مولانا آزاد نیشنل اُردو یونیورسٹی

मौलाना आज़ाद नेशनल उर्दू यूनिवर्सिटी

MAULANA AZAD NATIONAL URDU UNIVERSITY

(A Central University established by an Act of Parliament in 1998)

Hyderabad

MANUU Poytechnic Darbhanga Off Campus

No: *MANUU/Poly/DBG/MO/R4/03/2016-17*   **Date: 06.03.2017**

Cost of tender document: **Rs. 3000/-** through DD in favour of MANUU payable at Hyderabad.

(exemption of Tender cost/EMD will be considered on production of documentary proof).

TENDER DOCUMENT
TO SUPPLY AND INSTALL OF COMPUTER, SERVER, PRINTER & SMART CLASS ROOM EQUIPMENTS FOR MANUU POLYTECHNIC DARBHANGA OFF CAMPUS

Last date & time of submission of technical and financial bids **:** *28.03.2017.*
  at 1:00 p.m.

Date and time of opening of technical bids **:** *28.03.2017*
  at 2:00 p.m.

Chapter-I : Instructions to the bidders

1. **Preface:** Maulana Azad National Urdu University (MANUU) is a Central University with headquarter at Hyderabad and other campuses, colleges and Regional Centres located all over India.

2. **Call for tender:** MANUU invites sealed tenders from original manufacturer / Govt. organizations / authorized dealers / reputed firms to supply and install best quality equipments for the university off campus Darbhanga.

3. **Submission of tender:** The sealed tenders are invited for supply and installation of Computer, Server, printer & Smart Class Room Equipments for MANUU Polytechnic Darbhanga off campus of the University at Darbhanga Bihar under **two bid system** viz. 1)'**Technical bid** *(Annexure-II- A, B categories of trades) duly signed and stamped, consisting all technical details along with commercial terms and conditions and relevant documents, tender cost and EMD. The details of tender cost and EMD are given at S.No.6/Chapter-II: Terms & Conditions. 2)* **Financial bid** *(indicating items-wise price for each category of the respective trade category in Annexure-III for A, B, . These two separate sealed covers should be kept in a third envelope on which it should be super scribed 'Tender for* supply and installation of Computer, Server, printer & Smart Class Room Equipments for MANUU Polytechnic Darbhanga off campus' *addressed to The Principal MANUU Polytechnic, Chandanpatti, Laheriasarai, Darbhanga-846001, Bihar.*

4. **Quoting of items:** The vender may quote for all the items / part of items of Annexure-II A to B and should agree to accept the part supply order as per the criteria of lowest bid for each item GoI rules will be considered. Unit prices are to be quoted both in figures and in words. In case of discrepancy, price quoted in words or figures whichever is less will be taken as valid.

5. **Opening of bids:** The Technical bids will be opened and scrutinized; the firm, who meets the basic requirement as per documents furnished, may be invited for full fledge display / demonstration. The committee of the University may visit the firm / show room items supplied at other organizations to ascertain the quality. The University may also ask the firm to submit the samples before opening of financial bid / execution of order. The University may shortlist and considers only three to four best quality equipments firms. The University will not bear any expenses for presentation of samples. The financial bid will be opened for those firms who qualify technically and whose sample has been agreed up to the satisfaction level of the University. The decision of the University will be final in this regard.

6. **Selection of firm:** The lowest quoted firm will be selected on item wise basis subject to satisfaction of the quality of the product. The decision of the committee will be final in this regard.

7. **Alteration in the bid:** Bidders will not be permitted to alter or modify their bids after expiry of the deadline of receipt of bids.

8. **Availability of tender form:** The tender document can be had from Purchase Section/Principal Office MANUU Polytechnic Darbhanga on furnishing of DD (non

refundable) of Rs 3,000/-. Alternatively, tender document can be downloaded from the University's web site (www.manuu.ac.in). If downloaded, the DD drawn on *MANUU payable at Hyderabd* towards the cost of tender document for the required amount should be enclosed with the Technical bid.

9. **Cost:** The rates quoted should be inclusive of all taxes, levies, freight, insurance, transportation, installation etc. Rates are to be quoted in the financial bid as per tender document (Annexure-III A, B), else it shall not be considered. The element of taxes is required to be shown separately and distinctly.

10. **Offices location:** The firm should have its office in and arround Bihar region to provide service after sale and to furnish the addresses of Service Centre with telephone number along with technical bid. The bidder may be required based on necessity to supply items to MANUU campus, colleges etc all over India at same rate basis.

11. **Repair and maintenance:** The firm selected will be required to undertake the repair and maintenance of as and when required or at a regular intervals. The firm has to identify one single point for effective services and to attend within 24 hours from the time of booking the complaint.

12. **Validity period of quotation:** Firms tendering should note that their offers should remain open for acceptance up to 120 days; if the 120th day falls on holiday then last date will be the next working day from the date of opening of tender.

13. **Acceptance of tender:** The University does not pledge itself to accept the lowest or any tender and reserves to itself, the right to accepting the whole or any part of the tender or rejecting completely.

14. The tender cost/EMD will be exempted for the firms registered with MSME, NSIC, NCCF, Kendriya Bhandar or any Govt. Agency concerned as per GoI norms on submission of documentary proof along with the bid.

Chapter–II: Terms and Conditions

1. **Rejection of tender:** The conditional tenders, unsigned bids, without required EMD and cost of tender form (if downloaded form is used) shall not be accepted and any query / intimation will not be entertained on such bids.

2. **Specification:** The desired specifications and allied technical details are placed at Annexure-I A, & B . If required the same may be amended / up graded at the time of placing purchase order. These are basic specifications; the firm may quote the same or higher specifications as per enclosed Annexure only.

3. **Technical bid:** The technical bid must mention the specifications as per the Annexure–II A & B and indicate that the firm is ready to supply items of the required specifications or upgraded by mentioning "Yes / No" in against each item. The firm has to quote as per the required specifications. However higher configuration / technically up graded can be considered by the University. Detailed specifications, catalogue / literature, of all the items quoted may be supplied with the technical bids. Incomplete Bid / in adequate specification etc., in any respect are liable to be rejected. In case, the firm intends to supply the item with a different specification, it should be specified invariably. The firm should do indicate the make / model / manufacturer of the item against each item.

4.   **Date and place of submission of form:** The technical and financial bids should be submitted to the Principal, Maulana Azad National Urdu University Polytechnic, Darbhanga-846001, Bihar. by **1:00 p.m.** on 28.03.2017. Tenders received after due date and time will not be considered. The technical bid will be opened on the same day at **2:00 p.m.** in presence of vendors or their authorized representative. The representative should bring the authorization letter from their vendor for attending the tender opening committee meeting.

5.   **Bid security / EMD:** The Bid security / EMD for the required amount depend upon the category of trades chosen for the furnishing the quotations ranging from Rs.20,000/- to Rs1,50,000. The D.D. of EMD (refundable) drawn in favour of MANUU, payable at Hyderabad should be enclosed with the Technical bid (The DDs of tender cost and Bid security/EMD shall not be clubbed). The Security bid of the successful bidder will be converted into Security Deposit and will be returned without interest after successful completion of warranty period / after submission of Bank guarantee / supply of items. Further, in case any firm is L-1 in some of the items, then the firm will be required to deposit the bid security / EMD amount equal to 10% amount of P.O. and the full bid security / EMD amount will be returned without interest. The cost of tender form and security bid / EMD amount is as follows:

6.

