



Office of the Director
INDIRA GANDHI INSTITUTE OF MEDICAL SCIENCES,

(A Superspeciality Tertiary Care Autonomous Institute Under Government of Bihar)

SHEIKHPURA, PATNA – 800 014 (Bihar, India)

Tel.: 0612 – 2297631, 2297099; Fax: 0612 – 2297225; Website: www.igims.org;

E-Mail: director@igims.org

GLOBAL Tender Notice No.: 10 / 2014 – 15 / MOT / IGIMS / STORE

TENDER NOTIFICATION

Supply, Installation and Commissioning of Modular Operation Theatre

Director, I.G.I.M.S. – Patna invites sealed tenders under two packet system (Technical & Price Bids) from qualified, experienced and eligible manufacturer or their authorized agents for **supply, installation and commissioning of Modular Operation Theatre** at O.T. Complex of this Institute.

Description	Schedule
Dates of sale of tender enquiry documents	Can be downloaded from institute website www.igims.org .
Cost of the Tender Enquiry Document	Rs.10, 000 /- (Rs. Ten Thousand Only)
Closing date & time for receipt of Tender	14 / 10 / 2014 up to 4:00 P.M. by regd. / speed post / courier.
Earnest Money Deposit (EMD)	2% of the total cost of the project.
Date and time of opening Technical Bid	15 / 10 / 2014 at 3:30 P.M. in the Conference Hall of the Institute.

Interested tenderers may obtain Tender Enquiry Document from the office of the Store Officer, I.G.I.M.S. – Patna on payment of non-refundable fee of Rs.10, 000/- (Rs. Ten Thousand Only) in the form of DD drawn in favour of “Director, I.G.I.M.S. – Patna” payable at Patna for the items listed in the tender.

Tenderer may also download the Tender Enquiry Documents from the web site www.igims.org. In case the downloaded forms are used, Demand Draft for Rs. 10, 000/- (Rs. Ten Thousand Only) towards application fee drawn in favour of “Director, I.G.I.M.S. – Patna” should be enclosed with the tender.

Tenderers shall ensure that their tenders are complete in all respects. The tender application can be submitted to the Office of the **Director, I.G.I.M.S. – Patna** through Speed Post / Regd. Post / Courier only to the undersigned well in advance so as to reach before the closing date and time.

The incomplete tenders and tenders received after the closing date and time will not be considered. The tenders should be accompanied by Demand Draft for EMD & Application fee (in case the tender form downloaded from website), failing which the tender will be rejected.

Technical Bid, Price Bid, Demand Draft for EMD & Application fee ((in case the tender form downloaded from website) should be kept in separate envelopes and all the three envelopes duly superscribed and should be kept in a big envelop with superscription “**Tender for Supply, Installation and Commissioning of Modular Operation Theatre**”. In case the tender opening date happens to be a holiday the tender will be opened on the next working day at the schedule time.

The Tender Enquiry Documents are not transferable. The undersigned reserves the right to reject any or all the tenders without assigning any reason thereof. Quantity of the items may increase or decrease.

Sd/-
Prof. (Dr.) N. R. Biswas
Director,
I.G.I.M.S. – Patna

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a. Eligibility Criteria:

1. Annual financial turnover during the last three years ending 31st March 2014 should be not less than Rs 08 Cr. in each year. Notary certified Certificate issued by Chartered Accountant must be submitted in support of the same.
2. The experience of having successfully installation of Modular Operation Theatres of total value not less than Rs 15 CR (Fifteen) in last three financial years ending 31st March 2014.
3. Minimum solvency certificate from banker for 50% of estimated cost.
4. Profit / Loss: The Company should have positive, Net Worth and should not have incurred any loss in three years ending 31st March, 2014. Statement duly certified by the Chartered Account to this effect must be submitted.
5. No penalty should have been levied on the bidding firm by government agencies such as Central Vigilance Commission (CVC) / Comptroller and Auditor General of India (CAG) / Competition Commission of India (CCI), etc and bidder should never have been blacklisted and or debarred by any central / state government organization.
6. Firms must submit along with the offer the necessary authority letter from their principals / manufacturer for all the items mentioned in the specifications list. (As per Annexure – C)

b. PERSONNEL, EQUIPMENT AND FINANCIAL CAPABILITIES

1. Personal Capabilities: The firm should have suitably qualified and experienced personnel for the successful completion of works. List of employees and bio-data of key officials shall be submitted stating clearly how these would be involved in this work. (Fill enclosed ANNEXURE - F).
2. Equipments Capabilities: The Applicant should submit the list of equipments for successful completion of project. (Fill enclosed ANNEXURE - G).
3. Financial Capabilities: The Audited Balance Sheets for the last three financial years (2011-2012, 2012-2013 & 2013-2014) should be submitted and must demonstrate the soundness of the Applicant's financial position showing positive net worth and net profit, (see ANNEXURE -H). Where necessary, the Director, IGIMS, Patna will make inquiries with the Applicant's bankers (Applicant to fill enclosed ANNEXURE -H)

c. EXPERIENCE OF EXECUTING OF PROJECTS OF SIMILAR NATURE & COMPLEXITY

The applicant shall submit information about their past experience in executing projects of similar nature and complexity with information about magnitude of the Projects, Type of Projects, Successfully Installation and Completion Certificate from Client, Time Overrun if any, Cost overrun if any, (Fill enclosed ANNEXURE –I)

d. OTHER INFORMATION TO BE SUBMITTED ALONG WITH TENDER

1. **Registration/License:** The firm should have Works Contract Tax/VAT Registration with the appropriate Authorities. In case the firm is not registered at the time of submission of bid, a declaration should be submitted by the firm that they will get themselves registered with the concerned authorities in case they are awarded the work.

2. The firm should submit an affidavit duly notarized that they have not abandoned or were blacklisted or penalized for any work of Union Government/State Governments/PSU's etc. during last 5 years.
 3. The applicant should provide information regarding Litigation/Arbitration cases for the last five years. (As per ANNEXURE –J)
 4. The applicant shall submit the supporting documents regarding the information given in the ANNEXURE -F to ANNEXURE –J.
- e. **Even though the Applicants meet the above criteria, they are subject to be disqualified, if they have:**
1. Made misleading or false representation in the form, statement and attachments submitted;

or
 2. Record of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures, etc while working with any organizations, or while working with Indira Gandhi Institute Medical Science, Patna

or
 3. Found to have been black listed in any of the works.

or
 4. Found to have been penalized by any **Govt. agency or Competition Commission of India (CCI)** etc. for indulging in **illegal bid rigging and cartelization** etc.
- f. The applicants are advised to visit the site to get first hand information as regards its approach, accessibility, working conditions, site conditions, availability of labor and material etc. and other matters affecting cost and work. All costs incurred in connection with submission of the tender shall be borne by the applicant irrespective of the outcome.
- g. If any information furnished by the applicant is found incorrect at a later state, applicant shall be liable to be debarred from tendering process. The department reserves the right to verify the particulars furnished by the applicant independently.
- h. Even though the agency meets the criteria, the Institute reserves the right to accept or reject any applicant/disqualify any agency without assigning any reason whatsoever.
- i. **UPDATING QUALIFICATION INFORMATION**
- Applicants shall be required to update the financial information used for Pre-Qualification as and when asked for, to confirm their continued compliance with the pre-qualification criteria.
- j. Tenderer must give details of specifications with make and model of the offered items / components against this tender. Mere writing “complied” shall not be sufficient and it will be rejected. They must submit separate detail technical sheet of all items wherever applicable.
 - k. Capacity of Air-Conditioner to be provided must be mentioned along with technical configuration and other relevant details.

INSTRUCTION TO THE BIDDER

General Instruction

1. Scope of work:

- 1.1 IGIMS, Patna invites bids from manufacturers or their authorized distributors/agents for the Supply, Installation, Testing & Commissioning of Modular Operation Theatre , Patient hold areas, Post operation areas , ICU, Dialysis room and Related Areas at theatre complex IGIMS, Patna.
- 1.2 The successful bidder will be expected to complete the works within **14-16 (Weeks)** from the date of Award of work.

2. The Institute:

- 2.1 The person authorized by the Director, I.G.I.M.S. - Patna, will enter into the agreement with the chosen contractor for & on behalf of the I.G.I.M.S.- Patna.
- 2.2 In these documents wherever the word tender/tenderer/tendering has been used, the same shall be considered synonymous with bid/bidder/bidding.

3. Information to be submitted:

All bidders shall include the following information and documents with their bids:

- a. Power of attorney of the signatory of the bid to commit the bidder.
- b. A work plan clearly bringing out how the bidder proposes to carry out the work to achieve the time schedule.
- c. **Cost of bidding documents:**

The “**Bidding Document**” can be downloaded from **institute website www.igims.org**. In case, downloaded bidding document is used, bidder(s) have to submit the cost of the Tender Document (i.e. Rs. Ten Thousand Only Non – refundable) along with the completed documents in the form of Demand Draft in favour of Director, I.G.I.M.S. – Patna payable at Patna towards cost of the “**Tender documents**”. Firm is required to attach separate D.D. for the same in a separate envelope super scribed with “**Cost of Bidding Document**”. If the cost of tender document is not submitted by the bidder(s), his offer shall be outright rejected and returned.

4. Site visit:

The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for himself on his own responsibility and at his own risk all information that may be necessary for preparing the bid and entering into a contract for the works as detailed in the Scope of work. The cost of visiting the Site shall be at the bidder's own expense.

5. Bidding Documents

Content of bidding documents:

The set of bidding documents comprises the documents listed below:

Volume-I : Pre-Qualification Criteria

6. Amendment of bidding documents:

- 6.1 Before the deadline for submission of bids, the institute may modify the bidding documents by issuing addenda.
- 6.2 Any addendum thus issued shall be part of the bidding documents and shall be made available on the official website of the institute.
- 6.3 To give prospective bidders reasonable time to take an addendum into account in preparing their bids, the Institute shall extend as necessary, the deadline for submission of bids. .

7. Preparation of Bids

Language of bid:

All documents relating to the bid shall be in English Language only.

Documents comprising the bid:

The bid submitted by the bidder shall comprise the following:

1. Bid Security
2. All information and documents regarding the pre-qualification
3. Conditions of Contract
4. Specifications
5. Bill of Quantities
6. Tender drawings, if any
7. Documents mentioned in Sl. No. 3 above.

And any other documents required be completing and submitting by bidders in accordance with these instructions.

8.0 Bid prices:

- 8.1 The bidder shall fill the rates against each item of BOQ both in words and figures.
- 8.2 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause shall be included in the rates, prices, and total amount of bid submitted by the bidder. The evaluation and comparison of bids by the Institute shall be made accordingly.
- 8.3 The rates and prices quoted by the bidder shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account.

9.0 Currencies of bid and payment:

The rate to be quoted by the bidder shall be in Indian Rupees (INR).

10.0 Bid validity:

- 10.1 Bids shall remain valid for a period of 12 month after the deadline for bid submission specified above.
- 10.2 In exceptional circumstances, the bidders may be requested to extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by fax. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will

be required to extend the validity of his bid security for the period of the extension, and in compliance with other clauses.

11.0 **Bid security:**

- 11.1 The bidder shall furnish, as part of his bid, a security **/EMD amount equivalent to 2% of the offered price** by the bidders **Rs.....**
- 11.2 The bid security shall be in the form of a Pay Order/ Demand Draft / Bank Guarantee from a Nationalized/Scheduled bank in favour of the Director, I.G.I.M.S. – Patna payable at Patna.
- 11.3 Any bid not accompanied by an acceptable bid security shall be rejected.
- 11.4 The bid security of unsuccessful bidders will be returned within 30 days of the end of the bid validity period without any interest..
- 11.5 The bid security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required performance security.
- 11.6 **The bid security will be forfeited:**
- (a) If the bidder withdraws his bid during the period of bid validity;
 - (b) In the case of a successful bidder, if he fails within the specified time limit to;
 - (i) Sign the Agreement; or (ii) Furnish the required performance security.
- 11.7 **No interest will be payable on the bid security amount cited above.**

12.0 **Sealing, Marking and Submission of bid: Two bid systems**

- 12.1 The bid shall be submitted in accordance with the procedure detailed herein. Documents shall be enclosed in separate envelopes of appropriate size each of which shall be sealed.
- a. **Technical bid:**

Technical bid comprises of bid security, Companies details, pre qualifications, original bid document with covering letter, product Catalogue, Balance sheet, certificates, company registrations etc should be sealed in one appropriate envelope.
 - b. **Financial bid:**

Financial bid contains only the bill of quantities and rates/prices duly filled in, signed and stamped without any conditions what so ever. The rates should be mentioned in figures and words, the rates in words shall prevail.

The contractor must fill up the prices both in words and figures.

All bidders are required to submit unconditional bids. Conditional bids if submitted shall be liable to be rejected and no correspondence in this regard shall be entertained.

- 12.2 The bidder shall seal the bid.
- 12.3 The technical and financial bid envelopes shall be sealed and enclosed in an envelope and addressed to **the Director, I.G.I.M.S. – Patna (Bihar), Pin Code: 800 014.**
- 12.4 All the above envelope shall bear the following identification.

Name of work: -

Supply, Installation and Commissioning of Modular Operation Theatres , Patient hold areas, Post operation areas , ICU, Dialysis Room and other Related Areas at IGIMS, Patna .

12.5 All the envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened, if required.

12.6 All recipients for the purpose of submitting a bid shall treat the contents of the documents as private and confidential.

13.0 Deadline for submission of bids:

13.1 Bids must be received by the Institute at the address specified above not later than the designated date and time.

13.2 Institute may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 8, in which case all rights and obligations of The Institute and the bidders previously subject to the original deadline will then be subject to the new deadline. This extension shall be displayed on Institute website only and no paper advertisement will be given.

14.0 Late bids:

Any bid received by the Institute after the deadline prescribed in tender notice will be returned unopened to the bidder at their cost and risk. The Institute shall not be responsible for any postal dealing.

15.0 Modification and withdrawal of bids:

15.1 The bidder may modify or withdraw his bid by giving notice in writing before the deadline prescribed in tender notice.

15.2 The bidder's modification or withdrawal notice shall be prepared, sealed, marked and delivered in accordance with the clause, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL", as appropriate.

15.3 No bid may be modified after the deadline for submission of bids.

15.4 Withdrawal of bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in the Form of Bid may result in the forfeiture of the bid security.

16.0 Tender Opening and Evaluation

Bid opening:

16.1 **Technical Bids only shall be opened in the conference hall of the Institute at Patna on the date prescribed in the Tender Notice after the prescribed due time for tender submission in presence of the bidder's representatives who may wish to be present.**

The Technical bid envelope of each bidder will be opened to ascertain the bid security, pre qualifications and the information and documents submitted shall be evaluated.

The financial bid envelope of only those bidders who meet the pre qualification criteria and are pre qualified shall be opened at a subsequent date to be intimated to such eligible bidders on Institute website (www.igims.org).

- 16.2 The Committee constituted by the Institute (Technical Evaluation Committee & Price Evaluation Committee) will examine the bids to determine whether they are complete, whether the requisite bid securities have been furnished, whether the bids have been properly signed and whether the bids are generally in order.
- 16.3 Telegraphic/Fax offer will be treated as defective/invalid and thus rejected. Only detailed complete bids received prior to the closing time and date will be taken as valid.
- 16.4 The bidders names, general technical details, the presence of the requisite bid security and such other details, as the Committee at its discretion may consider appropriate, will be announced at the bid opening.
- 16.5 The bid of any bidder who has not complied with any of the instructions contained herein may not be considered.

17.0 Process to be confidential:

- 17.1 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the Director, I.G.I.M.S. - Patna or any other Officer of the IGIMS, Patna in processing of bids or award decisions may result in the rejection of his bid.

18.0 Clarification of bids:

- 18.1 To assist in the examination, evaluation, and comparison of bids, the competent authority or representatives of the same, at i t s / t h e i r discretion, ask any bidder for clarification of his bid, including break down of unit rates. The request for clarification and the response shall be in writing or by fax, but no change in the price or substance of the bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Committee, in the evaluation of the bids in accordance with relevant clauses.

19.0 Examination of bids and determination of responsiveness:

- 19.1 Prior to the detailed evaluation of bids, the committee constituted by the Institute, will determine whether each bid
- (a) Meets the eligibility criteria;
 - (b) Has been properly signed;
 - (c) Is accompanied by the required securities;
 - (d) Is substantially responsive to the requirements of the bidding documents;
 - (e) Provides any clarification and/or substantiation that, the committee constituted by the Director, I.G.I.M.S. - Patna, may require.
- 19.2 A substantially responsive bid is one which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is:
- (a) One which affects in any substantial way the scope, quality, or performance of the Works; or
 - (b) One which limits in any substantial way or is inconsistent with the bidding documents, the I.G.I.M.S., Director's right or the bidder's obligations under the contract; or
 - (c) One whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

- 19.3 If a bid is not substantially responsive, it will be rejected by the Committee, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

20.0 **Correction of errors:**

- 20.1 Bids determined to be substantially responsive will be checked by the Committee, for any arithmetic errors. Errors will be corrected by the Committee as follows:
- (a) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
 - (b) If the bidder does not accept the corrected amount of bid, his bid will be rejected, and the bid security may be forfeited in accordance with clauses mentioned in this bidding document.

21.0 **Currency for bid evaluation:**

Bids shall be evaluated as quoted in Indian Rupees (INR).

