CETPA INFOTECH PVT. LTD.
CURRICULUM OF Wireless Telecom

WIRELESS FUNDAMENTALS & CORE NETWORK

- Describe the generations & releases of communication system.
- Describe the GSM, its advantages, services, spectrum, interfaces, channels etc.
- Describe the WCDMA, its advantages, services, spectrum, interfaces, channels etc.
- Describe basic architecture of network components.
- Describe functionality of all network elements used in wireless communication.
- Describe call flow, paging, authentication & handover processes.
- Describe various multiple access technologies.
- Describe processing procedure of WCDMA system.
- Describe the LTE background & network architecture.
- Describe the various H/W for wireless & their functioning.
- GSM Core Network, GSM, BSS, NSS, OSS core and Architecture overview.
- MSC (Mobile Switching Centre), HLR (Home Location Register), VLR (Visitor Location Register)
- Connectivity and Interfaces, GSM Subscriber Services.
- GSM Core Network Product, Product introduction, Structure, logical structure etc.
- General Call Flows in Core Network.
- Overview of GPRS/UMTS Network, SGSN, GGSN.
- GPRS/UMTS Network Components.

TRANSMISSION FUNDAMENTALS

- Telecom Industry (Infra, Networking and operator).
- BTS and BSC (Installation, Commissioning operation and maintenance).
- Microwave Linking along with signaling Hybridization/ Up-gradation.
- Drive Test and RF Surveys along with EMF reports.
- Knowledge of Tools and their implementation.

- Detailed knowledge of Infra, Civil and Electrical foundation.
- Optimization and OJT on live sites.
- Shelter and Rack Installations.
- Site master functioning and VSWR measurements.
- EMF surveys and report filing.
- Microwave linking process along with feeder and RF cabling.

DATACOM

- Describe the purpose and functions of various network devices.
- Describe the purpose and basic operation of the protocols in the OSI and TCP models.
- Calculate addressing scheme including VLSM IP addressing design to a network.
- Describe basic routing concepts.
- Perform and verify routing configuration tasks for a static or default route.
- Configure and verify RIP, OSPF.
- Explain basic switching concepts.
- Configure and verify STP.
- Describe basic principle of VLAN.
- Configure and verify VLANs and trunking on switches.
- Describe the architecture of the optical access network.
- Describe GPON concepts.
- Analyze main GPON protocols.
- Datacom Product Introduction.

CLOUD COMPUTING

- Defining cloud computing and its Components.
- Differentiating types of clouds: public, private, hybrid.
- Delivering services from the cloud & Categorizing service types.
- Comparing vendor cloud products: Amazon, Google, Microsoft and others.
- Adopting the Cloud & Key drivers of cloud computing solutions.

- Streamlining administration with centralized installation.
- Optimizing cost and performance with scale on demand.
- Testing in the cloud.
- Monitoring cloud-based services.
- Portability across platforms.
- Scalable server clusters.
- Provisioning servers on demand.
- Handling dynamic and static IP addresses.

- Tools and support for management and monitoring.
- Security, availability and disaster recovery strategies.
- Migrating to the Cloud & Rearchitecting applications for the cloud.
- Integrating the cloud with existing applications.

PRACTICAL IMPLEMENTATION ON PROJECTS