

Section 6- Schedule of supply

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1. List of Goods and Related Services

Package Name: Supply of Information Technology (IT) and related equipment's for Industrial Training Institutes to enhance technical and vocational skills among the youth of Himachal Pradesh (HPSDP-DOTE/10)

Lot No: Not-applicable							
Lot Name: Not-applicable							
Item No	Name of Goods or Related Services	Description	Unit of Measure -ment	Quantity	Specification by the supplier (To be filled by the supplier)	Detailed information brochure attached at Page No.	Pass/Fail (By Purchaser)
1.	Personal computer with Intel Core i5 or Equivalent Processor latest configuration with colour Monitor and other standard Peripheral devices with Preloaded latest operating system & Microsoft Office pack.	<ul style="list-style-type: none"> • Processor: Intel Core i5 or equivalent - 8th Generation or above, Minimum quad core, Minimum 4 MB Cache • System Type: Desktop • RAM: Minimum 8 GB, DDR4 or Latest • Hard drive: 1TB, 7200 RPM • Graphics Card: HD Graphics integrated with shared memory • Monitor: 19 Inch or above, Colour, LED, Full HD • Built-in DVD Drive. • Networking: Integrated Gigabit Ethernet, Wi-Fi enabled • Keyboard: Wired, Full Size QWERTY keyboard • Mouse: Wired optical mouse with scroll button • Ports: 6xUSB, 1xHDMI, 1xAudio Combo Jack, 1xNetwork Port 	No.	93			

		<ul style="list-style-type: none"> • Licensed Operating System: 64 bit Windows 10 Professional • Microsoft Office 2016 Professional or latest • Security Software: Standard browsing protection, phishing protection, ransomware protection, data theft protection, malware protection anti-virus with 1 Year subscription • Certification RoHS compliant, EPEAT Gold/Silver, Energy star certified, TPM 2.0 					
2.	Personal computer with Intel Core i5 or Equivalent Processor latest configuration with colour Monitor and other standard Peripheral devices with Preloaded latest operating system & Microsoft Office pack.	<ul style="list-style-type: none"> • Processor: Intel Core i5 or equivalent - 8th Generation or above, Minimum quad core, Minimum 4 MB Cache • System Type: Desktop • RAM: Minimum 8 GB, DDR4 or Latest • Hard drive: 1TB, 7200 RPM • Graphics Card: HD Graphics integrated with shared memory • Monitor: 21 Inch or above, Colour, LED, Full HD • Built-in DVD Drive. • Networking: Integrated Gigabit Ethernet, Wi-Fi enabled • Keyboard: Wired, Full Size QWERTY keyboard • Mouse: Wired optical mouse with scroll button • Ports: 6xUSB, 1xHDMI, 1xAudio Combo Jack, 1xNetwork Port • Licensed Operating System: 64 bit Windows 10 Professional • Microsoft Office 2016 Professional or latest 	No.	1			

		<ul style="list-style-type: none"> • Security Software: Standard browsing protection, phishing protection, ransomware protection, data theft protection, malware protection anti-virus with 1 Year subscription • Certification RoHS compliant, EPEAT Gold/Silver, Energy star certified, TPM 2.0 					
3.	All-in-one desktop Mobile Computer (No separate CPU Box. CPU and system components integrated into the monitor so that the entire PC is contained all in one unit except Keyboard and Mouse)	<ul style="list-style-type: none"> • Processor: Intel Core i5 or equivalent - 8th Generation or above, Minimum quad core, Minimum 4 MB Cache • Form Factor: ALL-IN-ONE • RAM: Minimum 8 GB, DDR4 • Hard drive: 1TB, 7200 RPM • Graphics Card: HD Graphics integrated with shared memory • Monitor: 21 Inch or above, Colour, LED, Full HD • Networking: Integrated Gigabit Ethernet, Wi-Fi enabled • Keyboard: Wireless keyboard • Mouse: Wireless optical mouse with scroll button • Camera: Minimum resolution 720p or higher with LED indicator • Audio: integrated audio with inbuilt speaker and mic • Ports: 6xUSB, 1xHDMI, 1xAudio Combo Jack, 1xNetwork Port • Licensed Operating System: Windows 10 Professional (64 bit) • Microsoft Office 2016 Professional or latest • Security Software: Standard browsing protection, phishing protection, ransomware protection, 	No.	1			

		data theft protection, malware protection anti-virus with 1 Year subscription • Certification RoHS compliant, EPEAT Gold/Silver, Energy star certified, TPM 2.0					
4.	Laptop with Intel Core i7 or equivalent processor with Pre-loaded OS and MS office bundle.	<ul style="list-style-type: none"> • Processor: Intel Core i7 or equivalent - 8th Generation or above, Minimum quad core, Minimum 6 MB Cache • System Type: LAPTOP • RAM: Minimum 16 GB, DDR4 • Hard drive: 1TB or more - minimum 7200 RPM • Graphics Card: Dedicated Memory 2GB (minimum) • Display: 15 inch or more, Colour, LED, Full HD, Anti-glare, Non touch screen • Built-in DVD / Blue Ray Drive. • Networking: Integrated Gigabit Ethernet, Wi-Fi enabled • Web Cam: In built with minimum resolution 720p or higher • Keyboard: Integrated keyboard • Mouse: Wireless optical mouse with scroll button • Audio: integrated audio with inbuilt speaker and mic • Ports: 1x SD Card Reader, 3xUSB, 1xHDMI, 1xAudio Combo Jack, 1xNetwork Port • Licensed Operating System: 64 bit Windows 10 Professional • Microsoft Office 2016 Professional or latest • Security Software: Standard browsing protection, phishing 	No.	7			

		protection, ransomware protection, data theft protection, malware protection anti-virus with 1 Year subscription •Certification RoHS compliant, EPEAT Gold/Silver, Energy star certified, TPM 2.0					
5.	Server workstation with latest configuration	With Following minimum Specifications: Processor: Intel Xeon E3 -1200 series v6 or better, (3.30 GHz or higher, 8 MB Smart cache) - Number of Processors: 01 - Memory: 16 GB DDR4 2400 MHz or better, - HDD: 01 TB up to 4 TB SATA (7200 rpm) or higher - Graphic Card: 4 GB or higher - Connectivity: LAN Integrated, - Keyboard: Wired, Full Size QWERTY keyboard - Mouse: Wired optical mouse with scroll button - Minimum I/O Ports: 4 X USB, - Minimum 21" LED Full HD Display - Operating System - Windows 10 Pro (64 Bit or higher) for workstations or latest - DIMM Slots 04 or more - PS2 Ports(optional) • Certification EPEAT Gold/Silver, Energy star certified,	No.	5			
6.	Printer (A3 Laser jet) with scanner (multipurpose)	With following minimum specifications: Functions: Print, Scan & Copy Printing Method: Monochrome Laser Printing, / Optical scan Memory: 512 MB or higher	No.	1			