22.0 **Evaluation and comparison of bids:**

- 22.1 The Committee so constituted will evaluate and compare only the bids determined to be substantially responsive in accordance with clauses mentioned in this document.
- 22.2 In evaluating the bids, the Committee, will determine for each bid the Evaluated Bid Price by adjusting the Bid Price after making any correction for errors.

23. **Award of Contract**

23.1 **Award Criteria:**

Director, IGIMS, Patna, shall take decision for award of the Contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the Lowest Evaluated Bid Price.

- 23.2 The Director, I.G.I.M.S. - Patna reserves the right to accept any bid and to reject any or all bids:

- 23.3 The Director, IGIMS, Patna reserves the right to accept or reject any bid, and to cancel the bidding process and reject all bids, at any time prior to the award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the ground for the Director, IGIMS, Patna.

24.0 **Notification of award:**

- 24.1 Prior to expiration of the period of bid validity prescribed, the Store Officer, I.G.I.M.S. - Patna, on behalf of competent authority, will notify the successful bidder by fax, confirmed by registered post /courier letter that his bid has been accepted. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") shall name the estimated sum which the Institute will pay the Contractor in consideration of the Execution, Completion, and Maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").
- 24.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provision mentioned in this document.

- 24.3 Upon furnishing by the successful bidder of a Performance Security, the Store Officer, I.G.I.M.S. - Patna, on behalf of the competent authority will promptly notify the other bidders that their bids have been unsuccessful.

25.0 After Sales Service Conditions:

- The Institute is in the pursuit of ensuring excellent after sales service for every user in respect of the equipments supplied under this contract. The after sales terms and conditions will be strictly enforced and those Bidders who are willing to support the Institute in its endeavor to provide trouble free operation/performance of the equipments for the prescribed period need only participate in the tender.
- The after sales service shall be performed during the warranty period and also during the Comprehensive Maintenance Period (CMC)/ Annual Maintenance Contract, if awarded. The detailed terms and conditions for after sales service mentioned hereunder.

26.0 Guarantee/Warranty Terms:

- i. The successful Bidder has to warrant that the Goods supplied under this Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.
- ii. The successful Bidder further have to warrant that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Tender Inviting Authority's specifications) or from any act or omission of the successful Bidder, that may develop under normal use of the supplied goods.
- iii. All the equipments including the accessories supplied as per the technical specification as mentioned in the bidding document should carry comprehensive warranty (including all spares, accessories and consumables) for a period mentioned in this document in the first instance. During this period, the successful Bidder shall replace all defective parts / accessories / consumables and attend to all repairs/break downs and undertake stipulated number of preventive maintenance visits to every user installation site. The cost of spare parts for all replacements has to be borne by the successful Bidder during the period of comprehensive warranty. The items which are not covered under warranty should be clearly mentioned along with rate of the items.
- iv. On expiration of the comprehensive warranty period, the successful Bidder shall be willing to provide after sales support for an additional period prescribed in this document.
- v. The prospective Bidder, who are manufacturers, shall submit an undertaking from the Original Equipment Manufacturers (OEM) that they are willing to provide spare parts for the period of warranty as mentioned and also during the additional CMC/AMC period, if awarded. The OEM shall also assure continuity of service to their product, in the event of change in dealership or the Bidders – their existing dealers - couldn't provide service during the warranty / CAMC period. The undertaking from OEM is an essential document forming part of the Technical Bid, without which the tenders will be rejected summarily in the first round itself.

- vi. After sales service centre in Patna (Bihar) preferably or at least in East India should be available as part of the pre-qualification and the Bidder shall provide proof of their capability to undertake such maintenance/repair within the stipulated time.
- vii. The successful Bidder shall provide preventive maintenance as per the frequency mentioned in this document during the warranty period. The Bidder shall attend any number of break down/repair calls as and when informed by the institute authority.
- viii. Upon receipt of such notice for repair/breakdown from the institute, the successful Bidder shall, within the period as specified in this document, and with all reasonable speed, repair or replace the defective goods or parts thereof, without cost to the Tender Inviting Authority.
- ix. If the successful Bidder, having been notified, fails to rectify the defect(s) within the period specified mentioned in this document, the Tender Inviting Authority may proceed to take such remedial action as may be deemed necessary, at the successful Bidder's risk and cost and without prejudice to any other rights which the Tender Inviting Authority may have against the successful Bidder under the contract.
- x. Failure to attend the repairs in time or failure to attend the stipulated preventive maintenance visit or failure to replace the defective equipments or to provide stand by equipment if the fault/down time exceeds the stipulated period or to ensure the stipulated up-time in an year shall lead to forfeiture of the performance security and/or may lead to blacklisting/debarring of the defaulting Bidder.
- xi. The equipment which requires quality assurance test shall be done at free of cost immediately after installation, during the comprehensive warranty period, during the CMC / AMC period, by the demand of User and also when major spares are replaced.
- xii. Any mandatory approval required for installation shall be obtained by the successful Bidder in liaison with the respective authorities.
- xiii. The Bidder shall submit the parameters which require calibration and the frequency of calibration required.
- xiv. The Bidder shall undertake on-site calibration of the equipment every year as part of the after sales service during the period of comprehensive warranty, CMC/AMC or on demand from the user.
- xv. The Bidder shall also have to submit whether periodic replacements of consumable items are required for proper functioning of their quoted machine/Equipment? If yes they should submit the list of such consumables along with price list and frequency of replacement per year, if the same is not replaced free of cost during warranty / guarantee period.
- xvi. The offered warranty includes:
 - a. Visits to the user institutions at frequencies prescribed as part of preventive maintenance.
 - b. Testing & calibration as per technical/service/operation manual of the manufacturer or as per the period specified or as per the demand of the user.
 - c. Quality Assurance tests (if applicable).
 - d. The cost of labour for all repairs/ and all spares required for replacement during repairs all kinds of accessories, Probes, all types of sensors and transducers, Electrodes, Detectors, battery, battery for UPS, other vaccumatic parts etc wherever applicable and also the accessories and other devices supplied along with the equipments like stabilizer,

UPS, AC, Computer, Compressor, Monitor, etc, which forms part of the equipment system, without which it cannot perform satisfactorily.

- e. The exclusion of warranty of any vital equipment parts will be compared with offers of other Bidders during evaluation of the bids and this may be taken into consideration in deciding the successful Bidder on the basis of expert advice.
- f. The Bidder shall provide up-time warranty of complete equipment as mentioned in this document, the uptime being calculated on 24 (hrs) X 7 (days) basis failing Warranty period will be extended for every additional day of down time equal to one week.
- g. All software updates, if any required, should be provided free of cost during Warranty period.

27.0 Comprehensive Annual Maintenance Contract:

- The decision to enter into CMC or AMC will be determined on the basis of cost and complexity of the equipment by the Tender Inviting Authority, at its discretion, prior to the expiration of warranty period.
- The Comprehensive Maintenance Contract (CMC) is otherwise an extended warranty. All the terms and conditions agreed by the successful Bidder for executing the comprehensive warranty of the equipment shall be extended during the period of CMC, only difference being the payment of CMC charges is absent during the period of comprehensive warranty.
- The cost of CMC, accessories and spares, reagents and consumables as in case may be quoted along with taxes applicable, if any. The taxes to be paid extra, to be specifically indicated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
- Failure/refusal on the part of the successful tender supplying/installing the equipments to enter into CMC with the Tender Inviting Authority, at the end of the Comprehensive Warranty Period, if the Institute, as the case may be, desires so, shall lead to forfeiture of performance security and may also result in the blacklisting/debarring of the Bidder.
- The successful Bidder shall also indicate the rates for the CMC in price bid form and such rates are binding on the successful tenders after the expiration of the warranty period. The yearly rates for CMC shall remain the one and the same as quoted in the price bid form for the extended years.
- Cost of CMC (excluding taxes, if any) will be considered for Ranking/Evaluation purpose.
- The payment of the agreed CMC charges will be made as per frequency for payment after satisfactory completion of said period, on receipt of service report/ break down report from the user.
- The Bidder shall also have to submit whether periodic replacement of consumable items are required for proper functioning of their quoted machine/Equipment? If yes they should submit the list of such consumables along with price list and frequency of replacement per year if the same is not included in quoted Comprehensive Annual Maintenance Contract charges per year.

28.0 Time Limits prescribed

Sl. No	Activity	Time Limit
a.	Installation & Delivery Period	08 to 12 weeks from date of issuance of Supply Order
b.	Comprehensive Warranty Period	5 years from the date of successful installation.
c.	CAMC Period	5 years
d.	Frequency of visits to all User Institution concerned during Warranty/CMC	One visit every three months (4 visits in a year) for periodic/preventive maintenance and any time for attending repairs / break down calls.
e.	Frequency of payment of CAMC charges	Every six months after completion of the Period.
f.	Submission of Performance Security and entering into contract	20 days from the date of issuance of Letter of Intent.
g.	Maximum time to attend any Repair call	Within 24 hours.
h.	Uptime in a year during warranty as well as during CAMC period.	95% of 365 days.

- 29.0 Firm have to provide a minimum **UPTIME GUARANTEE** of 95% (95% of 365 Days) per year during the warranty period as well as during the Comprehensive Annual Maintenance Contract.
- 30.0 **While calculating the total unit price of the item / system to be procured, expenditure to be incurred in maintenance of the quoted item / system including all spare parts for a total period of five years after expiry of the warranty period of five years shall also be taken into consideration. Accordingly, it is mandatory for the bidders to submit the rate for Comprehensive Annual Maintenance Contract (with spares) for a minimum period of five years after the expiry of warranty period of five years.**
- 31.0 Supplier will submit undertaking for ensuring uninterrupted supply of spares during the total life span of the equipments.
- 32.0 Indian agency commission and Installation charge if any will be paid in Indian rupees after successful installation and demonstration of the equipments.
- 33.0 Principal's Invoice of the quoted items must be submitted with the quotations.
- 34.0 Proof of the official Indian agent certificate of the firm must be attached. (Notary Certified Photocopy)
- 35.0 In order to fully and optimally utilize the equipment, training to Para Medical Staffs and Doctors should be provided. In continuation to this training, separate maintenance training for the machine and the sub systems should also be given to the "Equipment Maintenance Engineer" and "Equipment Maintenance Technicians". All the financial commitments in this regard shall be met by the bidder(s).
- 36.0 Bidder(s) have to submit an affidavit to the effect that they have not supplied the offered item(s) to any Govt., semi Govt. / Pvt. Organization, Institution, Nursing Home etc. at the price lower than the price offered to I.G.I.M.S. – Patna.
- 37.0 All the claims regarding meeting the specifications shall be duly supported by appropriate, latest technical catalogues/brochures from the manufacturer. Simply stating that the equipment(s) meets the specifications is not sufficient and any such quotations will

be summarily rejected. Computer printed documents or Photostat copy or laser printouts will not be accepted as technical catalogues / brochures.

Section II. Conditions of Contract

A. General

1.0 Definitions:

- 1.1 Terms which are defined in the Contract Data are not defined in the Conditions of Contract but Keep their defined meanings. Capital initials are used to identify defined terms.

Acceptance is the date when the Contract came into existence upon receipt by the Contractor of the Letter of Acceptance issued by the Store Officer, I.G.I.M.S. - Patna on behalf of the competent authority.

The Activity Schedule is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works.

The Completion Date is the date when the, Store Officer, IGIMS, Patna notifies that the works can be used by the Institute.

The Contract is the contract between the Institute on the one part and the Contractor on the other.

The Contract Data defines the documents and other information which comprise the Contract.

The Contractor is a person or corporate body whose bid to carry out the Works has been accepted by the Institute.

The Contractor's Bid is the completed bidding document submitted by the Contractor to the Institute.

The Contract Price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; months are calendar months.

A Defect is any part of the Works not completed in accordance with the Contract.

Committee constituted by the Director, I.G.I.M.S. - Patna/ Officer authorized by the Director, I.G.I.M.S. - Patna is the person named in the Contract Data who is responsible for supervising the Contractor, administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the Contract, awarding extensions of time etc.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The Initial Contract Price is the Contract Price at the date of the Institute's written acceptance of the Contractor's Bid.

The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the, competent authority IGIMS, Patna by issuing an Extension of time.

Plant is an integral part of the Works which is to have a mechanical, electrical, electronic or chemical function.

The Site is the area defined as such in the Contract Data.

The Start Date is given in the Contract Data. It is the date when the Contractor can commence Work on the Contract. It does not necessarily coincide with any of the Site Possession Dates.

A Subcontractor is person or corporate body who has a contract with the Contractor to carry out a part of the work in the Contract.

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

A Variation is an instruction given by the, Competent authority, IGIMS, Patna which varies the Works.

The Works are what the Contract requires the Contractor to construct, install, and hand over to the Institute.

2.0 Interpretation:

In interpreting these Conditions of Contract, singular also means plural, male also means female, and vice versa. Headings and cross-references between clauses have no significance. Words have their normal meaning under the language of the Contract unless specifically defined.

3.0 Language and law:

The language of the Contract and the law governing the Contract are stated in the Contract Data.

4.0 Director, IGIMS, Patna, decisions:

The **Director, I.G.I.M.S. - Patna**, is to decide contractual matters between the Institute and the Contractor fairly and impartially.

5.0 Delegation:

The Director, I.G.I.M.S. - Patna, may delegate any of his powers and responsibilities to other people after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6.0 Communications:

Communications between parties which are referred to in the conditions are effective only when in writing.

7.0 Removal of personnel:

If the Director, I.G.I.M.S. - Patna or an authorized officer, asks the Contractor to remove a person who is a member of his staff or his work force and states his reasons the Contractor is to ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

8.0 Contractor's risks:

All risks of loss or damage to the, IGIMS Patna, and property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

Excepted Risks are:

- a.
 - (i) War, hostilities (whether war be declared or not), invasion, act of foreign enemies.
 - (ii) Rebellion, revolution, insurrection, or military or usurped power, or civil war.
 - (iii) Ionizing radiations, or contamination by radio - activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio- active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component thereof.
 - (iv) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speed.
- b. Loss or damage due to the use or occupation by the Institute of any section or part of the Permanent Works, except as may be provided for in the Contract.
- c. Loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible.

9.0 Insurance:

- 9.1 The following insurance cover is to be provided by the Contractor in the joint names of the Institute and the Contractor for the period from the Start Date to the end of the Defects Notice Period or of the last Defects Correction Period whichever is later:
 - (a) Cover against damage to other people's property caused by the Contractor's acts or omissions;
 - (b) Cover against death or injury caused by the Contractor's acts or omissions to
 - (i) Anyone authorized to be on the Site;
 - (ii) Third parties who are not on the Site;
 - (c) Cover against damage to the Works and materials during construction.
- 9.2 Policies and certificates for insurance are to be produced by the Contractor to the Store Officer, IGIMS, Patna, for approval before the Start Date given in the Contract Data and subsequently as the Authorities, may require.
- 9.3 If the Contractor does not produce any of the policies and certificates required, the Competent Authority, IGIMS, Patna may affect the insurance for which the Contractor should have produced the policies and certificates and recover the premiums paid from payments due to the Contractor.
- 9.4 Alterations to the terms of insurance may be made either with the approval of, the Competent Authority, IGIMS, Patna, or as a result of general changes imposed by the insurance company with which the insurance policy is affected.
- 9.5 Both parties are to comply with conditions of the insurance policies.

10.0 Indemnities:

- 10.1 The Contractor is liable for and indemnifies the Institute against losses, expenses and claims for loss or damage to the physical property of IGIMS, Patna or its personal's injury, and death caused by his own acts or omissions.
- 10.2 The Contractor indemnifies the Institute against claims for damage caused by the movement of his Equipment or Temporary Works outside the Site.

11.0 Queries about the contract data:

The Store Officer, IGIMS, Patna, is to give instructions clarifying queries about the Contract Data.

12.0 Contractor to execute the works:

The Contractor is to execute the work of supply, installation, testing & commissioning of Modular Operation Theatres & ICU and related areas in accordance with the Specifications and Contract.

13.0 The works to be completed by the intended completion date:

The Contractor may begin the Works on the Start Date and is to carry out the Works in accordance with the program submitted by him, as updated with the approval of the Director, IGIMS, Patna, and complete them by the Intended Completion Date.

14.0 Approval of samples shall be taken by the contractor prior to their delivery at site.

15.0 Safety:

The Contractor is responsible for the safety of all activities on the Site.

16.0 Possession of the site:

The Institute is to give possession of all parts of the Site to the Contractor, where the work is required to be executed. If possession of a part is not given by the date stated in the Contract Data, the Institute is deemed to have delayed the start of the relevant activities.

17.0 Access to the site:

The Contractor is to allow the Director, IGIMS Patna, and any person authorized by the Director, IGIMS, and Patna access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

18.0 Instructions:

The Contractor shall carry out all instructions of the Director, IGIMS Patna, or an authorized officer of the Institute.

