

**NOTICE INVITING TENDER  
[NIT]  
for  
SUPPLY, INSTALLATION  
AND COMMISSIONING OF HD  
VIDEO, AUDIO &  
CONFERENCE FACILITY AT  
COUNCIL HALL, HBNI**

Homi Bhabha National Institute, a  
Deemed to be University u/s 3 of UGC  
Act



**HOMI BHABHA NATIONAL INSTITUTE**

*(a deemed to be University u/s 3 of UGC Act), a grant-in-aid  
Institute of the Department of Atomic Energy, Government of India*

2<sup>nd</sup>Floor, Training School Complex, Anushakthinagar,

Mumbai 400094

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

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*(This document comprises of 38 pages including cover)*

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COUNCIL HALL, HBNI, MUMBAI**

**PART 1: General Conditions & Technical Specifications**

**I. TENDER INFORMATION (Instruction Sheet)**

Sealed tenders in TWO (2) parts in the prescribed format are hereby invited by the Vice Chancellor, Homi Bhabha National Institute, Training School Complex, Anushaktinagar, Mumbai 400 094 for the following work from eligible suppliers.

**Description of the Works:** Supply, Installation and Commissioning of the HD Video, Audio and Conference facility at HBNI, Mumbai

Estimated Cost of the Work	Rs. 35,00,000/- (in words Rupees Thirty Five Lakhs)
Earnest Money Deposit	2% of the estimated cost, i.e., Rs. 70,000
Tender fee	NIL [the document should be downloaded from the website, <a href="http://www.hbni.ac.in">www.hbni.ac.in</a> ]
Duration for completion of the work	2 months
Date of uploading the NIT	8 <sup>th</sup> November 2018
Date of Pre-bid meeting	16 <sup>th</sup> November 2018
Last date of Tender Submission Date & Time	7 <sup>th</sup> December 2018 [3.00 pm]
Date and Time of Opening the Tender (Technical Bid)	7 <sup>th</sup> December 2018 [3.30 pm]
Venue for pre-Bid meeting, Opening the Tenders	HBNI Council Hall 2 <sup>nd</sup> Floor, Training School Complex Anushaktinagar, Mumbai 400 094

**General Information to the Tenderer(s)**

**II. GENERAL CONDITIONS**

1. The Tender document is to be prepared in TWO Parts.  
**Part 1** comprises of General Conditions and Technical Specifications.  
**Part 2** comprises of Technical Bid, Price Bid and Tender Submission Formats.
2. The Bid documents shall be downloaded from the Institute website:  
<http://www.hbni.ac.in>
3. All queries related to this Tender document shall be sent by e-mail, at least 24 hours before the Pre-bid meeting to '[registrar@hbni.ac.in](mailto:registrar@hbni.ac.in)'. The tenderers' authorized

representatives are advised to attend the Pre-bid meeting with prior information. In response to the queries and clarifications sought by the tenderers during the Pre-bid meeting, certain modifications/clarification may be issued to all prospective tenderers (who have attended the pre-bid/ downloaded the Bid document), as may be deemed necessary through an Addendum. There shall be no minutes of the Pre-bid meeting. The information will be uploaded on the website hosting the tender document and the addendum (issued if any) will become part of the Bid document. There shall not be any information sent to the individual tenderers in this regard.

4. The Tenders are required to be submitted in separate sealed and super scribed envelopes, containing and indicating the following:

Envelope 1: Earnest Money Deposit  
Envelope 2: Technical Bid  
Envelope 3: Price Bid

All the envelopes shall then be placed in another envelope sealed and to be sent by Speed Post to the Tender Inviting Authority or dropped in the Tender Box kept with the *Administrative Officer III, HBNI, 2<sup>nd</sup> Floor, Training School Complex, Anushaktinagar, Mumbai.*

5. Pre-bid meeting will be held in the Council Hall of HBNI on the date and time as given in the Tender Information table (as above).
6. The deadline of submission of Tender shall be date & time as given in the Tender Information table (as above). Bids submitted later than the deadline will not be accepted. Such bids will be returned unopened to the addressee. The Technical Bid will be opened on the dates specified, i.e., 7<sup>th</sup> December 2018 at 15.30 hrs in presence of attending tenderers. The Technical Bids will be opened provided the EMD is found to be in order in all aspects.

The EMD shall be paid in the form of Demand Draft, drawn in favour of 'Accounts Officer, HBNI', payable at Mumbai.

7. All the tender responses and envelopes shall be addressed to:

The Registrar  
Homi Bhabha National Institute, a Deemed to be University  
2<sup>nd</sup> Floor, Training School Complex,  
Anushaktinagar  
Mumbai 400 094

8. No modifications in the Tender shall be allowed after opening EMD and the Technical Bid, unless the scope of the work is changed by HBNI. In such cases, fresh price bid will be invited from all the Bidders.
9. **Any tenders with any condition including conditional rebate shall be rejected. However, tenders with unconditional rebate given in their original offer will be accepted.**

10. Validity of the Tenders: The Tender shall be valid for 90 (Ninety) days from the date of opening of the Technical Bid.

11. Eligibility: Suitability of the Tenderer will be decided on the following grounds -

Experience of having successfully completed works during the last 7 years ending last day of the month previous to the one in which applications are invited. The works completed up to previous day of the last date of submission of tenders shall also be considered.

Three similar completed works costing not less than the amount equal to 40% of estimated cost put to tender.

or

Two similar completed works, costing not less than the amount equal to 60% of the estimated cost put to tender.

or

One similar completed work of aggregate cost not less than the amount equal to 80% of the estimated cost.

Similar work shall mean other related works as specified at the scope of the work above. The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to last date of receipt of applications for tender.

12. Other Eligibility

(i) Average annual financial turnover should be at least 100% of the estimated cost during the immediate last 3 years ending 31st March 2018.

(ii) Should not have incurred any loss in more than 2 years during the immediate last 5 years ending 31st March 2018.

13. Opening of Tender Documents: The Tender documents will be opened on the prescribed date and time mentioned in the Instruction Sheet (given above). In case the date of receipt and opening of the Tender is declared as holiday, the respective date shall be treated as postponed to the next working day, accordingly.

14. The time allowed for carrying out the work will be reckoned from the 7<sup>th</sup> day after date of written work order to commence the work, in accordance with the phasing, if any, indicated in the tender documents.

15. The Tenderers should quote amount in figures as well as in words and the rates in figures only. The amount of each item should be worked out and filled in the proper column. The total amount should be written in both figures as well as in words. While quoting the rate in Schedule of Quantities (SOQ), the word 'only' should be written closely following the amount and it should not be written in next line. All corrections shall be attested by the dated initials of the tenderer.

16. When the Company/Firms signs the tender in an Indian language, the total amount quoted by them should also be in the same language.

