



**NATIONAL INSTITUTE OF TECHNICAL TEACHERS'**

**TRAINING & RESEARCH**

**CHANDIGARH-160019**

([www.nitttrchd.ac.in](http://www.nitttrchd.ac.in))

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**e-TENDER NOTICE**

e-Tenders are invited for purchasing, installation, commissioning & training of **VR/AR Lab**. The bid document can be downloaded from the website of Chandigarh Administration at <https://etenders.chd.nic.in>.

1.	Tender Publish Date	25/01/2020 at 09.00 A.M.
2.	Tender Download/Sale Start Date	25/01/2020 at 09.00 A.M.
3.	Bid Submission Start Date	25/01/2020 at 09.00 A.M.
4.	Tender Download/Sale End Date	17/02/2020 at 05.00 P.M.
5.	Bid Submission End Date	17/02/2020 at 05.00 P.M.
6.	Physical submission of EMD and eligible documents (End Date)	17/02/2020 at 05.00 P.M.
7.	Bid Opening Date	18/02/2020 at 03.00 P.M.

The complete tender document is also available on NITTTR website at:- <http://www.nitttrchd.ac.in>.

**Director**

**NITTTR Chandigarh**

## INSTRUCTIONS TO BIDDERS REGARDING e-TENDERING PROCESS

1. The Bidders shall have to submit their Bids online in Electronic Format Digital Signatures. For participation in the e-tendering process, the Bidders need to register themselves at <http://etenders.chd.nic.in/nicgep>. On registration, they will be provided with a user ID and a system generated password enabling them to submit their Bids online using Digital System Certificates (DSC).
2. Tenders without Digital Signatures will not be accepted by the electronic tendering system. No tender will be accepted in physical form and in case it has been submitted in physical, it shall be rejected.
3. Bids will be opened online as per time schedule mentioned in “Terms and Conditions of the Tender”.
4. Before submission of online bids, bidders must ensure that scanned copies of all the necessary documents have been uploaded with the bid.
5. Director, NITTTR, Chandigarh will not be responsible for any delay in online submission of bids due to any reason whatsoever.
6. Bidders should get ready with the scanned copies of EMD as specified in the tender documents. Related EMD as per the given amount in the form of a Demand Draft in favour of the Director, NITTTR, Chandigarh payable at Chandigarh/ Electronic Payment details should be submitted to Director, National Institute of Technical Teachers Training and Research, Sector-26 Chandigarh so as to reach him on or before the last date for receiving the tenders.
7. The details of EMD specified in the tender document should be same as submitted online (scanned copies). Otherwise tender will be rejected summarily.
8. The conditional bids shall not be considered and may be outrightly rejected in the very first instance.
9. The Financial Bid through e-tendering of only those bidders shall be opened who will qualify in the technical bid and are approved by the Purchase Committee/Technical Experts.
10. **The tenderers are required to upload all self-attested copies of the relevant documents required as per Terms & Conditions and Check List, failing which their bids may be summarily/outrightly rejected and will not be considered.**

## **TERMS AND CONDITIONS OF THE TENDER**

1. The last date and time for receipt of tenders is 17.02.2020 up to 05.00 P.M. through e-tendering only.
2. Each tender must be accompanied with Earnest Money Deposit (EMD) in the shape of Demand Draft in favour of Director, NITTTR, Chandigarh payable at Chandigarh, valid for three months on any Scheduled Bank or, Electronically submitted through NEFT/RTGS in the following Bank Account:

**Director, NITTTR Chandigarh**  
**State Bank of India, Grain Market, Sector-26, Chandigarh**  
**Account No: 55105008209**  
**IFSC : SBIN0050116**

3. The EMD amount is as shown below:

1.	<b>VR/AR Lab</b>	<b>Rs. 90000</b>
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4. The sealed envelope of EMD bearing the Advertisement No. and should be clearly superscribed as **“EMD for VR/AR Lab”** should be submitted in the office of Director, NITTTR, Sector-26, Chandigarh on or before **17/02/2020 upto 05.00PM.**
5. Those who are exempted for EMD from Government have to furnish documentary proof along with technical bid online.
6. The quantity of items and quantity indicated in the enclosed list are tentative. Director reserves the right to increase or decrease the quantity or delete some or all of the items depending on the needs of the institute.
7. The tenderer should indicate specifically the Goods and Service Tax (GST), Duties and Levies chargeable against each item if any. The Institute is entitled to custom duty exemption and concessional sales tax applicable to Educational and Research organizations.
8. The rates quoted should be F.O.R. , NITTTR Chandigarh. In case rates are chargeable at any other place, the packing and forwarding charges should be clearly mentioned indicating the mode of transport and insurance during transit.
9. The tenderer should clearly indicate the delivery period and validity period of the offer.
10. The tenderer should clearly indicate the availability of service and maintenance facilities at Chandigarh for the items quoted.
11. The above mentioned details particularly the Goods and Service Tax (GST) number, any other levies/charges, if not quoted properly, the bid can be cancelled. Conditional/doubtful bids will also be liable for cancellation. **[If the Goods and Service Tax (GST), any other levies/charges are not possible to enter in online tender, kindly quote your price inclusive of all taxes]**

