श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, तिरुवनंतपुरम- 11, केरल
Sree ChitraTirunal Institute for Medical Sciences and Technology, Thiruvananthapuram - 11, Kerala
(भारत सरकार के अधीन राष्ट्रीय महत्व संस्थान)
(An Institute of National Importance under Government of India)
टेलीफॉन नं./Telephone No. 0471-2443152 फाक्स/Fax 0471-24464332550728
ई-मेल/E-mail :sct@sctimst.ac.in वेबसाइट/ Website : www.sctimst.ac.in

E- TENDER NOTICE

Tender No. SCT/H/IMP-IND/P2/2023-24/01 **Dated 02.06.2023**

Online Tender in **TWO BID** system are invited from Foreign Manufacturers/their accredited Indian Agents/Indian Manufacturers/ their Distributors for the supply and installation of the following equipment.

Sl. No.	Brief Description System	Quantity	Earnest Money Deposit
I	SUPPLY INSTALLATION TESTING AND COMMISSIONING OF SINGLE PLANE CATHLAB WTH CATH RECORDER	1 No.	15,00,000
Pre- Bid Meeting with prospective bidders			
Proposed dates of site visits before the pre-bid meeting 05/06/2023 to 07/06/2023 in consultation with Division of Clinical Engineering and Dept. of Cardiology			
Venue for pre-bid meeting : Lecture Hall-2 of AMCHSS of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Medical College P.O. Thiruvananthapuram – 695011, Kerala			
Last date of submission of pre-bid queries as email to **purchase@sctimst.ac.in** with a copy to **spso@sctimst.ac.in**			**09/06/2023 upto 4 PM**
Date of Pre-bid meeting			
Date of pre-bid meeting			**13.06.2023 at 3 PM**
Date of Publishing of corrigendum if any after pre-bid meeting			**19.06.2023**
Last date and time of online submission of bids			**07.07.2023 upto 5 PM**
Last date and time of submission of **Hardcopy of Techno-commercial Bid** with supporting documents **(price bid has to be submitted online only).** ***The tender will stand rejected if the price bid is submitted along with hardcopy of techno-commercial bid***			**10.07. 2023 upto 3 PM**
Date of tender Opening			**11.07.2023 at 2.30 PM**
Contact Person : Senior Purchase & Stores Officer, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Medical College P.O., Thiruvananthapuram – 695011, Kerala. Ph: 0471-2524 445/ 145 /225 / 425			

Interested bidders are advised to download the complete Tender Enquiry document from the websites www.sctimst.ac.in orwww.eprocure.gov.in/cppp or www.tenderwizard.com/SCTIMST under "Tender Free View" link for complete details.

Vendors should obtain the USER ID and PASSWORD from www.tenderwizard.com/SCTIMST by clicking on "Enrolment/REGISTER ME" link in the homepage. The vendor registration fees has to be paid to KEONICS for Rs 2000/- plus tax. Using the e-payment link provided at the time of registration, and the mode of payment are Credit Card, Debit Card and internet banking. Vendor Registration is valid for ONE Year.

For further details on e-Tender participation, please contact KEONICS Help Desk on

- Telephone: 080-49352000/9746428200 Mr. Vijay (Kerala Executive)
- Email : harishkumar.kb@etenderwizard.com, ambasa@etenderwizard.com twhelpdesk908@gmail.com

All bids should be accompanied by **EMD** in the form of Account payee Demand Draft, Fixed Deposit Receipt, Insurance Surety Bond, Bank Guarantee from any of the Commercial Banks in favour of The Director, SCTIMST payable at Thiruvananthapuram. However, in case of foreign bidder(s) bank Guarantee in equivalent Foreign Exchange amount from any of the scheduled commercial bank in India should be accompanied. EMD should have a validity of 45 days beyond the final bid validity period.

Integrity Pact Agreement will form part and parcel of this tender. It is mandatory to enclose the Integrity Pact Agreement (APPENDIX-A) along with the tender

Independent External Monitors

- Sri.Prahlad Kumar Sinha, IP & TAFS Rtd). Ph: 09423677066, Email:pekay66@gmail.com
- Dr.Ved Prakash, ITS (Rtd). Ph: 9810546996 Email: ved60prakash@gmail.com

All pages of Integrity Pact Agreement are to be returned by the bidder along with the bid duly signed by the same signatory who is duly authorized to sign the bid and to make binding – commitments on behalf of his company. Any bid not accompanied by Integrity Pact duly signed by the bidder shall be considered to be a non-responsive bid and shall be rejected straightaway.

Clarifications, if any with regard to tender documents may be communicated /sought well in advance before the closing date of the tender.

The Director of the Institute reserves the right to accept the offer by individual items and reject all or any of the tenders or in whole or part without assigning any reason thereof and does not bind itself to accept lowest quotations.

Bidders may simulate online bid submission (technical & financial) at least one week in advance of the bid submission deadline. No clarifications/troubleshooting regarding any problems being faced during bid submission online shall be entertained in the last week of bid submission.

Important Note: Tenders not accompanied with EMD shall automatically stand rejected.

Sd/-
DIRECTOR

श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, तिरुवनंतपुरम- 11, केरल
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TERMS & CONDITIONS

1. The tender(s) must be submitted as per the below terms and conditions and should be free from corrections/erasures. In case there is any unavoidable correction(s), it should be properly attested. If not the tender(s) will not be considered. Further, tender(s) written in pencil will not be considered.

2. (a) The bidder should declare whether they are a manufacturer, accredited Agents, or sole representative (indicating the name of Principal) on the top of the Bid.
   (b) In case of agents quoting in offshore procurements, on behalf of their principal manufacturer(s), one agent cannot represent two manufacturers or quote on their behalf in particular tender. One manufacturer can authorize only one agent / dealer. Only one bid, either from principal manufacturer directly or through one Indian agent on his behalf or Indian / foreign agent on behalf of principal manufacturer shall be entertained.
   (c) Agency Commission, if any should be payable to Indian agent at the rate prescribed by the foreign tenderers as per quote.

3. All offers should be accompanied with detailed specifications, relevant documents as elaborated in Annexure 1 & 2.
4. Bids should be accompanied with illustrated catalogue, brand, model number, make, literature, write up where ever applicable.

5. In case the items coming under the provisions of Drugs & Cosmetics Act & Rules, the following should be submitted :

   a) For imported items : Central Drugs Controller Certificate from Central Drugs Standard Control Organization, New Delhi.
   b) For indigenously manufactured items : Certificate issued by State Drugs Controller

6. The documents to be furnished in both the bids are given in Annexure-2. Technical bid will be opened and evaluated first. Price bid of technically qualified bidders will be opened on prior intimation. The lowest responsive bidder (L1) will be arrived by taking into account the Total cost including buyback offer and the total CAMC charges quoted [ie. Cost of Main item + standard accessories + optional accessories (item 1 to 4) + Turnkey + Total CAMC charges – Buyback]. Negotiation will be conducted with the lowest qualified tenderer only, if required.

7. This Institute reserves the right to accept the offer by individual items and reject any or all tenders without assigning any reason thereof and does not bind itself to accept lowest quotations.

8. The prices quoted should be EX-WORKS/ FOB / CIF/CIP in foreign currency by Ocean Freight/Air Freight or FOR Trivandrum for delivery at our Institute in INR, if the

tenderer prefers to quote in INR. (This clause is applicable as per the mode of quote). If the price quoted is CIF, break up of price for freight and insurance to be indicated separately. Rates quoted should not be revised till the supplies are completed and the rate shall be valid for 180 days from the date of opening of bid.

9. For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currency say US Dollar, Euro, GBP, Yen and etc. As regards price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only, if such services are to be performed/undertaken in India. Commission for Indian Agent, if any and if payable shall be indicated in the space provided for in the Price Schedule and will be payable in Indian Rupees only after satisfactory supply, installation and acceptance of the goods.

10. In case of no quotes against a particular item in the tender(s), this should be clearly mentioned along with reasons. The prices quoted should not be revised till the supplies are completed. The rates should be quoted in words and figures. Incase of difference in quote(s) written in figure and words arise, the amount written in words will be treated as quoted rate. Rates quoted should be free delivery at destination including all charges otherwise the tender is likely to be rejected. Prices quoted for free delivery at destination will be given preference. If there is no indication regarding the FOR, in the tender, then it will be considered as FOR destinations. Price quoted should be net and valid for a minimum period of six months from the date of opening of the tender. GST applicable should be mentioned separately in support of HSN code. If no indication regarding GST is recorded in the tender the GST will be considered as included in the quote(s).

11. (i) If an Indian Agent is participating on behalf of a foreign manufacturer then the foreign principal's proforma invoice indicating the commission payable to the Indian agent, nature of after sales service to be rendered by the Indian agent shall be furnished.
(ii) Copy of the agency agreement with the foreign manufacturer and the precise relationship between them and their mutual interest in the business.

12. The bidder should be a manufacturer or its authorized agent (an agent should submit Manufacturer Authorization as per prescribed format) to quote and enter into a contractual obligation. (Annexure-3)

13. The bidder should have successfully executed at least 02 (two) separate orders, of the similar equipment/goods meeting major parameters of technical specification, in last 05(five) years from the date of Tender Opening, in any Hospital in India.

14. The bidders/firms identifying as MSE and/or start-up firms are exempted from fulfilling criteria at point no.12 stated above. However, this does not exempt any bidder/firm/manufacturer from fulfilling the quality requirements.

15. The Bidder shall give an affidavit as under:

"We hereby certify that if at any time, information furnished by us is proved to be false or incorrect, we are liable for any action as deemed fit by the purchaser.

The manufacturer (bidder)/Indian Agent shall furnish Satisfactory Performance Certificate in respect of above, along with the tender.

16. The purchaser reserves the right to ask for a free demonstration of the quoted equipment at a pre-determined place acceptable to the purchaser for technical acceptability as per the tender specifications, before the opening of the Price Schedule.

17. Samples must be submitted wherever specified along with the tender. Samples must be carefully packed, sealed and labelled clearly with tender number, subject and sender's name for easy identification. Rejected samples will be returned at your cost if insisted.

18. All equipments and accessories except the items listed below, quoted against the technical specifications will be included under CAMC. Cost of the exempted items should not be considered for CAMC calculation. A line of confirmation on the above should be uploaded along with the technical bid.

    i. Turn key work
    ii. Radiation procedure Apron
    iii. Thyroid Shields
    iv. Head Gear
    v. Radiation Protection Goggles
    vi. Table mounted lead protected shield
    vii. Console room chairs
    viii. Console room tables
    ix. Radiation Protection Visor

19. While quoting the rates for Equipment, the following are mandatory:

(a) ***Warranty*****:** Minimum 3 years from the date of installation and successful commissioning of the system. The three year warranty sought for is OEM free warranty without any additional cost towards extended warranty to fulfill the tender condition. The charges, if any, claimed by the bidder towards warranty in this regard shall not be considered for calculating actual CMC/AMC value to be payable after warranty period. Where the total cost does not include such warranty charges, the bidder shall submit a declaration – "Certify that the equipment/accessories quoted in the bid is having OEM free warranty of three years and the total cost quoted in the bid does not include any warranty charges to fulfil the tender condition of three years warranty". This declaration shall be furnished along with Technical bid. False declaration may lead to rejection of bid.

Comprehensive Annual Maintenance Contract (CAMC) : The maximum permissible CAMC charges after warranty period shall be 5% of the Total cost after excluding the items from Total cost for calculation of CAMC/AMC as given in Format A. The CAMC charges have to be quoted in INR (excluding GST) in Format B. Escalation of maximum 5% will be allowed after every three years of CAMC. The 'Cost of the equipment for CAMC/AMC calculation' shall not include additional warranty cost (if any), cost towards Installation, Commissioning and Testing (in addition to the original equipment cost of the OEM), cost of transportation including import customs duty in the case of fully finished imported goods quoted in INR, specific excluded items from CAMC/AMC as per the tender condition and also GST, if any, included in the Total cost. The lowest responsive bidder (L1) will be arrived by taking into account the Total cost including buyback offer and the total CAMC charges quoted [ie. Cost of Main item + standard accessories + optional accessories (item 1 to 4) + Turnkey + Total CAMC charges – Buyback]. In respect of equipment quoted in foreign currency, the work orders for CAMC after warranty period will be issued by taking into account the exchange rate (debit advice from Bank) applicable at the time of release of payment against the Purchase Order or the CAMC charges quoted in the bid whichever is less, which will be subject to the conditions specified in the Purchase Order and agreed by both the parties. The successful bidder shall enter into CAMC as chosen by SCTIMST, three months prior to the completion of warranty period. The CAMC will commence after the date of expiry of warranty period from the date specified in the work order and agreement executed in this regard, which will be treated as the first year of CAMC.