		Print Speed - 16 ppm Print Resolution: 1200 x 1200dpi Duty Cycle: 25,000 pages per month maximum Connectivity: Ethernet interface, USB support as per market standards, Wi-Fi enabled Paper Handling: 2 trays, 1x A4 and 1 x A3 Scanner Type: Flat Bed, Scan file format: All standard formats Scan resolution : 1200x1200 dpi Copy Speed: 25 cpm minimum Copy resolution: 600 x 600 dpi					
7.	Dot matrix printer	With following minimum specifications: Printing Output: B/W, Print Technology: Dot Matrix, Size: 24 Pins, 132 columns, Printing speed: 600 cps or above	No.	2			
8.	Inkjet Printer	With following minimum specifications: DUPLEX PRINTING Automatic (standard) PRINT SPEED: Up to 22 ppm PORTS: 1 Hi-Speed USB 2.0; 1 Ethernet; 1 Wi-Fi 802.11b/g/n RESOLUTION: Up to 1200 x 1200 optimized dpi on plain paper from 600 x 600 input dpi MOBILE PRINTING CAPABILITY: YES	No.	5			
9.	Coloured laser Printer A4	With following minimum specifications:	No.	5			

		Printing Method: Laser Coloured printing Memory: 64 MB Minimum Print Speed A4: 18 ppm and above Print Resolution: 1200 x 1200dpi Duty Cycle: 10,000 pages per month minimum Connectivity: Ethernet interface, USB support as per market standards, Wi-Fi enabled Paper Handling: 1xA4 tray (100 sheets) Operating Voltage: AC 220-240V, 50 Hz					
10	Laser Printer Monochrome	With following minimum specifications: Print, Scan, Copy Printing Method: Monochrome Laser Beam Printing Print Speed A4: Up to 27ppm, Print Resolution: 600 x 600dpi Auto Duplex Print: Standard Connectivity: Ethernet interface, USB support as per market standards, Wi-Fi enabled	No.	12			
11	OPTICAL SCANNER (DESKTOP TYPE)	With following minimum specifications: Scanner type: Flatbed Colour Paper Size : Up to A3 size Scan resolution: optical Up to 4800 dpi / 12 line colour Scan technology: LED/ CCD/ CIS Scanning speed: 16.98 msec / line for both monochrome and colour /10 x 15 cm (4 x 6 in)	No.	5			

		Scan size (flatbed), maximum 216 x 297 mm (paper size A4) Document feeder type: Manual, Automatic (ADF) Scanning mode: OCR Scanning BiT depth: colour 48 - BiT					
12	Tablet	With following minimum specifications: Storage: 64GB DISPLAY: 10.5-inch (diagonal) LED-backlit Multi-Touch display 2224x1668 resolution at 264 pixels per inch (ppi) CONNECTIVITY: Mobile 4G LTE Wi-Fi CAMERA: 12-megapixel camera, <i>f</i> /1.8 aperture Digital zoom up to 5x VIDEO RECORDING: 4K video recording at 30 fps	No.	4			
13	Managed Layer 3 Ethernet Switch 24 Port	With Following minimum Specifications: Managed Layer 3 Ethernet Switch 24 Port Switch speed 10/100/1000 Mbps Speed Ethernet Ports: 24 GB Ports Interface Auto MDI/MDIX External Power Supply 240 v Standard IEEE 802.3, 802.3u, 802.3ab, 802.3x WAN Type RJ-45	No.	10			

		Signal Rate 1000 mbps 3 x shared SFP, 3 LAYERS Total of 24 Giga bit Ports. Certifications CE, FCC, RoHS					
14	Switch with POE ports	With Following minimum Specifications: 4 PoE Ports or higher to Transfer Data and Power on One Single Cable Expand Requires No Configuration and Installation LED Indicators for Monitoring Power, Link, Activity and Speed Interface 8 x 10 / 100 Mbps Ports, Auto-Negotiation, Auto-MDI/MDIX Standards and Protocol IEEE 802.3, IEEE 802.3u, IEEE 802.3x, CSMA/CD Power Consumption Maximum: 2.2W (220V/50Hz) Buffer Size 2Mb Data Rates 10/100 Mbps at Half Duplex & 20/200 Mbps at Full Duplex	No.	2			
15	24 Port Switch With Wireless Connectivity option	With Following minimum Specifications: Wi-Fi Router Wi-Fi Standard : 802.11 b/g/n Router's wireless frequency : 2.4GHz Speed of the router: 300 Mbps or higher Router's antenna range:1200 square feet	No.	6			

		Router ports, security, Other ports: USB port, ADSL port, WPA2 compatibility					
16	Digital Web Camera	With Following minimum Specifications: Digital Web Camera (High Resolution) HD Video calling :1280 X 720 pixels or equivalent HD video capture: Up to 1920 X 1080 mega pixels Photos: Up to 10 megapixels (software enhanced)	No.	7			
17	Network Camera (Outdoor / Indoor)	With Following minimum Specifications: Technology IP Resolution: 8 MP or higher Effective Range 30 - 40 Metres Type - Indoor HD 720P Wireless Camera	No.	2			
18	Blu-Ray CD/DVD Writer	With Following minimum Specifications: Read Speed: 8x BD-R / BD-RE / BD-ROM / BD- R(DL) / BD-ROM(DL), 6x BD-R(LTH) / BD-RE(DL); Write Speed: 12x BD-R, 8x BD-R(DL), 6x BD- R(LTH), 2x BD-RE(DL) / BD-RE; Cache Size: 4 MB - minimum Technology: Blu-ray 3D Technology or equivalent Dvd Ram Write Speed: 5 X Dvd Ram Read Speed: 5 X Dvd Rom Max Read Write Speed:	No.	26			

		16 X Cd R Max Read Write Speed: 40 X Cd Rom Max Read Write Speed: 40 X Operating System: Windows: 7 or higher Interface: USB support as per market standards, Operating voltage: 230V, 50Hz, unregulated AC mains					
19	Network Rack	With Following minimum Specifications: Patch Panels and PDUs Products included: 24 Port Switch Device Type: Enclosures, Racks & Cabinets Colour: Black or any other Usage: 19" Equipment Rack	No.	1			
20	Mini Dongle for Bluetooth devices Connections	CSR 4.0 or latest USB dongle Bluetooth adapter Compatible with Windows 7 & above	No.	4			
21	LAN Cards	With Following minimum Specifications: Interface (Bus) Type: PCI, Plug & Play Form Factor: plug-in card, Ports:10/100 Ethernet, Connectivity Technology: wired Cabling Type: Ethernet 100Base-TX, Ethernet 10Base-T, Protocol, Ethernet, Fast Ethernet, Data Transfer Rate:100 Mbps	No.	25			
22	Wireless Network Adapter	With Following minimum Specifications:	No.	12			

		Interface (Bus) Type: PCI, Form Factor: plug-in card, Ports:10/100 Ethernet, Connectivity Technology: wireless Cabling Type: Ethernet 100Base-TX, Ethernet 10Base-T, Ethernet, Fast Ethernet, Data Transfer Rate:100 Mbps OS Support : Win 7 & above Standard & Protocol IEEE 802.11b, IEEE 802.11a, IEEE 802.11g, IEEE 802.11n					
23	Wireless Access Point	With Following minimum Specifications: Encryption AES, TLS, PEAP, TTLS, TKIP, WPA, WPA2 Frequency 2.4 GHz, 5 GHz Standard & Protocol IEEE 802.11b, IEEE 802.11a, IEEE 802.11g, IEEE 802.11n Flash Memory 128 MB RAM 128 MB Ethernet Ports PoE Power Connector(for plugin AC Power module), RJ 45 Connector module for 10 base-T or 10 base-Tx ethernet connections RJ 45 connector for serial connection	No.	4			
24	LAN Tester	With Following minimum Specifications: 10/100 base -T cable 10 base-2 cable RJ45 modular cables	No.	7			