12. Any attempt direct or indirect, to cast influence, negotiation on the part of the tenderer with the officials/authority to whom he/she will submit the tender or the tender accepting official/authority before the finalization of tenders will render the tenderer liable for exclusion from consideration.
13. The requirements of the Institute in terms of category of equipment, detailed specifications and quantity are given in SCHEDULE OF TECHNICAL SPECIFICATION / REQUIREMENT (**As per Annexures I**). Director, NITTTR reserves the right to change the quantity for any/all items without assigning any reason.
14. The Tender must be submitted along with the copies of:
  - EMD in favor of Director NITTTR Chandigarh
  - Manufacturers Licence or Authority from the Manufacturer (if applicable)
  - Latest Income Tax Clearance Certificate
  - GST Number from Govt.
  - Certificate of Non Blacklisting from Magistrate/ Competent Authority
  - PAN or TAN
  - Balance Sheet of last three year (if applicable)
  - Product Specification/ Brochure
  - Tender Document duly signed
14. The Director reserves the right to reject any or all tenders without assigning any reason whatsoever.
15. The tenders will be opened on the date and time indicated in the presence of tenderers if any present on the occasion.
- 16. The tenders not accompanied by Earnest Money or incomplete in any respect will be rejected outrightly.**
17. No advance payment or payment against performa invoice will be made. Payment will be made after receipt, installation and testing of items, to the satisfaction of the authorized representative(s) of the Director.
18. In case, the item(s) is to be imported for supply, irrevocable letter of credit will be opened with the Bank. The Institute's Banker is State Bank of India, Extension Counter, Chandigarh College of Engineering and Technology, Sector-26, Chandigarh – 160019
19. All damaged or unapproved goods shall be returned at the risk and cost of the Tenderer and the incidental expenditure thereupon shall be recovered from them.
20. This institute is recognized as R&D institute and is exempted from Excise Duty. The quoted prices must be mentioned showing Excise Duty separately.
21. Training for the operation of equipment's, if any, shall be provided by the firm free of cost to the faculty/other staff of the institute.

22. The Equipment/Machinery will be maintained free of charges during the warranty period as on the terms and condition of the tender or Annexures.
23. Instructional materials and **e-manuals** will be uploaded by the supplier free of cost.
24. The bidder must fill the Check List from the authorized signatory only with the seal of the firm.  
**(As per Annexure-II)**
25. There is No pre-bid meeting for this tender/bid.

