Sealed Tenders are invited from prospective bidders as per Section IV - Schedule of Requirements of Indian Institute of Technology Dharwad

### **Section - I : Invitation of the Bids**

Tender No.		IITDH/MMD/EE/2018-19/06	
Tender Date		01.02.2019	
Tender Category		Goods	
	Tender Type	Open Tender	
No	o. of Envelopes	2	
	Со	vers Information / Submission of Bids	
Cover No.	Cover Type	Description	Document Type
1	Technical	Technical Specification, Tender Document, EMD, Schedule of Requirement and Compliance, Bidders Information/Indian Agent Information, Previous Supply Orders etc.	Hard copies duly signed and self- attested
2	Financial	Commercial Bid	sen- attested
envelopes as – Technical Bid and Commercial Bid.  Separate technical bid and commercial bid envelopes should be clearly marked as "Envelope No. 1 - Technical Bid" and "Envelope No. 2 - Commercial Bid".  Both these sealed covers are to be put in a bigger cover which should also be sealed and duly super scribed with our Tender No. & Due Date and to be submitted to the concern department/section mentioned in tender document.  Note: The technical offer should not contain any price information. If the price quoted is submitted in technical bid the tender will be rejected at the sole discretion of IIT Dharwad.  Initially Technical Bids will be opened and evaluated by the purchase committee. Commercial bids of only Technically qualified bidders will be opened later.  Contract/ Purchase Order will be awarded to the lowest bidder(L1) among them.			
Form of Contract		Purchase	
		Guarantee or Demand Draft)	
EMD Fee INR: Payable to:		Rs.1,50,000/- The Dean, IIT Dharwad	

Hubli-Dharwad

90 Days

Payable to: Payable at:

Bid Validity (Days):

Delivery Period (Days):	30 Days
Pre Bid Meeting Date & Time:	11.02.2019 at 11:30 AM
Pre Bid Meeting Place & Address:	Board Room, Admin block, IIT Dharwad - 580011
Delivery Location:	Indian Institute of Technology Dharwad WALMI Campus, Belur Industrial Area, National Highway- 4, Pune Bangalore Road, Near High Court, Dharwad, Karnataka
Pin Code	580 011
Bid Submission End Date & Time	26.02.2019 till 11.00 AM
Place of Submission of Bid	Indian Institute of Technology Dharwad WALMI Campus, Belur Industrial Area, National Highway- 4, Pune Bangalore Road, Near High Court, Dharwad, Karnataka
Bid Opening Date & Time	26.02.2019 at 11.30 AM
Bid Opening Place	Indian Institute of Technology Dharwad WALMI Campus, Belur Industrial Area, National Highway- 4, Pune Bangalore Road, Near High Court, Dharwad, Karnataka
Tender Inviting Authority:	Name: Asst. Registrar (MM) Address: Indian Institute of Technology Dharwad, WALMI Campus, Belur Industrial Area, National Highway- 4, Pune Bangalore Road, Near High Court, Dharwad, Karnataka

#### **Section II: Instructions to Bidders**

#### 1. Preparation and Submission of offers:

- i. The Quotation MUST BE ENCLOSED IN A SEALED ENVELOPE superscribing Tender number and due date & should reach the undersigned on or before the due date and time mentioned in the tender notice. If the quotation envelope is not sealed, it will be rejected.
- ii. Tender should be dropped in the tender box kept near the entrance at IIT Dharwad. Tender should not to be handed over to our staff personally unless otherwise specified. All communications are to be addressed to the undersigned only. In case due date happens to be holiday the tender will be accepted and opened on the next working day.
- iii. The bid can be submitted in person or through post/ courier (IIT Dharwad shall not be held responsible for any postal delays or any other reason for not submitting the bid in the specified time and resulting in disqualification / rejection of any bid) so as to reach on or before the due date and time specified in the tender document.
- iv. The leaflets catalogue, etc. should be sent invariably so that a proper evaluation of the equipment offered is possible.
- v. In a tender, either the Indian agent on behalf of the Principal / OEM or Principal / OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.
- vi. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.
- vii. IIT Dharwad discourages High Sea Sale purchase. All tenders with High Sea Sale may be rejected.
- viii. It is mandatory for all Indian Agents to submit copy of Indian Agent Agreement / Authorisation letter from OEM / OEMs along with tender.
- ix. It is mandatory for Indian Agents, Indian subsidiaries and Indigenous bidders to have GSTN Registration No. and should submit duly filled Bidders Information along with the tender document.