17. The 'Technical Bid' related documents will be evaluated first and accordingly tenderers will be qualified/ disqualified by the Competent Authority. The Price Bid of only the qualified tenderers will be opened at a notified date, time and place in presence of tenderers or their authorised representatives.

18. Other Instructions to Tenderers

- i. Tenderers should quote for 3 years On-site comprehensive warranty and for the 4<sup>th</sup> and 5<sup>th</sup> year option of extension may be quoted.
- ii. Quotation should be inclusive of training of manpower having on-site training and implementation support, where applicable.
- iii. Quotation should be inclusive of documentation and Standard operating Procedure with issues of trouble shooting where needed.
- iv. Any problems arising out of technical problems for suitability of equipment and devises shall be fixed by the tenderer, at no additional cost.
- v. **If tenderer includes price information of any nature in the 'Technical Bid' part of the tender such offers are liable for rejection without any notice to the tenderers.**
- vi. Submission of Tender Documents: -The tender documents shall be submitted in the prescribed format (in the envelopes mentioned above (S. No. 4 and 7). If in case, the envelope containing 'Techno - Commercial' and 'Price Bid' does not reach the said office (as per s. no. 4) on or before the due date and time specified for its receipt, such tenders will be treated as Delayed/ Late tenders and will neither be opened nor considered by the Authorities and will be summarily rejected. The tenderers should therefore take care and ensure that the EMD, Technical and Price Bid all three sealed separately and all in one common envelop reach the authorities of the Homi Bhabha National Institute on or before the due date and time specified for their receipt to avoid the rejection of the tenders.

vii. OPENING OF TENDERS

- a) Unless otherwise preponed or postponed with advance intimation to the tenderers, tender will be opened in two stages in the Council Hall, 2<sup>nd</sup> Floor, Training School complex, Anushaktinagar, Mumbai 400094 on the date and time indicated.
- b) The 'TechnicalBid' will be opened on the due date and time indicated for opening, as in the Instruction Sheet of this tender document. The 'Price Bid' of the Qualified tenderer will be opened subsequently (to be notified on the date of opening of the Technical Bid). Changes to the date of Price Bid opening will be notified to all the Tenderers through a notification, if any.
- c) While all the tenderers who submit tenders within the due date and time specified for its receipt will be permitted to participate in the opening of 'Technical Bid' of the tender on the due date and time indicated in the instruction sheet of this tender document, opening of the 'Price Bid' of the tender can be attended only by such of those tenderers whose 'Technical Bid' of the tenders are found to be technically suitable/ acceptable to the Purchaser and to whom intimation thereof is given by the Purchaser by Fax/ e-mail/ Letter, etc.

viii. AUTHORITY LETTER

- a) The tenderers who wish to participate in the opening of the tenders may depute their representatives to the HBNI, 2<sup>nd</sup> Floor, Council Hall, Training School Complex, Anushaktinagar, Mumbai - 400094 on the respective due date, time and venue as indicated in the Instruction Sheet of this tender document with an authority letter addressed to the Administrative Officer-III, Homi Bhabha National Institute, Anushaktinagar, Mumbai - 400094 which should be produced to the officers who are opening the tenders, on demand to prove the bonafides of the representative who participates in the opening of the tender. In case the representative of the tenderer fails to produce such an authority letter on behalf of the tenderer, such person will be debarred from participating in the opening of the tenders.
  - b) The tenderer's representative, who reaches the venue of the tender opening late, i.e. after the starting time specified for opening of the tenders, may not be allowed to take part in the tender opening. It should be noted that only one representative of each tenderer will be permitted to participate in the tender opening.
- ix. HOLIDAYS: - If the date(s) specified for receipt and opening of the tenders is/ are declared as holidays abruptly by the competent authority due to any administrative reasons, then the due date(s) for receipt/ opening of tenders will get postponed automatically to the next working day.
- x. TECHNICAL CLARIFICATIONS: - After opening the 'Technical Bid', if it becomes necessary for the technical authorities/ user department to seek clarifications from the tenderers, the same will be sought for, from the tenderers by the authorities concerned in any manner as it decides. In such an event, the tenderer shall,
- a) furnish all technical information/ clarification to the concerned technical authority directly sent by them to reach on or before the due date and time fixed by the technical authorities, in an ordinary envelope indicating the Purchaser's tender reference. If the technical clarifications/ details sought for by the technical authorities from the tenderers do not reach them on or before the due date and time fixed for its receipt, such tenders will be liable for rejection at the discretion of the competent authorities of HBNI. The tenderers should not, however, furnish altogether a new offer at this stage which is different from the Purchaser's tender specification.
- xi. POSTPONEMENT OR PREPONEMENT OF THE DATE FOR OPENING OF PRICE BID: - The Purchaser may at his discretion, depending upon the time needed for completion of the technical evaluation prepone or postpone the due date fixed for opening of the 'Price Bid' of the tender. If opening of the 'Price Bid' of the tender is required to be postponed due to non-completion of the evaluation of the 'Technical' part of the tender, indication towards postponement of the opening of the 'Price Bid' of the tender will be given to all the tenderers who have submitted the offers within the due date and time specified. However, the tenderers whose Technical Bid have been found suitable to the Purchaser will only be given intimation about the due date for opening of 'Price Bid' and such tenderers i.e.

- whose Technical Bid offers have been found suitable will only be permitted to participate in the opening of the 'Price Bid'.
- xii. VALIDITY OF OFFERS:- Offers shall be kept valid for acceptance for a period of 90 (ninety) days from the date of actual opening of 'Technical Bid' of the tender. Offers with shorter validity period will be rejected.
  - xiii. CATALOGUES/ TECHNICAL LITERATURE:- All necessary catalogues/ drawings technical literature data as are considered essential for full and correct evaluation of the offers shall in variably accompany the 'Technical Bid' of the tender.
  - xiv. SUB-CONTRACTING:- The tenderer in the event of the tender being accepted by the Purchaser shall not assign or delegate the contract or any part thereof without the prior written consent of the Purchaser.
  - xv. ACCEPTANCE OF TENDERS: - Acceptance of tenders by the Purchaser will be intimated by fax, e-mail, letter etc. within the validity date of the tender. Such a fax, email, letter etc. would then be followed by a formal purchase order/ contract.
16. The Firm whose tender is accepted will be required to furnish by way of security deposit, such sum which will amount to 10% (Ten percent) of the tendered value of the work. Security Deposit of 5% can be accepted in the form of Bank Guarantee (in case performance security exceeds Rs. 1 lakh). The same shall be submitted within 15 (Fifteen) days of date of issue of work order.
  17. The acceptance of the tender shall rest with the Institute which does not bind itself to accept the lowest tender and reserves to itself the authority to reject any or all of the tenders received, without assigning any reason. All tenders in which any of the prescribed conditions are not fulfilled or incomplete in any respect are liable to be rejected.
  18. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the company/firm who resort to canvassing will be liable for rejection.
  19. On acceptance of the tender, the name of the accredited representative(s) of the company/firm who would be responsible for taking instructions shall be communicated to the undersigned.
  20. Sales Tax/ GST or any other tax levied on material in respect of this order shall be payable by the Company/firm and the purchaser/ Client will not entertain any claim whatsoever in this respect.
  21. If any tenderer withdraws the tender within the validity period or makes any modifications in the terms and conditions of the tender which are not acceptable to the Institute, then the institute shall without prejudice to any right or remedy, be at liberty to forfeit 50% (Fifty percent) of the Earnest Money. Further, the tenderer may not be allowed to participate in the re-tendering process of the work.
  22. It will be obligatory on the part of the tenderer to sign the tender document for all the component parts.