(b) ***Annual Maintenance Contract (AMC) Labour***: The maximum permissible AMC after warranty period shall be 2.5% of the "cost of the equipment for AMC calculation" in INR value + Applicable GST after Warranty Period (Escalation of maximum 5% will be allowed after every three years of AMC). Cost of the AMC on equipment quoted in foreign currency will be arrived in accordance to the exchange rate (debit advice) applicable at the time of release of payment against the Purchase order.

(c) ***List of essential spares***: If the equipment contains any essential spares and consumables, the price should be frozen for minimum 3 years after warranty period. The price list should be attached along with the price bid list.

(d) ***Installation and Commissioning***: Supplier should undertake installation, commissioning and demonstration at our facility free of charge

(e) If the item involve software's, tenderer should obtain software license in the name of "Director, SCTIMST" and the paper license / email license to be transferred to the name of Institute.

20. For all supplies / contract above rupees one lakh, the successful tenderer should furnish a performance guarantee / security deposit @ 10 percent of purchase order value excluding GST against the item with warranty and without warranty in the form of Fixed Deposit or Bank Guarantee from a nationalised /scheduled bank having a validity period of 60 days beyond the completion of all contractual obligations including warranty obligation of the supplier.

21. Selected bidder shall have to confirm the purchase order within seven days from the date of receipt of purchase order otherwise the purchase order will deemed to be accepted by vendor. In case the selected bidder notices any mistake in the contents of the order, he/they must bring the same to the notice of the Institute and seek clarifications. However, Selected bidder will have to bear the responsibility for failure to take this action.

22. The tenderer shall submit the pre-requisite information like Civil works/ Electrical works, Air Conditioning etc. within 2 weeks from the date of receipt of order or Establishment of letter of credit as the case may be.

23. All supplies are subject to inspection and approval before acceptance. Manufacturer/ supplier warranty certificates and manufacturer/Government approved lab test certificate shall be furnished along with the supply, wherever applicable. In case of non-acceptance, the materials should be taken back with in seven days of intimation with the risk of supplier and the rejected items should be replaced within ten days from the date of non-acceptance.

24. Delivery period required for supplying the material should be invariably specified in the bid. The consignment should be delivered at Main Store, SCTIMST, Trivandrum between 9:00 AM to 4 PM during the working days.

25. Customs Duty, GST rate, packing , forwarding, transportation cost etc., if payable should be mentioned in the tender separately. Any exemptions on above may be mentioned.

26. This Institute reserves the right to modify the quantity specified in this tender.

27. Mode of payment should be indicated. The acceptable payment modes are following:

A. For foreign currency:

(1) 70% against negotiation of documents through irrevocable Letter of Credit. 30% against successful installation and commissioning. (As a pre-condition to open LC, the successful tenderer should furnish Performance Guarantee / Security Deposit @10% of the total assignment value (purchase value) in the form of Fixed Deposit or Bank Guarantee from the nationalised/scheduled bank which would be valid for a period of 60 days beyond the completion of all contractual obligations of the supplier including warranty)

(2) Wire Transfer will be applicable only after the receipt of the items, Bank Guarantee and original documents such as Invoice, Certificate of Origin, Air Way Bill, Insurance etc.

B. For INR:

(1) Electronic Transfer (NEFT) within 30 days of satisfactory installation and commissioning of system.
(3) Proforma invoice in triplicate should mention whether Ex-Works / FOB / CIP (Trivandrum), For CIP (Trivandrum) rates for Air freight & Ocean Freight should be separately indicated
(4) All bank charges outside India are levied to the beneficiary's account.

28. In the case of import purchase, following should be provided for negotiation of documents.
    1. Airway bill / Bill of Lading
    2. Certificate of country of Origin of the goods to be given by the seller OR a recognized Chamber of Commerce.
    3. Detailed Packing list
    4. Detailed Item wise original Invoice
    5. Insurance certificate
    6. Manufacturer's Guarantee and Inspection certificate.
    7. Inspection certificate by SGS/Lloyd/Bureau Veritas/TUV etc.

29. Copy of Technical / Service manual should be provided along with the equipment free of cost.

30. Installation & commissioning and Training: Tenderer should undertake installation, commissioning and demonstration of equipment at our facility, free cost. Training also should be provided free of cost.

31. **Penalty clause:**

(I) **Delay in Delivery**:

(i) If the delivery of purchased goods is not effected on due date as specified in the purchase order, the Director, SCTIMST will have the right to impose penalty at 0.5 percent per week subject to a maximum of 10 percent of order value.

(ii) If the deliveries are not effected as per schedule and due to that account, Institute is forced to buy the material at the risk and cost of the defaulting supplier from elsewhere, the cost towards loss or damage sustained thereby will be recovered from the defaulting supplier.

(II) **Performance (during Warranty period)**

Supplier should ensure uninterrupted service delivery of the equipment or product during the warranty period. In this regard following conditions also may be noted:

a) In case of failure of equipment or its components, breakdown call has to be attended within 48 hours of intimation.

b) The defect should be rectified within two days after the call is attended, failing which replacement or standby equipment should be provided for uninterrupted services.
c) In case of non-adherence to clause (a) or (b) above, downtime penalty will be realised a sum equivalent either the repairing charges met by the Institute to set right the equipment or 0.1 percent per day of cost of the equipment, whichever is higher, from the date of report of breakdown by way of deductions from SD/Performance Bank Guarantee.
d) The time spent on the repair work will be added to the warranty period of the equipment.

(III) **Performance (during CMC/AMC period)**:

i) Uptime means 95 percent of total days in a year during which the equipment remains functional.

ii) Down time means any shortage in achieving the up-time

iii) Down time penalty will be levied as per following terms and condition:

a) In the case of CMC, it shall be the responsibility of the service provider to set right the equipment and avoid down time. Down time penalty will be imposed @ 0.5 percent of contract value per day from the service provider.

b) In case auxiliary units/components attached to the main equipment undergoes failure and the main equipment provides uninterrupted services, down time penalty will be imposed @ 0.1 percent of contract value per day per auxiliary unit from the service provider.

c) Service provider should ensure rectification of defect of equipment within a reasonable period in the case of Labour Annual Maintenance Contract. In case break down is not attended within 48 hours of intimation, down time penalty will be imposed @ 0.5 percent per day of contract value from the service provider.

32. **Liquidated Damages:**

If the supplier fails to deliver or install/commission any or all of the goods or fails to perform the services within the time frame(s) incorporated in the Purchase Order, the Purchaser shall, without prejudice to other rights and remedies available to the Purchaser under the contract, deduct from the contract price, as liquidated damages, a sum equivalent to 0.5% per week of delay or part thereof on delayed supply of goods, installation, commissioning and/or services until actual delivery or performance subject to a maximum of 10% of the contract price. Once the maximum is reached Purchaser may consider termination of the contract .

If any delay by the supplier in maintaining its contractual obligations towards delivery of goods and performance of services shall render the supplier liable to any or all of the following sanctions:

(i) Imposition of liquidated damages,
(ii) Forfeiture of its Performance Security and
(iii) Termination of the Contract for default

.

33. **Recovery Clause**: All losses liquidated or otherwise due to the violation of terms and conditions of the purchase order or defective documentation will be to the supplier/agent's account.

34. In case the quote is not according to the above terms and conditions, the same will be summarily rejected. Further, false certification in the compliance statement and misrepresentation of facts may attract blacklisting of tenderer.

35. All correspondence after tender submission will be by e-mail only and the companies should provide their valid e-mail Id and should keep it updated.

36. The bidder submitting the tender would be deemed to have considered and accepted all the terms and conditions.

37. The Purchaser reserves the right to give the price preference to small-scale sectors etc. and purchase preference to central public sector undertakings as per the instruction in vogue while evaluating, comparing and ranking the responsive tenders.

i. In exercise of powers conferred in Section 11 of the Micro, Small and Medium Enterprises Development (MSMED) Act 2006, the Government has notified a new Public Procurement Policy for Micro & Small Enterprises effective from 1st April 2012. The policy mandates that 25% of procurement of annual requirement of goods and services by all Central Ministries /Public Sector Undertakings will be from the micro and small enterprises. The Government has also earmarked a sub-target of 4% procurement of goods & services from MSEs owned by SC/ST entrepreneurs out of above said 25% quantity.

ii. In accordance with the above said notification, the participating Micro and Small Enterprises (MSEs) in a tender, quoting price within the band of L1+15% would also be allowed to supply a portion of the requirement by bringing down their price to the L1 price, in a situation where L1 price is from someone other than an MSE. Such MSEs would be allowed to supply up to 25% of the total tendered value. In case there are more than one such eligible MSE, the 25% supply will be shared equally. Out of 25% of the quantity earmarked for supply from MSEs, 4% quantity is earmarked for procurement from MSEs owned by SC/ST entrepreneurs. However, in the event of failure of such MSEs to participate in the tender process or meet the tender requirements and the L 1 price, the 4% quantity earmarked for MSEs owned by SC/ST entrepreneurs will be met from other participating MSEs.

iii. The MSEs fulfilling the prescribed eligibility criteria and participating in the tender shall enclose with their tender a copy of their valid registration certificate with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or any other body specified by Ministry of Micro and Small enterprises in support of their being an MSE, failing which their tender will be liable to be ignored.

iv. Special provision for Micro and Small Enterprise owned by women. Out of the total annual procurement from Micro and Small Enterprises, 3% from within the 25% target shall be earmarked for procurement from Micro and Small Enterprise owned by women.

Note: "If the bidder is a MSE, it shall declare in the bid document and Udyam Registration Certificate should be furnished along with bid documents"

38. **Preference to Make in India**: As per the order issued by Department of Industrial Policy and Promotion (DIPP) vide No. P-45021/2/2017-PP(BE-II) dated 28.05.2018 and the subsequent orders thereof; the purchaser reserves the right to give preference to the local supplier.
39. Restrictions under Rule 144 (xi) of GFR 2017 - Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority (i.e Registration Committee constituted by Department for Promotion of Industry and Internal Trade (DPIIT)). The bidder should furnish a declaration to this effect in APPENDIX-B.
40. Dispute clause: Any dispute relating to the enquiry shall be subject to the jurisdiction of the court at Trivandrum only.