1.	**Tender cost for the categories of trades chosen for furnishing the quotations for all category of trade**
	    (i) Annexure-III (A) : Rs.2,000/-
	    (ii) Annexure-III (B) : Rs. 1,000/-
	          ………………
	All categories of trades : Rs.3,000/-

2.	**Bid security / EMD for the category of trades chosen for furnishing the quotations (Annexure-wise)**
	
	    (i) Annexure-III(A) : Rs. 1,50,000/-
	    (ii) Annexure-I II(B) : Rs. 20,000/-
	          ------------------- 	
	All categories of trades : Rs.1,70,000/-
	          ……………

   Note: Exemption of Tender Cost/EMD will be considered as per GOI rules on submission of documentary proof.

7.   **Company profile:** The bidders must submit their company profile, make / brand of the items etc. supplying. A list of organizations / agencies to which items have been supplied may be submitted along with copies of supply order, with the technical bid.

8.   **Bidders shall have to meet the following pre-qualification criteria:-**

   a) Should have achieved the Average Annual Turnover of 30% of the value for which the Quotations are furnished, during the last three years.

   b) In addition to this, the firm should have achieved any one of the following criteria, during the last 7 years.

c) (i) Should have supplied <u>three</u> purchase orders of the similar products worth 40% of the value for which the quotations are furnished

        or

(ii) Should have supplied <u>two</u> purchase orders of the similar products worth 50% of the value for which the quotations are furnished.

        or

(iii) Should have supplied <u>one</u> purchase order of the similar products worth 80% of the value for which the quotations are furnished.

9. **Repeat order:** This is a tender cum rate contract for a period of one year and the item offered in the tender can be re-ordered at the same rate, terms & conditions within a period of twelve (12) months.

10. Orders of different organizations booked during the last two years preceding may be attached.

11. **Delivery and Installation:** The firm shall deliver the softwares and equipments at MANUU Polytechnic, Chandanpatti, Laheriasarai, Darbhanga-846001, Bihar of the University and install the same within **30 days** from the date of issue of Purchase Order.

12. **Warranty:** All the items should be with onsite comprehensive warranty (as per OEM warranty period) after satisfactory installation and acceptance by the University. The firm should repair / replace the faulty items free of cost during the warranty period.

13. The firms should submit OEM/authorization certificate specific to this open tender or copy of authorized dealership Certificate.

14. **Payment terms:** No advance payment will be considered, The payment will be released in Indian rupees in the following order:

(i) **90% payment against purchase order:** on satisfactory supply and installation of the material. The remaining 10% cost would be released on submission of performance Bank Guarantee for the equal amount from a scheduled Bank with the vaility upto 60 days beyond the warranty period. If the firm fails to furnish Bank Performance Bank Guarantee, the 10% cost would be retained by the University till the Tender obligations are completed.

15. **Quantity:** The quantity mentioned in the tender can be increased or decreased at the discretion of the University and the decision of the University shall be final in all respects.

16. **Quality:** All steel parts shall be given antirust treatment and shall be coated with epoxy powder.

17. **Registration:** The firm should be registered with the government agency for sales tax and service tax,incomtax incorporation and the certificate of registration issued by appropriate government authority for required items to be enclosed.

18. **Submission of Integrity Pact:** The selected firm may be required to furnish the Integrity Pact as per the office Memorandum No.14 (12)/2008-E-II (A) dated

19.07.2011, Ministry of Finance, Government of India; the form is available with the University.

19. **Right of the University:** The University reserves the right to reject or accept any tender without assigning any reason or cancel before issuing Purchase Order. In case of cancellation of the tender the EMD will be returned without interest.

20. **Acceptance of terms and conditions:** All pages of the tender document are to be signed and stamped by the tendering firm as agreed by the terms and conditions of the tender and to be attached along with the technical bid.

21. **Penalty clause:** The supply and installation of items has to be completed within stipulated time period indicated in Purchase Orders, in case of delay the University reserves the right to impose penalty, as follows:

    (i) **Liquidated Damages:** If the firm fails to supply and install the items of desired quality and quantity or part of it or unable to perform the service within specified periods for reasonable cause, the University shall, without prejudice to its other remedies under the contract / order may deduct from the contract price, as liquidated damages, a sum equivalent to 2% per week of the value of undelivered service of the goods or unperformed services limited to a maximum of 10% value of the purchase order / left over cost. Once the maximum is reached, the University may consider termination of the contract / order without any notice and further serious action may be initiated. Late supply to the maximum of 10% will be deducted from the bill after which the order will remain cancelled and Bid Security / Earnest Money deposit will be forfeited.

    (ii) **Termination for default**: The University may, without prejudice to any other remedy for breach of contract / order, by written notice of default sent to the firm, terminate the contract / order in whole or part at the risk and cost of the defaulting firm.

    (a) If the firm fails to execute the supply of all the material specified in the order with in the period(s) of desired quality and quantity specified in the order, or within any extension therefore granted by the University, or

    (b) If the supplier fails to perform any other obligation(s) under the contract / order.

    (c) If any defects are observed in the items, the University will have the right to reduce the payment to be made to the firm and take any other suitable action against the firm, and the University decision will be final in this regard.

22. **Settlement of Dispute:** In case of any dispute, Darbhanga will be the Jurisdiction and the Registrar, Maulana Azad National Urdu University, Hyderabad shall decide the issue and his decision will be final and shall be binding on the parties as per following terms:

    (i)   The Purchaser and the Supplier shall make every effort to resolve by direct negotiation any disagreement or dispute arising between them under or in connection with the contract.

    (ii)   If the parties have failed to resolve their dispute of difference by such consultation, then either the Purchaser or the Supplier may give notice to the other party of its in tention to settle the issue by arbitration, as herein provided, as

to the matter in dispute. No arbitration in respect of the matter be commenced unless such notice is given in accordance with this clause for the final settlement of the matter. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.

(iii) All questions, disputes and differences arising shall be referred by the Vice Chancellor, MANUU to the sole arbitrator for arbitration under the provision of the Arbitrations and Conciliation Act, 1996.

23. **Obligation during Arbitrations:** Notwithstanding any reference to arbitration (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and (b) the Purchaser shall pay any amount due to the Supplier.

Sd/-
Registrar

Place**:** Hyderabad   Maulana Azad National Urdu University
Date:06.03.2017
Hyderabad

Encl: (i)   Annexure –I (A to B) (Specification: 13 pages)
  (ii)   Annexure-II (A to B) (Technical bid: 15 pages)
  (iv)   Annexure-III(A to B) (Financial bid: 14 pages)

SNO.	ITEM NAME	SPECIFICATION	QUANTITY
1	Computer All in One	**Processor Support** Supports Intel Core i3 or i5 or i7 Serials processors in LGA1150 package. • Support Intel 4th generation multi-core processors **Chipset** Intel H81 Chipset **Memory Support** DDR3 1600/1333 SDRAM • 4 GB DDR3 DIMMs (240 pin / 1.5V) (For more information on compatible components, please check with manufacturer) **LAN** Supports Realtek or other OEM with IEEE latest standards 8111F 1000 Mbps **Wireless** Inbuilt wireless with IEEE latest standards & inbuilt Bluetooth **Audio** Chip integrated by Realtek 662 or any other OEM. • Flexible 6-channel **SATA** • 4 SATA II ports • Supports storage and transfers up to 300 MB/s **Back panel** • 1 PS/2 keyboard port • 1 PS/2 mouse port • 1 VGA port • 1 HDMI port • 2 USB 3.0 Ports • 2 USB 2.0 Ports • 1 LAN Jack • 3 flexible audio Jack **On-Board Pinheaders** 2 USB 2.0 Pinheaders / Connectors • 1 COM Pinheaders • 1 Front Panel Audio Pinheaders **Slots** 1 PCI Express x 16 slot • 1 PCI Express x 1 slot • 1 Mini PCI _E slot **Form Factor** Micro-ATX (24 cm x 16.8 cm) **Sound** Inbuilt speaker with dedicated sound processor such as Dolby Digital etc **Monitor** 20 inch and above TFT monitor with LED Backlit. **Power Backup** Minimum two hour with 65 watt of charger **Accessories** • 4-pin SATA power cable / SATA data cable (optional) • 1 x I/O Backboard • 1 x User Manual • 1 x Drives installed CD .Key board & Mouse	55