19.0 Procedure for disputes:

If any dispute or difference of any kind what so ever shall arise between the Employer and the Contractor or the Store Officer or Authorized Officer of, IGIMS Patna, and the contractor in connection with or arising out of the Contract, or the execution of the works, whether during the progress of the works or after their completion and whether before or after the termination, abandonment or breach of the contract, it shall, in the first place, be referred to and settled by, the Director, IGIMS Patna, who shall, within a period of ninety days after being requested by either party to do so, give written notice of his decision to the Contractor. Subject to arbitration, as hereinafter provided, such decision in respect of every matter so referred shall be final and binding upon the Contractor and shall forthwith be given effect to by the Institute and by the Contractor, who shall proceed with the execution of the works with due diligence whether he or the Institution requires arbitration or not. If the Director, IGIMS Patna, has given written notice of his decision to the Institute and the Contractor and no claim to arbitration has been communicated to him by either the Institute or the Contractor within a period of ninety days from receipt of such notice, the said decision shall remain final and binding upon the Institute and the Contractor. If the Vice-Chancellor, IGIMS Patna, shall fail to give notice of his decision, as aforesaid within a period of

ninety days after being requested, or if either the Institute or the Contractor be dissatisfied with any such decision, then and in any such case either the Institute or the Contractor may within ninety days after receiving notice of such decision or within ninety days after the expiration of the first named period of ninety days as the case may be require that the matter or matters in dispute be referred to arbitration as hereinafter provided. All disputes or differences in respect of which the decision if any of the Director, IGIMS, Patna, has not become final and binding as aforesaid, shall be finally settled under the Indian Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. Such arbitration shall be settled by Sole arbitrator who shall be appointed by the Director, IGIMS Patna. The arbitration shall take place in Patna. Unless both parties agree otherwise. Neither party shall be limited in the proceedings before the arbitrator to the evidence nor did arguments put before the Director, IGIMS, Patna, for the purpose of obtaining his said decision. No decision given by the Director, IGIMS Patna, in accordance with the foregoing provisions shall disqualify him from being called as a witness and giving evidence before the arbitrator on any matter whatsoever relevant to the dispute or difference referred to the arbitrator as aforesaid. The reference to arbitration may proceed notwithstanding that the works shall not then be or be alleged to be complete provided always that the obligations of the Institute, the Director, IGIMS, Patna, and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the works.

B. Time Control

20.0 Program:

- 20.1 Within the time stated in the Contract Data, the Contractor shall submit to the Store officer, IGIMS Patna for approval a program showing the general methods, arrangements, order and timing for all the activities in the Works.
- 20.2 The Contractor is to submit to the Store officer, IGIMS Patna, an updated program as required by, the Director, IGIMS Patna,.
- 20.3 The Director, IGIMS Patna's, approval of the program does not alter the Contractor's obligations. The Contractor may revise the program and submit it to the Store officer, IGIMS Patna, again at any time. A revised program is to show the effect of Variations.

21.0 Extension of the intended completion date:

- 21.1 The Director, IGIMS Patna, is to extend the Intended Completion Date if an event not attributable to the contractor causing delay occurs or a Variation is issued which makes it impossible for completion to be achieved by the Intended Completion Date.
- 21.2 The Director, IGIMS Patna, is to decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking him to decide upon the effect of a event causing delay or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delayer has failed to cooperate in dealing with a delay, the delay by his failure is not considered in assessing the new Intended Completion Date.

22.0 Delays ordered by The Director, IGIMS Patna:

The Director, IGIMS Patna, may instruct the Contractor to delay the start or progress of any activity within the Works.

23.0 Management meetings:

- 23.1 The committee constituted by the Director, IGIMS Patna and / the Contractor may be required to attend management meetings. The business of a management meeting is to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

C. Quality Control:

24.0 Identifying defects:

The committee constituted by the Director, IGIMS Patna, is to check the Contractor's work and to notify the Contractor of any Defects which he finds. Such checking does not affect/absolve the Contractor's responsibilities. The Director, IGIMS Patna, may instruct the Contractor to search for a Defect and to uncover and test any work which he considers may have a Defect.

25.0 & 26.0 Inspection & Tests:

Inspection and Tests of the material will be carried out wherever mentioned in the technical specifications before supply to the site and for other plumbing, electrical and masonry work as per the relevant BIS. In case it is not available in BIS the same shall be carried out as per decision given by The Director IGIMS Patna, based on existing general practice which will be binding to the agency. The material which is not passing to BIS or any other test will be rejected or may be accepted with reduced rates as per decision taken by The Director IGIMS Patna,

27.0 Warranty Period:

- The “**Complete System**” shall remain under warranty period of **Five years** from the date of satisfactory installation. The Complete System should include the basic unit and allied supporting components like UPS, Computer System, Printer, De-ionizer, Dehumidifier etc to be supplied by the bidder along with basic unit.
- During warranty period of **five** years, bidder shall provide at least **four maintenance visits per year** at regular interval for usual maintenance and supervision. If bidder fails to provide these maintenance visits at regular interval, a proportionate deduction in the form of penalty on pro-rata basis will be recovered from the bidder from the Bank Guarantee amount. In case the Bank Guarantee is not adequate, Institute shall have right to recover the losses / penalty from other sources as well.
- Bidder shall also attend all breakdown calls within 48 hours of the receipt of the information from institute through fax/e-mail/mobile/sms etc.
- During warranty period, **bidder** shall maintain and keep **95% uptime** per year of the “**Complete System**” as per calculation given below:-.

1 Year = 365_days

95% of 365 days = 347 Days per annum

- The bidder shall compensate the uptime less than the specified above for **every additional day** of down time over and above 18 days stipulated above, warranty period will get extended by one week as penalty at no extra cost i.e. the extended penalty period will be equal to one week for every additional day of down time.
- During warranty period, **bidder** will make the “**Complete System**” in satisfactory working condition. In case, any spare parts, accessories, PCB, consumables etc. needs replacement due to normal wear and tear, **bidder** will supply and install the same for which no additional payment is to be made. If any spares / accessories / consumables etc. are not replaced by the bidder during warranty period, bidder should mention it

clearly with name of the items with frequency of replacement and its rate with a validity to cover warranty period.

- In case, the **bidder** is not able to provide services (and the items / accessories is not functioning as the reason thereof) due to natural calamity (act of God), Political unrest, Riot and fire at the user site, then in such a situation the warranty period will be extended by the period for which the item / accessories could not be operated because of supplier not been able to provide services.
- During warranty period, in case of any alleged damage due to accident / human error, a committee under the Chairmanship of Director, I.G.I.M.S. – Patna with one member from the bidder and one member from the Institute will decide the authenticity of the claim. The decision of the committee shall be final and binding on both the parties.

27.1. **After Sales Services:**

- a. After expiry of the warrantee/Guarantee period of the equipment, the Indian agent will have to undertake the Comprehensive Annual Maintenance contract (with spare parts, accessories, consumables etc.) of the Complete System for the further life span of equipment. The life span of the equipment shall not be less than ten years. In special circumstances the total life span of the Equipment/ items may be reduced by the Institute.
- b. The Complete System should include the basic unit and allied supporting components like UPS, Stabilizer, Computer System, Printer, De-ionizer, Dehumidifier etc to be supplied by the bidder along with basic unit.
- c. During Comprehensive Annual Maintenance Contract, bidder shall provide at least **four maintenance visits per year** at regular interval for usual maintenance and supervision. If bidder fails to provide these maintenance visits at regular interval per year, a proportionate deduction in the form of penalty at the rate of 25% of contract amount per year will be deducted.
- d. Bidder shall also attend all breakdown calls within 48 hours of the receipt of the information from institute through fax/e-mail/mobile/sms etc.
- e. During Comprehensive Annual Maintenance Contract, **bidder** shall maintain and keep **95% uptime** per year of the “**Complete System**” as per calculation given below:-

$$1 \text{ Year} = 365 \text{ days}$$

$$95\% \text{ of } 365 \text{ days} = 347 \text{ Days per annum}$$

- a. The bidder shall compensate the uptime less than the specified above for **every additional day** of down time over and above 18 days stipulated above, warranty period will get extended by one week as penalty at no extra cost i.e. the extended penalty period will be equal to one week for every additional day of down time.
- b. During Comprehensive Annual Maintenance Contract, **bidder** will make the “**Complete System**” in satisfactory working condition. In case, any spare parts, accessories, PCB, all type of consumables etc. needs replacement due to normal wear and tear, **bidder** will supply and install the same for which no additional payment is to be made. **.If any spares / consumables / accessories etc. are not covered under Comprehensive Annual Maintenance Contract charges; it should be clearly mentioned with frequency of replacement and with rate. The validity of rate of such items should also be mentioned clearly. What will be the rate of escalation on the quoted rate after expiry of the validity of rate of such item must be mentioned.**

- c. The payment of Comprehensive Annual Maintenance Contract will be made on half yearly basis after submission of satisfactory functioning report of the Complete System by the officials authorized by the Institute.
- d. In case, the **bidder** is not able to provide services (and the items / accessories is not functioning as the reason thereof) due to natural calamity (act of God), Political unrest, Riot and fire at the user site, then in such a situation the Comprehensive Annual Maintenance Contract will be extended by the period for which the item / accessories could not be operated because of supplier not been able to provide services.
- e. During Comprehensive Annual Maintenance Contract, in case of any alleged damage due to accident / human error, a committee under the Chairmanship of Director, I.G.I.M.S. – Patna with one member from the bidder and one member from the Institute will decide the authenticity of the claim. The decision of the committee shall be final and binding on both the parties.
- f. The offered warranty & Comprehensive Annual Maintenance Contract period should includes:
 - The selected agency shall Check air quality, maintenance and replacement of HEPA Filters whenever required during the warranty as well as during the Comprehensive Annual Maintenance Contract period.
 - Shall do Testing & calibration as per technical/service/operation manual of the manufacturer or as per the period specified or as per the demand of the user institute.
 - Quality Assurance tests (if applicable).
 - The Supplier / fabricator of the Modular OT will have to give a written undertaking that it will be his responsibility to test and maintain all the equipment (during warranty as well as during CAMC) which is fitted in the OT facility and this will include air quality inside the OT and periodic maintenance of the HEPA filters and other maintenance & checks of the Laminar flow system, scrub stations, Automatic door systems, OT Control Panel systems, X-Ray Viewing Systems, Peripheral Lighting, etc.
 - **Training**
 The successful tenderers shall have to impart on-site operational and maintenance training to Institute Maintenance Team on the operation and preventive maintenance of the equipment at the time of installation and anytime during warranty period / comprehensive annual maintenance contract period if demanded by the User Institution up to the satisfaction of the maintenance team. The training details shall be recorded in the installation certificate for enabling the Tender Inviting Authority to satisfy himself before making the payment.

27.2. **Performance Security**

- a. There will be a performance security deposit amounting to 10 % of the total value of the equipment excluding taxes, which shall be submitted by the successful bidder within 10 days from the date of issuance of “Letter of Intent”.
- b. The contract duly signed and returned to the Institute shall be accompanied by a demand Draft or Bank Guarantee in the prescribed format.
- c. Upon receipt of such contract and the performance security, the Institute shall issue the Supply Orders containing the terms and conditions for the execution of the order.

- d. Failure of the successful bidder in providing performance security as mentioned above and / or in returning contract copy duly signed in time shall make the bidder liable for forfeiture of its EMD.
- e. The Performance security shall be denominated in Indian Rupees or in the currency of the contract as detailed below:
 - i. It shall be in any one of the forms namely Account Payee Demand Draft or Bank Guarantee issued by a Scheduled bank in India, in the prescribed form as provided in this document endorsed in favour of the Institute.
 - ii. Institute will release the Performance Security without any interest to the successful bidder on completion of the successful bidder's all contractual obligations including the warranty obligations & after receipt of certificates confirming that all the contractual obligations have been successfully complied with.
- a. An undertaking of the principal regarding continuity of after sales and services (CAMC) @ the agreement rate even in case of changes of Indian agent during the life span of the equipment must be enclosed in the technical bid. Further, it will be the responsibility of the manufacturer Indian agent to get counter signature on the agreement to be executed with them by the principal.

28.0 Incorrect defects after completion date:

- 28.1 After completion The Director, IGIMS Patna may arrange for a third party to correct a Defect if the contractor has not corrected it within the Defects Correction Period.
- 28.2 An officer authorized by the Director, IGIMS Patna shall give the Contractor at least 28 days notice of his intention to use a third party to correct a Defect. If the Contractor does not correct the defects himself within this notice period, The Vice-Chancellor, IGIMS Patna / an Officer authorized by The Director, IGIMS Patna may have the defect corrected by the third party. The cost of the correction will be deducted from the Contract Price.

D. Cost Control:

29.0 Bill of quantities:

- 29.1 The Bill of Quantities is to contain items for the work to be done by the Contractor.
- 29.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

30.0 Changes in the quantities:

- 30.1 Final work done may exceed to any extent item wise as well as total work value wise, as per the requirement of the works to be executed under the contract.
- 30.2 If requested by the committee constituted by the IGIMS Patna the Contractor is to provide with a detailed cost breakdown of any rate in the Bill of Quantities.

31.0 Variations:

- 31.1 All Variations are to be included in updated programs produced by the Contractor.

32.0 Payments for variations:

If the contract does not contain any rates or prices applicable to the varied work, the rates and prices in the contract shall be used as basis for valuation so far as may be reasonable, failing which, after

due consultation by The IGIMS Patna with the contractor, suitable rates or prices shall be agreed upon between the committee constituted by the Director, IGIMS Patna and the contractor. In the event of disagreement, the Director, IGIMS Patna, shall fix such rates or prices as are, in his opinion, appropriate based on norms and shall notify the contractor accordingly.

33.0 Cash flow forecasts:

33.1 The contractor shall provide cash flow forecast at the start of work to the Store officer, IGIMS Patna When the program is updated; the Contractor is to provide the Store officer, IGIMS Patna with an updated cash flow forecast.

34.0 Payment certificates:

34.1 The contractor shall submit to the Store officer, IGIMS Patna, monthly statements of the value of the work completed less the cumulative amount certified previously on a printed Performa (prepared at the cost of Contractor).

34.2 The Store officer or any officer authorized by the Director, IGIMS Patna shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

34.3 The Director, IGIMS Patna, may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

35.0 Payment Terms

35.1 Payment:

- 100% L.C. will be opened as per order value. However, payment will be released as per following scheduled:-
- 15% of the contract amount will be released as mobilization advance on receipt of Bank Guarantee of the same amount with a validity to cover up the successful installation, and commissioning by the bidder and acceptance by the institute authorities.
- 80% of the contract amount after adjusting 15% of the contract amount, which was released as mobilization advance, will be made after supply, successful installation and commissioning of the complete system by the bidder and on submission of satisfactory Installation Report and acceptance issued by the institute authority.
- Balance 20% will be released after expiry of warranty period of five years or on submission of Bank Guarantee of 10% of the contract amount with a validity to cover the warranty period of five years. The Bank Guarantee of 10% of the contract amount, which was submitted by the bidder before as performance guarantee the award of work shall be taken into consideration for adjustment for release of 20% of the contract amount at this stage.

36.0 Taxes:

Taxes shall be paid extra as applicable.

37.0 Cost of Labor:

The Contractor shall be deemed to have allowed in his Tender Price for the full cost of labor having due regard to the provision of all labour legislation of the Central and State Government which are in force on the date of the tender and which are applicable to labor engaged for the Contract.

38.0 Retention Amount:

38.1 The Institute is to retain from each payment due to the contractor the proportion stated in the Contract data until completion of the whole of the Works.

38.2 On Completion of the whole of the Works, half the total amount retained is repaid to the Contractor and balance half when the Defects Notice Period has passed and the Store officer, IGIMS, Patna has certified that all Defects notified by him to the Contractor before the end of this period have been corrected. The second half of the retention may be paid against submission of Bank Guarantee approved by the competent authority of IGIMS Patna, from any Nationalized/Scheduled bank if applicable.

39.0 Liquidated damages:

39.1 If the contractor fails to complete execution of works within the relevant time as specified in the Contract Data/ Extended date, the contractor shall pay the Institute the relevant sum as stated in the Contract Data as liquidated damages for every day or part of a day which shall elapse between the relevant time of completion and the date stated in Taking over certificate

40.0 Securities:

40.1 The performance payment securities are to be provided to the Institute by the Start Date and are to be issued in a form and by a bank acceptable to the Institute.

40.2 If there is no reason to call the performance security, the performance security is to be returned by the Institute within 14 days of the last Defects Correction Period.

40.3 The Institute is to notify the Contractor of any claim made against the Institution issuing the security.

40.4 The Institute may claim against the surety if any of the following occurs for 42 days or more

(a) The Contractor is in breach of the Contract and the Institute has notified him that he is in breach of the contract.

(b) The Contractor has not paid an amount due to the Institute.

41.0 Cost of repairs:

Loss or damage to the Works or materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods is to be mended by the Contractor at the Contractor's cost if the loss of damage arises from the Contractor's Acts or Omissions.

E. Finishing the Contract:

42.0 Completion:

The committee constituted by the Director IGIMS Patna, shall issue a certificate certifying Work Completion to the Contractor and the Institute when the committee so constituted decides that the work is completed.

43.0 Taking over:

The Institute shall take over the works within seven days of the issuing a certificate of completion by competent authority of IGIMS Patna,

44.0 Final account:

44.1 The Contractor shall furnish to the , the Store officer, IGIMS Patna a detailed account of the total amount which he considers is payable to him under the Contract before the end of the Defects Notice Period. The Store IGIMS Patna, is to certify any final payment which is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Store officer, IGIMS Patna, is to issue a schedule which states the scope of the corrections or additions which are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, Officer authorized

by The Director, IGIMS Patna, is to decide on the amount payable to the Contractor, after getting approval by the Director, IGIMS Patna.

45.0 Operating and maintenance manuals:

The contractor shall submit operation and maintenance manual for the complete Modular Operation Theatres, clearly indicating the trouble shooting, the preventive maintenance to be carried out and maintenance schedule, in three sets in hard binding.

46.0 Remedies and Powers due to Default of Contractor:

46.1 If the contractor shall become bankrupt or if the Officer authorized by The Vice-Chancellor, IGIMS Patna, shall certify in writing to the Institute that in his opinion the contractor.