		AT&T 258A cable EIA / TIA 568A/568B cables Token Ring Cable ■ Verify the cable wiring for continuity, opens, shorts or incorrect wiring ■ Perform Loopback Test or Remote Test ■ Buzzer sound warning for error condition in cable ■ Two sets of LED lights for Source and Test indication ■ Maximum line length: > 300 meters ■ Connector types: RJ45, BNC					
25	Patch panel	With Following minimum Specifications: Panel: SPCC. 1.5 mm thickness colour painted RJ45 Jack Housing ABS, UL 94V-0 Contact Bracket PC, UL 94V-2. Transparent colour Contact Material(RJ 45) Phosphor Bronze with Nickel plated Finish 50 micro-inch Gold plated on Plug contact area IDC Housing PC + Glass Fibre, UL 94V-2 IDC Terminal Phosphor Bronze with Tin plated Jack Bracket Set ABS, UL 94V-0 Support Bar SPCC 1.5 mm thickness, PCB FR4, UL 94V-0	No.	2			
26	24 port UTP Jack panel	With Following minimum Specifications: 24 Port Jack Panel	No.	2			

		24-port modular patch panel, 1 RU. Front access to installed modules simplifies moves, adds and changes. Port and panel identification features. Accepts Mini-Com or Keystone Modules for UTP, fibre optic and audio/video, which snap in and out for easy moves, adds and changes. Mount to standard TIA/EIA 19-Inch rack or 23-Inch racks with optional extender bracket. 12-port panels mount to wall using wall-mount bracket					
27	Media Converter	With Following minimum Specifications: Standards and Protocols: IEEE 802.3ab, IEEE 802.3z, IEEE 802.3x Basic Function: Full Duplex Flow Control (IEEE 802.3x), Ports: 1 Gigabit SFP port, 1 1000M RJ45 port (Auto MDI/MDIX) Network Media 1000BASE-FX Multi-mode/Single-mode SFP module Network Media 1000BASE-T UTP category 5, 5e, 6 cable (maximum 100m), EIA/TIA-568 100 Ohm STP (maximum 100m) LED Indicators Power Supply: External Power Adapter	No.	4			
28	POE adapters	With Following minimum Specifications:	No.	2			

		Type : Internet Telephony POE Injector / Splitter Data PIN:1/2,3/6 Power PIN:4/5+ & 7/8- Data in: Con nects PC/HUB/Switch Ethernet Data rate:10/100 Mbp Ethernet Cable: TIA/EIA 568 Cat.5 Ethernet Cable Connector:RJ-45 Operating Temperature:0 - 40 Degree					
29	COMBO drives at least four different makes and types	With Following minimum Specifications: COMBO drives at least four different makes of following types: Drive Type: Internal Interface Type: SATA DVD Write Speed: 52x or higher Supported Discs DVD-ROM (SL/DL), DVDR (SL/DL), DVDRW, DVD-RAM, M-DISC, CD-R/RW/ROM, CD-DA, Video CD	No.	1			
30	Hard Disk 1 TB	With Following minimum Specifications: HDD capacity: 1 TB 3.5-inch internal hard drive 64MB buffer size Speed: minimum 7200 RPM Interface: USB support as per market standards, & e SATA 1 TB System Requirements Windows: 7, 8, 10 Mac OS X 10.6, Android 2.3, iOS 6	No.	12			
31	Optical Drives	With Following minimum Specifications:	No.	4			

		8x DVD Speed 24x CD-R/RW speed Compatible with windows 8 and above, Mac OS, Linux USB powered, USB Interface: 2.0					
32	LED Monitors 15.6 inch	With Following minimum Specifications: • Display 15.6 inch or Higher • HD ready • Resolution: 1366 x 768 pixels or higher • Connectivity: VGA, HDMI, Audio in & out port	No.	8			
33	Network storage	With Following minimum Specifications: 8TB Storage Capacity, One (1) Serial ATA II channel One (1) Ethernet port Two (2) USB ports Boots from HDD Network Protocols: CIFS/SMB for Windows AFP 3.3 for Mac OS 9/X NFS v2/v3 for Linux and UNIX HTTP/S for Web browsers	No.	2			
34	Display Card	With Following minimum Specifications: Base Clock (MHz): 1600 Minimum Memory Specs: Memory Speed: 10 Gbps Standard Memory Config: 8 GB GDDR5X Memory Interface Width: 256-bit Memory Bandwidth (GB/sec): 320	No.	12			

		Technology : Simultaneous Multi-Projection: Yes Bus Support: PCIe 3.0 Operating System: Windows 8 & above, Linux & Mac OS 10 & above Display : Maximum Digital Resolution: 7680x4320@60Hz DP 1.43, HDMI 2.0b, DL-DVI Standard Display Connectors Multi Monitor: Yes HDCP: 2.2					
35	Modem (Internal & External)	With Following minimum Specifications: Frequencies from 28.8kbps to 56kbps, RJ ports,10 slots (Internal) Frequencies from 28.8k bps to 56k bps, RJ ports, 10 slots (External)	No.	4			
36	MS Office Software	Microsoft Office: Licensed MS Office Professional 2016 or latest Fully installed versions of Word, Excel, PowerPoint, Outlook, OneNote, and more 1TB minimum cloud storage Ongoing access to updates	No.	12			
37	Tally ERP 9 or latest	Tally ERP 9 or latest Accounting Software With Payroll (Academic Version) Compatible with Windows 8, 10 or latest	No.	11			
38	Designing Software Corel DRAW	Corel DRAW 2018 (Academic Version) or latest	No.	13			

		Compatible with Windows 8, 10 or latest					
39	Antivirus Software	Total security Antivirus Software (latest version) Compatible with Windows 8, 10 or latest	No.	40			
40	Microsoft Windows Server 2016 or latest	Microsoft Windows Server 2016 or latest, box pack, academic version 64bit	No.	1			
41	Adobe PageMaker	Adobe PageMaker Pro 7, 2018 or latest version Academic edition Compatible with Windows 7, 8,10 or latest	No.	11			
42	Adobe Photoshop	Adobe Photoshop CC 2018 19.1.5 or latest Compatible with Windows 7, 8, 10 or latest Academic edition	No.	12			
43	Sound Forge Pro 12 or latest	Sound Forge Pro 12 or latest (Academic Edition) Compatible with Windows 7, 8, 10 or latest	No.	11			
44	Autodesk 3Ds MAX	Autodesk 3DS MAX software or latest (academic edition) compatible with Windows 7, 8, 10 or latest	No.	22			
45	MS Visual Studio Professional	MS Visual Studio 2017 or latest Academic edition compatible with Windows 7, 8, 10 or latest	No.	11			
46	Op Manager (Network Management Software)	Op Manager (Network Management Software) latest	No.	1			

		version compatible with Windows 7, 8, 10 or latest					
47	Adobe Dreamweaver CC 2018 or latest	Adobe Dreamweaver CC 2018 or latest (Academic edition) Compatible with Windows 7, 8, 10 or latest	No.	1			
48	Adobe Premiere Pro Suite 2018 or latest	Adobe Premiere Pro Suite 2018 or latest Compatible with Windows 7, 8, 10 or latest Academic edition	No.	12			
49	Microsoft Office Front page 2003 or latest	Microsoft FrontPage latest (Academic edition)	No.	1			
50	Microsoft Window 10 (professional) or latest	Microsoft Windows 10 (Professional) or latest	No.	1			
51	LAN Protocol Simulation & Analyzer Software	LAN Protocol Simulation & Analyzer Software latest version	No.	2			
52	Network & Internet Security Trainer Latest Software	Network & Internet Security Trainer Latest Software	No.	2			

Note: For detailed specifications please refer Table:3 Technical Specifications

2. Delivery and Completion Schedule

The delivery period shall start as of *date of Signing the Contract*

Item No	Description of Goods or Related Services	Delivery Schedule (Duration)	Location	Required Arrival Date of Goods or Completion Date for Related Services
1 to 52	As per Schedule 1 – List of Goods and Related Services	Within 365 Days from the Signing of the contract.	The location of Delivery of various items attached separately	Within 365 Days from the Signing of the contract.