Sd/-
DIRECTOR

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ANNEXURE-1

ITEM CODE	ITEM NAME	QUANTITY
EQCATH012T	SUPPLY INSTALLATION TESTING AND COMMISSIONING OF SINGLE PLANE CATHLAB WTH CATH RECORDER	1 Nos

Sl.No	SINGLE PLANE CATH LAB WITH CATH RECORDER FOR CARDIOLOGY - Scope of Works
A	Supply, Installation Testing and Commissioning of Single Plane Cath Lab With Cath Recorder for Cardiology as per the site condition and requirement complying with AERB standards
B	Demolishing, Reconstructing, Water Proofing, Plumbing, Repainting And Replacement of existing SIEMENS AXIOM ARTIS DFC - FLAT DETECTOR CARDIO VASCULAR ANGIOGRAPHY SYSTEM WITH DSA Cardiology Cath lab Stock No: 551/7 and other stocked accessories received along with the cath lab

PART - I	
1	GENERAL
1,A	Competitive bids are invited for Single plane Cathlab system for cardiology diagnostic angiography and interventional procedures.
1.B	Latest state of art Single plane with flat detector technology Digital Angiography System, Rotational angiography, Roadmap required for Cardiology diagnostic angiography and interventional procedures Companies should quote the latest and most technically advanced models with all advanced dose reduction techniques available at the time of submission
1.C	All capabilities detailed in the specification should be integral part of the quotation and none of the essential requirement should be quoted as optional. If the supplier has any additional advance application or technique, the same should be quoted separately. Any item not covered under standard set should be quoted separately.
1.D	The original data sheet must support all the specification quoted by the company. Broad specification of the proposed system is given below. Cost of the item/feature wherever asked should be quoted in the price bid only. Additional relevant technical features suitable for our requirement will be given due weight age. System must be DICOM standard compatible and must be ready to connect with the existing PACS system of the institute and local PACS available in our Cath lab.
1.E	System must be configured for higher performance to optimally deal with mixed caseload of various cardiovascular procedures. The bidder should produce original technical datasheet. When required additional information should be provided as a separate document referring to the specific section been addressed. Offer should comprise delivery, installation, official release and safety acceptance until hand over

	the system including the accessories necessary for operation.
1.F	The bidder must be original manufacturer of the equipment or authorized dealer with good track record who has sold, installed and maintained a number of such equipments during last ten years. All standard software and tools needed for routine and regular use must be part of system.
1.G	If at the time of tender form sales and negotiation for equipment. new features are added to the system. So the bidders are directed to quote most recently launched system meeting the tender requirement. At the time of negotiation the latest system will be given priority within the constraints of budget allocation. Many advances and new features are regularly getting added in this system. The latest update in the system as per the latest recommendations must be included. All updates should be made available during the warranty period.. All updates should be made available during the comprehensive maintenance period. Technical committee may decide inclusion of new features and may evaluate fresh in case exact specification is not matching as per tender specification. Technical committee will take appropriate decision.
1.H	The bidder shall submit certification from the manufacturer which must show that the product is brand new, and should include the year of introduction of the model, country of manufacturer, and standards compliance
1.I	The bidder should quote for removing the existing Siemens AXIOM Artis DFC Cardio vascular Angiography system (EQCATH0001-1, Stock no. 551/7) under buy back and install the new system in the existing place.
PART - II	
2	**SYSTEM CONFIGURATION**
2.A	Gantry
2.B	Patient angiography table
2.C	X-Ray generator
2.D	X-Rray tube
2.E	Collimator
2.F	Flat panel detector
2.G	Image display monitors
2.H	3D rotational angiography
2.I	Digital imaging processing system and work-station
2.J	System operation
2.K	Radiation protection
2.L	Software
2.M	DICOM compatibility
2.N	Hemodynamic recorder
2.O	Accessories
2.A	**Gantry**
2.A.1	The system should have floor mounted/ ceiling suspended gantry

2.A.2	System should have head-to-toe coverage (min 180cm) without patient repositioning.
2.A.3	The system should have the capability to pre-programmed the gantry for multiple examinations / positions
2.A.3.1	All movements of the gantry including collimator should be motorized and controlled from the table side.
2.A.4	The system should have adequate collision protection for the safety of the patient
2.A.5	Gantry should have fast speed for angulations and positioning; have a speed of at least 18 degrees /second or higher
2.A.6	Gantry angulations should be freely user-selectable to satisfy clinical imaging needs. Gantry should have automatic positioning capability dependent on the reference imaging being selected. One joystick for patient angle oriented c-arm and detector movements.
2.A.7	Positioning: 50 or more programmable examination positions.
2.A.8	Iso-center-to-floor distance at least 100 cm, focus-to-iso-center distance at least 70 cm, maximum patient coverage approx 180 cm or more without patient repositioning..
2.A.9	Variable focal spot-to-detector within 85 cm and 120cm distance and speed up to 9crn/sec or more.
2.A.10	Facility for fully motorized/ manual positioning/rotation of stand from the floor base/ceiling pivot by at least 180 degrees range for improved workflow and for ease of operation from both
2.A.11	Left and right side of the patient in addition to zero - degree normal head end position.
2.A.12	Patient access should be possible from either left or right side at the head end and groin (leg) end.
2.B	**Patient Angiography Table**
2.B.1	Cardiac table - patient table must have radio lucent carbon fiber table-top or equivalent
2.B.2	The table should have longitudinal, horizontal and vertical travel
2.B.3	It should be possible to swivel the table in case of emergencies
2.B.4	Table should allow head to toe coverage of adult patients without repositioning (desirable)
2.B.5	Floor-mounted patient table for all angiographic examinations and interventions.
2.B.6	Large unobstructed cantilevered table top and wide range of rotations enables access to patient from all sides and easy transfer and positioning
2.B.7	Table control module for operation of all table functions
2.B.8	Extendable arm rest both sides, elbow guard
2.B.9	Table height adjustable from at least 80cm to 100 cm
2.B.10	Table length 250cm or more
2.B.11	Lift speed 2 cm/s or more
2.B.12	Table rotation (on pivot)

2.B.13	With various locked position +/-90 deg or more
2.B.14	Motorized longitudinal travel 120cm or more
2.B.15	Manual transverse travel +/- 14 cm or more
2.B.16	Maximum unobstructed overhangs 125cm or more support
2.B.17	Maximum table load 300 kg or more (200kg patient weight)
2.B.17.1	Resuscitation should be possible without having to retract the table back on its base
2.B.18.	**Table should have the following accessories**
2.B.18.a	Long table top/mattress: mattress should provide high patient comfort for long interventional procedure, made of slow recovery foam with ideal density and thickness.
2.B.18.b	Accessory clamps
2.B.18.c	Arm / elbow supports – radiolucent
2.B.18.d	Drip stand
2.B.18.e	Catheterization arm support
2.B.18.f	Foot support
2.B.18.g	Head end holder
2.B.18.h	Handles with support
2.B.18.i	Articulating arm support
2.B.18.j	IV set holder
2.C	**X-ray generator**
2.C.1	The generator must be optimized for the latest cardiac application for electrophysiological / interventional procedures.
2.C.2	Generator should be microprocessor controlled multi pulse/high frequency for constant output with automatic dose rate control for radiography and fluoroscopy
2.C.3	100 KW at 100 KV
2.C.4	SID (source to image distance) tracking (automatic tube current adjustment to focus-to-detector distance)
2.C.5	Output should be 100kw or more
2.C.6	KVP range selectability should be mentioned; ideally must be 50-125KV or more
2.C.7	Output at 100 KV should be 1000ma or more and should be able to deliver up to 1000ma
2.C.8	It should have automatic exposure control device for radiographic fluoroscopy and Angio mode.
2.C.9	It should have digital display of KV & mA. It should have overloading protection.
2.C.10	It should have the facility for pulsed fluoroscopy at variable rates for reducing the x-ray dose to the patient during intervention procedure.
2.D	**X-ray tubes**
2.D.1	Tube should be supplied with preferably liquid bearing tube technology or equivalent and other performance proven tube technology like grid switched tube or equivalent technology for silent, efficient and long-lasting function.
2.D.2	The focal spot should have the following size:
2.D.2.a	1mm or less with load 80kw or more
2.D.2.b	0.6mm or less with load 30 kw or more

2.D.3	Anode angle 12 degrees or less
2.D.4	Output 10min 4000w, 20min 3000w, >30min 2500w
2.D.5	Anode heat storage capacity should be 3.3MHU or more having liquid bearing technology or metal lubricant or equivalent performance. The system should have adequate cooling facility for the X-Ray tubes for uninterrupted, performance during procedure
2.D.6	Tube must have very high heat dissipation rate and effective filtration to reduce patient dose significantly. Models having highest heat dissipation to be offered.
2.E	**Collimator**
2.E.1	Collimator should have facility for copper pre filtration for reducing the X-Ray dose.
2.E.2	Facility for asymmetric collimation will be an added advantage and will be preferred.
2.E.3	The collimator leads should have iris type or rectangular type arrangement.
2.E.4	The collimator should have the facility for dose measurement chamber in order to display the skin dose on the monitor in the lab.
2.F	**Flat panel detector**
2.F.1	Detector should have the field of view minimum of 9.5 inches or more
2.F.2	Flat detector should be made of cesium iodide amorphous silicon photo diode scintillator or similar material, ideal for excellent high-resolution 1024x1024 image matrix or more to achieve a resolution of 2.51p/mm or higher in routine use.
2.F.3	High speed fiber-optic connection to the imaging system.
2.F.4	Integrated temperature stabilizer.
2.F.5	Integrated collision protection with removable grid.
2.F.6	Detector / image rotation landscape/portrait selection with vertical display
2.F.7	Pixel size 200 microns or less.
2.F.8	Nyquist frequency 2.5 LP/mm or higher
2.F.9	Maximum acquisition speed from 05 up to 30 images/sec or more
2.F.10	Digitalization depth 14 bit or more
2.F.11	Spatial resolution of the detector 2.5LP/mm or more
2.F.12	Detector quantum efficiency (DQE)>75%) (at 0 LP/mm) or more
2.F.13	Control room should have antiglare provision with high resolution display in the control room.
2.G.	**Image display monitors**
2.G.1	Image display monitors: control room/console: Min 5nos / Equivalent nos to fulfil the below mentioned specifications.
2.G.1.a	LCD/ LED flat 19 inch or higher monochrome monitors with wide viewing angle, high luminance high contrast, flicker free, distortion free, medical grade
2.G.1.b	Displays in control room/console: at least 2 size diagonal screen measurement 19 inches or higher medical grade.
2.G.1.c	One display for patient data/ RIS information- colour
2.G.1.d	One display for live/ref display - monochrome and one display for stent magnification display

2.G.1.e	One display with workstation for special applications like IVUS, OCT/FFR etc.
2.G.1.f	There should be parallel view of archived examinations, permit concurrent measurements of both archived studies and any images of the current study while fluoroscopy or cineradiography (acquisition) is going on.
2.G.2	**Image display monitors in examination room**
2.G.2.a	55 inch or higher Single medical grade FHD monitor. Should be able more than 8 image sources in same display. I luminance intensity more than 400cd/m2. Should have Multi display controller. Should have more than 7 physical and simultaneously usable inputs including digital, Analog and High speed Analog. Power supply redundancy with hot swap capability. For live and reference back up two 19 inch or higher medical grade monitor should also be provided along with the single monitor. **(Optional)**
2.G.2.b	LCD/LED flat 19 inch FHD monitors with wide viewing angle, high Luminance, high contrast, flicker free, distortion-free: one for live image and two for reference. One additional color monitors for displaying images of other external devices like 3D rotational angiography, IVUS, Echo display and for hemodynamic recorder etc. minimum 5 monitors in examination room should be ceiling suspended with height adjustment and longitudinal travel to either side of Table & swivel capabilities. All monitors may be incorporated into a single suspension frame. Any additional feature to switch various video signals from various sources in a single monitor should be offered as standard. There should be video-out facility from the system. **(Optional)**
2.H	**Rotational Angiography**
2.H.1	Rotational angiography for coronary & pediatric angiography
2.H.2	Rotational speed 30 degree/sec or more
2.H.3	Rotational angle 90 degree or more
2.H.4	Frame rate in the range of 10 to 30 FPS with at least one additional option.
2.I	**Digital image processing system & work station**
2.I.1	Cine loop & image hold during fluoroscopy, pulsed fluoroscopy with frame rates of 7.5 /15/30 images at 1024x1024 matrix/12 bit resolution.
2.I.2	Advanced image processing for real time edge enhancement, real-time harmonization & noise reduction
2.I.3	Digital system with acquisition & processing in 1k matrix at 25/30 FPS
2.I.4	Last image hold and fluoro store (manual)
2.I.5	Minimum storage capacity of 1,00,000 images or more in 1024x1024/12 bit resolution.
2.I.6	Background transfer of images from cath lab to digital storage/ CD / DVD archiving without interruption of cathlab procedure. (Preferably automatic) .
2.I.7	Ability to display images back to cath lab.
2.I.8	Image processing features like zoom, post processing.
2.I.9	Both online & off line coronary analysis & ventricular analysis from table side & console room. There should be facility for view of archived examinations, permit

	measurements of both archived studies and any images of the current study
2.I.10	True on line digital subtraction facility at selectable frame speeds. Specify system capability for on line DSA and frame rate per second.
2.I.11	Facility to measure & display X-Ray dose delivery during procedure.
2.I.12	DICOM 3.0 or more based CD / DVD recording; CD have embedded software for instant review in any pc. Should have ability to run DSA run on CD. Facility to achieve multiple patient angiograms on single CD
2.I.13	Clinically validated QCA for control & exam room.
2.I.14	Desirable: storage and display of dynamic fluoro sequences: eg. 10 sec at 30 FPS.
2.I.15	Desirable: digital subtraction angiography in real time at variable frame rate specify
2.I.16	Latest stent visualization features like stent boost or equivalent.
2.I.17	Image inversion facility for live procedures
2.I.18	Facility for reporting and printing of report by attached printer
2.I.19	Printer (preferably with toner/ink tank type) for printing of angiography reports preferably with colour printing facility (highly desirable for generation and printing of immediate reports)
2.J	**System operation**
2.J.1	In exam room: complete system operation with controls at patient table for controlling c-arm projection, patient table and collimator. Multi-function joy stick for operation of the image system
2.J.2	One at table foot end and one at table-side for operator. Multifunction foot switch for fluoroscopy, radiography, table brakes (the operator should be able to release the table from braked position), light source, parallel view etc. Data display monitor system and table geometry, system messages, dose data etc in addition to other monitors in examination room
2.J.3	Dedicated touch pad for review/zoom, play/pause previous /next image, store /recall reference images at the table side.
2.J.4	There should be facility to enter the patient demographics from the examination room or the console room
2.J.5	The following functions should be selectable in the examination room
2.J.5.a	Run and image selection
2.J.5.b	File and run cycle
2.J.5.c	Review speed
2.J.5.d	Run and file overview
2.J.5.e	Active exam folder selection
2.J.5.f	Flagging image and run storage
2.J.5.g	Subtraction and image mask selection
2.J.5.h	Digital zoom
2.J.5.i	Storing reference run or image to reference monitors
2.J.5.j	Select reference monitors for review and/ or processing of previous run exposures
2.J.5.k	System emergency brake should be available in the procedure room

