

GOVERNMENT OF UTTARAKHAND
Office of Superintending Engineer,
Research Circle
Irrigation Research Institute Roorkee-247667
E-mail: uttarkhandwrtd@gmail.com, Website: www.iri-roorkee.res.in

Tender Notice No.: 22/SE(R)/NHP/e-Tender/2020-21 Dated 25.03.2021

Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee on behalf of "Governor of Uttarakhand" invites item wise rates for the following works through e-tenders in "Two Bid System" as given below.

S. No.	Name of work	Earnest Money (Rs.)	Cost of tender form (Rs.)	Validity of Tender	Period of completion
1	2	3	4	5	6
1	Supply & Installation of IT and Audio Visual Equipment in SWIC Building at Roorkee under NHP	2.60 Lac	4,000.00+ GST @ 18%	90 Days	3 months

Key Dates

1	Date of calling	25.03.2021	-
2	Date of online publication	26.03.2021	05.30 PM
3	Documents downloads start date	26.03.2021	06.00 PM
4	Pre-bid meeting date	06.04.2021	01.30 PM
5	Bid submission start date	19.04.2021	03.30 PM
6	Bid submission end date	26.04.2021	03.00 PM
7	Physical Submission of bid security and cost of bidding document	26.04.2021	03.00 PM
8	Date of opening of technical bid	26.04.2021	03.30 PM
9	Date of opening of financial bid	To be declared later	

For further details please log on to www.uktenders.gov.in


Superintending Engineer
Research Circle
Irrigation Research Institute, Roorkee

SECTION I: INVITATION FOR BIDS (IFB)

NATIONAL COMPETITIVE BIDDING FOR
Supply, and Installation of IT and Audio Visual Equipment in SWIC Building at Roorkee
under National Hydrology Project
(Two-Envelope Bidding Process with e-Procurement)
INVITATION FOR BIDS (IFB)
E-Procurement Notice

Date:

Loan No. : 8725IN

IFB No.: 22 /SE (R)/ NHP/ e-Tender/ 2020-21, dated

1. This Invitation for Bid follows the General Procurement Notice for this Project that appeared in Development Business on 21 Sep 2016
2. The Government of India has received financing from World Bank towards the cost of National Hydrology Project and it is intended that part of the proceeds will be applied to eligible payments under the contract for “**Supply and Installation of IT and Audio Visual Equipment in SWIC Building at Roorkee under National Hydrology Project**”.
3. The Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee invites online bids from eligible bidders for “Supply and Installation of IT and Audio Visual Equipment in SWIC Building at Roorkee under National Hydrology Project”.
4. Bidding will be conducted through the National Competitive Bidding (NCB) procedures agreed with World Bank. The bidding is open to all eligible bidders as defined in the Bank’s Procurement Guidelines. In addition, please refer to paragraphs 1.6 and 1.7 of the Guidelines setting forth the World Bank’s policy on conflict of interest.
5. Bidding documents are available online on <http://uktenders.gov.in> for a non-refundable fee as indicated below, in the form of Demand Draft/Banker’s cheque on any Scheduled/Nationalized bank payable at Roorkee in favour of **Executive Engineer, Design Division, Irrigation Design Organisation, Roorkee**. Demand Draft to be submitted subsequently as per the procedure described in paragraph 7 below). Bidders will be required to register in the website, which is free of cost. The bidder would be responsible for ensuring that any addenda available on the website is also downloaded and incorporated.
 - (a) Price of bidding document (Separate demand draft : Rs. 4,000.00 + GST for tender cost and GST) (non-refundable)
 - (b) Date of commencement of sale of bidding document : 26.03.2021, 6.00 PM
 - (c) Last date for sale of bidding document : 26.04.2021, 3.00 PM
 - (d) Last date and time for receipt of bids : 26.04.2021, 3.00 PM
 - (e) Time and date of opening of Technical bids : 26.04.2021, 3.30 PM
6. For submission of the bids, the bidder is required to have Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities, authorised by Government of India for issuing DSC.
7. Bids security of the amount specified in the bidding document, drawn in favour of “**Executive Engineer, Design Division, Irrigation Design Organisation, Roorkee**” must be submitted as per the procedure described in paragraph 7 below. The Bid

security will have to be in any one of the forms as specified in the bidding document and shall have to be valid for 90 days beyond the validity of the bid. Bids must be submitted online on <http://uktenders.gov.in> on or before the date and time for receipt of bids, and will be opened online on the specified time and date for opening of bids, as given above. Any bid or modifications to bid (including discount) received outside e-procurement system will not be considered. If the office happens to be closed on the date of opening of the bids as specified, the bids will be opened on the next working day at the same time. The electronic bidding system would not allow any late submission of bids.

8. The bidders are required to submit (a) 02 nos. original demand drafts towards the cost of bid document (Rs. 5000.00) and for GST (applicable @18% of tender cost) separately; (b) original bid security in approved form; (c) original affidavit regarding correctness of information furnished with bid document before the opening of the technical part of the Bid given above; and (d) original affidavit regarding validity of rates for 90 days from the date of opening of Financial bid, either by registered post/speed post/courier or by hand, failing which the bids will be declared non-responsive. Due to valid unavoidable circumstances, if bidder(s) fails to submit the hard copies of aforesaid original documents before the opening of technical bid, the bidder must submit these original documents within the stipulated time as intimated by the Purchaser. If bidder(s) will not provide these original documents within prescribed time as given by the Purchaser, his/their bid(s) will be declared as non-responsive and in such situation Purchaser may take any action against such bidder(s).
9. A pre-bid meeting will be held on 06.04.2021 at 1.30 PM at the **Office of the Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee-247667**, Uttarakhand to clarify the issues and to answer questions on any matter that may be raised at the stage as stated in ITB clause 7.1 of “Instructions to Bidders” of the bidding documents.
10. Other details can be seen in the bidding document. The Purchaser shall not be held liable for any delays due to system failure beyond its control. Even though the system will attempt to notify the bidders of any bid updates, the Purchaser shall not be liable for any information not received by the bidder. It is the bidders’ responsibility to verify the website for the latest information related to this bid.

Seal of Office & Address
Office of the Superintending Engineer
Research Circle
Research Institute, Roorkee- 247 667
Haridwar, Uttarakhand
E mail: uttarkhandwrd@gmail.com
Tel: 91-1332-265174

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PART 1 – BIDDING PROCEDURES

SECTION I - INSTRUCTIONS TO BIDDERS [ITB]

Section I. Instructions to Bidders

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Section I. Instructions to Bidders

A. General

1. **Scope of Bid**
 - 1.1 The Purchaser **indicated in the Bidding Data Sheet (BDS)**, issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section VII, Schedule of Requirements. The name, identification and number of lots (contracts) of this National Competitive Bidding (NCB) procurement are **specified in the BDS**.
 - 1.2 Throughout these Bidding Documents:
 - (a) the term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex, including if **specified in the BDS**, distributed or received through the electronic-procurement system used by the Employer) with proof of receipt;
 - (b) if the context so requires, “singular” means “plural” and vice versa; and
 - (c) “day” means calendar day.
2. **Source of Funds**
 - 2.1 The Government of India (hereinafter called “Borrower”) **specified in the BDS** has applied for or received financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) in an amount **specified in BDS** toward the project **named in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract for which these Bidding Documents are issued.
 - 2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the loan or other financing) account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the funds.
3. **Corrupt & Fraudulent Practices**
 - 3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Section VI.
 - 3.2 In further pursuance of this policy, Bidders shall permit and shall cause its agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers and to permit the Bank to inspect all accounts, records and other documents relating to the

submission of the application, bid submission (in case prequalified), and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

- 4. Eligible Bidders**
- 4.1 A Bidder may be a firm that is a private entity, or a government owned entity subject to ITB 4.5.
- 4.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder:
- a. directly or indirectly controls, is controlled by or is under common control with another Bidder; or
 - b. receives or has received any direct or indirect subsidy from another Bidder; or
 - c. has the same legal representative as another Bidder; or
 - d. has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
 - e. participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or
 - f. any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods/equipment that are the subject of the bid; or
 - g. any of its affiliates has been hired (or is proposed to be hired) by the Purchaser or Borrower for the Contract implementation; or
 - h. would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any of its affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
 - i. has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank

throughout the procurement process and execution of the contract.

- 4.3 A Bidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.7. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed sub-contractors or sub-consultants for any part of the Contract including related Services.
- 4.4 A Bidder that has been sanctioned by the Bank in accordance with the above ITB 3.1, including in accordance with the Bank's Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants ("Anti-Corruption Guidelines"), shall be ineligible to be prequalified for, bid for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address **specified in the BDS.**
- 4.5 Bidders that are Government-owned enterprises or institutions in the Purchaser's Country may participate only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not dependent agencies of the Purchaser. To be eligible, a government-owned enterprise or institution shall establish to the Bank's satisfaction, through all relevant documents, including its Charter and other information the Bank may request, that it: (i) is a legal entity separate from the government (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to the government, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt; and (iv) is not bidding for a contract to be awarded by the department or agency of the government which under their applicable laws or regulations is the reporting or supervisory authority of the enterprise or has the ability to exercise influence or control over the enterprise or institution.
- 4.6 A Bidder shall not be under suspension from bidding by the Purchaser as the result of the operation of a Bid-Securing Declaration.
- 4.7 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of

works or services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.

4.8 A bidder shall provide such evidence of eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.

4.9 It is necessary for the bidders to quote their rates for all the items mentioned in the price schedule forms.

5. Eligible Goods and Related Services

5.1 All the Goods and Related Services to be supplied under the Contract and financed by the Bank may have their origin in any country in accordance with Section V, Eligible Countries.

5.2 For purposes of this Clause, the term "goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "related services" includes services such as insurance, installation, training, and initial maintenance.

5.3 The term "origin" means the country where the goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

B. Contents of Bidding Document

6. Sections of Bidding Documents

6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addendum issued in accordance with ITB Clause 8.

PART 1 Bidding Procedures

- Section I. Instructions to Bidders (ITB)
- Section II. Bidding Data Sheet (BDS)
- Section III. Evaluation and Qualification Criteria
- Section IV. Bidding Forms
- Section V. Eligible Countries
- Section VI Bank Policy-Corrupt and Fraudulent Practices

PART 2 Supply Requirements

- Section VII. Schedule of Requirements

PART 3 Contract

- Section VIII. General Conditions of Contract (GCC)
- Section IX. Special Conditions of Contract (SCC)
- Section X. Contract Forms

6.2 The Invitation for Bids issued by the Purchaser is not part of the Bidding Document.

6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to requests for clarification, minutes of pre-bid meeting (if any), or Addenda to the Bidding Document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail.

6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.

7. Clarification of Bidding Documents

7.1 The electronic bidding system **specified in the BDS** provides for online clarifications. A prospective Bidder requiring any clarification on the Bidding Documents may notify the Purchaser online. Clarifications requested through any other mode shall not be considered by the Purchaser. The Purchaser will respond to any request for clarification, provided that such request is received no later than fifteen (15) days prior to the deadline for submission of bids. Description of clarification sought and the response of the Purchaser shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 8 and ITB Sub-Clause 22.2. It is the bidder's responsibility to check on the e-procurement system, for any addendum/ amendment/ corrigendum to the bidding document.

8. Amendment of Bidding Documents

8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addendum. The addendum will appear on the e-procurement system under "Latest Corrigendum" and email notification is also automatically sent to those bidders who have started working on the tender, or as **otherwise specified in BDS**.

8.2 Any addendum thus issued shall be part of the Bidding Documents and shall be deemed to have been communicated to all

the bidders.

- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB Sub-Clause 22.2

C. Preparation of Bids

- 9. Cost of Bidding** 9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 10. Language of Bid** 10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into English language, in which case, for purposes of interpretation of the Bid, such translation shall govern.
- 11. Documents Comprising the Bid** 11.1 The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously.
- 11.2 **The Technical Part** shall contain the following:
- (a) Letter of Bid – Technical Part, in accordance with ITB Clause 12;
 - (b) Bid Security, in accordance with ITB Clause 19.1, if required;
 - (c) Alternative bids– Technical Part, if permissible, in accordance with ITB 13, the Technical Part of any Alternative Bid;
 - (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 20.2;
 - (e) documentary evidence in accordance with ITB Clause 17 establishing the Bidder’s qualifications to perform the contract if its bid is accepted;
 - (f) documentary evidence in accordance with ITB 17 establishing the Bidder’s eligibility to bid;
 - (g) documentary evidence in accordance with ITB Clause 16, that the Goods and Related Services to be supplied by the Bidder are of eligible origin;
 - (h) documentary evidence in accordance with ITB Clauses 16, that the Goods and Related Services conform to the Bidding Documents;

- (i) Manufacturer's authorization form; and
- (j) any other document **required in the BDS.**

11.3 The **Financial Part** shall contain the following:

- (a) Letter of Bid – Financial Part: prepared in accordance with ITB 12 and ITB 14;
- (b) Price Schedules: completed prepared in accordance with ITB 12 and ITB 14;
- (c) Alternative Bid - Financial Part; if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid; and
- (d) It is necessary for the bidders to quote their rates for all the items mentioned in price schedule forms.
- (e) any other document **required in the BDS.**

11.4 The Technical Part shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part, the Bid shall be declared non-responsive.

11.5 The Bidder shall furnish in the Letter of Bid, information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

12. Process of Bid Submission

12.1 The Letter of Bid – Technical Part, Letter of Bid – Financial Part, and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.2. All blank spaces shall be filled in with the information requested.

12.2 Entire Bid including the Letter of Bid and filled-up Price Schedules shall be submitted online on e-procurement system specified in ITB 7.1. Details and process of online submission of the tender and relevant documents are given in the website mentioned above. Scanned copies of documents listed in clauses 11 and 12.3 should also be uploaded on this website.

12.3 **Submission of Original Documents:** The bidders are required to separately submit (i) 02 nos. original demand drafts towards the cost of bid document and GST amount; (ii) original bid security in approved form (iii) original affidavit regarding correctness of information furnished with bid document and (iv) Original affidavit regarding validity of rates; (iv) original affidavit regarding validity of rates with the office **specified in the BDS**, before the opening of the technical part of the Bid, either by registered/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened. Hard copy of rest of the bid is not to be submitted. Due to valid unavoidable circumstances,

if bidder(s) fails to submit the hard copies of aforesaid original documents before the opening of technical bid, the bidder must submit these original documents within the stipulated time as intimated by the Purchaser. If bidder(s) will not provide these original documents within prescribed time as given by the Purchaser, his/their bid(s) will be declared as non-responsive and in such situation Purchaser may take any action against such bidder(s).

- 13. Alternative Bids** 13.1 Unless otherwise **specified in the BDS**, alternative bids shall not be considered.
- 14. Bid Prices and Discounts**
- 14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Price Schedules shall conform to the requirements specified below.
- 14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.
- 14.3 The price to be quoted in the Letter of Bid, in accordance with ITB 12.1, shall be the total price of the bid, excluding any discounts offered.
- 14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid in accordance with ITB 12.1.
- 14.5 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, **unless otherwise specified in the BDS**. A bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 29. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.
- 14.6 If so specified in ITB 1.1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Unless otherwise **specified in the BDS**, prices quoted shall correspond to 100% of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer discounts for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4 provided the bids for all lots (contracts) are submitted and opened at the same time.
- 14.7 The terms EXW and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by The International Chamber of Commerce, **as specified in the BDS**.

14.8 Prices shall be quoted as specified in the Price Schedule included in Section IV, Bidding Forms. The dis-aggregation of price components is required solely for the purpose of facilitating the comparison of bids by the Purchaser. This shall not in any way limit the Purchaser's right to contract on any of the terms offered. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country, in accordance with Section V Eligible Countries. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Section V Eligible Countries. Prices shall be entered in the following manner:

(a) **For Goods:**

- (i) the price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable), including all duties, and GST and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Goods;
- (ii) any GST and other taxes which will be payable in India on the Goods, if the contract is awarded to the Bidder; and
- (iii) the price for inland transportation, insurance, and other local services required to convey the Goods to their final destination (Project Site) **specified in the BDS.**

(b) for the Related Services, other than inland transportation and other services required to convey the Goods to their final destination, whenever such Related Services are specified in the Schedule of Requirements:

- (i) the price of each item comprising the Related Services (inclusive of any applicable taxes).

14.9 **Deemed Export Benefits**

Bidders may like to ascertain availability of tax/duty exemption benefits, available for contracts financed under World Bank Credits/ Loans. They are solely responsible for obtaining such benefits, which they have considered in their bid and in case of failure to receive such benefits for reasons whatsoever, the Purchaser will not compensate the bidder.

Where the bidder has quoted taking into account such benefits, it must give all information required for issue of necessary Certificates in terms of the Government of India's relevant Notification along with its bid as per form stipulated in Section IV Bidding Forms. Where the Purchaser issues such Certificates,

such taxes and duties will not be reimbursed separately.

If the Bidder has considered the Deemed Export Benefits in its bid, the Bidder shall confirm and certify that the Purchaser will not be required to undertake any responsibilities of the deemed export scheme or the benefits available during contract execution except issuing the required certificates. Bids which do not conform to this provision or any condition by the Bidder which makes the bid subject to availability of deemed export benefits or compensation on withdrawal of or any variations in the deemed export benefits scheme will make the bid non responsive and hence liable to rejection.

15. Currencies of Bid & Payment

15.1 The Bidder shall quote the Price in Indian Rupees only.

16. Documents Establishing the Eligibility and conformity of the Goods and Related Services

16.1 To establish the eligibility of the Goods and Related Services in accordance with ITB Clause 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.

16.2 To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.

16.3 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII Schedule of Requirements.

16.4 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BDS** following commencement of the use of the goods by the Purchaser.

16.5 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII Schedule of

Requirements.

**17. Documents
Establishing the
Eligibility
&Qualifications
of the Bidder**

17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid, included in Section IV, Bidding Forms.

17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction:

(a) that the Bidder meets each of the qualification criterion Criteria specified in Section III, Evaluation and Qualification;

(b) (i) that, if **required in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's Country;

(ii) Supplies for any particular item in each schedule of the bid should be from one manufacturer only. Bids from agents offering supplies from different manufacturers for the same item of the schedule in the bid will be treated as non-responsive.

(iii) that, if **required in the BDS**, the Bidder is or will be (if awarded the contract) represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications;

(c) Bids from Joint Ventures are not acceptable.

**18 Period of
Validity of Bids**

18.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Purchaser in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.

18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB Sub-Clause 18.3.

18.3 If the award is delayed by a period exceeding ninety (90) days

beyond the expiry of the initial bid validity, the Contract price shall be determined as follows:

- (a) In the case of fixed price contracts, the Contract price shall be the bid price adjusted by the factor **specified in the BDS** for each week or part of the week that has elapsed from the expiration of the initial bid validity to the date of notification of award to the successful bidder.
- (b) In the case of adjustable price contracts, no adjustment shall be made.
- (c) In any case, bid evaluation shall be based on the bid Price without taking into consideration the applicable correction from those indicated above.

19 Bid Security

19.1 The Bidder shall furnish as part of the Technical Part of its bid, a Bid Security, if required, as **specified in the BDS**.

19.2 Not used.

19.3 The Bid Security shall be in the amount **specified in the BDS** and denominated in Indian Rupees or a freely convertible currency, and shall:

- (a) at the bidder's option, be in the form of either a certified check, demand draft, letter of credit, or a bank guarantee from a Nationalized /Scheduled Bank in India, or another security **specified in the BDS**;
- (b) be substantially in accordance with one of the forms of Bid Security included in Section IV, Bidding Forms, or other form approved by the Purchaser prior to bid submission;
- (c) be payable promptly upon written demand by the Purchaser in case the conditions listed in ITB Clause 19.7 are invoked;
- (d) be submitted in its original form; copies will not be accepted;
- (e) remain valid for a period of one twenty (120) days beyond the original validity period of the bids, or beyond any period of extension of bid validity, if so requested under ITB Clause 18.2.

19.4 If a Bid Security is required in accordance with ITB Sub-Clause 19.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.

19.5 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB Clause 42.

19.6 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.

19.7 The Bid Security may be forfeited:

(a) if a Bidder

(i) withdraws its bid during the period of bid validity specified by the Bidder in the Letter of Bid, except as provided in ITB Sub-Clause 18.2;

or

(ii) does not accept the correction of errors in pursuant to ITB 31,

or

(b) if the successful Bidder fails to:

(i) sign the Contract in accordance with ITB Clause 41;
or

(ii) furnish a Performance Security in accordance with ITB Clause 42.

19.8 Not used.

19.9 If a bid security is **not required in the BDS**, and

(a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid Form, except as provided in ITB 18.2, or does not accept the correction of errors pursuant to ITB 31; or

(b) if the successful Bidder fails to sign the Contract in accordance with ITB 41; or furnish a performance security in accordance with ITB 42;

the Borrower may, **if provided for in the BDS**, declare the Bidder ineligible to be awarded a contract by the Purchaser for a period of time **as stated in the BDS**.

20 Format and Signing of Bid

20.1 The Bidder shall prepare the Bid as per details given in ITB 21.

20.2 The bid shall be signed by a person duly authorized to sign on behalf of the Bidder. The authorization shall consist of a written confirmation **as specified in the BDS** and shall be uploaded along with the bid.

20.3 Not used.

20.4 Corrections if any in the bid can be carried out by editing the information before electronic submission on e-procurement portal.

D. Online Submission of Bids

21 Preparation of Bids

21.1 Bids, both Technical and Financial Parts, shall be submitted online on the e-procurement system specified in BDS 7.1. Detailed guidelines for viewing bids and submission of online bids are

given on the website. The Invitation for Bids under this Project is published on this website. Any citizen or prospective bidder can logon to this website and view the Invitation for Bids and can view the details of goods for which bids are invited. A prospective bidder can submit its bid online; however, the bidder is required to have enrolment/registration in the website, and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token obtained from any authorised certifying agency of Government of India (for class of DSC **specified in BDS**). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, along with the bid, otherwise the bid will be rejected.

- 21.2 The completed bid comprising of documents indicated in ITB 12, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security.
- 21.3 All the documents are required to be signed digitally by the bidder. After electronic online bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.
- 21.4 Physical, Email, Telex, Cable or Facsimile bids will be rejected as non-responsive.
- 22 Deadline for Submission of Bids**
- 22.1 Bids must be uploaded online no later than the date and time **specified in the BDS**.
- 22.2 The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB Clause 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 23 Late Bids**
- 23.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.
- 24 Withdrawal, Substitution, and Modification of Bids**
- 24.1 Bidders may modify their bids by using appropriate option for bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall

be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is not allowed (or allowed **if specified in BDS**).

24.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 24.1 shall not be opened.

24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid (Technical Part and/or Financial Part) or any extension thereof.

25 Bid Opening of Technical Parts of Bids

25.1. The Purchaser shall publicly open Technical Parts of all bids received by the deadline, at the date, time and place **specified in the BDS**, in the presence of Bidder's designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. In all cases, original documents submitted as specified in ITB 12.3 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 12.3 will be declared non-responsive and will not be opened. The bidder's names, the Bid prices, the total amount of each bid, including any discounts and Alternative Bid, and such other details as the Purchaser may consider appropriate will be notified online by the Purchaser at the time of bid opening.

In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.

25.2 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Bids, alternative bids if permitted in ITB 13, and discounts that are opened at Bid opening shall be considered further for evaluation.

E. Evaluation of Bids-General Provisions

26 Confidentiality

26.1 Information relating to the examination, evaluation, comparison, and post-qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until information on Contract Award is communicated to all Bidders in accordance with ITB 40.

26.2 Any effort by a Bidder to influence the Purchaser in the

examination, evaluation, comparison, and post-qualification of the bids or contract award decisions may result in the rejection of its Bid.

- 26.3 Notwithstanding ITB Sub-Clause 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.
- 27 Clarification of Bids**
- 27.1 To assist in the examination, evaluation, comparison of the bids and post-qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid, that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB Clause 31.
- 27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser's request for clarification, its bid may be rejected.
- 28 Deviations, Reservations, Omissions**
- 28.1 During the evaluation of bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Documents;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents
- 29 Nonconformities, Errors and Omissions**
- 29.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformities or omissions in the Bid which do not constitute a material deviation, reservation or omission.
- 29.2 Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price or substance of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.
- 29.3 Provided that a Bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid

Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified in the **BDS**.

G. Evaluation of Technical Parts of Bids

- 30 Evaluation of Technical Parts** 30.1 In evaluating the Technical Parts of each Bid, the Purchaser shall use the criteria and methodologies listed in ITB 31, ITB 32, and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted.
- 31 Determination of Responsiveness** 31.1 The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself as defined in ITB 11.
- 31.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
- (a) If accepted, would
 - (i) affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
 - (ii) limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or
 - (b) if rectified would unfairly affect the competitive position of other bidders presenting substantially responsive bids.
- 31.2.1 Bids from Agents, without proper authorization from the manufacturer as per Section IV, shall be treated as non-responsive.
- 31.3.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 11 have been provided, and to determine the completeness of each document submitted.
- 31.3.2 The Purchaser shall examine the bid to confirm that the Bidder has accepted all terms and conditions specified in GCC and the SCC without material deviations or reservations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 18). Warranty (GCC Clause 28), Force Majeure (Clause 32), Limitation of liability (GCC Clause 30), Governing law (GCC Clause 9) and Taxes & Duties (GCC Clause 17) will be deemed to be a material deviation. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 31.4 If a bid is not substantially responsive to the Bidding

Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

32 Qualification of the Bidders

- 32.1 The Purchaser shall determine, to its satisfaction, whether all eligible Bidders, whose Bids have been determined to be substantially responsive to the bidding document, meet the Qualification Criteria specified in Section III, Evaluation and Qualification Criteria.
- 32.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than specialized subcontractors if permitted in the bidding document), or any other firm(s) different from the Bidder.
- 32.3 If a Bidder does not meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria, its Bid shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- 32.4 Only Bids that are both substantially responsive to the bidding document, and meet all Qualification Criteria shall have the Financial Parts of their Bids opened at the second public opening

H. Public Opening of Financial Parts of Bids

33 Public Opening of Financial Parts

- 33.1 Following the completion of the evaluation of the Technical Parts of the Bids, and the Bank has issued its no objection (if applicable), the Purchaser shall notify in writing those Bidders who have failed to meet the Qualification Criteria and/or whose Bids were considered non-responsive to the requirements in the bidding document, advising them of the following information:
- (a) their Technical Part of Bid failed to meet the requirements of the bidding document;
 - (b) their Financial Part of the Bid shall not be opened; and
 - (c) notify them of the date and time for public opening of the Financial Parts of the Bids. Financial Parts of the bids shall not be opened earlier than seven (7) days from the communication of technical evaluation results to the bidders.
- 33.2 The Purchaser shall, simultaneously, notify in writing those Bidders whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria, advising them of the following information:

- (a) their Bid has been evaluated as substantially responsive to the bidding document and met the Qualification Criteria;
- (b) their Financial Part of Bid will be opened at the public opening of Financial Parts;
- (c) notify them of the date and time of the second public opening of the Financial Parts of the Bids, as **specified in the BDS**.

