

BIDDING DOCUMENTS

Tender For Supply, Installation & Commissioning of Medical Equipment on Turn-key Basis for Government Dental College & Hospital, Rahui in Nalanda of Bihar.



Tender Reference No.:- BMSICL/2022-23/ME-292

**Bihar Medical Services and Infrastructure Corporation Limited
4th Floor, Bihar State Building Construction Co. Ltd, Hospital Road, Shastri Nagar, Patna -
800023(Bihar) India**

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INVITATION FOR E-BIDS
FOR

Tender For Supply, Installation & Commissioning of Medical Equipment on Turn-key basis for
Government Dental College & Hospital, Rahui in Nalanda of Bihar.

[Modify as appropriate to indicate general description of items under procurement]

Tender Reference No.	BMSICL/2022-23/ME-292
Date and time for downloading of bid document	Upto 07 th Sept. 2022 till 17:00 Hrs.
Date of Pre- Bid Meeting	24 th August 2022 at 15:00 Hrs in Conference hall of BMSICL, 4 th Floor, Bihar State Building Construction Co. Ltd, Hospital Road, Shastri Nagar, Patna (Bihar)
Last date and time of submission of online bids	08 th Sept. 2022 up to 17:00 Hrs.
Last date and time for submission of original documents of EMD, Document Fee and technical bid.	09 th Sept. 2022 till 14:00 Hrs.
Date, Time and Place of opening of Technical Bid	09 th Sept. 2022 (at 15:00 Hrs.) on the website of www.eproc.bihar.gov.in in the office of BMSICL
Date and time of opening of financial Bids	To be announced later on www.eproc.bihar.gov.in
Validity of Tender	180 Days
Cost of the tender document	Rs.11,800/- (Eleven Thousand Eight Hundred Rupees only) Non-refundable.
Bid Processing Fee	Rs 1180/-

1. To participate in E-Tendering the tenderer will have to be registered with E-Tendering service provider. For this help desk first floor, M/22, Bank of India building, Road no.-25, Sri Krishna Nagar Patna-800020, Tele Phone no.-0612-2523006, Mobile No. - 7542028164 can be approached.

2. The cost of tender document is acceptable in the form of Bank Draft issued by any nationalized bank / Scheduled bank in favour of Managing Director, Bihar Medical Services and Infrastructure Corporation Limited, Patna and payable at Patna and it is non-refundable.
3. The required amount of Earnest Money is acceptable in the form of Bank Draft/Bank Guarantee issued by nationalized / schedule bank in favour of Managing Director, Bihar Medical Services and Infrastructure Corporation Limited, Patna and payable at Patna. The Earnest Money deposited in any other form shall not be accepted.
4. The Tender Inviting Authority reserves the right to extend the schedule of tender or to reject the tender without assigning any reason.
5. The fee for bid processing is to be deposited by the tenderer through net banking i.e. RTGS/NEFT/Debit Card. The tenderer must ensure the payment before schedule time otherwise the Corporation will not be responsible for any delay.
6. It is essential to deposit the original copies of Tender fee, EMD as specified in Section-IV (Schedule of Requirement) in a sealed envelope at Bihar Medical Services Infrastructure Corporation Limited, **Patna by 09th September 2022 till 14:00 Hrs.**
7. Note: Please number the documents with serial number on each and every page and do mention the total number of pages of bidding document. In the technical Bid also assign the corresponding page numbers of supporting documents. Any discrepancy or misrepresentation in this aspect will not be entertained.
8. All queries and questions regarding the tender should be addressed to MD BMSICL (either through letter or through e-mail: -md-bmsicl-bih@nic.in and/or bmsicl.equipment@gmail.com or contact no. [0612-2219634/35](tel:0612-2219634/35)) up to 7 days before of closing of online bid registration.
9. All communication, addendum/corrigendum related to this tender will be uploaded on the website of www.eproc.bihar.gov.in
10. Managing Director, BMSICL reserves the right to reject any or all the applications without assigning any reason.

**Managing Director
BMSICL, Patna**

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INVITATION FOR E- BIDS (IFB)

Tender For Supply, Installation & Commissioning of Dental Equipment on Turn-key basis for Government Dental College & Hospital, Rahui in Nalanda of Bihar.