2.J.5.l	Review of a patient exam
2.J.5.m	Exam and run cycle
2.J.5.n	Adjustment of contrast, brightness and edge
2.J.5.o	Exam, run and image stepping
2.J.5.p	Run and exam over view
2.J.5.q	Basic review functionality as image invert and digital zoom
2.J.5.r	Go to original settings.
2.J.5.s	Reset fluoroscopy timer and switch x-ray on/off
2.J.5.t	Quantitative analysis package.
2.J.5.u	Land marking (increase/decrease of degree of subtraction)
2.J.5.v	Video invert
2.J.5.w	Zoom and pan image
2.J.5.x	View trace & Pixel shift
2.J.5.y	Electronic shutter
2.K	**Radiation protection features**
2.K.1	Conformation of the fluoroscopy system to standards of international electro technical commission (IEC) and latest FDA regulations or equivalent
2.K.2	Automatic x-ray control system for automatic calculation and optimization of exposure data based on fluoroscopic values
2.K.3	Collimators and wedge filters for spatial filtering
2.K.4	Five level adaptive cu filtration for reduction of skin dose (desirable)
2.K.5	Pulsed fluoroscopy with additional reduced pulse frequencies (specify range of frequencies)
2.K.6	Low dose fluoroscopy mode upto 7.5 FPS and 3.75 FPS (desirable)
2.K.7	Modulation of fluoroscopy pulsing to obtain less noise and scatter
2.K.8	Radiation free positioning of primary and semi-transparent collimators via graphic last image hold on image monitor.
2.K.9	Radiation measurement and display chamber integrated collimator housing.
2.K.10	Exam and patient related automatic parameter setting
2.K.11	Radiation-free positioning of primary and secondary collimators via graphic representation on last image hold
2.K.12	Manual protocol selection for different types of examinations (eg: low dose EP and high dose interventional)
2.K.13	Real time display of patient dose and archiving of x ray exposure data
2.K.14	Any available special software required for increasing the image quality and reducing the image noise for Real time Motion correction, Real time Image enhancement & Real time Noise reduction should be offered as part of the standard offer.
2.K.15	Upper body and lower body shields for operator protection lead glass (2 x 4 feet) (ceiling and table mounted) the upper body shield should contain flexible radiation protective strips, for contact with patient body. The lead equivalent of the shields should be defined and should be more than 0.5 lead. Accessory rails should be available at the head of the table for lower body protection during left and right

	anterior chest procedures. The lower body protection shield should be minimum two in number (one for each side of the table) the flexible vertical fold of the lower body screen should provide additional 25 cm of upward protection.
2.K.16	Radiation protection visors (for operator use) x 3 numbers
2.K.17	The system should be provided with latest dose reduction feature. All dose reduction package available on the quoted model must be offered as standard without any additional cost.
2.L	**Software**
2.L.1	Quantification software
2.L.1.a	Quantification software should have the following capabilities
2.L.1.a.1	Vascular analysis with stenosis quantification
2.L.1.a.2	Quantitative coronary analysis
2.L.1.a.3	Ventricular analysis
2.L.1.a.4	Measurements-linear where reference points can be manually edited.
2.L.1.a.5	There should be option for manual selection of reference points or ability to edit the automated detection system.
2.L.1.a.6	ECG should be displayed beneath the image for reference.
2. M	**DICOM compatibility (DICOM 3 compatible)**
2.M.1	Archiving / recording in DICOM modes
2.M.2	DICOM storage commitment for archiving on CD
2.M.3	DICOM print of image through laser printer.
2.N	**Hemo dynamic recorder**
2.N.1	12 channel ECG waveform display
2.N.2	Two or more invasive pressure overlay display and necessary transducers, connectors
2.N.3	Dp /Dt waveform display
2.N.4	SpO2, noninvasive BP display and necessary equipment
2.N.5	Storage of ECG/pressure recording on CD
2.N.6	Storage on hard disk of atleast 2TB
2.N.7	One LCD monitor in examination room with ceiling suspension and one in console. Monitor inside the cathlab should be medical grade.
2.N.8	Desirable: conversion of hemodynamic reports into DICOM 3 compatible image data format
2.N.9	Should have all calculation packages for pressure wave form analysis, valve area; gradient off-line and on-line.
2.N.10	Should provide 4 transducer-connector cables
2.N.11	Respiration display
2.N.12	Integrate ECG with fluoroscopy / cine output in monitor and should be saved in image media/ CD
2.N.13	Apart from standard page prints, it should be possible to scroll the selection across pages and save hemodynamic traces – for short and long strips (preferably up to 30 seconds) into a single image. (Desirable)

2.N.14	Extra cables: ECG – three sets of trunk cable ((interphase cable), lead wire – 5 sets extra, SpO2 probe with cable – 5 sets extra, pressure transducer cables – 4 sets extra
2.N.15	Wi-Fi connectivity options (desirable). Able to print the output directly from the recorder through a laser printer
2.N.16	Separate laser printer for printing output directly from the recorder.
2.O	**Accessories**
2.O.1	Focused ceiling mounted cool light of high quality
2.O.2	Console room chairs 4 and tables (as per user)
2.O.3	Console room and review station in the cath lab with computer and DVD/ CD writing .
2.O.4	Additional Laser printer for report printing
2.O.5	Communication facility from reputed brand should be provided for two-way communication. There should be provision to communicate between operator and view-station (microphone – on /off, volume control, speaker on/off with volume control); 3 handsets
2.O.6	Lead protection skirting the tableside for operators lower body protection **(Optional)**
2.O.9	**Radiation safety gear with attached specifications**
2.O.9.a	It include radiation procedure apron, thyroid shields and radiation protection glasses
2.O.9.a.1	Radiation protection apron- 0.5mm equivalent wrap around light weight non lead - 20 nos (Two piece type,18 Nos, Single Piece Type- 2 Nos)
2.O.9.a.1.1	Abdominal belt to share the weight to the shoulders and back.
2.O.9.a.1.2	Should cover front, side, and rear.
2.O.9.a.1.3	The over-the-shoulder snap lock for easy wearing and removing
2.O.9.a.1.4	Provides full front/back protection in a one-piece style.
2.O.9.a.1.5	Includes fully adjustable back-saver belt for lower lumbar support.
2.O.9.a.1.6	Should have 0.5 mm PB -equivalent front protection and 0.25 mm back protection.
2.O.9.a.2	**Thyroid shields**
2.O.9.a.2.1	Ultra light washable thyroid shields aprons
2.O.9.a.2.2	Provides 0.5mm pb-equivalent protection
2.O.9.a.2.3	Extremely lightweight and comfortable—free of top binding to help prevent
2.O.9.a.2.4	Radiation protection glasses:
2.O.9.a.2.5	Lightweight frame design provides both maximum coverage and clarity.
2.O.9.a.2.6	Secure wrap temple and arms for stability and comfort
2.O.9.a.3	**Head gear**
2.O.9.a.3.1	0.75 mm PB-equivalent protection
2.O.9.a.3.2	Fits medium to large faces.
2.O.9.a.3.3	Product type should be approved by AERB
2.O.9.a.4	Radiation Protection Goggles
2.O.10.	**UPS**
2.O.10.a	With 15 min back up for the whole system with harmonics less than 3%.
2.O.10.b	Should adhere to the following standards

2.O.10.c	EN 62040-1 - Uninterruptible Power Systems (UPS) part 1: general and safety requirements for UPS.
2.O.10.d	EN 62040-2 - Static Uninterruptible Power Systems (UPS) part 2: electromagnetic compatibility (EMC) requirements.
2.O.10.e	EN 62040-4 - Environmental Aspects - requirements and reporting.
2.O.10.f	IEC 61000-4 - Electromagnetic compatibility (EMC) - part 4: testing and measurement techniques.
2.O.10.g	Battery replacement for the UPS during the warranty as well as the CAMC period should be the scope of the vender.
2.P	**Anesthesia workstation with Hemodynamic monitor (Trolley Version)**
2.P.1	Should be advanced, reliable, compact and mobile with integrated ventilator.
2.P.2	Should be based on microprocessor and suitable for low flow as well as minimal flow anesthesia for adults, pediatrics and neonatal use.
2.P.3	Machine should be suitable for premature babies, neonates, pediatric and adults.
2.P.4	Should have a facility to connect to the central supply (oxygen, air and N2O) , pin index cylinder one each of oxygen and N2O with on screen digital display of pressure gauges for central supply and cylinder.
2.P.5	Machine should have working surface and illumination with the storage space for keeping accessories.
2.P.6	Should have electronic gas mixing with FiO2 & total flow setting along with virtual flow meter displays
2.P.7	Should have integrated safety feature like electronic hypoxic guard, N2O/Air cut off in case of O2 low pressure/failure, alarm and O2 flush etc.
2.P.8	Should have onscreen virtual flow meter display of O2 and N2O/Air.
2.P.9	Should have compact autoclavable breathing system. Soda lime chamber maximum capacity of 1.5L. The sodalime canister should be compatible with the devices in all the operating rooms.
2.P.10	Should have electronically controlled and electrically/pneumatically driven anesthesia ventilator
2.P.11	The machine should be suitable for low & minimal flow Anesthesia application
2.P.12	Should able to log all alarms, self-tests, messages and other events.
2.P.13	Should have integrated touch screen color display with minimum15” screen size.
2.P.14	The machine should have automatic calculations and presetting of patient specific ventilation settings via ideal body weight, Age and height
2.P.15	The machine should calculate agent consumption and uptake by patient with display of fresh gas usage even during the case and after the case in the logbook.
2.P.16	System should confirms to EN 60601-2-13 (Requirement for safety and essential performance of anaesthesia system)
2.P.17	**Anesthesia ventilator should have the following settings:**
2.P.17.a	Automatic breathing circuit Compliance correction
2.P.17.b	Spontaneous. Breathing
2.P.17.c	Manual Ventilation