23. This 'Notice Inviting Tender (NIT)' shall form a part of the contract document.

24. Disputes and Arbitration

Any disputes arising out of the supplies and or works undertaken by the contractor/ vendor shall be resolved mutually identifying the key issues by both the parties.

In case the disputes are not resolved within the specified period and time, the decisions of the Vice Chancellor, HBNI shall be final and binding.

Notwithstanding anything contained in the Terms and Conditions and the Special Conditions, in the event of any question, dispute or difference arising under these conditions or any conditions contained in the tender document shall be referred to the HBNI Authority, the Vice Chancellor, HBNI, whose decisions are final and binding.

### III. TECHNICAL SPECIFICATIONS[for HD AV/ VC facility]

The technical specifications for the equipment, instrument, Devices for the HD Video, Audio and Video Conference facility is illustrated below:

#### A. Brief Description of the Hall

The Council Hall has the dimensions of 25' (W) x 50' (L) x 11' (H) and with a seating capacity of around 30 persons around a V-shaped table. There is a presenter desk and chair.

**Presently, five display units are available**

- (i) **Projector screen (1 nos.) on front wall opposite of the conference table and**
- (ii) **Wall mounted flat panel displays (3 + 3 nos.)**

It is proposed to set up a video conferencing (VC) facility with two additional display units for remote participant meetings along with a necessary audio reinforcement system for local meetings. The VC cameras should be placed in such a way that it covers all the participants in the hall. There should be a provision from the second camera to cover the presenter & also the projection screen. The power point presentation utilized during the meeting in the Council Hall should also be visible to the remote participants. The local screen should share the audio and video of remote participants as well.

#### B. End User Requirements

For local meeting with the presentations from Laptop/Desktop and the audio from laptop/desktop, presenter's wireless mic and audience wireless handheld mic will be used. One laptop/desktop will be located on presenter's desk and two more on conference table. Conference table laptop presentation will be shared using wireless streaming technique. Laptop display interface either VGA or HDMI. Anyone of these laptops will be used for sharing and collaboration.

Video Conference (VC) meeting with 3+1 Site on intranet or internet with two video cameras will be used. VC main camera to be mounted in front of the table below the projector screen and second camera on left of screen wall.

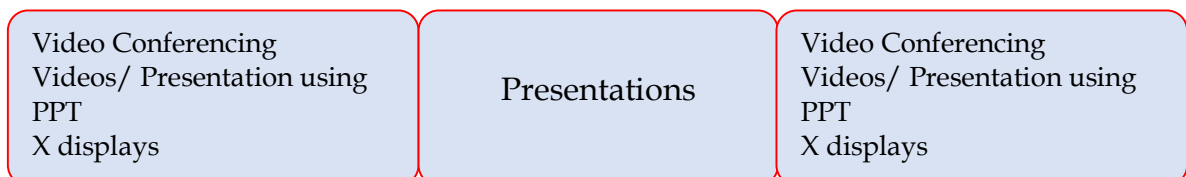
At least 3+1 Web Conference Laptop/Desktop PC clients on internet in a VC session

At least 3+1 H.323 clients in a VC session

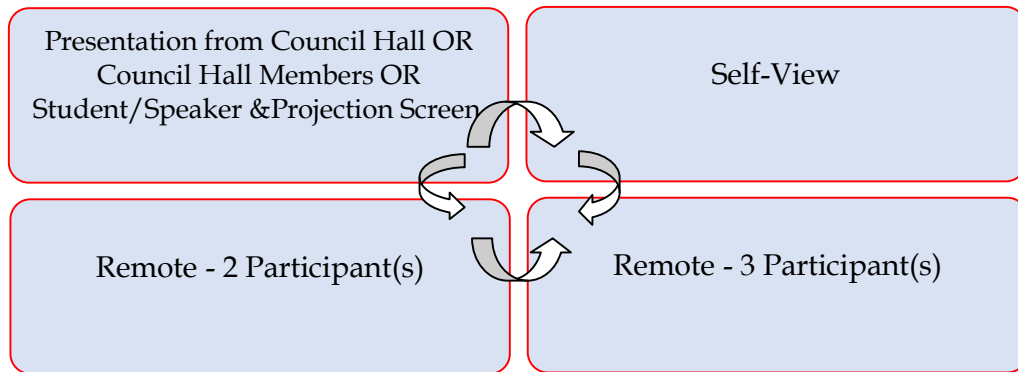
At least 3+1 Web Conference clients and H.323 clients combined VC session

Wireless Sharing presentations & Collaboration during VC session & Local meetings using a Laptop/Desktop

- (a) Video Layout at Council Hall Display i.e., Projector Screen + All six 55" Adjacent Displays