Chapter – III: Requirement and specification of the all items

Annexure – I (A)

(i) **Requirement of Computer(All-in one),Server & Printer:**

SL No	Item Name	Item Specification	Qty Req.
2	Servers	Intel Xeon E5-2620v2 2.1GHz, 15M Cache, 7.2GT/s QPI, Turbo, HT, 6C, 80W, Max Mem 1600MHz 16GB RDIMM, 1600Mhz, Low Volt, Dual Rank, x4 Bandwidth 300GB 10K RPM,6Gbps SAS 2.5 " Hot Plug Hard Drive PERC H710 Integrated RAID Controller, 512MB NV Cache, Full Height iDRAC7 Enterprise 3 Yr Next Business Day Onsite Service DVD Chassis with up to 16, 2.5" Hard Drives, Tower	02
3	Printer	All-in One LaserJet Printer (Model Latest)	01

Place: Hyderabad

Date: 06 /03 / 2017

Sd/-
Registrar
Maulana Azad National Urdu University
Hyderabad

(i) Technical Specification for Smart Class Room Equipments:

Sl. No.	Items	Specification	Qty Req.
1.	Integrated Digital Podium	Intel Xeon E5- Make : Wooden Used to integrate all the devices to be used in Smart Class Room Fully Lockable system Provision for CPU, Interactive Panel, Audio, Visualizer and remotes. Top Sliding Tray for safety of Interactive Panel 2 Speakers integrated in the podium and amplifier kept safely in the cabinet Configuration processor such as Dolby Digital etc OR Equivalent	1
2	Ultra Short Throw LCD Projector (DLP Technology	**Resolution** 1024x768 or better **Contrast Ratio** 8000:1 or more **Brightness** 3100 ANSI lumens or more **Short Throw Distance** 2 feet to 3 feet or better **Image Size / Projection Area** 70 inches to 100 inches or better **Compatibility** HDTV Formats (720p, 1080i, 1080p, 575i, 575p), Digital Input (HDMI), Personal Computers, Standard Video, Component Video **Aspect Ration** 16:10 (WXGA) or better **Interfaces** Mini USB, HDMI Inx1, MONITOR OUTx1, COMPUTER IN X2 Nos., LAN inputx1, Computer Audio- 1Nos., S Video Input With audiox1, Video Input with Audio x1 **Keystone correction** -+/- 15% **Other Features** projection system must be capable of project 90" Image from distance of 25" or in same ratio	1
3	120" Motorized Screen with remote control	**Size** 120" (Diagonal) **Aspect Ration** 4:3 **View Angle** 160 degree **Other Features** Free to stop any location Super high grain Matt white fabric	1

		Screen should be retractable gpe and can be operated (pull down and wound back) via Motoi'and preferably wireless remote control	
4	Full HD 55" LED TV	**Size** 55" Diagonal Size **Resolution** 1,920 x 1,080, (16.7 Million Display Color) **Aspect Ratio** 16:9 **Pixel Pitch** 0.21(H) x 0.63(V)mm **Active Display Area** 1209.6 (H) x 680.4 (V) mm **Brightness** 350 cd/㎡ **Dynamic Contrast Ratio** 100,000:1 **Viewing Angle (Horizontal / Vertical)** 178 / 178 ° **Response Time** 8 ms **Connectivity** Analog D-SUB, DVI-D (Dual Link),Component, CVBS, HDMI,Input Audio: Stereo Mini Jack,Output Audio: Stereo Mini Jack,RS232C (In/Out), RJ45 **General Feature** Slim & Light LFD with Built-in Scheduler , can display scheduled contents automatically Built in Speaker (10W + 10W), Plug and Play ,Display PPT etc (through USB), PIP/PBP, Narrow Bezel, Light Weight	1
5	Digital interfacing and all digital cable connectivity to integrate all the equipment	**UTP CAT 6 Cable** **Features** Category 6 Unshielded Twisted Pair 4 pair 100 Ohm cable shall be compliant with ANSI/TIA/EIA-568-B.2-1 upto 600 Mhz Category 6 UTP cables shall extend between the work area location and its associated telecommunications closet and consist of 4 pair, 23 AWG, UTP Non Plenum cable jacket. The 4 pair Unshielded Twisted Pair cable should be UL Listed and ETL Certify. Zero-Bit error throughput test as per IEEE standards verified by ETL The 4 pair Unshielded Twisted Pair cable should be RoHS Compliant **Mechanical** **Characteristics** Construction: 4 twisted pairs separated by internal X shaped, 4 channel, full separator. Half shall not be accepted. Conductor Solid Copper Insulator Polyethylene Delay Skew : 35 ns MAX Jacket PVC Attenuation : 22.8dB/100m at 250MHz, 29.4dB/100m at 400MHz, 39dB/100m at 600MHz	1

CAT - 6 Information outlets (I/O) with face plate and flush PVC box Features

Surface Mount Face Plate & Box with CAT6 Work Area Data I/O Outlet (RJ45) adhering to ETL Verification program for compliance with TIA568B.2-1

Category 6, TIA568.B.2-1 – 600MHz

Information Outlet should be UL Listed and I/O box should be RoHS Compliant

568A/B configuration

Be constructed of high impact with color and icon options for better visual identification. Integrated hinged dust cover using collapsible angular spring loaded shuttered technology.

Face plate should be Single Gang square plate and Should have provision for Labe

Material

ABS / UL 94 V-0

Port

One

24 Port Gigabit Fast Ethernet Web Managed L2 POE Switch

Port

24 ports 10/100/1000Base-T and 2 ports 1000Base-X, 2 Giga SFP port

Power Over Ethrenet (PoE)

Support for 802.3af,802.3AF
Power per port - 31Watts for 4 ports, Rest of the ports supports 15.4Watts

Switching Capacity

52Gbps

Forwarding Rate

		Min 35Mpps	
		MAC address	
		16K	
		Wlan	
		256	
		Jumbo Frame	
		9 K	
		Features	
		Auto Negotiation of port speed and Duplex Settings	
		IEEE 802.1wrapid Spanning Tree group	
		Loopback Detection	
		IEEE 802.3ad Link Aggregation or equivalent	
		IEEE 802.1p (Priority Queues)	
		IEEE 802.1x security	
		Port based Mirroring	
		Support for IPv6	
		WLAN Support	
		802.1Q WLAN	
		Private Wlan	
		Traffic Segmentation	
		WLAN protocol	
		GVRP	
		Q-in-Q	