2.P.17.d	Volume controlled mode
2.P.17.e	Pressure controlled ventilation
2.P.17.f	SIMV in VCV & PCV
2.P.17.g	Pressure Support, PS with CPAP, PS with SIMV in VCV/PCV
2.P.17.h	Auto flowor PCV-VG or similar mode – delivering set tidal volume at minimum airway pressure. and in combination with SIMV
2.P.17.i	High peak inspiratory flow upto 120 LPM or more.
2.P.17.j	Tidal volume adjustment range 5 ml to 1500 min volume control mode / pressure control mode
2.P.17.k	Adjustable PEEP:Off, 4 to 30 hPa (or cmH2O);and CPAP: 0, 4 to 30 mbar
2.P.17.l	Respiratory frequency from 4 to 100 per min.
2.P.17.m	I:E : minimum 2: 1 to 1:8
2.P.17.n	In case of total fresh gas failure including Oxygen, facility to ventilate the patient with Oxygen via the same Anaesthesia workstation must be available.
2.P.18	Should have tidal volume compensation or fresh gas decoupling valve.
2.P.19	Should have external fresh gas outlet for connecting the open circuits.
2.P.20	Should have dual flow sensing technology with flow sensor at inspiratory and expiratory side.
2.P.21	Should have display of up to 3 or more real time wave forms and display of concentration of CO2, O2, and anesthetics agents, airway pressure, inspiratory and expiratory flows and loops for P-V and F-V loops.
2.P.22	Anesthesia machine should monitor and display the measure value of minute volume, tidal volumes, peak airway pressure, mean pressure, plateau, PEEP, dynamic compliance and resistance.
2.P.23	Should have pause mode for short term interruptions of ventilation with variable time period up to 60 mins.
2.P.24	Should have alarms for high/low volume for expired tidal volume, minute volume frequency and airway pressure low MAC, FiO2, CO2,gas supply, leak, circuit disconnection, power failure, battery empty.
2.P.25	Should be supplied with Sevoflurane and Isoflurane/ Desflurane vaporizer (one of them as requested); All the vaporizers and monitor should be manufactured from same company as anaesthesia machine. Should quote for all the three vaporisors. Will be selected one from Isoflurane or Desflurane.
2.P.26	Should be supplied with independent Active / passive anesthesia scavenging system for pollution free atmosphere in operation theatre. 60 PSI air outlet and hospital vacuum outlet will be available.
2.P.27	Should have dual detection of anesthetic agent in case of change of anesthetic agent.
2.P.28	Should have RS232 port to interface monitor to transfer the expired parameters on monitor
2.P.29	Should have battery back up to at least 60-90minute including that for ventilator.
2.P.30	System should have backup oxygen control in case of complete power failure and auxiliary oxygen supply source.
2.P.31	Should have auxiliary Oxygen supply system.

2.P.32	Should have anytime facility for manual ventilation possible at least with fresh gas O2 delivery and dosage of volatile agents with airway pressure monitoring in case of system failure / system "off".
2.P.33	Should have the indicator or decision support to show the efficiency of fresh gas setting while used in Low flow and minimal flow
2.P.34	Machine should be equipped with anesthesia gas monitoring with automatic identification of anesthetic agent (MAC , inspired and end tidal concentration) as well as O2 %, N2O %, FiO2 % and Inspired and expired CO2 (through side stream monitoring) in mm Hg;
2.P.35	End tidal CO2 measurement should be of side stream technology
2.P.36	Machine should have tools to support low and minimal flow anesthesia such as Econometer/low flow wizard, O2 uptake and MV*CO2 values
2.P.37	Machine should be able to calculate patient's lung compliance values.
2.P.38	Should have sample gas return into the breathing system for better gas efficiency in low flow and minimal flow usage.
2.P.39	Should have heated breathing system/ any other equivalent mechanism for optimized minimal flow anaesthesia usage and ventilation quality.
2.P.40	Should be possible to deliver oxygen and anaesthetic agents in Man/spontaneous mode even when the machine is in switched off mode as an emergency back up
2.P.41	The machine should have adjustable alarm limits for all the parameters with auto set alarm function.
2.P.42	The machine should have automatic display of MACx values
2.P.43	Should have low agent concentration alarm
2.P.44	Should have alarm logbook for displaying and saving alarm history
2.P.45	System leak and fresh-gas deficiency alarm/ Indicator tool to eliminate Hypoxia and fresh gas insufficiency.
2.P.46	Should have cardiac bypass mode
2.P.47	Should have fully automated self-test including calibration of all sensors without any user action necessary after start to test.
2.P.48	Should have backup manual mode to allow the direct change to manual ventilation while maintaining gas and ventilation monitoring; O2 and anaesthetic agents from the vaporisers can be continuously delivered
2.P.49	Should have integrated active AGS system
2.P.50	Each machine should be supplied with following accessories with each unit of same manufactures make.
2.P.51	Multi parameter Monitor mounting should provide along with machine.
2.P.52	Standard Scope of supply must include:
2.P.53	Pipeline connections for O2, N2O and Air
2.P.54	Semiclosed breathing system
2.P.55	Adult & Peadiatric autoclavable patient tubings (1 each)
2.P.56	Anaesthetic mask size – Adult & child

2.P.57	Vaporisers for sevoflurane and Isoflurane / Desflurane (one of them as requested). Should quote for all the three vaporisors. Will be selected one from Isofurane or Desflurane.
2.P.58	Central gas supply hoses (Color coded)
2.P.59	Sampling lines:10Nos and water traps: 12Nos
2.P.60	19inch or higher display monitor with necessory cabling should be provided to view the monitor parametres at the consol room.
2.Q	**Hemodynamic Patient Monitor to use along with Anaesthesia workstation**
2.Q.1	Should be suitable for adult, paediatric neonatal patients monitoring in fixed environment.
2.Q.2	Should have 17inch or higher touch screen colour display with large fonts and provide access to minimum 12 or more waveforms with ergonomic representation of multi-functionality. 19inch or higher display monitor with necessary cabling should be provided to view the monitor parameters at the consol room
2.Q.3	Monitor should be HL 7 compliant and should be able to interface with other single point access to web-based applications like HIS, PACS, PDMS, LIS and more directly (without requiring extra server, hardware and software from institute side)
2.Q.4	Should give direct access to Web-based applications, without requiring extra servers or licenses (such as Microsoft® clients, Citrix)
2.Q.5	Should have minimum ECG, NIBP, SpO2, 2 temperature and 2 Invasive pressure as standard and all other parameters should be through upgrades as pods/modules and software.
2.Q.6	Should have basic arrhythmia detection for life-threatening alarms that include asystole, ventricular fibrillation, ventricular tachycardia, and bradycardia and more.
2.Q.7	Should have non-volatile graphic and tabular trending of all monitored parameters as standard for minimum 72hrs.
2.Q.8	Should have manual as well as automatic setting of screen format with selectable parameter priority & colour selection for parameter on screen.
2.Q.9	Should have excellent cable management with as minimum as possible cables at monitor & patient end for maximum comfort to patient as well as user.
2.Q.10	Should have integrated transport monitor with battery backup of 180min and one-button disconnect and without additional modules or batteries and shall allow transport with all currently monitored parameters remaining active.
2.Q.11	The transport display shall automatically adjust its orientation using a gravitational sensor when it is rotated to a different view.
2.Q.12	The transport monitor should have minimum 6 inches of touch screen and 3 or more waveforms
2.Q.13	Should have Defibrillator and ESU protection, ECG Sync, IABP interface (ECG and Arterial for triggering and deflation with a device delay of <20 millisec)
2.Q.14	Ready for wired networking
2.Q.15	Facility to upgrade to automatic electronic charting and data management solution with data archival facility for patient monitor and ventilator data. It should be single centralised server based for multiple bed's upgrade. Charts should be seen on patient monitor screen or any optional device like laptop, desk top or tab etc.

2.Q.16	Monitoring solution shall support at least sixteen (16) different display layouts, and at least five (5) for the transport component.
2.Q.17	While using another application, the monitor configuration will always allow for continuous viewing of the real-time parameter data
2.Q.18	360-degree alarm bar & Rotary knob lights up when conformation for user selection is required
2.Q.19	Touchscreen, Rotary knob & keyboard
2.Q.20	Monitor when interfaced with Anaesthesia Machine , the monitor shall provide capabilities for display of multi-parameter sets to be used in lung recruitment procedures through an analysis tool.
2.Q.21	Monitor shall provide the option to connect a secondary display that can be configured independent display without the need for additional hardware and users the ability to configure the location, speed and color of the parameters and their associated waveforms separately to the monitoring workstation
2.Q.22	Monitor should able to connect to anaesthesia machine and should be able to display ventilator waveforms, parameters and loops.
2.Q.23	The monitor must be mounted over anaesthesia machine and the necessary mounts must be supplied
2.Q.24	**Should have following parameters**
2.Q.24.a.1	ECG
2.Q.24.a.1.1	5 lead ECG monitoring with three leads of ECG waveform simultaneously monitoring
2.Q. 24.a.1.2	Should display 12 leads of ECG monitoring
2.Q. 25.a.1.3	Range 15 to 300bpm
2.Q. 24.a.1.4	Should display 12 leads of ECG by connecting 6/5 ECG lead wires (Reduced lead set algorithm) as standard feature with max. lead positions as per standard lead placement
2.Q.24.a.2	RESPIRATION
2.Q.24.a.3	SpO2
2.Q. 24.a.3.1	Should be supplied with Masimo SET technology with respective sensors
2.Q. 25.a.3.2	Should display digital value and Plethysmograph
2.Q. 25.a.4	NIBP
2.Q. 24.a.4.1	By oscillometric principle of measurement with step wise deflation.
2.Q. 24.a.4.2	Suitable for adult, paediatric, neonatal patients
2.Q. 24.a.4.3	Should display Systolic, diastolic, mean pressure in large easy to read display
2.Q. 24.a.4.4	Should have manual/ stat mode or automatic mode with adjustable time intervals from 2 – 240 minutes and adjustable alarm limits
2.Q.	Monitor should have capability for continuous arterial pressure monitoring through

24.a.4.5	non-invasive technique – preferred
2.Q. 24.a.5	IBPs - Simultaneous monitoring of 2 Invasive Pressures should be standard and upgradable to 8 Invasive Pressures. Range: -50 to 400mmHg
2.Q. 24.a.6	Temperature - two temperature one core and second skin simultaneous monitoring and upgradable to 4 Temperature. Range: -5 to 50Deg C
2.Q.25	**Following upgrades should be offered – (Quote unit prices in price bid)**
2.Q.25.a	BIS/Entropy to measure depth of anaesthesia as standard
2.Q.25.b	NMT Neuro muscular transmission module as standard
2.Q.25.c	Cardiac Output by thermodilution technique
2.Q.25.d	Masimo rainbow / equivalent SET; SpHb, SpOC, SpCO, SpMet or PVI, at the users discretion from one sensor source as optional
2.Q.26	**Standard Scope of supply must include:**
2.Q.26.a	5/6/10 lead ECG Cable – 1 no
2.Q.26.b	SpO2 Masimo / equivalent set finger Pead, Neonate and Adult sensor with extension cable – 1 no
2.Q.26.c	Skin temperature Probe – 1 no
2.Q.26.d	Rectal / Oesophageal temperature probe – 1 no
2.Q.26.e	NIBP Hose – 1 no
2.Q.26.f	Adult, Neonate & Paediatric Cuff – 1 each
2.Q.26.g	IBP reusable cable for 2 IBP and 10 pcs disposable transducers
2.Q.26.h	NMT module -1
2.R	**Airway management set (Optional)**
2.R.1	C Mac Video laryngoscope with mini monitor and adult and pediatric D blades
2.S	**Pressure injector for cardiac angiography**
2.S.1	Microprocessor-controlled compact, powerful digital high-pressure injector, suitable for procedures in digital subtraction angiography.
2.S.2	There should be automatic protection for overflow, over volume and over pressure.
2.S.3	Syringe: 150 ml polypropylene disposable – 100 pcs to be provided.
2.S.4	The make and the model shall be clearly indicated
2.S.5	It should be pedestal version, smaller footprint, a flexible articulating arm and a smooth arc design.
2.S.6	Clearly visible and intuitive user interface that guides through the proper setup.
2.S.7	Should have a syringe front-load system for simple insertion and clean removal
2.S.8	Pedestal contrast medium injector can be positioned anywhere at the patient positioning table on a mobile unit
2.S.9	For direct operation of all functions in the examination room.
2.S.10	There should be a facility to control the flow rate of contrast during injection
2.S.11	Pressure limit: selectable, ranging at least from 130 psi to 1200 psi.
2.S.12	Flow rate: at least 0.1 ml/sec up to 40 ml/sec.
2.S.13	Programmable control: Minimum up to 6 different flow-rate, volumes and/or delays and transition time for one automatic injection series.
2.S.14	Timer synchronization of injection to image acquisition with variable delay.
2.S.15	Syringe heater to maintain preheated contrast at body temperature