33.3 The opening date should allow Bidders sufficient time to make arrangements for attending the opening. The Financial Part of the Bid shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The bidder's names, the Bid prices, the total amount of each bid, including any discounts and Alternative Bid – Financial Part, and such other details as the Purchaser may consider appropriate will be notified online by the Purchaser at the time of bid opening.

In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.

33.4 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation.

Evaluation of Financial Parts of Bids

34 Evaluation of Financial Parts

34.1 To evaluate the Financial Part of each Bid, the Purchaser shall consider the following:

- (a) evaluation will be done for Items or Lots (contracts), as specified **in the BDS**; and the Bid Price as quoted in accordance with ITB 14;
- (b) Not used;
- (c) price adjustment due to discounts offered in accordance with ITB 14.4;
- (d) Not used;
- (e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 29.3; and
- (f) the additional evaluation factors specified in the BDS as per ITB 34.5 from amongst those set out in Section III,

Evaluation and Qualification Criteria.

- 34.2 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.
- 34.3 If this bidding document allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the Letter of Bid - Financial Part, is specified in Section III, Evaluation and Qualification Criteria.
- 34.4 The Purchaser's evaluation of a Bid shall include (i) price quoted EXW including GST as applicable on the finished goods; (ii) other taxes, if any, payable on finished goods; (iii) price for inland transportation, insurance, and other local services required to convey the Goods to their Final Destination; and (iv) price for Related Services, if any.
- 34.5 The Purchaser's evaluation of a Bid may require the consideration of other factors, in addition to the Bid price quoted in accordance with ITB 14. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of Bids, unless otherwise specified **in the BDS** from amongst those set out in Section III, Evaluation and Qualification Criteria. The criteria and methodologies to be used shall be as specified in ITB 34.1 (f).
- 35 Correction of Arithmetical Errors** 35.1 The e-procurement system automatically calculates the total amount from unit rates and quantities and the system also automatically populates the amount in words from the amount in figures and therefore there is no scope of discrepancy and need for arithmetic correction.
- 36 Conversion to Single Currency** 36.1 Not applicable.
- 37 Margin of Domestic Preference** 37.1 Not applicable.
- 38 Comparison of Financial Parts** 38.1 The Purchaser shall compare the evaluated prices of all substantially responsive bids to determine the lowest-evaluated bid, in accordance with ITB Clause 34.

- 39 Purchaser’s Right to Accept Any Bid, and to Reject Any or All Bids** 39.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all documents submitted and specifically, bid securities, shall be promptly returned to the Bidders.

J. Award of Contract

- 40 Award Criteria** 40.1 Subject to ITB 39.1, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

- 41 Purchaser’s Right to Vary Quantities at Time of Award** 41.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VII, Schedule of Requirements, provided this does not exceed the percentages **specified in the BDS**, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.

- 42 Notification of Award** 42.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter called “Letter of Acceptance”) shall specify the sum that the purchaser will pay in consideration of the supply of Goods (hereinafter called “the Contract Price”).

- Publication of Award** 42.2 At the same time the Purchaser shall publish in e-tender website(<http://uktenders.gov.in>) or on the Purchaser’s website with free access if available, or in the official gazette, the results identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the successful Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.

- Recourse to Unsuccessful Bidders** 42.3 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after Publication of contract award, requests in writing the grounds on which its bid was not selected.

- 42.4 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.

- 42.5 Upon the successful Bidder’s furnishing of the performance security and signing the Contract Form pursuant to ITB Clause 43, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 19.5

- 43 Signing of Contract**
- 43.1 Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.
- 43.2 Within twenty-one (21) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.
- 44 Performance Security**
- 44.1 Within twenty-one (21) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section X Contract forms, or another Form acceptable to the Purchaser. Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose bid is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

SECTION II - BIDDING DATA SHEET

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

ITB Clause Reference	A. General
ITB 1.1	The Purchaser is: Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, Haridwar-247667, Uttarakhand
ITB 1.1	The name and identification number of the NCB is: Supply and Installation of IT and Audio Visual Equipment in SWIC Building at Roorkee under National Hydrology Project. e-Tender Notice No. 22/SE (R)/ NHP/ e-Tender/ 2020-21, The number, identification and names of the (contracts): (one) lot.
ITB 1.2(a)	The Purchaser shall use the electronic-procurement system specified in BDS 7.1 to manage this Bidding process.
ITB 2.1	The Borrower is: Government of India <i>(i)</i> Loan Agreement Amount: US\$ 175 million
ITB 2.1	The name of the Project is: <i>National Hydrology Project.</i>
ITB 4.1	JV is not allowed.
ITB 4.4	A list of firms debarred from participating in World Bank projects is available at http://www.worldbank.org/debarr
B. Contents of Bidding Documents	
ITB 7.1	Electronic –Procurement System The Purchaser shall use the following electronic-procurement system to manage this Bidding process: www.uktenders.gov.in For Clarification of bid purposes only, the Purchaser’s address is: Office of the Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, District-Haridwar, Uttarakhand-247667 INDIA Telephone: 91-1332-265174 Facsimile number: 01332-262792, 01332-262487 Mobile: 886758368 (Sh. Shankar Kumar Saha, Superintending Engineer) E-mail: uttarkhandwr@gmail.com
ITB7.1 a Additional	The Pre bid meeting will be held at following date and place to clarify queries related to the bidding document:

clause.	<p>Date : 06.04.2021</p> <p>Time: 1.30 PM</p> <p>Place: Office of the Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, District-Haridwar, Uttarakhand-247667 INDIA Telephone: 91-1332-265174 Facsimile number: 01332-262792, 01332-262487 E-mail: uttarkhandwr@gmail.com</p> <p>Contact Persons: Sh. Shankar Kumar Saha (Mobile:8826758368) Sh. Manish Shankar Sant, (Mobile: 9760664452)</p>
ITB 8.1	The addendum will appear on the e-procurement system under latest corrigendum and email notification is also automatically sent to those bidders who have started working on this tender.
	C. Preparation of Bids
ITB 11.1(k)	<p>The Bidder shall submit the following additional documents in its bid:</p> <ol style="list-style-type: none"> 1. Certification of incorporation of the bidder 2. As e-procurement system is being used, there is no hard copy submission of bid. Only the hard copy of the DD of Bid Document fee, bid security affidavit regarding correctness of information and affidavit regarding validity of rates, is requested to be submitted. However, scanned copy of the original affidavit for correctness of information and power of attorney shall be uploaded along with the Technical Part of the bid. 3. The bidder shall clearly confirm that all facilities exist with him (or manufacturer, as applicable) in his factory for inspection and testing and these can be accessed by the Purchaser or his representative for inspection. 4. Technical schedules of goods as required by technical specifications. 5. Descriptive Documents, drawings, notes and references of operating and assembly of mechanical parts 6. A detailed description of the Goods essential technical and performance characteristics. 7. A clause-by-clause commentary on the Purchaser's technical specifications demonstrating substantial responsiveness of the Goods and Services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications. 8. For purposes of the commentary to be furnished pursuant to Paragraph 6 above, the Bidder shall note that standards for workmanship, material and goods, and references to brand names or catalogue numbers designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications 9. The documentary evidence of the goods and services eligibility shall consist of a statement in the Price Schedule on the country of origin of the goods and

	<p>services offered which shall be confirmed by a certificate of origin at the time of shipment</p> <p>10. Non-manufacturer bidders will submit the manufacturer’s authorization Form as per Proforma in Section IV.</p> <p>11. The following details shall also be provided by Indian Bidders:</p> <ul style="list-style-type: none"> a. Name, address, PAN and ward/circle where they are being assessed of the Directors of the Bidding Company. b. Company’s PAN and Income Tax clearance certificate and ward/circle where it is being assessed, c. Registration details of the company under GST and other laws as may be applicable. <p>- The bidders from outside India shall provide the corresponding details of Income Tax registration, Social Security Number, details regarding Registration under goods & services tax (as may be applicable) etc.</p> <p>12. The bidders from outside India shall provide the corresponding details of Income Tax registration, Social Security Number, details regarding Registration under GST or sale of goods (as may be applicable) etc.</p> <p>13. The bidder shall disclose instance of previous past performance that may have resulted into adverse actions taken against the bidder during the last five years.</p> <p>14. All document required in Section 3: Evaluation & Qualification Criteria.</p>
<p>ITB 12</p>	<p>Note for Bidders: Bidders have to submit the bids on the e-procurement portal along with the relevant required documents. For this purpose, the bidders shall fill up online, the forms that are available for online filling on the e-portal. The rest of the forms shall be download by the bidders and filled up. The filled up pages shall then be scanned and uploaded on the e-procurement portal along with the scanned copies of the supporting documents.</p>
<p>ITB 12.3</p>	<p>The bidders are required to submit (a) original demand drafts towards the cost of bid document; (b) original scanned copy of affidavit regarding correctness of information (b) original bid security in approved form, (c) Original affidavit regarding correctness of information in bid document and (d) Original affidavit regarding validity of rates. and (d) original scanned copy of affidavit regarding validity of rates before the opening of Technical Bid. However, scanned copy of the original affidavit for correctness of information and power of attorney shall be uploaded along with the Technical Part of the bid.</p> <p>For submission of original documents, the Purchaser’s address is:</p> <p>Office of the Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, District Haridwar-247667, Uttarakhand</p> <p>Telephone: +91-1332-265174</p> <p>Facsimile number: 01332-262792, 01332-262487</p> <p>E-mail: uttarkhandwr@gmail.com</p>
<p>ITB 13.1</p>	<p>Alternative Bids “<i>shall not be</i>” considered.</p>

ITB 14.5	Prices quoted shall correspond to 100 percent of the quantities specified items along with all the necessary ancillary goods, services and works. The prices quoted by the Bidder shall not be adjustable during the performance of the Contract.
ITB 14.7	The Incoterms edition is Incoterms 2010.
ITB 14.8 (a) (i)	Replace 14.8 (a) (i) with the following: (a) For Goods: (i) the price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable), excluding GST as applicable payable on the finished Goods;
ITB 14.8 (a) (iii)	“Final destination (Project Site)”: <i>as mentioned in Schedule of Requirements.</i>
ITB 14.9	<i>As per latest instructions from Government of India.</i>
ITB 16.4	Period of time the Goods are expected to be functioning (for the purpose of spare parts): a minimum period of 10 years after commissioning.
ITB 17.2 (b) (i)	Manufacturer’s authorization is: <i>required as per proforma in Section IV.</i>
ITB 17.2 (b)iii	After Sales service is required which shall be provided by the Supplier or alternatively by its Agent in case of a foreign bidder.
ITB 18.1	The bid validity period shall be 90 days.
ITB 18.3(a)	The factor will be 1.0007692(multiplicative) per week.
ITB 19.1	Bids shall include a Bid Security in the form of FDR/CDR/NSC or Post Office Passbook pledged in favour of Executive Engineer, Design Division, IDO, Roorkee included in Section IV Bidding Forms.
ITB 19.3	The amount of the Bid Security shall be: INR 2,60,000/- (Rs. Two Lakhs Sixty Thousands only)
ITB 19.3 (a)	Other types of acceptable securities are: Fixed Deposit/Time Deposit certificate issued by a Nationalized or Scheduled Bank located in India for equivalent or higher values are acceptable provided it is pledged in favour of Executive Engineer, Design Division, IDO, Roorkee and such pledging has been noted and suitably endorsed by the bank issuing the certificate.
ITB 19.9	<i>Not applicable</i>
ITB 20.2	All the documents are required to be signed digitally by the bidder. After electronic on line bid submission, the system generates a unique bid identification number which is time stamped. This shall be treated as

	acknowledgement of bid submission. The written confirmation of authorization to sign on behalf of the Bidder shall consist of: Power of Attorney .
	D. Online Submission and Opening of Bids
ITB 21.1	Class of DSC required is: Class3 DSC
ITB 21	The Envelope for submitting Document as per ITB 12.3 shall bear the following: ORIGINAL DOCUMENTS AS PER CLAUSE 12.3 for e-Tender Notice No. 22/SE (R)/ NHP/ e-Tender/ 2020-21, dated 25.03.2021 For “Supply and Installation of IT and Audio Visual Equipment in SWIC Building at Roorkee under National Hydrology Project”. Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, Haridwar-247667, Uttarakhand
ITB 22.1	The deadline for uploading of Technical bids is: 26.04.2021, Time: 3.30 pm hours server time
ITB 24.1	Re-submission of the bid is allowed till the final date and time submission.
	E. Public Opening of Technical Parts of Bids
ITB 25.1	The online bid opening shall take place at: Office of the Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, Haridwar-247667, Uttarakhand E-mail: uttarkhandwr@gmail.com Date: 26.04.2021 Time: 3.30 PM
	F. Evaluation of Bids – General Provisions
ITB 29.3	The adjustment shall be based on the highest price of the item or component as quoted in other substantially responsive Bids, subject to a maximum of the estimated price of the item. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Purchaser shall use its best estimate.
	H. Public Opening of Financial Parts of Bids
ITB 33.2 (c)	Following the completion of the evaluation of the Technical Parts of the Bids, the Purchaser will notify all Bidders of the date and time of the public opening of Financial Parts. The online opening of the Financial Parts of bids (for technically qualified bidders) shall take place at: Office of the Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, District-Haridwar, Uttarakhand-247667 INDIA Telephone: 91-1332-265174 E-mail: uttarkhandwr@gmail.com Date & Time: To Be declared later
	E. Evaluation and Comparison of Bids

ITB 34.1(a)	Evaluation will be done for whole lot in one package. Any bidder who has not quoted for all the items mentioned in the price schedule, shall be summarily rejected.
ITB 34.4	<p>Replace ITB 34.4 as follows:</p> <p>The Purchaser's evaluation of a Bid will exclude and not take into account:</p> <ul style="list-style-type: none"> (a) in the case of Goods manufactured in India or goods of foreign origin already located in India, GST and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder; (b) Not used; (c) any allowance for price adjustment during the period of execution of the contract, if provided in the Bid. <p>But, the purchaser's evaluation of a bid will include i) price for inland transportation, insurance, and other local services required to convey the Goods to their Final Destination; and (ii) price for Related Services, if any.</p>
ITB 34.5	<p>The adjustments shall be determined using the following criteria, from amongst those set out in Section III, Evaluation and Qualification Criteria: <i>[refer to Schedule III, Evaluation and Qualification Criteria; insert complementary details if necessary]</i></p> <ul style="list-style-type: none"> (a) Deviation in Delivery schedule: Not Applicable (b) Deviation in payment schedule: Not Applicable (c) the cost of major replacement components, mandatory spare parts, and service: <i>Not Applicable</i> (d) the availability in the Purchaser's Country of spare parts and after-sales services for the equipment offered in the bid '<i>Not Applicable</i> (e) the projected operating and maintenance costs during the life of the equipment <i>Not Applicable</i> (f) the performance and productivity of the equipment offered] <i>Not Applicable</i>
F. Award of Contract	
ITB 39.1	<p>The maximum percentage by which quantities may be increased is: 15%</p> <p>The maximum percentage by which quantities may be decreased is: 15%</p>

SECTION III. EVALUATION AND QUALIFICATION CRITERIA

This Section complements the Instructions to Bidders. It contains the criteria that the Purchaser shall use to evaluate a bid and determine whether a Bidder qualifies in accordance with ITB 32 & 34. No other criteria shall be used.

TECHNICAL PART

1 Qualification (ITB 32)

1.1 Qualification Criteria (ITB 32.1)

The Purchaser shall assess each Bid against the following Qualification Criteria. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications.

I- Financial Capability

The Bidder shall furnish documentary evidence that it meets the following financial requirement(s):

- i) Capacity to have a cash flow: The bidder must provide a letter from a reputed Bank stating the availability of liquid assets and/or credit facilities exclusively for the contract only, of not less than **INR 32.50 Lakhs**. *(The availability of liquid assets and/or credit facilities should be clearly certified by Bank (Nationalized or Scheduled Bank In India) in Form-9 provided in Section IV- Bidding forms)*

Or

In case the bidder does not prefer to have support from a Bank and does not require credit facilities from the Bank exclusively for the contract, the bidder shall have to submit the cash resources certificate amounting to Rs. 32.50 Lakhs taking into consideration existing projects being executed by him from its Statutory Chartered Accountant.

- ii) The Minimum required annual turnover in respect of business operations for the successful Bidder in any two of the last five (5) years shall be **INR 130.00 Lakhs or its equivalent amount** a freely convertible currency. Period of five (5) years shall be reckoned from 31st march of financial year preceding the year in which bid is published.
- iii) Further, bidder should be in continuous business of supplying and/or after sale services of products similar to that specified in the 'Schedule of requirement' during the last 5 years prior to date of bid submission.
- iv) Bidder shall furnish the legal status, place of registration and principal place of business of the company or firm or partnership, etc.;
- v) Details of experience and past performance on equipment offered and on those of similar nature within the past seven years (Prior to the date of bid submission) and details of current contracts in hand and other commitments (suggested Proforma given in Section IV).
- vi) The bidder should furnish a brief write-up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the supply of the required equipment within the specified time of completion after the meeting all their current commitments.
- vii) Reports on financial standing of the bidder such as profit and loss statements, balance sheets and auditor's report for the past five years, bankers certificate, etc.
- viii) A firm can submit only one bid in the same bidding process. A bidder who submits or participates in more than one bid will cause all the bids in which the bidder has participated to be disqualified.

- ix) Should possess /GST Registration. In case of foreign bidder, if presently bidder is not having any office(s) in India, he has to provide the GST registration certificate within one month of award of contract.

II- Experience and Technical Capacity of Bidder

A. If the Bidder is a manufacturer:

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):

The bidder must have manufactured and supplied satisfactorily IT equipment of the type specified in each item of the Schedule of Requirements to the extent of at least 80% of the total quantity and minimum 50% of each item under schedule under “Section – VII, Schedule of Requirements” in any one of the last five years (Prior to the year of bid opening) and should be in use satisfactorily with no adverse report for at least two years preceding the date of bid opening.

B) Non- Manufacturer Bidders

In the case of a Bidder offering to supply Goods under the Contract that the Bidder does not manufacture or otherwise produce, the Bidder should be duly authorized by the manufacturer of the Goods. The manufacturer must have supplied at least 80% of the IT equipment for which authorization has been given to the supplier in any one of the last three years and equipment should be in satisfactory operation for the last two years from the date of bid opening and the manufacturer furnishes a legally enforceable authorization in the prescribed Form [Section IV] assuring full guarantee and warranty obligations as per GCC and SCC for the goods offered; and the bidder, as authorized by the manufacturers, has supplied and provided after sales service to the extent of at least 30% of each item specified in the schedule of requirements in any one of the last three (3) years (Prior to the year of bid opening), which must be in satisfactory operation at least for two years on the date of bid opening.

FINANCIAL PART

2. Margin of Preference (ITB 37) – Not Applicable

3. Evaluation (ITB 30, 31, and 34)

3.1. Evaluation Criteria (ITB 34.5)

The Purchaser shall use the criteria and methodologies listed in this Section to evaluate Bids. By applying the criteria and methodologies, the Purchaser shall determine the substantially responsive lowest-evaluated bid.

3.2. Multiple Contracts (ITB 34.3) deleted

SECTION IV – BIDDING FORMS

1. LETTER OF BID– TECHNICAL PART

The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.

Note: All italicized text is for use in preparing these forms and shall be deleted from the final products.

No alterations to the text except as provided in ITB20.2 shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]

Date: *[insert date (as day, month and year) of Bid Submission]*
NCB No.: *[insert number of bidding process]*
Invitation for Bid No.: *[insert No of IFB]*
Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda No. issued in accordance with ITB 8: *[insert the number and issuing date of each Addenda]*;
- (b) We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) We have-not been suspended nor declared ineligible by the Purchaser based on execution of a Bid Securing Declaration in the Purchaser's country in accordance with ITB 4.6;
- (d) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services ***[insert a brief description of the Goods and Related Services]***;
- (e) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;
- (g) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.2(e), other than alternative bids submitted in accordance with ITB 13;
- (h) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment

imposed by the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Purchaser's Country laws or official regulations or pursuant to a decision of the United Nations Security Council;

- (i) We are not a government owned entity/ We are a government owned entity but meet the requirements of ITB 4.5;¹
- (j) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (k) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- (l) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption; and
- (m) We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely, "Prevention of Corruption Act 1988."

Name of the Bidder *[insert complete name of person signing the Bid]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder** *[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid *[insert complete title of the person signing the Bid]*

Signature of the person named above *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* day of *[insert month]*, *[insert year]*

** : Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.

¹ Bidder to use as appropriate

1B. LETTER OF BID- FINANCIAL PART

The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.

Note: All italicized text is for use in preparing these forms and shall be deleted from the final products.

No alterations to the text except as provided in ITB 20.2 shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]

Date: *[insert date (as day, month and year) of Bid Submission]*
NCB No.: *[insert number of bidding process]*
Invitation for Bid No.: *[insert No of IFB]*
Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

We, the undersigned Bidder, hereby submit the second part of our Bid, the Financial Part. In submitting our Financial Part we make the following additional declarations:

(a) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(b) The total price of our Bid, excluding any discounts offered in item (c) below, is:

In case of only one lot, total price of the Bid ***[insert the total price of the bid in words and figures]***;

In case of multiple lots, total price of each lot ***[insert the total price of each lot in words and figures]***;

In case of multiple lots, total price of all lots (sum of all lots) ***[insert the total price of all lots in words and figures]***;

(c) The discounts offered and the methodology for their application are:

(i) The discounts offered are: ***[Specify in detail each discount offered.]***

(ii) The exact method of calculations to determine the net price after application of discounts is shown below:***[Specify in detail the method that shall be used to apply the discounts];Discounts.***

(d) The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*

Name of Recipient	Address	Reason	Amount
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_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate “none.”)

- (e) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

Name of the Bidder *[insert complete name of person signing the Bid]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder** *[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid *[insert complete title of the person signing the Bid]*

Signature of the person named above *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* day of *[insert month]*, *[insert year]*

** : Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.

2. BIDDER Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*

NCB No.: *[insert number of bidding process]*

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. Bidder's actual or intended Country of Registration: <i>[insert actual or intended Country of Registration]</i>
3. Bidder's Year of Registration: <i>[insert Bidder's year of registration]</i>
4. Bidder's Legal Address in Country of Registration: <i>[insert Bidder's legal address in country of registration]</i>
5. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Authorized Representative's email address]</i>
6. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation or Registration of firm named in 1, above, in accordance with ITB Sub-Clauses 4.3. <input type="checkbox"/> In case of government owned entity from the Purchaser's country, documents establishing legal and financial autonomy and compliance with commercial law and not dependent agency of borrower or sub-borrower or purchaser, in accordance with ITB Sub-Clause 4.5. <input type="checkbox"/> Included are the organizational chart ,a list of Board of Directors, and the beneficial ownership

Price Schedule Forms

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]*

3. PRICE SCHEDULE FOR SUPPLY, TESTING AND COMMISSIONING AS PER SCHEDULE OF REQUIREMENTS

Prices in Rs										
										Date: _____
										NCB No: _____
										Alternative No: _____
										Page No _____ of _____
1	2	3	4	5	6	7	8	9	10	
Line Item No	Description of Goods	Country of Origin	Delivery Date	Unit	Qty.	BASIC RATE In Figures To be entered by the Bidder in Rs. P	GST Amount in INR Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT With Taxes in Rs. P	TOTAL AMOUNT In Words
1	AV Solution- Conference Room									
1.01	Diagonal Size- 55", Panel Type IPS, Resolution 1920*1080 (Full HD), Pixel Pitch(mm) 0.63mm(H) * 0.63mm(V), Brightness(Typ.) 500 nit, Contrast Ratio 1200:1, Viewing Angle(H/V) 178/178, Response Time(G-to-G) 8ms, Display Colors 8 bit - 16.7M, Operation Hour 24/7, 1.8mm bezel-to-beze, Haze 28%, Dynamic C/R 30,000:1, H & V -Scanning Frequency-57.3kHz ~ 70kHz & 48Hz ~ 75Hz, DVI-D, Display Port 1.2, HDMI 2.0 (2), HDCP 2.2, Audio Stereo mini Jack, Output: DP1.2(Loop-out), Stereo mini Jack, Sleep mode Less then 0.5W, off mode less then 0.5W,		90 days from date of signing of contract	NOS	9					
1.02	Fixed Wall Mount Suitable wall mount for the LED Video wall to be provided, Maintenance Feature, Quick release latch easily activates lock & unlock mode to secure displays in place firmly Max.load 121 lbs (55 Kg) Display Sizes 37" to 70" VESA 200x200 to 600x400 Material Steel Product Weight 7 Kg Shipping Weight 8.5 Kg		90 days from date of signing of contract	NOS	9					
1.03	Codec, Quad Cam, Touch Screen, Codec Pro for Auto Expand, Quad Camera, Powersupply - AC/DC, 12V, 6.25A, grey, Wall mounting bracket for Quad Camera,		90 days from date of signing of	NOS	1					