By Managing Director,
Bihar Medical Services and Infrastructure Corporation Limited
4th Floor, Bihar State Building Construction Co. Ltd, Hospital Road, Shastri Nagar, Patna
(Bihar) India

Bid Reference No.: BMSICL/2022-23/ME-292

Date: August 2022

The Bihar Medical Services and Infrastructure Corporation Limited, Patna (name of purchaser) on behalf of the Government of Bihar, invites e-bids from sole bidders as defined in section-II of this tender document / OEM or their authorized dealer/Distributor/Sole Selling agent (having authorization in the format (Form-X) given in the bidding document of all equipment listed in the schedule of requirement for Supply, Installation & Commissioning of Dental Equipment on Turn-key basis for Dental College & Hospital, Rahui in Nalanda of Bihar.

Schedule No.	Brief Description of Goods and Services on turkey basis	Qty./No.	Delivery Schedule (in days)	Earnest Money Deposit (EMD) in Indian Rupees
1	Tender For Establishment of Dental Equipment on Turn-key basis for Dental College & Hospital, Rahui in Nalanda of Bihar.	(As mentioned in section –IV) of the bid document	45 days	60,00,000

1. The qualification criteria, Detailed Technical Specifications, Scope of Work, Cost of Tender Document, Earnest Money Deposit and other conditions can be seen in the tender document to be downloaded from the website of www.eproc.bihar.gov.in.
2. The bids must be uploaded (e-mode/ online) at the address given at page 2 on or before 17:00 hrs. of **08th Sept. 2022** up to 17:00 Hrs. All bids must be accompanied by an Earnest Money Deposit (EMD) as specified in the bidding document. Bids submitted after 17:00 hrs. **08th Sept. 2022** up to 17:00 Hrs. shall be rejected.

3. The Pre-bid meeting shall be organized at the purchaser's office on **24th August 2022** at 11:00 Hrs. In the Pre-bid meeting, the prospective bidders may seek clarification on any issues related to the terms, conditions and technical specifications given in the bidding documents.
4. Technical bids will be opened (in e- mode) at Bihar Medical Services & Infrastructure Corporation Ltd., 4th Floor, Bihar State Building Construction Co. Ltd, Hospital Road, Shastri Nagar, Patna (Bihar) **09th Sept. 2022 at 15.00 Hrs.** on the website of www.eproc.bihar.gov.in The bidder's representatives may attend the bid opening meeting.
5. The Purchaser reserves the right to cancel/annul the bidding process without assigning any reason thereof.
6. In the event, the dates specified for the bid receipt and opening are declared as holidays for purchaser's office, the due date for submission of bids and opening of bids shall be the immediately following working day at the appointed time.

**Managing Director
BMSICL, Patna**

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INSTRUCTIONS TO BIDDERS

A INTRODUCTION

1. SCOPE OF BID

The Bihar Medical Services and Infrastructure Corporation Limited, Patna (name of purchaser) on behalf of Government of Bihar, invites e-bids from sole bidder / OEM (Original Equipment Manufacturer) of any one of the equipment listed in schedule of requirement for Tender For Supply, Installation & Commissioning of Equipment on Turn-key basis for Government Dental College & Hospital, Rahui in Nalanda of Bihar. As specified in the Schedule of Requirements.

2. FRAUD AND CORRUPTION

2.1 It is required that the Purchasers as well as Bidders/Suppliers/Contractors observe the highest standard of ethics during the procurement and execution of Contracts. In pursuance of this policy, the Purchaser:

(a) defines, for the purposes of this provision, the terms set forth below as follows:

- (i) “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in Contract execution; and
- (ii) “fraudulent practice” means a misrepresentation of facts and / or concealment of fact in order to influence a procurement process or the execution of a Contract to the detriment of the Purchaser; it includes collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, noncompetitive levels and to deprive the Purchaser of the benefits of free and open competition

(b) will declare a firm ineligible and debar the firm, either indefinitely or for a stated period of time, to be awarded a Contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract. In such cases, appropriate legal action as per court of law shall be initiated for which the concerned bidder shall be solely responsible.

2.2 Furthermore, bidders shall be aware of the provision stated in Sub-Clauses 19.4 and 22.1.d. of the General Conditions of Contract

3 ELIGIBLE BIDDERS

3.1 The eligible bidder should be a legal entity and have satisfactorily completed works of similar nature in the last **05 (Five)** year still the date of bid opening, according to anyone of the following requirements.