		Web based management interface	
		Through Telnet, HTTP and NMS.	
		SNMP Version 1,2c	
		Firmware upgrade via Web	
		Remote Ping	
		Port statistics	
		Quality of Service	
		hardware queues	
		Strict priority, weighted round-robinPriorityQueue	
		Scheduling	
		Queue assignment based on DSCP and class of service	
		Bandwidth Control oEgress : min 16Kbps Granularity oIngress : min 16Kbps Granularity	
		Security	
		Local Authentication with support for manual Privilege definitions assignment	
		802.1x Authentication	
		Port Security	
		Automatic HTTPS redirection	
		DHCP Snooping	
		Defence Engine	
		IP Source Guard	
		Management Access Filter for HTTP/HTTPS,SNMP,TELENT/SSH	
		Broadcast,Multicast,Unicast Storm Control Based on Packets per	

		seconds	
		Flow based Rate limiting based on Packets per second (PPS)	
		Mbps Wireless Access Point with POE Support	
		Antenna:	
		PiFa Antenna x 2 (2T2R MIMO Technology)	
		Port	
		One 10/100Mbps 10/100 Ethernet Uplink port for AN	
		Push Button	
		One WPS push button	
		Flash Memory	
		Flash: 2MB	
		SDRAM	
		16MB	
		Frequency band	
		2.4000 ~ 2.4835GHz	
		Standard compliance	
		IEEE 802.3 10BASE-T Ethernet	
		IEEE 802.3u 100BASE-TX Fast Ethernet	
		IEEE802.11b/g/n	
		RADIUS (IEEE802.1x)	
		Data Rate	
		IEEE802.11b: 1/2/5.5/11Mbps	
		IEEE802.11g: 6/9/12/24/36/48/54Mbps	

		IEEE802.11n (20MHz): MCS0-15, up to 144Mbps IEEE802.11n (40MHz): MCS0-15, up to 300Mbps Output power IEEE802.11b @ 11Mbps: 26 +/- 1.5dBm IEEE802.11g @ 54Mbps: 24 +/- 1.5dBm IEEE802.11n (20MHz) @ MCS15: 23 +/- 1.5dBm IEEE802.11n (40MHz) @ MCS15: 23 +/- 1.5dBm **Patch Cord Cat 6 UTP 1m and 2m** Conductor 24 AWG 7 / 32, stranded copper Length **7-feet for** workstation **and 3feet for Jackpanel / equipment** Plug Protection Matching **colored** snag-less, elastomer polyolefin boot Warranty 25-year component warranty Category Category 6 Housing Clear polycarbonate	

6		Terminals Phosphor Bronze, 50 micron gold plating over selected area and gold flash over remainder, over 100 micron nickel under plate Load bar PBT polyester Jacket PVC Insulation Flame Retardant Polyethylene **Patch Panel Cat 6 Utp Modular -24 Port- Loaded 0.5u Height** **Type** 24-port, Unshielded Twisted Pair, Category 6, TIA / EIA 568 **Port Arrangement** Keystone Krone type. Ports must be replaceable in 8 Port Module. **Category** Category 6 **Circuit Identification Scheme** Patch Panels Rear Cable Management without tie-wrap with simplified numbering labels **Height** 5 U , to save the Rack space	
6	Public Address System	**Power Consumption** 220 v AC, 12 v DC **Wattage** 200 -250 watt **Frequency**	1

7		20 Hz to 20 KHz **Auxiliary Input** YES- Standard **Amplification Capacity** 20 Hz to 20 KHz **Speaker Interface Connector** 4 ohm, 8 ohm, 16 ohm **Microphone** Wireless and wire included **Operating frequency** 20 Hz to 20 KHz **Battery** Supplied for microphone **Speaker** Wattage-50 watt to 80 watt Frequency-20 Hz to 20 KHz Power – operating power capacity Internal impedance- 8 ohm, 16 ohm Wire length- 10 meter of microphone 4:1 **Interface** Memory card, pendrive interface	1
7	Web Cam	**With Clip:** **Height x Width x Depth:** 304.2 mm X 75 mm X 75 mm **Weight:** 766 g	1

Remote:

Height x Width x Depth:

41 mm X 128 mm X 9 mm

Weight:

32 g

USB Cable:

2 m

Power Adapter With Cord:

3 m

Technical Specifications

Camera:

Full HD 1080p video calling (up to 1920 x 1080 pixels); 720p HD video calling (up to 1280 x 720 pixels) with supported clients.
H.264 UVC 1.5 with Scalable Video Coding (SVC).
Supports H.264 SVC 1080p.
90-degree field of view with autofocus
4X digital zoom in Full HD.
Rightlight™ 2 Technology for clear image in various lighting environments (even low light).
ZEISS lens certification
Camera LED for active streaming indication.
Speakerphone:

Integrated full duplex speakerphone with echo and noise cancellation
360-degree wideband audio with 12-foot (3.6 m) diameter range
Bluetooth® and NFC enabled
LEDs for speakerphone streaming, mute, hold,
and Bluetooth pairing
Controls for call answer/end, volume mute
Microphone(Tx):

Two omni-directional microphones supporting 3.6 m diameter range
Frequency response: 100Hz – 16KHz
Sensitivity: -34dB +/-3dB
Distortion: <1% @ 1KHz at 65dB
Speakers(Rx):

Frequency response: 140Hz – 16KHz
Sensitivity: 89dBSPL +/-3dB at 1W/0.5M

| | | Max output: 91.5dBSPL at 0.5M
 Distortion: <5% from 200Hz
 Remote Control:

 Dockable remote control for camera / speakerphone functions
 10-foot (3 meters) range

 Cables:

 USB
 Power adapter with cord

 Screen mirroring through WiFi connection to the device

 Wireless Screen Mirroring and Connectivity Features:

 Screen mirroring through WiFi connection to the device

 Android or Windows 8.1 compatibility for screen mirroring
 HDMI connector for TV output
 Rechargeable battery supports up to 3 hours videoconferencing or screen mirroring time
 Talk Time/Battery Life:

 Up to 15 hours (3 hours for videoconferencing and screen mirroring)

 Range:

 12 foot diameter range (3.7 meters)
 360-degree sound | |

Sd/-

Place: Hyderabad

Registrar

Date:06 /03 / 2017　　　　Maulana Azad National Urdu University

Hyderabad

Chapter–IV: Technical Bid :   Annexure–II

1.	**Name of the firm**	
2.	**Details of Tender Cost**	
	Details of Tender Cost (for Desktop Computer, Server, Printer) (Annexure-III-A)	Rs.2,000/- D.D. No._____ dated: _____ Bank _____
	Details of Tender Cost (for Smart Class room equipments) (Annexure-III-B)	Rs. 1,000/- D.D. No._____ dated: _____ Bank _____
	Note: Exemption of Tender Cost/ EMD will be considered on production of documentary proof	
3.	Details of EMD (Bidders may submit combined/consolidated DD for the Annexures they intends to participate/quote)	
	Details of EMD (for Desktop Computer, Server, Printer) (Annexure-III-A)	Rs. 1,50,000/- D.D. No._____ dated: _____ Bank _____
	Details of EMD (for Smart Class room equipments) (Annexure-III-B)	Rs.20,000/- D.D. No._____ dated: _____ Bank _____
4.	**Contact Details**	Postal Address …………………………………………. …………………………………………. …………………………………………. Tel No. Land Line Mobile: E-mail:
5.	**Details of Registration with income tax and sales tax authorities** *Enclose Copy / proof*	
6.	**Original Manufacturer / Government Organization / Authorized dealers / reputed firm / authorization certificate specific t this tender**	
7.	**PAN Details** *Enclose Copy / proof*	
8.	**Documentary proof for Pre Qualification Criteria as mentioned in the Tender (Sl. 8, Chapter II)** **1) Average turnover for the last 3 years** **2) Proof of documents against Chapter-II, Sl.7, b(i) or b(ii) or b(iii)**	…………………………………………………………….. ……………………………………………………………..
9.	**Any other relevant information**	
Optional:		
10.	**Customer List with nature of work done (Enclose a list of minimum 10 customers)**	

Declaration: It is hereby declared that the firm have carefully read and understood the tender and **agreed with all the clauses**, terms and conditions of the tender, Darbhanga jurisdiction etc and agreed that the decision of the University shall be final in all respect.