## Annexure I

### TECHNICAL SPECIFICATIONS OF VR/AR Lab

S. NO	Technical Specification	QTY.
1	<p><b><u>Virtual Reality Headsets</u></b>  Screen: Dual AMOLED 3.6’’ diagonal; Resolution: 1080 x 1200 pixels per eye (2160 x 1200 pixels combined); Refresh rate: 90 Hz; Field of view: 110 degrees; Safety features: Chaperone play area boundaries and front-facing camera; Sensors: SteamVR Tracking, G-sensor, gyroscope, proximity  Interface : HDMI, USB 2.0, stereo 3.5 mm headphone jack, Power, Bluetooth  Input: Integrated microphone; Eye Relief: Interpapillary distance and lens distance adjustment; Controller must have - Sensors: SteamVR Tracking  Input: Multifunction trackpad, Grip buttons, dual-stage trigger, System button, Menu button; Use per charge: Approx. 6 hours; Connections: Micro-USB charging port; Tracked area requirements; Standing / seated: No min. space requirements; Room-scale: Upto to 15m with an area of approximately 12 sq. meters. Compatible with Window 7 OS or higher</p>	3
2	<p><b><u>Augmented Reality Headsets</u></b>  <b><u>OPTICS:</u></b></p> <ul style="list-style-type: none"> <li>• Display resolution: nHD colour display</li> <li>• Aspect ratio: 16:9</li> <li>• Field of View (diagonal): 16.7 degrees, equivalent to a 5 in. mobile device screen seen at 17 inches</li> <li>• Brightness: More than 2000 nits</li> <li>• 24 bit colour</li> <li>• Supports left or right eye use</li> <li>• Dual Core Intel Atom CPU or better</li> <li>• 2GB system RAM or more</li> <li>• Android 6 OS</li> <li>• 64GB internal flash memory</li> </ul> <p><b><u>CONTROLS:</u></b></p> <ul style="list-style-type: none"> <li>• 4 standard Android control buttons</li> <li>• Voice control – customizable and supports multiple languages</li> <li>• 2 Axis touch pad with gesture</li> </ul> <p><b><u>MUST HAVE UNIVERSAL MOUNTING FEATURES:</u></b></p> <ul style="list-style-type: none"> <li>• Eyeglass frames with or without lens, Safety glasses, Hard hat mount, Headband mount</li> </ul> <p><b><u>BATTERY:</u></b></p> <ul style="list-style-type: none"> <li>• 160mAh internal battery supports hot swapping of external batteries</li> <li>• 860mAh external battery</li> <li>• Can be powered by a USB battery pack for extended run time</li> <li>• 2 – 12 hours of operation based on external battery choice</li> </ul> <p><b><u>INTEGRATED HEAD TRACKER:</u></b></p> <ul style="list-style-type: none"> <li>• 3-degree of freedom head tracking</li> <li>• 3 axis gyro, 3 axis accelerometer, 3 axis mag/integrated compass</li> </ul> <p><b><u>CONNECTIVITY:</u></b></p> <ul style="list-style-type: none"> <li>• USB Micro-B 2.0, Wi-Fi b/g/n/ac – Dual-B 2.4/5 GHz, BT 4.1/2.1+EDR</li> </ul> <p><b><u>AUDIO:</u></b></p> <ul style="list-style-type: none"> <li>• Ear speaker , Dual noise cancelling microphones</li> </ul> <p><b><u>CAMERA:</u></b></p> <ul style="list-style-type: none"> <li>• Up to 10 megapixel stills, Up to 1080p video, Auto-Focus, Optical Image</li> </ul>	3

	<p>Stabilization, Flash/scene illumination</p> <p><b><u>SENSOR SYSTEMS:</u></b></p> <ul style="list-style-type: none"> <li>Proximity inward facing , Proximity/ALS outward facing</li> </ul>	
3	<p><b><u>65 inch Ultra (Non Touch) HD TV</u></b>  Display 65-inch, 4K, 3840x2160 Screen Resolution LED Screen Type, Ideal viewing distance of 8 - 12 ft., TV Type, Smart TV, Interface by, 2 USB Ports,3 HDMI Ports, Bluetooth, Wi-Fi, LAN/Ethernet, 3.5mm audio out. Performance, Quad Core processor or higher, 2.5 GB or more, Minimum 16 GB RAM, Operating System, Smart TV based on Android, overlaid with brand`s custom interface and applications, Search and watch all your favourite content with a single remote, Audio, 20W Speakers, Dolby Audio: Advanced audio formatting and signal processing to deliver enhanced sound</p>	1
4	<p><b><u>Infrared and Camera Tracker</u></b>  RGB Colour, Depth Tracking, Minimum Camera Resolution Rate 1920*1080 with 30 frames per second, Field of View Horizontal 70 degrees and Field of View Vertical 60 degrees, Operative measuring Range 0.5m to 4.5m range, Depth Technology Time of Flight.</p>	1
5	<p><b><u>Unity 3D Version 2019.2.17 or latest</u></b>  Subscription license Pro for 5 seats for the minimum period of 3 years. Access to learning resources on the computer and the learning cloud. Unity 3D must include support for AR/VR devices for 3 years. The software must be compatible with Window 7, Window8/8.1, Window 10 OS or higher and iOS 11 or higher.</p>	5 licenses
6	<p><b><u>3D Modelling Software Academic Edition (MAYA 2020)</u></b>  5 license with minimum period of 3 years and Assets Package for building custom environments. Common Scientific Equipment 3D models and textures for microscope, computers, soldering iron, lab View equipment to be included in the deliverables. The software must be compatible with Window 7, Window8/8.1, Window 10 OS or higher and iOS 11 or higher.</p>	5 licenses
7	<p><b><u>DSLR Camera</u></b>  Sensor: 24.2MP APS-C CMOS 4, 23.5 x 15.6mm. Image processor: EXPEED 4. AF points: 11-point AF, 1 cross-type. ISO range: 100 to 25,600. Max image size: 6,000 x 4,000px. Metering zones: 420 pixel RGB sensor. Video: 1920 x 1080 at 60p, 50p, 30p, 25p, 24p. Viewfinder: Optical penta mirror, 95% coverage. Memory card: SD/SDHC/SDXC UHS I LCD: 3.0-inch fixed, 921K dots Max burst: 5fps,Connectivity: Bluetooth or USB interfaced</p>	1
8	<p><b><u>Tripod for DSLR Camera</u></b>  Tripod for holding DSLR Camera and Mobile Phone Connectors at least 6 ft. height.</p>	5
9	<p><b><u>Desktop with brief specifications</u></b>  Intel i7, 8<sup>th</sup> Generation processor with 4 cores, 32GB RAM, 1 TB HDD, 256GB SSD, nvidia GeForce GTX 1660 or better Video Card for minimum 4 outputs, 8 USB, Wireless Keyboard and Mouse, 4 Microphones, Multi input audio Card. DVD RW, Licensed Windows 10 Pro, MS Office 2016, Sublime Text, Python 2.x and 3.x support (latest),</p>	5