2.S.16	Indicator light to indicate injector ready or in progress.
2.S.17	Scale reading indicating amount of contrast in syringe.
2.S.18	There should be a colour touch screen in the console room
2.S.19	The unit should be synchronized with the application
2.S.20	LED display for ensuring proper orientation for viewing of the power head in rotation; indicates programmed protocol and volume remaining in the syringe. the information needed must be highlighted
2.S.21	Control bar for easy one finger operation, variable speed control of ram for syringe filling, pull-back, or infusion
2.S.22	Should provide a clear view of the contrast.
2.S.23	Air detection and warning system to detect empty syringes and air bolus
2.S.24	The pressure sensitive touch screen display
2.S.25	Protocol manager to store and recall user defined protocols
2.S.26	Single button for switching between angio and CT modes
2.T	**ACT Machine -1 No**
2.T.1	System should be microprocessor controlled designed to determine coagulation end points in whole blood, Citrated blood and plasma samples.
2.T.2	It should be compact & portable for bed-side testing
2.T.3	One Button Operation- Easy to Use
2.T.4	LED/LCD based screen for displaying results (fully digital display screen)
2.T.5	It should be capable of displaying two reports at one time
2.T.6	Measurement range 0-1500 sec.
2.T.7	Temparature Range: 37.0.±2 Degree c
2.T.8	Environment-15degree-30degree C
2.T.9	It should require less than 2ml of blood for each test.
2.T.10	It should have inbuilt mechanism to heat the cuvette
2.T.11	Dual well testing method
2.T.12	Desirable: Rate of Actual Clot Formation (CR, Clot Rate: Thrombin Activity, Low Molecular Weight Heparin Management).
2.T.13	It should have a battery backup of 2 hrs
2.T.14	Data transfer capability: Printer option available facility to store view multiple patient data
2.T.15	Cuvettes for each test to be supplied with machine - 100 nos.
2.U	**Hemoximeter -1 No (Optional)**
2.U.1	The Analyzer should be able to measure the following parameters accurately: tHb, HbO2, %HbO2, [O2], sO2, O2Ct, COHb, MetHb.
2.U.2	Should be capable to use whole blood as sample. Cuvette type preferred.
2.U.3	Sample volume for measuring all parameters should be less than 50 microlitre.
2.U.4	Should have 5 analysis wavelengths
2.U.5	**Measuring Range**
2.U.5.a	%HbO2: 0 to 100% (+/-1)
2.U.5.b	tHB: 4 to 25 g/dL (+/-0.35 to 0.45)
2.U.5.c	[O2] : 0 to 35 ml O2/ dL

2.U.6	Analyzer should perform automated quality control.
2.U.7	Analyzer should have LCD monitor display
2.U.8	Analyzer should have external keyboard and high end color printer compatible with software.
2.U.9	Analyzer should have minimum inbuilt memory of at least 100 measurements and also have a USB port/HIS compatibility that enable to transfer to external computer.
2.U.10	All results should be microprocessor controlled and of latest version of technology
2.U.11	Environmental factors
2.U.11.a	The unit shall be capable of operating continuously in room temperature of 15-30 deg C and relative humidity of 15-90%
2.U.11.b	Shall meet IEC-60601-1-2: 2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.
2.U.12	**Power Supply**
2.U.12.a	Should operate on battery approximately 8 hours (constant run) or 10 complete testcycles per charge. Tests may also be run while the machine is plugged into the AC/DC power module.
2.U.13	Standards, Safety and Training
2.U.13.a	Shall meet the safety requirements as per IEC.
2.V	**Additional Requirements**
2.V.1	Ceiling-suspended lamp with shield
2.V.2	Console room and review station in the Cath lab with computer and DVD/CD writing
2.V.3	Console room chairs and tables (as per site requirement)
2.V.4	Lead impregnated door as per AERB specifications (as per site requirement)
2.V.5	Wireless remote communication with operators from outside
2.V.6	Standalone Cath lab/ OT examination light – One number
2.V.11	**Necessary Turnkey work as per the site requirement should be done by the selected bidder.**
2.V.11.a	Flooring, false ceiling, lighting, wall tiling, electrical work and power plug points inside cathlab, console, machine room, store room, washing area including necessary gaslines
2.V.11.b	Necessary Turnkey work as per the site including Flooring, false ceiling, lighting, wall tiling for the corridor between cath lab and patient waiting area
2.V.11.c	Automatic handwashing system in the washing area with two sets of tap with betadine and soap dispenser as suitable. With foot operated manual override.
2.V.11.d	**Air Conditioning Scope of Work:**
2.V.11.d.1	Existing Air handling units (one 13TR Working+ one 13TR Standby) should be used for the air conditioning of Cath Lab examination Room, Console Room, UPS room, Equipment room, Recovery Room etc. The existing Air handling Unit shall be reconditioned for meeting the design temperature and humidity requirements of the cath lab.
2.V.11.d.2	Air Distribution System-Supply and return air ducting, supply air diffusers/grilles with volume control dampers and Return air diffusers/grilles without volume

	control dampers. Smoke and fire dampers.
2.V.11.d.3	Exhaust Air blower motorized with louvers and bird screen and necessary exhaust air ducting.
2.V.11.d.4	Temperature and Humidity Control: Replacing the existing motorized valves of chilled water, Pressure and temperature gauges, Isolation valves, Air vents, Strainers and Drain valves of both the Air Handling Units. Replacing/Repairing of the Strip Heater set for humidity control for both the Air Handling Units. Thermostat and Humidistat with control wiring to be provided by the vendor.
2.V.11.d.5	Insulation: Thermal and Acoustic insulation of Chilled water Pipes and Air Ducts.
2.V.11.d.6	Ensure the proper working of cooling coils, fan and blower section, Electrical control panel, Cable wiring, Drain Line, etc.
2.V.11.d.7	The vendor shall provide suitable pre filters and fine filters and Belts.
2.V.11.d.8	The vendor shall provide digital display of Temperature and Humidity inside the Examination room.
2.V.11.d.9	Design supply installation testing and commissioning of the above items will be under the scope of vendor. Ensuring the required Temperature, Humidity and Air flow with proper filtration will be the responsibility of the bidder
2.V.11.d.10	CAMC of the cath labe system should include Air Handling Units with all spares and consumables like filters and Belts.The bidder shall visit the site and submit a detailed layout of air distribution system of the Cath Lab.
2.V.11.e	**Electrical Scope of Work:**
2.V.11.e.1	SCTIMST shall provide only single-point power supply in the respective floor electrical room. All downstream cabling, interconnections, wiring, earthing etc as required for the meeting the tender criteria and statutory requirement shall be in the bidder's scope.
2.V.11.e.2	APPROVAL All the equipment to be supplied and works to be executed should conform to the Kerala State Electrical Inspectorate Standards including all protection and metering accessories. the bidder has to obtain necessary scheme approval/power allocation from the Kerala State Electrical Inspectorate/KSEB immediately after the award of work. All drawings required in this regard are to be prepared by the bidder at his expanse. All testing/calibration, etc. are to be carried out as per the requirements of KSEI/KSEB.
2.V.11.e.3	On completion of the work, the bidder has to obtain necessary safety/ energization certificate from KSEI by submitting necessary completion certificates, drawings, equipment details, load details, test results, etc. before energisation. All costs incurred in obtaining such approval/certificates “including all statutory fees etc” are to be borne by the bidder. Approval for shifting and energisation also has to be obtained. Similarly the entire statutory fee and other expenses for the temporary/permanent energisation of panels etc are to be borne by the bidder. Liaison with all statutory authorities including KSEB/Electrical Inspectorate for getting sanction/approval/safety certificate/ power connection including

	submission of necessary forms to KSEB/ Electrical inspectorate as required is included in the scope of this work.
2.V.11.e.4	The bidder shall prepare shop drawings as per the site conditions and get the approval of the consultant prior to the commencement of procurement works. All installation has to be conducted as per the approved shop drawings. Shop drawings shall include all details like layout drawings, schematics, single line diagrams, panel GA drawings, proposed to make of materials etc as applicable. After completion of installation works, all the electrical installation shall be labelled properly using vinyl stickers of approved colour and size as approved by the consultant. As-built drawings in hard and soft copy shall be submitted to SCTIMST.
2.V.11.e.5	Necessary earthing should be provided after checking the existing lab earthing
2.V.11.e.6	Rewiring of entire point wiring & power point wiring from DB Point including the replacement of existing DB in Cath lab, Console, Technical Room & main entry passage. The supplier has to Replace all existing plug points in the above-mentioned rooms with new modular plug points. Electrical sockets, switches and boards must be from Legrand brand, Myrius model. Ensure adequate lighting for the cath lab procedure table. Replacement of old Tube Light fittings with new 600x 600 mm 40 watts LED light fittings in Cath Lab, Console, Technical room & Main passage. The supplier has to provideadditional 2nos. focusing spotlights for the nurse's procedure trolley.Foot switches to be provided for the control of cath lab room lights (focusing and other lights independently). Peripheral LED strips (white light) to be provided in the false ceiling of cath lab and console area. All lightings and their drivers should be from Philips lightings. Audio cable wiring to be provided in the cath lab room to connect with the console room music system. Supply and installation of new 600x 600 mm copper plate earth for Cath Lab machine as per the manufacturer requirement.
2.W	**General Terms & Condition:**
2. W.1	Complete Supply, Installation testing and commissioning of Video & Image Integration system for Single plane Cathlab system for cardiology in accordance with the specifications, bill of quantities. The above works should also entail necessary Turnkey works including providing of free spare parts and service during Warranty Period.
2. W.2	Installation by qualified personnel
2. W.3	Customer training
2. W.4	Service and Maintenance Agreement
2. W.5	All associated twisted pair/fibre optic cables and termination are to be supplied. Cables should be suitable routed through concealed conduits. In essence the whole installation would be a turnkey work.
2. X	**Approvals Preferred**
2.X.1	Medical device Class I
2.X.2	The quoted Single Plane Cath Lab with Cath Recorder and all other equipment should have a valid Indian Standards quality certification. If there is no Indian Standard is available, then the quoted Single Plane Cath Lab and all other equipment should have USFDA/European CE with four digit identification number according to Directive

	93/42/EEC from a notified body of certification as applicable.
2.Y	**Specials Conditions**
2.Y.1	In case of European or US/FDA: For CE, all the medical devices shall be CE marked as per EU Medical Device Directive No.93/42/EEC and other component parts shall bear CE mark as per relevant EU directive/s For US/FDA certified. Self-declaration of conformity documents with other related certificates e.g. Notified Body certificates shall be uploaded. Additional documents to verify the claims may be asked for.
2.Y.2	Bidder should clearly mention country of origin of each and every product quoted.
2.Z	**General Requirements**
2.Z.1	Obtaining statutory approval from Kerala State Electrical Inspectorate (KSEI) is the responsibility of the bidder. Soon after releasing of PO, the bidder must associate with an electrical contractor and prepare the drawings for initial scheme approval after collecting the required documents from the institute and submit the documents in KSEI. Work can be started after obtaining initial approval. After completion of electrical work, the bidder must prepare the completion report and submit the same to KSEI. The bidder shall follow up regularly with KSEI throughout the approval process and submit any additional documents and clarifications as required by KSEI. The bidder shall be absolved of any delay solely attributable to SCTIMST provided, the bidder submits the required documents to KSEI in time as mentioned above. Any delay in getting clearance on account of SCTIMST and KSEI shall be condoned.
2.Z.2	Necessary AERB inspection and certification as per the radiation guidelines should be obtained by the bidder

NOTE

BIDDERS SHOULD ALSO MEET THE FOLLOWING PARAMETERS WITH

REGARD TO **DICOM/HL7/IHE Requirements**

1. The modality must be DICOM (Digital Imaging in Communications and Medicine) compliant, provide at a minimum Level 2 conformance, and be able to function with other DICOM compliant modalities and systems within SCTIMST.
2. The intent is to provide maximum automation for the institution utilizing DICOM standards. This includes specifically the institutions PACS (Picture Archiving and Communications System), and any other DICOM equipment specified in the bid.
3. Functionality at a minimum includes DICOM Storage Service Class User (SCU) and DICOM Verification Service Class User and Provider (SCU and SCP) capability. These classes should be current and appropriate for the modality, and if requirements specify connection to an older system, should include any potential 'retired' SOP (Service Object Pairs) the older modality may require. If the modality does not yet have the capabilities below, they must be installed at no additional charge within one year from purchase. These items must be clearly stated in the bid submisisons, along with projected time frames for implementation.
4. The modality must be able to perform DICOM Modality Work List Information Model Find functions so that patient orders can be selected from a worklist provided by

PACS/RIS (Radiology Information System), rather than requiring manual entry by the technologist. The worklists will be provided MWL License pack.