(b) Video Layout at Remote End Display



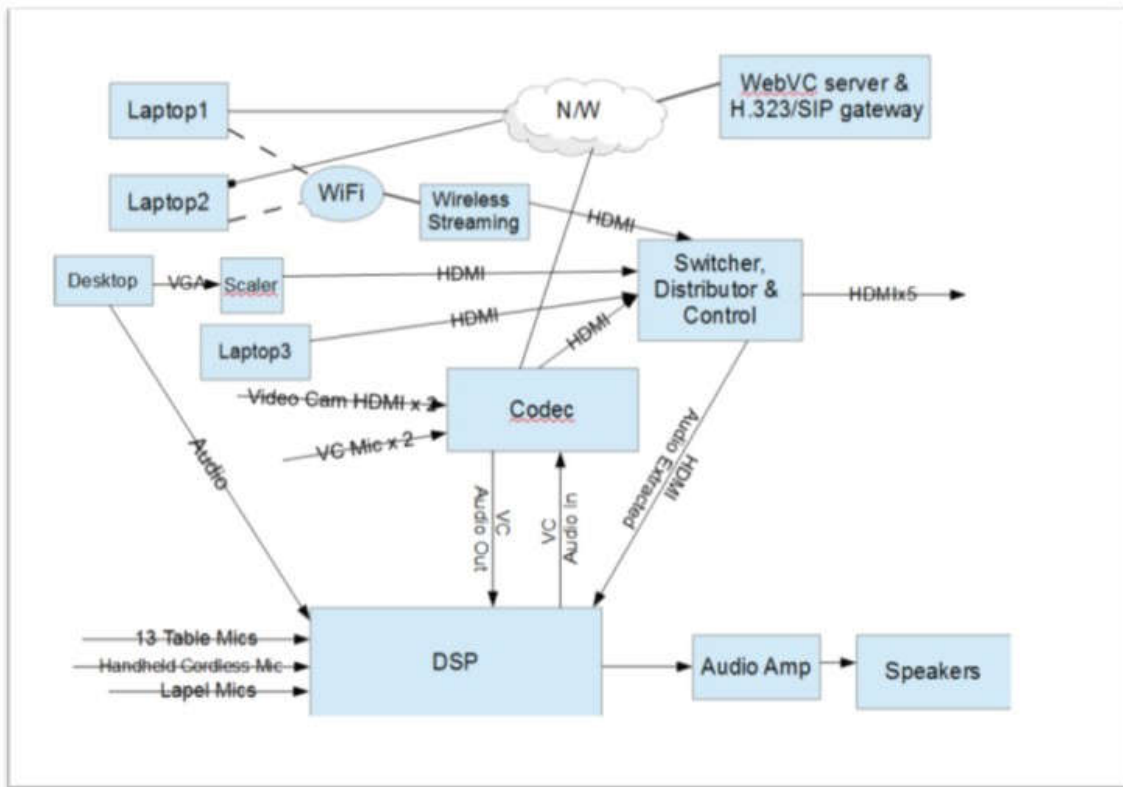
- Speech reinforcement system and its integration with the VC Audio system
- Full HD video cabling for **existing one Projector and Six LED/LCD displays**
- AV Control Functions
- Power On and Off
- Select Local Meeting or Video Conference Meeting
- Volume Control of Audio System
- Local Meeting
- Select from Three Presentation sources
- Display output on all seven units
- Audio source any participant of the meeting
- VC meeting
- Connect to remote participant - Web client or H.323/SIP Client
- Start/Stop Presentation from any participant's presentation source
- Switching of Camera 1 and Camera 2 connected to VC codec
- AV Equipment space is limited to 15U x 2 small racks enclosed in a wooden cabinet.
- AV system & control documentation
- Operation and User Guide documentation
- Training for Operation, Configuration, Upgradation, Backups and Basic Maintenance/troubleshooting

**C. Item List & Scope of Work**

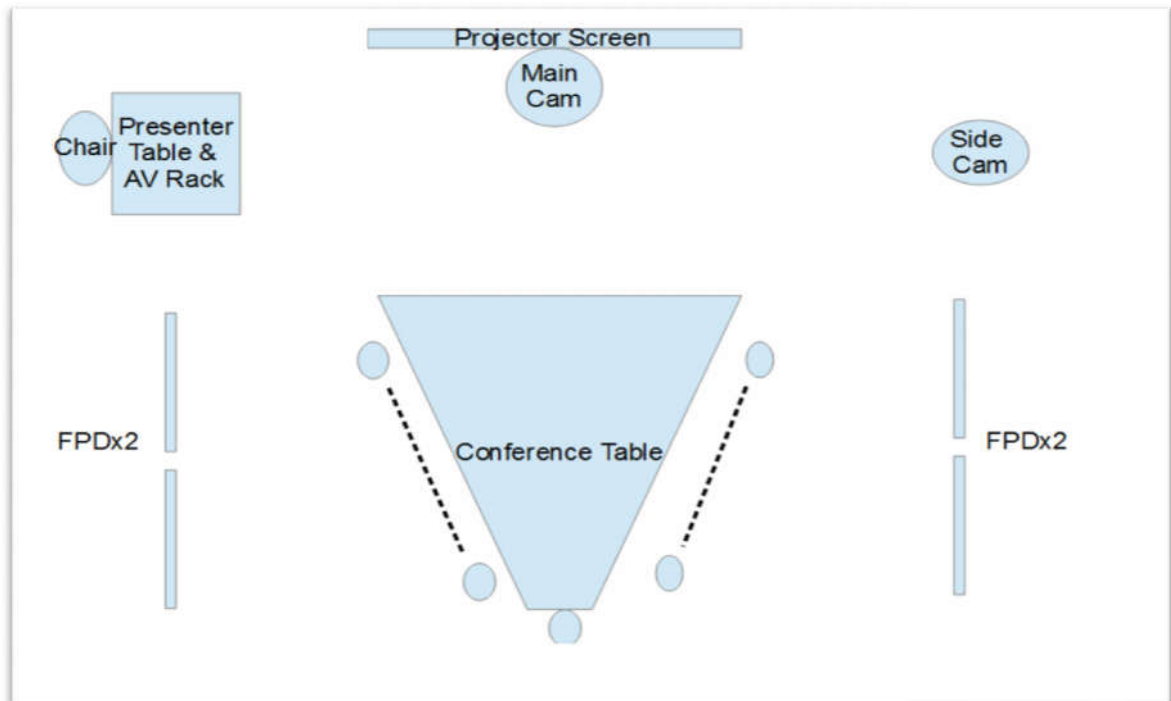
- (i) 3+1 Full HD VC Codec (H.323 and SIP) with Presentation sharing and dual cameraports with life time license, Two HDMI PTZ Camera
- (ii) Web based VC conference Server On Premise Software with Life Time License
- (iii) H.323 and Web based VC client session On Premise gateway with Life Time License
- (iv) Speech Reinforcement System for a conference room having 30-person capacity
- (v) AV Control System with HDMI Scaler, Switcher, Distributor and Wireless Streaming Two nos. of 55" Full HD LED Displays
- (vi) Full HD Video Cables and related accessories
- (vii) 15U x 2 small racks enclosed in a wooden cabinet.
- (viii) Installation, DSP programming, HD Video & Audio Cabling, Commissioning, and Training

**Warranty** for the equipment, devices and peripherals: 3 years On Site Comprehensive Warranty with 4th & 5th years extension options on all of the above-mentioned items.