- a) Has abandoned the contract, or
- b) Without reasonable excuse has failed to commence the work or has suspended the progress of the works for twenty eight(28) days after receiving from, the Store officer, IGIMS Patna, written notice to proceed, or
- c) Has failed to remove materials from the Site or to pull down and replace work within twenty eight (28) days after receiving from, the Store officer IGIMS Patna, written notice that the said materials or work had been condemned and rejected by the committee constituted by the Director, IGIMS Patna, under these conditions, or
- d) Despite previous warnings by the Store officer IGIMS Patna, in writing, is not executing the works in accordance with the contract, or is persistently or flagrantly neglecting to carry out his obligations under the Contract, or
- e) Has to the detriment of good workmanship, or in defiance of the Director, IGIMS Patna's instructions to the contrary, sublet any part of the contract, then all the events mentioned in this clause 46.1 shall for the avoidance of doubt be a breach of this contract and the Institute may, after giving fourteen (14) days notice to the contractor, enter upon the site and the works and expel the contractor there from without thereby avoiding the contract, or releasing the Contractor from any of his obligations or liabilities under the contract, or affecting the rights and powers conferred on the Institute or the Competent authority of the, IGIMS Patna, by the contract, and may himself complete the works or may employ any other contractor to complete the works. The Institute or such other contractor may use for such completion so much of the constructional plant, Temporary works and materials, which have been or are deemed to be reserved exclusively for the execution of works under the provisions of the contract, as he or they may think proper, and the Institute may, at any time sell any of the said constructional plant, Temporary works and unused materials and apply the proceeds of sale in or towards the satisfaction of any sums due or which may become due to him from the contractor under contract.

46.2 Valuation at date of forfeiture:

The Director IGIMS, Patna shall as soon as may be practical after any such entry and expulsion by the Institute, fix and determine ex-parte, or by or after reference to the parties, or such investigation or enquiries as he may think fit to make or institute, and shall certify what amount, if any, had at the time of such entry and expulsion been reasonably earned by or would reasonably accrue to the contractor in respect of work then actually done by him under the contract and the value of any of the said unused or partially used materials, any constructional plant and any Temporary works.

46.3 Payment after forfeiture:

If the Institute shall enter and expel the contractor under this clause, he shall not be liable to pay to the contractor any money on account of the contract until the expiration of the Defects period and thereafter until the costs of execution and maintenance, damages for delay in completion, if any, and all other expenses incurred by the Institute have been ascertained and the amount thereof certified by the Store officer, IGIMS Patna, The contractor shall then be entitled to receive only such sum or sums, if any as the Store officer, IGIMS Patna, may certify would have been payable to him upon due completion by him after deducting the said amount. If such amount shall exceed the sum which would have been payable to the contractor on due completion by him then the Contractor shall, upon demand pay to the Institute the amount of such excess and it shall be deemed a debt due by the contractor to the Institute and shall be recoverable accordingly.

47.0 **Property:**

47.1 All materials on the Site, Plant, and Equipment owned by the Contractor, Temporary Works and Works are deemed to be the Property of Institute and are at i t ' s disposal if the Contract is terminated because of a fundamental breach of Contract by the Contractor.

48.0 **Frustration:**

48.1 If the Contractor is frustrated by the outbreak of war or by any other event entirely outside the control of either the IGIMS Patna, is to certify that the Contract has been frustrated. The Contractor is to make the Site safe and stop work as quickly as possible after receiving this certificate and is to be paid for all work carried out before receiving it and for any work carried out after wards to which he was committed.

Section- III Additional Specific Conditions of Contract

1.0 Supply, Installation, Testing, Commissioning and Modular Operation Theatres along with, Electrical wiring & cabling, and of the existing OT complex working in the Institute; while incorporating for maximal use of the facilities available in facility.

Room; as such/with optimal upgrading if required as per site.

2.0 The bidder may collect the copy of **building layout plan** and visit the site, for complete evaluation of the project before submitting the bid with due permission from the Store Officer, IGIMS Patna.

3.0 The entire project has to be done **on turnkey basis of the subscribed scope of works.**

4.0 The bidder must enclose with their bids the **item wise compliance statement** for their offered equipment, system & accessories and quality standard categorically with respect to the tender specifications.

5.0 The bidder should have **service facility in Patna** in the event of work is awarded to provide useful service with spares during warranty and CMC with zero downtime.

6.0 The selection of all equipments and system should be **as per the standards noted** in the specification.

7.0 Any **misinformation** regarding the specification of the equipment offered would mean outright technical **rejection.**

8.0 The bidder must submit **Printed catalogue** and technical data sheet to substantiate the offer.

9.0 The bidder must submit **User list and Performance report** of similar type of work, within last 7 Years from major hospital.

10.0 **Warranty for 5 yrs** from the date of hand-over to the Institute.

- 11.0 **100% uptime warranty** during warranty period of the complete system with extension of warranty period by double the down time period.
- 12.0 Five years warranty as per Specific conditions of contract of the bidding document. The warranty will be for the main equipment along with accessories from the date of **satisfactory installation issued by user**
- 13.0 The bidder, in case of participating in the tender as agent, must include the **Manufacturer's Authorization** Form with the offer after getting duly filled as per Format enclosed in Special Condition of contract.
- 14.0 All the equipments must be **from ISO certified Company**.
- 15.0 The contractor must provide at least **7 days training program** to the concerned IGIMS Patna, personnel on the Modular Operation Theatres and the necessary cost for training shall be borne by the contractor.

SCHEDULED OF THE REQUIRMENT

S. No.	Description
1.	Walling & Ceiling constructions
2.	Paint
3.	Laminar Air Flow System
4.	Automatic Door- Hermetically sealed and Manual Hermetic sealing door at OT
5.	Control panel- Membrane type
6.	Distribution Box
7.	X-Ray View screens
8.	Pressure Relief Damper
9.	Flooring
10.	Storage Unit
11.	Writing List Board
12.	Hatch Box
13.	Surgical Scrub Sink- Two Bay
14.	LED OT Light with HD camera system
15.	Single arm Anesthesia Pendent
16.	Double arm Surgeon Pendent
17.	HVAC system for Modular OT
18.	Anti bacterial spray
19.	Variable Refrigerant Flow system for other scope of works
20.	ICU Bed
21.	Work Station
22.	Manual Hermetic sealing Door
23.	O.T. Table Automated high end
24.	Patient Transport Trolley

MAJOR ITEMS:

Sl. No.	Description	Certification
1	O.T. Lights	Must be US FDA / European CE . Copy of the certificate must be attached with bid failing which offer shall be summarily rejected.
2	Pendants	Must be US FDA / European CE . Copy of the certificate must be attached with bid failing which offer shall be summarily rejected.
3	ICU Bed	Must be US FDA / European CE . Copy of the certificate must be attached with bid failing which offer shall be summarily rejected.
4	O. T. Table (Automated high end)	Must be US FDA / European CE . Copy of the certificate must be attached with bid failing which offer shall be summarily rejected.
5	Automatic Door	Must be US FDA / European CE . Copy of the certificate must be attached with bid failing which offer shall be summarily rejected.
6	Antibacterial Spray	Imported
7.	Patient Transport Trolley	Must be US FDA / European CE . Copy of the certificate must be attached with bid failing which offer shall be summarily rejected.
8.	HVAC (Condensing Unit) + VRV System	Should be of reputed manufacturer.

SCHEDULE OF THE REQUIREMENT WITH DETAILS
TECHNICAL SPECIFICATION OF ITEMS:

Sl. No.: 1 Wall & Ceiling Construction

a	The Pre-fabricated operating room should be free standing structure, construction from composite, free standing insulated steel wall panels.
b	<p>The room wall panel will have two independent surfaces with a minimum opening in between. The inner surfaces walls will be constructed with 120 GSM sheets of 0.80mm thick with proper support. The Outer wall will also be constructed with 120 GSM sheets of 0.80 mm thick. These panels should be produced in a double band laminator in which continuously moving belts of 120 GSM sheets of 0.80mm thickness are firmly bonded together by the sprayed in insulating foam, which hardens during this process.</p> <p>The wall panels design and construction will allow for the installation and support of all equipment and the provision of opening required for the installation, without affecting rigidity and strength.</p> <p>All the four corners should have return air duct outlets, the grill of which should be made of MS steel, duly powder coated with colour choice to suit the hospital.</p> <p>The surface should be highly scratch resistant, impact resistant, abrasion resistant and long lasting.</p>
c	The core between two panels should consist of polyurethane foam, which has been injected under high pressure, with a minimum density of 40kg/m. The wall should be modular in construction, consisting of 1180mm,875mm,570mm and 265mm wide panels, together with corner panels 200x200mm to achieve the desired false ceiling height. The thickness of the complete panel, including the core should be a minimum of 50mm
d	The Modular panels are installed upon floor using a "U" channel. Each pre-fabricated operating Room may optionally include sloping ceiling panel at an angle of 45 degree from the straight wall panel edge. These option reduces the overall volume of the room, decreasing the running costs for air-conditioning and ventilation, while at the same time maintaining the necessary height at the centre of the room for the installation of ceiling mounted equipments.
e	The inner surface of the operating theater should be seamless, free from visible joints and shape edge,. All internal corners and panels joints should be filled with proper Epoxy filler, standard slush or ready to use on site, ready to receive the sterile plastic finish. All panels should be invisible when the plastic coating is applied.
f	The thickness of the wall panels should be a minimum of 10mm and mounted on the existing wall structure using the necessary steel frame work. The wall panels should be easily removable for catering to serve related needs.

Sl. No.: 2 Paint (Antibacterial Spray)

Sl. No.	Specification
1	<p><u>PRODUCTDESCRIPTION</u></p> <p>Filling of all Joints and Cavities with Metallic Epoxy filler and sanded flush to provide a jointless finish and then sprayed with a water based liquid plastic aseptic and self - sterilizing wall coating system to a d.f.t of 300 microns with primer. Paint is a superior quality, special acrylic based emulsion paint with an advanced HCT formula that can withstand hairline cracks normally associated with internal cement plastered walls. Paint is lab tested as having a stretch tolerance of between 0.1 mm to 1 mm. It has excellent flow properties and washability. This paint has very good opacity and leveling thereby creating a high-class finish, also offers resistance against Bacterial and fungal growth on interior walls and is approved by Ministry of Health.</p> <p>RECOMMENDED USE</p> <p>Most suitable for internal use on cement plastered walls, ceilings, concrete, rendered block work, gypsum board partitions etc.</p> <p>PHYSICALPROPERTIES</p> <p>Colour: White + NCS colours can be tinted on the paint machine.</p> <p>Solids(vol%)*:38±2</p> <p>FlashPoint;:-:Nonflammable</p> <p>APPLICATIONMETHODS</p> <p>Spray: Airless or conventional spray.</p> <p>Brush: Recommended.</p> <p>Roller: Recommended.</p>

SI No.: 3:- Laminar Air Flow System - Monofilament	
S. No.	Specifications
a	The Plan-air ceiling ventilation system should dilute the bacteria generated by the operating team and patient in the theatre and to create an Air flow system pattern that carries contaminated air away from the operating table & entering surgical wounds. It should be designed such that filtered, sterile air flows through the operating zone without an admixture of indoor air. The germs and aerosols released by occupants are displaced into adjacent room zone and removed with the exhaust air.
b	Planair Ceiling constructed out of 1.6 mm thick extruded aluminium sheet of size 2400 x 2400 mm having 6 nos of hepa filters. The hepa filters having dust spot efficiency of 99.99% 0.3 micron. Diffuser will be made out of perforated SS304 sheet. The main components that the Laminar flow should be having is a rectangular air outlet housing with air outlet frame and air discharge element on the underside and two housings on the top side each with a built in HEPA filter. The air discharge element should be a fine-meshed fabric for laminar displacement flow. The air discharge element should be split with a feed through for the surgical light. The element should be removable or can be folded downwards for easy accessibility to the housing interior for cleaning and disinfection. it should be also easily accessible to the HEPA filters which can be easily replaced when required to do so.
c	The complete Laminar Flow system should be Pre-manufactured and pre-assembled unit, modular in design, having connection box and filter frame. The construction should consist of four units' modular in design with filter frames and variable connection hoods for the supply air, the air discharge element should be made of fine-mesh laminar fabric (polyester) with a surrounding stainless steel frame. The Laminar air distribution element should be divided into four parts with a minimum number of bars, individually foldable, covered with monofilament polyimide from one side, fixed without screws. It should have connection for differential pressure measurement.

Sl. No : 4 Hermetically Sealed Sliding Door - Automated

Hermetically Sealed Sliding Door - Automated	
S. No.	Specifications
a	<p>To maintain sterility and the correct air pressure in the room, all doors into and out should be of the sliding, hermetically sealing type. The door should meet following specifications:</p> <ul style="list-style-type: none"> • Meets international quality & safety requirements. • Low noise level of movement.(Not More than 60 decibel) • Controller should be preferably microprocessor based. • The track should be made up of single piece extruded aluminum. • The doorframe should be made of high quality anodize aluminum and the door panel should be made of compact laminate that can withstand high abrasion. • The door should seal on all four edges in the closed position & should be surface installed type. • The track of the door should be constructed with high quality door lock with aluminum extrusion, fixed firmly to the walls. Nylon runner guides should be fixed to the door in such a way they do not obstruct trolley movement through the door. • The doorframes should be edged with an aluminum extrusion & with concealed fixings that are adjustable during installation to ensure a 100% hermetic seal is achieved. <p>Automated operated hermetically sealing sliding door for OT comprising of:</p>
b	A track system wherein the door blade is guided under a 45° angle with approximately 6mm deep indentations at the closed position.
c	Having a special inside & outside Stainless Steel lever handle that lifts out the door blade from its hermetic closing position, thus allowing even very heavy doors to be opened effortlessly, manually.
d	Encased within an extruded anodized 2.5mm thick aluminium profile frame all around the door blade with solid high pressure laminate on both sides.
e	Should have special nylon top rollers with double roller bearings, to enable the door to slide smoothly & silently.
f	The door blade to have a special 3-tier specially designed 3 side heavy duty replaceable EPDM gasket, for the hermetic sealing on the wall frame. The bottom sealing should e with a 2-tier heavy duty EPDM gasket to flush with the finished floor.
g	The door core should be 60mm thick, built up with 4mm thick HPL (High Pressure compact laminate) skin on both sides of the door to provide better strength and rigidity. Having between the two sides of laminates - CFC free, high density polyurethane puff (density 40 Kg/ m ³), thickness 52mm.
h	Vision panels-double glazed, laminated safety glass, flush finished on both sides with door blade should be provided in the doors.
i	The automation controller for the door should be micorporcessor based with regulated electro-mechanical sliding door drive.

j	The automation should be able to operate a door with maximum door weight of 45Kg.
k	The wall frame should be high grade aluminium extrusion with natural anodized 15 micron finish wall frame profile. The wall frame profile should be 3 sided blind fixed with cladding on wall cut-out section from inside and outside of the room.
l	The automation should have variable / adjustable opening & closing speeds, with opening speed adjustable between 120mm/Sec 800mm/Sec and the closing speed adjustable between 120mm/Sec 500mm/Sec.
m	The automation door can be controlled/operated using either push-button switch, Kick switch or Sensor (touch less-infra-red) switches OR all in combination.
n	Sliding, hermetically sealing type of door of size 800 x 2100 mm having high density particle board cores, high pressure laminated faced on both sides, viewing window 300 x 300 mm and for smooth effortless sliding, the door runs on nylon wheels within an aluminum extrusion track.

Note: For Manual Hermetic sealed Door in OTs, the specification will be remaining same as that of Automatic sealed door but without automation.

SI No:-5- CONTROL PANEL: Membrane

Sl. No.	Specification
1.	Membrane Type Control panel, mounted flush in the theatre wall, comprising of the following: Standard Clock Elapsed Clock Telephone Temp and Humidity Indicators Lighting controls Medical Gas Alarm
2.	Control Panel to incorporate, electrically operated equipments, ground & power bar with power bar connection and medical gas to be recessed with matt aluminum finish. The interior part of the panel can be exceed two ways.
3.	Front part shall be inside be inside the OT
4.	Rear part shall be outside of the OT
5.	The approach from inside the room through main door and for the outside panel through dirt corridor. The panel shall included the following:-
6.	Analog Clock
7.	Electrical Alarm Repeater
8.	Humidity & Temp. Display
9.	General Lighting Control
10.	Ground Connection
11.	3 plate LED X-ray Viewer
12.	Hand Free Telephone
13.	2 Nos. RJ-45
14.	2 Nos. – 5 Nos. Electrical switch & socket
15.	Audio & Video Socket
16.	2 Nos. Earthing Outlet
17.	1 Nos. gas alarm up to (5/6 Gases)
18.	Hepa filter status indication
19.	The size of the panel shall be 1000 x 1500 x 200 mm.
20.	Music System

Sl. No.: 6 Distribution Box

S. No.	Specifications
1	All high voltage equipment should be installed in a separate enclosure. The cabinet should house the operating lamp transformers, mains failure relays, MCB's electrical distribution equipment & circuit protection equipment for all circuits within the operating theatre. All internal wiring should terminate in connectors with screw & clamp spring connections of the clip- on type mounted, on a DIN rail & labeled with clear proprietary labels. Individual fuses or miniature circuit breakers should protect all internal circuits.