	Network cable (ethernet) 8 meter, Touch controller for collaboration endpoints, Antennas for Codec, Power Cord for India 2m 10A, Rackears for Spark Codec Pro, CAB 3m GREY HDMI 2.0, CAB 3 m/10 ft GREY ETHERNET, Tele Presence Power Cord for India 2m 10A		contract							
1.04	8X5XNBD 36 Month Suppor for Codec with Quad Camera and Touch Panel		90 days from date of signing of contract	NOS	1					
1.05	A Podium Supplied with a detachable gooseneck condenser microphone and a reading light for the podium top, HDMI wall Plate Power Point		90 days from date of signing of contract	NOS	1					
1.06	A Wall Plate Transmitter which has atleast two Video Input: 1x HDMI, 1x VGA & Audio. Output: 1x RJ45 output which should be HDBaseT compatible which transmit signals upto 230 ft along with control signals. It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management.		90 days from date of signing of contract	NOS	1					
1.07	A Receiver which has atleast one Video Input: 1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance. Output: 1x HDMI scaled output. It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management. It should have atleast 1xRS-232 port and upto 2 IR port which can be used to control the devices.		90 days from date of signing of contract	NOS	1					
1.08	A high-performance rack-mountable 4K60 4:4:4 AVswitcher. Provides four HDMI® inputs and four HDMI outputs. Includes support of HDR (High Dynamic Range) and Dolby Vision® video formats, advanced EDID management, Built in audio de-embedding capabilities with 2x Stereo outputs, EDID Management, HDCP Management upto 2.3, Should have an ethernet management for getting controlled through controller.		90 days from date of signing of contract	NOS	1					
1.09	A high-performance 4K AV distribution amplifier designed to split a single HDMI® signal to feed up to		90 days from date of	NOS	1					

	eight separate displays, switchers, and/or other devices. It provides full support for UHD and DCI 4K60 4:4:4 and HDR video, HDCP 1.4 or 2.2 copy protection, and high-bitrate 7.1 audio, to ensure optimal performance and compatibility for any HD or 4K video application.		signing of contract							
1.10	Wireless content sharing solution to support content from Windows, Apple devices without installation of any additional Application and USB dongle and share the content of Android devices using app. Support up to 2 presentations simultaneously with HDMI IN-1, HDMI Out-1, USB-1, RS-232-1, LAN-1- RJ45, Input Indicators- HDMI, Video Support- FULL HD, Custom welcome screen, There should be provision for security code for connecting to the wireless presentation system.		90 days from date of signing of contract	NOS	1					
1.11	Control system with modular programming architecture, Onboard 2GB RAM & 8GB Flash memory, , High-speed USB 2.0 host port, Industry-standard Ethernet and wired communications, support computer and web based control, iPhone®, iPad®, and Android™ control app, SNMP remote management support, One port that supports all three of RS-232, RS-422 & RS-485 COM port , Two RS-232 COM ports, 8x IR/serial, 8x relay, and 8x Versiport I/O ports, event scheduling Shall have Native /IP support, Should support BACnet and should have Secure access through full user/group management or Active Directory integration, Hardware level security using 802.1X authentication, TLS, SSL, SSH, and SFTP network, security protocols, FIPS 140-2 compliant encryption IPv6 ready, Front panel USB computer console port, 1-space rack-mountable		90 days from date of signing of contract	NOS	1					
1.12	A high-speed Category HDMI cable featuring 24k gold-plated HDMI Type A male connectors at each end, VGA cable featuring male DB15HD connectors at each end. it should support full 4K60 4:4:4 video.		90 days from date of signing of contract	LOT	1					
1.13	Supply, Installation, Testing&Commissioningof Wired Table Top Digital Chairman Unit with super cardioid / array microphone, Goosneck length minimum 380mm or better, Should be flush-mountable, unit should have inbuilt Dual / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, Priority switch for temporary muting delegates, frequency		90 days from date of signing of contract	NOS	2					

	response : 100Hz to 14500Hz, Audio quality : 16bit or better, built in headphone socket complete as per specification.								
1.14	Supply, Installation, Testing&Commissioning of Wired Table Top Digital Delegate Unit with Super cardioid / Hyper array Microphone, Goosneck length minimum 380mm or better, Should be flush-mountable, unit should have inbuilt Twin / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, frequency response: 100Hz to 14500Hz, Audio quality:16bit, built in headphone socket or better complete as per specification, Testing&Commissioning of Table Top Wireless Digital Delegate Unit with Supercardioid/Array Microphone, Twin / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, detachable battery complete as per specification.		90 days from date of signing of contract	NOS	14				
1.15	Supply, Installation, Testing&Commissioning of Digital Audio Conference Control Unit with redundant power supply for conference system supplies Power for minimum for 40 units and controls up to Minimum 350 discussion units, built in / External USB Audio Recorder . An Ethernet Port shall be provided for network connection and control units, Integrated / external PC for control and management of the system, pre-installed control software for Microphone management, synoptic and Audio Recording, can be controllable wired and wireless discussion system etc and as per attached specification.		90 days from date of signing of contract	NOS	1				
1.16	Supply & fixing of Molded CAT-5/6 Patch Cords for loop in loop out 10 mtr length,should be from the same OEM as conference system		90 days from date of signing of contract	NOS	13				
1.17	Supply & fixing of Molded CAT-5/6 Patch Cords for loop in loop out 10 mtr length,should be from the same OEM as conference system		90 days from date of signing of contract	NOS	2				
1.18	Supply, Installation, testing and commissioning of wireless digital Handheld Microphone with 18 or more channel, RF output 80mW or more, super cardioid pickup pattern, Frequency range : 1880 to 1930 MHZ,		90 days from date of signing of	NOS	1				

	Connectivity : RJ-45 etc and complete as required.		contract						
1.19	Supply, Installation, testing and commissioning of wireless digital lavalier Microphone with 18 or more channel, RF output 80mW or more, omni directional pickup pattern, Frequency range : 1880 to 1930 MHz, Connectivity : RJ-45 etc and complete as required.		90 days from date of signing of contract	NOS	1				
1.20	Supply, Installation, testing and commissioning of wireless handheld / lapel / headworn microphone charging dock station from the same make, simultaneously charger 2 microphone, lighting indication etc complete required as per specifications		90 days from date of signing of contract	NOS	1				
1.21	Supply, Installation, testing and commissioning of 6.5" two-way coaxial speaker, 100V tapping : 24watt - 12watt, frequency response: 55Hz - 20KHz, Dispersion: 150 degree, low impedance RMS Power: 30watt, frequency range: 45 Hz - 20 kHz, borderless grill etc and complete as required.		90 days from date of signing of contract	NOS	8				
1.22	Supply, Installation, testing and commissioning of 240w amplifier, The amplifier should have 240w or more output @100v line or low impedance, THD+N (@ 1 kHz) : < 1%, Technology: Class-A/B, Temperature controlled FAN, should have Protection features like: DC Short circuit & Over heating & Over load & Signal limiting etc complete required as per specifications.		90 days from date of signing of contract	NOS	1				
1.23	Supply Installation Testing and Commissioning of digital signal processor with minimum 6no. Or more Mic / line input with phantom power and AEC and 4 or more line output, at least 2 channel of USB input and output for software Video Conferencing,, Should have sample rate of 48kHz or better, Should be expandable for port expansion. 4x4 or more Dante Input for Digital audio transfer as per need,should support Control with App via iOS and Android devices, or any third-party control system, Shall have Built-in filters, feedback suppression, AGC etc complete as required as per specifications		90 days from date of signing of contract	NOS	1				
1.24	Supply, Installation, testing and commissioning of Speaker Cable 2.5 square mm , Outer Dia 8 mm, cond. construction 50 x 0.25 mm/ conductor resistance 7 Ω/km/ inductance 0.53 μH/m, 100 mtr. Coil etc and complete as required.		90 days from date of signing of contract	NOS	1				

1.25	Supply, Installation, testing and commissioning a high-quality mic or line level audio signals and Control Cable.		90 days from date of signing of contract	NOS	1					
1.26	AV Rack Frame/600x600/Steel/FM/Casters Type 2/Black, Glass Door/600/FM/Black, Metal Door/600/FM/Black, Shelf/600/Black, Mounting Hardware-CR (Pack of 20), Server /IT Rack mount power distribution unit, 1Ph, 230V, 16A, 50/60Hz, 2U standard with 6 X Indian Round Pin 5/15A, Inlet Plug type 16A Indian Round Pin, 16A MCB - PDU Rating 3.6KVA/Side feed-1.5Mt/ Black, ITE / Server Rack Air Circulation module/Tower Mount/180CFM, Horz. Cable Organiser/IU/Loop		90 days from date of signing of contract	NOS	1					
1.27	Services charges along with programming & Training charges for audio conferencing system.		90 days from date of signing of contract	NOS	1					
2	AV Solution Auditorium									
2.01	3LCD technology, 7000 lumen brightness, WUXGA resolution, 4K enhancement, laser light source and native contrast of 2000:1, Lens support: Supports a wide selection of interchangeable lenses, 360 degree angle projection freedom, USB 2.0 Type B (Service Only), RS-232C, Wired Network, Wireless Network (2x), VGA in, VGA out, DVI in, HDMI in, BNC in, HDBaseT, Stereo mini jack audio out, Stereo mini jack audio in (3x), HDMI (HDCP 2.2), Wireless LAN IEEE 802.11b/g/n (optional), Kensington lock, Control panel lock, Security cable hole, Wireless LAN unit lock, Password protection		90 days from date of signing of contract	NOS	1					
2.02	projectors up to 20,000 lumens and Pro G7000 Series projectors with the Short-throw #1 Zoom Lens. Ideal for projecting large, high-quality images in narrow spaces, this interchangeable lens supports screen sizes of 80" to 1000" and provides a wider lens shift for 1080p sources compared to our previous generation lens		90 days from date of signing of contract	NOS	1					
2.03	MOTORIZED 16:10 -FIBER GLASS WITH LVC, Mount Type Ceiling & Wall mount Screen Fabric Fiber Glass Matte White, Aspect Ratio 16:10, Gain 1.0, Case		90 days from date of signing of	NOS	1					

	Color White. Projection Type Front, Motor Tubular motor, Control External RF, RS 232, RF controller, Wire trigger, Power 220V, LVC 12V, wire trigger, Screen Size Diagonal 170"		contract							
2.04	A Podium Supplied with a detachable gooseneck condenser microphone and a reading light for the podium top, HDMI wall Plate Power Point		90 days from date of signing of contract	NOS	1					
2.05	Diagonal Size 65, Type Direct LED BLU, Resolution 3840*2160 (4K UHD), Pixel Pitch(mm) 0.372 x 0.372, Active Display Area(mm) 1428.48 (H) x 803.52 (V), Brightness(Typ.) 300 nit, Contrast Ratio 4000:1, Viewing Angle(H/V) 178/178, Response Time(G-to-G) 8ms(Typ.), Display Colors 16.7M(True Display), Color Gamut (NTSC) 72%, Operation Hour 16/7, Dynamic C/R MEGA, H-Scanning Frequency 30 ~ 81kHz, V-Scanning Frequency 48 ~ 75HZ, Maximum Pixel Frequency 594MHz, Speaker Type Built in Speaker(10W + 10W), Input- Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1, Output-Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45, Bezel Width (mm) 3 Bezel-less		90 days from date of signing of contract	NOS	2					
2.06	Projector Mount Kit 4 + 4 : Ino. (Projector Model is Maximum Dimensions (D X W X H) 586 x 211 x 492 mm, Weight (Including Standard Lens) Approx. 23.7 kg		90 days from date of signing of contract	NOS	1					
2.07	A Wall Plate Transmitter which has atleast two Video Input: 1x HDMI, 1x VGA & Audio. Output: 1x RJ45 output which should be HDBaseT compatible which transmit signals upto 230 ft along with control signals. It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management.		90 days from date of signing of contract	NOS	1					
2.08	A Receiver which has atleast one Video Input: 1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance. Output: 1x HDMI scaled output. It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management. It should have atleast 1xRS-232 port and upto 2 IR port which can be		90 days from date of signing of contract	NOS	1					

	used to control the devices.									
2.09	A Switcher which has atleast four inputs, Video Input: 4x HDMI which support video of resolution upto 4K with HDR10+. Output: 1x HDMI which support video upto 4K with HDR10+, Built in audio de-embedding capabilities with 1 Stereo outputs, EDID Management, HDCP Management upto 2.3, Should have an ethernet management for getting controlled through controller.		90 days from date of signing of contract	NOS	1					
2.10	A splitter which converts and splits a single 4K60 HDMI signal to feed up to four separate HDBaseT compatible receivers. Video inputs: 1x HDMI which can accept 4K signal and outputs 1xHDMI and 4xRJ-45 which supports 4K signals. The RJ-45 output's should be HDBaseT and transmits video upto 230 ft. It should have one Ethernet port.		90 days from date of signing of contract	NOS	1					
2.11	A Receiver which has atleast one Video Input: 1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance. Output: 1x HDMI output. It should have the EDID Management, HDCP Management. It should have atleast 1xRS-232 port and upto 2 IR port which can be used to control the devices.		90 days from date of signing of contract	NOS	4					
2.12	A device which handles standard and high-definition video sources with resolutions up to Full HD 1080p60 as well as computer sources up to WUXGA 1920x1200. Whatever the source is connected it can scale it up or down, deinterlacing it, reducing noise artifacts, and adjusting its aspect ratio to match the native resolution of video display. It has an VGA input along with stereo audio and gives HDMI scaled output. It should also do the audio embedding.		90 days from date of signing of contract	NOS	1					
2.13	10.2-inch Retina display, A10 Fusion chip, Touch ID fingerprint sensor and Apple Pay 8MP back camera, 1.2MP FaceTime HD front camera, Stereo speakers 802.11ac Wi-Fi, Up to 10 hours of battery life Lightning connector for charging and accessories with Wall mount and System Control application		90 days from date of signing of contract	NOS	1					
2.14	Control system with modular programming architecture, Onboard 2GB RAM & 8GB Flash memory, High-speed USB 2.0 host port, Industry-standard Ethernet and wired communications, support computer and web based control, iPhone®, iPad®, and Android™ control app, SNMP remote management support, One port that		90 days from date of signing of contract	NOS	1					

	supports all three of RS-232, RS-422 & RS-485 COM port , Two RS-232 COM ports, 8x IR/serial, 8x relay, and 8x Versiport I/O ports, event scheduling Shall have Native /IP support, Should support BACnet and should have Secure access through full user/group management or Active Directory integration, Hardware level security using 802.1X authentication, TLS, SSL, SSH, and SFTP network security protocols, FIPS 140-2 compliant encryption IPv6 ready, Front panel USB computer console port, 1-space rack-mountable								
2.15	A cable which has 350MHz or better certified twisted-pair cable with overall foil shield that is engineered to deliver optimum performance for use in data networking and high-definition AV signal distribution applications. It is precision manufactured and tested to significantly exceed the CAT5e specifications for bandwidth, crosstalk, and interference rejection, and is qualified for use wherever a high-quality shielded wire is required.		90 days from date of signing of contract	NOS	2				
2.16	A high-speed Category 2 HDMI cable featuring 24k gold-plated HDMI Type A male connectors at each end, it should support full 4K60 4:4:4 video.		90 days from date of signing of contract	SET	1				
2.17	A high-bandwidth VGA cable featuring male DB15HD connectors at each end. Unbalanced stereo audio is also integrated into the cable assembly, providing a breakout at each end with a single male 3.5 mm mini-TRS connector.		90 days from date of signing of contract	NOS	1				
2.18	Supply, Installation, Testing&Commissioning of Wired Podium Microphone / Super Cardioid Mini Shotgun microphone/ frequency response 40 Hz to 20 kHz/ Pickup pattern Lobar/ 60 cm/ double band/ with Base BI Colored light ring for clear visual feedback, Microphone modes Toggle on/off/Push to mute/Push to talk, complete as per specification.		90 days from date of signing of contract	NOS	1				
2.19	Wireless Handheld Microphone: SITC of Wireless Handheld Microphone set: having Condenser mic with super cardioid or better polar pattern, Up to 88 MHz switching Bandwidth, Should have Signal to noise ratio >113dBA or better, Total Harmonic Distortion should be <0.9%, Frequency Response: 80 to 18000Hz or		90 days from date of signing of contract	Nos.	2				

	better, Sensitivity: < 2.5 μ V at 52 dB(A), Should have RF Power of 45mW or more, Should have mute/unmute button, Operating time: up to 8 hours or better, Company Should have atleast three direct service centre in India for after sales Support.								
2.2	Wireless Lavalier Microphone : SITC of Wireless Lapel Microphone set: having Condenser mic with super cardioid or better polar pattern, Up to 88 MHz switching Bandwidth, Should have Signal to noise ratio >113dBA or better, Total Harmonic Distortion should be <0.9%, Frequency Response: 50 to 18000Hz or better, Sensitivity: < 2.5 μ V at 52 dB(A), Should have RF Power of 45mW or more, Should have mute/unmute button, Operating time: up to 8 hours or better, Company Should have atleast three direct service centre in India for after sales Support.		90 days from date of signing of contract	Nos.	1				
2.21	Supply Installation Testing Commissioning of 4 Way Antenna Distribution System. The Antenna Splitter should support up to 4 receivers, it should split signal from 2 Antennas to 4 wireless microphone receivers or more, it should be able to power up to 4 connected receivers, full true diversity support, should support UHF range from 470MHZ to 870MHZ or more, Should come with power supply as required, should be from the same OEM as wireless microphones for 100% compatibility etc complete as required as per specifications		90 days from date of signing of contract	Set	1				
2.22	Supply Installation Testing Commissioning of Directional Antenna, the antenna Should come built-in gain selectable boosters to boost radio signal, should be from the same OEM as wireless microphones for 100% compatibility etc complete as required as per specifications		90 days from date of signing of contract	Nos.	2				
2.23	Supply Installation Testing Commissioning of Antenna Cable, The cable should be OEM approved to work with the system etc complete as required as per specifications		90 days from date of signing of contract	Nos.	2				
2.24	Supply, Installation, testing and commissioning of thin edge 8" or more, ceiling subwoofer, it should have 70watt or more, Impedance: 8 Ω , Sensitivity (1W/1m): 88dB or more, Sound Pressure (Max. W/1m): 107dB or		90 days from date of signing of contract	Nos.	12				

	more, Frequency response: 50 Hz - 20000Hz, should come with built-in crossover for better overall audio output, etc.complete required as per specifications.								
2.25	Supply, Installation, testing and commissioning of 8" bass cabinet, 2.4 inches voice coil, Maximum Power 200 watt, Impdeance 8 ohm, frequency response: 90 Hz - 350 Hz, AluminiumConstruction with Plastic and complete as required.	90 days from date of signing of contract	Nos.	4					
2.26	Supply, Installation, testing and commissioning of Quad channel energy star rated stereo digital power amplifier, Technology: Class-D, Temperature controlled FAN, Switching mode power supply, built in DSP, Protection: DC Short circuit & Over heating & Over load & Signal limiting & Power limiter, Frequency response: 20 Hz - 20 kHz, RMS Power @ 4 Ω Stereo: 4 x 240 Watt or more, RMS power @ 8 Ω Stereo: 4 x 120 Watt or more etc complete required as per specifications.	90 days from date of signing of contract	Nos.	2					
2.27	Supply, Installation, testing and commissioning of Dual channel energy star rated stereo digital power amplifier, Technology: Class-D, Fan less operation, , Protection : DC Short circuit & Over heating & Over load & Signal limiting, Frequency response : 20 Hz - 20 kHz, RMS Power @ 4 Ω Stereo: 2 x 500 Watt or more, RMS power @ 8 Ω Stereo : 2 x 300 Watt or more etc complete required as per specifications.	90 days from date of signing of contract	Nos.	1					
2.28	Supply Installation Testing and Commissioning of digital signal processor with minimum 6no. Or more Mic / line input with phantom power and AEC and 4 or more line output, at least 2 channel of USB input and output for software Video Conferencing,, Should have sampline rate of 48kHz or better, Should be expandable for port expansion. 4x4 or more Dante Input for Digital audio transfer as per need,should support Control with App via iOS and Android devices, or any third-party control system, Shall have Built-in filters, feedback suppression, AGC etc complete as required as per specifications	90 days from date of signing of contract	Nos.	1					
2.29	Supply, Installation, testing and commissioning of Speaker Cable 2.5 square mm , Outer Dia 8 mm, cond. construction 50 x 0.25 mm/ conductor resistance 7 Ω /km/ inductance 0.53 μ H/m, 100 mtr. Coil etc and complete as required.	90 days from date of signing of contract	Nos.	3					

2.30	Supply, Installation, testing and commissioning a high-quality mic or line level audio signals and Control Cable.		90 days from date of signing of contract	NOS	1					
2.31	AV Rack Frame/600x600/Steel/FM/Casters Type 2/Black, Glass Door/600/FM/Black, Metal Door/600/FM/Black, Shelf/600/Black, Mounting Hardware-CR (Pack of 20), Server /IT Rack mount power distribution unit, 1Ph, 230V, 16A, 50/60Hz, 2U standard with 6 X Indian Round Pin 5/15A, Inlet Plug type 16A Indian Round Pin, 16A MCB - PDU Rating 3.6KVA/Side feed-1.5Mt/ Black, ITE / Server Rack Air Circulation module/Tower Mount/180CFM, Horz. Cable Organiser/IU/Loop		90 days from date of signing of contract	NOS	1					
2.32	Services charges along with programming & Training charges for audio conferencing system.		90 days from date of signing of contract	Job	1					
3	VC with 55" Display									
3.01	VC with microphone array, speakers and Navigator, Power Cord for India 2m 10A, Screen Mount Kit for the VC, USB C-USB A Cable, 4 meters long, 1.5m GREY HDMI 2.0, Wall Mount for VC, CAB (16,4 feet/5m) GREY ETHERNET, Power supply - AC/DC, 12V, 6.25A, grey, Network cable (ethernet) 8 meter, Navigator - Table stand version with 3 year support		90 days from date of signing of contract	NOS.	2					
3.02	Diagonal Size 55, Type Direct LED BLU, Resolution 3840*2160 (4K UHD), Pixel Pitch(mm) 0.372 x 0.372, Active Display Area(mm) 1428.48 (H) x 803.52 (V), Brightness(Typ.) 300 nit, Contrast Ratio 4000:1, Viewing Angle(H/V) 178/178, Response Time(G-to-G) 8ms(Typ.), Display Colors 16.7M(True Display), Color Gamut (NTSC) 72%, Operation Hour 16/7, Dynamic C/R MEGA, H-Scanning Frequency 30 ~ 81kHz, V-Scanning Frequency 48 ~ 75HZ, Maximum Pixel Frequency 594MHz, Speaker Type Built in Speaker(10W + 10W), Input- Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1, Output-Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45, Bezel Width (mm) 3 Bezel-less		90 days from date of signing of contract	NOS.	2					

3.03	Services charges along with programming & Training charges for audio conferencing system.		90 days from date of signing of contract	NOS.	2					
4	VC with 65" Display -1nos									
4.01	VC with microphone array, speakers and Navigator, Power Cord for India 2m 10A, Screen Mount Kit for the VC, USB C - USB A Cable, 4 meters long, 1.5m GREY HDMI 2.0, Wall Mount for VC, CAB (16,4 feet/5m) GREY ETHERNET, Powersupply - AC/DC, 12V, 6.25A, grey, Network cable (ethernet) 8 meter, Navigator - Table stand version with 5 Year Support		90 days from date of signing of contract	NOS.	1					
4.02	Diagonal Size 65, Type Direct LED BLU, Resolution 3840*2160 (4K UHD), Pixel Pitch(mm) 0.372 x 0.372, Active Display Area(mm) 1428.48 (H) x 803.52 (V), Brightness(Typ.) 300 nit, Contrast Ratio 4000:1, Viewing Angle(H/V) 178/178, Response Time(G-to-G) 8ms(Typ.), Display Colors 16.7M(True Display), Color Gamut (NTSC) 72%, Operation Hour 16/7, Dynamic C/R MEGA, H-Scanning Frequency 30 ~ 81kHz, V-Scanning Frequency 48 ~ 75HZ, Maximum Pixel Frequency 594MHz, Speaker Type Built in Speaker(10W + 10W), Input- Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1, Output-Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45, Bezel Width (mm) 3 Bezel-less		90 days from date of signing of contract	NOS	1					
4.03	Services charges along with programming & Training charges for audio conferencing system.		90 days from date of signing of contract	NOS	1					
5	CCTV Solution									
5.01	Supply, installation, testing & commissioning INDOOR IP CAMERA 2 MP		90 days from date of signing of contract	NOS.	26					
5.02	Supply, installation, testing & commissioning Outdoor IP CAMERA 2 MP		90 days from date of signing of	NOS.	6					

			contract							
5.03	Supply, installation, testing & commissioning 32 channel NVR Full HD		90 days from date of signing of contract	NOS.	1					
5.04	Supply, installation, testing & commissioning Hard disc, 4TB HDD		90 days from date of signing of contract	NOS.	2					
5.05	Supply, installation, testing & commissioning 24Port POE Switch		90 days from date of signing of contract	NOS.	2					
5.06	Supply, installation, testing and commissioning of Resolution H1920*1080 (Full HD Response Time(G-to-G), Contrast Ratio 4000:1, 6ms with 24x7-500nits Brightness and RGB DVI-I(D-Sub Common), Display Port 1.2 (2) / HDMI 2.0 (2) / HDCP 2.2 /HDCP 2.2/Stereo mini Jack, RGB/DVI/HDMI/ USB 2.0 x 2 /RS232C(in/out) thru Stereo Jack, RJ45/Built-in-Speakers with Video Signal extender upto 100mtr		90 days from date of signing of contract	NOS.	1					
5.07	Supply, installation, testing and commissioning of 24 Port Patch Pannel		90 days from date of signing of contract	NOS.	2					
5.08	Supply, installation, testing and commissioning of 1Meter patch cord		90 days from date of signing of contract	NOS.	56					
5.09	Face Plate		90 days from date of signing of contract	NOS.	28					
5.1	Supply, installation, testing and commissioning of Gangbox		90 days from date of signing of contract	NOS.	28					

5.11	Supply, installation, testing and commissioning of Cat 6 UTP Cable 305mtr Roll.		90 days from date of signing of contract	NOS.	9					
5.12	Supply, installation, testing and commissioning of PVC Conduit Channel		90 days from date of signing of contract	LOT.	1					
5.13	Supply, installation, testing and commissioning of 6U Rack Fully Loaded		90 days from date of signing of contract	NOS.	1					
5.14	Services charges along with programming & Training charges for audio conferencing system.			LAM	1					
									Total Price (Excluding GST and other taxes) (A) Rs	

*GST to be quoted item wise as per HSN Code

Name of Bidder *[insert complete name of Bidder]*

Signature of Bidder *[signature of person signing the Bid]*

Date *[insert date]*

B. PRICE AND COMPLETION SCHEDULE - RELATED SERVICES

Date: _____ NCB No: _____ Alternative No: _____ Page No. _____ of _____								
1	2	3	4	5	6	7	8	
Service No.	Description of Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Country of Origin	Delivery Date at place of Final destination	Quantity and physical unit	Unit price (excluding GST)	*GST and other taxes payable per item if Contract is awarded	Total Price per Service (Col. 5*6)	
*GST to be quoted item wise as per HSN Code.							Sum (A)	
							GST (B)	
							Total (A + B)	

Name of Bidder *[insert complete name of Bidder]*

Signature of Bidder *[signature of person signing the Bid]*

Date *[insert date]*

5. FORMS OF BID SECURITY

Form of Bid Security - Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

Bank Guarantee No..... *[insert guarantee reference number]*

Date..... *[insert date of issue of the guarantee]*

WHEREAS, _____ *[name of Bidder]*² (hereinafter called "the Applicant") has submitted his Bid dated _____ *[date]* or will submit his Bid for the supply of _____ *[name of Contract]* (hereinafter called "the Bid") under Invitation for Bids No.....*[insert number]* (hereinafter called "the IFB")

KNOW ALL PEOPLE by these presents that We _____ *[name of bank]* of _____ *[name of country]* having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ *[name of Purchaser]* (hereinafter called "the Purchaser ") in the sum of _____³ for which payment well and truly to be made to the said Purchaser the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 20____.