Sole bidder must have successfully executed the supply/purchase orders/contracts for medical equipment of similar nature as mentioned in the schedule of requirements to the tune of the value of at least 50% of the estimated cost (28 Cr) put to tender

Similar Work shall mean supply, installation and commissioning of medical equipment/ Medical Furniture/ Medical Devices for various level of Medical health facilities on turnkey basis in Government, Semi-Government, PSU or reputed Private hospitals/firms / Organizations or similar R & D facilities (for Hospitals).

The completion certificate shall be issued by Competent Authority. In case of private client, the completion certificate issued by Head of Hospital/Institution/ Medical administrator/Superintendent/ Purchase head/ Financial Head/ Equivalent and the same should be certified by CA.

3.2 A firm declared ineligible by the Purchaser in accordance with ITB Sub-Clause 2.1 (b) shall be ineligible to bid for a contract during the period of time determined by the Purchaser.

- 3.3 Pursuant to ITB Clause 11, the Bidder shall furnish, as part of its bid, documents establishing, to the Purchaser's satisfaction, the Bidder's eligibility to bid.
- 3.4 The sole bidder must have average annual turnover of Rs 40 Crores (average of any three years during the last 5 years). Bidder must submit copies of audited balance sheet and profit and loss statement detailing the same. Joint ventures and consortiums are not allowed for bidding.

4. ONE BID PER BIDDER

A firm shall submit only one bid. **The firm has to quote for all equipment (Full set) as listed in the schedule of requirement. Part Bids will not be considered.**

5. COST OF BIDDING

The bidder shall bear all costs associated with the preparation and submission of the bid. The Purchaser will, in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

6. ALTERNATIVE TENDER

Alternative Tenders are not permitted. However, the Tenderers can quote TWO alternate make/models of the same equipment meeting the tender specifications with single EMD.

1. THE BIDDING DOCUMENTS

6. CONTENTS OF BIDDING DOCUMENTS

- 6.1 The goods required to be supplied; bidding procedures and contract terms and conditions are prescribed in the Bidding Documents. The Bidding Document include the following:

Section I	Instructions to Bidders (ITB)
Section II	General Conditions of Contract (GCC)
Section III	Special Conditions of Contract (SCC)
Section IV	Schedule of Requirements (SOR)
Section V	Technical Specifications
Section VI	Sample Forms

- 6.2 The "Invitation for Bids" does not form part of the Bidding Documents and is included as a reference only. In case of discrepancies between the Invitation for Bid and the Bidding Documents listed in 6.1 above said Bidding Documents will take precedence.
- 6.3 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bid Documents. Failure to furnish all information required as per the Bid Documents or submission of the bids not substantially responsive to the Bid Documents in every respect will be at the bidder's risk and may result in rejection of the bid.

7. CLARIFICATION OF BID DOCUMENTS

- 7.1 A prospective bidder, requiring any clarification on the Bid Documents shall notify the Purchaser in writing or by FAX/e-mail at the Purchaser's mailing address indicated in the invitation of Bid.
- 7.2 Any clarification issued by the Purchaser in response to query raised by prospective bidders shall be published on the website of BMSICL and shall form an integral part of bid documents and it may amount to an amendment of relevant clauses of the bid documents.

8. Pre-bid Meeting

- 8.1 The bidder or his representative is invited to attend a pre-bid meeting, which will take place in the office of BMSICL Patna on **24th August 2022** at 15:00 Hrs.
- 8.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

- 8.3 The bidder may submit any query in writing or by FAX/ e-mail to reach the purchaser well before the time to be considered during the pre-bid meeting and **not after 48 hours since the pre-bid meeting**.
- 8.4 Any modification of the bidding document listed in ITB Clause 6.1 which may become necessary as a result of the pre-bid meeting shall be made exclusively through the issue of an Addendum pursuant to ITB Clause 9 and not through the minutes of the pre-bid meeting & the same will be uploaded at www.eproc.bihar.gov.in&/or www.bmsicl.gov.in.
- 8.5 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

9. AMENDMENT OF BIDDING DOCUMENTS

- 9.1 At any time, prior to the date of submission of Bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, or pursuant to ITB Clause 8, modify bid documents by amendments.
- 9.2 The amendments shall be notified by uploading the same at www.eproc.bihar.gov.in and/or website of BMSICL i.e. www.bmsicl.gov.in.
- 9.3 In order to afford prospective bidders a reasonable time to take the amendment into account in preparing their bids, the purchaser may, at its discretion, extend the deadline for the submission of bids suitably.