3. Technical Specifications

Special Note: 1	As a part of Documentation even if not mentioned all items supplied shall have minimum of 1. User/Operation Manual and 2. Warranty Certificate. Additional requirements for specific items will be explicitly mentioned.
Special Note: 2	The installation has to be carried out as per the guidelines given by the OEM with necessary ground work and fixtures wherever necessary.
Special Note: 3	All Light, Medium and Heavy machineries and item needing installation either on Ground or on Wall is the sole responsibility of the supplier.
Special Note: 4	All costs involved in installation such as materials and Labour is to be borne by the Supplier.
Special Note: 5	Machines and items shall be installed at the identified position in the designated ITI workshop /Laboratory.
Special Note: 6	Warranty of One/Two/.. / means that the Supplier of the item takes full responsibility in ensuring the best working condition of the item during the warranty period.
Special Note: 7	In the event the item is not working the OEM ensure that the item is brought back to best working condition with-in a reasonable period of time not more than 5 days in the worst case.
Special Note: 8	All parts of the machine not intentionally damaged by the user should be replaced free of cost by the supplier.
Special Note: 9	All consumable items if any needing replacement will be supplied by the ITI.
Special Note: 10	All Items of delicate nature shall be supplied in a suitable Cloth/Wooden/ Other suitable storage case/cover for protection of the item from dust and moisture.
Special Note: 11	Detailed information brochures having specifications, make and model number of individual item to be attached.

Item No.	Name of Goods or Related Services	Technical Specifications of Item and/or Bureau of Indian Standards (BIS) (if applicable) reference	Features	Accessories	Spare parts	Documents	Installation & Training	Warranty of equipment/parts
1.	Personal computer with Intel Core i5 or Equivalent Processor latest configuration with colour Monitor and other standard Peripheral devices with Preloaded latest operating system & Microsoft Office pack.	<ul style="list-style-type: none"> • Processor: Intel Core i5 or equivalent - 8th Generation or above, Minimum quad core, Minimum 4 MB Cache • System Type: Desktop • RAM: Minimum 8 GB, DDR4 or Latest • Hard drive: 1TB, 7200 RPM • Graphics Card: HD Graphics integrated with shared memory • Monitor: 19 Inch or above, Colour, LED, Full HD • Built-in DVD Drive. • Networking: Integrated Gigabit 	<ul style="list-style-type: none"> - Form factor: Small Form Factor - Preloaded Standard software - Other standard features of a high end i5 Desktop PC 	<ul style="list-style-type: none"> - One set of all standard Accessories including cables and connectors - Dust Covers for 	Standard Spares	Operating Manual/user Manual, General Maintenance manual System Warranty Card OS Licence Antivirus Licence	<ul style="list-style-type: none"> - To be installed at the designated ITI in Himachal Pradesh. - Training to the staff 	OEM, 2 years, On site

		Ethernet, Wi-Fi enabled • Keyboard: Wired, Full Size QWERTY keyboard • Mouse: Wired optical mouse with scroll button • Ports: 6xUSB, 1xHDMI, 1xAudio Combo Jack, 1xNetwork Port • Licensed Operating System: 64 bit Windows 10 Professional • Microsoft Office 2016 Professional or latest • Security Software: Standard browsing protection, phishing protection, ransomware protection, data theft protection, malware protection anti-virus with 1 Year subscription • Certification RoHS compliant, EPEAT Gold/Silver, Energy star certified, TPM 2.0		CPU, Monitor and keyboard - Mouse Pad - System Recovery DVD/CD		MS Office Licence Local Service Provider details	should be provided as required at the institute premises	
2.	Personal computer with Intel Core i5 or Equivalent Processor latest configuration with colour Monitor and other standard Peripheral devices with Preloaded latest operating system & Microsoft Office pack.	• Processor: Intel Core i5 or equivalent - 8th Generation or above, Minimum quad core, Minimum 4 MB Cache • System Type: Desktop • RAM: Minimum 8 GB, DDR4 or Latest • Hard drive: 1TB, 7200 RPM • Graphics Card: HD Graphics integrated with shared memory • Monitor: 21 Inch or above, Colour, LED, Full HD • Built-in DVD Drive. • Networking: Integrated Gigabit Ethernet, Wi-Fi enabled • Keyboard: Wired, Full Size QWERTY keyboard • Mouse: Wired optical mouse with scroll button • Ports: 6xUSB, 1xHDMI, 1xAudio Combo Jack, 1xNetwork Port • Licensed Operating System: 64 bit	- Form factor: Small Form Factor - Preloaded Standard software - Other standard features of a high end i5 Desktop PC	- One set of all standard Accessories including cables and connectors - Dust Covers for CPU, Monitor and keyboard - Mouse Pad - System Recovery	Standard Spares	Operating Manual/user Manual, General Maintenance manual System Warranty Card OS Licence Antivirus Licence MS Office Licence Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	OEM, 2 years, On site

		Windows 10 Professional • Microsoft Office 2016 Professional or latest • Security Software: Standard browsing protection, phishing protection, ransomware protection, data theft protection, malware protection anti-virus with 1 Year subscription • Certification RoHS compliant, EPEAT Gold/Silver, Energy star certified, TPM 2.0		DVD/CD				
3.	All-in-one desktop Mobile Computer (No separate CPU Box. CPU and system components integrated into the monitor so that the entire PC is contained all in one unit except Keyboard and Mouse)	• Processor: Intel Core i5 or equivalent - 8th Generation or above, Minimum quad core, Minimum 4 MB Cache • Form Factor: ALL-IN-ONE • RAM: Minimum 8 GB, DDR4 • Hard drive: 1TB, 7200 RPM • Graphics Card: HD Graphics integrated with shared memory • Monitor: 21 Inch or above, Colour, LED, Full HD • Networking: Integrated Gigabit Ethernet, Wi-Fi enabled • Keyboard: Wireless keyboard • Mouse: Wireless optical mouse with scroll button • Camera: Minimum resolution 720p or higher with LED indicator • Audio: integrated audio with inbuilt speaker and mic • Ports: 6xUSB, 1xHDMI, 1xAudio Combo Jack, 1xNetwork Port • Licensed Operating System: Windows 10 Professional (64 bit) • Microsoft Office 2016 Professional or latest • Security Software: Standard browsing protection, phishing protection, ransomware protection, data theft	- System components integrated into the monitor so that the entire PC is contained all in one unit with Sleek design - Preloaded Standard software - Other standard features	- One set of all standard Accessories including cables and connectors - Dust Covers for Monitor and keyboard - Mouse Pad - System Recovery DVD/CD	Standard Spares	Operating Manual/user Manual, General Maintenance manual System Warranty Card OS Licence Antivirus Licence MS Office Licence Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	OEM, 2 years, On site