THE CONDITIONS of this obligation are:

- (1) If after Bid opening the Applicant (a) withdraws his bid during the period of Bid validity specified in the Letter of Bid; or (b) does not accept the correction of the Bid Price pursuant to ITB 31;

or

- (2) If the Applicant having been notified of the acceptance of his bid by the Purchaser during the period of Bid validity:
 - (a) fails or refuses to execute the Contract Agreement in accordance with the Instructions to Bidders, if required; or
 - (b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders.

we undertake to pay to the Purchaser up to the above amount upon receipt of his first written demand, without the Purchaser having to substantiate his demand, provided that in his demand the Purchaser

²*In the case of a JV, the bidder should be stated as "a Joint Venture consisting of, and".*

³*The Applicant should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 19.1 of the Instructions to Bidders.*

will note that the amount claimed by him is due to him owing to the occurrence of one or any of the four conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date 45 days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Purchaser, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE OF THE BANK _____

WITNESS _____ SEAL _____

[signature, name, and address]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

6. MANUFACTURER'S AUTHORIZATION

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are legally binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the **BDS**.]*

Date: *[insert date (as day, month and year) of Bid Submission]*

NCB No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To:

*Superintending Engineer,
Research Circle,
National Hydrology Project,
Irrigation research Institute, Roorkee
Distt. – Haridwar, Uttarakhand PIN 247667*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract against the above IFB.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm against this IFB.

We as manufacturers of *[insert type of goods manufactured]* confirm to provide spares and service support for a minimum period of 10 years after commissioning.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Bidder]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Note – Modify this format suitably in cases where manufacturer's warranty and guarantee are not applicable for the items for which bids are invited. If the supply consists of number of items, indicate the specific item (s) for which alone the above authorization is required.

7. DECLARATION FOR CLAIMING TAX/ DUTY EXEMPTION⁴

(Name of the Project)

Bid No.

Description of item to be supplied

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

(Information for issue of certificate for claiming exemption of Tax/ Duty in terms of Government of India's relevant notification)

(Bidder's Name and Address):

**To
(Name of
Purchaser)**

.....

Dear Sir:

1. We confirm that we are solely responsible for obtaining deemed export benefits which we have considered in our bid and in case of failure to receive such benefits for reasons whatsoever, Purchaser will not compensate us.
2. We are furnishing below the information required by the Purchaser for issue of necessary certificate in terms of Government of India's relevant notification.

(i) Ex-factory price per unit on which the tax/duty is payable: *Rs.

(ii) No of Units to be supplied:

(iii) Total cost on which the tax/duty is payable (Rs.)

(The requirements listed above are as per Current notifications. These may be modified, as necessary, in terms of the rules in force)

(Signature) _____

(Printed Name) _____

(Designation) _____

(Common Seal) _____

** Please attach details item-wise with cost, if there are more than one items. The figures indicated should tally with what is given in the price schedule.*

⁴ This declaration refers to ITB 14.9 and shall be retained only if ITB 14.9 is retained. The format may be modified as per the latest instructions of Government of India.

8. PERFORMA FOR PERFORMANCE STATEMENT

[Please see ITB Clause 36.2 and Section III-
Evaluation and Qualification Criteria]

Proforma for Performance Statement (for a period of last three/five years)

Bid No. _____ Date of opening _____ Time _____
Hours

Name of the Firm _____

<u>Order placed by (full address of Purchaser)</u>	<u>Order No. and date</u>	<u>Description and quantity of ordered equipment</u>	<u>Value of order</u>	<u>Date of completion of delivery</u>		<u>Remarks indicating reasons for late delivery, if any</u>	<u>Has the equipment been satisfactorily functioning? (Attach a certificate from the Purchaser/Consignee)</u>
				As per contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder _____

9. FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CASH FLOW

(To be provided on the letter head of the Bank)

AVAILABILITY OF CASH FLOW (WORKING CAPITAL)

(This should be given in this form only by a nationalized or scheduled bank in India. No other substitute will be acceptable)

This is to certify that M/s. _____ is a reputed company with a good financial standing.

If the contract for the works, namely _____ [funded by the World Bank] is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of INR _____ to meet their capital requirements for executing the above contract.

-- Sd. --

Name of Bank Manager

Senior Bank Manager

Address of the Bank

* Change the text as follows for Joint venture:

This is to certify that M/s. who has formed a JV with M/s. and M/s. for participating in this bid, is a reputed company with a good financial standing.

If the contract for the work, namely [funded by the World Bank] is awarded to the above Joint Venture, we shall be able to provide overdraft/credit facilities to the extent of Rs. to meet the working capital requirements for executing the above contract.

[This should be given by the JV members in proportion to their financial participation.]

**FORM OF AFFIDAVIT FOR CORRECTNESS OF INFORMATION AND DOCUMENTS
SUBMITTED WITH BID**

[Reference ITB 20.2]

[This affidavit should be on a non-judicial stamp paper of Rs.10/- and shall be attested by Magistrate/ Sub-Judge/ Notary Public]

I, (*name of the authorised representative of the Bidder*) solemnly affirm and state as under:

1. I hereby certify that all the information and documents furnished with the Bid submitted online in response to IFB number date issued by (*authority inviting bids*) for (*name and identification of Goods & Related Services*) are true and correct.
2. *I hereby certify that I have been authorised by (*the Bidder*) to sign on their behalf, the Bid mentioned in paragraph 1 above.

Deponent

Place:

Date:

** This sub-paragraph is not applicable if the Bidder is an individual and is signing the Bid on his own behalf.*

SECTION V. – ELIGIBLE COUNTRIES

Public Information Center

Eligibility for the Provision of Goods, Works and Non Consulting Services in Bank-Financed Procurement

In reference to ITB 4.7 and 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this bidding process:

Under ITB 4.7(a) and 5.1: *None*

Under ITB 4.7(b) and 5.1: *None*

SECTION VI. BANK POLICY - CORRUPT AND FRAUDULENT PRACTICES

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011.

“Fraud and Corruption:

1.16 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.⁵ In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;⁶
 - ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;⁷
 - (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;⁸
 - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;⁹
 - (v) "obstructive practice" is:
 - (aa) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation

⁵ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

⁶ For the purpose of this sub-paragraph, “*another party*” refers to a public official acting in relation to the procurement process or contract execution. In this context, “*public official*” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

⁷ For the purpose of this sub-paragraph, “*party*” refers to a public official; the terms “*benefit*” and “*obligation*” relate to the procurement process or contract execution; and the “*act or omission*” is intended to influence the procurement process or contract execution.

⁸ For the purpose of this sub-paragraph, “*parties*” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

⁹ For the purpose of this sub-paragraph, “*party*” refers to a participant in the procurement process or contract execution.

into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

- (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 1.16(e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- (c) will declare mis procurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- (d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank's sanctions procedures,¹⁰ including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated¹¹;
- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.”

¹⁰ A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

¹¹ A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

PART 2 - SUPPLY REQUIREMENTS

SECTION VII – SCHEDULE OF REQUIREMENTS

1. LIST OF GOODS AND DELIVERY SCHEDULE

Line Item No	Description of Goods	Physical unit	Quantity	Final (Site) Destination as specified in BDS	Delivery (as per Incoterms) Date		
					Earliest Delivery Date	Latest Delivery Date	Bidder's offered Delivery date
2	Audio Visual Works for Conference Room						
1.01	Diagonal Size- 55", Panel Type IPS, Resolution 1920*1080 (Full HD), Pixel Pitch(mm) 0.63mm(H) * 0.63mm(V), Brightness(Typ.) 500 nit, Contrast Ratio 1200:1, Viewing Angle(H/V) 178/178, Response Time(G-to-G) 8ms, Display Colors 8 bit - 16.7M, Operation Hour 24/7, 1.8mm bezel-to-beze, Haze 28%, Dynamic C/R 30,000:1, H & V - Scanning Frequency- 57.3kHz ~ 70kHz & 48Hz ~ 75Hz, DVI-D, Display Port 1.2, HDMI 2.0 (2), HDCP 2.2, Audio Stereo mini Jack, Output: DP1.2(Loop-out), Stereo mini Jack, Sleep mode Less then 0.5W, off mode less then 0.5W,	NOS	9		90 days from date of signing of contract	90 days from date of signing of contract	
1.02	Fixed Wall Mount Suitable wall mount for the LED Video wall to be provided, Maintenance Feature, Quick release latch easily activates lock & unlock mode to secure displays in place firmly Max.load 121 lbs (55 Kg) Display Sizes 37" to 70" VESA 200x200 to 600x400 Material Steel Product Weight 7	NOS	9		90 days from date of signing of contract	90 days from date of signing of contract	

	Kg Shipping Weight 8.5 Kg						
1.03	Codec, Quad Cam, Touch Screen, Codec Pro for Auto Expand, Quad Camera, Powersupply - AC/DC, 12V, 6.25A, grey, Wall mounting bracket for Quad Camera, Network cable (ethernet) 8 meter, Touch controller for collaboration endpoints, Antennas for Codec, Power Cord for India 2m 10A, Rackears for Spark Codec Pro, CAB 3m GREY HDMI 2.0, CAB 3 m/10 ft GREY ETHERNET, Tele Presence Power Cord for India 2m 10A	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.04	8X5XNBD 36 Month Suppor for Codec with Quad Camera and Touch Panel	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.05	A Podium Supplied with a detachable gooseneck condenser microphone and a reading light for the podium top, HDMI wall Plate Power Point	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.06	A Wall Plate Transmitter which has atleast two Video Input: 1x HDMI, 1x VGA & Audio. Output: 1x RJ45 output which should be HDBaseT compatible which transmit signals upto 230 ft along with control signals. It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.07	A Receiver which has atleast one Video Input: 1x RJ45 which should be HDBaseT compatible supporting signal receiving from	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	

	230 ft distance. Output: 1x HDMI scaled output. It should have at least one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management. It should have at least 1xRS-232 port and upto 2 IR port which can be used to control the devices.						
1.08	A high-performance rack-mountable 4K60 4:4:4 AVswitcher. Provides four HDMI® inputs and four HDMI outputs. Includes support of HDR (High Dynamic Range) and Dolby Vision® video formats, advanced EDID management, Built in audio de-embedding capabilities with 2x Stereo outputs, EDID Management, HDCP Management upto 2.3, Should have an ethernet management for getting controlled through controller.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.09	A high-performance 4K AV distribution amplifier designed to split a single HDMI® signal to feed up to eight separate displays, switchers, and/or other devices. It provides full support for UHD and DCI 4K60 4:4:4 and HDR video, HDCP 1.4 or 2.2 copy protection, and high-bitrate 7.1 audio, to ensure optimal performance and compatibility for any HD or 4K video application.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.10	Wireless content sharing solution to support content from Windows, Apple devices without installation of any additional Application and	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	

	USB dongle and share the content of Android devices using app. Support up to 2 presentations simultaneously with HDMI IN-1, HDMI Out-1, USB-1, RS-232-1, LAN-1- RJ45, Input Indicators-HDMI, Video Support- FULL HD, Custom welcome screen, There should be provision for security code for connecting to the wireless presentation system.						
1.11	Control system with modular programming architecture, Onboard 2GB RAM & 8GB Flash memory, , High-speed USB 2.0 host port, Industry-standard Ethernet and wired communications, support computer and web based control, iPhone®, iPad®, and Android™ control app, SNMP remote management support, One port that supports all three of RS-232, RS-422 & RS-485 COM port , Two RS-232 COM ports, 8x IR/serial, 8x relay, and 8x Versiport I/O ports, event scheduling Shall have Native /IP support, Should support BACnet and should have Secure access through full user/group management or Active Directory integration, Hardware level security using 802.1X authentication, TLS, SSL, SSH, and SFTP network, security protocols, FIPS 140-2 compliant encryption IPv6 ready, Front panel USB computer console port, 1-space rack-mountable	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	

1.12	A high-speed Category HDMI cable featuring 24k gold-plated HDMI Type A male connectors at each end, VGA cable featuring male DB15HD connectors at each end. it should support full 4K60 4:4:4 video.	LOT	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.13	Supply, Installation, Testing&Commissioningof Wired Table Top Digital Chairman Unit with super cardioid / array microphone, Goosneck length minimum 380mm or better, Should be flush-mountable, unit should have inbuilt Dual / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, Priority switch for temporary muting delegates, frequency response : 100Hz to 14500Hz, Audio quality : 16bit or better, built in headphone socket complete as per specification.	NOS	2		90 days from date of signing of contract	90 days from date of signing of contract	
1.14	Supply, Installation, Testing&Commissioning of Wired Table Top Digital Delegate Unit with Super cardioid / Hyper array Microphone, Goosneck length minimum 380mm or better, Should be flush-mountable, unit should have inbuilt Twin / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, frequency response: 100Hz to 14500Hz, Audio quality:16bit, built in headphone socket or better complete as per specification, Testing&Commissioning of Table Top Wireless Digital Delegate	NOS	14		90 days from date of signing of contract	90 days from date of signing of contract	

	Unit with Supercardiod/Array Microphone, Twin / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, detachable battery complete as per specification.						
1.15	Supply, Installation, Testing&Commissioning of Digital Audio Conference Control Unit with redundant power supply for conference system supplies Power for minimum for 40 units and controls up to Minimum 350 discussion units, built in / External USB Audio Recorder . An Ethernet Port shall be provided for network connection and control units, Integrated / external PC for control and management of the system, pre-installed control software for Microphone management, synoptic and Audio Recording, can be controllable wired and wireless discussion system etc and as per attached specification.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.16	Supply & fixing of Molded CAT-5/6 Patch Cords for loop in loop out 10 mtr length,should be from the same OEM as conference system	NOS	13		90 days from date of signing of contract	90 days from date of signing of contract	
1.17	Supply & fixing of Molded CAT-5/6 Patch Cords for loop in loop out 10 mtr length,should be from the same OEM as conference system	NOS	2		90 days from date of signing of contract	90 days from date of signing of contract	
1.18	Supply, Installation, testing and commissioning of wireless digital	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	

	Handheld Microphone with 18 or more channel, RF output 80mW or more, super cardioid pickup pattern, Frequency range : 1880 to 1930 MHz, Connectivity : RJ-45 etc and complete as required.						
1.19	Supply, Installation, testing and commissioning of wireless digital lavalier Microphone with 18 or more channel, RF output 80mW or more, omni directional pickup pattern, Frequency range : 1880 to 1930 MHz, Connectivity : RJ-45 etc and complete as required.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.2	Supply, Installation, testing and commissioning of wireless handheld / lapel / headworn microphone charging dock station from the same make, simultaneously charger 2 microphone, lighting indication etc complete required as per specifications	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.21	Supply, Installation, testing and commissioning of 6.5" two-way coaxial speaker, 100V tapping : 24watt - 12watt, frequency response: 55Hz - 20KHz, Dispersion: 150 degree, low impedance RMS Power: 30watt, frequency range: 45 Hz - 20 kHz, borderless grill etc and complete as required.	NOS	8		90 days from date of signing of contract	90 days from date of signing of contract	
1.22	Supply, Installation, testing and commissioning of 240w amplifier, The amplifier should have 240w or more output @100v line or low impedance, THD+N (@ 1 kHz) : <	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	

	1%, Technology: Class-A/B, Temperature controlled FAN, should have Protection features like: DC Short circuit & Over heating & Over load & Signal limiting etc complete required as per specifications.						
1.23	Supply Installation Testing and Commissioning of digital signal processor with minimum 6no. Or more Mic / line input with phantom power and AEC and 4 or more line output, at least 2 channel of USB input and output for software Video Conferencing,, Should have sampline rate of 48kHz or better, Should be expandable for port expansion. 4x4 or more Dante Input for Digital audio transfer as per need,should support Control with App via iOS and Android devices, or any third-party control system, Shall have Built-in filters, feedback suppression, AGC etc complete as required as per specifications	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.24	Supply, Installation, testing and commissioning of Speaker Cable 2.5 square mm , Outer Dia 8 mm, cond. construction 50 x 0.25 mm/ conductor resistance 7 Ω /km/ inductance 0.53 μ H/m, 100 mtr. Coil etc and complete as required.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.25	Supply, Installation, testing and commissioning a high-quality mic or line level audio signals and Control Cable.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
1.26	AV Rack	NOS	1		90 days from date of	90 days from date of	

	Frame/600x600/Steel/FM/Casters Type 2/Black, Glass Door/600/FM/Black, Metal Door/600/FM/Black, Shelf/600/Black, Mounting Hardware-CR (Pack of 20), Server /IT Rack mount power distribution unit, 1Ph, 230V, 16A, 50/60Hz, 2U standard with 6 X Indian Round Pin 5/15A, Inlet Plug type 16A Indian Round Pin, 16A MCB - PDU Rating 3.6KVA/Side feed-1.5Mt/ Black, ITE / Server Rack Air Circulation module/Tower Mount/180CFM, Horz. Cable Organiser/1U/Loop				signing of contract	signing of contract	
1.27	Services charges along with programming & Training charges for audio conferencing system.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2	AV Solution Auditorium						
2.01	3LCD technology, 7000 lumen brightness, WUXGA resolution, 4K enhancement, laser light source and native contrast of 2000:1, Lens support: Supports a wide selection of interchangeable lenses, 360 degree angle projection freedom, USB 2.0 Type B (Service Only), RS-232C, Wired Network, Wireless Network (2x), VGA in, VGA out, DVI in, HDMI in, BNC in, HDBaseT, Stereo mini jack audio out, Stereo mini jack audio in (3x), HDMI (HDCP 2.2), Wireless LAN IEEE 802.11b/g/n (optional), Kensington lock, Control panel lock, Security cable hole, Wireless LAN unit lock,	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	

	Password protection						
2.02	projectors up to 20,000 lumens and Pro G7000 Series projectors with the Short-throw #1 Zoom Lens. Ideal for projecting large, high-quality images in narrow spaces, this interchangeable lens supports screen sizes of 80" to 1000" and provides a wider lens shift for 1080p sources compared to our previous generation lens	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.03	MOTORIZED 16:10 -FIBER GLASS WITH LVC, Mount Type Ceiling & Wall mount Screen Fabric Fiber Glass Matte White, Aspect Ratio 16:10, Gain 1.0, Case Color White. Projection Type Front, Motor Tubular motor, Control External RF, RS 232, RF controller, Wire trigger, Power 220V, LVC 12V, wire trigger, Screen Size Diagonal 170"	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.04	A Podium Supplied with a detachable gooseneck condenser microphone and a reading light for the podium top, HDMI wall Plate Power Point	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.05	Diagonal Size 65, Type Direct LED BLU, Resolution 3840*2160 (4K UHD), Pixel Pitch(mm) 0.372 x 0.372, Active Display Area(mm) 1428.48 (H) x 803.52 (V), Brightness(Typ.) 300 nit, Contrast Ratio 4000:1, Viewing Angle(H/V) 178/178, Response Time(G-to-G) 8ms(Typ.), Display Colors 16.7M(True Display), Color Gamut (NTSC) 72%,	NOS	2		90 days from date of signing of contract	90 days from date of signing of contract	

	Operation Hour 16/7, Dynamic C/R MEGA, H-Scanning Frequency 30 ~ 81kHz, V-Scanning Frequency 48 ~ 75Hz, Maximum Pixel Frequency 594MHz, Speaker Type Built in Speaker(10W + 10W), Input-Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1, Output- Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45, Bezel Width (mm) 3 Bezel-less						
2.06	Projector Mount Kit 4 + 4 : 1no. (Projector Model is Maximum Dimensions (D X W X H) 586 x 211 x 492 mm, Weight (Including Standard Lens) Approx. 23.7 kg	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.07	A Wall Plate Transmitter which has atleast two Video Input: 1x HDMI, 1x VGA & Audio. Output: 1x RJ45 output which should be HDBaseT compatible which transmit signals upto 230 ft along with control signals. It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.08	A Receiver which has atleast one Video Input: 1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance. Output: 1x HDMI scaled output. It should have atleast one USB port which supports USB HID compliant device. It should have the EDID	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	

	Management, HDCP Management. It should have atleast 1xRS-232 port and upto 2 IR port which can be used to control the devices.						
2.09	A Switcher which has atleast fount inputs, Video Input: 4x HDMI which support video of resolution upto 4K with HDR10+. Output: 1x HDMI which support video upto 4K with HDR10+, Built in audio de-embedding capabilities with 1 Stereo outputs, EDID Management, HDCP Management upto 2.3, Should have an ethernet management for getting controlled through controller.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.1	A splitter which converts and splits a single 4K60 HDMI signal to feed up to four separate HDBaseT compatible receivers. Video inputs: 1x HDMI which can accept 4K signal and outputs 1xHDMI and 4xRJ-45 which supports 4K signals. The RJ-45 output's should be HDBaseT and transmits video upto 230 ft. It should have one Ethernet port.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.11	A Receiver which has atleast one Video Input: 1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance. Output: 1x HDMI output. It should have the EDID Management, HDCP Management. It should have atleast 1xRS-232 port and upto 2 IR port which can be used to control the devices.	NOS	4		90 days from date of signing of contract	90 days from date of signing of contract	
2.12	A device which handles standard	NOS	1		90 days from date of	90 days from date of	

	and high-definition video sources with resolutions up to Full HD 1080p60 as well as computer sources up to WUXGA 1920x1200. Whatever the source is connected it can scale it up or down, deinterlacing it, reducing noise artifacts, and adjusting its aspect ratio to match the native resolution of video display. It has an VGA input along with stereo audio and gives HDMI scaled output. It should also do the audio embedding.				signing of contract	signing of contract	
2.13	10.2-inch Retina display, A10 Fusion chip, Touch ID fingerprint sensor and Apple Pay 8MP back camera, 1.2MP FaceTime HD front camera, Stereo speakers 802.11ac Wi-Fi, Up to 10 hours of battery life Lightning connector for charging and accessories with Wall mount and System Control application	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.14	Control system with modular programming architecture, Onboard 2GB RAM & 8GB Flash memory, High-speed USB 2.0 host port, Industry-standard Ethernet and wired communications, support computer and web based control, iPhone®, iPad®, and Android™ control app, SNMP remote management support, One port that supports all three of RS-232, RS-422 & RS-485 COM port , Two RS-232 COM ports, 8x IR/serial, 8x relay, and 8x Versiport I/O ports, event	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	

	scheduling Shall have Native /IP support, Should support BACnet and should have Secure access through full user/group management or Active Directory integration, Hardware level security using 802.1X authentication, TLS, SSL, SSH, and SFTP network security protocols, FIPS 140-2 compliant encryption IPv6 ready, Front panel USB computer console port, 1-space rack-mountable						
2.15	A cable which has 350MHz or better certified twisted-pair cable with overall foil shield that is engineered to deliver optimum performance for use in data networking and high-definition AV signal distribution applications. It is precision manufactured and tested to significantly exceed the CAT5e specifications for bandwidth, crosstalk, and interference rejection, and is qualified for use wherever a high-quality shielded wire is required.	NOS	2		90 days from date of signing of contract	90 days from date of signing of contract	
2.16	A high-speed Category 2 HDMI cable featuring 24k gold-plated HDMI Type A male connectors at each end, it should support full 4K60 4:4:4 video.	SET	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.17	A high-bandwidth VGA cable featuring male DB15HD connectors at each end. Unbalanced stereo audio is also integrated into the cable assembly, providing a breakout at each end	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	

	with a single male 3.5 mm mini-TRS connector.						
2.18	Supply, Installation, Testing&Commissioning of Wired Podium Microphone / Super Cardioid Mini Shotgun microphone/ frequency response 40 Hz to 20 kHz/ Pickup pattern Lobar/ 60 cm/ double band/ with Base BI Colored light ring for clear visual feedback, Microphone modes Toggle on/off/Push to mute/Push to talk, complete as per specification.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.19	Wireless Handheld Microphone: SITC of Wireless Handheld Microphone set: having Condenser mic with super cardioid or better polar pattern, Up to 88 MHz switching Bandwidth, Should have Signal to noise ratio >113dBA or better, Total Harmonic Distortion should be <0.9%, Frequency Response: 80 to 18000Hz or better, Sensitivity: < 2.5 μ V at 52 dB(A), Should have RF Power of 45mW or more, Should have mute/unmute button, Operating time: up to 8 hours or better, Company Should have atleast three direct service centre in India for after sales Support.	Nos.	2		90 days from date of signing of contract	90 days from date of signing of contract	
2.2	Wireless Lavalier Microphone : SITC of Wireless Lapel Microphone set: having Condenser mic with super cardioid or better polar pattern, Up to 88 MHz switching Bandwidth, Should have Signal to noise ratio >113dBA or	Nos.	1		90 days from date of signing of contract	90 days from date of signing of contract	

	better, Total Harmonic Distortion should be <0.9%, Frequency Response: 50 to 18000Hz or better, Sensitivity: < 2.5 µV at 52 dB(A), Should have RF Power of 45mW or more, Should have mute/unmute button, Operating time: up to 8 hours or better, Company Should have atleast three direct service centre in India for after sales Support.						
2.21	Supply Installation Testing Commissioning of 4 Way Antenna Distribution System. The Antenna Splitter should support up to 4 receivers, it should split signal from 2 Antennas to 4 wireless microphone receivers or more, it should be able to power up to 4 connected receivers, full true diversity support, should support UHF range from 470MHZ to 870MHZ or more, Should come with power supply as required, should be from the same OEM as wireless microphones for 100% compatibility etc complete as required as per specifications	Set	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.22	Supply Installation Testing Commissioning of Directional Antenna, the antenna Should come built-in gain selectable boosters to boost radio signal, should be from the same OEM as wireless microphones for 100% compatibility etc complete as required as per specifications	Nos.	2		90 days from date of signing of contract	90 days from date of signing of contract	
2.23	Supply Installation Testing Commissioning of Antenna Cable,	Nos.	2		90 days from date of	90 days from date of	