#### 2. Cost of Bidding:

The Bidder shall bear all costs associated with the preparation and submission of its Bid and the Purchaser shall not be held responsible or liable for those costs incurred regardless of the conduct or outcome of the bidding process.

#### 3. Validity of the Bid:

90 Days from the last date of submission of bid.

#### 4. Amendments to Tender Document:

- i. At any time prior to the deadline for submission of bids, IIT Dharwad may, for any reason, whether on its own initiative or in response to the clarification sought by a prospective BIDDER may modify the bid document by issuing necessary corrigendum.
- ii. All prospective BIDDERs who have downloaded the tender document are requested to visit IIT Dharwad website for any amendments / modifications and make a note of the same, which will be binding on them.

#### 5. Deadline for Submission of Bids:

Bids must be received by IIT Dharwad before the due date and time at the address specified in the tender document. In the event of the specified date for the submission of bids being declared as a holiday for IIT Dharwad the bid-closing deadline will stand extended to the next working day up to the same time without any further notice.

#### 6. Bid Opening Process:

- i. In case of one bid system, technical & financial bid will be opened simultaneously in the presence of representatives of the bidders at IIT Dharwad.
- ii. In case of two bid system, The Technical Bid will be opened in the first instance in the presence of Procurement Committee(PC)/MMD, representatives of the bidders at IIT Dharwad.
- iii. Financial bids of only those bidders, whose bids are found technically qualified, by the Technical Evaluation Committee/PC, will be opened in the presence of the Procurement Committee(PC)/MMD vendor's

representatives subsequently at a later date for further evaluation. Date and Time of financial bid opening shall be intimated to technically qualified bidders only.

- iv. One authorized representative of each of the bidder would be permitted to be present at the time of opening of the bids.
- v. The authorized representative of bidders, present at the time of opening of the bids shall be required to sign an attendance register as a proof of having attended the Technical/Commercial bid opening session.

#### 7. Late Bids:

IIT Dharwad will not be responsible:

- (a) For delayed / late quotations submitted / sent by post / courier etc.
- (b) For submission / delivery of bids/quotations at the wrong places other than the mentioned in the tender.
- (c) Any bid inadvertently received by IIT Dharwad after the deadline i.e. after due date & time for submission of bids, will not be accepted and returned unopened to the BIDDER, without any prejudice by hand/speed post/courier services.

#### 8. Supplementary offer /Modification of Original Bid:

BIDDER desirous to modify their offer/terms may submit their revised / supplementary offer (s) within the extended Tender Opening Date (TOD) by clearly stating to the extent of updation done to the original offer. The purchaser reserves the right to open the original offer along with the revised offer.

#### 9. Confidentiality:

- i. Information relating to the evaluation 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. On completion of Technical Evaluation by the Committee, Vendors whose offer do not meet with the users Technical Specification will be restricted to participate in commercial bid opening process. Information regarding the criteria for disqualification of the tender would be communicated to the bidder in writing.
- ii. Any attempt by a Bidder to influence the Purchaser in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.
- iii. Notwithstanding, 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 shall do so in writing.

#### 10. Deviation, Reservations and Omissions:

During the evaluation of Bids, the following definitions apply:

- (a) "Deviation" is a departure from the requirement specified in the Tender Documents;
- (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Tender Documents; and
- (c) "Omission" is the failure to submit part or all of the information or documentation required in the Tender Documents.

#### 11. Correction of Arithmetical Errors:

- i. Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:
  - (a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
  - (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
  - (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- ii. Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with the same, shall result in the rejection of the Bid.