Authorized signature of the firm along with seal

Place
Date:……………2017

Chapter–IV: Technical bid: To be utilized by the firm to indicate that agreed to supply the item wise.

(i) Requirement of Computers (All in One),Server,Printer:

Sl. No.	Items	Qty Reqd.	Make & model	Agreed by firm (Yes / No)
1.	**Computers All In one** **Processor Support** Supports Intel Core i3 or i5 or i7 Serials processors in LGA1150 package. • Support Intel 4th generation multi-core processors **Chipset** Intel H81 Chipset **Memory Support** DDR3 1600/1333 SDRAM • 4 GB DDR3 DIMMs (240 pin / 1.5V) (For more information on compatible components, please check with manufacturer) **LAN** Supports Realtek or other OEM with IEEE latest standards 8111F 1000 Mbps **Wireless** Inbuilt wireless with IEEE latest standards & inbuilt Bluetooth **Audio** Chip integrated by Realtek 662 or any other OEM. • Flexible 6-channel **SATA** • 4 SATA II ports • Supports storage and transfers up to 300 MB/s **Back panel** • 1 PS/2 keyboard port • 1 PS/2 mouse port • 1 VGA port • 1 HDMI port • 2 USB 3.0 Ports • 2 USB 2.0 Ports • 1 LAN Jack • 3 flexible audio Jack **On-Board Pinheaders** 2 USB 2.0 Pinheaders / Connectors • 1 COM Pinheaders • 1 Front Panel Audio Pinheaders **Slots** 1 PCI Express x 16 slot • 1 PCI Express x 1 slot • 1 Mini PCI _E slot **Form Factor** Micro-ATX (24 cm x 16.8 cm) **Sound** Inbuilt speaker with dedicated sound processor such as Dolby Digital etc **Monitor** 20 inch and above TFT monitor with LED Backlit. **Power Backup** Minimum two hour with 65 watt of charger **Accessories** • 4-pin SATA power cable / SATA data cable (optional) • 1 x I/O Backboard • 1 x User Manual • 1 x Drives installed CD .Key board and Mouse	55		

Sl. No.	Items	Qty Req.	Make & model	Agreed by firm (Yes / No)
2	**Server** Intel Xeon E5-2620v2 2.1GHz, 15M Cache, 7.2GT/s QPI, Turbo, HT, 6C, 80W, Max Mem 1600MHz 16GB RDIMM, 1600Mhz, Low Volt, Dual Rank, x4 Bandwidth 300GB 10K RPM,6Gbps SAS 2.5 " Hot Plug Hard Drive PERC H710 Integrated RAID Controller, 512MB NVCache, Full Height iDRAC7 Enterprise 3 Yr Next Business Day Onsite Service DVD Chassis with up to 16, 2.5" Hard Drives, Tower **Or Equivalent**	2		
3	**Printer** All-in One LaserJet Printer (Model Latest)	1		

Place: Authorized signature of
Date: 2017   the firm along with seal

(ii) Technical Specification for Smart Class Room Equipments:

Sl. No.	Items	Specification	Qty Req.	Make & model	Agreed by firm (Yes / No)
1.	Integrated Digital Podium	Intel Xeon E5- Make : Wooden Used to integrate all the devices to be used in Smart Class Room Fully Lockable system Provision for CPU, Interactive Panel, Audio, Visualizer and remotes. Top Sliding Tray for safety of Interactive Panel 2 Speakers integrated in the podium and amplifier kept safely in the cabinet Configuration processor such as Dolby Digital etc	1		
2	Ultra Short Throw LCD Projector (DLP Technology	**Resolution** 1024x768 or better **Contrast Ratio** 8000:1 or more **Brightness** 3100 ANSI lumens or more **Short Throw Distance** 2 feet to 3 feet or better **Image Size / Projection Area** 70 inches to 100 inches or better **Compatibility** HDTV Formats (720p, 1080i, 1080p, 575i, 575p), Digital Input (HDMI), Personal Computers, Standard Video, Component Video **Aspect Ration** 16:10 (WXGA) or better **Interfaces** Mini USB, HDMI Inx1, MONITOR OUTx1, COMPUTER IN X2 Nos., LAN inputx1, Computer Audio-1Nos., S Video Input With audiox1, Video Input with Audio x1 **Keystone correction** -+/- 15% **Other Features** projection system must be capable of project 90" Image from distance of 25" or in same ratio	1		
3	120" Motorized Screen with	**Size** 120" (Diagonal)	1		

5	remote control	**Aspect Ration** 4:3 **View Angle** 160 degree **Other Features** Free to stop any location Super high grain Matt white fabric Screen should be retractable gpe and can be operated (pull down and wound back) via Motoi'and preferably wireless remote control				
4	Full HD 55" LED TV	**Size** 55" Diagonal Size **Resolution** 1,920 x 1,080, (16.7 Million Display Color) **Aspect Ratio** 16:9 **Pixel Pitch** 0.21(H) x 0.63(V)mm **Active Display Area** 1209.6 (H) x 680.4 (V) mm **Brightness** 350 cd/㎡ **Dynamic Contrast Ratio** 100,000:1 **Viewing Angle (Horizontal / Vertical)** 178 / 178 ° **Response Time** 8 ms **Connectivity** Analog D-SUB, DVI-D (Dual Link),Component, CVBS, HDMI,Input Audio: Stereo Mini Jack,Output Audio: Stereo Mini Jack,RS232C (In/Out), RJ45 **General Feature** Slim & Light LFD with Built-in Scheduler , can display scheduled contents automatically Built in Speaker (10W + 10W), Plug and Play ,Display PPT etc (through USB), PIP/PBP, Narrow Bezel, Light Weight	1			
5	Digital interfacing and all digital cable connectivity to integrate all the equipment	**UTP CAT 6 Cable** **Features** Category 6 Unshielded Twisted Pair 4 pair 100 Ohm cable shall be compliant with ANSI/TIA/EIA-568-B.2-1 upto 600 Mhz Category 6 UTP cables shall extend between the work area location and its associated telecommunications closet and consist of 4 pair, 23 AWG, UTP Non Plenum cable jacket. The 4 pair Unshielded Twisted Pair cable should be UL Listed and ETL	1			

		Certify. Zero-Bit error throughput test as per IEEE standards verified by ETL The 4 pair Unshielded Twisted Pair cable should be RoHS Compliant **Mechanical Characteristics** Construction: 4 twisted pairs separated by internal X shaped, 4 channel, full separator. Half shall not be accepted. Conductor Solid Copper Insulator Polyethylene Delay Skew : 35 ns MAX Jacket PVC Attenuation : 22.8dB/100m at 250MHz, 29.4dB/100m at 400MHz, 39dB/100m at 600MHz **CAT - 6 Information outlets (I/O) with face plate and flush PVC box Features** Surface Mount Face Plate & Box with CAT6 Work Area Data I/O Outlet (RJ45) adhering to ETL Verification program for compliance with TIA568B.2-1 Category 6, TIA568.B.2-1 – 600MHz Information Outlet should be UL Listed and I/O box should be RoHS Compliant 568A/B configuration Be constructed of high impact with color and icon options for better visual identification. Integrated hinged dust cover using collapsible angular spring loaded shuttered technology. Face plate should be Single Gang square plate and Should have provision for Labe **Material** ABS / UL 94 V-0			