**D. AV System Schematic Diagram**



**AV System Placement Layout**



**E. The Technical Bid (Quotation) should include:**

Two Part Tender for Supply, Installation, Commissioning of HD Video and Video Conference Facility at the Council Hall, HBNI, Mumbai

- (a) Confirmation that the supplier has fully understood the scope of the work (site visit optional)
- (b) Each and every item from 'C' Item List
- (c) Complete bill of materials
- (d) AV system connectivity diagram and physical/mounting layout
- (e) List of PO/WO with similar & equivalent complexity, executed in last three years
- (f) Compliance Sheet
- (g) Server, OS, Networking, Firewall & NAT traversal requirements
- (h) Space, Power requirements

**E) Quotation/Offer Acceptance Criteria**

- Technical Evaluation of capabilities based on the demo-visit to Fully Operational Meeting Room with equivalent AV-VC complexity, set up by the supplier
- Availability of all the Offer documents as per above para 'E'

<b>1. 3+1 Full HD VC Codec with Presentation</b> sharing and dual camera ports with life time license with PTZ-HDMI Camera (2 nos.) – 1 set		
<b>S. No.</b>	<b>FEATURE(S)</b>	<b>SPECIFICATIONS</b>
1.	Protocols	H.323, SIP
2.	Web Clients	TCP-UDP/IP
3.	Multisite	3 + 1
4.	Presentation & Collaboration	H.239, upto Full HD resolution with Audio, HDMI input Wi-fi Connectivity between Codec and Desktop/ Laptop minimum Two Laptop/desktop Wi-fi Connectivity
5.	Video & Camera Inputs	Minimum – 2xHDMI, 2xUSB 3.0/ HDMI
6.	Video Outputs	1xHDMI, 1xHDMI
7.	Audio Inputs	Balanced Audio, USB, Line in with Echo cancellation
8.	Audio Outputs	Balanced Audio, Line Out, HDMI, with Echo cancellation
9.	Resolutions	Upto 1080p60 H.24, AVC upto 6 Mbps AAC-LD, G-722, and 3G
10.	Control & Management	IR remote, Web based, Directory
11.	Recording and Streaming	1080p Recording and live Streaming Unit cast and Multicast Local and External USB Storage MP4 and WMV
12.	Pocket loss and Error Control	Loss concealment and Recovery
13.	Network	10/100/1000 Mbps Ethernet
14.	Privacy	Media and Signalling encryption
15.	Camera	12xOptical, + - 170/-30 to +90 deg PTZ, 3,9-47 mm, 73 deg FOV with auto-focus Full HD 1080p60 HDMI PTZ by IR Remote Controller

		2Nos
16.	Microphone	360-degree coverage, 2nos
17.	Accessories	Power Supply, IR with batteries, HDMI Video and Audio Cables, LAN cables

<b>2. Web Server with Life time license - 1 set</b>		
<b>S. No.</b>	<b>FEATURE(S)</b>	<b>SPECIFICATIONS</b>
1.	Server	On premise based
2.	Protocol	Compatible with H.323 and SIP sessions
3.	Clients	Web based Concurrent at least 3 + 1 Continuous presence 3 + 1 SSL
4.	Client Types	PC, Mobile Phones
5.	Drivers	Windows OS, USB based Camera and Mic
6.	Content Sharing	Compatible with H.323 and SIP sessions

<b>3. H.323 and Web based VC client session gateway with Life Time License - 1 set</b>		
<b>S. No.</b>	<b>FEATURE(S)</b>	<b>SPECIFICATIONS</b>
1.	Server	On premise based
2.	Protocol	Compatible with H.323 and SIP sessions
3.	Clients	Web based
4.	Drivers	Windows OS, USB based Camera and Mic
5.	Content Sharing	Compatible with H.323 and SIP sessions

<b>4. Speech Reinforcement System - 1 set</b>		
<b>S. No.</b>	<b>FEATURE(S)</b>	<b>SPECIFICATIONS</b>
1.	Audio sources	13 x Gooseneck Mic. 1 x Coller Mic UHF and 1 x Mic spare 2 x Handheld UHF wireless Mic and 2 x Laptop/Desktop 1x Video Conference System
2.	Audio Processor	Digital Signal Processor Audio Matrix Switcher 20 Hz to 20 kHz audio processing 24 bits, 48 Khz sampling Better than or equal to 100 db SNR Better than or equal to 0.01% THD+Noise Better than or equal to 90 dB cross talk AEC control Latency deterministic and selectable Ethernet base control functions
3.	Auto Amplifier	Multi-Channel, Class D

		Professional grade signal to noise ratio with 0,1% THD+N CMRR better than 70 dB Convection cooled, fan-less operation Auto Protection built in Compatible with loudspeakers
4.	Loudspeakers	Front, Side and Ceiling – Distributed Full range audio Overload protection RoHS compliant Better than 80 dB SPL
5.	Audio Output	100% coverage of Council Hall Seats/ Participants 80dB to 90dB SNR and speech clarity at Council Hall and Remote end room Echo Cancellation and Noise Reduction
6.	Audio Input	100% coverage of Council Hall Seats/ Participants 90dB to 100dB SNR pick up
7.	Accessories	All Cables, bases and mounting plates/clamps, pre-amps and power supplies, protective covers/cases, Windscreens for mics, Batteries, as per the site requirements as per the site

<b>5. AV Control System – 1 set</b>		
<b>S. No.</b>	<b>FEATURE(S)</b>	<b>SPECIFICATIONS</b>
1.	Switching Functions	Manual Select Mode – Local or Video Conference(VC) Meeting; Cable insertion/removal should not be required. During VC Select from two camera sources using IR remote or dedicated controller
2.	Video Switcher, Scaler & Distributor	Upto 8 x 1080p60 HDMI 2.0b inputs Upto 2x1920x1200, Up to 120Hz VGA/DVI with audio Atleast 8 x 1080p60HDMI 2.0b Outputs HDMI Audio de-embedding and Breakaway HDCP 2.2. compliant Auto Cable Equalisation Presets and Configurable, Programmable Ethernet base control functions
3.	AV Layout Functions during VC session	1) Remote + Local Participants/Presenter at near end display 2) Remote Participants/ Presenter at far end display Audio received from Presenter, Local and Remote Participants 3) Audio distributed to Hall speakers and to remote participants.
4.	AV layout Functions during Local Meeting	Laptop/Desktop presentation to Projector + 6 LED displays Presenter/ Participant Audio to Speakers in hall
5.	Wireless Presentation System	<b>Sources:</b> Microsoft Windows OS based

		<p>Laptop/Desktop; Android, IOS based Smart devices</p> <p><b>Video outputs:</b> 1xHDMI, 30 fps, 1920 x1200</p> <p><b>Number of sources:</b>Atleast 2</p> <p><b>Audio:</b> via HDMI, analog via Audio Jack 3.5 mm, S/PDIF</p> <p><b>Authentication protocol:</b> WPA2-PSK in standalone mode WPA2-PSK or IEEE 802.IX in network integration mode</p> <p><b>DHCP Server</b></p> <p><b>Wireless transmission protocol:</b> IEEE 802.11 a/g/n</p> <p><b>Reach:</b> Adjustable with signal strength modulation; max. 30m (100 ft)</p> <p><b>Frequency band:</b> 2.4 GHZ and 5 GHZ</p> <p><b>Connections:</b> 1x Ethernet LAN, USB, Audio analogue line out on mini jack socket (3.5 mm) digital S/PDIF</p>
6.	Accessories	All Cables, bases and mounting plates/clamps, pre-amps and power supplies, protective covers/cases, Windscreens for mics, Batteries, as per the site.