#### 12. Evaluation of Bid:

- i. IIT Dharwad will evaluate technical and commercial acceptable offers on landed **Net Price basis in respect of each item separately**.
- ii. In case any BIDDER is silent on any clauses mentioned in this tender documents, IIT Dharwad shall construe that the BIDDER had accepted the clauses as per the invitation to tender no further claim will be entertained.
- iii. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

#### 13. (A) Price Bid (For Import Supplies):

- i. Quoting of Price (s): It is mandatory to quote price in DDP basis only.
- ii. PRICE BID must be submitted in enclosed Price Bid Form only.
- iii. If the price is not quoted in Price Bid Form provided in the tender document then, IIT Dharwad will reject bid.
- iv. If the bidder wishes to give pricing details, it may be attached in separate sheet. It is mandatory to quote optional items in separate sheet otherwise your quote will be rejected.
- v. In case of Multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- vi. Quantity: The quantity mentioned in the tender can be increased or decreased to any extent depending upon the actual requirement.
- vii. It is mandatory to quote optional items in separate sheet otherwise your quote will be rejected.

#### 13. (B) Price Bid (For Indigenous Supplies):

- i. Quoting of Price (s): Price quoted should be in Indian Rupees, free delivery at IIT Dharwad Campus at site.
- ii. PRICE BID must be submitted in enclosed Price Bid Form only.
- iii. Prices should include all the taxes including GST and other duties/levies.
- iv. If the price is not quoted in Price Bid Form only provided in tender document then, IIT Dharwad will reject bid. If bidder wish to give pricing details, it may be attached in separate sheet.
- v. In case of Multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- vi. Quantity: The quantity mentioned in the tender can be increased or decreased to any extent depending upon the actual requirement.
- vii. It is mandatory to quote optional items on a separate sheet otherwise your quote will be rejected.

#### 14. Corrupt & Fraudulent Practices:

- i. IIT Dharwad requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the terms set forth below are defined as follows:
  - 1. "Corrupt practice "means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of in kind/value to influence the action of a public official in the procurement process or in contract execution;
  - 2. "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
  - 3. "Collusive practice" means a scheme or arrangement between two or more bidders, designed to establish bid prices at artificial, non-competitive levels; and
  - 4. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;

IIT Dharwad will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

#### 15. Cancellation of Tender:

- i. Notwithstanding anything specified in this tender document, Purchaser/IIT Dharwad in his sole discretion, unconditionally and without assigning any reasons, reserves the rights:
  - (a) To accept OR reject lowest tender or any other tender or all the tenders.
  - (b) To accept any tender in full or in part.
  - (c) To reject the tender offer not confirming to the tender terms.
- ii. IIT Dharwad will give purchase preference to Public Sector undertakings when applicable as per Govt. Policy/ Guidelines.
- iii. Offer which deviates from the vital conditions (as illustrates below) of the tender shall be rejected:
  - (a) Non-submission of complete offers as mentioned in the tender document,
  - (b) Receipt of offers after due date and time and or by email / fax (unless specified otherwise).
  - (c) Receipt of offers in open condition.
  - (d) Conditional Tenders and Unsigned Tenders will also be rejected.

#### 16. Delivery:

i. The successful BIDDER should deliver the material as per tender document/purchase order. The successful bidder should emboss stickers of purchase order number on the material to be delivered.

#### **Section III: Conditions of Contract**

#### **1.** Award of Contract:

- i. IIT Bombay on behalf of IIT Dharwad shall award the contract to the technically qualified eligible BIDDER whose bid has been determined as the lowest evaluated commercial bid.
- **ii.** If more than one BIDDER happens to quote the same lowest price, IIT Bombay reserves the right to award the contract to more than one BIDDER or any BIDDER.

#### 2. Prices:

- i. For Import Supplies As per Govt. Of India Notification No.51/96/ Custom dtd. 23<sup>rd</sup> July 1996, IIT Bombay is exempted from Custom duty and IGST (substituted under Notification No.43/2017 dtd. 30<sup>th</sup> June 2017) for all research equipment. We shall provide all the documents under this notification to enable you to clear the goods without payment of Custom duty, whenever required. Please state clearly that this certificate is required. The supplier shall pay and bear all other liabilities, taxes and duties not specifically agreed by the Purchaser in the contract.
- ii. **For Indigenous Supplies -** The supplier shall pay and bear all other liabilities, taxes and duties not specifically agreed by the Purchaser in the contract.