10	<p><b><u>Audio 5.1 Audio Card</u></b>  Signal-to-Noise Ratio (SNR) 106dB; Platform PC - PCI-e x1; Connectivity Options (Main); Optical Out:1 x TOSLINK; Line In:1 x 3.5mm jack  Microphone In: 2 x 3.5mm jack</p> <p>Line Out :1 x 3.5mm jack (Front Out); 1 x 3.5mm jack (Rear / Side R)  1 x 3.5mm jack (C / Sub / Side L)</p> <p>Headphone Out : 1 x 3.5mm jack shared with Front Out; Max Channel Output 5.1/7.1 Channels; Supported Operating Systems; Windows 7, Windows 8, Windows 10 or higher; Audio Fidelity Up to 24-bit / 192kHz ASIO ASIO 2.0</p>	5
11	<p><b><u>5.1 Surround Sound Audio System</u></b>  5 Speakers with Subwoofer, Remote Control; Speaker Surround Sound Channel Configuration - 5.1 Channel; Speaker Connectivity wired  Audio Wattage - 150 Watts; Wattage - 7 Watts;  Batteries Included - No;  Batteries Required - No;  Signal To Noise Ratio (SNR) - 75 dB;  Connector Type wired;  Includes Rechargeable Battery - No;  Includes AC Adapter - Yes;  Includes Remote - Yes</p>	1
12	<p><b><u>Stand for backgrounds of Red, Green, Blue White &amp; Black</u></b> - 8 feet X 12 feet green blue and white color -_Green Screen, Blue Screen and White Screen with Portable Backdrop Stand</p>	1
13	<p><b><u>Screen Reflective AI Display</u></b>  Reflective AI Display with following specifications: 55 HD inch display (38 inch X 57 inch) (2 Screens) Color LED Mirror Lights Voice activated switches to control home lights Proximity sensors Touch sensors Omnidirectional microphone, 5MP camera, External USB for hard drive connection 2.0, Speaker system, 1 TB of internal storage, Wi-Fi, Bluetooth and Wireline Connectivity indoor and outdoor temperature sensors, soil moisture sensors, Air quality sensors for pollution, remote control.</p>	1
14	<p><b><u>3D Printed Augmented Reality Tags &amp; APP</u></b> - 150 Custom AR Tags for NITTTR printed on Sunboard and Laminated Paper in 5 sets</p>	1
15	<p><b><u>Kiosk Touch 65 “ having the below Features:</u></b>  65-inch Full HD 1080P LCD digital signage screen  Horizontal screen LCD digital signage screen floor-standing type for indoor use  Custom 65 inch standing LCD digital signage screen  Memory card: supports CF/SD cards and with USB port multiple file formats supported for advertising player: MP3, MP4, JPG, MPEG1, MPEG2, MPEG4 and AVI format  Can play back automatically when power on, timing power on/off function  Logo function, can keep the playing record  Infrared remote control mode for photos refresh, multi-options for interval time  Supports split screen (play video, pictures and subtitles at the same time)  Supports any of the scrolling marquee text document editing and smooth subtitles  Supports English and other languages  Free server: control software running on one PC, managing the scheduled playlists for all terminal AD players around the world  Display real-time clock, calendar, month, week, day timer mode  Supports picture hardware JPEG, BMP, GIF  Supports Ad cut-in function  Safety protection locks  Others: infrared remote control, keys, user's manual</p>	1