SI No. : 7 - X-Ray View Screen	
S. No.	Specifications
a	The theatre should be equipped with a twin plate X-Ray Viewing Screen, recessed in the wall and designed to provide a high level of control luminance, without flicker, from a unit that is easy to clean and maintain. Twin Plate X-ray viewing LCD Screen, designed to provide a high level of control luminance without flicker.
b	The X-Ray viewing screen illumination should be by LED lamps, controlled by dimming ballast.
c	The front panel diffuser is of a glare free type, sealed flush with the inside face of the operating theatre wall.
d	The LED lamps should provide a uniform level of illumination across the entire front panel.
e	Access for maintenance and lamp changing is from the front of the panel.
f	All internal wiring is terminated in connectors with screw and clamp spring connections.
g	Individual fuses or miniature circuit breakers protect all internal circuits.
h	All internal wiring is of high temperature resistance and secured by propriety cable clips.
i	It is flush mounted and sealed into theatre wall by means of a sterile jointing system.
J	Twin Plate X-ray viewing LCD Screen, designed to provide a high level of control luminance without flicker.

Sl. No.: 8:- Pressure Relief Damper	
S. No.	Specifications
a	<p>Pressure relief dampers should be provided in each room (SS) to prevent contamination of air from clean and dirty areas. Suitably sized air pressure relief damper should be strategically placed, enabling differential room pressure to be maintained and ensure that when doors are opened between clean and dirty areas.</p> <p>Cascade pressure stabilizers should be a range of multi bladed units specifically designed to prevent contamination of air from clean and dirty areas also control room air pressures in critical areas, such as operating theatre suites.</p>
b	<p>Each stabilizer should compromise of carbon steel housing with up to four Grade 304 Stainless steel blades, which pivot upon sealed for life bearing assemblies. The body should be epoxy powder coated as per standard BS colors. First class electrolyzed steel plate should be used for body and with high grade SS304 stainless steel for blades.</p>
c	<p>Counter- weight balancing system should be provided in the PRD to maintain positive pressure inside the operation room. Air pressure stabilizers should have a capability of controlling differential pressure to close tolerance. .</p>
d	<p>These stabilizers should be accurate to a range of 1 Pascal over their working range of – 35Pa.</p>
e	<p>Suitably sized air pressure relief damper should be strategically placed, enabling differential room pressure to be maintained and ensure that when doors are opened between clean and dirty areas</p>
f	<p>The PRD should remain closed at pressure below the set pressure and should open fully at pressure and should open fully at pressure only fractionally above the threshold pressure</p>

Sl. No: 9 Flooring

S. No.	Specification			
a	EL5 is a conductive, vinyl floor covering in accordance with EN 1081 ($104 \leq Rt \leq 106$) and is available in 2m roll widths.			
b	The 2 mm homogeneous material incorporates carbon encapsulated granules throughout its full thickness and has a conductive backing to ensure optimal and constant conductive properties throughout its full life expectancy. The product has excellent resistance to static and rolling loads and is classified 34-43 in accordance to EN 649.			
	DESCRIPTION			
	Total thickness	EN 428	mm	2
	Weight	EN 430	g/m ²	3440
	Width/Length of sheet	EN 426	cm/lm	-
	Tile size	EN 427	mm	608 x 608
	Number of tiles per package	-	-	20
	CLASSIFICATION			
	Norm / Product specification	-	-	EN 649
	European classification	EN 685	class	34-43
	K rating	-	-	K5
	Fire rating	EN 13501-1	-	Bfl-s1
		EN 1081		$5 \times 10^4 \leq Rt \leq 106$
	Electrical resistance	IEC 61340-4-1	Ω	$Rt \leq 108$
		ANSI / ESD 7.1		$2.5 \times 10^4 \leq Rt \leq 106$
		EN 1815	kV	< 2
	Static electrical propensity			
		IEC 61340-4-5	V	< 20*
	Slip resistance wet	DIN 51 130	class	R9
	PERFORMANCE			
	Wear resistance	EN 660.2	mm ³	≤ 4.0
	Wear group	EN 649	group	P
	Dimensional stability	EN 434	%	Tile ≤ 0.25
	Residual indentation	EN 433	mm	0.03
	Thermal conductivity	EN 12 524	W/(m.K)	0.25
	Colour fastness	EN 20 105 - B02	-	≥ 6
	Chemical resistance	EN 423	-	Good
	Anti-bacterial & fungicidal	-	-	OK
	CE MARKING			

	Installation			
	The material must be allowed to acclimatise 24 hours before installation in a room temperature of between 18-24°C. All seams must be heat welded using Gerflor weld rod.			
	Maintenance			
	Maintenance should be carried out regularly to retain the appearance and durability of the floor. The floorcovering should be maintained with regular sweeping and damp mopping using a neutral cleanser, or machine scrubbing with an appropriate pad. Further maintenance instructions are available upon request. Rubber leaves indelible stains on vinyl flooring: do not use mats with rubber backing and replace tubular furniture feet with those made of PVC or polyamide.			
	Controlling Discharges			
	<ul style="list-style-type: none"> • Mipolam EL floorcoverings guarantee the lasting elimination of electrostatic charges, while taking into account the safety of people. 			
	Low Accumulation of Charges			
	<ul style="list-style-type: none"> • Mipolam EL floorcoverings guarantee a low accumulation of electrostatic charges to people and equipment. 			
	Mechanical resistance			
	<ul style="list-style-type: none"> • The homogeneous and compacted surface provides an enduring resistance to static and dynamic loads. 			
	Chemical resistance			
	<ul style="list-style-type: none"> • Mipolam EL floorcoverings display excellent resistance to chemical products such as detergents, acids and alkaline products. 			
	Minimum gas emission			
	<ul style="list-style-type: none"> • Low VOC emissions. 			
	Decontamination			
	<ul style="list-style-type: none"> • Mipolam EL floorcoverings are rated as "good" in compliance with ISO 8690 the nuclear decontamination standard. 			
	Fully hygienic			
	<ul style="list-style-type: none"> • Fungistatic and bacteriostatic treatment throughout total thickness of flooring. 			
	<ul style="list-style-type: none"> • Floorcovering is non-absorbent, impervious and non-porous. 			
	<ul style="list-style-type: none"> • Can be hot welded and installed with a coved skirting for easy cleaning. 			
	Access flooring with laminar flow			

	<ul style="list-style-type: none"> • Mipolam EL tiles are especially well suited to "high-tech" applications and are designed to be compatible with access flooring in cleanrooms with laminar flow. 			
	Low risk of particulate contamination			
	<ul style="list-style-type: none"> • The Mipolam EL tiles meet the high requirements of particulate contamination set by electronic industry due to the low release of carbon particles. 			
	Static electricity			
	<p>Static electricity is everywhere. At its most spectacular, we see thunderbolts and lightning but it is also generated by friction and by the separation of two differing materials where one is not a conductor. This produces a build-up of electric charge on the surface of each of the materials with one becoming positively and, the other negatively charged. The electrostatic charges naturally seek to balance themselves out. Electro Static Discharge (ESD) occurs as soon as contact is made with a conductive element. Static electricity is harmless to humans however, it can pose a serious threat to sensitive equipment. Vulnerable electronic equipment can be subject to a reduction insensitivity and even complete failure in the event of an uncontrolled build up and discharge of electro stactic energy.</p>			
	Typical areas for concern include health-care environments such as operating theatres and intensive care wards, the electronics industry and industrial clean rooms.			
	ESD risks			
	In technical areas and industrial premises, electrostatic discharges lead to a number of problems, the most frequent among them being:			
	<ul style="list-style-type: none"> • degradation of sensitive electronic components 			
	leading to a loss of performance which is sometimes impossible to detect during routine quality control			
	<ul style="list-style-type: none"> • deterioration of production conditions: 			
	the disruption of sensitive electronic equipment, build-up of dust, reduction in line output, etc.			
	In particular circumstances, the close packing of components can have a marked increase in the sensitivity of products and a charge of as little as 10 volts may be sufficient to increase risk.			
	<ul style="list-style-type: none"> • risk to human safety 			
	In the electronic industry, it is believed that 30-50% of faults found in components is due to uncontrolled Electro Static Discharge (ESD).			
	Controlling ESD			

	To reduce the risk from static electricity, various solutions can be effective including: earthing points for people and equipment, static control packaging, ionisation, etc., all having the intention of:			
	• Limiting charges			
	• Controlling discharges.			

SI No: 10 - Storage Unit	
S. No.	Specifications
1	It should be flush mounted into the theatre wall with a sterile jointing system. Storage Unit of size 800x1900x350 mm .
2	The cabinet should be made of Stainless Steel AISI 304 material.
3	Doors of cabinet should open right to left and made of cleary safety glass.
4	It is suitably partitioned / shelved to allow storage of common endoscopic equipments.
5	It has the facility of secure locking.

SI No: 11- Writing List Board	
S. No.	Specifications
a	A list/Writing Board is provided in each operating theatre. Writing Board of size 840 x 640 mm comprises of a flush mounted, 1.50 mm thick, white laminate board, bonded to a 10 mm high density fibreboard sheet for additional rigidity.
b	The unit can be opened to create a wall mounted writing surface within the operating room.
c	An additional storage unit is located under the writing unit for the placement of a computer CPU and peripheral items.
d	The white board is constructed from 1.6mm thick, white laminate board.

SI No. : 12 - Hatch Box	
S. No.	Specifications
1	Hatch box (600' X 600' X 600mm' Deep) made out of SS 304 for disposal of dirty linen /waste. Each hatch will be equipped with two doors and the door will be operated electronically. The hatch will be designed in such a way that only one door will be opened at one time. The UV light will be so installed that it is kept on while both the doors are closed, this UV light has to be automatically turned off in case of opening of either of the doors. There shall be indicators on both sides of the OT so that door open/close status can be monitored from the both ends. Each hatch should be equipped with two doors and the door should be operated electronically. There shall be indicators on both sides of the OT such that door open / close status can be monitored from both ends.

Sl No.: 13 Surgical Scrub Sink : Two Bay

S. No.	Specifications
1	<p>Compact surgical scrub sink should be designed for use in OT complex providing Surgeons with a convenient sink for pre – OT scrub up where high hygienic standards are to be maintained. Each fixture should be fabricated from heavy gauge type 304 stainless steel and should be seamless welded construction, polished to a stain finish. It should be free standing sink with all mounted possibility, having a depth of 300mm. The scrub sink should be provided with a front access panel which should be easily removed for access to the water controlled valve, waste connections, stoppers and strainers. Hands free operation should include infra red sensors with built-in range of adjustment. Thermostatic mixing, valve control should be located behind the access panel and maintain constant water temperature. User defined setting of 1 to 3 min are available. This timing should be adjustable to meet individual application requirements. Provided with infrared sensors, thermostatic control taps with fail safe temperature controls. All units should have reduced anti- splash fronts. Foot operated switch should be there. The scrub should have 1/2 or 3 tap outlets. S.S. 304, 2 Bay with sensor and foot pedal: 2-Bay scrub sink, with infrared photo sensor, digital timer with valve and 2 nos solenoid valves along with manual option made for stainless steel grade 304 polished finished. The scrub sink is provided with front access panel for ease of maintenance and repairs. Size 1600 mm long.</p>

SI NO: 14 Broad Based LED OT Light with HD camera

1. DESCRIPTION OF FUNCTION

LED Surgical lights illuminate the surgical site for optimal visualization of small, low-contrast objects at varying depths in incisions and body cavities. OT room double dome LED light complete with controls gear and control panel suitable for minimum light intensity of major / setallite cupola 160000/160000 Lux

2. GENERAL REQUIREMENTS

1. The light shall adopt latest LED technology to create a homogenous light patch without emitting any infrad rays.
2. The light system shall be double light heads, one major and one satellite.
3. The major light shall be with automatic illumination control system and with sensors on the light head. When some part of LEDs is masked by surgeon's head or shoulders, the remaining LEDs will become brighter automatically to compensate the losing illumination.
4. Light intensity shall be adjustable at least between 25%-100% and at least 20 different levels.
5. The light shall be with 3 lighting modes for different surgery requirements, including general lighting mode, full lighting mode and ambient lighting mode for minimally invasive surgery.
6. The light head shall be "cross" shape to avoid laminar flow influence by turbulence.
7. The light shall be mountable to ceiling from a single center. Light head bearing the arms shall be rotatable 360 degrees around its own axis and mounting point. Each Light head shall be rotatable at least 300 degrees around its own axis.
8. The maximum movement angle of the spring arm shall be at least up 45° and down 50°.
9. The maximum movement range of the horizontal arm & spring arm should be at least 1,610 mm.
10. The thickness of the light head shall be no more than 50mm.
11. Each LED shall be replaceable individually with the new one to save cost in case of failure, instead of replacing the module with several LEDs.
12. Optional facility of AICS function

3. Technical Specifications of Major Dome:

- a) Central Illuminance: $\geq 160,000$ Lux
- b) Light Field Diameter (D10): Adjustable from 195-330 mm
- c) Color Temperature: 4,350K
- d) Color Rendering Index (Ra): ≥ 95
- e) Depth of Illumination (L1+L2): $\geq 1,200$ mm
- f) Dimming Range: 25~100%
- g) Ambient (Endoscopy) Illumination: 12,800 Lux
- h) Radiant energy (average): ≤ 3.6 mW/m²*Lux
- i) Shadow dilution with tube: $\geq 100\%$
- j) Shadow dilution with one mask: $\geq 80\%$ and $\geq 90\%$
- k) with AICS Function
- l) Shadow dilution with tube and one mask: $\geq 75\%$ and $\geq 85\%$ with AICS Function
- m) Shadow dilution with two masks: $\geq 60\%$ and $\geq 70\%$ with AICS Function
 - Shadow dilution with tube and two masks: $\geq 55\%$ and $\geq 65\%$ with AICS Function
 - LED Service Life: $\geq 40,000$ hrs
 - Light Head Dimension: 740mm
 - Maximum power consumption of all light sources: \leq show be approx. 200w -120w +- 10%
120 W +- 10%
 - Power Supply: 100~240VAC, 50~60Hz
 - Light Intensity will be taken into consideration instead of number of LED used in set.

4. Technical Specifications of Satellite Dome:

- Central Illuminance: $\geq 160,000$ Lux
- Light Field Diameter (D10): Adjustable from 95-330
- Color Temperature: 4,350K
- Color Rendering Index (Ra): ≥ 95
- Depth of Illumination (L1+L2): $\geq 1,200$ mm
- Dimming Range: 25~100%
- Ambient (Endoscopy) Illumination: 12,800 Lux
- Radiant energy (average): ≤ 3.6 mW/m²*Lux
- Shadow dilution with tube: $\geq 100\%$
- Shadow dilution with one mask: $\geq 80\%$ and $\geq 90\%$ with AICS Function
- Shadow dilution with tube and one mask: $\geq 75\%$ and $\geq 85\%$ with AICS Function
- Shadow dilution with two masks: $\geq 60\%$ and $\geq 70\%$ with AICS Function
- Shadow dilution with tube and two masks: $\geq 55\%$ and $\geq 65\%$ with AICS Function
- LED Service Life: $\geq 40,000$ hrs
- Light Head Dimension: 740mm
- Maximum power consumption of all light sources: \leq show be approx. 200w -120w +- 10% **120 W**
+- **10%**
- Power Supply: 100~240VAC, 50~60Hz
- Touch panel LED monitor (minimum 17" or more) is to be provided.
- L.E.D OT light should have arm to carry monitor.
*During Inspection, lux intensity will be taken into consideration instead of no. of LED.
* Monitor Light show have the facility of arm to carry monitor.

5. Technical Specifications of HD Camera System

- The camera shall be installed in the center of the
- major light head or on a separate spring arm.
- Picture elements: $\geq 2,000,000$ pixels
- Optical zoom: 10X (F= 5.1-50.1 mm, F= 1.8-2.1)
- Digital zoom: 12X (120X with optical zoom)
- S/N ratio: ≥ 50 dB
- Electronic shutter: 1/2 to 1/10000 s
- Video output (Analog component): Y/Pb/Pr

6. Standards:

- a. ISO 9001:2008
- b. ISO 13485:2003,
- c. CE Certificate / US FDA Certified

SI NO-15;- Broad Based Single Arm Motorized Anesthesia Pendant

1. Installation base

Single installation base for swivel arms

2. Suspension arm

1. The single arm designed with motorized height adjustable should be 1000 mm
2. The vertical movement of the motorized arm should be at least 700 mm
3. The load capabilities of each pendant should be at least 180 kg
4. The allowable rotation angle of each axis should not be less than 340 degrees.
5. Dual break system for maximum safety combines the advantages of both pneumatic and friction brakes. The upper and intermediate joint should be equipped with electro-pneumatic break to prevent unintentional movement or disconnection
6. In the event of a compressed air system failure, pneumatic break system should hold position until the user chooses to release it. At this point, the friction brake takes over, allowing quick but controlled drift-free repositioning of equipment as required.

3. Supply distribution

- a. The allowable rotation angle of each axis should not be less than 340 degrees
- b. 800 mm column distribution for the gas and electrical outlet
- c. Separated cavity design for the gas (2 cavities on both sides) and electrical outlet (1 cavity in the middle) for maximum safety
- d. Supply distribution should consist of, but not limited to the following outlets:
 - i. Vacuum outlet x 2 No. (BS Standard)
 - ii. Medical air outlet x 2 No. (BS Standard)
 - iii. Oxygen outlet x 2 No. (BS Standard)
 - iv. Nitrous Oxide outlet x 2 No. (BS Standard)
 - v. Electrical outlet (Indian Standard) x 8 Nos.
 - vi. RJ45 x 1 No.