#### **3.** Pre-installation:

Please also mention the pre-installation requirements for the equipment like ambient temperature, humidity, civil work, weather specifications, power specifications, etc. When items are provided full performance satisfaction should be demonstrated.

#### **4.** Installation:

- i. BIDDER shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty period and thereafter as mentioned in the contract.
- ii. Installation demonstration to be arranged by the supplier free of cost and the same is to be done within 15 days of the arrival of the equipment at site.

#### **5.** Training:

- i. The BIDDER shall submit training proposal for the operation and maintenance to the personnel of IIT Dharwad on the offered equipment/machinery.
- ii. Wherever needed, our technical persons should be trained by the supplier at the project site free of cost. In case the person is to be trained at supplier's site abroad or in India it should be mentioned in the quotation clearly. The supplier should bear all the expenses for such training including 'to & fro' fares and lodging & boarding charges.

### **6.** (A) Terms of Payment (For Import Supplies):

- i. 100% Payment by Letter of Credit (90% payment will be released on receipt of documents without any discrepancies and balance 10% will be paid after satisfactory installation and commissioning). IIT Bombay does not pay any advance payment to party. Any request of Advance payment will be rejected summarily.
- **ii.** Any request for change in payment terms and conditions will not be accepted. In case, if it is necessary to change payment terms and conditions then IIT Bombay will not pay any additional charges. If the above payment terms conditions are not acceptable then tender will be rejected.

#### (B) Terms of Payment (For Indigenous Supplies):

- i. Payment within 30 days from the date of delivery, installation and Acceptance Certificate of concerned Department / Section / Materials Management Division, IIT Bombay.
- ii. Payment shall be made by Cheque or such other mode / electronic fund transfer offered by the Bank.
- iii. IIT Bombay does not pay advance payment to party. Any request of Advance payment will be summarily rejected.

#### 7. Legal Matter:

All Domestic and International disputes are subject to Mumbai jurisdiction only.

#### **8.** Transfer and Subletting:

The seller shall not sublet, transfer, assign or otherwise part with the acceptance to the tender or any part thereof, either directly or indirectly, without the prior written permission of the Purchaser.

#### **9.** Force Majeure:

Force Majeure will be accepted on adequate proof thereof.

#### 10. Penalty/ Liquidated Damages:

- i. Timely delivery is essence of the contract and hence if any consignment be delayed, liquidated damages at the rate 0.5% of the price of the delayed consignment, for each week or part whereof shall be levied and recovered subject to maximum of 10% of total purchase order value.
- ii. IIT Bombay/Dharwad reserves the right to cancel the order in case the delay is more than 10 weeks. Penalties if any will be recovered by forfeiting PBG at vendor's cost and risks.

### 11. Specification and Samples:

The suppliers shall supply the stores in accordance with the specifications/ descriptions of stores given in the acceptance of tender. The Purchaser reserved the rights to alter the description of stores including drawings given in the acceptance of tender. In the event any such alteration result in any implication to the deliver and price, such implication shall be mutually agreed between the Purchaser and supplier. In case certified sample has been issued by the Purchaser and the Specifications / Drawings also exist in the acceptance of tender then the certified sample will govern the supply to the extent of material, workmanship and finished product.

#### **12.** Supervision of Erection and Commissioning:

Successful BIDDER shall depute concerned specialist, for supervision of erection & commissioning of the machine to be carried out. The successful BIDDER shall make necessary arrangement at their own expenses for stay, transport and other expenses of their specialist during their stay in Dharwad which also includes imparting free of cost training to IIT Dharwad personnel.