6. 55" Full HD LED Displays - 2 nos.		
S. No.	FEATURE(S)	SPECIFICATIONS
1.	Diagonal size, Type, Resolution	55", 120 Hz LED BLU, 1920 x180 (16.9)
2.	Pixel Pitch (mm)	0.21 (H) x 0.63 (V)
3.	Brightness, Contrast Ratio	350nit, 5000:1
4.	Viewing Angle (H/V)	178/178
5.	Response Time	8 ms
6.	Display colours, Dynamic C/R	16.7 M, 50,000:1
7.	H-Scanning, V-Scanning, Freq.	30-81 kHz, 48-75kHz
8.	Sound	Built in Speaker (10W + 10W)
9.	Input	HDMI, DVI-D, Analog D-Sub, Component (CVBS common), Audio-stereo mini jack
10.	Output	Audio-stereo mini jack
11.	External control	RS232C (in/out) thru stereo jack, RJ45
12.	Power	AC 100-240 V (+-10%) 50/60 Hz
13.	VESA mount	400 x400 mm
14.	Certification	Safety: EN60950-1 EMC-Class A Environment - Energy



<b>7. Full HD Video Cables and related accessories with Cabling - 1 set</b>		
<b>S. No.</b>	<b>FEATURE(S)</b>	<b>SPECIFICATIONS</b>
1.	Cables	Upto 8x1080p60 HDMI 2.0 cables
2.	Type & Length	22A WG, Gold Plated Contacts Length as per site requirements verified during the Site Inspection visit
3.	Certification	4K/60 Certified and verified

**Existing AV System in the Council Hall, HBNI (given as under):**

Video System Components

- (i) Ceiling mounted projector with projection screen, Epson 1 no.
- (ii) Flat Panel Displays-wall mounted, Samsung - 4 nos.

## **PART 2:TECHNICAL BID**

#### **IV. SPECIAL CONDITIONS (to the Technical Bid)**

Following the General Conditions of this Tender specified in Part 1, the Specific Conditions shall be applicable to the Technical Bid, given as under:

##### **4.1 Scope of the Work**

The scope of the work shall be to supply, install and commission the HD AV/ VC systems as per the design and specifications of the equipment, devices and peripherals illustrated in the Technical Specifications section (Part 1 of the Tender Document).

It is the responsibility of the Tenderer to get familiarity of the specifications of the equipment and devices completely. Any doubts should be raised at the pre-bid meeting and any items not clarified at this stage will be responsibility of the vendor.

The Client, HBNI is looking for a service provider with high technical skill level in the AV system, HD video conference facility and extremely high quality of work and excellent project management skills as this area is a specialised requirement and the best of the finishes and installation will be accepted.

The vendor will be allowed 2 months for completion of the work from the date of award of the work. The works are to be carried out in coherence with the ongoing activities in the Council Hall. The vendor shall coordinate with the Administrative Office for the ongoing activities.

The vendor will be issued a Purchase Order for "Supply, Installation and Commissioning of the AV and HD Video conference facility at HBNI, Council Hall". The equipment and devices shall have the specifications and the terms and conditions as stipulated in the Tender document. The rates shall be quoted by the Tenderer as per various terms and conditions of this document, which shall also form part of the agreement.

##### **4.2 Upgrading the Council Hall**

The Council Hall serves as an important meeting room for all statutory functions & meetings of the institute such as Council of Management, Academic Council, Boards of Studies, Finance Committee meetings and the most important academic activity held here include the viva voce examination hall for students defending their thesis.

The Council Hall presently is connected internally with screening facility and a projection system with 4 TV screens for better readability by group of audience sitting at locations.

The hall has seating capacity of 60 persons. The hall also has a wi-fi connectivity.

The following Sections illustrate the requirement in terms of technical specifications, and terms for testing, commissioning, training and installation of the equipment, devices and related peripherals for the HD video, audio and conference facility at the Council Hall.

### **4.3 Technical Clarifications**

4.3.1 After opening the Technical Bid, if it becomes necessary to seek clarifications from the tenderer, the same shall be sought by the authorities. In such an event the tenderer shall:

4.3.2 Furnish all technical information/ clarification to the concerned in the Technical Bid of the document so as to reach on or before the prescribed date, time and venue. If such technical clarifications/ details sought for by the authorities from the tenderers do not reach them on or before the due date and time fixed for its receipt, such tender will be liable for rejection at the discretion of HBNI authorities or such other assigned by the authorities. The Tenderer should not however, furnish altogether a new offer at this stage which is different from the given specifications.

4.3.3 Exercise an option to modify the price and other related commercial terms and conditions based on the technical clarifications. In case any revision is proposed by the Bidder in the price, they should communicate such a revision in price only to Competent Authority. This letter containing price revision should be enclosed in a separate envelope super scribing "Part II: Price Bid (Revised)".

4.3.4 Irrespective of the circumstances whether technical clarifications have been sought for or not from any other tenderer, the tenderers will be free to have technical discussions with the technical authorities concerning the scope details of the tender etc. if they so consider it so essential.

4.3.5 Copies of the correspondence sent relating to price and other commercial terms and conditions should not be endorsed to the technical authorities.

### **4.4 Terms and Conditions**

4.4.1 Any contract conducted pursuant to this invitation to tender shall be governed by the General Conditions of the Contract as contained in Part I of the Tender document. Tenderers must therefore take special care to go through these general conditions of contract and in the exceptional cases if any deviations are proposed, these must clearly have indicated in the Technical Bid as a separate annexure instead of merely enclosing their printed conditions of sale.

4.4.2 Tenders made subject to counter conditions of far too many deviations from the general conditions of the contract are liable to be ignored. It should be realised that failure to bring out deviations from the General Conditions of Contract contained in the section of this tender document will imply that the tenderer is willing to execute the contract as per the purchaser's terms and conditions of the contract.

### **4.5 Spares and Accessories**

4.5.1 Tenders for HD - AV equipment, video conference facility shall also indicate prices for essential accessories, optional accessories and spares necessary for satisfactory operation of the equipment/ devices & related peripherals.

4.4.2 The spares and accessories may be provided for a period of (a) 2-years (two years) and (b) for a period of 5-years (five years).

4.4.3 Prices for accessories and spares shall be itemized. Tenders where only lump sum prices are indicated are liable to be ignored. Care shall be taken to list all items of spare and quantity recommended and also the individual price for these items. These details should be included only in Part II Price Bid. However, a list of spares and accessories without the price should be included in Part I (Technical) of the tender.

#### **4.6 Quantity**

The purchaser reserves the right to accept tenders for any quantity of choice and the tenderers shall be bound to accept a contract for any quantity. The purchase also reserves the right to accept or reject lowest and any tender in full or part without assigning any reasons.

#### **4.7 Sub-contracting**

4.7.1 The Tender in the event of being accepted by the Purchaser shall not assign/ sublet or delegate the contract or any part thereof without prior written consent of the purchaser, which consent shall not be unreasonably withheld, but the tenderer may without the Purchaser's consent purchase such parts, accessories, raw materials, etc. from any of the leading and reputed manufacturer in case the tenderer do not normally manufacture such items.