	The cable should be OEM approved to work with the system etc complete as required as per specifications				signing of contract	signing of contract	
2.24	Supply, Installation, testing and commissioning of thin edge 8" or more, ceiling subwoofer, it should have 70watt or more, Impedance: 8 Ω , Sensitivity (1W/1m): 88dB or more, Sound Pressure (Max. W/1m): 107dB or more, Frequency response: 50 Hz - 20000Hz, should come with built-in crossover for better overall audio output, etc.complete required as per specifications.	Nos.	12		90 days from date of signing of contract	90 days from date of signing of contract	
2.25	Supply, Installation, testing and commissioning of 8" bass cabinet, 2.4 inches voice coil, Maximum Power 200 watt, Impedance 8 ohm, frequency response: 90 Hz - 350 Hz, AluminiumConstruction with Plastic and complete as required.	Nos.	4		90 days from date of signing of contract	90 days from date of signing of contract	
2.26	Supply, Installation, testing and commissioning of Quad channel energy star rated stereo digital power amplifier, Technology: Class-D, Temperature controlled FAN, Switching mode power supply, built in DSP, Protection: DC Short circuit & Over heating & Over load & Signal limiting & Power limiter, Frequency response: 20 Hz - 20 kHz, RMS Power @ 4 Ω Stereo: 4 x 240 Watt or more, RMS power @ 8 Ω Stereo: 4 x 120 Watt or more etc complete required as per	Nos.	2		90 days from date of signing of contract	90 days from date of signing of contract	

	specifications.						
2.27	Supply, Installation, testing and commissioning of Dual channel energy star rated stereo digital power amplifier, Technology: Class-D, Fan less operation, , Protection : DC Short circuit & Over heating & Over load & Signal limiting, Frequency response : 20 Hz - 20 kHz, RMS Power @ 4 Ω Stereo: 2 x 500 Watt or more, RMS power @ 8 Ω Stereo : 2 x 300 Watt or more etc complete required as per specifications.	Nos.	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.28	Supply Installation Testing and Commissioning of digital signal processor with minimum 6no. Or more Mic / line input with phantom power and AEC and 4 or more line output, at least 2 channel of USB input and output for software Video Conferencing,, Should have sampline rate of 48kHz or better, Should be expandable for port expansion. 4x4 or more Dante Input for Digital audio transfer as per need,should support Control with App via iOS and Android devices, or any third-party control system, Shall have Built-in filters, feedback suppression, AGC etc complete as required as per specifications	Nos.	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.29	Supply, Installation, testing and commissioning of Speaker Cable 2.5 square mm , Outer Dia 8 mm, cond. construction 50 x 0.25 mm/	Nos.	3		90 days from date of signing of contract	90 days from date of signing of contract	

	conductor resistance 7 Ω/km/ inductance 0.53 μH/m, 100 mtr. Coil etc and complete as required.						
2.30	Supply, Installation, testing and commissioning a high-quality mic or line level audio signals and Control Cable.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.31	AV Rack Frame/600x600/Steel/FM/Casters Type 2/Black, Glass Door/600/FM/Black, Metal Door/600/FM/Black, Shelf/600/Black, Mounting Hardware-CR (Pack of 20), Server /IT Rack mount power distribution unit, 1Ph, 230V, 16A, 50/60Hz, 2U standard with 6 X Indian Round Pin 5/15A, Inlet Plug type 16A Indian Round Pin, 16A MCB - PDU Rating 3.6KVA/Side feed-1.5Mt/ Black, ITE / Server Rack Air Circulation module/Tower Mount/180CFM, Horz. Cable Organiser/1U/Loop	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
2.32	Services charges along with programming & Training charges for audio conferencing system.	Job	1		90 days from date of signing of contract	90 days from date of signing of contract	
3	VC with 55" Display -2nos						
3.01	VC with microphone array, speakers and Navigator, Power Cord for India 2m 10A, Screen Mount Kit for the VC, USB C-USB A Cable, 4 meters long, 1.5m GREY HDMI 2.0, Wall Mount for VC, CAB (16,4 feet/5m) GREY ETHERNET, Power supply - AC/DC, 12V, 6.25A, grey, Network cable (ethernet) 8 meter,	NOS.	2	3.01	90 days from date of signing of contract	90 days from date of signing of contract	

	Navigator - Table stand version with 3 year support						
3.02	Diagonal Size 55, Type Direct LED BLU, Resolution 3840*2160 (4K UHD), Pixel Pitch(mm) 0.372 x 0.372, Active Display Area(mm) 1428.48 (H) x 803.52 (V), Brightness(Typ.) 300 nit, Contrast Ratio 4000:1, Viewing Angle(H/V) 178/178, Response Time(G-to-G) 8ms(Typ.), Display Colors 16.7M(True Display), Color Gamut (NTSC) 72%, Operation Hour 16/7, Dynamic C/R MEGA, H-Scanning Frequency 30 ~ 81kHz, V-Scanning Frequency 48 ~ 75Hz, Maximum Pixel Frequency 594MHz, Speaker Type Built in Speaker(10W + 10W), Input-Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1, Output- Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45, Bezel Width (mm) 3 Bezel-less	NOS.	2	3.02	90 days from date of signing of contract	90 days from date of signing of contract	
3.03	Services charges along with programming & Training charges for audio conferencing system.	NOS.	2	3.03	90 days from date of signing of contract	90 days from date of signing of contract	
4	VC with 65" Display -1nos						
4.01	VC with microphone array, speakers and Navigator, Power Cord for India 2m 10A, Screen Mount Kit for the VC, USB C - USB A Cable, 4 meters long, 1.5m GREY HDMI 2.0, Wall Mount for VC, CAB (16,4 feet/5m) GREY	NOS.	1		90 days from date of signing of contract	90 days from date of signing of contract	

	ETHERNET, Powersupply - AC/DC, 12V, 6.25A, grey, Network cable (ethernet) 8 meter, Navigator - Table stand version with 5 Year Support						
4.02	Diagonal Size 65, Type Direct LED BLU, Resolution 3840*2160 (4K UHD), Pixel Pitch(mm) 0.372 x 0.372, Active Display Area(mm) 1428.48 (H) x 803.52 (V), Brightness(Typ.) 300 nit, Contrast Ratio 4000:1, Viewing Angle(H/V) 178/178, Response Time(G-to-G) 8ms(Typ.), Display Colors 16.7M(True Display), Color Gamut (NTSC) 72%, Operation Hour 16/7, Dynamic C/R MEGA, H-Scanning Frequency 30 ~ 81kHz, V-Scanning Frequency 48 ~ 75HZ, Maximum Pixel Frequency 594MHz, Speaker Type Built in Speaker(10W + 10W), Input-Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1, Output- Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45, Bezel Width (mm) 3 Bezel-less	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
4.03	Services charges along with programming & Training charges for audio conferencing system.	NOS	1		90 days from date of signing of contract	90 days from date of signing of contract	
5	CCTV Solution						
5.01	Supply, installation, testing & commissioning INDOOR IP CAMERA 2 MP	NOS.	26		90 days from date of signing of contract	90 days from date of signing of contract	

5.02	Supply, installation, testing & commissioning Outdoor IP CAMERA 2 MP	NOS.	6		90 days from date of signing of contract	90 days from date of signing of contract	
5.03	Supply, installation, testing & commissioning 32 channel NVR Full HD	NOS.	1		90 days from date of signing of contract	90 days from date of signing of contract	
5.04	Supply, installation, testing & commissioning Hard disc, 4TB HDD	NOS.	2		90 days from date of signing of contract	90 days from date of signing of contract	
5.05	Supply, installation, testing & commissioning 24Port POE Switch	NOS.	2		90 days from date of signing of contract	90 days from date of signing of contract	
5.06	Supply, installation, testing and commissioning of Resolution H1920*1080 (Full HD Response Time(G-to-G), Contrast Ratio 4000:1, 6ms with 24x7-500nits Brightness and RGB DVI-I(D-Sub Common), Display Port 1.2 (2) / HDMI 2.0 (2) / HDCP 2.2 /HDCP 2.2/Stereo mini Jack, RGB/DVI/HDMI/ USB 2.0 x 2 /RS232C(in/out) thru Stereo Jack, RJ45/Built-in-Speakers with Video Signal extender upto 100mtr	NOS.	1		90 days from date of signing of contract	90 days from date of signing of contract	
5.07	Supply, installation, testing and commissioning of 24 Port Patch Panel	NOS.	2		90 days from date of signing of contract	90 days from date of signing of contract	
5.08	Supply, installation, testing and commissioning of 1Meter patch cord	NOS.	56		90 days from date of signing of contract	90 days from date of signing of contract	
5.09	Face Plate	NOS.	28		90 days from date of signing of contract	90 days from date of signing of contract	
5.1	Supply, installation, testing and commissioning of Gangbox	NOS.	28		90 days from date of signing of contract	90 days from date of signing of contract	
5.11	Supply, installation, testing and commissioning of Cat 6 UTP	NOS.	9		90 days from date of signing of contract	90 days from date of signing of contract	

	Cable 305mtr Roll.						
5.12	Supply, installation, testing and commissioning of PVC Conduit Channel	LOT.	1		90 days from date of signing of contract	90 days from date of signing of contract	
5.13	Supply, installation, testing and commissioning of 6U Rack Fully Loaded	NOS.	1		90 days from date of signing of contract	90 days from date of signing of contract	
5.14	Services charges along with programming & Training charges for audio conferencing system.	LAM.	1		90 days from date of signing of contract	90 days from date of signing of contract	

LIST OF RELATED SERVICES {[ITB CLAUSE 14.8B]} AND COMPLETION SCHEDULE

List of Related Services					
Sl. No.	Description	Qty.	Physical Unit	Place where service be performed	Final completion date of service
01	02	03	04	05	06

3. TECHNICAL SPECIFICATIONS

BACKGROUND

Irrigation Research Institute, Roorkee (IRI) is a unit of Irrigation Department, Govt. of Uttarakhand. IRI was established to carry out Research and Development work under the aegis of the U. P. Irrigation Department in the year 1928 as a small research unit in Lucknow. The success of this small unit was duly acknowledged and in 1945 activities were expanded and were shifted to Bahadradab (Roorkee) in 1946, where facilities in abundance were available for the physical modeling of hydraulic structures.

The research unit at Roorkee rose to a full-fledged Institute in 1954. The Institute gradually developed into a pioneer research station and is now engaged in research and development activities for many hydropower and water resources projects in India. After formation of new State Uttarakhand in Nov., 2000, IRI became a unit of Irrigation Department, Uttarakhand.

Irrigation Research Institute is represented in advisory capacity on several national technical committees of BIS, CBI&P, IRC and MOST. The Institute maintain a close liaison with several technical committees of Water Resources Development Council (WRDC), BIS, Manak Bhawan, New Delhi, Departments of Civil Engineering, Water Resources Development and Management (WRD&M), and Alternate Hydro Energy Centre (AHEC), Indian Institute of Technology, Roorkee, Central Board of Irrigation and Power, New Delhi, National Institute of Hydrology, Roorkee, Central Building Research Institute, Roorkee, State Engineers Academy, Roorkee, etc. in its research activities.

The institute was awarded by several prestigious awards. Recently Irrigation Research Institute Roorkee was chosen for best R&D institute in water resources sector award 2019 by Central Board of Irrigation and Power, New Delhi. (For more details, refer to the website of IRI <http://www.iri.res.in>).

Based on the successful outcome of the past two phases of the Hydrology Project, the Government of India with World Bank assistance initiated a follow up project – National Hydrology Project (NHP)-Approach towards Integrated Water Resources Management (www.indiawrm.org). The National Hydrology Project (NHP) will be implemented in eight years (2017-2024) with the funding of USD 350 million.

The project aims to improve the extent, quality, and accessibility of water resources information and strengthen the capacity of targeted water resources management institutions in India. The Project will cover the entire country and will be coordinated by the MoWR, RD & GR. The Project has adopted a four-pronged approach: (a) modernizing monitoring, including establishing comprehensive, nationwide, automated, real-time monitoring and data management systems for surface water and groundwater (both quality and quantity); (b) enhancing analytical tools for water resources assessment, hydrologic and flood inundation forecasting, water infrastructure operations, groundwater modelling, and river basin and investment planning; (c) transforming knowledge access, using cloud computing, Internet, mobile devices, social media and other communication tools to modernize access to and visualization of customized water information by all stakeholders; and (d) modernizing institutions through investments in people and institutional capacity.

In line with the four-pronged strategy described above, the project is divided into four components: (A) Water resources monitoring systems; (B) Water resources information

systems; (C) Water resources operations and planning systems; and (D) Institutional capacity enhancement. Essentially the data systems (A) will feed into the information systems (B) to improve planning and operations and to produce water information products (B and C), all of which will provide the basis for improved decision-making related to investment planning, water resources allocation, flood and drought management, and irrigation capacity and efficiency. Technical capacity for systems, planning, operations and policy and decision-making will be built under Component D.

The key outcomes of the project are listed below:

- To establish a National Water Information System with multi-disciplinary data from States and Central agencies and to facilitate data exchange amongst agencies on a real time basis
- To create National information system with generic models for improved water resources assessment
- To enable states to manage floods and dry season operation by using a river basin approach
- To operate reservoirs and irrigation systems more efficiently leading to water savings and improved productivity.

The project will cover all major river basins of India and will require strong collaboration among Central and State levels of government. All States and Union Territories will participate in the Project given their constitutional mandate for water resources management. Central agencies will also participate given significant inter-State aspects of water management (most large river basins and aquifers cross State boundaries) and the need for a consistent National Water Information Base. For the implementation of NHP in Uttarakhand State, Irrigation Department, Govt. of Uttarakhand has been nominated as State Implementing Agency for Uttarakhand State by Department of WR, RD & GR, Ministry of Jal Shakti, Govt. of India. Irrigation Department, Govt. of Uttarakhand has nominated IRI for implementing NHP in the State of Uttarakhand as nodal agency.

Under component A of NHP, a state of art State Water Informatics Centre at Roorkee has been constructed to collect, disseminate the all Hydro-meteorological Data from the different location of state of Uttarakhand and share the data with stakeholder.

1.0 GENERAL SPECIFICATIONS

A. Audio Visual Systems for Auditorium

S. NO	Description	Required Specification
		Auditorium Conference Hall
1	Projector	
	Technology	3LCD technology
	Brightness	7000 lumen
	Resolution	WUXGA resolution, 4K enhancement
	Light Type	laser light source
	Contrast	2000:1
	Lens Support	Supports a wide selection of interchangeable lenses
	Projection Freedom	360 degree angle projection freedom
	Ports	USB 2.0 Type B (Service Only), RS-232C, Wired Network, Wireless Network (2x), VGA in, VGA out, DVI in, HDMI in,

		BNC in, HDBaseT, Stereo mini jack audio out, Stereo mini jack audio in (3x), HDMI (HDCP 2.2), Wireless LAN IEEE 802.11b/g/n (optional), Kensington lock, Control panel lock, Security cable hole, Wireless LAN unit lock
	Other Features	Password protection
2	Short-throw Lens	
	Projector brightness	up to 20,000 lumen
	Screen Size	80" to 1000"
	Additional features	Pro G7000 Series projectors with the Short-throw Zoom Lens. Ideal for projecting large, high-quality images in narrow spaces
3	Projector Screen	
	Type	MOTORIZED 16:10 -FIBER GLASS WITH LVC
	Mount type	Ceiling & Wall mount
	Screen type	Screen Fabric Fiber Glass Matte White
	Aspect ratio	16:10
	Gain	1.0
	Case Colour	White
	Projection Type	Front
	Power	220V, LVC 12V
	Screen Size (Diagonal)	170"
	Additional features	Motor Tubular motor, Control External RF, RS 232, RF controller, Wire trigger, Power, wire trigger
4	Podium	
	Dimensions	45"(H) x 24"(W) x 20"(D)
	Podium Type	A Podium Supplied with a detachable gooseneck condenser microphone and a reading light for the podium top
	Other features	HDMI wall Plate Power Point, Wooden /metal Stylish attractive and elegant Podium available in Black Wooden or Metal material with 1 power, VGA, Audio And HDMI Connectivity
5	Display	
	Diagonal Size	65"
	Panel Type	Direct LED BLU
	Resolution	3840*2160 (4K UHD)
	Pixel Pitch(mm)	0.372 x 0.372
	Active Display Area(mm)	1428.48 (H) x 803.52 (V)
	Brightness(Typ.)	300 nit
	Contrast Ratio	4000:1
	Viewing Angle(H/V)	178/178
	Response Time(G-to-G)	8ms
	Display Colors	16.7M(True Display)
	Operation Hour	16/7
	Display Design	1.8mm bezel-to-bezel
	Color Gamut (NTSC)	72%
	Dynamic C/R	MEGA

	Maximum Pixel Frequency	594MHz,
	Speaker Type	Built in Speaker(10W + 10W)
	Input	Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1,
	H & V -Scanning Frequency	30kHz ~ 81kHz & 48Hz ~ 75Hz
	Output	Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45
	Bezel Width (mm)	3 Bezel-less
6	Mount Kit	
	Dimensions (D X W X H)	586 x 211 x 492 mm
	Weight (Including Standard Lens)	23.7 kg
	Mount kit (4 + 4)	1no
7	HDMI/VGA wall Plate	
	Video Input	1x HDMI, 1x VGA
	Audio. Output	1x RJ45 output which should be HDBaseT compatible which transmit signals upto 230 ft along with control signals
	Additional features	It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management.
8	Video Receiver	
	Video Input	1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance.
	Output	1x HDMI scaled output
	Additional features	It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management.It should have atleast 1xRS-232 port and upto 2 IR port which can be used to control the devices.
9	Switcher	
	Video Input	4x HDMI which support video of resolution upto 4K with HDR10+
	Output	1x HDMI which support video upto 4K with HDR10+,
	Additional features	Built in audio de-embedding capabilities with 1 Stereo outputs, EDID Management, HDCP Management upto 2.3, Should have an ethernet management for getting controlled through controller.
10	Splitter	
	Type	A splitter which converts and splits a single 4K60 HDMI signal to feed up to four separate HDBaseT compatible receivers.
	Video inputs	1x HDMI which can accept 4K signal
	Output	1xHDMI and 4xRJ-45 which supports 4K signals
	Additional features	The RJ-45 output's should be HDBaseT and transmits video upto 230 ft. It should have one Ethernet port.
11	Receiver	
	Video Input	1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance
	Output	1x HDMI output
	Ports	It should have atleast 1xRS-232 port and upto 2 IR port which can be used to control the devices.

	Additional Features	It should have the EDID Management, HDCP Management.
12	VGA to HDMI Scaler	
	Input Resolutions	Full HD 1080p60 as well as computer sources up to WUXGA 1920x1200
	Additional features	Whatever the source is connected it can scale it up or down, deinterlacing it, reducing noise artifacts, and adjusting its aspect ratio to match the native resolution of video display. It has an VGA input along with stereo audio and gives HDMI scaled output. It should also do the audio embedding.
13	Touch Panel	
	Display	10.2-inch Retina display
	Processor	A10 Fusion chip
	Fingerprint Sensor	Touch ID fingerprint sensor
	Camera	8MP back camera, 1.2MP FaceTime HD front camera
	Speakers	Stereo speakers
	Wifi connectivity	802.11ac Wi-Fi,
	Battery Life	Up to 10 hours of battery life
	Additional features	Apple Pay, Lightning connector for charging and accessories with Wall mount and System Control application
14	AV Controller	
	Controller type	Control system with modular programming architecture
	RAM	2GB
	Memory	8GB Flash Memory
	USB Port	High-speed USB 2.0 host port
	Communication Support	Industry-standard Ethernet and wired communications, support computer and web based control, iPhone®, iPad®, and Android™ control app, SNMP remote management support,
	Ports	One port that supports all three of RS-232, RS-422 & RS-485 COM port , Two RS-232 COM ports, 8x IR/serial, 8x relay, and 8x Versiport I/O ports
	Other features	Event scheduling Shall have Native /IP support, Should support BACnet and should have Secure access through full user/group management or Active Directory integration, Hardware level security using 802.1X authentication, TLS, SSL, SSH, and SFTP network, security protocols, FIPS 140-2 compliant encryption IPv6 ready, Front panel USB computer console port, 1-space rack-mountable
15	Digital Media 8G Cable	
	Additional features	A cable which has 350MHz or better certified twisted-pair cable with overall foil shield that is engineered to deliver optimum performance for use in data networking and high-definition AV signal distribution applications. It is precision manufactured and tested to significantly exceed the CAT5e specifications for bandwidth, crosstalk, and interference rejection, and is qualified for use wherever a high-quality shielded wire is required.
17	Video Cables	
	Additional features	A high-bandwidth VGA cable featuring male DB15HD connectors at each end. Unbalanced stereo audio is also integrated into the cable assembly, providing a breakout at each end with a single male 3.5 mm mini-TRS connector.
18	Microphone	

	Microphone type	Wired Table Wired Podium Microphone / Super Cardioid Mini Shotgun microphone
	Length	Goosneck length minimum 380mm or better
	frequency response	40Hz to 20kHz
	Audio quality	16bit or better
	Additional features	Pickup pattern Lobar/ 60 cm/ double band/ with Base BI Colored light ring for clear visual feedback, Microphone modes Toggle on/off/Push to mute/Push to talk , and complete as per specification.
19	Handheld Microphone	
	Microphone type	Wireless Handheld Microphone : SITC of Wireless Handheld Microphone set: having Condenser mic with super cardioid or better polar pattern
	Switching bandwidth	Up to 88 MHz switching Bandwidth
	SNR	>113dBA or better
	THD	<0.9%
	Frequency Response	80 to 18000Hz or better
	Sensitivity	< 2.5 μ V at 52 dB(A)
	RF Power	45mW or more
	Mute Button	Should have mute/unmute button
	Operating time	up to 8 hours or better
	Service Centres	Company Should have atleast three direct service centre in India for after sales Support.
20	Lapel microphone	
	Microphone type	Wireless Handheld Microphone : SITC of Wireless Lapel Microphone set: having Condenser mic with super cardioid or better polar pattern
	Switching bandwidth	Up to 88 MHz switching Bandwidth
	SNR	>113dBA or better
	THD	<0.9%
	Frequency Response	50 to 18000Hz or better
	Sensitivity	< 2.5 μ V at 52 dB(A)
	RF Power	45mW or more
	Mute Button	Should have mute/unmute button
	Operating time	up to 8 hours or better
	Service Centres	Company Should have atleast three direct service centre in India for after sales Support.
21	Microphone charging dock station	
	Type	4 Way Antenna Distribution System.
	Recievers	The Antenna Splitter should support up to 4 receivers, it should split signal from 2 Antennas to 4 wireless microphone receivers or more, it should be able to power up to 4 connected receivers
	UHF range	470MHZ to 870MHZ or more
	Power Supply	Should come with power supply as required
	Additional features	full true diversity support, and should be from the same OEM as wireless microphones for 100% compatibility etc complete as required as per specifications
22	Boosters	
	Additional features	Supply Installation Testing Commissioning of Directional Antenna, the antenna Should come built-in gain selectable boosters to boost radio signal, should be from the same OEM as wireless microphones for 100% compatibility etc complete

		as required as per specifications
23	Boosters Cable	
	Additional features	Supply Installation Testing Commissioning of Antenna Cable, The cable should be OEM approved to work with the system etc complete as required as per specifications
24	Subwoofer	
	Subwoofer type	thin edge 8" or more, ceiling subwoofer
	Power	70watt or more
	Impedance	8 Ω ,
	Sensitivity (1W/1m)	88dB or more
	Sound Pressure (Max. W/1m)	107dB or more
	Frequency response	50 Hz - 20000Hz
	Crossover	Should come with built-in crossover for better overall audio output, etc. complete required as per specifications.
25	Speaker	
	Speaker Type	8" bass cabinet, 2.4 inches voice coil
	Maximum Power	200 watt
	Impedance	8 Ω ,
	Frequency response	90 Hz - 350Hz
	Construction Type	Aluminium Contruction with Plastic and complete as required.
26	Amplifier	
	Type	Quad channel energy star rated stereo digital power amplifier
	Technology	Class-D
	Protection	DC Short circuit & Over heating & Over load & Signal limiting & Power limiter
	Frequency response	20 Hz - 20 kHz
	RMS Power @ 4 Ω Stereo	4 x 240 Watt or more
	RMS power @ 8 Ω Stereo	4 x 120 Watt or more
	Additional features	Temperature controlled FAN, Switching mode power supply, built in DSP etc complete required as per specifications.
27	Amplifier	
	Type	Quad channel energy star rated stereo digital power amplifier
	Technology	Class-D
	Protection	DC Short circuit & Over heating & Over load & Signal limiting & Power limiter
	Frequency response	20 Hz - 20 kHz
	RMS Power @ 4 Ω Stereo	2 x 500 Watt or more
	RMS power @ 8 Ω Stereo	2 x 300 Watt or more
	Additional features	Fan less operation etc. complete required as per specifications.
28	Audio DSP	
	Mic Input	Minimum 6no. Or more Mic / line input with phantom power and AEC
	Line Output	4 or more line output
	USB	at least 2 channel of USB input and output for software Video Conferencing,
	Sampling rate	48kHz or better

	Dante Input	4x4 or more Dante Input for Digital audio transfer as per need,
	App Control	should support Control with App via iOS and Android devices, or any third-party control system
	Additional features	Should be expandable for port expansion. , Shall have Built-in filters, feedback suppression, AGC etc complete as required as per specifications
29	Speaker Cables	
	Cable	2.5 square mm
	Diameter	8mm
	Construction	50 x 0.25 mm
	conductor resistance	7 Ω/km
	inductance	0.53 μH/m
	Additional features	100 mtr. Coil etc and complete as required.
30	Cables	
	Additional features	Supply, Installation, testing and commissioning a high-quality mic or line level audio signals and Control Cable.
31	AV Rack	
	Frame Dimension	600x600
	Material	Steel
	Power rating	1Ph, 230V, 16A, 50/60Hz,
	Inlet Plug type	16A Indian Round Pin
	Additional features	AV Rack Frame/FM/Casters Type 2/Black, Glass Door/600/FM/Black, Metal Door/600/FM/Black, Shelf/600/Black, Mounting Hardware-CR (Pack of 20), Server /IT Rack mount power distribution unit, 2U standard with 6 X Indian Round Pin 5/15A, 16A MCB - PDU Rating 3.6KVA/Side feed-1.5Mt/ Black, ITE / Server Rack Air Circulation module/Tower Mount/180CFM, Horz. Cable Organiser/1U/Loop
32	Service & Support	
	Additional features	Installation, Testing & commissioning charges along the programming & Training charges for audio conferencing system.