#### 13. EARNEST MONEY DEPOSIT (GFR 2017 Rule 170):

#### i. Earnest Money Deposit is mandatory to be enclosed in the tender.

- ii. While submitting bid, the BIDDER shall deposit an amount mentioned in tender document as Earnest Money, with the IIT Dharwad through the following instruments:
  - A confirmed Bank Guarantee or Demand Draft by an Indian Nationalized Bank/Scheduled bank promising payment of the guaranteed sum to the BUYER without any demur whatsoever and without seeking any reasons whatsoever.
- iii. The Earnest Money shall be valid up to a period of 90 days or the complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER and the BUYER whichever is later.
- iv. Bidders registered with any of the following agencies/ bodies as per Public procurement policy for Micro & Small Enterprises (MSE) order 2012 are exempted categories from payment of EMD provided that the registration certificate issued by any one of these below mentioned agencies must be valid as on close date of tender. Micro small or medium enterprises who have applied for registration or renewal of registration with any of these agencies/bodies but have not obtained the valid certificate as on close date of tender are not eligibile for exemption.
- i) Khadi and Village Industries Commission (KVIC)
- ii) National Small Industries Corporation (NSIC)
- iii) Any other body specified by Ministry of MSME/GOI
  - v. EMD Exemption against NSIC/MSME and KVIC certificate will not be applicable for import purchases.
  - vi. No interest shall be payable by the BUYER to the BIDDER on Earnest Money for the period of its currency.

- vii. If successful bidder fails to submit the Performance Guarantee Bond within 15 days from the date of placing of Purchase Order, then purchase order will be cancelled and EMD will be forfeited.
- viii. If there is any difficulty in submitting Bank Guarantee then Demand draft can be submitted in the favour of 'The Dean, IIT Dharwad' payable at Hubli-Dharwad.
- ix. Return of EMD: In case of successful BIDDER, EMD in the form of Bank guarantee will be returned within 30 days from the date of submission of Performance Guarantee Bond.
- x. For unsuccessful bidder, Bank Guarantee will be returned within 30 days from the date of placing the Purchase Order
- xi. In case of Demand Draft, amount of EMD will be returned within 60 days from the date of placing the purchase order.

#### 14. Performance Guarantee (GFR 2017 Rule 171):

- i. Performance Guarantee Bond is mandatory.
- ii. Successful tenderer/ bidder should submit performance guarantee as prescribed above to be sent to "The Registrar, IIT Bombay" on or before 15 days from the due date of issue of order acknowledgement. The PBG to be furnished in the form of bank guarantee as per proforma or annexure of the tender documents, for an amount covering 5% of the purchase order value.
- iii. The Performance Guarantee should be established in favour of "The Registrar, IIT Bombay".
- iv. PBG to be established through any of the National Banks/Scheduled bank (whether situated at Mumbai or outstation) with a clause to enforced the same on their local branch or any scheduled bank (other than national bank). Bonds issued by co-operative banks will not be accepted.
- v. Performance Guarantee Bond shall be for the due and faithfully performance of the contract and shall remain binding, notwithstanding such variations, alterations for extensions of time as may be made, given, conceded or agreed to between the successful tenderer and the purchaser under the terms & conditions of acceptance to the tender.
- vi. The successful tenderer is entirely responsible for due performance of the contract in letter and spirit and all other documents referred to in the acceptance of tenders.
- vii. The PBG shall be kept valid during the period of contract and shall continue to be enforceable for a period of one year/two years (as mentioned in the tender document) or up to warranty period whichever is later from the date of order acknowledge. In case PBG needs extensions up to warranty period then supplier shall initiate extensions to PBG one month prior to expiry of PBG.
- **viii.** For successful suppliers, if PBG is not submitted within **15 days** from the date of Order Acknowledgement, then the Purchase Order will be cancelled with forfeiting of EMD.
- ix. No interest shall be payable by the buyer to the Bidder on PBG.

### FORMAT FOR EARNEST MONEY DEPOSIT / BID BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONALED BANKS/SCHEDULED BANKS (WHETHER SITUATED AT DHARWAD OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK). BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED)

### **LETTER OF GUARANTEE**

To,	
The Assistant Registrar (MMD)	
Indian Institute of Technology Dharwad	
Dharwad, Karnataka – 500 011	
at, M/s	TENDER No:
<b>During the validity of this Bank Guara</b>	ntaa
We,	g its registered Office at
	s if any, against this Bank Guarantee shall be enforceable at our situated at(Address of local branch).
	Yours truly,
Date:	Signature and seal of the guarantor: Name of Bank: Address:

Instruction to Bank: Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.