16	<p><b><u>Single Board Computers focused on AI</u></b>  AI based single board which each unit must have of Raspberry PI (Latest Version)  NVIDIA Jetson Nano Developer Kit [Specially designed for AI projects]</p>	5
17	<p><b><u>Video wall 2x2 matrix, 55 Inch cube size, 1.8 mm</u></b>  Diagonal Size 49" or above; Type D-LED DID; Minimum Resolution 1920*1080 (Full HD); Pixel Pitch(mm) - 0.63mm(H) * 0.63mm(V); Active Display Area(mm) 1209.6 * 680.4mm; Minimum Brightness(Typ.) 300 nit  Contrast Ratio 4000:1 ; Viewing Angle(H/V) 178/178; Response Time(G-to-G) 8ms;  Display Colors 8 bit - 16.7M; Color Gamut 72%  Operation Hour 24/7 ; Haze 25% (Outer Haze 23%); Video Wall Screen Stands, Full Installation with all cables including HDMI Cables with one HDMI Cable of 20 metres or above</p>	1
18	<p><b><u>360 degree Camera</u></b>  360 VR Camera Dual-Lens 5.7K HI Resolution Panoramic Camera with Electronic Image Stabilization, 4K in-Camera Stitching Batteries Included Yes  Batteries Required Yes  Battery Cell Composition Lithium Ion  Contains Liquid Contents No  Includes Rechargeable Battery Yes  Includes External Memory No</p>	1
19	<p><b><u>Android Tablet 10</u></b>  Camera Description 2MP  Connectivity Technology GSM; UMTS; 4G LTE; FDD; TDD; WiFi  Processor (CPU) Manufacturer Qualcomm Snapdragon 450  Display Size 10.1 inches  Effective Still Resolution 5  Included Components Tablet, Adapter, USB Type C Cable, Safety/Warranty Guide and Quick Start Guide  Item Weight 480 grams  Memory Storage Capacity 16GB  Operating System Android  Special Feature Single SIM; GPS; Music Player; Video Player; FM Radio; GPS; E-mail</p>	2
20	<p><b><u>Mobile VR Headsets</u></b>  Compatible Devices        Android / iOS / Windows phone - with gyroscope function  Additional Features        40mm lenses, IPD Adjustment, Comfortable &amp; Convenient,  Free 3D VR Game  Batteries Included        No  Batteries Required        No</p>	3
21	<p><b><u>Mobile :</u></b>  Rear Camera Lens 1    16 MP,  Rear Camera Lens 2    12MP  Screen Size    5.8 inches  Screen Type    AMOLED  Battery Power (In mAH) 3,100  RAM    6 GB  Inbuilt Storage (in GB)        128 GB  Exynos 9820 or Qualcomm Snapdragon 665  Operating System    Android Pie 9.0</p>	1

22	<p><b>Other Essential Services</b></p> <ol style="list-style-type: none"> <li>1) Providing Welcome and Instructional Videos, Custom VR Environment for Organizational Experience, Augmented Reality Brochures and Posters,</li> <li>2) Providing Teaching Training Modules for VR including presentations, curriculum and other instructional materials</li> <li>3) Training of the Institute faculty for 10 working days</li> <li>4) Curriculum creation in future and lab creation support for creating additional courses on VR/AR for media, VR/AR for rural development and VR/AR for Design</li> <li>5) Providing Sample codes for VR environments like Calcflow, Math Problem Challenge, Number Hunt, etc.</li> <li>6) Raw Code and environment for Further coding along with coding support provided by vendor to NITTTR for 1 year</li> </ol>	

## **Annexure II**

### **CHECK LIST DULY FILLED IN TO BE ATTACHED WITH PRE-QUALIFYING- CUM-TECHNICAL BID FOR THE MACHINERY/EQUIPMENT/SERVICES FOR NITTTR CHANDIGARH**

- |    |  |        |
|----|--|--------|
| 1. | Whether EMD in the shape of Demand Draft valid for three months, for the asked-for amount attached?  | Yes/No |
| 2. | Whether tender document duly signed by authorized signatory Attached?  | Yes/No |
| 3. | Whether a list of institutions / organizations where your firm has supplied this item / equipment / instrument / services recently, is Attached.                   | Yes/No |
| 4. | If you are an authorized agent / dealer / distributor of the firm / company / manufacturer and whether authority Letter as issued by them in your favour attached? | Yes/No |
| 5. | Whether Technical brochure of the equipment/services attached?   | Yes/No |

Note :- If Yes, must attach all relevant documents.

**Signature of authorized signatory  
with seal of the firm**