2. Audio Visual Works for Conference Room

S. NO	Description	Required Specification
1	Display	
	Diagonal Size	55"
	Panel Type	IPS
	Resolution	1920*1080 (Full HD)
	Pixel Pitch(mm)	0.63mm(H) * 0.63mm(V)
	Brightness(Typ.)	500 nit
	Contrast Ratio	1200:1
	Viewing Angle(H/V)	178/178
	Response Time(G-to-G)	8ms
	Display Colors	8 bit - 16.7M
	Operation Hour	24/7
	Display Design	1.8mm bezel-to-bezel
	Dynamic C/R	30,000:1
	Haze	28%
	H & V -Scanning	57.3kHz ~ 70kHz & 48Hz ~ 75Hz

	Frequency	
	Display encoder	DVI-D
	Display Port 1.2	HDMI 2.0 (2), HDCP 2.2
	Audio Output	Audio Stereo mini Jack
	Output	DPI.2(Loop-out)
	Other features	Sleep mode Less than 0.5W, off mode less than 0.5W
2	Wall Mount	
	Mount type	Fixed Wall Mount Suitable wall mount for the LED Video wall to be provided
	Maintenance feature	Available
	Release feature	Quick release latch easily activates lock & unlock mode to secure displays in place firmly
	Max.load	121 lbs (55 Kg)
	Display Sizes	37" to 70"
	VESA	200x200 to 600x400
	Material	Steel
	Product Weight	7 Kg
	Shipping Weight	8.5 Kg
3	Video Conference	
	Power cord	TelePresence Power Cord for India 2m 10A
	Power supply	AC/DC, 12V, 6.25A, grey
	Network cable (Ethernet)	8 meter
	Mount type	Wall mounting bracket for Quad Camera
	Cables	CAB 3m GREY HDMI 2.0, CAB 3 m/10 ft GREY ETHERNET
	Other features	Codec, Quad Cam, Touch Screen, Codec Pro for Auto Expand, Cisco Quad Camera, Touch controller for collaboration endpoints, Antennas for Codec, Rackears for Cisco Spark Codec Pro,
4	Video Conference Support	
	Additional features	8X5XNBD 36 Month Support for Codec with Quad Camera and Touch Panel
5	Podium	
	Dimensions	45"(H) x 24"(W) x 20"(D)
	Podium Type	A Podium Supplied with a detachable gooseneck condenser microphone and a reading light for the podium top
	Other features	HDMI wall Plate Power Point, Wooden /metal Stylish attractive and elegant Podium available in Black Wooden or Metal material with 1 power, VGA, Audio And HDMI Connectivity
6	HDMI/VGA wall Plate	
	Video Input	1x HDMI, 1x VGA
	Audio Output	1x RJ45 output which should be HDBaseT compatible which transmit signals upto 230 ft along with control signals.
	USB Port	It should have atleast one USB port which supports USB HID compliant device
	Other features	It should have the EDID Management, HDCP Management.
7	Video Receiver	
	Video Input	1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance
	Output	1x HDMI scaled output
	USB Port	It should have at least one USB port which supports USB HID

		compliant device
	Other features	It should have the EDID Management, HDCP Management. It should have at least 1xRS-232 port and upto 2 IR port which can be used to control the devices
8	Switcher	
	Switcher Type	A high-performance rack-mountable 4K60 4:4:4 AV switcher.
	Input	four HDMI® inputs
	Output	four HDMI outputs
	HDR and Dolby Vision	Includes support of HDR (High Dynamic Range) and Dolby Vision® video formats
	Ethernet management	Should have an ethernet management for getting controlled through controller.
	Other features	Advanced EDID management, Built in audio de-embedding capabilities with 2x Stereo outputs, EDID Management, HDCP Management upto 2.3
9	Distribution Amplifier	
	Amp Type	A high-performance 4K AV distribution amplifier designed to split a single HDMI® signal to feed up to eight separate displays, switchers, and/or other devices
	HDR and 4K support	It provides full support for UHD and DCI 4K60 4:4:4 and HDR video
	Other features	HDCP 1.4 or 2.2 copy protection, and high-bitrate 7.1 audio, to ensure optimal performance and compatibility for any HD or 4K video application
10	Wireless Presenter	
	Wireless Connectivity	Wireless content sharing solution to support content from Windows, Apple devices without installation of any additional Application and USB dongle and share the content of Android devices using app
	Interface Support	Support up to 2 presentations simultaneously with HDMI IN-1,
	Ports	HDMI Out-1, USB-1, RS-232-1, LAN-1 - RJ45
	Input Indicators	HDMI
	Video Support	FULL HD
	Other features	Custom welcome screen, There should be provision for security code for connecting to the wireless presentation system.
11	AV Controller	
	Controller type	Control system with modular programming architecture
	RAM	2GB
	Memory	8GB Flash Memory
	USB Port	High-speed USB 2.0 host port
	Communication Support	Industry-standard Ethernet and wired communications, support computer and web based control, iPhone®, iPad®, and Android™ control app, SNMP remote management support,
	Ports	One port that supports all three of RS-232, RS-422 & RS-485 COM port , Two RS-232 COM ports, 8x IR/serial, 8x relay, and 8x Versiport I/O ports
	Other features	Event scheduling Shall have Native /IP support, Should support BACnet and should have Secure access through full user/group management or Active Directory integration, Hardware level security using 802.1X authentication, TLS,

		SSL, SSH, and SFTP network, security protocols, FIPS 140-2 compliant encryption IPv6 ready, Front panel USB computer console port, 1-space rack-mountable
12	Video Cables	
	Additional features	A high-speed Category HDMI cable featuring 24k gold-plated HDMI Type A male connectors at each end, VGA cable featuring male DB15HD connectors at each end. it should support full 4K60 4:4:4 video.
13	Table Microphone	
	Microphone type	Wired Table Top Digital Chairman Unit with super cardioid / array microphone
	Length	Goosneck length minimum 380mm or better
	frequency response	100Hz to 14500Hz
	Audio quality	16bit or better
	Additional features	Should be flush-mountable, unit should have inbuilt Dual / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, Priority switch for temporary muting delegates, built in headphone socket complete as per specification.
14	Table Microphone	
	Microphone type	Wired Table Top Digital Delegate Unit with Super cardioid / Hyper array Microphone
	Length	Goosneck length minimum 380mm or better
	frequency response	100Hz to 14500Hz
	Audio quality	16bit or better
	Additional features	Should be flush-mountable, unit should have inbuilt Dual / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, Priority switch for temporary muting delegates,built in headphone socket complete as per specification.
15	Audio Conference Control Unit	
	Audio Conference Control Unit type	Digital Audio Conference Control Unit with redundant power supply for conference system
	Power Supply	supplies Power for minimum for 40 units and controls up to Minimum 350 discussion units
	Ethernet Port	An Ethernet Port shall be provided for network connection and control units
	Audio Recorder	built in / External USB Audio Recorder
	Additional features	Integrated / external PC for control and management of the system, pre-installed control software for Microphone management, synoptic and Audio Recording, can be controllable wired and wireless discussion system etc. and as per attached specification.
16	Patch Cord	
		Supply & fixing of Molded CAT-5/6 Patch Cords for loop in loop out length, should be from the same OEM as conference system
17	Patch Cord	
		Supply & fixing of Molded CAT-5/6 Patch Cords for loop in loop out 10 mtr length, should be from the same OEM as conference system
18	Handheld Microphone	
	Channel	18 or more channel

	RF Output	80mW or more
	Frequency range	1880 to 1930 MHz
	Connectivity	RJ-45 etc. and complete as required
	Other features	wireless digital Handheld Microphone with super cardioid pickup pattern
19	Lapel microphone	
	Channel	18 or more channel
	RF Output	80mW or more
	Frequency range	1880 to 1930 MHz
	Connectivity	RJ-45 etc. and complete as required
	Other features	wireless digital lavalier Microphone with omni directional pickup pattern
20	Microphone charging dock station	
	Additional features	Supply, Installation, testing and commissioning of wireless handheld / lapel / headworn microphone charging dock station from the same make, simultaneously charger 2 microphone, lighting indication etc. complete required as per specifications
21	Ceiling Speakers	
	Speaker Type	6.5" two-way coaxial speaker
	100 V tapping	24watt - 12watt
	frequency response	55Hz - 20KHz
	Dispersion	150 degree
	low impedance RMS Power	30watt
	Frequency range	45 Hz - 20 kHz
	Additional features	borderless grill etc. and complete as required.
22	Amplifier	
	Amplifier RMS power	The amplifier should have 240w or more output @100v line or low impedance
	THD+N (@ 1 kHz)	< 1%
	Technology	Class-A/B
	Additional features	Temperature controlled FAN, should have Protection features like: DC Short circuit & Over heating & Over load & Signal limiting etc. complete required as per specifications.
23	Audio DSP	
	DSP type	Digital signal processor with minimum 6no. Or more Mic / line input with phantom power and AEC and 4 or more line output
	Sampling rate	48kHz or better
	I/O	at least 2 channel of USB input and output for software Video Conferencing
	Dante Input for Digital audio	4x4 or more
	Filters	Shall have Built-in filters
	App Control	should support Control with App via iOS and Android devices, or any third-party control system
	Additional features	Should be expandable for port expansion, feedback suppression, AGC etc complete as required as per specifications
24	Speaker Cables	
	Additional features	Supply, Installation, testing and commissioning of Speaker Cable 2.5 square mm , Outer Dia 8 mm, cond. construction 50 x 0.25 mm/ conductor resistance 7 Ω/km/ inductance 0.53

		µH/m, 100 mtr. Coil etc and complete as required.
25	Cables	
	Additional features	Supply, Installation, testing and commissioning a high-quality mic or line level audio signals and Control Cable.
26	AV Rack	
	Additional features	AV Rack Frame/600x600/Steel/FM/Casters Type 2/Black, Glass Door/600/FM/Black, Metal Door/600/FM/Black, Shelf/600/Black, Mounting Hardware-CR (Pack of 20), Server /IT Rack mount power distribution unit, 1Ph, 230V, 16A, 50/60Hz, 2U standard with 6 X Indian Round Pin 5/15A, Inlet Plug type 16A Indian Round Pin, 16A MCB - PDU Rating 3.6KVA/Side feed-1.5Mt/ Black, ITE / Server Rack Air Circulation module/Tower Mount/180CFM, Horz. Cable Organiser/1U/Loop
27	Service & Support	Installation, Testing & commissioning charges along the programming & Training charges for audio conferencing system.

3. VC with 55" Displays

S. NO	Description	Required Specification
1	Video Conference	
	Video Conference type	VC with microphone array
	Speaker	speakers and Navigator
	Power Cord	Power Cord for India 2m 10A
	Mounting	Screen Mount Kit for the VC, Wall Mount for VC
	USB connectivity	USB C - USB A Cable 4 meters long
	HDMI cable	1.5m GREY HDMI 2.0
	Cable type	CAB (16,4 feet / 5m) GREY ETHERNET, Network cable (ethernet) 8 meter
	Powersupply	AC/DC, 12V, 6.25A
	Additional Features	Navigator - Table stand version with 3 year support
2	Display	
	Diagonal Size	55"
	Display Type	Direct LED BLU
	Resolution	3840*2160 (4K UHD)
	Pixel Pitch (mm)	0.372 x 0.372
	Active Display Area(mm)	1428.48 (H) x 803.52 (V)
	Brightness	300 nit
	Contrast Ratio	4000:1
	Viewing Angle(H/V)	178/178
	Response Time(G-to-G)	8ms(Typ.)
	Display Colors	16.7M(True Display)
	Color Gamut (NTSC)	72%
	Operation Hour	16/7
	Dynamic C/R	MEGA
	H-Scanning Frequency	30 ~ 81kHz
	V-Scanning Frequency	48 ~ 75HZ
	Maximum Pixel Frequency	594MHz
	Speaker Type	Built in Speaker(10W + 10W)

	Input	Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1
	Output	Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45
	Bezel Width (mm)	3 Bezel-less
3	Service & Support	Installation Testing & commissioning charges along the programming & Training charges for audio conferencing system.

3. VC with 65" Displays

S. NO	Description	Required Specification
1	Video Conference	
	Video Conference type	VC with microphone array
	Speaker	speakers and Navigator
	Power Cord	Power Cord for India 2m 10A
	Mounting	Screen Mount Kit for the VC, Wall Mount for VC
	USB connectivity	USB C - USB A Cable 4 meters long
	HDMI cable	1.5m GREY HDMI 2.0
	Cable type	CAB (16,4 feet / 5m) GREY ETHERNET, Network cable (ethernet) 8 meter
	Powersupply	AC/DC, 12V, 6.25A
	Additional Features	Navigator - Table stand version with 5 year support
2	Display	
	Diagonal Size	65"
	Display Type	Direct LED BLU
	Resolution	3840*2160 (4K UHD)
	Pixel Pitch (mm)	0.372 x 0.372
	Active Display Area(mm)	1428.48 (H) x 803.52 (V)
	Brightness	300 nit
	Contrast Ratio	4000:1
	Viewing Angle(H/V)	178/178
	Response Time(G-to-G)	8ms(Typ.)
	Display Colors	16.7M(True Display)
	Color Gamut (NTSC)	72%
	Operation Hour	16/7
	Dynamic C/R	MEGA
	H-Scanning Frequency	30 ~ 81kHz
	V-Scanning Frequency	48 ~ 75HZ
	Maximum Pixel Frequency	594MHz
	Speaker Type	Built in Speaker(10W + 10W)
	Input	Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1

	Output	Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45
	Bezel Width (mm)	3 Bezel-less
3	Service & Support	Installation Testing & commissioning charges along the programming & Training charges for audio conferencing system.

5. Supply, installation, testing & commissioning of CCTV Camera setup

S. No.	Description	Required Specification
1	Indoor Camera	Supply, installation, testing & commissioning INDOOR IP CAMERA 2 MP
2	Outdoor Camera	Supply, installation, testing & commissioning Outdoor IP CAMERA 2 MP
3	NVR	Supply, installation, testing & commissioning 32 channel NVR Full HD
4	Hard Disk	Supply, installation, testing & commissioning Hard disc, 4TB HDD
5	Poe Switch	Supply, installation, testing & commissioning 24Port POE Switch
6	Display	
	Resolution	H1920*1080 (Full HD Response Time(G-to-G))
	Contrast Ratio	4000:1
	Response Time	6ms
	Running time	24/7
	Brightness	500 nits
	Display Interface	RGB DVI-I(D-Sub Common)
	Ports	Display Port 1.2 (2) / HDMI 2.0 (2) / HDCP 2.2 /HDCP 2.2/Stereo mini Jack, RGB/DVI/HDMI/ USB 2.0 x 2 /RS232C(in/out) thru Stereo Jack, RJ45
	Speakers	Built-in-Speakers with Video Signal extender upto 100mtr
		Supply, installation, testing & commissioning
7	Patch Pannel	Supply, installation, testing and commissioning of 24 Port Patch Pannel
8	Patch Cord	Supply, installation, testing and commissioning of 1Meter patch cord
9	Face Plate	Face Plate
10	Gangbox	Supply, installation, testing and commissioning of Gangbox
11	UTP Cable	Supply, installation, testing and commissioning of Cat 6 UTP Cable 305mtr Roll.
12	Conduit Channel	Supply, installation, testing and commissioning of PVC Conduit Channel
13	Rack	Supply, installation, testing and commissioning of 6U Rack Fully Loaded
	Service & Support	Installation, Testing and Commissioning Programming of CCCTV & Access Control System

TECHNICAL RESPONSIVENESS FORM

(A) Summary of Instructions

- (i) Particulars of Manufacturer and local agent cum representative are to be given under rows Model and Address.
- (ii) **All** entry boxes in column “**Specification and Standards as offered in by Bidder**” shall be filled-in accurately and comprehensively. Quantitative fields shall be filled in accurately. It is not acceptable to use ‘Yes’, No, Compliant or similar evading words. Following format is designed to help the Bidder to understand the requirements of the equipment being procured. The Bidder must describe in the format how his bid responds to the technical requirements of the equipment. Bidder to note that one or two word responses (e.g. “Yes”, “No” “will comply” or similar evading words) are normally not sufficient to confirm the responsiveness with the technical requirements, hence elaborate responses are sought from the bidders. In case of deviation on the following technical requirement of equipment is not as per minimum criteria mentioned, the bids may be declared non-responsive.
- (iii) Requested materials and information shall be enclosed with the bid and be unambiguously associated with instruments as offered in the bid
- (iv) Negligence to comply with the instructions and requirements as stated above makes the bid liable to be rejected.

(B) Entries requiring special attention:

- (i) The proposed maintenance interval and the recommended spares as offered in the bid shall be based on instrument deployment history. The training proposal shall be based on experience in similar cases. Moreover, it shall consider the educational level and specialization of the trainees.

(C) Bidder shall provide information in the formats given below:

- i) Clause by Clause Commentary against laid down technical specifications along with make, model & country of origin:

A. Audio Visual Systems for Auditorium

S. NO	Description	Required Specifications and standards as per bidding document	Specification and standard as offered in by Bidder	Remarks
	Auditorium Conference Hall			
1	Projector		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Technology	3LCD technology		
	Brightness	7000 lumen		
	Resolution	WUXGA resolution, 4K enhancement		
	Light Type	laser light source		

	Contrast	2000:1		
	Lens Support	Supports a wide selection of interchangeable lenses		
	Projection Freedom	360 degree angle projection freedom		
	Ports	USB 2.0 Type B (Service Only), RS-232C, Wired Network, Wireless Network (2x), VGA in, VGA out, DVI in, HDMI in, BNC in, HDBaseT, Stereo mini jack audio out, Stereo mini jack audio in (3x), HDMI (HDCP 2.2), Wireless LAN IEEE 802.11b/g/n (optional), Kensington lock, Control panel lock, Security cable hole, Wireless LAN unit lock		
	Other Features	Password protection		
2	Short-throw Lens		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Projector brightness	up to 20,000 lumen		
	Screen Size	80" to 1000"		
	Additional features	Pro G7000 Series projectors with the Short-throw Zoom Lens. Ideal for projecting large, high-quality images in narrow spaces		
3	Projector Screen		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Type	MOTORIZED 16:10 -FIBER GLASS WITH LVC		
	Mount type	Ceiling & Wall mount		
	Screen type	Screen Fabric Fiber Glass Matte White		
	Aspect ratio	16:10		
	Gain	1.0		
	Case Colour	White		
	Projection Type	Front		
	Power	220V, LVC 12V		
	Screen Size (Diagonal)	170"		
	Additional features	Motor Tubular motor, Control External RF, RS 232, RF controller, Wire trigger, Power, wire trigger		
4	Podium		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Dimensions	45"(H) x 24"(W) x 20"(D)		
	Podium Type	A Podium Supplied with a detachable gooseneck condenser microphone and a reading light for		

		the podium top		
	Other features	HDMI wall Plate Power Point, Wooden /metal Stylish attractive and elegant Podium available in Black Wooden or Metal material with 1 power, VGA, Audio And HDMI Connectivity		
5	Display	Diagonal Size 65, Type, Resolution , Pixel Pitch(mm) , , Brightness(Typ.) 300 nit, Contrast Ratio 4000:1, Viewing Angle(H/V) 178/178, Response Time(G-to-G) 8ms(Typ.), Display Colors 16.7M(True Display), 72%, Operation Hour 16/7, , H-Scanning Frequency 30 ~ 81kHz, V-Scanning Frequency 48 ~ 75HZ, Speaker Type , Input- Output- ,		
	Diagonal Size	65"		
	Panel Type	Direct LED BLU		
	Resolution	3840*2160 (4K UHD)		
	Pixel Pitch(mm)	0.372 x 0.372		
	Active Display Area(mm)	1428.48 (H) x 803.52 (V)		
	Brightness(Typ.)	300 nit		
	Contrast Ratio	4000:1		
	Viewing Angle(H/V)	178/178		
	Response Time(G-to-G)	8ms		
	Display Colors	16.7M(True Display)		
	Operation Hour	16/7		
	Display Design	1.8mm bezel-to-bezel		
	Color Gamut (NTSC)	72%		
	Dynamic C/R	MEGA		
	Maximum Pixel Frequency	594MHz,		
	Speaker Type	Built in Speaker(10W + 10W)		
	Input	Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1,		
	H & V -Scanning Frequency	30kHz ~ 81kHz & 48Hz ~ 75Hz		
	Output	Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45		
	Bezel Width (mm)	3 Bezel-less		
6	Mount Kit		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Dimensions (D X W X H)	586 x 211 x 492 mm		
	Weight (Including Standard Lens)	23.7 kg		

	Mount kit (4 + 4)	1no		
7	HDMI/VGA wall Plate		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Video Input	1x HDMI, 1x VGA		
	Audio. Output	1x RJ45 output which should be HDBaseT compatible which transmit signals upto 230 ft along with control signals		
	Additional features	It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management.		
8	Video Receiver		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Video Input	1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance.		
	Output	1x HDMI scaled output		
	Additional features	It should have atleast one USB port which supports USB HID compliant device. It should have the EDID Management, HDCP Management. It should have atleast 1xRS-232 port and upto 2 IR port which can be used to control the devices.		
9	Switcher		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Video Input	4x HDMI which support video of resolution upto 4K with HDR10+		
	Output	1x HDMI which support video upto 4K with HDR10+,		
	Additional features	Built in audio de-embedding capabilities with 1 Stereo outputs, EDID Management, HDCP Management upto 2.3, Should have an ethernet management for getting controlled through controller.		
10	Splitter		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Type	A splitter which converts and splits a single 4K60 HDMI signal to feed up to four separate HDBaseT		

		compatible receivers.		
	Video inputs	1x HDMI which can accept 4K signal		
	Output	1xHDMI and 4xRJ-45 which supports 4K signals		
	Additional features	The RJ-45 output's should be HDBaseT and transmits video upto 230 ft. It should have one Ethernet port.		
11	Receiver		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Video Input	1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance		
	Output	1x HDMI output		
	Ports	It should have atleast 1xRS-232 port and upto 2 IR port which can be used to control the devices.		
	Additional Features	It should have the EDID Management, HDCP Management.		
12	VGA to HDMI Scaler		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Input Resolutions	Full HD 1080p60 as well as computer sources up to WUXGA 1920x1200		
	Additional features	Whatever the source is connected it can scale it up or down, deinterlacing it, reducing noise artifacts, and adjusting its aspect ratio to match the native resolution of video display. It has an VGA input along with stereo audio and gives HDMI scaled output. It should also do the audio embedding.		
13	Touch Panel		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Display	10.2-inch Retina display		
	Processor	A10 Fusion chip		
	Fingerprint Sensor	Touch ID fingerprint sensor		
	Camera	8MP back camera, 1.2MP FaceTime HD front camera		
	Speakers	Stereo speakers		
	Wifi connectivity	802.11ac Wi-Fi,		
	Battery Life	Up to 10 hours of battery life		
	Additional features	Apple Pay, Lightning connector for charging and accessories with Wall mount and System Control		

		application		
14	AV Controller		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Controller type	Control system with modular programming architecture		
	RAM	2GB		
	Memory	8GB Flash Memory		
	USB Port	High-speed USB 2.0 host port		
	Communication Support	Industry-standard Ethernet and wired communications, support computer and web based control, iPhone®, iPad®, and Android™ control app, SNMP remote management support,		
	Ports	One port that supports all three of RS-232, RS-422 & RS-485 COM port , Two RS-232 COM ports, 8x IR/serial, 8x relay, and 8x Versiport I/O ports		
	Other features	Event scheduling Shall have Native /IP support, Should support BACnet and should have Secure access through full user/group management or Active Directory integration, Hardware level security using 802.1X authentication, TLS, SSL, SSH, and SFTP network, security protocols, FIPS 140-2 compliant encryption IPv6 ready, Front panel USB computer console port, 1-space rack-mountable		
15	Digital Media 8G Cable		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Additional features	A cable which has 350MHz or better certified twisted-pair cable with overall foil shield that is engineered to deliver optimum performance for use in data networking and high-definition AV signal distribution applications. It is precision manufactured and tested to significantly exceed the CAT5e specifications for bandwidth, crosstalk, and interference rejection, and is qualified for use wherever a high-quality shielded wire is required.		
17	Video Cables		Make: Model: Manufacturer Name,	

			address, email, phone, website, fax	
	Additional features	A high-bandwidth VGA cable featuring male DB15HD connectors at each end. Unbalanced stereo audio is also integrated into the cable assembly, providing a breakout at each end with a single male 3.5 mm mini-TRS connector.		
18	Microphone		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Microphone type	Wired Table Wired Podium Microphone / Super Cardioid Mini Shotgun microphone		
	Length	Goosneck length minimum 380mm or better		
	frequency response	40Hz to 20kHz		
	Audio quality	16bit or better		
	Additional features	Pickup pattern Lobar/ 60 cm/ double band/ with Base BI Colored light ring for clear visual feedback, Microphone modes Toggle on/off/Push to mute/Push to talk , and complete as per specification.		
19	Handheld Microphone		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Microphone type	Wireless Handheld Microphone : SITC of Wireless Handheld Microphone set: having Condenser mic with super cardioid or better polar pattern		
	Switching bandwidth	Up to 88 MHz switching Bandwidth		
	SNR	>113dBA or better		
	THD	<0.9%		
	Frequency Response	80 to 18000Hz or better		
	Sensitivity	< 2.5 μ V at 52 dB(A)		
	RF Power	45mW or more		
	Mute Button	Should have mute/unmute button		
	Operating time	up to 8 hours or better		
	Service Centres	Company Should have atleast three direct service centre in India for after sales Support.		
20	Lapel microphone		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Microphone type	Wireless Handheld Microphone : SITC of Wireless Lapel Microphone set: having Condenser		

		mic with super cardioid or better polar pattern		
	Switching bandwidth	Up to 88 MHz switching Bandwidth		
	SNR	>113dBA or better		
	THD	<0.9%		
	Frequency Response	50 to 18000Hz or better		
	Sensitivity	< 2.5 μ V at 52 dB(A)		
	RF Power	45mW or more		
	Mute Button	Should have mute/unmute button		
	Operating time	up to 8 hours or better		
	Service Centres	Company Should have atleast three direct service centre in India for after sales Support.		
21	Microphone charging dock station		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Type	4 Way Antenna Distribution System.		
	Recievers	The Antenna Splitter should support up to 4 receivers, it should split signal from 2 Antennas to 4 wireless microphone receivers or more, it should be able to power up to 4 connected receivers		
	UHF range	470MHZ to 870MHZ or more		
	Power Supply	Should come with power supply as required		
	Additional features	full true diversity support, and should be from the same OEM as wireless microphones for 100% compatibility etc complete as required as per specifications		
22	Boosters		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Additional features	Supply Installation Testing Commissioning of Directional Antenna, the antenna Should come built-in gain selectable boosters to boost radio signal, should be from the same OEM as wireless microphones for 100% compatibility etc complete as required as per specifications		
23	Boosters Cable		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Additional features	Supply Installation Testing Commissioning of Antenna Cable, The cable should be OEM approved to work with the system		

		etc complete as required as per specifications		
24	Subwoofer		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Subwoofer type	thin edge 8" or more, ceiling subwoofer		
	Power	70watt or more		
	Impedance	8 Ω ,		
	Sensitivity (1W/1m)	88dB or more		
	Sound Pressure (Max. W/1m)	107dB or more		
	Frequency response	50 Hz - 20000Hz		
	Crossover	Should come with built-in crossover for better overall audio output, etc. complete required as per specifications.		
25	Speaker		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Speaker Type	8" bass cabinet, 2.4 inches voice coil		
	Maximum Power	200 watt		
	Impedance	8 Ω ,		
	Frequency response	90 Hz - 350Hz		
	Construction Type	Aluminium Construction with Plastic and complete as required.		
26	Amplifier		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Type	Quad channel energy star rated stereo digital power amplifier		
	Technology	Class-D		
	Protection	DC Short circuit & Over heating & Over load & Signal limiting & Power limiter		
	Frequency response	20 Hz - 20 kHz		
	RMS Power @ 4 Ω Stereo	4 x 240 Watt or more		
	RMS power @ 8 Ω Stereo	4 x 120 Watt or more		
	Additional features	Temperature controlled FAN, Switching mode power supply, built in DSP etc complete required as per specifications.		
27	Amplifier		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Type	Quad channel energy star rated stereo digital power amplifier		

	Technology	Class-D		
	Protection	DC Short circuit & Over heating & Over load & Signal limiting & Power limiter		
	Frequency response	20 Hz - 20 kHz		
	RMS Power @ 4 Ω Stereo	2 x 500 Watt or more		
	RMS power @ 8 Ω Stereo	2 x 300 Watt or more		
	Additional features	Fan less operation etc. complete required as per specifications.		
28	Audio DSP		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Mic Input	Minimum 6no. Or more Mic / line input with phantom power and AEC		
	Line Output	4 or more line output		
	USB	at least 2 channel of USB input and output for software Video Conferencing,		
	Sampling rate	48kHz or better		
	Dante Input	4x4 or more Dante Input for Digital audio transfer as per need,		
	App Control	should support Control with App via iOS and Android devices, or any third-party control system		
	Additional features	Should be expandable for port expansion. , Shall have Built-in filters, feedback suppression, AGC etc complete as required as per specifications		
29	Speaker Cables		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Cable	2.5 square mm		
	Diameter	8mm		
	Construction	50 x 0.25 mm		
	conductor resistance	7 Ω /km		
	inductance	0.53 μ H/m		
	Additional features	100 mtr. Coil etc and complete as required.		
30	Cables		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Additional features	Supply, Installation, testing and commissioning a high-quality mic or line level audio signals and Control Cable.		
31	AV Rack			
	Frame Dimension	600x600		
	Material	Steel		

	Power rating	1Ph, 230V, 16A, 50/60Hz,		
	Inlet Plug type	16A Indian Round Pin		
	Additional features	AV Rack Frame/FM/Casters Type 2/Black, Glass Door/600/FM/Black, Metal Door/600/FM/Black, Shelf/600/Black, Mounting Hardware-CR (Pack of 20), Server /IT Rack mount power distribution unit, 2U standard with 6 X Indian Round Pin 5/15A, 16A MCB - PDU Rating 3.6KVA/Side feed-1.5Mt/ Black, ITE / Server Rack Air Circulation module/Tower Mount/180CFM, Horz. Cable Organiser/1U/Loop		
32	Service & Support			
	Additional features	Installation, Testing & commissioning charges along the programming & Training charges for audio conferencing system.		