#### FORMAT FOR PERFORMANCE GUARANTEE BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONALED BANKS/SCHEDULED BANKS (WHETHER SITUATED AT MUMBAI OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK). BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED)

To, The Joint Registrar (MMD) Indian Institute of Technology Bombay Powai, Mumbai – 400 076

#### **LETTER OF GUARANTEE**

WHEREAS Indian Institute of Technology Bombay (Buyer) have invited Tenders vide Tender No
NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document / purchase order / performance of the equipment / machinery, etc. this Bank shall pay to Indian Institute of Technology Bombay on demand and without protest or demur Rs
This Bank further agrees that the decision of Indian Institute of Technology Bombay (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.
We,
1. Our liability under this Bank Guarantee shall not exceed Rs
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT Bombay serve upon us a written claim or demand on or before(date).
This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at
Yours truly, Date: Signature and seal of the guarantor: Name of Bank: Address:

**Instruction to Bank:** Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.

## **Section IV - Schedule of Requirements and Compliance**

Sl. No.	Item Description	Compliance (Yes/No)
1.	Software Defined Radio (SDR) Type I	
2.	Software Defined Radio (SDR) Type II	
3.	Whether all the above items specified	
	have been quoted in the Price Bid	

The detailed specification in respect of each Software Defined Radio (SDR) shall be as below: -

Sl. no.	Specification	Compliance Status (Yes/No)
1	Input power supply: USB or standard power supply of single-phase AC 240V and frequency of 50/60Hz.	
2	Connectivity to PC: USB or Ethernet.	
3	Compatible operating systems: Linux (optional: Windows 7 and above).	
4	All required drivers/software for operations must be included and must be open for upgradation or periodic revisions up to a minimum of three years.	
5	Must be controllable/programmable using <u>MATLAB scripts</u> (and/or open source software like GNU radio etc.), and/or company specific software that should be included (see (4) above).	
6	All required cables, power adapters, antennas have to be quoted and supplied with the SDR.	
7	The connectors required for loopback communication must be provided.	
8	Any connectors/cables that may be required to connect to external RF devices (e.g., power amplifier, signal analyser and generator, etc.) must be provided.	
9	Manuals, courseware, documentations and data sheets of all supplied hardware must be provided.	
10	Bidder must have a standard service program for hardware support and repair.	
11	Training required to operate the supplied hardware must be provided.	
12	The supplier should have supplied SDRs to at least one of the following Govt. organization within the past 5 years: IITs, IISc, NIT's, any of the CSIR labs or Central Universities, CFTIs etc. A letter stating the same should be supplied along with the technical bid.	
13	The supplier should have a turnover of at least 1 crore (INR) or above since last three years.	
14	The supplier/company should have been in the market of supplying/manufacturing of SDRs for the past three years.	
15	The supplier/company should provide a letter duly signed by competent authority of the supplier/company stating that the company/supplier has not been blacklisted by any Govt. organization during last three years.	
16	Whether service support is available within 24 hours of lodging any issue related to the SDRs provided by the bidder?	

The detailed technical specifications of three types of SDR's is provided in the tables below. In addition, the accessories required, and common specifications to be met by both SDRs are also listed.

### Design technical specifications of SDR Type I (Quantity: 15)

S.No.	Feature	Requirement	Offered by the
			supplier? (Yes/No)
1	Maximum supported frequency (for both Tx and Rx)	$\geq 2.2~\mathrm{GHz}$	
2	Frequency accuracy	$\leq 3 \text{ ppm}$	
3	Instantaneous signal bandwidth (for both Tx and Rx)	$\geq 55~\mathrm{MHz}$	
	The required frequency range can also be obtained with	th external up/dov	vn-converters.
	In such a case, the external up/down-converters shou	ld also be quoted a	and supplied.
4	Number of IQ channels	$\geq 2$	
5	IQ rate - two channels (for both Tx and Rx)	$\geq 30 \text{ MS/s}$	
6	ADC/DAC	$\geq 12 \text{ bits}$	
7	Gain range (for both Tx and Rx)	$\geq 75 \text{ dB}$	
8	Maximum output power (Tx)	$\geq 10 \text{ dBm}$	
9	Maximum input power (Rx)	$\geq -15~\mathrm{dBm}$	
10	Supported MIMO configuration	$1 \times 1 \text{ MIMO}$	

