



**GOVERNMENT OF THE PUNJAB**  
**TECHNICAL EDUCATION & VOCATIONAL TRAINING AUTHORITY**  
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No.TEVTA/MIS/

January 21, 2020

## **NOTIFICATION**

No.TEVTA/MIS/1-198 Technical Specifications for procurement of following IT Equipment are hereby notified.

1. Entry Level Server
2. Work Station / Desktop Computer
3. Laptop
4. Printers
5. Multimedia Projector
6. Scanners
7. Network Equipment

The Purchase procedure will be followed as per Punjab Procurement Regulatory Authority (PPRA) Rules 2014.

**(NAEEM ASLAM)**  
Chief Technology Officer

A copy is forwarded for information to:

- a) All General Managers and Deputy General Managers (TEVTA)
- b) All Zonal Managers and District Managers (TEVTA)
- c) Manager (Procurement), Manager (Admn.) TEVTA Secretariat
- d) All Committee Members
- e) Manager (MIS) TEVTA Secretariat to place on Website and Circulate through email
- f) SA to the Chairperson, PS to the COO, PA to Advisor Projects
- g) PA to General Manager Academics
- h) Master File

## Specification of I.T Equipment

<b>ENTRY LEVEL SERVER</b>	
<b>ITEM</b>	<b>DESCRIPTION</b>
Processor	Intel Xeon processor (3.0 GHz, 8MB Cache) Equivalent / higher
Mother Board	Intel Chipset with min 4 Memory (RAM) slot or higher
Memory (RAM)	Min 16 GB (2x8GB) or higher upgradeable/ Support upto 64GB
Hard Disk Drive	Min 2x 1TB SATA or higher
RAID Controller	Integrated SATA RAID Support Levels 0/1/10 or higher
I/O Ports & Expansion Slots	Min 4 PCI/ PCIe Slots and 4 USB 2.0/3.0 slots or higher
Optical Drive	DVD Writer (Super Drive)
Display Card	As per manufacturer standards or integrated
Network Adapter	Minimum 2x integrated Gigabit Ethernet (10/100/1000) or higher
Mouse & Key Board	USB Standard Keyboard and Optical Mouse with Scroll.
Chassis	Tower / mini Tower Casing
Power Supply	Single Power Supply or manufacturer's standard
Display LED	20" LED Display, 1024x 768 Resolution supportive or higher
<b>Optional (Need Based)</b>	
Operating System (Educational Licensed )	Microsoft Windows 2016 Server Std. Edition with minimum 10 CALS or latest
Wire Less LAN Card	300Mbps or higher
ECC Memory	Min 8 GB (Single Module)

  
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<b>WORK STATION / DESKTOP COMPUTER</b>	
<b>ITEM</b>	<b>DESCRIPTION</b>
Processor	Intel 9 <sup>th</sup> Generation Core i5 processor (2.9 GHz, 9MB Cache) or higher
Mother Board	Intel chipset Motherboard with min 2 Memory (RAM) slot or higher
Memory (RAM)	Min 4 GB- DDR-IV or higher (single module)
Hard Disk Drive	Min 1TB SATA with 7200 RPM or higher.
Display /Sound Card	Integrated display and audio card.
Network Adapter	Integrated Gigabit Ethernet (10/100/1000 Mbps)
Display	18.5" LED or above, Low <sup>2</sup> Radiation, 1024 x 768 Resolution supportive or better
Mouse & Keyboard	USB Standard Keyboards and Optical Mouse with Scroll.
Casing	Tower / Micro Tower /Mini Tower
I/O Interfaces and Expansion Slots	Min 4 USB 2.0/3.0 ports and Two PCI/ PCI Express slots
<b>Optional (Need Based)</b>	
Optical Drive Internal	DVD-RW (Super Drive) or higher
Operating System (Educational Licensed)	Microsoft Windows 10 Professional or Latest Version
Wireless LAN Card	300Mbps or higher (if Wireless Networking required)
Graphics Card	As per curriculum requirement

  
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<b>LAPTOP</b>	
<b>ITEM</b>	<b>DESCRIPTION</b>
Processor	Intel 9 <sup>th</sup> Generation Core i7 Processor 3.0 GHz or higher
Memory	8 GB- DDR-IV (Single Module) or higher, Support upto 32GB
Hard Disk Drive	1TB (5400RPM) or higher.
Super Internal Drive	DVD-RW (Super Drive) or higher
Display Sound Card	Built-in Video Graphics display and sound card.
Connectivity	Integrated Gigabit Ethernet (10/100/1000 Mbps), Built-in WIFI and Bluetooth
Display	15" High Definition Display or higher
Mouse & Key	Touchpad Mouse and Standard Keyboard
Camera & Speaker	Built-in web cam with Mic, Integrated Speaker
Accessories	Original Carry-Pack/ Executive Bag (Branded) , Original Power Adapter & Original Battery
<b>Optional (Need Based)</b>	
Operating System	Microsoft Windows 10 Professional or Latest Version (Licensed)