2. Audio Visual Works for Conference Room

S. NO	Description	Required Specification	Specification and standard as offered in by Bidder	Remarks
1	Display		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Diagonal Size	55"		
	Panel Type	IPS		
	Resolution	1920*1080 (Full HD)		
	Pixel Pitch(mm)	0.63mm(H) * 0.63mm(V)		
	Brightness(Typ.)	500 nit		
	Contrast Ratio	1200:1		
	Viewing Angle(H/V)	178/178		
	Response Time(G-to-G)	8ms		
	Display Colors	8 bit - 16.7M		
	Operation Hour	24/7		
	Display Design	1.8mm bezel-to-bezel		
	Dynamic C/R	30,000:1		
	Haze	28%		
	H & V -Scanning Frequency	57.3kHz ~ 70kHz & 48Hz ~ 75Hz		
	Display encoder	DVI-D		
	Display Port 1.2	HDMI 2.0 (2), HDCP 2.2		
	Audio Output	Audio Stereo mini Jack		
	Output	DPI.2(Loop-out)		
	Other features	Sleep mode Less than 0.5W, off mode less than 0.5W		
2	Wall Mount		Make: Model: Manufacturer Name, address, email, phone,	

			website, fax	
	Mount type	Fixed Wall Mount Suitable wall mount for the LED Video wall to be provided		
	Maintenance feature	Available		
	Release feature	Quick release latch easily activates lock & unlock mode to secure displays in place firmly		
	Max.load	121 lbs (55 Kg)		
	Display Sizes	37" to 70"		
	VESA	200x200 to 600x400		
	Material	Steel		
	Product Weight	7 Kg		
	Shipping Weight	8.5 Kg		
3	Video Conference		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Power cord	TelePresence Power Cord for India 2m 10A		
	Power supply	AC/DC, 12V, 6.25A, grey		
	Network cable (Ethernet)	8 meter		
	Mount type	Wall mounting bracket for Quad Camera		
	Cables	CAB 3m GREY HDMI 2.0, CAB 3 m/10 ft GREY ETHERNET		
	Other features	Codec, Quad Cam, Touch Screen, Codec Pro for Auto Expand, Cisco Quad Camera, Touch controller for collaboration endpoints, Antennas for Codec, Rackears for Cisco Spark Codec Pro,		
4	Video Conference Support		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Additional features	8X5XNBD 36 Month Support for Codec with Quad Camera and Touch Panel		
5	Podium		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Dimensions	45"(H) x 24"(W) x 20"(D)		
	Podium Type	A Podium Supplied with a detachable gooseneck condenser microphone and a reading light for the podium top		
	Other features	HDMI wall Plate Power Point, Wooden /metal Stylish attractive and elegant Podium available in Black Wooden or Metal material		

		with 1 power, VGA, Audio And HDMI Connectivity		
6	HDMI/VGA wall Plate		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Video Input	1x HDMI, 1x VGA		
	Audio Output	1x RJ45 output which should be HDBaseT compatible which transmit signals upto 230 ft along with control signals.		
	USB Port	It should have atleast one USB port which supports USB HID compliant device		
	Other features	It should have the EDID Management, HDCP Management.		
7	Video Receiver		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Video Input	1x RJ45 which should be HDBaseT compatible supporting signal receiving from 230 ft distance		
	Output	1x HDMI scaled output		
	USB Port	It should have at least one USB port which supports USB HID compliant device		
	Other features	It should have the EDID Management, HDCP Management. It should have at least 1xRS-232 port and upto 2 IR port which can be used to control the devices		
8	Switcher		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Switcher Type	A high-performance rack-mountable 4K60 4:4:4 AV switcher.		
	Input	four HDMI® inputs		
	Output	four HDMI outputs		
	HDR and Dolby Vision	Includes support of HDR (High Dynamic Range) and Dolby Vision® video formats		
	Ethernet management	Should have an ethernet management for getting controlled through controller.		
	Other features	Advanced EDID management, Built in audio de-embedding capabilities with 2x Stereo outputs, EDID Management, HDCP Management upto 2.3		

9	Distribution Amplifier		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Amp Type	A high-performance 4K AV distribution amplifier designed to split a single HDMI® signal to feed up to eight separate displays, switchers, and/or other devices		
	HDR and 4K support	It provides full support for UHD and DCI 4K60 4:4:4 and HDR video		
	Other features	HDCP 1.4 or 2.2 copy protection, and high-bitrate 7.1 audio, to ensure optimal performance and compatibility for any HD or 4K video application		
10	Wireless Presenter		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Wireless Connectivity	Wireless content sharing solution to support content from Windows, Apple devices without installation of any additional Application and USB dongle and share the content of Android devices using app		
	Interface Support	Support up to 2 presentations simultaneously with HDMI IN-1,		
	Ports	HDMI Out-1, USB-1, RS-232-1, LAN-1 - RJ45		
	Input Indicators	HDMI		
	Video Support	FULL HD		
	Other features	Custom welcome screen, There should be provision for security code for connecting to the wireless presentation system.		
11	AV Controller		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Controller type	Control system with modular programming architecture		
	RAM	2GB		
	Memory	8GB Flash Memory		
	USB Port	High-speed USB 2.0 host port		
	Communication Support	Industry-standard Ethernet and wired communications, support computer and web based control, iPhone®, iPad®, and Android™ control app, SNMP remote		

		management support,		
	Ports	One port that supports all three of RS-232, RS-422 & RS-485 COM port , Two RS-232 COM ports, 8x IR/serial, 8x relay, and 8x Versiport I/O ports		
	Other features	Event scheduling Shall have Native /IP support, Should support BACnet and should have Secure access through full user/group management or Active Directory integration, Hardware level security using 802.1X authentication, TLS, SSL, SSH, and SFTP network, security protocols, FIPS 140-2 compliant encryption IPv6 ready, Front panel USB computer console port, 1-space rack-mountable		
12	Video Cables		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Additional features	A high-speed Category HDMI cable featuring 24k gold-plated HDMI Type A male connectors at each end, VGA cable featuring male DB15HD connectors at each end. it should support full 4K60 4:4:4 video.		
13	Table Microphone		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Microphone type	Wired Table Top Digital Chairman Unit with super cardioid / array microphone		
	Length	Goosneck length minimum 380mm or better		
	frequency response	100Hz to 14500Hz		
	Audio quality	16bit or better		
	Additional features	Should be flush-mountable, unit should have inbuilt Dual / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, Priority switch for temporary muting delegates, built in headphone socket complete as per specification.		
14	Table Microphone		Make: Model: Manufacturer Name, address, email, phone, website, fax	

	Microphone type	Wired Table Top Digital Delegate Unit with Super cardioid / Hyper array Microphone		
	Length	Goosneck length minimum 380mm or better		
	frequency response	100Hz to 14500Hz		
	Audio quality	16bit or better		
	Additional features	Should be flush-mountable, unit should have inbuilt Dual / Two way Loudspeaker for better sound reinforcement, Microphone on/off button, Priority switch for temporary muting delegates,built in headphone socket complete as per specification.		
15	Audio Conference Control Unit		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Audio Conference Control Unit type	Digital Audio Conference Control Unit with redundant power supply for conference system		
	Power Supply	supplies Power for minimum for 40 units and controls up to Minimum 350 discussion units		
	Ethernet Port	An Ethernet Port shall be provided for network connection and control units		
	Audio Recorder	built in / External USB Audio Recorder		
	Additional features	Integrated / external PC for control and management of the system, pre-installed control software for Microphone management, synoptic and Audio Recording, can be controllable wired and wireless discussion system etc. and as per attached specification.		
16	Patch Cord		Make: Model: Manufacturer Name, address, email, phone, website, fax	
		Supply & fixing of Molded CAT-5/6 Patch Cords for loop in loop out length, should be from the same OEM as conference system		
17	Patch Cord		Make: Model: Manufacturer Name, address, email, phone, website, fax	

		Supply & fixing of Molded CAT-5/6 Patch Cords for loop in loop out 10 mtr length, should be from the same OEM as conference system		
18	Handheld Microphone		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Channel	18 or more channel		
	RF Output	80mW or more		
	Frequency range	1880 to 1930 MHz		
	Connectivity	RJ-45 etc. and complete as required		
	Other features	wireless digital Handheld Microphone with super cardioid pickup pattern		
19	Lapel microphone		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Channel	18 or more channel		
	RF Output	80mW or more		
	Frequency range	1880 to 1930 MHz		
	Connectivity	RJ-45 etc. and complete as required		
	Other features	wireless digital lavalier Microphone with omni directional pickup pattern		
20	Microphone charging dock station		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Additional features	Supply, Installation, testing and commissioning of wireless handheld / lapel / headworn microphone charging dock station from the same make, simultaneously charger 2 microphone, lighting indication etc. complete required as per specifications		
21	Ceiling Speakers		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Speaker Type	6.5" two-way coaxial speaker		
	100 V tapping	24watt - 12watt		
	frequency response	55Hz - 20KHz		
	Dispersion	150 degree		
	low impedance RMS Power	30watt		
	Frequency range	45 Hz - 20 kHz		
	Additional features	borderless grill etc. and complete		

		as required.		
22	Amplifier		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Amplifier RMS power	The amplifier should have 240w or more output @100v line or low impedance		
	THD+N (@ 1 kHz)	< 1%		
	Technology	Class-A/B		
	Additional features	Temperature controlled FAN, should have Protection features like: DC Short circuit & Over heating & Over load & Signal limiting etc. complete required as per specifications.		
23	Audio DSP		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	DSP type	Digital signal processor with minimum 6no. Or more Mic / line input with phantom power and AEC and 4 or more line output		
	Sampling rate	48kHz or better		
	I/O	at least 2 channel of USB input and output for software Video Conferencing		
	Dante Input for Digital audio	4x4 or more		
	Filters	Shall have Built-in filters		
	App Control	should support Control with App via iOS and Android devices, or any third-party control system		
	Additional features	Should be expandable for port expansion, feedback suppression, AGC etc complete as required as per specifications		
24	Speaker Cables		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Additional features	Supply, Installation, testing and commissioning of Speaker Cable 2.5 square mm , Outer Dia 8 mm, cond. construction 50 x 0.25 mm/ conductor resistance 7 Ω/km/ inductance 0.53 μH/m, 100 mtr. Coil etc and complete as required.		
25	Cables		Make: Model: Manufacturer Name,	

			address, email, phone, website, fax	
	Additional features	Supply, Installation, testing and commissioning a high-quality mic or line level audio signals and Control Cable.		
26	AV Rack		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Additional features	AV Rack Frame/600x600/Steel/FM/Casters Type 2/Black, Glass Door/600/FM/Black, Metal Door/600/FM/Black, Shelf/600/Black, Mounting Hardware-CR (Pack of 20), Server /IT Rack mount power distribution unit, 1Ph, 230V, 16A, 50/60Hz, 2U standard with 6 X Indian Round Pin 5/15A, Inlet Plug type 16A Indian Round Pin, 16A MCB - PDU Rating 3.6KVA/Side feed- 1.5Mt/ Black, ITE / Server Rack Air Circulation module/Tower Mount/180CFM, Horz. Cable Organiser/1U/Loop		
27	Service & Support	Installation, Testing & commissioning charges along the programming & Training charges for audio conferencing system.		

3. VC with 55" Displays

S. NO	Description	Required Specification	Specification and standard as offered in by Bidder	Remarks
1	Video Conference		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Video Conference type	VC with microphone array		
	Speaker	speakers and Navigator		
	Power Cord	Power Cord for India 2m 10A		
	Mounting	Screen Mount Kit for the VC, Wall Mount for VC		
	USB connectivity	USB C - USB A Cable 4 meters long		
	HDMI cable	1.5m GREY HDMI 2.0		
	Cable type	CAB (16,4 feet / 5m) GREY ETHERNET, Network cable (ethernet) 8 meter		
	Powersupply	AC/DC, 12V, 6.25A		

	Additional Features	Navigator - Table stand version with 3 year support		
2	Display		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Diagonal Size	55"		
	Display Type	Direct LED BLU		
	Resolution	3840*2160 (4K UHD)		
	Pixel Pitch (mm)	0.372 x 0.372		
	Active Display Area(mm)	1428.48 (H) x 803.52 (V)		
	Brightness	300 nit		
	Contrast Ratio	4000:1		
	Viewing Angle(H/V)	178/178		
	Response Time(G-to-G)	8ms(Typ.)		
	Display Colors	16.7M(True Display)		
	Color Gamut (NTSC)	72%		
	Operation Hour	16/7		
	Dynamic C/R	MEGA		
	H-Scanning Frequency	30 ~ 81kHz		
	V-Scanning Frequency	48 ~ 75HZ		
	Maximum Pixel Frequency	594MHz		
	Speaker Type	Built in Speaker(10W + 10W)		
	Input	Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1		
	Output	Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45		
	Bezel Width (mm)	3 Bezel-less		
3	Service & Support	Installation Testing & commissioning charges along the programming & Training charges for audio conferencing system.		

3. VC with 65" Displays

S. NO	Description	Required Specification	Specification and standard as offered in by Bidder	Remarks
1	Video Conference		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Video Conference	VC with microphone array		

	type			
	Speaker	speakers and Navigator		
	Power Cord	Power Cord for India 2m 10A		
	Mounting	Screen Mount Kit for the VC, Wall Mount for VC		
	USB connectivity	USB C - USB A Cable 4 meters long		
	HDMI cable	1.5m GREY HDMI 2.0		
	Cable type	CAB (16,4 feet / 5m) GREY ETHERNET, Network cable (ethernet) 8 meter		
	Powersupply	AC/DC, 12V, 6.25A		
	Additional Features	Navigator - Table stand version with 5 year support		
2	Display		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Diagonal Size	65"		
	Display Type	Direct LED BLU		
	Resolution	3840*2160 (4K UHD)		
	Pixel Pitch (mm)	0.372 x 0.372		
	Active Display Area(mm)	1428.48 (H) x 803.52 (V)		
	Brightness	300 nit		
	Contrast Ratio	4000:1		
	Viewing Angle(H/V)	178/178		
	Response Time(G- to-G)	8ms(Typ.)		
	Display Colors	16.7M(True Display)		
	Color Gamut (NTSC)	72%		
	Operation Hour	16/7		
	Dynamic C/R	MEGA		
	H-Scanning Frequency	30 ~ 81kHz		
	V-Scanning Frequency	48 ~ 75HZ		
	Maximum Pixel Frequency	594MHz		
	Speaker Type	Built in Speaker(10W + 10W)		
	Input	Video HDMI 2.0 (2), HDCP HDCP 2.2, Audio Stereo Mini Jack, HDMI/Audio(Common), USB USB 2.0 x 1		
	Output	Audio Stereo Mini Jack, External Control RS232C(in) thru stereo jack, RJ45		
	Bezel Width (mm)	3 Bezel-less		
3	Service & Support	Installation Testing & commissioning charges along the programming & Training charges for audio conferencing system.		

5. Supply, installation, testing & commissioning of CCTV Camera setup

S. No.	Description	Required Specification	Specification and standard as offered in by Bidder	
1	Indoor Camera	Supply, installation, testing & commissioning INDOOR IP CAMERA 2 MP	Make: Model: Manufacturer Name, address, email, phone, website, fax	
2	Outdoor Camera	Supply, installation, testing & commissioning Outdoor IP CAMERA 2 MP	Make: Model: Manufacturer Name, address, email, phone, website, fax	
3	NVR	Supply, installation, testing & commissioning 32 channel NVR Full HD	Make: Model: Manufacturer Name, address, email, phone, website, fax	
4	Hard Disk	Supply, installation, testing & commissioning Hard disc, 4TB HDD	Make: Model: Manufacturer Name, address, email, phone, website, fax	
5	Poe Switch	Supply, installation, testing & commissioning 24Port POE Switch	Make: Model: Manufacturer Name, address, email, phone, website, fax	
6	Display		Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Resolution	H1920*1080 (Full HD Response Time(G-to-G))		
	Contrast Ratio	4000:1		
	Response Time	6ms		
	Running time	24/7		
	Brightness	500 nits		
	Display Interface	RGB DVI-I(D-Sub Common)		
	Ports	Display Port 1.2 (2) / HDMI 2.0 (2) / HDCP 2.2 /HDCP 2.2/Stereo mini Jack, RGB/DVI/HDMI/ USB 2.0 x 2 /RS232C(in/out) thru Stereo Jack, RJ45		
	Speakers	Built-in-Speakers with Video Signal extender upto 100mtr		
		Supply, installation, testing & commissioning		
7	Patch Pannel	Supply, installation, testing and commissioning of 24 Port Patch Pannel	Make: Model: Manufacturer Name, address, email, phone, website, fax	

8	Patch Cord	Supply, installation, testing and commissioning of 1Meter patch cord	Make: Model: Manufacturer Name, address, email, phone, website, fax	
9	Face Plate	Face Plate	Make: Model: Manufacturer Name, address, email, phone, website, fax	
10	Gangbox	Supply, installation, testing and commissioning of Gangbox	Make: Model: Manufacturer Name, address, email, phone, website, fax	
11	UTP Cable	Supply, installation, testing and commissioning of Cat 6 UTP Cable 305mtr Roll.	Make: Model: Manufacturer Name, address, email, phone, website, fax	
12	Conduit Channel	Supply, installation, testing and commissioning of PVC Conduit Channel	Make: Model: Manufacturer Name, address, email, phone, website, fax	
13	Rack	Supply, installation, testing and commissioning of 6U Rack Fully Loaded	Make: Model: Manufacturer Name, address, email, phone, website, fax	
	Service & Support	Installation, Testing and Commissioning Programming of CCCTV & Access Control System		

TESTING AND ACCEPTANCE

Factory Acceptance Testing

The Bidder shall provide factory calibration & type testing certificate in respect of each component of all the equipments as mentioned above and their major sub-assemblies to the department before delivery/shipment.

Site Acceptance Protocol

In order to facilitate the site acceptance of the system by the engineer – in – charge, the Bidder should give a list of deliverables for each site to the respective sites as well as to the headquarters. The list shall be verified by the engineer – in – charge and accordingly will give a verification report whether all deliverables have been delivered properly at the site. For site acceptance test, the supplier should give a check – list of all components and their functions. This check list shall be decided in consultation with the engineer – in – charge. This check list shall indicate the tests to be conducted at the site and the results that are expected for each and every component that are to be installed at the site. This check list will have to be provided for each and every equipments before the installation begins.

1. Documentation

Detailed operating and maintenance manuals for the instrument and other equipment supplied under the contract shall be provided. 2 hard as well as soft copies of the final manuals of each equipments have to be given at data center, Roorkee.

The manuals shall indicate full detail of the equipment supplied, including test certificates, and the software section shall be comprehensive with sufficient detail to allow personnel to easily modify any setting or operational parameter.

2. Spare parts

Bidder shall ensure the availability of sufficient spare parts in its godown in India for fulfilling its service obligations during warranty period of 3 years & AMC period of 2 years. The same can be inspected by Engineer-in Charge or its authorized representative.

1. Training and Documentation

The Bidder shall provide trainings as training modules as part of the Tender given as under:

Sl. No.	Description	Numbers of training	Number of Participants per session
1	Training of the purchaser's personnel at the site in assembly, startup & operation of all equipments. Course topics will include installation, testing, operation at minimum 4 different locations (i.e. Roorkee, Dehradun, Srinagar & Haldwani). Also include retrieval of data, maintenance requirements & equipment configuration, including training kit containing course material in soft and hard copies etc. complete in all respect. (5 days)	5 Nos.	05

2. Preventive Maintenance

The bidder shall be responsible for maintenance of all the equipments /components of installations, commissioning, site acceptance and operation tests. All equipment maintenance cost, repairs & replacements shall be borne by the bidder during the warranty Period. The scope of maintenance support would include all materials and services including major replacement components, Consumables, mandatory spare parts required to ensure smooth and sustainable operations of the entire system. The bidder shall supply a Manual specifying all the faults experienced by the system together with an account of how such faults have been rectified.

The bidders shall ensure the following visits at remote site for preventive maintenance.

SCHEDULE SHOWING FREQUENCY OF SCHEDULED VISITS FOR ROUTINE AND PREVENTIVE MAINTENANCE

Sl. No.	Station Category	Minimum Preventive Visits / Year	Remarks
1	All the IT equipments listed in Table 1 with all accessories as per technical specifications and Terms & Conditions	2	Every Six months and also on need basis

. Specific Requirements regarding Maintaining Confidentiality of Data

The hydro-met data collected by the service provider shall remain the exclusive property of **Purchaser**. The service provider shall maintain a strict confidentiality of data collected and shall not share the same with any person or agency for any purpose other than with the **Purchaser**.

1. INSPECTIONS AND TESTS

The following inspections and tests shall be performed:

1. Inspection and tests prior to shipment of Goods and at final acceptance are as follows:
 - i. The inspection of the goods shall be carried out to check whether the goods are in conformity with the approved technical specifications and shall be in line with the inspection/test procedures laid down in the technical specifications and the General Conditions of contract. The supplier will dispatch the goods to the ultimate consignee after approval of engineer-in charge against the submission of internal inspection testing along with the supplier’s inspection report, manufacturer’s warranty certificate etc. The purchaser will test the equipment after completion of the installation and commissioning at the site of the installation. For site preparation, the supplier should furnish all details to the purchaser sufficiently in advance so as to get the works completed before receipt of the equipment. Complete hardware and software as specified in section VI should be supplied, installed and commissioned properly by the supplier prior to commencement of performance tests.
 - ii. The acceptance test will be conducted by the purchaser/their consultant or any other person nominated by the purchaser, at its option as per Section-3 Technical

Specification. The acceptance will involve trouble-free operation for three consecutive days. There shall not be any additional charges for carrying out acceptance tests. No malfunction, partial or complete failure of any part of hardware or bugs in the software should occur. All the software should be complete and no missing modules/sections will be allowed. The supplier shall maintain necessary log in respect of the results of the tests to establish to the entire satisfaction of the purchaser, the successful completion of the test specified. An average uptake efficiency of 95% for the duration of test period shall be considered as satisfactory.

- iii. In the event of the hardware and software failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the purchaser reserves the rights to get the equipment replaced by the supplier at no extra cost to the purchaser.

1. Manuals

- Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals of the goods and equipment. These shall be in such detail as will enable the Purchaser to operate, maintain, adjust and repair all parts of the equipment as stated in the specifications.
- The manuals shall be in the ruling language (English) and in such form and numbers as stated in the contract.
- Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purpose of taking over until such manuals have been supplied to the Purchaser.

2. For the System and Other Software the following will apply:

The Supplier shall provide complete and legal documentation of hardware, and licensed operating systems. The supplier shall also indemnify the purchaser against any levies/penalties on account of any default in this regard.

To be reviewed and revised for each procurement depending on the equipment to be procured.

3. Acceptance Certificates:

On successful completion of acceptability test, receipt of deliverables etc., and after the purchaser is satisfied with the working on the system, the acceptance certificate signed by the supplier and the representative of the purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the system

2. PROFORMA OF CERTIFICATE FOR ISSUE BY THE PURCHASER AFTER SUCCESSFUL INSTALLATION AND STARTUP OF THE SUPPLIED GOODS.

[This is to be attached for supply, erection, supervision of erection and startup contracts only]

No.