5. The modality must be able to perform DICOM Modality Performed Procedure Step functions, so that exam progress status can be automatically sent back to PACS/RIS, and DICOM Storage Commitment.
6. The modality must be able to perform DICOM Query/Retrieve functions as a Service Class User for all appropriate image sets to allow for retrieval of prior studies for comparison at the modality.
7. The modality must be able to perform DICOM Print as a Service Class User for all appropriate image sets, and must work with SCTIMST DICOM Print servers.
8. SCTIMST currently has GE's PACS (Centricity 6.0 Sp 10) and RIS system (Centricity RIS 6.0 Sp 10.3), It is the vendor's responsibility to ensure that images can be stored, retrieved and properly displayed from PACS, and that all requested DICOM/HL7/IHE functions work with the appropriate SCTIMST systems. This includes any additional licenses, fees and service required to connect the modality and to provide the functionality. MPPS SOP class must be implemented by the vendor. If this connection does not work due to the vendor's product not properly implementing the DICOM standard, it must be fixed. It is the intention of this bidder to ensure a complete installation, and that there will not be any 'gaps' left to SCTIMST to pay for outside of the bid to make the systems work as intended.
9. Once the modality is installed, the vendor will work with SCTIMST to provide validation testing before production use to ensure proper exchange of intended information.
10. The vendor must be a participant in the IHE (Integrating the Healthcare Enterprise) initiative. A current IHE Integration Statement must be provided prior to the bid. It is SCTIMST intent to utilize IHE principles to support the integration of systems in the healthcare enterprise. The vendor must be working in the same direction in order to be considered for this bid. There are currently a number of Integration Profile specifications, with varied degree of support from Vendors. Ultimately, all Integration Profiles should be a standard part of a Vendors offer. The specific profiles are listed below, and are required if applicable to the system being bid. If the Vendor does not currently support applicable profiles, they must be made available upon Vendor implementation at no extra charge to SCTIMST. The vendor must provide User Authentication/Access Control at the device, as well as node authentication and exportable audit logs in the IHE Audit Trail and Node Authentication (ATNA) format. There must be an ability to synchronize the clock on the device with a central clock specified by SCTIMST.
    a. Patient Information Reconciliation (PIR)
    b. Scheduled Workflow (SWF)
    c. Presentation of Grouped Procedures (PGP)
    d. Post Processing Workflow (PWF)
    e. Reporting Workflow (RPW)

f. Charge Posting (CP)
g. Consistent Presentation of Images (CPI)
h. Evidence Documents (ED)
i. Key Image Notes (KIN)

j. Simple Image and Numeric Reports (SINR)
k. Access to Radiology Information (ARI)
l. Portable Data for Imaging (PDI)
m. Import Reconciliation Workflow (IRWF)

n. Audit Trail and Node Authentication (ATNA)
o. Nuclear Medicine Image (NMI)
p. Mammography Image (MMI)
q. Image Fusion (IF)
r. Teaching File and Clinical Trial Export (TCT)
s. Cross Enterprise Document Sharing for Imaging

11. If the modality provides storage to removable devices (DVD or MOD), this storage must comply with the DICOM Part 10 Media Interchange standards and the IHE Portable Data for Imaging (PDI) profile. To insure compliance with SCTIMST HIPAA policy, the storage mechanism must at least have the option to remove Identifiable Healthcare Information from the image sets that will be transferred via this mechanism, and all creation functions must be logged according to the IHE ATNA profile.

Software Patches

The vendor must provide critical (security or operational) patches on a timely basis, including the process of FDA approval. If the system is affected by an attack on an unpatched (one that has a patch available for it but has not been installed pending approval by the vendor) security hole, it is the vendors responsibility to bring the system back to a functional state within the emergency response time specified under service.

Network requirements

Network connections should be located within 15 feet of the console. The bid system should support 1000mbps (1000BaseT) network speeds. 1000mbps network speed is preferred, particularly for modalities that create large data sets, such as multi-slice CT. The SCTIMST PACS network shall be segmented from the rest of the hospital network, and utilize category 6a cables for all installations. Network jacks must be 8 pin modular (RJ45). The system should be connected to the network via patch cord connection to the facility

infrastructure. SCTIMST will provide AE Titles, IP address, default router IP address, and subnet mask for each system installed.

Hardware and Operating System requirements

All computer hardware and operating systems must be current versions. For Windows at this time that would be Windows 10/11 Professional or Server editions 2019 or above. If a vendor is currently utilizing an older operating system, the system must be upgraded within a year to the current version of the operating system.

I	Current models (within last 6 months) should be quoted. Latest model meeting the tender specification should be quoted. Document to support the same should be submitted along with quotation.
II	If the specification document refers to technical terms/features which may reflect the product line of a particular manufacturer, the equivalent proven technology/feature can be quoted. If this document does not elaborate on a particular specification, state of art industry standards will be applicable. For all clarifications, refer to state of art industry standards.

DESCRIPTION

BOQ shall be read and construed in conjunction with other Contract Documents.

General directions and description of work and material given in the Technical Specification and codes are not necessarily repeated in the Bill of Quantities. The Technical Specification forms an integral part of the Bill of Quantities.

The Tenderer is obliged to check the number of the pages of the Bill of Quantities and should any be found missing or duplicated or the figures, the Tenderer must notify the Institute representative at once and have the matter rectified before the Tender is submitted. No liability whatsoever will be accepted in respect of any claim for errors in the Tenderer's offer resulting from failure to comply with the afore-going.

Notwithstanding that practical care was exercised in preparing the BOQ, but all quantities given herein shall be deemed to be estimated quantities of the work to be done but they are not to be taken as actual and correct quantities of the work to be executed and they are not to absolve the contractor of his obligations under the Contract. They are not to be taken as guarantee that the actual quantities increase or decrease, and any claim whatsoever submitted for cost or extra expenses incurred from such increase or decrease will not be accepted by Institute representative except where else stipulated in the Contract.

All materials used are to be of the best new available and subject to the Institute representative's approval, and of durable nature, guaranteed, not liable to any base exchange and manufactured according to applicable Standards. Execution also is subject to approval of Institute representative and shall be the best available common practice in engineering codes at the time of execution.

Items that contain materials or products of special make with names of manufacturers are to be taken as samples of what will be required. Subject to the Institute representative's approval.

The contractor will also be responsible for any defect that may result from his work and shall be corrected on his own cost.

The Institute representative has the right to increase, decrease or even cancel any specific item in the BOQ without any change in unit or contract price.
The contract price includes the submissions of all user manuals, catalogues, software's and other related submittals the Institute representative may request.
The Unit Price shall cover all costs of every kind whatsoever including, without being limited to, all charges for additional site installations, relocation, supervision, labour, transportation and supply of materials; the provision, maintenance, use and efficient repair of all items, equipment and appliance of every kind, the construction and maintenance of all temporary works, the performance of all services and the fulfilment of all obligations and responsibilities herein defined.
All contamination removal (refuse, debris, building rubbish and the like) arising from or in connection with the Contractor's work.
Protection of the executed works and of the items made available for execution of the works from damage, fire, inclement weather, and theft etc., to the time of final handing over.
Any type of tests to be carried out on materials and works, etc., as required by the Institute.
The prices should include all required tests, turnkey work and any temporary works such as the temporary installation of fittings etc
The concrete foundations if required for the installation of equipments shall be in the scope of the vendor. All reworks due to misalignments/wrong installation shall be in the scope of Single Plane Cath Lab With Cath Recorder for Cardiology contractor (including cost) and rework in all respect to be done.
All materials, fixing materials, accessories, hardware, operations, tools, equipment, consumables, civil works wherever involved and incidentals required in preparations for in the full and entire execution and completion of the work called for the item and as per specifications and drawings completely.
The successful contractors shall submit the Schematic diagrams, fabrication drawings with details of equipment wiring diagrams etc. to SCTIMST for approval prior to supply / commencement of such works. The approval of these drawings will be general and will not absolve to contractor of the responsibility of the correctness of these drawings. At least four copies of the approved drawings supplied to SCTIMST for their distribution to various agencies at site at no cost to owner.
All testing and calibration charges for the meters shall be included in the installation price of all type of Metering.
The tender shall take into account the expenses of pre-commissioning tests to be conducted as per specification of the complete installation by licensed agencies.
All the items of work shall be treated as supply, store, installation, testing, commissioning and handover unless otherwise mentioned.
Any other service damaged during the works shall be repaired and/or replaced and all necessary precautions shall be taken under this Contract to ensure that the existing services are maintained and are not damaged. The Institute representative shall be advised immediately of any service which has been damaged during the work and replaced or repaired under Single Plane Cath Lab With Cath Recorder for Cardiology contractor cost for this Contract.
The work need to be carried out in the working hospital. The Contractor has to coordinate/liaise with those agencies and ensure smooth execution of work and the work should not make any inconvenience to the patient care services.
BATTERY LIMITS

Safe Storage of all items including client supplied items : Single Plane Cath Lab With Cath Recorder for Cardiology Contractor
Testing Commissioning electrical connection required items: Single Plane Cath Lab With Cath Recorder for Cardiology contractor in coordination with Electrical contractor. Electrical Inspectrate approval for the required work should be obtained by the vender.
Supply & unloading of all items at site: Single Plane Cath Lab With Cath Recorder for Cardiology Contractor.
Material Receipt at site and pre inspections of delivered material: Single Plane Cath Lab With Cath Recorder for Cardiology
Fixing of Route Markers : Single Plane Cath Lab With Cath Recorder for Cardiology Contractor
Equipment Earthing / Body Earthing (where ever applicable) : Single Plane Cath Lab With Cath Recorder for Cardiology Contractor
Glanding of Cables & Providing Lugs For Cables In all Equipments :Single Plane Cath Lab With Cath Recorder for Cardiology Contractor
Terminations Inside the Equipments: Single Plane Cath Lab With Cath Recorder for Cardiology Contractor.
All control Cabling , Control cable glanding with Cu Lugs In all Equipments, Cabling from the nearest available DB to the lab, All electrical, data and communication cabling required for the working of the Cath Lab : Single Plane Cath Lab With Cath Recorder for Cardiology Contractor
Testing & Commissioning of all equipments supplied for Single Plane Cath Lab With Cath Recorder for Cardiology system : Single Plane Cath Lab With Cath Recorder for Cardiology Contractor
Statutory approvals: AERB, KSEI,
RESPONSIBILITY OF BIDDER
Bidder shall be responsible for complete design, supply, installation, testing and commissioning including Civil Modification works, demolition and construction as applicable . Electrical cabling from the nearest DB to the Cathlab if necessary and wiring inside cathlab including UPS. The bidders are required to survey the site before furnishing the quotations.
Bidder shall execute all required civil, electrical, plumbing, lighting, fire safety, exhaust systems, false ceiling trap door/ cut-out and repair(if any) and other works as maybe required for complete installation and trouble-free functioning as a part of the Civil Modification.
The Single Plane Cath Lab With Cath Recorder for Cardiology bidder has to terminate/interconnect all the medical gas lines up to/to the Pendant and or Wall in the lab and recovery room
Medical gas pipe line inside the lab has to be done by the Single Plane Cath Lab With Cath Recorder for Cardiology bidder. The interconnection of Gas pipelines is the responsibility of Single Plane Cath Lab With Cath Recorder for Cardiology bidder. The Single Plane Cath Lab With Cath Recorder for Cardiology bidder has to terminate/interconnect all the medical gas lines and outlets to the Pendants and or Wall in the lab and recovery room.
The bidder shall be responsible for the complete works including the submission of working drawings, and isometric views, detailed work schedule and materials. Bidder shall be responsible for design, supply, installation, testing and commissioning of medical gas supply system in coordination with institute authorities.
Bidder shall be responsible for free maintenance of all component during warranty period including all