		protection, malware protection anti-virus with 1 Year subscription • Certification RoHS compliant, EPEAT Gold/Silver, Energy star certified, TPM 2.0						
4.	Laptop with Intel Core i7 or equivalent processor with Pre-loaded OS and MS office bundle.	<ul style="list-style-type: none"> • Processor: Intel Core i7 or equivalent - 8th Generation or above, Minimum quad core, Minimum 6 MB Cache • System Type: LAPTOP • RAM: Minimum 16 GB, DDR4 • Hard drive: 1TB or more - minimum 7200 RPM • Graphics Card: Dedicated Memory 2GB (minimum) • Display: 15 inch or more, Colour, LED, Full HD, Anti-glare, Non touch screen • Built-in DVD / Blue Ray Drive. • Networking: Integrated Gigabit Ethernet, Wi-Fi enabled • Web Cam: In built with minimum resolution 720p or higher • Keyboard: Integrated keyboard • Mouse: Wireless optical mouse with scroll button • Audio: integrated audio with inbuilt speaker and mic • Ports: 1x SD Card Reader, 3xUSB, 1xHDMI, 1xAudio Combo Jack, 1xNetwork Port • Licensed Operating System: 64 bit Windows 10 Professional • Microsoft Office 2016 Professional or latest • Security Software: Standard browsing protection, phishing protection, ransomware protection, data theft protection, malware protection anti-virus with 1 Year subscription • Certification RoHS compliant, EPEAT 	Lightweight Backlit display Facility for lighted keyboard (optional) Long battery life	All standard accessories including carry case	Standard Spares	Operating Manual/user Manual, General Maintenance manual System Warranty Card OS Licence Antivirus Licence MS Office Licence Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	OEM, 2 years, On site

		Gold/Silver, Energy star certified, TPM 2.0						
5.	Server work Station with latest configuration	<p>With Following minimum Specifications:</p> <p>Processor: Intel Xeon E3 -1200 series v6 or better, (3.30 GHz or higher, 8 MB Smart cache)</p> <ul style="list-style-type: none"> - Number of Processors: 01 - Memory: 16 GB DDR4 2400 MHz or better, - HDD: 01 TB up to 4 TB SATA (7200 rpm) or higher - Graphic Card: 4 GB or higher - Connectivity: LAN Integrated, - Keyboard: Wired, Full Size QWERTY keyboard - Mouse: Wired optical mouse with scroll button - Minimum I/O Ports: 4 X USB, - Minimum 21" LED Full HD Display - Operating System - Windows 10 Pro (64 Bit or higher) for workstations or latest - DIMM Slots 04 or more - PS2 Ports(optional) <p>• Certification EPEAT Gold/Silver, Energy star certified,</p>	Standard Features	Standard Accessories	Standard Spares	Operating Manual/user Manual, General Maintenance manual System Warranty Card	<ul style="list-style-type: none"> - To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises 	OEM, 2 years, On site
6.	Printer (A3 Laser jet) with scanner (multipurpose)	<p>With following minimum specifications:</p> <p>Functions: Print, Scan & Copy</p> <p>Printing Method: Monochrome Laser Printing, / Optical scan</p> <p>Memory: 512 MB or higher</p> <p>Print Speed - 16 ppm</p> <p>Print Resolution: 1200 x 1200dpi</p> <p>Duty Cycle: 25,000 pages per month maximum</p>	Reduce/Enlarge ment: 25- 400 % Automatic document feeder (ARDF) Optical character recognition	Standard Accessories	Standard Spares	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service	<ul style="list-style-type: none"> - To be installed at the designated ITI in Himachal Pradesh. - Training to the 	2 Years Minimum

		Connectivity: Ethernet interface, USB support as per market standards, Wi-Fi enabled Paper Handling: 2 trays, 1x A4 and 1 x A3 Scanner Type: Flat Bed, Scan file format: All standard formats Scan resolution : 1200x1200 dpi Copy Speed: 25 cpm minimum Copy resolution: 600 x 600 dpi	(OCR)			Provider details	staff should be provided as required at the institute premises	
7.	Dot matrix printer	With following minimum specifications: Printing Output: B/W, Print Technology: Dot Matrix, Size: 24 Pins, 132 columns, Printing speed: 600 cps or above	Other Features: Silicon Self Lubrication Mechanism etc	Standard Accessories	Standard Spares	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
8.	Inkjet Printer	With following minimum specifications: DUPLEX PRINTING Automatic (standard) PRINT SPEED: Up to 22 ppm PORTS: 1 Hi-Speed USB 2.0; 1	Energy Efficient, AUTOMATIC PAPER SENSOR: Yes	Inkjet Cartridge; CD-ROM; Getting started guide; power	Standard Spares	Operating Manual/user Manual, General Maintenance manual System	- To be installed at the designated ITI in Himachal Pradesh.	2 Years Minimum

		Ethernet; 1 Wi-Fi 802.11b/g/n RESOLUTION: Up to 1200 x 1200 optimized dpi on plain paper from 600 x 600 input dpi MOBILE PRINTING CAPABILITY: YES		cord		Warranty Card Local Service Provider details	Pradesh. - Training to the staff should be provided as required at the institute premises	
9.	Coloured laser Printer A4	With following minimum specifications: Printing Method: Laser Coloured printing Memory: 64 MB Minimum Print Speed A4: 18 ppm and above Print Resolution: 1200 x 1200dpi Duty Cycle: 10,000 pages per month minimum Connectivity: Ethernet interface, USB support as per market standards, Wi-Fi enabled Paper Handling: 1xA4 tray (100 sheets) Operating Voltage: AC 220-240V, 50 Hz	Standard Features	Standard Accessories	Standard Spares	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
10.	Laser Printer Monochrome	With following minimum specifications: Print, Scan, copy Printing Method: Monochrome Laser Beam Printing	Standard Features	Standard Accessories	Standard Spares	Operating Manual/user Manual, General Maintenance	- To be installed at the designated ITI in	2 Years Minimum

		Print Speed A4: Up to 27ppm, Print Resolution: 600 x 600dpi Auto Duplex Print: Standard Connectivity: Ethernet interface, USB support as per market standards, Wi-Fi enabled				e manual System Warranty Card Local Service Provider details	Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	
11.	OPTICAL SCANNER (DESKTOP TYPE)	With following minimum specifications: Scanner type: Flatbed Colour Paper Size : Up to A3 size Scan resolution: optical Up to 4800 dpi / 12 line colour Scan technology: LED/ CCD/ CIS Scanning speed: 16.98 msec / line for both monochrome and colour /10 x 15 cm (4 x 6 in) Scan size (flatbed), maximum 216 x 297 mm (paper size A4) Document feeder type: Manual, Automatic (ADF) Scanning mode: OCR Scanning Bit depth: colour 48 - Bit	Power: AC 110-240 V AC. Power consumption: 16 W (approx.) Ports: USB ports Scan file format (Windows): TIFF Compressed, PNG, PCX, TIFF, PDF Searchable, HTM, FlashPix (FPX), PDF,	Standard Accessories i.e. connecting cables, adapters, etc.	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum

			RTF, BMP, JPEG, GIF, TXT Connectivity: USB 2.0 or higher					
12.	Tablet	<p>With following minimum specifications: Storage: 64GB DISPLAY: 10.5-inch (diagonal) LED-backlit Multi-Touch display 2224x1668 resolution at 264 pixels per inch (ppi) CONNECTIVITY: Mobile 4G LTE Wi-Fi CAMERA:12-megapixel camera, <i>f</i>/1.8 aperture Digital zoom up to 5x</p> <p>VIDEO RECORDING: 4K video recording at 30 fps</p>	<p>Fingerprint-resistant oleophobic coating Fully laminated display Anti-reflective coating Hybrid IR filter Body and face detection Auto HDR for photos Auto image stabilization Burst mode, Timer mode</p> <p>VIDEO: Optical image stabilisation Slow-motion</p>	Standard Accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	<p>- To be installed at the designated ITI in Himachal Pradesh.</p> <p>- Training to the staff should be provided as required at the institute premises</p>	2 Years Minimum

			video support Time-lapse video Playback zoom					
13.	Managed Layer 3 Ethernet Switch 24 Port	With Following minimum Specifications: Managed Layer 3 Ethernet Switch 24 Port Switch speed 10/100/1000 Mbps Speed Ethernet Ports: 24 GB Ports Interface Auto MDI/MDIX External Power Supply 240 v Standard IEEE 802.3, 802.3u, 802.3ab, 802.3x WAN Type RJ-45 Signal Rate 1000 mbps 3 x shared SFP, 3 LAYERS Total of 24 Giga bit Ports. Certifications CE, FCC, RoHS	24 auto-sensing RJ45 10/100/1000 ports 2 shared SFP ports for Gigabit fibre uplinks (shared with the last 2 RJ45 ports) Serial RS-232 port for console. LED Indicators per port Link/Activity, Power, etc.	Standard Accessories	Standard accessories i.e. power cables and connectors etc.	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
14.	Switch with POE ports	With Following minimum Specifications: 4 PoE Ports or higher to Transfer Data and Power on One Single Cable Expand Requires No Configuration and Installation	10/100/1000 Base-T Power Over Ethernet Switch S5100-	Standard Accessories	standard accessories i.e. power cables and	Operating Manual/user Manual, General Maintenance manual	- To be installed at the designated ITI in Himachal Pradesh.	2 Years Minimum

		LED Indicators for Monitoring Power, Link, Activity and Speed Interface 8 x 10 / 100 Mbps Ports, Auto-Negotiation, Auto-MDI/MDIX Standards and Protocol IEEE 802.3, IEEE 802.3u, IEEE 802.3x, CSMA/CD Power Consumption Maximum: 2.2W (220V/50Hz) Buffer Size 2Mb Data Rates 10/100 Mbps at Half Duplex & 20/200 Mbps at Full Duplex	10PC Standard 10 Port or higher POE Gigabit Switch Conforming to CE / UL certification .		connector s etc.	System Warranty Card Local Service Provider details	I Pradesh. - Training to the staff should be provided as required at the institute premises	
15.	24 Port Switch with Wireless Connectivity option	With Following minimum Specifications: Wi-Fi Router Wi-Fi Standard : 802.11 b/g/n Router's wireless frequency : 2.4GHz Speed of the router: 300 Mbps or higher Router's antenna range:1200 square feet's Router ports, security, Other ports: USB port, ADSL port WPA2 compatibility	Five or more 10/100 Ethernet ports DHCP server, IP address filtering, IPsec pass through, MAC address filtering, NAT support, URL filtering, Auto-uplink (auto MDI/MDI-	Standard Accessorie s	Standard power cables and connector s.	Operating Manual/use r Manual, General Maintenanc e manual System Warranty Card Local Service Provider details	- To be installed at the designat ed ITI in Himacha l Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum

			X), Suitable Frequency Band and Data transfer rate – (approx. 2.4 GHz and 54 Mbps)					
16.	Digital Web Camera	With Following minimum Specifications: Digital Web Camera (High Resolution) HD Video calling :1280 X 720 pixels or equivalent HD video capture: Up to 1920 X 1080 mega pixels Photos: Up to 10 megapixels (software enhanced)	Video capability, versatile fixing arrangement for laptop, table top computer, USB ports supported etc.	TV, Projector and Laptop connecting cables.	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
17.	Network Camera (Outdoor / Indoor)	With Following minimum Specifications: Technology IP Resolution: 8 MP or higher Effective Range 30 - 40 Metres Type - Indoor HD 720P Wireless	Excellent Video Quality: HD 720P Dual-Stream w/ Bandwidth-	1 x IFIPT1 720P Wireless IP Camera, Power Adapter,	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System	- To be installed at the designated ITI in Himachal Pradesh.	2 Years Minimum

		Camera	Conserving H.264 Video Compression Remote Viewing & Recording from Anywhere and Anytime using iPhone, iPad and Android (w/ included if iView app) With wide View along with night Vision Motion Detection Alerts via Email or Send Images to FTP- WEP, WPA, WPA2 Encryption Features Night Vision lenses Lens Size 4	USB Cable, User Manual, Mounting Screws, Mounting Bracket		Warranty Card Local Service Provider details	Pradesh. - Training to the staff should be provided as required at the institute premises	
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			MM or higher					
18.	Blu-Ray CD/DVD Writer	<p>With Following minimum Specifications:</p> <p>Read Speed: 8x BD-R / BD-RE / BD-ROM / BD-R(DL) / BD-ROM(DL), 6x BD-R(LTH) / BD-RE(DL);</p> <p>Write Speed: 12x BD-R, 8x BD-R(DL), 6x BD-R(LTH), 2x BD-RE(DL) / BD-RE;</p> <p>Cache Size: 4 MB - minimum</p> <p>Technology: Blu-ray 3D Technology or equivalent</p> <p>Dvd Ram Write Speed: 5 X</p> <p>Dvd Ram Read Speed: 5 X</p> <p>Dvd Rom Max Read Write Speed: 16 X</p> <p>Cd R Max Read Write Speed: 40 X</p> <p>Cd Rom Max Read Write Speed: 40 X</p> <p>Operating System: Windows: 7 or higher</p> <p>Interface: USB support as per market standards,</p> <p>Operating voltage: 230V, 50Hz, unregulated AC mains</p>	<p>Horizontal / Vertical Mountable, USB 2.0 Backward Compatible</p> <p>Other Compatible Media: DVD Video Playback, VCD Playback, Audio CD Playback, DVD-ROM(DL), Audio CD, Video CD, CD-I, CD-Extra, Photo CD, CD-Text, CD-ROM / XA, Multi-session CD, DVD Video, BD Video</p>	<p>Accessories: Standard accessories</p> <p>Dust Cover Installation CD</p>	Standard spares, as suggested by the manufacturer	<p>Operating Manual/user Manual, General Maintenance manual</p> <p>System Warranty Card</p> <p>Local Service Provider details</p>	<p>- To be installed at the designated ITI in Himachal Pradesh.</p> <p>- Training to the staff should be provided as required at the institute premises</p>	2 Years Minimum