  
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**PRINTERS**

ITEMS	DESCRIPTION
LaserJet Medium Duty	Minimum Print Speed: 40 PPM A4 size, Resolution 1200X1200 Dpi (1200 Image Quality) or better. Processor: 1024 MHz RISC or higher, Memory: 128 MB RAM or higher. Paper Handling: Legal, A4 & letter size paper. Duplex Printing: Automatic Two-sided printing (Duplexer Card). Paper Tray(s): Two Paper Trays minimum. Low Ink indicator. Print cancel job etc LCD/LED Display of the Print Status, With other Standard Features of the Manufacturer. Drivers: Microsoft windows XP/Vista/2003/07/10/server 8/12 and Red Hat Linux supportive. (with USB 2.0 cable)
LaserJet Light Duty	Minimum Print Speed: 20 PPM, Memory: 128 MB RAM or higher, Processor: 512 MHz or higher Resolution: 600 x 600 dpi or better quality. Paper Handling: Legal, A4 & letter size paper. Paper Tray(s): One paper tray minimum. Other standard features like print cancel job etc. Drivers: Microsoft windows XP/Vista/2003/07/10/server 8/12 and Red Hat Linux supportive. (with USB 2.0 cable)
Color LaserJet Light Duty	Print Speed: 18 PPM (A4 size color on normal quality mode) or higher. Memory: 128MB RAM or higher. Processor: 512 MHz or higher Resolution: 600x600 dpi or better. Paper Handling: Legal, A4 and letter size paper. Paper Tray(s): one paper tray minimum + one manual paper feeding. Other standard features like low Ink indicator, print cancel button etc. Drivers: Microsoft windows XP/Vista/2003/07/10/server 8/12 and Red Hat Linux supportive. (with USB 2.0 cable)
Dot Metrix	Printing Method: impact dot matrix Print Speed: Draft mode 225cps (10dpi) or higher. Input Buffer: 8KB or higher. Number of Pins: 24Pins Formatting: Line spacing 1/6" or better Paper Handling: Cut Sheets, width 3.9" to 10.1", Length 3.9" to 14.3". Continuous paper width 4" to 10", Length 22". Paper Feed Method: Friction, Push tractor, Push & pull tractor and Pull tractor feed. Interface: Bidirectional 8-bit parallel and Serial Interface Drivers: Microsoft windows XP/Vista/2003/07/10/server 8/12 and Red Hat Linux supportive. (with USB 2.0 cable)



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<b>MULTIMEDIA PROJECTOR</b>	
<b>ITEMS</b>	<b>DESCRIPTION</b>
<b>Brightness</b>	3,000 Lumens (Lamp mode High) or better
<b>Contrast Ratio</b>	500:1/ 700:1 / 2,000:1
<b>Native Resolution</b>	XGA (1024x768) or better
<b>Aspect Ratio</b>	4:3 or better
<b>Acceptable Video Signals</b>	720p, 1080i, 576i, 576p
<b>Lamp Life (hours)</b>	3000 hour or higher
<b>Zoom Lens</b>	x1.3
<b>Projection/ Display Size:</b>	30" to 300"
<b>Optical Lens Shift</b>	Horizontal & Vertical
<b>Ceiling Mountable &amp; Remote Control</b>	Yes
<b>Ports</b>	VGA, HDMI, PC Audio in/out
<b>USB Port</b>	PC-free slideshows feature with remote control (to run presentation without Computer)


  
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SCANNERS	
ITEMS	DESCRIPTION
Light Duty Scanner for A4/ Letter size paper	<p>Flatbed. Scanning</p> <p>Resolution: 600 by 600 or higher.</p> <p>Document Size: A4/Letter.</p> <p>Scanning modes: B/W &amp; Color.</p> <p>Standard features along-with USB cable.</p> <p>Drivers: Microsoft windows XP/Vista/2003/07/10/server 8/12 and Red Hat Linux supportive. (with USB 2.0 cable)</p>
Light Duty Scanner for Legal size paper	<p>Automatic Document Feeding and Flatbed.</p> <p>Scanning Speed: 20 ppm / 40 ipm or higher</p> <p>Scanning Resolution: 600 by 600 or higher.</p> <p>Document Size: Letter, Legal.</p> <p>Scanning modes: B/W &amp; Color.</p> <p>Standard features along-with USB cable.</p> <p>Drivers: Microsoft windows XP/Vista/2003/07/10/server 8/12 and Red Hat Linux supportive. (with USB 2.0 cable)</p>

  
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NETWORK EQUIPMENT	
ITEMS	DESCRIPTION
<b>ACTIVE</b>	
<b>Non-Manageable Switch</b>	Non-Manageable Layer 2 Full Duplex, 10/100/1000 BaseT, TX Fast Ethernet 24 Ports
<b>Non- Manageable Switch</b>	Non-Manageable, 10/100/1000 BaseT, TX Fast Ethernet 08 Ports
<b>Wireless Access Point / Router (If Wireless Networking Required)</b>	300Mbps with minimum 4 Ethernet Ports (10/100 Mbps) or higher
<b>PASSIVE EQUIPMENT</b>	
ITEMS	DESCRIPTION
UTP Cable CAT 6E (Pure Copper)	UTP cable, 4 pair, Fast Ethernet supported, Roll/Box = 1000 ft minimum
Face Plates	Face Plates with dual shutter, dual fast Ethernet supported UTP I/O
Back Box	Standard Back Box
Patch Panel	UTP 24-Port Patch Panel with rear cable management
Patch Cord	UTP Patch Cord, fast Ethernet supported 1 meters, 3 meters, 9 meters or (length as per requirement)
Data Cabinet	Data Cabinet 4 U, perforated top, Floor standing, min 2 exhaust fans and power panel, glass door and Lock
Ducts	Duct 16 x 38 (10 Ft Per Length) ISO certified Brand
Ducts	Duct 40 x 40 (10 Ft Per Length) ISO certified Brand
PVC pipe	PVC Flexible 1 (10 ft Length)
	UTP Cable Laying & Termination job (Per Running Foot)

  
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