4. Accessories

Supply distribution should consist of, but not limited to the following accessories:

- i. Shelf (with side rail), load capacity 80 Kg – 450 mm (W) x 500 mm (D) x 2 No
- ii. Anesthesia machine holder installed on the rail
- iii. Infusion pole in length 1000 mm, height adjustable x 1 No.
- iv. Extension arm 300 mm for the infusion pole x 1 No.
- v. Handle with control button for motor and pneumatic break

5. Certification

The following certificate must be complied with official document

- a. ISO 13485:2003 & ISO 9001:2008
- b. The medical device should have been assigned to class II b by rule 11 according to Annex ix of the direction 93/42/EEC and **should be CE certified**

SI No- 16:- Broad Based Double Arm Motorized Surgical Pendant

1- Installation base

Single installation base for swivel arms

2- Suspension arm

1. The length of the upper mechanical arm and motorized arm above designed height adjustable should be 750 mm + 750 mm
2. The vertical movement of the motorized arm should be at least 500 mm
3. The load capabilities of each pendant should be at least 220 kg
4. The allowable rotation angle of each axis should not be less than 340 degrees
5. Dual break system for maximum safety combines the advantages of both pneumatic and friction brakes. The upper and intermediate joint should be equipped with electro-pneumatic break to prevent unintentional movement or disconnection.
6. In the event of a compressed air system failure, pneumatic break system should hold position until the user chooses to release it. At this point, the friction brake takes over, allowing quick but controlled drift-free repositioning of equipment as required.

3- Supply distribution

- a. The allowable rotation angle of each axis should not be less than 340 degree.
- b. 800 mm column distribution for the gas and electrical outlet
- c. Separated cavity design for the gas (2 cavities on both sides) and electrical outlet (1 cavity in the middle) for maximum safety
- d. Supply distribution should consist of but not limited to the following outlets:
 - i. Vacuum outlet x 2 No. (BS Standard)
 - ii. Medical air outlet x 2 No. (BS Standard)
 - iii. Oxygen outlet x 2 No. (BS Standard)
 - iv. Electrical outlet (Indian standard) x 8 Nos.
 - v. RJ45 x 1 No.

4- Accessories

Supply distribution should consist of, but not limited to the following accessories :

- a. Shelf (with side rail), load capacity 80 Kg – 450 mm (W) x 500 mm (D) x 2 No
- b. Shelf with drawer (with side rail, load capacity 80 Kg) – 450 mm (W) x 500 mm (D) x 2 No
- c. Handle with control button for motor and pneumatic break

5- Certification

The following certificate must be complied with official document

- i. ISO 13485:2003 & ISO 9001:2008
- ii. The medical device should have been assigned to class II b by rule 11 according to Annex IX of the direction 93/42/EEC and **should be CE certified.**

Sl. NO- 17- HVAC System for Modular OT

Sl. No.	Specifications
1	AHU - AIR HANDLING UNIT (DOUBLE SKIN TYPE)
1a	Type:
	The air-handling units are of double skin construction, draw-thru type comprising of various sections such as Pre-filter section, coil section. Units must be able to work satisfactorily in exposed atmospheric conditions. The unit should have tubular heater of 3 KW range with SS Jacket construction.
1b	Casing:
	Double skinned panels are fabricated with anodized extruded aluminium extrusion frame work bolted together with sandwich panel having powder coated 0.70mm sheet for outer skin and plain GP 0.63 mm sheet for inner skin. 43 mm thick PUF insulation material is injected between the two panels (with U value no greater than 0. 85W / m ² / K)
	The entire frame duly painted is mounted on sheet steel channel based. The panels are sealed to the framework by heavy-duty 'O' ring gaskets held captive in the framed extrusion. All panels are detachable or hinged. Hinges are made of die cast aluminum with stainless steel pivots, handles are made of hard nylon and be operational from both inside and outside of the unit. All fixing and gaskets shall be concealed.
1c	Motor and drive:
	Fan motors are highly efficient and work on 440 ± 10% volts, 50 cycles, three phase with explosion proof type with class F installation, with IP 55 protection. Motors are easily designed for quiet operation and motor speed does not exceed 1440 rpm. Drive to fan is provided through belt-drive arrangement. Belts are of the oil-resistant type.
1d	Fan:
	Fans are of centrifugal type, conforming to AMCA 210 and are double width, double inlet with forward-inclined airfoil blades, specially designed and suitable for the required operating pressure. Fan casing are made from galvanized steel sheet. Fan shaft is grounded C 40 carbon steel and supported in self-aligning plumber block operating less than 75% of first critical speed, grease lubricated bearings.
1e	Cooling Units:
	DX coils have 12.5 to 15mm dia tubes minimum 24G thick with sine wave aluminium fins firmly bonded to copper tubes assembled in zinc coated steel frame.Face and surfaces areas are such as to ensure rated capacity from each unit and such that the air velocity across the coil does not exceed 150 meters per minutes. Each coil is factory tested at 21-kg/M ² air pressures under water. Tube is Hydraulically / mechanically expanded for minimum thermal contact resistant with fins. Fin spacing is 4-5 fins per cm.
1f	Filters:
	Each unit is provided with a factory assembled section containing washable synthetic type air filters having anodized aluminium frame. The media is supported with HDP mesh. Filter banks are easily accessible and designed for easy withdrawal and renewal of filter cells. Filter banks face velocities do not exceed 100 m/minutes. Differential pressure switch is to be fixed across the filter as part of AHU's system.
2	Ducting:

	The duct supply system should be free of construction debris. Ducting shall be made of Aluminium with curves & bends where indicated for easy flow of and ensured to be air tight by applying silicon sealant after fabrication. Hangers shall be provided to ducts & shall be suspended by means of G.I. coated rods & these shall not be more than 2.5mtrs apart. Thermal insulation with 9mm XPE for supply & return air ducts. Joints will be lapped with Nitrile rubber tape for better insulation.
3	CONDENSING UNITS
3a	Compressor:
	The compressor shall be screw, scroll / reciprocating type, hermitic, in accordance with with ARI 520, direct driven with capacity control arrangement. The compressor casing shall be of cast iron and designed for 450 psig or higher. The compressor shall incorporate rolling element bearing to support rotating assembly. the rotor shall be higher steel alloy.
	Refrigerant circuit components shall include flexible pipe connectors, hot gas muffler, high side pressure switch, liquid line shut-off valves, suction and discharge shut-off valves, filter drier, moisture - indicating sight glass, electronic or thermostatic expansion valve (EXV), heavy duty pressure gauge with cocks to monitor suction, discharge and oil pressure and complete operating of refrigerant and compressor oil.
3b	Motor:
	Compressor motor shall be Hermetic / semi-hermetic direct drive, squirrel cage, two pole, induction type, refrigerant cooled motor suitable for 415 V/50Hz. 3 Phase supply. Hot gas motor cooling is not acceptable.
3c	Condenser:
	Condenser shall be Air Cooled type. Tubing shall be copper, Aluminium fins high efficiency type. Tubes shall be nominal 19mm. Outer diameter and thickness shall not be less than 22 g. and rolled into tube sheets and shall be individually replaceable and also tubes shall be coated with corrosion resistant coating.
	Condenser fans shall be direct coupled to motor and protected against overloading and with minimum 1.15 service factor.
	<ol style="list-style-type: none"> 1. Supply of AHU of 3500 CFM with 6 RD coil DX Type nicotra blower ABB/ Crompton motor mixing box Al. damper in or out 25mm thick panel fresh air damper ST P125 with heating coil. 2. Supply and installation of 2 Nos. condensing unit (one stand by) with 8.5 TR -22 Refrigerant floor mount 3. Supply installation of AHU and Condensing unit starter panel with volt meter, empire meter related LP/HP controller thermostat sensor on/off light with power coated 4. Supply and fabrication of aluminum duct 22 Gauge and installed with 8mm threaded rod, 8mm fastener, 5 mm gasket, silicone make (Hindalco, Balco, Nalco) 5. Supply and fixing of 9 mm aluminum foil foam insulation with adhesive aluminum tape 5mm gasket silicone make paramount, supreme 6. Providing and fixing of casual dryer 8.5 TR 7. Providing and fixing of expansion valve 8. Providing and fixing of 1,1/8, and 5/8 ,18(g) copper piping with cell type insulation taping nitrogen testing vacuum and drefling R22 gas brazing.

SI No-18 Anti Bacterial Spray

1. The product should be aqueous liquid compound with active ingredient being Titanium Dioxide in the shape of nano particles.
2. It should work using light on self-sustainable Photo-catalyst technology which continuously kills all bacteria, viruses and Fungal spores and also eliminates odors.
3. The material should be transparent to avoid any affect on the aesthetics of the interiors and should be able to be sprayed on the interiors with spray gun and dry not later than 30 minutes.
4. The product should offer strong Anti-Bacterial capabilities against Microbial, effective destruction rate of VOC,s, Higher destruction rate of Micro-organic substances due to super oxidation properties. It should also offer effective Anti-fungal/Mould capabilities and Anti-rust capabilities due to super-hydrophilic nature preventing water accumulation on treated surface.
5. The treatment should be possible on all types of interiors, wood, glass for excellent cleaning and superior decomposition capabilities.
6. The material once sprayed in the interiors and the articles to be treated, should have at least 3H hardness soon after it is applied.
7. The company should offer at least 12 months warranty for the effective treatment and should confirm the effectivity by doing swab tests every 3 months from NABH accredited lab.

SI NO-19 VRF System for Area other than O T

Specification.

VRF/VRV-Variable refrigerant flow/variable Refrigerant volume solution. :

Supply of variable Refrigerant Flow modular type airconditioning system complete with indoor & outdoor units with individual corded controller as per the following capacities of the IDU and ODU.

OUTDOOR UNIT

Supply of Compact Air Cooled type outdoor units of VRF System having hermetically sealed scroll type compressors & separate minimum 1# Inverter scroll compressor per Out door Module (Each Module will have minimum 1 Inverter Scroll Compressor) , condenser coil fabricated from Seamless Copper tube & Plate type Al. Fins of Multi Row, Axial Flow, upward throw condenser fan, Condenser fan - motor unit, insulated refrigeration piping, power / controlwiring, and earthing, external wiring between Indoor & Outdoor units, all systemcontrols-safety. The system should have flexibility to handle total 500 Rmt of ref. piping Each Outdoor units with High Pressure switch, Fan driver overload protector, Over current relay, Inverter Overload Protector & Fusible Plug. The unit shall be suitable for 415 ± 10 % volts, 50 Hz, 3 phase AC supply, and IP 55 protection. The VRF System shall have green ref. gas only- R410 / R407 / R-134a.

INDOOR UNIT:

Ceiling mounted four way air discharge cassette indoor units with compact cooling coil, electronic expansion valve and multispeed fan motor, The blower shall be dynamicaly balanced and designed for silent operation, the filters shall be Plasma and synthetic washable media type arranged for convenient cleaning and replacement, built in drain pump, the drain pan shall be fabricated out of heavy sheet steel insulated with 6mm' expanded polythylene sheet.

REMOTE CONTROL:

Wired Remote controls for all the Hi-wall and Cassette type units which shall be sleek and self diagnostic type.

REFREGERENT PIPING:

Supply and installation of Refrigerant Copper piping insulated with Nitrile Rubber Tubular Insulation with covered with polyshield . All bends and Y joints to be incorporated in the piping itself .

DRAIN PIPING:

UPVC heavy class drain piping for Cassette type units for the following diameters of the pipes. The pipes shall be insulated with 6mm thick nitrile rubber.

INSTALLATION TESTING AND COMMISIONING:

Installation, Testing and commissioning of Outdoor units including the transport and lifting and complete structural frame work plat forms as per site conditions.

About VRF solution.

VRF systems are similar to the multi- split systems which connect one outdoor section to several evaporators However , multi – split systems turn OFF or on completely in response to one master controller, whereas VRF systems continuously adjust the flow of refrigerant to each indoor evaporate . The control is achieved by continuously varying the flow of refrigerant through a pulse modulating valve (PMV) whose opening is determined by the microprocessor receiving information from the thermostat sensors in each indoor unit. The indoor units are linked by a control wire to the

outdoor unit which responds to the demanded from the indoor units by varying its compressor speed to match the total cooling and/ or heating requirements

Outdoor unit

Modular type outdoor units equipped with highly efficient scroll compressor with all inverter type compressor(s) only, special acryle precoated heat exchange, low noise condenser fan, pre- coated fin type heat exchangers. The outdoor and indoor unit shall be integrated with special super wiring system with a central monitoring remote controller into one common wiring. All refnet piping system shall be imported. Refrigerant should be R410A.All structural frame work platform required shall be of HVAC vendor as per site conditions.

Indoor unit for above mentioned out door unit

Ceiling mounted four way air discharge cassette indoor units with compact cooling coil, electronic expansion valve unit with compact cooling coil, electronic expansion valve units with compact cooling coil , electronic expansion valve units with compact cooling coil, electronic expansion valve unit with compact cooling coil, electronic expansion valve and multispeed fan motor. The blower shall shall be dynamically balanced and designed for silent operation, the filter shall be plasma and synthetic washable media type arranged for convenient cleaning and replacement, built in drain pump , the drain pan shall be fabricated out of heavy sheet steel insulated with 6mm expanded polyethylene sheet.

Cassette unit (4 side throw) of :-

1.5TR
2TR
4TR
Cassette unit (2side throw)
2 TR

Piping and Insulation

Supply and insulation of Refrigerant copper piping insulated with Nitrile Rubber tubular insulation with covered with polyshield

28.6mm with 19mm thick insulation
25.4mm with 19mm thick insulation
22.2mm with 13 mm thick insulation
19.1mm with 13 mm thick insulation
15.9mm with 10mm thick insulation
12.7mm with 10mm thick insulation
9.5mm with 10mm thick insulation
6.4mm with 8 mm thick insulation.

Drain piping

UPVC heavy class drain piping for SPLIT UNITS AND CASSETTE TYPE UNIT FOR the following diameters of the pipis. The pipe shall be insulated with 6mm thick nitrlye rubber.

19mm
25mm
32mm

Electrical Wiring and Control Cabling

Armoured copper cabbles from the isolator to the units at terrace.(Power cable) (the size of the cable to selected by the vendors as per the manufacturer standard and to be approved by the consultant)

Control cabling PVC insulated coper conductor control cables

2Cx1.5sqmm,as per relevant IS

3Cx1.0 sqmm,as per relevant IS

Installation and commissioning

Installation with proper structures for outdoor units at the specified place and provision of supports for copper piping, electrical wiring and control cabling

Serial No. 20: ICU- Bed

Frame made of CRCA rectangular tubes of 16 SWG (1.62mm/wall thickness), four section perforated CRCA made sheet made of 18SWG (1.2 mm/thickness), suitably adjustable back rest, knee-rest, Trendelenburg's, Reverse Trendelenburg's position, height adjustable Hi-Lo(High -Low) from foot-end by separate four crank mechanisms, SS detachable head and leg bow fitted with laminated wooden board, collapsible full-length railing. The bed mounted on 15cms swiveling castors. Provision for engaging IV rod on the frame, one number SS IV rod. Pre-treated and powder coated. The standard dimension of bed frame: 2030mm L x 900mm W x 600mm - 800mm.

Serial No: 21: WORK STATION:

Providing & fixing of writing unit of size 1800 x 2100mm comprise a flush mounted white laminated board. The unit can be opened to create a wall mounted writing surface with computer monitor storage space inside the recessed chamber of 350mm or more the operating room along with additional storage unit should be located under the writing unit for placement of computer CPU and peripheral items.

Serial No: 22: MANUAL HERMETICALLY SEALED DOOR:

Sliding, hermetically sealing type of door of size 800 x 2100 mm having high density particle board cores, high pressure laminated faced on both sides, viewing window 300 x 300 mm and for smooth effortless sliding, the door runs on nylon wheels within an aluminum extrusion track.

Serial No. 23: OT table

Designed to support the patient during all surgical procedures and operations: general surgery, vascular surgery, endoscopy, neurosurgery, gynecology, urology and orthopedic.

The electro-hydraulic operating table made of stainless, acid proof steel. The table can be equipped with wide range table tops and bases.

Functional movements of table column are provided by reliable electro-hydraulic system. Functional movements of table top are supported with gas springs, longitudinal shift mechanically (optionally with hydraulic actuators). Modular or multi-sectional table top has exchangeable sections. Orthopedic table top is also available.

With CE mark / US FDA certified..

Serial No: 24: Patient Transport Trolley

Patient Transport Trolley Sizes: 210L x cms Height 65 to 95 cms. Emergency Recovery Trolley made of Heavy duty ERW Steel tube, S.S. swing away railing, S.S. telescopic saline rod, storage tray and oxygen cylinder cage

Patient Transport Trolley are removable X-Ray translucent top and provided with a tray for holding X-Ray cassettes underneath the entire length of the stretcher.

Height adjustment by hydraulic system, trendelenburg and reverse trendelenburg by pressure cylinder.

Fitted with 15 cm dia PU castors-two with brakes and rubber buffers on all sides.

Tender Document

B.O.Q.

SUMMARY		
S.No	Description	
	PACKAGE 1	
1	(MOT 1 + MOT 2 + Corridor between (OT 1 & OT 2)	
2	(MOT 3 + MOT 4 + Corridor between (OT 3 & OT 4)	
3	Post Recovery Room 1	
4	Patient hold Room	
5	ICU	
	PACKAGE 2	
1	Dialysis Room	

PACKAGE-1

- **Modular OT-1 + Modular OT-2 + Corridor between (OT-1+ OT2)**
- **Modular Ot-3 + Modular OT-4 + Corridor between (OT-3 + OT-4)**
- **Post recovery room**
- **Patient hold room**
- **ICU**

Modular Operation Theatre_1 Size: 5.5 x 5.26 x 3.0m

<u>SI.NO.</u>	<u>DESCRIPTION</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Rate</u>	<u>TOTAL</u>
1	PANELLING: As per tender specification	78	Sqm		
2	PAINT: As per tender specification	78	Sqm		
3	FLOORING: As per tender specification	33	Sqm		
4	PLANAIR: As per tender specification	1	No.		
5	Anesthesia Pendent single arm As per tender specification	1	No.		
6	Surgical Pendent double arm As per tender specification	1	No.		
7	CONTROL PANEL: As per tender specification	1	No.		
8	PRESSURE RELIEF DAMPER: As per tender specification	1	No.		