		Port One **24 Port Gigabit Fast Ethernet Web Managed L2 POE Switch** **Port** 24 ports 10/100/1000Base-T and 2 ports 1000Base-X, 2 Giga SFP port **Power Over Ethrenet (PoE)** Support for 802.3af,802.3AF Power per port - 31Watts for 4 ports, Rest of the ports supports 15.4Watts Switching Capacity 52Gbps Forwarding Rate Min 35Mpps MAC address 16K Wlan 256 Jumbo Frame 9 K Features Auto Negotiation of port speed and Duplex Settings IEEE 802.1wrapid Spanning Tree group Loopback Detection IEEE 802.3ad Link Aggregation or			

		equivalent			
		IEEE 802.1p (Priority Queues)			
		IEEE 802.1x security			
		Port based Mirroring			
		Support for IPv6			
		WLAN Support			
		802.1Q WLAN			
		Private Wlan			
		Traffic Segmentation			
		WLAN protocol			
		GVRP			
		Q-in-Q			
		Web based management interface			
		Through Telnet, HTTP and NMS.			
		SNMP Version 1,2c			
		Firmware upgrade via Web			
		Remote Ping			
		Port statistics			
		Quality of Service			
		hardware queues			
		Strict priority, weighted round-robinPriorityQueue			
		Scheduling			
		Queue assignment based on DSCP and class of service			
		Bandwidth Control oEgress : min			

		16Kbps Granularity oIngress : min 16Kbps Granularity			
		Security			
		Local Authentication with support for manual Privilege definitions assignment			
		802.1x Authentication			
		Port Security			
		Automatic HTTPS redirection			
		DHCP Snooping			
		Defence Engine			
		IP Source Guard			
		Management Access Filter for HTTP/HTTPS,SNMP,TELENT/SSH			
		Broadcast,Multicast,Unicast Storm Control Based on Packets per seconds			
		Flow based Rate limiting based on Packets per second (PPS)			
		Mbps Wireless Access Point with POE Support			
		Antenna:			
		PiFa Antenna x 2 (2T2R MIMO Technology)			
		Port			
		One 10/100Mbps 10/100 Ethernet Uplink port for AN			
		Push Button			
		One WPS push button			
		Flash Memory			

		Flash: 2MB			
		SDRAM			
		16MB			
		Frequency band			
		2.4000 ~ 2.4835GHz			
		Standard compliance			
		IEEE 802.3 10BASE-T Ethernet			
		IEEE 802.3u 100BASE-TX Fast Ethernet			
		IEEE802.11b/g/n			
		RADIUS (IEEE802.1x)			
		Data Rate			
		IEEE802.11b: 1/2/5.5/11Mbps			
		IEEE802.11g: 6/9/12/24/36/48/54Mbps			
		IEEE802.11n (20MHz): MCS0-15, up to			
		144Mbps			
		IEEE802.11n (40MHz): MCS0-15, up to 300Mbps			
		Output power			
		IEEE802.11b @ 11Mbps: 26 +/- 1.5dBm			
		IEEE802.11g @ 54Mbps: 24 +/- 1.5dBm			
		IEEE802.11n (20MHz) @ MCS15: 23 +/- 1.5dBm			
		IEEE802.11n (40MHz) @ MCS15: 23 +/- 1.5dBm			

		Patch Cord Cat 6 UTP 1m and 2m			
		Conductor			
		24 AWG 7 / 32, stranded copper			
		Length			
		7-feet for workstation **and 3feet for Jackpanel / equipment**			
		Plug Protection			
		Matching **colored** snag-less, elastomer polyolefin boot			
		Warranty			
		25-year component warranty			
		Category			
		Category 6			
		Housing			
		Clear polycarbonate			
		Terminals			
		Phosphor Bronze, 50 micron gold plating over selected area and gold flash over remainder, over 100 micron nickel under plate			
		Load bar			
		PBT polyester			
		Jacket			
		PVC			
		Insulation			
		Flame Retardant Polyethylene			
		Patch Panel Cat 6 Utp Modular -24			

6		**Port- Loaded 0.5u Height** **Type** 24-port, Unshielded Twisted Pair, Category 6, TIA / EIA 568 **Port Arrangement** Keystone Krone type. Ports must be replaceable in 8 Port Module. **Category** Category 6 **Circuit Identification Scheme** Patch Panels Rear Cable Management without tie-wrap with simplified numbering labels **Height** 5 U , to save the Rack space			
6	Public Address System	**Power Consumption** 220 v AC, 12 v DC **Wattage** 200 -250 watt **Frequency** 20 Hz to 20 KHz **Auxiliary Input** YES- Standard **Amplification Capacity** 20 Hz to 20 KHz **Speaker Interface Connector** 4 ohm, 8 ohm, 16 ohm	1		

7		**Microphone** Wireless and wire included **Operating frequency** 20 Hz to 20 KHz **Battery** Supplied for microphone **Speaker** Wattage-50 watt to 80 watt Frequency-20 Hz to 20 KHz Power – operating power capacity Internal impedance- 8 ohm, 16 ohm Wire length- 10 meter of microphone 4:1 **Interface** Memory card, pendrive interface			
7	Web Cam	**With Clip:** **Height x Width x Depth:** 304.2 mm X 75 mm X 75 mm **Weight:** 766 g **Remote:** **Height x Width x Depth:** 41 mm X 128 mm X 9 mm **Weight:** 32 g **USB Cable:**	1		

		2 m **Power Adapter With Cord:** 3 m **Technical Specifications** **Camera:** Full HD 1080p video calling (up to 1920 x 1080 pixels); 720p HD video calling (up to 1280 x 720 pixels) with supported clients. H.264 UVC 1.5 with Scalable Video Coding (SVC). Supports H.264 SVC 1080p. 90-degree field of view with autofocus 4X digital zoom in Full HD. Rightlight™ 2 Technology for clear image in various lighting environments (even low light). ZEISS lens certification Camera LED for active streaming indication. **Speakerphone:** Integrated full duplex speakerphone with echo and noise cancellation 360-degree wideband audio with 12-foot (3.6 m) diameter range Bluetooth® and NFC enabled LEDs for speakerphone streaming, mute, hold, and Bluetooth pairing Controls for call answer/end, volume mute **Microphone(Tx):** Two omni-directional microphones supporting 3.6 m diameter range Frequency response: 100Hz – 16KHz Sensitivity: -34dB +/-3dB Distortion: <1% @ 1KHz at 65dB **Speakers(Rx):** Frequency response: 140Hz – 16KHz Sensitivity: 89dBSPL +/-3dB at 1W/0.5M Max output: 91.5dBSPL at 0.5M Distortion: <5% from 200Hz **Remote Control:** Dockable remote control for camera / speakerphone functions			

		10-foot (3 meters) range **Cables:** USB Power adapter with cord Screen mirroring through WiFi connection to the device **Wireless Screen Mirroring and Connectivity Features:** Screen mirroring through WiFi connection to the device Android or Windows 8.1 compatibility for screen mirroring HDMI connector for TV output Rechargeable battery supports up to 3 hours videoconferencing or screen mirroring time **Talk Time/Battery Life:** Up to 15 hours (3 hours for videoconferencing and screen mirroring) **Range:** 12 foot diameter range (3.7 meters) 360-degree sound			

Place: Hyderabad

Registrar

Date: - /- / 2017   Maulana Azad National Urdu University

Hyderabad

Chapter–V: Financial bid: To be utilized by the bidder to quote their prices item wise.