filters & consumables.
Bidder should provide factory test certificates for the materials used. Bidder should supply complete set of part manuals, service manuals and user manuals for all the systems and subsystems supplied. Final electrical safety test, system test, leakage and calibration should be done by authorized persons using calibrated test equipment as per standards.
The final Payment will be made on the actual consumption of the BOQ Items and ranking will be done with tendered BOQ.
Bidder must have a satisfactory installation of complete and or Wall in the lab and recovery room as per any International standard as asked in tender and demo may be taken for the same.
Bidder will be provided after award either AutoCAD or PDF or hard Copy of building Layout drawing for preparation of Single Plane Cath Lab With Cath Recorder for Cardiology drawings. Bidder has to submit the drawings within 20 days after award of contract.
Bidder should be responsible for suitable arrangement of heat dissipation and Air-Conditioning as per offered and or Wall in the lab and recovery room plant requirement/recommendations from the Manufacturer and as per local site condition.
Bidder should be responsible for dedicated earthling (Chemical type) for and or Wall in the lab and recovery room (If required)
Bidder has to design the Single Plane Cath Lab With Cath Recorder for Cardiology system as per BOQ & specification mentioned in the tender, any clarification/suggestions regarding the design of Single Plane Cath Lab With Cath Recorder for Cardiology system should be Submitted before pre-bid meeting.
Bidder has to clarify their doubts or prerequisites during pre-bid meeting. Bidder has to submit the list of prerequisites along with bid. No further pre-requisite/requirement after placement of contract will be addressed.
Bidder shall provide switch/socket on wall for Single Plane Cath Lab With Cath Recorder for Cardiology on the location as approved/required by consignee.
Onsite training to hospital staff shall be provided as and when requested.
The storing of raw materials of Single Plane Cath Lab With Cath Recorder for Cardiology system during installation period and the security of the materials is the responsibility of Single Plane Cath Lab With Cath Recorder for Cardiology vendor.
The latest version/model of the equipment available at the time of submitting the quotation should only be quoted.
The cath lab system should be regularly maintained in the latest version of computing software including software platform updates released for the respective system that can prepare it for future enhancements. If a hardware upgrade is required to run the latest updated software version to its normal performance, the respective hardware should be upgrade at no additional cost during the complete life of the system (minimum 10 years during the warranty and CAMC period).

श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, तिरुवनंतपुरम- 11, केरल
Sree ChitraTirunal Institute for Medical Sciences and Technology, Thiruvananthapuram - 11, Kerala
(भारत सरकार के अधीन राष्ट्रीय महत्व संस्थान)
(An Institute of National Importance under Government of India)
टेलीफॉन नं./Telephone No. 0471-2443152 फाक्स/Fax 0471-24464332550728
ई-मेल/E-mail :sct@sctimst.ac.in वेबसाइट/ Website : www.sctimst.ac.in

ANNEXURE – 2

TECHNICAL BID

A. Online Technical Bid

Online Technical Bid consists of the following:
Scanned copy of EMD receipt
Copy of GST Registration Certificate.
Copy of PAN Card
Clear specification matching as given in the tender document
Product No/catalogue No. (Catalogue in original to be attached)
Model No.
Valid authorization from the manufacturer, if bid is submitted by the agent and distributors (as per enclosed format)
Technical features
How old is this technology & when is going to be discontinued
When is the upgraded/Updated version likely to come
Additional features very particulate to the system.
If workstation or PC is quoted, its full configuration, brand, model No. etc.
Period of warranty as called for in the Tender.
AMC coverage items
Comprehensive (Spares & Labour)
Labour alone
History of service and maintenance support in the Institute.

1. List of Installations in public sector/private sector with contact person : Name, Designation & Telephone No.
2. List of essential spares
3. Certificate of quality like USFDA 510K CLEARED/BIS/ CDSCO/ AERB
4. Documents, if clause no:37 in the tender is applicable (Copy of Registration Certificate & Product List)
5. Filled Check list & Compliance Statement in the excel format provided in e-tender portal.

B. Hard Copy of Technical Bid & Original EMD

The hard copy of the Techno-Commercial Bid as specified above with the original EMD in the form of Demand Draft in favor of The Director, SCTIMST payble at Thiruvananthapuram, Fixed Deposit Receipt of Bank Guarantee receipt should be addressed to the Director, SCTIMST, Medical College P.O, Thiruvananthapuram - 695 011, Kerala in the sealed envelop superscribed as "Techno-Commercial Bid" , "Tender No.", "Item Name" and "Due Date". The sentence "NOT TO BE OPENED BEFORE due date and tender opening time" is also to be printed on this envelope. The hard copy can be sent by post/courier to AMCHSS, SCTIMST, Medical College Campus, Thiruvananthapuram or the same shall be submitted by the bidder by hand to Inward Section, 4th Floor, AMCHSS, SCTIMST, Thiruvananthapuram.

C. Price Bid

Price Bid in the prescribed proforma should be submitted in online mode only. The tender will stand rejected if the price bid is submitted along with hardcopy of techno-commercial bid

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ANNEXURE-3

MANUFACTURER'S AUTHORISATION FORM

The Director,
Sree Chitra Tirunal Institute For Medical Sciences and Technology,
Medical College P.O,
Thiruvananthapuram-695 011.

Dear Sir/Madam,

Ref: GeM Bid No _____ dated _____

We, _____ who are proven and reputable manufacturers of_____(*name and description of the goods offered in the bid*) having factories at_____, hereby authorise Messrs_____(*name and address of the agent*) to submit a bid, process the same further and enter into a contract with you against your requirement as contained in the above referred GeM Bid for the above goods manufactured by us.

We also state that we are not participating directly in this bid for the following reason(s):
_____*(please provide reason here).*

We also hereby extend our full warranty (3 years), CAMC as applicable as per terms and conditions of the bid , for supply by the above firm against this bid document.

We also hereby confirm that we would be responsible for the satisfactory execution of contract placed on the authorized agent and the spares for the equipment shall be available for at least 10 years from the date of supply of equipment.

Yours faithfully,

[*Signature with date, name and designation*]
for and on behalf of Messrs_____
[*Name & address of the manufacturers*]

Note:

1. *This letter of authorisation should be on the letter head of the manufacturing firm and should be signed by a person competent and having the power of attorney to legally bind the manufacturer.*
2. *Original letter may be sent.*

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APPENDIX - A

INTEGRITY PACT

Between

SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY (SCTIMST)

hereafter referred to as **"The Principal"**

and

.....hereinafter referred to as **"The Bidder/Contractor"**

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for .....The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness / transparency in its relations with its Bidder(s) and / or Contractor(s).

In order to achieve these goals, the principal will appoint Independent External Monitors (IEMs)who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1-Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe and to observe the following principles :-

a. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand ,take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

b. The Principal will, during the tender process treat all Bidder(s) with equity and reason. The principal will in particular ,before and during the tender process, provide to all Bidders(s) the same information and will not provide to any Bibber(s) confidential /additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution .

c. The principal will exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 -Commitments of the Bidder(s) /Contractor(s)

(1) The Bidder(s) /Contractor(s) commit themselves to take all measures necessary to prevent corruption. The Bidder(s) /Contractor(s) commit themselves to observe the following principles during participation in the tender process and during the contract execution.

sd/-

DIRECTOR, SCTIMST BIDDER

a. The Bidder(s) /Contractor(s) will not directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to ,in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

b. The Bidder(s) /Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specification, certification ,subsidiary contracts, submission or non-submission of bids or any other actions or restrict competitiveness or to introduce cartelization in the bidding process.

c. The Bidder(s) /Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s) /Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d. The Bidder(s) /Contractor(s)of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s) /Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals. if any, Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by Bidder(s) /Contractor(s).Further all the payments made to the Indian agent/representative have to be in Indian Rupees only.

e. The Bidder(s) /Contractor(s) will, when presenting their bid, disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

f. Bidder(s) /Contractor(s) who have signed the Integrity Pact shall not approach the courts while representing the matter to IEMs and shall wait for their decision in the matter.

(2) The Bidder(s) /Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 -Disqualification from tender process and exclusion from future contracts

If the Bidder(s) /Contractor(s),before award or during execution has committed a transgression through a violation of Section 2,above or in any other form such as to put their reliability or credibility in question, the principal is entitled to disqualify the Bidder(s) /Contractor(s) from the tender process or take action as per the procedure applicable to SCTIMST.

sd/-

DIRECTOR, SCTIMST BIDDER

Section 4 -Compensation for Damages

(1) If the principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.

(2) If the principal has terminated the contact according to Section 3,or of the Principal is entitled to terminate the contract according to Section 3,the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to performance Bank Guarantee.

Section 5 - previous Transgression

(1) The Bidder declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.

(2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as per the procedure mentioned in "Guidelines on Banning of business dealings".

Section 6 - Equal Treatment of all Bidders/Contractors/Subcontractors

(1) In case of Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor.

(2) The Principal will enter into agreements with identical conditions as this one with all Bidders and Contactors.

(3) The principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7- Criminal charges against violating Bidder(s) /Contractor(s) /Sub contractor(s)

If the principal obtains knowledge of conduct of a Bidder ,Contractor or Subcontractor ,or of an employee or a representative or an associate of a Bidder ,Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8 - Independent External Monitor

(1) The Principal appoints competent and credible Independent External Monitor for this pact after approval by Central Vigilance Commission. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

sd/-

DIRECTOR, SCTIMST BIDDER

(2) The Monitor is not subject to instructions by the representatives of the parties an performs his /her functions neutrally and independently. The Monitor would have access to all Contract documents, whenever required. It will be obligatory for him/her to treat the information and documents of the Bidders/Contractors as confidential.

(3) The Bidder(s) /Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation .The same is applicable to Sub-contractors.

(4) The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Sub-Contractor(s) with confidentiality .The Monitor has also signed declarations on 'Non-Disclosure of Confidential Information' and of 'Absence of Conflict of Interest'. In case of any conflict of interest arising at a later date, the IEM shall rescue himself/herself from that case.

(5) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

(6) As soon as the Monitor notices, or believes to notice ,a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action .The Monitor in this regard submit non-binding recommendations. Beyond this ,the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

(7) The Monitor will submit a written report to the DIRECTOR, SCTIMST within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.

(8) If the Monitor has reported to the DIRECTOR, SCTIMST a substantiated suspicion of an offence under relevant IPC/PC Act, and the DIRECTOR,SCTIMST has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

(9) The word **'Monitor'** would include both singular and plural.

Section -9 -Pact Duration

This pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.

sd/-
DIRECTOR, SCTIMST BIDDER

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by DIRECTOR,SCTIMST.

Section 10 -Other provisions

(1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Office of the Principal, ie THIRUVANANTHAPURAM.
(2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
(3) if the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

(4) Should one or several provisions of the agreement turn our to be invalid, the reminder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
(5) Issues like Warranty/Guarantee etc. shall be outside the purview of IEMs.
(6) In the event of any contradiction between the Integrity Pact and its Annexure, the clause in the Integrity Pact will prevail.

Sd/-
DIRECTOR, SCTIMST.

(For & On behalf of the Principal) (For & On behalf of Bidder/Contractor)

(Office Seal)

Place .....
Date.....

Witness 1: _____
(Name & Address) _____

Witness 1: _____
(Name & Address) _____

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APPENDIX - B

Restrictions under Rule 144 (XI) of the General Financial Rules (GFRs),2017

I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.

II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

Ill. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -

a. An entity incorporated, established or registered in such a country; or
b. A subsidiary of an entity incorporated, established or registered in such acountry; or
c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
d. An entity whose *beneficial owner* is situated in such a country; or
e. An Indian (or other) agent of such an entity; or
f. A natural person who is a citizen of such a country; or
g. A consortium or joint venture where any member of the consortium or jointventure falls under any of the above

IV. The *beneficial owner* for the purpose of (iii) above will be as under:

1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
Explanation-

a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the

company;

b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership

V. An Agent is a person employed to do any act for another, or to representanother in dealings with third person.

Competent Authority and proccedure for Registration

The competent authority for the purpose of registration under this order shall be the Registration committee constituted by the department for promotion of industry and internal Trade (DPIIT)

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Model Certificate for Tenders to be Submitted by the Bidder.

"I have read the clause regarding restrictions on procurement from a *bidder of* a *country which shares* a *land border with India; I certify that this bidder is not from such* a *country or, if from such* a *country, has been registered with the Competent Authority.*

I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"