9	X-RAY VIEW BOX: As per tender specification	1	No.		
10	WRITING LIST BOARD: As per tender specification	1	No.		
11	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	6	Nos.		
12	STORAGE UNIT: As per tender specification	1	No.		
13	TWO BAY SCRUB SINK: As per tender specification	1	No.		
14	AUTOMATIC HERMETICALLY SEALED DOOR: As per tender specification	1	No.		
15	MANUAL HERMETICALLY SEALED DOOR: As per tender specification	1	No.		
16	SINGLE FLAP SWI NG DOOR: Single Leaf GI powdered coated hinge door of size 900 X 2100 having wall frame with rubber seals, Single door leaf, Door Handles, Door Closer and Hinges	1	No.		
17	HATCHBOX: As per tender specification	1	No.		
18	Distribution Box As per tender specification	1	No.		

19	Ducting Inside OT 22" Aluminium.	1	Lot		
20	Electrical System: - Laying conduits, Switch Boxes, Switches and switch plates, Power and Light Electric Multi-plug Sockets, including Wirubg, Earthing all the lighting controls, pendants and other equipment fixtures and fittings complete as per approved design.	1	Lot		
21	OT Light: As per tender specification	1	No		
22	HVAC SYSTEM: As per tender specification	1	Lot		
23	AntiBacterial Spray As per tender specification	1	Lot		
24.	Medical Grade copper pipeline installation inside OT with scope of connectivity with existing pipeline in the hospital	1	LOT		
25.	OT Table Automated As per tender specification	6	LOT		
26.	Patient Transport Trolley As per tender specification	6	LOT		

Modular Operation Theatre_2 Size: 7.6 x 5.26 x 3.0m

<u>SI.NO.</u>	<u>DESCRIPTION</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Rate</u>	<u>TOTAL</u>
1	PANELLING: As per tender specification	96	Sqm		
2	PAINT: As per tender specification	96	Sqm		
3	FLOORING: As per tender specification	44	Sqm		
4	PLANAIR: As per tender specification	1	No.		
5	Anesthesia Pendent single arm As per tender specification	1	No.		
6	Surgical Pendent double arm As per tender specification	1	No.		
7	CONTROL PANEL: As per tender specification	1	No.		
8	PRESSURE RELIEF DAMPER: As per tender specification	1	No.		
9	X-RAY VIEW BOX As per tender specification	1	No.		

10	WRITING LIST BOARD: As per tender specification	1	No.		
11	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	8	Nos.		
12	STORAGE UNIT: As per tender specification	1	No.		
13	WORK STATION: As per tender specification	1	No.		
14	TWO BAY SCRUB SINK: As per tender specification	1	No.		
15	AUTOMATIC HERMETICALLY SEALED DOOR: As per tender specification	1	No.		
16	MANUAL HERMETICALLY SEALED DOOR: As per tender specification	1	No.		
17	SINGLE FLAP SWING DOOR: Single Leaf GI powdered coated hinge door of size 900 X 2100 having wall frame with rubber seals, Single door leaf, Door Handles, Door Closer and Hinges	1	No.		
18	HATCH BOX: As per tender specification	1	No.		
19	Distribution Box As per tender specification	1	No.		
20	Ducting Inside OT 22" Aluminium.	1	Lot		
21	Electrical System: - Laying conduits, Switch Boxes, Switches and switch plates, Power and Light Electric Multi-plug Sockets, including Wirubg, Earthing all the lighting controls, pendants and other equipment fixtures and fittings complete as per approved design.	1	Lot		

22	OT Light: As per tender specification	1	No.		
23	HVAC SYSTEM: As per tender specification	1	Lot		
24	AntiBacterial Spray As per tender specification	1	Lot		
25.	Medical Grade copper pipeline installation inside OT with scope of connectivity with existing pipeline in the hospital	1	LOT		
26.	OT table Automated As per tender specification	6	LOT		
27.	Patient Transport Trolley As per tender specification	6	LOT		

Corridor between OT -1 & 2 Size: 4.4 x 0.86 x 2.7m					
SI.NO.	DESCRIPTION	Qty	Unit	Unit Rate	TOTAL
1	PANELLING: As per tender specification	32	Sqm		
2	PAINT: As per tender specification	32	Sqm		
3	FLOORING: As per tender specification	6	Sqm		
4	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	2	Nos.		

-					
Modular Operation Theatre_3 Size: 8.3 x 5.26 x 3.0m					
<u>SI.NO.</u>	<u>DESCRIPTION</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Rate</u>	<u>TOTAL</u>
1	PANELLING: As per tender specification	104	Sqm		
2	PAINT: As per tender specification	104	Sqm		
3	FLOORING: As per tender specification	48	Sqm		
4	Plainair As per tender specification	1	No.		
5	Anesthesia Pendent single arm As per tender specification	1	No.		
6	Surgical Pendent double arm As per tender specification	1	No.		
7	CONTROL PANEL: As per tender specification	1	No.		
8	PRESSURE RELIEF DAMPER: As per tender specification	1	No.		
9	X-RAY VIEW BOX: As per tender specification	1	No.		
10	WRITING LIST BOARD: As per tender specification	1	No.		
11	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	8	Nos.		
12	STORAGE UNIT: As per tender specification	1	No.		
13	WORK STATION: As per tender specification	1	No.		
14	TWO BAY SCRUB SINK: As per tender specification	1	No.		

15	AUTOMATIC HERMETICALLY SEALED DOOR: As per tender specification	1	No.		
16	MANUAL HERMETICALLY SEALED DOOR: As per tender specification	1	No.		
17	SINGLE FLAP SWING DOOR: Single Leaf GI powdered coated hinge door of size 900 X 2100 having wall frame with rubber seals, Single door leaf, Door Handles, Door Closer and Hinges	1	No.		
18	HATCH BOX: As per tender specification	1	No.		
19	Distribution Box As per tender specification	1	No.		
20	Ducting Inside OT 22" Aluminium.	1	Lot		
21	Electrical System: - Laying conduits, Switch Boxes, Switches and switch plates, Power and Light Electric Multi-plug Sockets, including Wirubg, Earthing all the lighting controls, pendants and other equipment fixtures and fittings complete as per approved design.	1	Lot		
22	OT Light: As per tender specification	1	No		
23	HVAC SYSTEM: As per tender specification	1	Lot		
24	AntiBacterial Spray As per tender specification	1	Lot		
25.	Medical Grade copper pipeline installation inside OT with scope of connectivity with existing pipeline in the hospital	1	LOT		
26.	OT Table Automated As per tender specification	6	LOT		
27.	Patient Transport Trolley As per tender specification	6	LOT		

Modular Operation Theatre_4 Size: 7.9 x 5.26 x 3.0m

SI.NO.	DESCRIPTION	Qty	Unit	Unit Rate	TOTAL
1	PANELLING: As per tender specification	100	Sqm		
2	PAINT: As per tender specification	100	Sqm		
3	FLOORING: As per tender specification	46	Sqm		
4	PLANAIR: As per tender specification	1	No.		
5	Anesthesia Pendent single arm As per tender specification	1	No.		
6	Surgical Pendent double arm As per tender specification	1	No.		
7	CONTROL PANEL: As per tender specification	1	No.		
8	PRESSURE RELIEF DAMPER: As per tender specification	1	No.		
9	X-RAY VIEW BOX: As per tender specification	1	No.		
10	WRITING LIST BOARD: As per tender specification	1	No.		
11	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	8	Nos.		
12	STORAGE UNIT: As per tender specification	1	No.		
13	WORK STATION: As per tender specification	1	No.		
14	TWO BAY SCRUB SINK: As per tender specification	1	No.		
15	AUTOMATIC HERMETICALLY SEALED DOOR: As per tender specification	1	No.		
16	MANUAL HERMETICALLY SEALED DOOR: As per tender specification	1	No.		

17	SINGLE FLAP SWING DOOR: Single Leaf GI powdered coated hinge door of size 900 X 2100 having wall frame with rubber seals, Single door leaf, Door Handles, Door Closer and Hinges	1	No.		
18	HATCH BOX: As per tender specification	1	No.		
19	Distribution Box As per tender specification	1	Lot		
20	Ducting Inside OT 22" Aluminium.	1	Lot		
21	Electrical System: - Laying conduits, Switch Boxes, Switches and switch plates, Power and Light Electric Multi-plug Sockets, including Wirubg, Earthing all the lighting controls, pendants and other equipment fixtures and fittings complete as per approved design.	1	Lot		
22	OT Light: As per tender specification	1	No.		
23	HVAC SYSTEM: As per tender specification	1	Lot		
24	AntiBacterial Spray As per tender specification	1	Lot		
25.	Medical Grade copper pipeline installation inside OT with scope of connectivity with existing pipeline in the hospital	1	LOT		
26.	OT Table Automated As per tender specification	6	LOT		
27.	Patient Transport Trolley As per tender specification	6	LOT		

Corridor between OT -3 & 4 Size: 4.5 x 0.79 x 2.7m

<u>SI.NO.</u>	<u>DESCRIPTION</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Rate</u>	<u>TOTAL</u>
1	PANELLING: As per tender specification	33	Sqm		
2	PAINT: As per tender specification	33	Sqm		
3	FLOORING: As per tender specification	6.5	Sqm		
4	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	2	Nos.		

13 Bed ICU Size: 15.7 x 8.23 x 2.8m					
<u>SI.NO.</u>	<u>DESCRIPTION</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Rate</u>	<u>TOTAL</u>
1	PANELLING: As per tender specification	133	Sqm		
2	PAINT: As per tender specification	133	Sqm		
3	FLOORING: As per tender specification	135	Sqm		
4	FALSE CEILING: PVC Laminated ceiling tiles with powder coated G.I. Grid.	131	Sqm		
5	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	8	Nos.		
6	Curtains including G-Rail Curtain Track 22 rft, Suspension Hanger 3Pcs, Stain retardant curtain (15 x 7")	13	Nos		
7	ICU Bed: As per tender specification	13	Nos		
8	ICU Side Table	13	Nos		
9	Double Flap Swing Door: Double Leaf GI powdered coated hinge door of size 1200 X 2100 having wall frame with rubber seals, Double door leaf, Door Handles, Door Closer and Hinges.	2	Nos		
10	HVAC SYSTEM: Supply of variable Refrigerant Flow modular type airconditioning system complete with indoor & outdoor units with individual corded controller as per the following capacities of the IDU and ODU. As per tender specification	1	Lot		
11	AntiBacterial Spray As per tender specification	1	Lot		
12	Single Bay Scrub As per tender specification	1	Lot		

Note: The Preexisting installed Bed head panel, Gas pipeline and electrical system of ICU will be reused or reinstalled after completion of fitting of pre- fabricated wall panel.

Patient hold Room_2 Size: 11.3 x 5.64 x 2.8m					
SI.NO.	DESCRIPTION	Qty	Unit	Unit Rate	TOTAL
1	PANELLING: As per tender specification	109	Sqm		
2	PAINT: As per tender specification	109	Sqm		
3	FLOORING: As per tender specification	87	Sqm		
4	FALSE CEILING: PVC Laminated ceiling tiles with powder coated G.I. Grid.	82	Sqm		
5	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	8	Nos.		
6	Curtains including G-Rail Curtain Track 22 rft, Suspension Hanger 3Pcs, Stain retardant curtain (15 x 7")	5	Nos		
7	ICU Bed: As per tender specification	5	Nos		
8	ICU Side Table	5	Nos		
9	Double Flap Swing Door: Double Leaf GI powdered coated hinge door of size 1200 X 2100 having wall frame with rubber seals, Double door leaf, Door Handles, Door Closer and Hinges.	2	Nos		
10	HVAC SYSTEM: Supply of variable Refrigerant Flow modular type airconditioning system complete with indoor & outdoor units with individual corded controller as per the following capacities of the IDU and ODU. As per tender specification	1	Lot		
11	AntiBacterial Spray As per tender specification	1	Lot		

Note: The preexisting Bed head panel, Gas pipeline system and electrical system will be reused and reinstalled after completion of pre-fabricated wall panel.

Post Recovery Room_1 Size: 15.7 x 8.23 x 2.8m					
SI.NO.	DESCRIPTION	Qty	Unit	Unit Rate	TOTAL
1	PANELLING: As per tender specification	127	Sqm		
2	PAINT: As per tender specification	127	Sqm		
3	FLOORING: As per tender specification	135	Sqm		
4	FALSE CEILING: PVC Laminated ceiling tiles with powder coated G.I. Grid.	131	Sqm		
5	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	8	Nos.		
6	Curtains including G-Rail Curtain Track 22 rft, Suspension Hanger 3Pcs, Stain retardant curtain (15 x 7")	15	Nos		
7	ICU Bed: As per tender specification	15	Nos		
8	ICU Side Table	15	Nos		
9	Double Flap Swing Door: Double Leaf GI powdered coated hinge door of size 1200 X 2100 having wall frame with rubber seals, Double door leaf, Door Handles, Door Closer and Hinges.	2	Nos		
10	HVAC SYSTEM: Supply of variable Refrigerant Flow modular type airconditioning system complete with indoor & outdoor units with individual corded controller as per the following capacities of the IDU and ODU. As per tender specification	1	Lot		
11	AntiBacterial Spray As per tender specification	1	Lot		

Note: The preexisting Bed head panel, Gas pipeline system and electrification will be reused and reinstalled after completion of pre-fabricated wall panel.

BOQ of VRV System Air Conditioners for Total Allied areas

Note: Following total BOQ is given for the allied areas other than OTs for using VRV system air conditioning.

S. No	Item Description	Unit	Qty
PART-A :	High Side Works		
1	Supply of Imported 100% Variable Inverter Compressors of following capacities.		
	<u>Variable Refrigerant Flow System</u>		
	Supply of Variable Refrigerant Flow type multi unit air-conditioning system complete with indoor and outdoor units with individual controller for cooling & heating type operations. All Machines are Imported.		
1.1	<u>Outdoor Unit</u>		
	Supply of Air-cooled inverter based modular type air conditioning VRV outdoor condensing units with R-410-A equipped with highly efficient Scroll compressors with 100% inverter compressor in each combination of outdoor unit with special acryl pre-coated e-pass heat exchanger, low noise condenser fan with DC motor, auto check function for connection error, auto address setting with following nominal capacities suitable to work on 3 phase 415 volt (+)(-)10%, 50 Hz AC supply, as per following:- Make ,		
	<u>TOTAL 100 H.P.</u>		
1	28 HP	Nos.	1
2	44 HP	Nos.	1
2	<u>Indoor Units</u>		
	Supply of Indoor units equipped with pre-filter, fan section with low noise fan, multispeed motor, coil section with DX coil, outer cabinet, drain pan, insulation, pipe connections, corded remote control etc. of various capacities as per specifications aand drawings.		
	<u>Ductable/ Celining Consiled Unit</u>	Nos.	6
3	Corded remote controls for ductable	Nos.	6
	cordless for Hiwall type		
4	Supply of Refnut Interconnecting Y joints as per requirement	LOT	1
PART-B :	Low Side Works		
1	<u>Installation of Outdoor Unit</u>		

	Installation of Air-cooled inverter based modular type air conditioning VRV outdoor condensing units with R-410-A equipped with highly efficient Scroll compressors with 100% inverter compressor in each combination of outdoor unit with special acryl pre-coated e-pass heat exchanger, low noise condenser fan with DC motor, autocheck function for connection error, auto address setting with following nominal capacities suitable to work on 3 phase 415 volt (+)(-10%, 50 Hz AC supply, as per following:-		
1.1	44 HP	Nos.	1
1.2	22 HP	Nos.	1
2	<u>Installation of 'Indoor Units</u>	Nos.	6
3	Installation of Corded remote controls for ductable and cordless for Hiwall type	Nos.	6
4	Installation of Centralized remote Controller System		
	Installation & Commissioning of centralised remote controlling system capable of Internet monitoring any where from the world and controlling of all the indoors and outdoor units including all necessary hardware, software, adoptor for computerized control,	Job.	1
5	Installation of Refnut Interconnecting Y joints as per requirment	LOT	1
6	Refrigerant Piping for VRV System		
	Supply & fixing of interconnecting copper refrigerant pipe work duly insulated with elastomeric nitrile rubber type tubular insulation between indoor & outdoor units as per specifications. All piping inside the room shall be properly supported on descrete (at a interval of 1 meter) Piping length shall be measured equivalent to 1 meter liquid line & one meter gas line irrespective of sizes & rate per meter shall be for both the length irrespective of sizes.		
6.1	41.3 mm O.D. (insulation : 19 mm)	Rm	30
6.2	34.9 mm O.D. (insulation : 19 mm)	Rm	25
6.3	28.6 mm O.D. (insulation : 19 mm)	Rm	27
6.4	22.2 mm O.D. (insulation : 13 mm)	Rm	38
6.5	19.1 mm O.D. (insulation : 13 mm)	Rm	35
6.6	15.9 mm O.D. (insulation : 13 mm)	Rm	38
6.7	<u>12.7 mm O.D. (insulation : 13 mm)</u>	Rm	50
6.8	9.5 mm O.D. (insulation : 13 mm)	Rm	45
6.9	6.4 mm O.D. (insulation : 13 mm)	Rm	35
7	Additional Refrigerant Gas		
	Supply & charging of additional refrigerant gas at site as required for satisfactory commissioning of AC System.	Kg	25
8	Control & Transmission Wiring		
	Providing & fixing control cum transmission wiring of 2 core x 1.0 sqmm copper in suitable conduits between indoor and from outdoor units to centralized controller.	RM	150
9	Controller Wiring		
	Providing & fixing control wiring of 2 core x 1.0 sq mm copper between indoor units and their wired remote.	Rm	120
10	<u>Ducting</u>		
	Supply, installation, testing and commissioning Sheet metal ducting complete with supports, dampers, Vanes, nuts, bolts etc. as per specifications and drawings.		