<u>**Annexure – III (A)**</u>

(i) **Requirement of Computer(All in One):**

Sl. No.	Items	Qty Reqd.	Make & model	Unit cost	Total (Including taxes & all charges etc)
1.	**Computer(All in One)** **Computers All In one** **Processor Support** Supports Intel Core i3 or i5 or i7 Serials processors in LGA1150 package. • Support Intel 4th generation multi-core processors **Chipset** Intel H81 Chipset **Memory Support** DDR3 1600/1333 SDRAM • 4 GB DDR3 DIMMs (240 pin / 1.5V) (For more information on compatible components, please check with manufacturer) **LAN** Supports Realtek or other OEM with IEEE latest standards 8111F 1000 Mbps **Wireless** Inbuilt wireless with IEEE latest standards & inbuilt Bluetooth **Audio** Chip integrated by Realtek 662 or any other OEM. • Flexible 6-channel **SATA** • 4 SATA II ports • Supports storage and transfers up to 300 MB/s **Back panel** • 1 PS/2 keyboard port • 1 PS/2 mouse port • 1 VGA port • 1 HDMI port • 2 USB 3.0 Ports • 2 USB 2.0 Ports • 1 LAN Jack • 3 flexible audio Jack **On-Board Pinheaders** 2 USB 2.0 Pinheaders / Connectors • 1 COM Pinheaders • 1 Front Panel Audio Pinheaders **Slots** 1 PCI Express x 16 slot • 1 PCI Express x 1 slot • 1 Mini PCI _E slot **Form Factor** Micro-ATX (24 cm x 16.8 cm) **Sound** Inbuilt speaker with dedicated sound processor such as Dolby Digital etc **Monitor** 20 inch and above TFT monitor with LED Backlit. **Power Backup** Minimum two hour with 65 watt of charger **Accessories** • 4-pin SATA power cable / SATA data cable (optional) • 1 x I/O Backboard • 1 x User Manual	55			

	Mouse & Key board • 1 x Drives installed CD				
2	**Server** Intel Xeon E5-2620v2 2.1GHz, 15M Cache, 7.2GT/s QPI, Turbo, HT, 6C, 80W, Max Mem 1600MHz 16GB RDIMM, 1600Mhz, Low Volt,Dual Rank, x4 Bandwidth 300GB 10K RPM,6Gbps SAS 2.5 " Hot Plug Hard Drive PERC H710 Integrated RAID Controller, 512MB NVCache, Full Height iDRAC7 Enterprise 3 Yr Next Business Day Onsite Service DVD Chassis with up to 16, 2.5" Hard Drives, Tower Configuration **POWER EDGE T620**	2			
3	**Printer** All-in One LaserJet Printer (Model Latest)	1			

Declaration: It is hereby declared that the firm have carefully read and understood the tender and agreed with all the clauses, terms and conditions of the tender, Darbhanga jurisdiction etc and agreed that the decision of the University shall be final in all respect.

Place: Authorized signature of
Date: 2017   the firm along with seal

Annexure – III (B)

(ii) Requirement of Smart Class Room Equipments:

Sl. No.	Items	Specification	Qty Req.	Make & model	Unit cost	Total (Including taxes & all charges etc)
1.	Integrated Digital Podium	Intel Xeon E5- Make : Wooden Used to integrate all the devices to be used in Smart Class Room Fully Lockable system Provision for CPU, Interactive Panel, Audio, Visualizer and remotes. Top Sliding Tray for safety of Interactive Panel 2 Speakers integrated in the podium and amplifier kept safely in the cabinet Configuration processor such as Dolby Digital etc or **equivalent**	1			
2	Ultra Short Throw LCD Projector (DLP Technology	**Resolution** 1024x768 or better **Contrast Ratio** 8000:1 or more **Brightness** 3100 ANSI lumens or more **Short Throw Distance** 2 feet to 3 feet or better **Image Size / Projection Area** 70 inches to 100 inches or better **Compatibility** HDTV Formats (720p, 1080i, 1080p, 575i, 575p), Digital Input (HDMI), Personal Computers, Standard Video, Component Video **Aspect Ration** 16:10 (WXGA) or better **Interfaces** Mini USB, HDMI Inx1, MONITOR OUTx1, COMPUTER IN X2 Nos., LAN inputx1, Computer Audio-1Nos., S Video Input With audiox1, Video Input with Audio x1 **Keystone correction** -+/- 15% **Other Features**	1			

		projection system must be capable of project 90" Image from distance of 25" or in same ratio				
3	120" Motorized Screen with remote control	**Size** 120" (Diagonal) **Aspect Ration** 4:3 **View Angle** 160 degree **Other Features** Free to stop any location Super high grain Matt white fabric Screen should be retractable gpe and can be operated (pull down and wound back) via Motoi'and preferably wireless remote control	1			
4	Full HD 55" LED TV	**Size** 55" Diagonal Size **Resolution** 1,920 x 1,080, (16.7 Million Display Color) **Aspect Ratio** 16:9 **Pixel Pitch** 0.21(H) x 0.63(V)mm **Active Display Area** 1209.6 (H) x 680.4 (V) mm **Brightness** 350 cd/m^2 **Dynamic Contrast Ratio** 100,000:1 **Viewing Angle (Horizontal / Vertical)** 178 / 178 ° **Response Time** 8 ms **Connectivity** Analog D-SUB, DVI-D (Dual Link),Component, CVBS, HDMI,Input Audio: Stereo Mini Jack,Output Audio: Stereo Mini Jack,RS232C (In/Out), RJ45 **General Feature** Slim & Light LFD with Built-in Scheduler , can display scheduled contents automatically Built in Speaker (10W + 10W), Plug and Play ,Display PPT etc (through USB), PIP/PBP, Narrow Bezel, Light Weight	1			
5	Digital interfacing and all digital cable connectivity to integrate	**UTP CAT 6 Cable** **Features** Category 6 Unshielded Twisted Pair 4 pair 100 Ohm cable shall be compliant with ANSI/TIA/EIA-568-B.2-1 upto 600 Mhz Category 6 UTP cables shall extend	1			

all the equipment	between the work area location and its associated telecommunications closet and consist of 4 pair, 23 AWG, UTP Non Plenum cable jacket.				
	The 4 pair Unshielded Twisted Pair cable should be UL Listed and ETL Certify.				
	Zero-Bit error throughput test as per IEEE standards verified by ETL				
	The 4 pair Unshielded Twisted Pair cable should be RoHS Compliant **Mechanical Characteristics** Construction: 4 twisted pairs separated by internal X shaped, 4 channel, full separator. Half shall not be accepted.				
	Conductor Solid Copper				
	Insulator Polyethylene				
	Delay Skew : 35 ns MAX				
	Jacket PVC				
	Attenuation : 22.8dB/100m at 250MHz, 29.4dB/100m at 400MHz, 39dB/100m at 600MHz				
	CAT - 6 Information outlets (I/O) with face plate and flush PVC box Features				
	Surface Mount Face Plate & Box with CAT6 Work Area Data I/O Outlet (RJ45) adhering to ETL Verification program for compliance with TIA568B.2-1				
	Category 6, TIA568.B.2-1 – 600MHz				
	Information Outlet should be UL Listed and I/O box should be RoHS Compliant				
	568A/B configuration				
	Be constructed of high impact with color and icon options for better visual identification. Integrated hinged dust cover using collapsible angular spring loaded shuttered technology.				
	Face plate should be Single Gang square plate and Should have				

		provision for Labe **Material** ABS / UL 94 V-0 **Port** One **24 Port Gigabit Fast Ethernet Web Managed L2 POE Switch** **Port** 24 ports 10/100/1000Base-T and 2 ports 1000Base-X, 2 Giga SFP port **Power Over Ethrenet (PoE)** Support for 802.3af,802.3AF Power per port - 31Watts for 4 ports, Rest of the ports supports 15.4Watts Switching Capacity 52Gbps Forwarding Rate Min 35Mpps MAC address 16K Wlan 256 Jumbo Frame 9 K Features Auto Negotiation of port speed and Duplex Settings				