19.	Network Rack	With Following minimum Specifications: Patch Panels and PDUs Products included: 24 Port Switch Device Type: Enclosures, Racks & Cabinets Colour: Black or any other Usage: 19" Equipment Rack	Type of Product: Flexibox Depth: 500 mm Mounting Angle: 19 Inch	Standard Accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
20.	Mini Dongle for Bluetooth devices Connections	CSR 4.0 or latest USB dongle Bluetooth adapter Compatible with Windows 7 & above	Backwards compatible with legacy Bluetooth equipment Bluetooth 3.0, 2.1, 2.0 & 1.0	Standard Accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the	2 Years Minimum

							institute premises	
21.	LAN Cards	With Following minimum Specifications: Interface (Bus) Type: PCI, Plug & Play Form Factor: plug-in card, Ports:10/100 Ethernet, Connectivity Technology: wired Cabling Type: Ethernet 100Base-TX, Ethernet 10Base-T, Protocol, Ethernet, Fast Ethernet, Data Transfer Rate:100 Mbps	2 CH relay output LAN Control Auto Ping and Programmable Reboot (x2 independent monitor channels) DHCP Function Modbus-TCP Http Web Control	Standard Accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
22.	Wireless Network Adapter	With Following minimum Specifications: Interface (Bus) Type : PCI, Form Factor: plug-in card, Ports:10/100 Ethernet, Connectivity Technology: wireless Cabling Type: Ethernet 100Base-TX, Ethernet 10Base-T, Ethernet, Fast Ethernet, Data Transfer Rate:100 Mbps OS Support : Win 7 & above Standard & Protocol IEEE 802.11b,	Wi-Fi protected setup (WPS)	Standard Accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be	2 Years Minimum

		IEEE 802.11a, IEEE 802.11g, IEEE 802.11n					provided as required at the institute premises	
23.	Wireless Access Point	With Following minimum Specifications: Encryption AES, TLS, PEAP, TTLS, TKIP, WPA, WPA2 Frequency 2.4 GHz, 5 GHz Standard & Protocol IEEE 802.11b, IEEE 802.11a, IEEE 802.11g, IEEE 802.11n Flash Memory 128 MB RAM 128 MB Ethernet Ports PoE Power Connector(for plugin AC Power module), RJ 45 Connector module for 10 base-T or 10 base-Tx ethernet connections RJ 45 connector for serial connection	Type of Product: Access point Sub Type: Wireless Encryption: AES, TLS, PEAP, TTLS, TKIP, WPA, WPA2 Frequency: 2.4 GHz, 5 GHz	Standard Accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
24.	LAN Tester	With Following minimum Specifications: 10/100 base -T cable 10 base-2 cable RJ45 modular cables AT&T 258A cable EIA / TIA 568A/568B cables Token Ring Cable ■ Verify the cable wiring for continuity, opens, shorts or incorrect wiring	Cable Tester for RJ12, RJ11, RJ45, Cat 5e, Cat 5, Cat 6, 10/100 Base-T, AT&T 258A, TIA-	Remote Terminator, 1 ea RJ45 to female BNC cable, 1 ea RJ45 to male BNC cable, 1 ea 1 RJ45	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff	2 Years Minimum

		<ul style="list-style-type: none"> ■ Perform Loopback Test or Remote Test ■ Buzzer sound warning for error condition in cable ■ Two sets of LED lights for Source and Test indication ■ Maximum line length: > 300 meters ■ Connector types: RJ45, BNC 	568A/568B etc. Test correspondi ngly double- twisted cables 1, 2, 3, 4, 5, 6, 7, 8 and Ground. 9 LED lights to indicated wiring connection on both remote and master unit Grounding Test. Build in power switch for power saving. Power: 9V battery (Included) It can easily clarify cable, continuity, open and short.	to RJ45 cable, 1 ea female BNC to female BNC connector , 9-volt battery and User's Manual		details	should be provided as required at the institute premises	
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25.	Patch panel	With Following minimum Specifications: Panel: SPCC. 1.5 mm thickness colour painted RJ45 Jack Housing ABS, UL 94V-0 Contact Bracket PC, UL 94V-2. Transparent colour Contact Material(RJ 45) Phosphor Bronze with Nickel plated Finish 50 micro-inch Gold plated on Plug contact area IDC Housing PC + Glass Fibre, UL 94V-2 IDC Terminal Phosphor Bronze with Tin plated Jack Bracket Set ABS, UL 94V-0 Support Bar SPCC 1.5 mm thickness, PCB FR4, UL 94V-0	Type : Patch Panel 24 Port Cat 5e Return Policy : Returnable if Defected With cable management bar for improved management. Staggered 24 port panel in 1U. Staggered 48 port panel in 2U. Mounts in standard 19 inch racks. Feasible solution for lower interference and eliminate alien crosstalk.	Standard Accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
26.	24 port UTP Jack panel	With Following minimum Specifications: 24 Port Jack Panel 24-port modular patch panel,	Panel: SPCC. 1.5mm thickness	Standard Accessories	Standard spares, as suggested by the	Operating Manual/user Manual, General	- To be installed at the designated	2 Years Minimum

		1 RU. Front access to installed modules simplifies moves, adds and changes. Port and panel identification features. Accepts Mini-Com or Keystone Modules for UTP, fibre optic and audio/video, which snap in and out for easy moves, adds and changes. Mount to standard TIA/EIA 19-Inch rack or 23-Inch racks with optional extender bracket. 12-port panels mount to wall using wall-mount bracket	Type Ethernet RJ-45 Jack : Housing ABS, UL94-0 RJ-45 Jack Contact : Material Phosphor Bronze with Nickel Plated Patch Panel Cat 6 UTP Keystone Type- 24 Port-Fully Loaded 4-port panel in 1U ID stripes for identifying port allocations Improved cable management		manufacturer	Maintenance manual System Warranty Card Local Service Provider details	ed ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	
27.	Media Converter	With Following minimum Specifications: Standards and Protocols: IEEE 802.3ab, IEEE 802.3z, IEEE 802.3x Basic Function: Full Duplex Flow Control (IEEE 802.3x),	Extend network distances up to 160km Conduct	Standard Accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual	- To be installed at the designated ITI in Himachal Pradesh.	2 Years Minimum

		Ports: 1 Gigabit SFP port, 1 1000M RJ45 port (Auto MDI/MDIX) Network Media 1000BASE-FX Multi-mode/Single-mode SFP module Network Media 1000BASE-T UTP category 5, 5e, 6 cable (maximum 100m), EIA/TIA-568 100 Ohm STP (maximum 100m) LED Indicators Power Supply: External Power Adapter	10/100/1000/2500/10000 Ethernet Rate Conversion SC, LC and ST fibre connector options SX, FX, LX, EX, ZX, BX fibre support Multimode and single mode fibre 10BaseT, Fast Ethernet Gigabit and 10G to fibre Advanced Features : Link Pass-Through, Far-End Fault, Auto-MDIX, Fibre Fault Alert, Loopback Manage via SNMP, CLI-Telnet/SSH, Internet Browser			System Warranty Card Local Service Provider details	I Pradesh. - Training to the staff should be provided as required at the institute premises	
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28.	POE adapters	With Following minimum Specifications: Type : Internet Telephony POE Injector / Splitter Data PIN:1/2,3/6 Power PIN:4/5+ & 7/8- Data in: Connects PC/HUB/Switch Ethernet Data rate:10/100 Mbp Ethernet Cable: TIA/EIA 568 Cat.5 Ethernet Cable Connector:RJ-45 Operating Temperature:0 - 40 Degree	Device network data and power via one Ethernet cable (Cat.5 or better). The output power of per port is up to 15W, which can serve as an outlet for a PoE device (powering via RJ45 port). Connect PoE4810 to an IEEE 802.3u compliant Device, such as wireless AP, IP camera, IP phone, etc.	Standard Accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
29.	COMBO drives at least four different makes and types	With Following minimum Specifications: COMBO drives at least four different makes of following types:	Standard DVD Writer 52x or higher	Standard Accessories	Standard spares, as suggested by the	Operating Manual/user Manual, General	- To be installed at the designated	2 Years Minimum