4.7.2 The Tenderer shall solely responsible for the satisfactory execution of the contract irrespective of the fact whether a part or portion of a contract has been assigned or sublet by him to a sub-contractor even when such sub-contracting has been done with the prior written consent of the Purchaser.

#### **4.8 Quality Surveillance/ Inspection and Submission of Reports**

4.8.1 The Purchaser at the discretion may excise option to seek prior evaluation of the tenderers and depute key officials, representatives for any quality surveillance of choice to assess the quality aspects by visit to the already installed project sites.

4.8.2 The Tenderer shall allow reasonable facility, free access to such places, premises for ascertaining the progress of the delivery of the equipment, devices.

#### **4.9 Installation & Commissioning**

The Tenderer shall clearly and separately furnish terms of installation, commissioning of the equipment, devices and related peripherals.

#### **4.10 Training and Instruction Manual**

The tenderer/ Contractor shall provide training to the authorised officials in the use of equipment, devices as per provisions made and troubleshooting relating to purchase and installation of the devices.

The Contractor shall prepare Instruction Manual where necessary including the Standard Operating Procedure document required for operating of such equipment and devices. The

Contractor shall clearly specify in the offer about the readiness to supply the Instruction Manual/ Standard Operating Procedure.

#### **4.11 Packing**

4.11.1 The equipment, devices and peripherals shall be packed and transported as per the prescribed standards of the route such as 'sea' or 'air' or 'surface'. Even when no packing specifications are included, the supplier shall provide for appropriate packing depending upon the nature of supply and transportation and handling.

4.11.2 The equipment, devices shall be so packed and protected as not to suffer any deterioration damage or breakage during transportation, shipment and storage.

4.11.3 Each package shall be properly labelled to indicate the type and quantity if materials it contains, the purchase order number, its dimension (where needed) and any other item necessary data to identify the equipment and relate to the contract.

#### **4.12 Warranty**

4.12.1 The equipment, devices and peripherals supplied by the contractor shall be of best quality and workmanship. The contractor/ supplier shall supply in accordance with the technical specifications unless any deviation has been expressly specified in the tender conditions and any amendments agreed to.

4.12.2 The Contract giving an undertaking and submission of this Technical and Price Bid in accordance with the technical specifications shall be deemed to be an admission on their part that the firm has fully acquainted with the details thereof. No claim shall lie against the purchaser on the ground that the contractor did not examine or acquaint fully with the technical specifications.

4.12.3 The warranty of the equipment, devices and peripherals including the spares shall be as per the terms and conditions specified in the Technical Specifications, section III.

4.12.4 Should any defect or deficiency in the equipment, devices and peripherals, the vendor under the contract appear to be discovered within 12 months from the date of receipt and acceptance of such equipment, devices and peripherals by HBNI, the contractor upon notification shall forthwith take measures to rectify every such defect, deficiency by the purchaser, shall forthwith take measure to rectify every such defect, deficiency or failure without any cost to the purchaser.

#### **4.13 Force Majeure**

4.13.1 Force Majeure shall mean any event which is beyond the control of the contractor or the purchaser, as the case may be, which they could not foresee or with reasonable amount of diligence could not have foreseen and which sustainability affects the performance of the contract. These may be natural and manmade or such other due to unforeseen circumstances such as riots, unrest, hostilities etc.

4.13.2 The purchaser and contract effected by the event of force majeure shall use reasonable efforts to mitigate the effect thereof upon its or their performance of the contract and to fulfil the obligations under the contract requirements.

4.13.3 Notice Period: If either party is prevented, hindered or delayed from or in performing any of its obligations under the contract by an event of force majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 2-weeks after the occurrence of such event. The contractor/ vendor shall give such notice to the purchaser when it ceases to be affected by the force majeure.

4.13.4 The party who has given such notice, shall be accepted by the Competent Authority of the HBNI and shall be excused from the performance or punctual performance of its obligations under the specified terms and conditions of the Bid for so long as the relevant event of force majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The delivery time shall be re-fixed in accordance with the revised time plan.

## V. PRICE BID

### 5.1 General Guidelines for Price Bid

(1) Definitions

- (a) 'Purchaser/ Client' is Homi Bhabha National Institute represented by the Competent Authority and or his nominees
- (b) 'Project Manager/ Nodal Officer' is the nominated person by the HBNI Authorities
- (c) 'Accepting Authority' is the Vice Chancellor, HBNI
- (d) 'Rates to be considered for Estimate' DSR of 2016/17 (as applicable)/ market rates as applicable

- |     |   |   |
|-----|---|---|
| (2) | The Security Deposit in the form of EMD   | 2% of project value i.e., Rs. 70,000/-                                      |
|     | Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance | To be submitted along with Price Bid (as given in Tender Instruction Sheet) |
| (3) | Liquidated damages<br>Authority for fixing LD clause  | Vice Chancellor, HBNI   |
| (4) | Number of days from the date of issue of letter of acceptance for reckoning the date of start       | 7 days  |
| (5) | Settlement of disputes  | Vice Chancellor or an appointed Committee                                   |

### 5.2 Price

5.2.1 The prices quoted must be FIRM during the validity of the offer. The price bid shall be submitted in the format submitted in Form 1C along with supporting Annexure as mentioned therein. **The Price Bid shall contain separate price for AMC for minimum period of 3 years and extendable for 2 more years.**

5.2.2 All the Statutory levies such as GST should be shown separately. All such levies shall be reimbursed by HBNI authorities only on production of documentary proof of depositing the levies to the Government Authority.

5.2.3 The Paying Authority of HBNI is "Accounts Officer, HBNI, Mumbai.

5.2.5 The vendor shall submit all the Bills, claims due for the supply, installation and commissioning of the works undertaken in TRIPLICATE.

5.3 Payment Terms: (a) 90% of Total Contract (tendered value) on completion of installation and commissioning of all the consignments and inspection by the HBNI Authorities.  
(b) Balance Payment will be made after 1 month of commissioning.



## **FORMATS FOR SUBMISSION OF TENDER RESPONSES**

**(a) Technical Bid**

**(b) Price Bid**

**Format for submission of Tender Response**

**Form 1A**

**TECHNICAL BID (Form for submission)**

From

M/s

.....  
.....  
.....  
.....  
.....

The Vice Chancellor  
Homi Bhabha National Institute  
(a Deemed to be University & an aided institution of the Department of Atomic Energy,  
Government of India)  
2<sup>nd</sup> Floor, Training School Complex  
Anushaktinagar  
Mumbai 400 094

**SUB: Supply, Installation and Commissioning of the HD Video, Audio and  
Conference Facility at the Council Hall, HBNI, Mumbai.**

Dear Sir,

I/ We..... represented through  
M/s.....(name of the firm) and have gone through the  
tendering conditions and the General Conditions of Contracts and Special Conditions of  
Contracts for the subject project (as given above) pursuant to the tender conditions and  
hereby agree to supply the equipment, devices, instruments conforming to the tender  
specifications incorporated in Part III of the tender documents strictly adhering to the  
General and Special Conditions of Contract as set out in Section I and/ or Section II of the  
tender documents.