		IEEE 802.1wrapid Spanning Tree group				
		Loopback Detection				
		IEEE 802.3ad Link Aggregation or equivalent				
		IEEE 802.1p (Priority Queues)				
		IEEE 802.1x security				
		Port based Mirroring				
		Support for IPv6				
		WLAN Support				
		802.1Q WLAN				
		Private Wlan				
		Traffic Segmentation				
		WLAN protocol				
		GVRP				
		Q-in-Q				
		Web based management interface				
		Through Telnet, HTTP and NMS.				
		SNMP Version 1,2c				
		Firmware upgrade via Web				
		Remote Ping				
		Port statistics				
		Quality of Service				
		hardware queues				
		Strict priority, weighted round-robinPriorityQueue				

		Scheduling				
		Queue assignment based on DSCP and class of service				
		Bandwidth Control oEgress : min 16Kbps Granularity oIngress : min 16Kbps Granularity				
		Security				
		Local Authentication with support for manual Privilege definitions assignment				
		802.1x Authentication				
		Port Security				
		Automatic HTTPS redirection				
		DHCP Snooping				
		Defence Engine				
		IP Source Guard				
		Management Access Filter for HTTP/HTTPS,SNMP,TELENT/SSH				
		Broadcast,Multicast,Unicast Storm Control Based on Packets per seconds				
		Flow based Rate limiting based on Packets per second (PPS)				
		Mbps Wireless Access Point with POE Support				
		Antenna:				
		PiFa Antenna x 2 (2T2R MIMO Technology)				
		Port				
		One 10/100Mbps 10/100 Ethernet Uplink port for AN				
		Push Button				

		One WPS push button				
		Flash Memory				
		Flash: 2MB				
		SDRAM				
		16MB				
		Frequency band				
		2.4000 ~ 2.4835GHz				
		Standard compliance				
		IEEE 802.3 10BASE-T Ethernet				
		IEEE 802.3u 100BASE-TX Fast Ethernet				
		IEEE802.11b/g/n				
		RADIUS (IEEE802.1x)				
		Data Rate				
		IEEE802.11b: 1/2/5.5/11Mbps				
		IEEE802.11g: 6/9/12/24/36/48/54Mbps				
		IEEE802.11n (20MHz): MCS0-15, up to				
		144Mbps				
		IEEE802.11n (40MHz): MCS0-15, up to 300Mbps				
		Output power				
		IEEE802.11b @ 11Mbps: 26 +/- 1.5dBm				
		IEEE802.11g @ 54Mbps: 24 +/- 1.5dBm				
		IEEE802.11n (20MHz) @ MCS15: 23				

		+/- 1.5dBm				
		IEEE802.11n (40MHz) @ MCS15: 23 +/- 1.5dBm				
		Patch Cord Cat 6 UTP 1m and 2m				
		Conductor				
		24 AWG 7 / 32, stranded copper				
		Length				
		7-feet for workstation **and 3feet for Jackpanel / equipment**				
		Plug Protection				
		Matching **colored** snag-less, elastomer polyolefin boot				
		Warranty				
		25-year component warranty				
		Category				
		Category 6				
		Housing				
		Clear polycarbonate				
		Terminals				
		Phosphor Bronze, 50 micron gold plating over selected area and gold flash over remainder, over 100 micron nickel under plate				
		Load bar				
		PBT polyester				
		Jacket				
		PVC				

6		Insulation				
		Flame Retardant Polyethylene				
		Patch Panel Cat 6 Utp Modular -24 Port- Loaded 0.5u Height				
		Type				
		24-port, Unshielded Twisted Pair, Category 6, TIA / EIA 568				
		Port Arrangement				
		Keystone Krone type. Ports must be replaceable in 8 Port Module.				
		Category				
		Category 6				
		Circuit Identification Scheme				
		Patch Panels Rear Cable Management without tie-wrap with simplified numbering labels				
		Height				
		5 U , to save the Rack space				
6	Public Address System	**Power Consumption**	1			
		220 v AC, 12 v DC				
		Wattage				
		200 -250 watt				
		Frequency				
		20 Hz to 20 KHz				
		Auxiliary Input				
		YES- Standard				
		Amplification Capacity				

7		20 Hz to 20 KHz **Speaker Interface Connector** 4 ohm, 8 ohm, 16 ohm **Microphone** Wireless and wire included **Operating frequency** 20 Hz to 20 KHz **Battery** Supplied for microphone **Speaker** Wattage-50 watt to 80 watt Frequency-20 Hz to 20 KHz Power – operating power capacity Internal impedance- 8 ohm, 16 ohm Wire length- 10 meter of microphone 4:1 **Interface** Memory card, pendrive interface				
7	Web Cam	**With Clip:** **Height x Width x Depth:** 304.2 mm X 75 mm X 75 mm **Weight:** 766 g **Remote:** **Height x Width x Depth:** 41 mm X 128 mm X 9 mm	1			

		Weight: 32 g **USB Cable:** 2 m **Power Adapter With Cord:** 3 m **Technical Specifications** **Camera:** Full HD 1080p video calling (up to 1920 x 1080 pixels); 720p HD video calling (up to 1280 x 720 pixels) with supported clients. H.264 UVC 1.5 with Scalable Video Coding (SVC). Supports H.264 SVC 1080p. 90-degree field of view with autofocus 4X digital zoom in Full HD. Rightlight™ 2 Technology for clear image in various lighting environments (even low light). ZEISS lens certification Camera LED for active streaming indication. **Speakerphone:** Integrated full duplex speakerphone with echo and noise cancellation 360-degree wideband audio with 12-foot (3.6 m) diameter range Bluetooth® and NFC enabled LEDs for speakerphone streaming, mute, hold, and Bluetooth pairing Controls for call answer/end, volume mute **Microphone(Tx):** Two omni-directional microphones supporting 3.6 m diameter range Frequency response: 100Hz – 16KHz Sensitivity: -34dB +/-3dB Distortion: <1% @ 1KHz at 65dB **Speakers(Rx):** Frequency response: 140Hz – 16KHz Sensitivity: 89dBSPL +/-3dB at 1W/0.5M				

| | | Max output: 91.5dBSPL at 0.5M
Distortion: <5% from 200Hz
Remote Control:

Dockable remote control for camera /
speakerphone functions
10-foot (3 meters) range

Cables:

USB
Power adapter with cord

Screen mirroring through WiFi
connection to the device

**Wireless Screen Mirroring and
Connectivity Features:**

Screen mirroring through WiFi
connection to the device

Android or Windows 8.1 compatibility
for screen mirroring
HDMI connector for TV output
Rechargeable battery supports up to 3
hours videoconferencing or screen
mirroring time
Talk Time/Battery Life:

Up to 15 hours (3 hours for
videoconferencing and screen
mirroring)

Range:

12 foot diameter range (3.7 meters)
360-degree sound | | | | |

Declaration: It is hereby declared that the firm have carefully read and understood the tender and agreed with all the clauses, terms and conditions of the tender, Darbhanga jurisdiction etc and agreed that the decision of the University shall be final in all respect.

Place: Authorized signature of
Date: 2017   the firm along with seal