## Design technical specifications of SDR Type II (Quantity: 2)

S.No.	Feature	Requirement	Offered by the
			supplier?
			(Yes/No)
1	Maximum supported frequency (for both Tx and Rx)	$\geq 2.2~\mathrm{GHz}$	
2	Frequency accuracy	$\leq 3 \text{ ppm}$	
3	Instantaneous signal bandwidth (for both Tx and Rx)	$\geq 55~\mathrm{MHz}$	
	The required frequency range can also be obtained with ex	ternal up/down-co	onverters.
	In such a case, the external up/down-converters should also	so be quoted and $s$	supplied.
4	Number of IQ channels	$\geq 2$	
5	IQ rate - two channels (for both transmitter and receiver)	$\geq 30 \text{ MS/s}$	
6	ADC/DAC	$\geq 12 \text{ bits}$	
7	Gain range (for both Tx and Rx)	$\geq 75~\mathrm{dB}$	
8	Maximum output power (Tx)	$\geq 10 \text{ dBm}$	
9	Maximum input power (Rx)	$\geq -15 \text{ dBm}$	
10	Supported MIMO configuration	$2 \times 2 \text{ MIMO}$	

## Technical specifications common to both SDR Type I and II

S. No.	Feature	Requirement	Offered by the supplier?
			(Yes/No)
1	Communication mode	Full duplex	
2	Frequency step size (for both Tx and Rx)	≤ 1 KHz	
3	Clock synchronization	Support for supplying	
		external clock	
4	Gain step (for both Tx and Rx)	$\leq 1 \text{ dB}$	
5	Receiver noise figure	$\leq 7 \text{ dB}$	
6	External attenuators	30 dB, and that	
	(to attenuate the input signal to Rx)	required for loopback setup	
7	Modulation schemes supported	AM, FM, PSK, QAM, FSK.	

	Accessories required			
S. No.	Feature	Requirement	Offered by the supplier? (Yes/No)	
1	Antennas (Mandatory)	<ol> <li>Dual band: 2.4 GHz and 5 GHz. Quantity: 10.</li> <li>Tri-band antenna for GSM frequencies. Quantity: 30.</li> <li>GPS receive antenna. Quantity: 8.</li> </ol>		
2.	RF power amplifiers (optional)	<ol> <li>Frequency range: 200 MHz to 5</li> <li>GHz (depending on the support of the SDR).</li> <li>Peak output power ≥ 30 dBm.</li> <li>Dynamic range ≥ 20 dB.</li> <li>Quantity: 5</li> </ol>		

## **Bidders Information**

1.	Name of the Bidder	
2.	Address of the Bidder	
3.	PAN No.	
4.	GSTN No.	
5.	Bank Details:  A/c No.  Bank  IFSC Code	
6.	E-mail	
7.	Contact Person's Name & Designation	
8.	Mobile No.	

## **Indian Agent's Information**

1.	Name of Indian Agent	
2.	Address of Indian Agent	
3.	Indian Agent PAN No.	
4.	Indian Agent GSTN No.	
5.	Bank Details: A/c No. Bank IFSC Code	
6.	E-mail	
7.	Contact Person's Name & Designation	
8.	Mobile No.	

## **Reasonability of Prices:**

Please quote best minimum prices applicable for a premier Educational and Research Institution. The party must give details of at least two purchase orders identical or similar equipment, supplied to any IITs/Research Institutions/ other organisations as per below Format (to be enclosed in Technical Bid) along with the final price paid and details are mandatory.