		Drive Type: Internal Interface Type: SATA DVD Write Speed: 52x or higher Supported Discs DVD-ROM (SL/DL), DVDR (SL/DL), DVDRW, DVD-RAM, M-DISC, CD-R/RW/ROM, CD-DA, Video CD	writing Speed		manufact urer	Maintenanc e manual System Warranty Card Local Service Provider details	ed ITI in Himacha l Pradesh. - Training to the staff should be provided as required at the institute premises	
30.	Hard Disk 1 TB	With Following minimum Specifications: HDD capacity: 1 TB 3.5-inch internal hard drive 64MB buffer size Speed: minimum 7200 RPM Interface: USB support as per market standards, & e SATA 1 TB System Requirements Windows: 7, 8, 10 Mac OS X 10.6, Android 2.3, iOS 6	Standard Features	Standard accessorie s	Standard spares, as suggested by the manufact urer	Operating Manual/use r Manual, General Maintenanc e manual System Warranty Card Local Service Provider details	- To be installed at the designat ed ITI in Himacha l Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum

31.	Optical Drives	With Following minimum Specifications: 8x DVD Speed 24x CD-R/RW speed Compatible with windows 8 and above, Mac OS, Linux USB powered, USB Interface: 2.0	Optical Drives	Standard accessories Installation CD Dust Cover	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
32.	LED Monitors 15.6 inch	With Following minimum Specifications: • Display 15.6 inch or Higher • HD ready • Resolution: 1366 x 768 pixels or higher • Connectivity: VGA, HDMI, Audio in & out port	LCD/LED/TF T Monitors	Standard accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the	2 Years Minimum

							institute premises	
33.	Network storage	With Following minimum Specifications: 8TB Storage Capacity, One (1) Serial ATA II channel One (1) Ethernet port Two (2) USB ports Boots from HDD Network Protocols: CIFS/SMB for Windows AFP 3.3 for Mac OS 9/X NFS v2/v3 for Linux and UNIX HTTP/S for Web browsers	Gigabit Ethernet and USB 3.0, Blazing-fast file transfers DLNA 1.5 and UPnP Certified Auto Network Discovery	Personal cloud storage, Ethernet cable, AC adapter	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
34.	Display Card	With Following minimum Specifications: Base Clock (MHz): 1600 Minimum Memory Specs: Memory Speed: 10 Gbps Standard Memory Config: 8 GB GDDR5X Memory Interface Width: 256-bit Memory Bandwidth (GB/sec): 320 Technology : Simultaneous Multi-Projection: Yes Bus Support: PCIe 3.0	Standard Features	Standard accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	Training to the staff should be provided as required at the institute premises	2 Years Minimum

		Operating System: Windows 8 & above, Linux & Mac OS 10 & above Display : Maximum Digital Resolution: 7680x4320@60Hz DP 1.43, HDMI 2.0b, DL-DVI Standard Display Connectors Multi Monitor: Yes, HDCP: 2.2						
35.	Modem (Internal & External)	With Following minimum Specifications: Frequencies from 28.8kbps to 56kbps, RJ ports, 10 slots (Internal) Frequencies from 28.8k bps to 56k bps, RJ ports, 10 slots (External)	Standard Features	Standard accessories	Standard spares, as suggested by the manufacturer	Operating Manual/user Manual, General Maintenance manual System Warranty Card Local Service Provider details	- To be installed at the designated ITI in Himachal Pradesh. - Training to the staff should be provided as required at the institute premises	2 Years Minimum
36.	MS Office Software	Microsoft Office: Licensed MS Office Professional 2016 or latest Fully installed versions of Word, Excel, PowerPoint, Outlook, OneNote, and more 1TB minimum cloud storage Ongoing access to updates	11 user /multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License..	Training to the staff should be provided as required at the institute	Warranty for the complete period of Licence of the software.

							premises	
37.	Tally ERP 9 or latest	Tally ERP 9 or latest Accounting Software With Payroll (Academic Version) Compatible with Windows 8, 10 or latest	11 user /multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
38.	Designing Software Corel DRAW	Corel DRAW 2018 (Academic Version) or latest Compatible with Windows 8, 10 or latest	11 user /multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
39.	Antivirus Software	Total security Antivirus Software (latest version) Compatible with Windows 8, 10 or latest	20 user/ multiuser licence , with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.

40.	Microsoft Windows Server 2016 or latest	Microsoft Windows Server 2016 or latest, box pack, academic version 64bit	Single user, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
41.	Adobe PageMaker	Adobe PageMaker Pro 7, 2018 or latest version Academic edition Compatible with Windows 7, 8,10 or latest	11 user /multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
42.	Adobe Photoshop	Adobe Photoshop CC 2018 19.1.5 or latest Compatible with Windows 7, 8, 10 or latest Academic edition	11 user/ multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
43.	Sound Forge Pro 12 or latest	Sound Forge Pro 12 or latest (Academic Edition) Compatible with Windows 7, 8, 10 or latest	11 user multiuser license, with minimum of 2 year	Standard	Standard	Installation Manual Installation Software on Media	Training to the staff should be	Warranty for the complete period of Licence of

			Licence.			with Key Software License.	provided as required at the institute premises	the software.
44.	Autodesk 3Ds MAX	Autodesk 3DS MAX software or latest (academic edition) compatible with Windows 7, 8, 10 or latest	11 user /multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation manual License certificate Subscription Document	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
45.	MS Visual Studio Professional	MS Visual Studio 2017 or latest Academic edition compatible with Windows 7, 8, 10 or latest	11 user /multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
46.	Op Manager (Network Management Software)	Op Manager (Network Management Software) latest version compatible with Windows 7, 8, 10 or latest	Single user licence, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute	Warranty for the complete period of Licence of the software.

							premises	
47.	Adobe Dreamweaver CC 2018 or latest	Adobe Dreamweaver CC 2018 or latest (Academic edition) Compatible with Windows 7, 8, 10 or latest	10 user /multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
48.	Adobe Premiere Pro Suite 2018 or latest	Adobe Premiere Pro Suite 2018 or latest Compatible with Windows 7, 8, 10 or latest Academic edition	11 user /multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
49.	Microsoft Office Front page 2003 or latest	Microsoft FrontPage latest (Academic edition)	10 user /multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.

50.	Microsoft Window 10 (professional) or latest	Microsoft Windows 10 (Professional) or latest	11 user/ multiuser license, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
51.	LAN Protocol Simulation & Analyzer Software	LAN Protocol Simulation & Analyzer Software latest version	Single user licence, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License required	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.
52.	Network & Internet Security Trainer Latest Software	Network & Internet Security Trainer Latest Software	Single user licence, with minimum of 2 year Licence.	Standard	Standard	Installation Manual Installation Software on Media with Key Software License.	Training to the staff should be provided as required at the institute premises	Warranty for the complete period of Licence of the software.

4. Drawings

Not Applicable