11	<u>G.I. Sheet Metal Ducting (Rectangular)</u>		
	0.63 MM (24 Gauge)	Sqm.	105
	0.80 MM (22 Gauge)	Sqm.	35
12	Grilles/Diffusers/Louvers		
-	Supply, installation , testing and commissioning of Extruded aluminium supply and return air grilles/diffusers/louvres, extruded aluminium dampers, supply air plenum etc. duly powder coated as per specifications and drawings.		
-	Aluminium linear grill with dampers	Sqm.	3.4
13	<u>Aluminium linear grill without Dampers</u>	Sqm.	5.2
14	Flexible Duct Connection		
	Supply, installation, testing and commissioning Fire retardant non porous double layer flexible connection between each fan and duct.	Nos.	10
15	Drain Piping		
	<u>Supply, installation , testing and commissioning of PVC' drain piping complete with fittings, supports, valve and 6 mm thick closed nitrile rubber foam insulation as per specifications & drawings.</u>		
	<u>Providing and fixing piping fittings, supports and insulation</u>		
	25 MM	RM	55
	32 MM	RM	40
16	Duct insulation		
	Supply, Installation, testing and commissioning of closed cell Nitrel insulation with microbial treatment of density not less than 50 kg/Cubm and material shall be in the form of sheets of uniform thickness.		
	13 mm thick	Sq.m.	105
17	Duct Acoustic lining		
	Supply, Installation, testing and commissioning of open cell elastomeric insulation with microbial treatment of density not less than 50 kg/Cubm and material shall be in the form of sheets of uniform thickness.		
	12 mm thick	Sq.m.	35

PACKAGE-2

Dialysis Room.

Dialysis Room Size: 2.4mx 5.64m x 2.8m					
<u>SI.NO.</u>	<u>DESCRIPTION</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Rate</u>	<u>TOTAL</u>
1	PERIPHERAL LIGHTS: Recess mounted IP54 Protocol, non-hygroscopic peripheral lights having compact fluorescent lamp, non dimmable	10	Nos.		
2.	Paints. as per specification attached.	45 Sqm	LOT		
3	HVAC SYSTEM: Supply of variable Refrigerant Flow modular type air-conditioning system complete with indoor & outdoor units with individual corded controller as per the following capacities of the IDU and ODU. as per specification attached.	1	Lot		
4.	AntiBacterial Spray as per specification attached.	1	Lot		
5.	Flooring as per specification attached.	40 Sqm	LOT		

Check List to be submitted in Technical bid.

Sr. No.	Criteria	Requirements	Cross Referencing / Page no. at which required information is available (To be mentioned)	Indicate Eligibility Y/N
1	Turnover for each last three years	Annual financial turnover during the last three years ending 31 st March 2014 should be not less than Rs 08 Cr. in each year. Notary certified Certificate issued by Chartered Accountant must be submitted in support of the same.		
2	Experience	The experience of having successfully installation of Modular Operation Theatres of total value not less than Rs 15 CR (Fifteen) in last three financial years ending 31 st March 2014.		
3	Personnel Capabilities	List of suitably qualified and experienced personnel in relevant field		
4	Equipment Capabilities	List of equipment required and proposed to be deployed & source of such equipments		
5	Financial Capabilities	The Company should have positive, Net Worth and should not have incurred any loss in three years ending 31 st March, 2014. Statement duly certified by the Chartered Account to this effect must be submitted.		
6	Solvency Certificate	Minimum solvency certificate from banker for 50% of estimated cost.		
7	Abandoning / Blacklisting	Information regarding not Abandoned /Black listing for any work of Union Govt./State Govt./CCI/PSU's etc. during last 5 years		
8	Works Contract Tax/VAT Registration with appropriate Authorities.	In case the firm is not registered at the time of submission of bid, a declaration by the firm that they will get themselves registered with the concerned authorities in case they are awarded the work is submitted.		
9		Notary certified User List (List of Govt. / Semi Govt., Reputed Pvt. Hospital) where quoted model of the items has been supplied and installed.		
10		Notary certified Supply order copy (Minimum five nos. or more) issued by Govt./Semi Govt./Reputed Pvt. Institutions/organization for the quoted		

		items. (same model)		
11		Affidavit, to the effect that the bidder is not supplying the quoted item(s) to any other Govt. / Pvt. Organizations / Institutions / Hospitals at the rate lower than the rate quoted against this tender.		
12		PAN No. Registration no.		
13.		Certificate , to the effect that bidder will maintain the quoted item(s) during Warranty period of five years including all spares, accessories, consumables etc., (Please mention the name of the item / items with price, which are not supplied by the bidder free of cost with frequency of replacement)		
14.		Certificate , to the effect that bidder have quoted their rates for Comprehensive Annual Maintenance Contract inclusive of labour, spares, consumables, accessories etc. on per year basis for a further period of five years after expiry of warranty period of three years in the price bid . (Please mention the name of the item / items with price, which are not supplied by the bidder free of cost with frequency of replacement during Comprehensive Annual Maintenance Contract period in the technical bid)		
15.		Compliance Statement with relation to the technical specification as mentioned in the bidding document duly supported by the original catalogue.		
16.		Compliance Statement with relation to the terms & conditions as mentioned in the document.		

Authorized Signature

B: To be filled by the Bidder and submitted along with Price Bid

Sl. No.	Terms & Conditions as per Bidding Document	Page No.	Remarks
1.	Item wise price for the item(s) as mentioned in the Bidding Document (BOQ's)		
2.	Rate for Comprehensive Annual Maintenance Contract as per terms & conditions mentioned in the Bidding Document and as per format appended below:		

COMPREHINSIVE ANNUAL MAINTENANCE CONTRACT PRICES SCHEDULE

S. No.	Item Description	1 st Yr.	2 nd Yr.	3 rd Yr.	4 th Yr.	5 th Yr.	Total Comprehensive Annual Maintenance Contract over a period of five years after expiry of warranty period of five years from the date of successful installation. (c + d + e + f + g)
a	b	c	d	e	f	g	j
1.	Complete System						

Note: If the above-mentioned details are not mentioned and required documents are not attached at appropriate places, the offer of the bidder(s) shall be summarily rejected. Hence, bidder(s) are advised to go through the bidding document carefully and be prepared with all the required documents to avoid rejection of offer.

(Name of the Bidder with signature & seal)

FORM OF AGREEMENT

1. This agreement made on the - - - - - day of -----2013 between IGIMS Patna, (hereinafter called "The Institute") represented by who enters into this Agreement of the one part and M/s----- hereinafter called ("the Contractor") of the other part.

1.1 Whereas the Institute is desirous that certain Works should be executed by the Contractor, viz. Supply, Installation, Testing and Commissioning of Modular Operation Theatres and has accepted a bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

Now this Agreement witnesses the follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:

- (a) The Letter of Acceptance;
- (b) The Said Bid;
- (c) The Conditions of Contract;
- (d) The Specification;
- (e) The Drawings;
- (f) The Priced Bill of Quantities;
- (g) Any other relevant documents referred to this Agreement or in the aforementioned documents

3. In consideration of the payments to be made by the Institute to the Contractor as herein after mentioned, the Contractor hereby covenants with the Institute to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

4. The Institute hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or only such sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof, the parties hereto have caused this Agreement to be executed the day and year first before written.

Signed, Sealed, and Delivered by the Said -----

Binding Signature of the Director, IGIMS Patna

Binding Signature of Contractor -----

In the presence of

Witness (1):

Witness (2):

PROFORMA FOR PERFORMANCE BANK GUARANTEE

(On a stamp paper of appropriate value from any Nationalized Bank or Scheduled Bank)

To,

The Director,
IGIMS ,
Patna

Dear Sir,

In consideration of the IGIMS , Patna. (hereinafter called Institute) having awarded to M/s-----
----- (hereinafter referred to as the said Contractor or
'Contractor' which expression shall whenever the subject to context so permits include its successors and
assigns) a contract

No.-----in terms inter alia, of the IGIMS , Patna. Letter No.-----
-----dated _____ and the General Conditions of Contract and upon
the condition of the contractor's furnishing security for the performance of the contractor's obligations and
discharge of the contractor's liability under and in connection with the said contract upto a sum of Rs. -----
----- (Rupees -----only)amounting to -----percent of the total
contract value.

1. We, -----(hereinafter called 'The Bank' which expression
shall include its successors and assigns) having our branch office at

----- and Registered/Head Office at
----- a company registered under the Companies Act, 1956) hereby
jointly and severally undertake to guarantee the payment to the Institute in rupees forthwith on demand in
writing and without protest or demur or any and all monies any wise payable by the contractor to the Institute
under in respect of or in connection with the said contract inclusive of all the Institute's losses and damages
and costs, (inclusive
between attorney and client) charges and expenses and other moneys any wise payable in respect of the above
as specified in any notice of demand made by the Institute to the Bank with reference to this guarantee upto
an aggregate limit of Rs.-----Rupees-----_ only).

2. We, -----Bank Ltd. further agree that The Institute shall be sole
judge of and as to whether the said contractor has committed any breach or breaches of any of the terms and
conditions of the said contract and the extent of loss, damage, cost, charges and expenses caused to or
suffered by or that may be caused to or suffered by The Institute on account thereof and the decision of The
Institute that the said Contractor has committed such breach or breaches and as to the amount or amounts of
loss, damage, costs, charges and expenses caused to or suffered by The Institute from time to time shall be
final and binding on us.

3. The Institute shall be at liberty without reference to the Bank and without affecting the full liability of the
Bank hereunder to take any other security in respect of the Contractor's obligations and liabilities hereunder
or to vary the contract or the work to be done there under vis-a-vis the Contractor or to grant time or
indulgence to the Contractor or to reduce or to increase or otherwise vary the prices of the total contract value
or to release or to
forbear from enforcement of all or any of the security and/or any other security(ies) now or hereafter held by
The Institute and no such dealing(s) reduction(s) increase(s) or other indulgence(s) or arrangements with the
Contractor or release or forbearance whatsoever shall absolve the bank of the full liability to The Institute
hereunder or prejudice
the rights of The Institute against the bank.

4. This guarantee shall not be determined or affected by the liquidation or winding up, dissolution, or change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all monies payable to The Institute in terms thereof.

5. The bank hereby waives all rights at any time inconsistent with the terms of this guarantee and the obligations of the Bank in terms hereof shall not be any wise affected or suspended by reason of any dispute or disputes having been raised by the Contractor stopping or preventing or purporting to stop or prevent any payment by the Bank to The Institute in terms hereof.

6. The amount stated in any notice of demand addressed by The Institute to the Bank as liable to be paid to The Institute by the Contractor or as suffered or incurred by The Institute on account of any losses or damages or costs, charges and/or expenses shall be conclusive evidence of the amount so liable to be paid to The Institute or suffered or incurred by The Institute as the case may be and shall be payable by the Bank to The Institute in terms hereof.

7. This guarantee shall be a continuing guarantee and shall remain valid and irrevocable for all claims of The Institute and liabilities of the contractor arising up to and until midnight of -----.

8. This guarantee shall be in addition to any other guarantee or security whatsoever that The Institute may now or at any time any wise may have in relation to the Contractor's obligations/or liabilities under and/or in connection with the said contract, and The Institute shall have full authority to have recourse to or enforce this security in preference to any other guarantee or security which The Institute may have or obtain and no forbearance on the part of The Institute in enforcing or requiring enforcement of any other security shall have the effect of releasing the Bank from its full liability hereunder.

9. It shall not be necessary for The Institute to proceed against the said Contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding that any security which The Institute may have obtained or obtain from the contractor shall at the time when proceedings are taken against the said bank hereunder be outstanding or unrealized.

10. We, the said Bank undertake not to revoke this guarantee during its currency except with the consent of The Institute in writing and agree that any change in the constitution of the said contractor or the said bank shall not discharge our liability hereunder.

11. We ----- the said Bank further that we shall pay forthwith the amount stated in the notice of demand notwithstanding any dispute/difference pending between the parties before the arbitrator and/or that any dispute is being referred to arbitration.

12. Notwithstanding anything contained herein above, our liability under this guarantee shall be restricted to Rs.------(Rupees----- only) and this guarantee shall remain in force till----- and unless a claim is made on us within 3 months from that date, that is before ----- all the claims under this guarantee shall be forfeited and we shall be relieved of and discharged from our liabilities hereunder.

Dated -----Day of-----2012

For and on behalf of Bank.

Issued Under Seal:

MANUFACTURER'S AUTHORIZATION FORM

No. ----- Dated -----

-

To

Dear Sir,

Tender No. -----

We, ----- who are established and reputed manufacturer of -----
----- (Name & description of goods offered) having factories at -----
----- (Address of factory) do hereby authorize M/s -----
----- (Name & address of agent) which has been our Dealer/distributor since-----
----- to submit a bid, and sign the contract with you for the goods manufactured by
us against the above tender. No company or firm or individual other than M/s -----
----- are authorized to bid And to conclude the contract for goods manufactured by us against this
specific tender. We hereby extend our full guarantee and warranty as per the clause of Special Condition of
Contract of above tender for
goods and services offered for supply by our authorized firm.

Yours faithfully,

(Name) (Name of

Manufacturer)

Note: This authorization letter should be on the letter head of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the bidder in its bid

APPLICATION FORM No. - 1

GENERAL INFORMATION

All individual firms applying for pre-qualification are requested to complete the information in this form. Information is to be provided by for all Owners or Applicants who are partnerships or individually-owned firms.

1.	Name of firm
2.	Head office address
3.	Contact Person Telephone
4.	Fax Email
5.	Place of Incorporation / Year of Incorporation / Registration Registration

Authorized Signatory of bidder

APPLICATION FORM No. - 2

STRUCTURE AND ORGANIZATION

1. Name & address of the applicant
2. Telephone No. /Telex No. /Fax No. /E-Mail
3. Legal status of the applicant (attach copies of original document defining the legal status)
 - (a) An individual
 - (b) A proprietor firm
 - (c) A firm in partnership
 - (d) A Limited Company or Corporation.
4. Particulars of registration with various Government bodies (attach attested photocopy)
Organization /Place of Registration:
Registration No.:
5. Name and Titles of Directors & Officers with designation to be concerned with this work.
6. Name and Designation of individuals authorized to act for the organization.
7. Was the applicant ever required to suspend construction for a period of more than six months continuously after the commencement of the construction? If so, give the name of the project and reasons for suspension of work.
8. Has the applicant ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.
9. Has the applicant ever been debarred / black listed for tendering in any organization at any time? If so, give details.
10. Has the applicant ever been convicted/ penalized by a court of law or Competition Commission of India (CCI)? If so, give details.
11. Any other information considered necessary but not included above.

Authorized Signatory of bidder

APPLICATION FORM No. - 3

PERSONNEL CAPABILITIES

S.No.	Designation	Total Number	Number available for this work	Name	Qualification	Professional Experience	Remarks

APPLICATION FORM NO.: 4

EQUIPMENT CAPABILITIES

S. No.	Name of equipment	Nos.	Capacity	Age	Condition	Remarks

APPLICATION NO.: 5**FINANCIAL CAPABILITIES****(Rs. In lacs)**

Financial Year	Annual Turn Over in Indian Rupees (or equivalent to Indian Rupees) as per Audited Balance Sheet
2010-2011	Rs.
2011-2012	Rs.
2012-2013	Rs.

Financial Information in Rs. Equivalent	For Years 2008-2009	For Years 2009-2010	For Years 2010-2011	For Years 2011-2012	For Years 2012-2013
11. Total Assets					
12. Current Assets					
13. Total Liabilities					
14. Current Liabilities					
15. Profit before Tax					
16. Profit after Tax					
17. Net Worth					

NOTE : The above data is to be supported by audited balance sheets

1. Attach copies of audited balance sheets for all 3 years (2011- 12, 2012 – 13, 2013 – 14)
2. Attach recent solvency certificate from bankers.
3. Indicate financial arrangements for carrying out the proposed work.

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APPLICATION NO. - 6EXPERIENCE OF COMPLETION OF PROJECTS OF
SIMILAR NATURE & COMPLEXITY

S. No.	Name of work / Project and location	Owner or sponsoring organization	Cost of work in Lakhs	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Name and address/ Telephone/ Fax number/ Email of officer to whom reference	Remarks

NOTE: Please attach supporting documents (completion certificates along with order copies) for the above information

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APPLICATION FORM NO.: 7

**Litigation Details
Court Cases / Arbitration**

Name of Bidder:

Name of Bidder:							
Year	Name of the work	Name of the client, with Address	Title of the court case / arbitration	Detail of the Court / Arbitrator	Status Pending / Decided	Disputed Amount (Current Value, the equivalent in case of Court Cases/ Arbitration	Actual Awarded Amount (Rs) in decided Court Cases / arbitration

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