**COURSE DETAILS: Broadband Technologies and Future Trends**

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| **A.** Name of the Institute | CETTM MTNL |
| **B.** Title of the Course | **Broadband Technologies and Future Trends** |
| **C.** Dates and duration  of the Course  | Batch1: 23-11-2020   To: 15-01-2021 **Duration:** 08 Weeks |
| **D**. Eligibility criteria for participants**I.**  Educational QualificationII. Work Experience | Degree / DiplomaMinimum 1 year working experience in the relevant field |
| **III.** Age Limit | Above 21 years |
| **IV**. Target group  | Telecommunications / IT related Departments and Ministries [Level of participants and target ministries/departments etc. may be indicated] |
| **E.** Study Tour | 1day Mumbai city tour3 Days 2 nights tour to Mahabaleshwar |
| **F.** Aim, Objectives of the Course | This course aims to impart basic to the state-of-the-art technology in the broadband access technology. On completion of the course the participants are expected to build sufficient knowledge about the broadband access technology and services. They can manage the customer premises equipment, and other network elements. |
| **G.** Course Contents  | 1. Overview of Local Area Networks, Ethernet , ISO-OSI Ref Model, Internet Protocols, IP Addressing Sub netting & VLSM, IOS, IP Routing, Routing protocols, Layer 2 Switching, VLSM, WAN Protocols, Access Control Lists
2. Broadband overview, xDSL, , ADSL Network Architecture, ADSL Router, Broadband VAS, DSLAM ,T1 & T2 Switch overview, BRAS & Service.
3. MPLS Basics, MPLS Architecture , MPLS Based L3 & L2 VPN
4. Fiber Broadband Network, FTTH basics , GPON technology
5. Wireless Access networks architecture , Mobile Data networks, viz 3G,4G,WiMax ,Sensor networks
6. **Lab sessions:** IP Networking , ADSL access network , MPLS-VPN, FTTH access network with Demo & Hands On
7. Field Visit to telecom operational systems
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| **H.** Mode of evaluation of performance  of the ITEC participant | Day to day interaction and feedback and a final evaluation at the end of the course |