### **Previous Supply Orders**

Order placed by (Full address of Purchaser)	Order No. and Date	Description and quantity of ordered equipment	Value of Order	Date of completion of delivery as per contract	Remarks indicating reasons for late delivery, if any and justification for price difference of their supply order & those quoted to us	Has the Equipment being installed satisfactorily (Attach a Certificate from the Purchaser/ Consigner)	Contact Person along with Telephone No., Fax No. and e- mail address.
Signature and Se Place :			idder				

Due Date: 26.02.2019 11.00 AM

### **Section V – PRICE BID**

#### for Imported Supplies

Tender No. :- IITDH/MMD/EE/2018-19/06

Sl. No.	Short Description of Item & Specification	HSN Code / SAC Code (I)	Qty. (in Units) (II)	*IGST % (III)	Price Basis DDP (IV)	Total Bid Price (V)
1.	Software Defined Radio (SDR) Type I		15 Nos.			
2.	Software Defined Radio (SDR) Type II		2 Nos.			
	Installation and Commissioning Charges (if any, quote in INR)					
	Agency Commission (if any, quote in Percentage %)					
	Other Charges if any please specify					
	GRAND TO	OTAL AMOU	NT			

#HSN Code: "Harmonized System of Nomenclature Code No." and SAC Code: "Service Accounting Codes Code No."

1.	Delivery .	Period:		days
----	------------	---------	--	------

- 2. Terms of Payment:
- (a) 90% payment by Letter of Credit (90% payment will be released on receipt of documents without any discrepancies and balance 10% will be paid by wire transfer after satisfactory installation and commissioning.
- (b) Agency Commission: Payment will be made after receipt/satisfactory installation, testing & commissioning of equipment.
- (c) Payment by wire transfer (on request) within 30 days from the date of supply and installation of item.
- 3. Validity of the bid: 90 days from the date of submission of quotation/tender.

	Signature
	Name
	Company Name & Address:
Date:	Affix Rubber Stamp:

### Note-1: Price Bid should be submitted in given format only.

Evaluation Criteria: The L-1 bidder will be identified separately for each type of SDR on the basis of Net Price (to be provided in column IV above).

Note-2: The quantities mentioned above are subject to upward and downward revision, depending on the requirement of IIT Dharwad in future.

Due Date :26.02.2019 11.00 AM

#### Section V – PRICE BID

### for Indigenous Supplies, Quotes in INR only

Tender No. :- IITDH/MMD/EE/2018-19/06

Sl. No.	Description of Item & Specification	HSN Code / SAC Code (I)	Qty. in Units (II)	Unit Price (III)	Discount % (IV)	IGST %	CGST %	SGST % (VII)	Total Bid Price (VIII)
1	Software Defined Radio (SDR) Type I		15 Nos.						
2	Software Defined Radio (SDR) Type II		2 Nos.						
	Installation and Commissioning Charges (if any, quote in INR)								
	Other Charges if any please specify								
	GRA	ND TO	TAL AM	OUNT					

#HSN Code: "Harmonized System of Nomenclature Code No." and SAC Code: "Service Accounting Codes Code No."

1.	Delivery	Mode:	Delivery	at IIT	Dharwad,	at site	on	V.
1.	Delivery	wrode:	Denvery	almı	Dharwad,	at site	•	UII

- 2. Total bid Price in the above column should be inclusive of all taxes and levies transport, loading, unloading etc.
- 3. Delivery Period: \_\_\_\_\_ days
- 4. Validity Date: Minimum 90 days from the date of submission of quotation/tender.
- 5. Payment Term: Payment within 30 days from the date submission of bill Acceptance Certificate to concerned Dept./ Sect./MMD.
- 6. Prices quoted in other currencies will be summarily rejected.

	PAN No:
	GST Registration No:
	Signature
	Name:
Place:	Company Name & Address:
Date:	Affix Rubber Stamp:

Note-1: Price Bid should be submitted in given format only.

Evaluation Criteria: The L-1 bidder will be identified separately for each type of SDR on the basis of Net Price (to be provided in column III above).

Note-2: The quantities mentioned above are subject to upward and downward revision, depending on the requirement of IIT Dharwad in future.