1. HBNI will be at liberty to accept any one or more of the items of stores offered by us  
and ..... (name of the firm) shall be  
bound to supply HBNI as may be specified in the purchase order/ contract

OR

2. .... (name of the firm) are not  
in a position to submit an offer as the specification contained in Part III of the tender  
documents and would, therefore, submit herewith an ALTERNATIVE OFFERS for  
your consideration. .... (name of the firm) hereby confirm  
that this alternative offer is of an equivalent specification and would equally serve  
the purpose.

3. Technical deviations to specifications contained in Part III of the tender documents  
are detailed in Annexure "A" to the tender form and deviation proposed to General  
and Special conditions of Contracts contained in Part II of the tender documents are  
detailed in Annexure "B" to the tender form.

4. .... (name of the firm) are also enclosing herewith all the leaflets/ catalogues etc. pertaining to the stores offered.

Yours faithfully,

Stamp and Signature of the Tenderer

Encl.: Deviations to technical specification - Annexure "A"  
Deviations to General and Special Conditions of Contract - Annexure "B"

**General Information on your Company (to be submitted with Technical Bid)**

This section must be completed in full and failure to provide this information will mean your tender submission is disqualified. Please answer all field and indicate "NA" if the specific field is not applicable to your company and include all additional and supporting information where indicated.

**A. About the Firm/ Organization**

S. No.	Description of Items	Enclosures & information
1.	Name of the firm/ Organization	
2.	If registered as per Govt. regulations (pl. give registration number) attach copies of relevant document.	Central/ State/ MSME/ NSIC/ RoC:
3.	Details of PAN/ TIN/ GST (attach a copy)	
4.	Year of Establishment	
5.	Address of the Registered office	
6.	Address for Communication	
7.	Telephone (L) Fax E-mail:	
8.	Name of CEO/ Prop. of the firm	
9.	Nodal Officer for the present works	
10.	Mobile contact of key persons	CEO: Nodal/ Key Officer:
11.	<b>Total Staff details:</b>	
	Engineers	
	Management Staff	
	Technical/ Supporting staff	
	Field Staff	
12.	Balance Sheet and other supporting documents for clauses 11 and 12 (Specified in General conditions, page 4)	
13.	Any other information about the company	

**B. List the partnerships the firm/ organization having dealership details:**

S. No.	Name of the firm	Type of partnership: Dealer/ Sub-contractor/ partnership firm	Products for which such partnership exist

**Project References**

This section must be completed in full and failure to provide this information will mean your tender submission is disqualified. Please answer all field and indicate “NA” if the specific field is not applicable to your company and include all additional and supporting information where indicated.

**C. About the Firm/ Organization’ Projects**

Name of the project:		
Project start date	MM/ YYYY	Completion date: MM/ YYYY
Project Cost:	Client Name:	Address:
Whether executed single or in partnership		Name of Partnership firm
	No. of Staff engaged	No. of Staff engaged
Description of Project:		

Name of the project:		
Project start date	MM/ YYYY	Completion date: MM/ YYYY
Project Cost:	Client Name:	Address:
Whether executed single or in partnership		Name of Partnership firm
	No. of Staff engaged	No. of Staff engaged
Description of Project:		

Name of the project:		
Project start date	MM/ YYYY	Completion date: MM/ YYYY
Project Cost:	Client Name:	Address:
Whether executed single or in partnership		Name of Partnership firm
	No. of Staff engaged	No. of Staff engaged
Description of Project:		

The Bidder is requested to make as many copies and may list only key the projects executed in the last 3 years relevant to the educational institutions.

**CERTIFICATION**

Certified that the above list of works is complete and no work has been left undisclosed and that the information furnished above is true, correct and not misleading to my/our knowledge and belief.

Signature of the Key Officials

**Performance Security (to be executed by the Contractor's Bank)**

The Vice Chancellor,  
Homi Bhabha National institute, a Deemed to be University &  
An aided Institution of the Department of Atomic Energy, Govt. of India,  
2<sup>nd</sup> Floor, Training School Complex,  
Anushaktinagar,  
Mumbai 400094.

WHEREAS on or about the .....  
.....

having its registered office at ..... (hereinafter)  
called "the contractor", entered into an Agreement No.....  
dated ..... for manufacture and supply of  
.....  
(hereinafter called "the Contract" with the HBNI Authorities represented through the Vice  
Chancellor, acting through the Registrar, HBNI (hereinafter called "the Purchaser").

AND WHEREAS under the terms and conditions of the contract final payment amounting  
to ..... under the contract is to be made against  
a Performance Bond in the form of Bank Guarantee furnished by the Contractor for a sum of  
..... equivalent to 10% (ten percent) of the value of the contract towards  
satisfactory performance of the ..... (hereinafter  
called the "Equipment") valid for a period of 12 months from the date of putting into  
operation of the said equipment of ..... months from the date of receipt of  
the last lot of consignment whichever is earlier: -

NOW WE the ..... Bank in consideration of the  
promise and payment of the final / balance amount of .....  
under the contract to the Contractor hereby agree and undertake to pay on demand and  
without any demur to the HBNI Authorities, on behalf of the contractor a sum not exceeding  
..... against any loss or damage that may be suffered by the Purchase  
by the reasons of any unsatisfactory performance of the said equipment.

AND WE hereby also agree that the decision of the said Authorities as to whether the said  
equipment is giving satisfactory performance or not and as to the amount of loss or damage  
suffered by the Purchaser on account of unsatisfactory performance of the said equipment  
shall be final and binding on us.

AND WE ..... (Bank) hereby further agree that  
our liability hereunder shall not be discharged by virtue of any agreement between the  
Purchaser and the Contractor whether with or without knowledge and / or consent or by  
reason of the Purchaser showing any indulgence or forbearance to the Contractor whether as

to payment, time for performance or any other matter whatsoever relating to the contract which but for this provision would amount to discharge of the surety under the law.

OUR guarantee shall remain in force until and unless a claim under the guarantee is lodged with us within six months from the date, all rights of the Purchaser under the guarantee shall be forfeited and we shall be relieved and discharged from all our liabilities hereunder.

OUR liability under this guarantee shall not be affected by any change in our constitution or the constitution of the Contractor.

(Stamp & Signature)

For and on behalf of ..... (Bank)

Dated at ..... the ..... 2018



**Technical Specification of the Equipment, Devices and Instruments for AV/ VC facility**  
*(please use the table given in Part 1 of the Tender document, Technical Specifications)*



## **Payment Terms**



**Annexure B**

Note to Tenderers: If any deviations are proposed, these must be clearly stated in the tender and incorporated here as Annexure "B". Please mark 'NIL' if no deviations.