

STANDARD LIST

OPTICAL FIBER TECHNICIAN

SECTOR:

TELECOM

SUB-SECTOR:

NETWORK MANAGED SERVICES

REFERENCE ID:

TEL/Q6401



**State Council of Educational Research and Training(SCERT)
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This list of equipment, tool, furniture & consumables are prepared for a batch of 30 students

| Part A - EQUIPMENTS | | | |
|---------------------------------------|--|--|-----------------|
| SL No | NAME | SPECIFICATION | QUANTITY |
| 1 | Single Fiber Optic Fusion Splicing Machine | Cladding diameter 80- 150um SM, MM, fiber, 0.02 dB loss 60 dB return loss, Automatic setting, 3.5 inch 'TFT' etc | 1 |
| 2 | Optical Power Meter | 800nm-1700nm | 2 |
| 3 | OTDR (Optical Time Domain Reflectometer) | Range: 26dB (50 Km) 5 inch HD screen, OPM, VFL etc. | 1 |
| 4 | Media Converter (Tx-Rx pair) | Range 20/40 km | 2 |
| 5 | Fiber Distribution Box 1U | Unloaded 12/24 | 2 |
| 6 | Fiber Distribution Box 1U | Loaded 24 FMS | 2 |
| 7 | FTTH Modem | GPON or EPON and Minimum one FE/GE port | 1 |
| 8 | Wi-Fi Router | 802.11 b/g/n 2.4GHZ, 300Mbps | 1 |
| 9 | Rodometer | 12 inch steel wheel, counts : 1000m | 1 |
| 10 | Visual Fault Locator (VFL) | 10 Milli Watt, SC, 2.5mm universal Pulsed & CW 650nm, Laser | 2 |
| 11 | Optical Switch with Gigabit ports (Manageable) | Minimum 2 Gigabit electrical ports & Minimum 2 Gig bit Optical Ports (Equipped with Dual Fiber SFP LC type, Range 20 Km) | 1 |
| 12 | 9 U network Rack | Steel network rack with back open | 1 |
| 13 | Gigabit Media Converter pair | Optical Port (Single fiber type) | 1 pair |
| 14 | Gigabit Media Converter pair | Optical Port (Dual Fiber Type) | 1 pair |
| 15 | Optical stabilized light source | 1310nm / 1550nm | 1 |
| 16 | Surveillance Camera | IP camera, Full HD, PTZ indoor type with RJ45 interface | 2 |
| 17 | Laptops (For Employability skills) | Core i3, 4GB RAM, 1 TB HDD, 14 " screen | 4 |
| Part B - TOOLS and ACCESSORIES | | | |
| SL No | NAME | SPECIFICATION | QUANTITY |
| 1 | Professional Fiber Cutter / cleaver | Standard type | 5 |
| 2 | Fiber Stripper (Multi- 125 & 250 & 900nm) | Standard type | 10 |
| 3 | Cutting Plier with Sleeve | Standard type | 10 |
| 4 | Fiber Optic Joint Closure / Enclosure | Enclosure 24 fiber | 6 |
| 5 | Cable Manager | Standard type | 1 |
| 6 | Black table mat | (4x4 feet) | 6 |

| | | | |
|----|--|--|--------------|
| | Hammer | Standard type | 2 |
| 8 | Screw Driver set | Standard type | 6 |
| 9 | Safety Goggles | Poly carbonate | 10 |
| 10 | Gloves | Rubber type | 6 Pairs |
| 11 | LAN tester | RJ 45 | 2 |
| 12 | Crimping tools (RJ 45) | RJ 45 | 2 |
| 13 | Sharp pointed tweezers | Standard type | 10 |
| 14 | Kevlar Scissors | Standard type | 6 |
| 15 | Attenuators (5 dB & 10 dB) | Single mode , SC type, 15 each | 30 |
| 16 | Passive Optical Splitters (FTTH splitter) 1:2 (80: 20) , 1:4 | Planar Lightwave Circuit (PLC) Splitter 900um with SC Termination, 6 each | 12 |
| 17 | Mechanical Splice | Fiber diameter: 250µm to 900µm | 30 |
| 18 | Inspection Microscope | 100x / 200x Magnification Light Source: White LED Built-in IR Filter | 1 |
| 19 | Optical Fiber Cable outer jacket Remover | Standard type | 6 |
| 20 | Buffer tube remover | Standard types, 2 mm | 6 |
| 21 | Launch spool box | 500 m | 2 |
| 22 | FiberConnectorization tool kit | Standard type | 1 |
| 23 | FTTH installation items: a. 2 / 4 fiber aerial cable b. Aerial cable joint box c. Termination box | 200 m 2/4 fiber 2/4 fiber | 1 6 10 |

Part C - CONSUMABLES

| SL NO | NAME | SPECIFICATION | QUANTITY |
|-------|---|--|------------|
| 1 | Optical Fiber Cable | SM 4, 6 , 12, 24, 48, 96 Fiber ISO certified (each 30 meter long) | 180 meter |
| 2 | Iso Propyl Alcohol 200 ml | Standard type | 30 |
| 3 | Splice Protector Sleeve (Thermo shrink sleeve) | Standard type | 500 |
| 4 | SC, FC, LC, ST Connectors | Standard type (30 each) | 120 |
| 5 | Cotton waste | Standard type | 5 Kg |
| 6 | Double side tape | Standard type | 10 |
| 7 | Insulation tape | Standard type | 10 |
| 8 | Numbering Ferrule (1 -24 Nos) | Standard type, 10 each | 240 |
| 9 | Cable cleaning solution (Petrol) | Standard type | 1 Liter |
| 10 | Lint free tissue paper | Standard type | 6 Bundle |
| 11 | Cable tie a. 5 cm b. 10 cm | Standard type | 500 300 |
| 12 | UTP cat 5 E cable | Cat 5 E cable | 60 meter |
| 13 | RJ 45 connectors | Standard type | 120 |

| | | | |
|----|--|--|----|
| 14 | Optical Fiber Cable | 12 Fiber cable, Single Mode 500 Meter continuous cable | 2 |
| 15 | Lab Aprons | Disposable, Black colour | 30 |
| 16 | Optical Fiber Patch cord | SC / SC – 10 meters Single mode 9/125um | 10 |
| | | SC / LC – 10 meters Single mode 9/125um | 10 |
| | | LC/PC - LC/PC – 10 meters Single mode 9/125 um, | 10 |
| 17 | Optical Fiber Pigtail | SC – 20 meter Single mode 9/125um | 10 |
| | | ST – 20 meter Single mode 9/125um | 10 |
| | | FC – 20 meter Single mode 9/125um | 10 |
| | | LC – 20 meter Single mode 9/125um | 10 |
| 18 | Fiber Connector cleaner | Pen type, color : white, 2.5 mm (SC) & 1.25mm (LC). 1 each | 2 |
| 19 | Optical Fiber patch cord Multi mode fiber | SC / SC – 10 meters Multi mode 50 /125um | 10 |

Part D -FURNITURE

| SL No | NAME | SPECIFICATION | QUANTITY |
|-------|---------------------------|---|----------|
| 1 | Almirah for keeping Tools | Steel, with 6' height x 3 ' width x 1.75" depth | 3 |

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