Date:

M/S

Sub: Certificate of startup of the supplied Goods

1. This is to certify that the plants / Equipment as detailed below has/have been received in good condition along with all the standard and special accessories (subject to remarks in Para No. 2) and a set of spares in accordance with the Contract/Specifications. The same has been installed and commissioned.

a) Contract No. _____ dated _____

b) Description of the Equipment _____

c) Sl. No. _____

d) Quantity _____

e) Rail / Road ways Receipt No. _____ dated _____

f) Name of the consignee _____

g) Date of startup and proving test _____

2. Details of accessories/spares not yet supplied and recoveries to be made on that account.

Sl. No.	Description	Amount to be recovered
---------	-------------	------------------------

1. The proving test has been done to our entire satisfaction and operators have been trained to operate the plant.

2. The supplier has fulfilled his contractual obligations satisfactorily. *

Or

The supplier has failed to fulfill his contractual obligations with regard to the following.

(a)

(b)

(c)

(d)

3. The amount of recovery on account of non-supply of accessories and spares is given under Para No. 2
4. The amount of recovery on account of failure of the supplier to meet his contractual obligations is as indicated in endorsement of the letter.

Signature _____

Name _____

Designation with Stamp _____

* Explanatory notes for filling up the certificates

- a) He has adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to Technical Specifications.
- b) He has supervised the startup of the plan in time i.e., within the period specified in the contract from the date of intimation by the Purchaser in respect of the installation of the plant.
- c) Training of personnel has been done by the supplier as specified in the contract
- d) In the event of documents/drawings having not been supplied or installation and startup of the plant have been delayed on account of the supplier, the extent of delay should always be mentioned.

Note: This form is for the information only. It is not to be filled and submitted / uploaded along with the bid.

PART 3 – CONTRACT

SECTION VIII – GENERAL CONDITIONS OF CONTRACT

Section VII. General Conditions of Contract

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Section VIII. General Conditions of Contract

1. Definitions The following words and expressions shall have the meanings hereby assigned to them:

- (a) “Bank” means the World Bank and refers to the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).
- (b) “Bidder” means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
- (c) “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- (d) “Contract Documents” means the documents listed in the Contract Agreement, including any amendments thereto.
- (e) “Contract Price” means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
- (f) “Day” means calendar day.
- (g) “Completion” means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- (h) “GCC” means the General Conditions of Contract.
- (i) “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- (j) “Incoterms” means International Commercial Terms that are a series of pre-defined commercial terms published by the International Chamber of Commerce (ICC) relating to international commercial law. The Incoterms edition is Incoterms 2010.
- (k) “Purchaser’s Country” is India.
- (l) “Purchaser” means the entity purchasing the Goods and Related Services, as specified in the SCC.
- (m) “Related Services” means the services incidental to the supply of the goods, such as insurance, installation, start-up, training and initial maintenance and other such obligations of the Supplier under the Contract.
- (n) “SCC” means the Special Conditions of Contract.
- (o) “Subcontractor” means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- (p) “Supplier” means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.

(q) “The Project Site,” where applicable, means the place named in the SCC.

2. Contract Documents

2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

3. Corrupt & Fraudulent Practices

3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Appendix to the GCC.

3.2 The Purchaser requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

4. Interpretation

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms.

(a) Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.

(b) The terms EXW and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms specified in the SCC and published by the International Chamber of Commerce in Paris, France.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

(a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

(b) Any waiver of a party’s rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be English. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in English language, in which case, for purposes of interpretation of the Contract, this translation shall govern.
- 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

6. Deleted

5.3

7. Eligibility

- 7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.
- 7.2 All Goods and Related Services to be supplied under the Contract and financed by the Bank shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

8. Notices

- 8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term "in writing" means communicated in written form with proof of receipt.
- 8.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

9. Governing Law

- 9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Union of India.

10. Settlement of Disputes

- 10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 10.2 If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence

arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the SCC.**

10.3 Notwithstanding any reference to arbitration herein,

(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

10.1 the Purchaser shall pay the Supplier any monies due the Supplier

11. Inspections and Audit by the Bank

11.1 The Supplier shall keep, and shall make all reasonable efforts to cause its Subcontractors to keep, accurate and systematic accounts and records in respect of the Goods in such form and details as will clearly identify relevant time changes and costs

11.2 The Supplier shall permit, and shall cause its Subcontractors to permit, the Bank and/or persons appointed by the Bank to inspect the Supplier's offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Supplier's and its Subcontractors and consultants' attention is drawn to Clause 3 [Fraud and Corruption], which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under this Sub-Clause 11.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures)

12. Scope of Supply

12.1 The Goods and Related Services to be supplied shall be as specified in the **Special Conditions of Contract.**

13. Delivery and Documents

13.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements. The details of shipping and other documents to be furnished by the Supplier are specified in the **SCC.**

14. Supplier's Responsibilities

14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13.

15. Contract Price

15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the **SCC.**

16. Terms of Payment

The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the **SCC.**

16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 13 and upon

fulfillment of all other obligations stipulated in the Contract.

16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.

16.4 The payments shall be made in Indian Rupees to the Supplier under this Contract.

16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period set forth in the SCC, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate shown in the SCC, for the period of delay until payment has been made in full, whether before or after judgment or arbitration award.

17. Taxes and Duties

17.1 The Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

18. Performance Security

18.1 If required as specified in the SCC, the Supplier shall, within twenty-one (21) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount specified in the SCC.

18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

18.3 As specified in the SCC, the Performance Security shall be denominated in the Indian Rupees, and shall be in the format stipulated by the Purchaser in the SCC, or in another format acceptable to the Purchaser.

18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the SCC.

19. Copyright

19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

20. Confidential Information

20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it

receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

- 20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.
- 20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:
- (a) the Purchaser or Supplier need to share with the Bank or other institutions participating in the financing of the Contract;
 - (b) now or hereafter enters the public domain through no fault of that party;
 - (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
 - (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
- 20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.
- 20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

21. Subcontracting

- 21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.
- 21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. Specifications and Standards

- 22.1 Technical Specifications and Drawings
- (a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VII, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.
 - (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.

Wherever references are made in the Contract to codes and standards in

accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

23. Packing and Documents

- 23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the **SCC**, and in any other instructions ordered by the Purchaser.

24. Insurance

- 24.1 Unless otherwise specified in the **SCC**, the Goods supplied under the Contract shall be fully insured—against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the **SCC**.

25. Transportation & Incidental Services

- 25.1 Unless otherwise specified in the **SCC**, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.
- 25.2 The Supplier may be required to provide any or all of the following services, including additional services, if any, **specified in Schedule of Requirements and SCC**:
- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;
 - (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
 - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
 - (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
 - (e) training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods
- 25.3 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by

the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

26. Inspections and Tests

- 26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the SCC.
- 26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in the Purchaser's Country as specified in the SCC. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.
- 26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.
- 26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.
- 26.1 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the

Supplier from any warranties or other obligations under the Contract.

27. Liquidated Damages

27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in those SCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

28. Warranty

28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.

28.3 Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.

28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.

28.5 Upon receipt of such notice, the Supplier shall, within the period specified in the SCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.

28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the SCC, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29. Patent Indemnity

29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and

expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
- (b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.

29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

30. Limitation of Liability

30.1 Except in cases of criminal negligence or willful misconduct,

- (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser, and
- (b) the aggregate liability of the Supplier to the Purchaser, whether

under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement.

**31. Change in
Laws and
Regulations**

31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in India, where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

32. Force Majeure

32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

32.2 For purposes of this Clause, “Force Majeure” means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**33. Change
Orders and
Contract
Amendments**

33.1 The Purchaser may at any time order the Supplier through notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipment or packing;
- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

- 33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.
- 33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.
- 33.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

34. Extensions of Time

- 34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 13, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.
- 34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 26, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

35. Termination

- 35.1 Termination for Default
- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34;
 - (ii) if the Supplier fails to perform any other obligation under the Contract; or
 - (iii) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 3, in competing for or in executing the Contract.
 - (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems

appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency.

- (a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

35.3 Termination for Convenience.

- (a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
 - (i) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

36. Assignment

- 36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party

APPENDIX TO GENERAL CONDITIONS

Bank's Policy- Corrupt and Fraudulent Practices

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011:

“Fraud and Corruption:

1.16 It is the Bank's policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.ⁱ In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;ⁱⁱ
 - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;ⁱⁱⁱ
 - (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;^{iv}
 - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;^v
 - (v) "obstructive practice" is:
 - (aa) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
 - (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 1.16(e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

- (c) will declare misprocurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- (d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank's sanctions procedures,¹² including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated¹³;
- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.”

¹² A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

¹³ A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

SECTION IX. SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

SCC 1.1(j)	<p>The Purchaser is: Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee - 247667 E mail: uttarkhandwrd@gmail.com</p>
SCC 1.1 (o)	The Project Site(s)/Final Destination(s) is/are: as mentioned in Schedule of Requirements Section IV.
SCC 4.2 (a)	The meaning of the trade terms shall be as prescribed by Incoterms.
SCC 4.2 (b)	The version edition of Incoterms shall be 2010.
SCC 8.1	<p>For <u>notices</u>, the Purchaser's address shall be: Attention : Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee Distt.- Haridwar, Uttarakhand PIN 247667 E mail: uttarkhandwrd@gmail.com Country: INDIA</p>
SCC 10.2	<p>Settlement of Disputes</p> <p>The dispute settlement mechanism to be applied for adhoc arbitration shall be as follows:</p> <p>(a) In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act 1996 as amended up-to date. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the president of the institution of Engineers (India).</p> <p>(b) In the case of a dispute with a Foreign Supplier, the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules. The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the parties, and shall act as presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the</p>

	<p>Presiding Arbitrator shall be appointed by the President of the Institution of Engineers (India).</p> <p>(c) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above, within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the president of the Institution of Engineers (India), both in cases of the Foreign supplier as well as Indian supplier, shall appoint the arbitrator. A certified copy of the order of the President of the Institution of Engineers (India), making such an appointment shall be furnished to each of the parties.(d)Arbitration proceedings shall be held at Roorkee, India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.</p> <p>(e) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.</p> <p>(f) Where the value of the contract is Rs. 10 million and below, the disputes or differences arising shall be referred to the Sole Arbitrator. The Sole Arbitrator should be appointed by agreement between the parties; failing such agreement, by the appointing authority namely the President of the Institution of Engineers (India).</p> <p>(g) Except otherwise agreed to by the Parties, Arbitrators should give a decision in writing within 120 days of receipt of notification of dispute.</p>
<p>SCC 12.1 and 25.2</p>	<p>The scope of supply for the Goods and Related Services to be supplied shall be as specified in the Schedule of requirement.</p>
<p>SCC 13.1</p>	<p>Details of Shipping and other Documents to be furnished by the Supplier are given below:</p> <p>GCC 13.1 Upon delivery of the goods to the transporter/consignee, the supplier shall notify the purchaser and mail the following documents to the Purchaser:</p> <ul style="list-style-type: none"> (i) Four Copies of the Supplier invoice showing contract number, goods description, quantity, unit price, total amount; (ii) Delivery note, Railway receipt, or Road consignment note or equivalent transport document or acknowledgement of receipt of goods from the Consignee; (iii) Four Copies of packing list identifying contents of each package; (iv) Insurance certificate; (v) Manufacturer's/Supplier's warranty certificate; (vi) Inspection certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and (vii) Certificate or origin. <p>The above documents shall be received by the Purchaser before arrival of the Goods (except where it is handed over to the Consignee with all documents) and if not received, the supplier will be responsible for any</p>

	consequent expenses.
SCC 14.1	<p>ADD to GCC;</p> <p>The supplier is responsible for and obliged to conduct all contracted activities in accordance with the contract using state- of- the- art methods and economic principles and exercising all means available to achieve the performance specified in the Contract</p> <p>The Supplier is obliged to work closely with the Purchaser's staff, act within its own authority and abide by directives issued by the Purchaser and implementation activities.</p> <p>The Supplier will abide by the job safety measures prevalent in India and will free the Purchaser from all demands or responsibilities arising from accidents or loss of life the cause of which is the supplier's negligence. The Supplier will pay all indemnities arising from such incidents and will not hold the purchaser responsible or obligated</p> <p>The Supplier is responsible for managing the activities of its personnel or sub-contracted personnel and will hold itself responsible for any misdemeanors</p> <p>The Supplier will treat as confidential all data and information about the purchaser, obtained in the execution of his responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Purchaser</p>
SCC 15.1	The prices charged for the Goods supplied and the related Services performed <i>shall not be</i> adjustable.
SCC 16.1	<p>Advance Payment: <i>Advance Payment:</i> Ten (10) % of the total contract price shall be paid within thirty (30) days of signing of Contract and upon submission of claim / against a simple receipt and a bank guarantee for the equivalent amount valid until the goods are delivered and in the form provided in the bidding documents or another form acceptable to the Purchaser.</p> <p>Payment shall be made in Indian Rupees in the following manner:</p> <p>a. 85% (Seventy Percent) of the contract price excluding AMC cost plus total GST amount charged in Invoice against Supply of Goods shall be released after 30 days of the successful testing, commissioning and training before/during commissioning and their the final acceptance both equipments. The advance payment, if any, shall be adjusted from the said bill.</p> <p>d. 15% (Fifteen Percent) of the Contract Price excluding AMC cost (for 3 years of warranty period) to be paid on Half Yearly basis (2.5% at every six month) inclusive of GST payable, subjected to good running conditions of the equipment as per service level agreement mentioned in technical specifications apart from above payment.</p> <p>In case, the service provider is not able to run the equipment to perform the test, the payment on this account shall be made as per detailed given below:</p>

	Percentage of test	Payment to be made to the Supplier
	90-100% test performed	100% of (5% of contract price to be paid six monthly as per SCC clause no. 16.1 (b))
	80-89.99 % test performed	90% of (5% of contract price to be paid six monthly as per SCC clause no. 16.1 (b))
	70-79.99 % test performed	80% of (5% of contract price to be paid six monthly as per SCC clause no. 16.1 (b))
	60-69.99 % test performed	70% of (5% of contract price to be paid six monthly as per SCC clause no. 16.1 (b))
	50- 59.99% test performed	60% of (5% of contract price to be paid six monthly as per SCC clause no. 16.1 (b))
	Below 50%	NIL of (5% of contract price to be paid six monthly as per SCC clause no. 16.1 (b))

e. **AMC cost for two years inclusive of GST payable on it, shall be paid on half yearly basis after 3 years of onsite manufacturer warranty period.**

f. **Payment of GST will be against valid Invoice as per GST Act & Rules and submission of GST Registration Certificate along with declaration that GST Registration is valid and all liabilities towards GST have been discharged by the Bidder. GST amount will be reimbursed after 30 days of submission of valid Invoice and all required documents and declaration by Bidder.**

g. **Bank guarantee for advance payment shall be released not later than 30 days after the adjustment of advance amount against payment due after testing, commissioning and final acceptance. The bank guarantee should be valid for a period of 180 days or till the date of final testing, commissioning and final acceptance whichever is later, from the date of issue of bank guarantee including claim period.**

The bidder shall indicate in the Price Schedules specifying all items prices shown therein including the unit prices and total prices of the goods and related services along with GST or any other duties and taxes applicable against the schedule of requirements. GST if liveable shall be paid as applicable. Any statutory variation shall be paid on submission of documentary evidence. Bidders shall be required to quote HSN code and applicable tax rates.

“GST” means all four Acts CGST, SGST, UTGST, IGST and any other regulations by Government in relation to GST and rules thereto.

h. Note: The award of CAMC for 2 Years after expiring of warranty will be at the discretion of purchaser, subjected to NHP tenure

SCC 16.5	The payment-delay period after which the Purchaser shall pay interest to the supplier shall be 60 days. The interest rate that shall be applied is 02% per annum
SCC 17	In the case of tax/ duty waiver, the purchaser will issue only the certificates in terms of the Government of India’s notification as per information given by supplier in form stipulated in Section IV. Supplier is solely responsible for obtaining such benefits and in case of failure to receive such benefits; the purchaser will not compensate the supplier separately.

SCC 18.1	<p>Within 21 days of notification of award, the supplier shall furnish the Performance Security to the Purchaser shall be for an amount of 10% of the contract value, valid up to 60 days after the date of completion of performance obligations including warranty and Annual Maintenance services obligations.</p> <p>In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/ replaced material shall be extended to a further period of 12 months and the Performance Bank guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.</p>
SCC 18.3	<p>The Performance Security shall be in the form of a “Bank Guarantee” drawn in favour of the Purchaser.</p>
SCC 18.4	<p>Discharge of the performance Security shall take place not later than 60 days following the date of completion of the Supplier’s performance obligations, including the warranty and comprehensive AMC obligation, under the contract.</p>
SCC 18.5	<p>Add as Clause 18.5 to the GCC the following:</p> <p>In the event of any contractual amendment, the Supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract, as amended for 60 days after the completion of performance obligations including warranty and Annual Maintenance services obligations.</p>
SCC 23.2	<p><u>Packing Instructions:</u> The Supplier will be required to make separate packages for each Consignee. Each package will be marked on three sides with proper paint/indelible ink with the following:</p> <p>(i) Project; (ii) Contract No.; (iii) Country of Origin of Goods; (iv) Supplier’s Name; (v) Packing List Reference Number.</p> <p>Suppliers should use recycled materials as much as possible for packing</p>
SCC 24.1	<p>The insurance shall be paid in an amount equal to 110 percent of the EXW value of the Goods from “Warehouse to warehouse (final destination)” on “All Risks” basis including War Risks and Strikes.</p>
SCC 25.1	<p>The Supplier is required under the Contract to transport the Goods duly insured to the specified final destination, and until the commissioning & final acceptance of each equipment, and all related costs shall be included in the Contract Price.</p>
SCC 25.2	<p>Incidental services to be provided are: All services under GCC clause 25.2</p>
SCC 26.1	<p>The inspections and tests shall be as detailed in Para 5 of Section VI-Schedule of Requirement:</p> <p>The supplier shall get each item indicated in the Schedule of requirement inspected in manufacturer’s works or at the premises of supplier and submit a test certificate and also manufacturer’s guarantee /warranty certificate that the items are conforms to the laid down specification.</p> <p>The Purchaser or its representative may inspect and /or test any or all the items to confirm their conformity to the contract specification, prior to dispatch from the manufacturer’s premises /supplier’s premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the items on receipt at destination to verify conformity to technical specification.</p> <p>If the items are fails to meet the laid down specifications the supplier shall take immediate steps to remedy the deficiency or replace the defective parts of the each</p>

	to the satisfaction of the purchaser/ consignee
SCC 26.2	The Inspections and tests shall also be conducted at: <i>at remote site and Data Centre, Roorkee, Uttarakhand, India as specified in technical specification.</i>
SCC 27.1	The liquidated damages shall be: 0.5% of contract price per week or part thereof.
SCC 27.2	The maximum amount of liquidated damages shall be: 10% of the contract price.
SCC 28.3	The period of validity of the onsite Warranty shall be 36 (thirty six) months after successful installation, testing, commissioning and acceptance. Warranty period shall be followed by 2 years comprehensive AMC. For purposes of the Warranty, the place(s) of final destination(s) shall be: As per ITB 14.8 (a) (iii) or as per schedule of requirement.
SCC 28.5	The period for repair or replacement shall be: 15 days. The maximum response time for a complaint from the Purchaser/ authorized officer for the defect/breakdown after a request sms/ fax /e-mail is made or letter is written shall not exceed 48 hours. Upon receipt of such notice, the Supplier shall, visit the site and repair or replace the defective Goods or parts thereof, without cost to the Department within stipulated time of 15 days. If anyone equipment continues to remain "breakdown" for more than 15 days, the Supplier is liable to pay penalty @ Rs.1000/- per Day/ equipment. The Day for the purpose of penalty shall be taken as failure period of 24 hours or part thereof for particular equipment. The amount of penalty will be recovered from performance bank guarantee or payment due to bidder during warranty period or AMC period
SCC 28.6	The period shall be 14 days
SCC 31.1	This clause will apply only to variations in GST and other taxes payable in India on the final product which is being supplied and not for variations in tax on the individual components / raw materials which go into the product.
GCC 33.5	The supplier shall replace/ re-install / re-commission Goods in case of damage/theft or vandalism not attributable to the supplier of the line items listed in table 3A-Price Schedule for supply of goods as per schedule of requirement and table 3B- Price and completion schedule –related services of the contract and payment shall be accordingly made at the quoted rates in this contract by the supplier for line item. The procedure adopted shall be in accordance with GCC 33- change orders and contract Amendments.
SCC 37	Add the following additional sub clauses. 37.1 Supplier integrity: The supplier is responsible for and obliged to conduct all contracted activities in accordance with the contract using state- of- the- art methods and economic principles and exercising all means available to achieve the performance specified in the Contract. 37.2 Supplier's obligations : The Supplier is obliged to work closely with the Purchaser's staff, act within its own authority and abide by directives issued by the Purchaser and implementation activities. The Supplier will abide by the job safety measures prevalent in India and will free the Purchaser from all demands or responsibilities arising from accidents or loss of life the cause of which is the supplier's negligence. The Supplier will pay all

indemnities arising from such incidents and will not hold the purchaser responsible or obligated.

The Supplier is responsible for managing the activities of its personnel or sub-contracted personnel and will hold itself responsible for any misdemeanors.

The Supplier will treat as confidential all data and information about the purchaser, obtained in the execution of his responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Purchaser.

37.3 Site preparation and installation

The supplier is responsible for associated civil work required for installation and commissioning of the supplies in the Schedule of Requirement under the heading of Relative services

37.4 Hardware installation:

The Supplier is responsible for all unpacking, assemblies, wiring, installations, cabling between hardware units and connecting to power supplies. The Supplier will test all hardware operations and accomplish all adjustments necessary for successful and continuous operation of the hardware at all installation sites.

Attachment: Price Adjustment Formula

(DELETED)

SECTION X – CONTRACT FORMS

1. LETTER OF ACCEPTANCE

[letterhead paper of the Purchaser]

[date]

To: *[name and address of the Supplier]*

Subject: **Notification of Award Contract No.**

This is to notify you that your Bid dated *[insert date]* for execution of the *[insert name of the contract and identification number, as given in the SCC]* for the Accepted Contract Amount of *[insert amount in numbers and words in Rupees]*, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 21 days in accordance with the Conditions of Contract, using for that purpose the of the Performance Security Form included in Section X, Contract Forms, of the Bidding Document.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Agency: _____

Attachment: Contract Agreement

2. CONTRACT AGREEMENT

[The successful Bidder shall fill in this form in accordance with the instructions indicated]

THIS CONTRACT AGREEMENT is made

the *[insert: **number**]* day of *[insert: **month**], [insert: **year**]*.

BETWEEN

- (1) *[insert complete name of Purchaser], a [insert description of type of legal entity, for example, an agency of the Ministry of of the Government of { insert name of Country of Purchaser }, or corporation incorporated under the laws of { insert name of Country of Purchaser }] and having its principal place of business at [insert address of Purchaser] (hereinafter called “the Purchaser”), and*
- (2) *[insert name of Supplier], a corporation incorporated under the laws of [insert: country of Supplier] and having its principal place of business at [insert: address of Supplier] (hereinafter called “the Supplier”).*

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of *[insert Contract Price in words and figures, expressed in Rs]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract Agreement. This Agreement shall prevail over all other contract documents: In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed below.
 - (a) The letter of Acceptance
 - (b) this Contract Agreement
 - (c) The Supplier’s letter of Bid and original completed Schedules including Price Schedules
 - (d) Special Conditions of Contract
 - (e) General Conditions of Contract
 - (f) Technical Requirements (including Schedule of Requirements and Technical Specifications)
 - (g) *[Add here any other document(s) listed in GCC/SCC as part of contract]*

3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

3. Performance Security - Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

Performance Guarantee No..... *[insert guarantee reference number]*

Date.....*[insert date of issue of the guarantee]*

To: _____ *[name of Purchaser]*

_____ *[address of Purchaser]*

WHEREAS _____ *[name and address of Supplier¹⁴]* (hereinafter called "the Applicant") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ *[name of Contract and brief description of Goods and related Services]* (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Applicant shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Applicant such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee¹⁵]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Applicant before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Goods and related Services to be supplied thereunder or of any of the Contract documents which may be made between you and the Applicant shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

¹⁴ *In the case of a JV, insert the name of the Joint Venture*

¹⁵ *An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.*

This guarantee shall be valid until (i.e.) 60 days following the Completion date of the Contract including any warranty obligations¹⁶, and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

¹⁶ Completion date as described in GC Clause 18.4

4. Advance Payment Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Advance Payment Guarantee No.....*[insert guarantee reference number]*

Date.....*[insert date of issue of the guarantee]*

To: _____ *[name of Purchaser]*

_____ *[address of Purchaser]*

_____ *[name of Contract]*

Gentlemen:

In accordance with the provisions of the Conditions of Contract, Clause 16 ("Terms of Payment") of the above-mentioned Contract, _____ *[name and address of Supplier¹⁷]* (hereinafter called "the Applicant") shall deposit with _____ - _____ *[name of Purchaser]* a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ *[amount of guarantee¹⁸]* _____ *[in words]*.

We, the _____ *[bank or financial institution]*, as instructed by the Applicant, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ *[name of Purchaser]* on his first demand without whatsoever right of objection on our part and without his first claim to the Applicant, in the amount not exceeding _____ *[amount of guarantee]* _____ *[in words]*.

We further agree that no change or addition to or other modification of the terms of the Contract or of Goods and related Services to be supplied thereunder or of any of the Contract documents which may be made between _____ *[name of Purchaser]* and the Applicant, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ *[name of Purchaser]* receives full repayment of the same amount from the Applicant. Consequently any demand for payment under this guarantee must be received by us at this office on or before that date.

¹⁷In the case of a JV, insert the name of the Joint Venture

¹⁸An amount shall be inserted by the bank representing the amount of the Advance Payment, and denominated in Indian Rupees.

Yours truly,

Signature and seal: _____

Name of Bank: _____

Address: _____

Date: _____

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

ⁱ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

ⁱⁱ For the purpose of this sub-paragraph, “*another party*” refers to a public official acting in relation to the procurement process or contract execution. In this context, “*public official*” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

ⁱⁱⁱ For the purpose of this sub-paragraph, “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

^{iv} For the purpose of this sub-paragraph, “parties” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

^v For the purpose of this sub-paragraph, “party” refers to a participant in the procurement process or contract execution.