox"/> Explain how to measure the VSWR <ul style="list-style-type: none"> • Effects of VSWR 	Supported by Video
9.	<p>3G/4G and 5G Mobile Communication</p> <ul style="list-style-type: none"> • Introduction to 3G UMTS • 4G Mobile Communication <p>Mobile Future Trends 5G</p>	Online- Cisco Webex/Google Meet

	<p align="center">JobAid-29 [Study and Analysis of GSM Radio Parameters]</p> <ul style="list-style-type: none"> □ Understand the purpose and method to use Engineering Handset 	<p align="center">Supported by Video</p>
	<ul style="list-style-type: none"> • Explain important Radio Parameters in GSM network. <p align="center">JobAid-30 [Optimization of Network performance-Drive Test for GSM network & KPI monitoring]</p> <ul style="list-style-type: none"> • Understand the purpose and method to conduct Drive test for network optimization. Explain and understand how to monitor important KPIs in GSM network 	
10.	<p align="center">Assessment and Group Discussion , Presentation</p> <ul style="list-style-type: none"> • Assessment will be done • Group Presentation by Trainees- Online <ul style="list-style-type: none"> • Doubt Clearing • Certificate distribution -Online <p align="center">Job Aid 19 and 20</p> <ul style="list-style-type: none"> • Presentation by Trainees 	<p align="center">Online- Cisco Webex/Google Meet</p>