C. PREPARATION OF BIDS

10. LANGUAGE OF BID

The bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language. However, the purchaser as well as bidder may correspond in Hindi language also.

11. DOCUMENTS CONSTITUTING THE BID

The bid prepared by the bidder shall comprise the following components:

- (a) A Bid Form and a Price Schedule completed in accordance with ITB Clauses 12 and 13;
- (b) Documentary evidence established in accordance with ITB Clause 14 and 15 that the Bidder is eligible and qualified to perform the contract if its bid is accepted.
- (c) Documentary evidence established in accordance with ITB Clause 16 that the goods and ancillary services to be supplied by the Bidder conform to the bidding documents.
- (d) Earnest Money Deposit (EMD) furnished in accordance with ITB Clause 17.
- (e) Tender Document fee in the form of Demand Draft in favour of Managing Director, Bihar Medical services and Infrastructure Corporation Ltd. Payable at Patna.

12. BID FORM

The bidder shall complete the Bid Form and appropriate Price Schedule, indicating the goods to be supplied, brief description of the goods, quantity and prices as per section VI.

13. BID PRICES

- 13.1 The bidder shall give the total composite price along with price of each equipment exclusive of GST but inclusive of Customs duty, packing, forwarding, freight, octroi /entry tax and insurance etc. Price should be as per the price schedule given in Section VI. No Foreign exchange will be made available by the purchaser.
- 13.2 Break-up of the prices indicated in the Price Schedule shall be entered in the following manner:
- (i) The Unit price should be inclusive of, Excise duty, Sales Tax, Freight, octroi/entry tax Forwarding, Packing, Insurance, and any other Levies/Charges etc.
 - (ii) The supplier shall quote as per price schedule given in section VI for all the items given in schedule of requirement.
- 13.3 The price quoted by the bidder shall remain fixed during the entire period of contract and shall not be subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non - responsive and rejected.
- 13.4 The prices quoted by the bidder shall be in sufficient detail to enable the Purchaser to arrive at the price of material/goods offered.
- 13.5 “DISCOUNT, if any, offered by the bidders shall not be considered unless specifically indicated in the price schedule. Bidders desiring to offer discount shall therefore modify their offers suitably while quoting and shall quote clearly net price taking all such factors like Discount, free supply, etc, into account”.
- 13.6 The price approved by the Purchaser for procurement will be **FOR destination** which will be inclusive of all Taxes, Levies, packing, forwarding, freight and insurance as mentioned in Para 13.1 above.

14. DOCUMENTS REQUIRED TO BE SUBMITTED

- 14.1 The bidder shall furnish, as part of the bid documents, the documents as called for in the Check List(Annexure – 13).
- 14.2 The offered product may be required to be type approved / demonstrated at the time and place of installation. The supplied product would be evaluated for its ability to meet the technical specifications, manufacturability, reliability, testability, ease of installation, maintainability etc. Necessary documents to substantiate these attributes will have to be submitted at the time of application for approval by the supplier for obtaining type approval.

Or

Product can be demonstrated only at Site during installation and commissioning which Govt. Dental College & Hospital, Rahui, Nalanda of Bihar.

Or

In case goods offered have already been type approved/ validated by the Purchaser, documentary evidence to this effect shall be submitted by the bidder.

15. DOCUMENTS ESTABLISHING BIDDER'S QUALIFICATION

- 15.1 Pursuant to ITB Clause 11, the bidder shall furnish, as part of its bid, documents establishing the Bidder's qualification to perform the Contract if its bid is accepted.
- 15.2 The documentary evidence of the Bidder's qualifications as per eligibility criteria to perform the Contract shall establish to the Purchaser's satisfaction that:
- (a) The bidder should furnish the information on past works and satisfactory performance for being eligible in accordance with eligibility for the bidder in the Performa given under Section VI,

Form No.6 and provide self-attested copies of Orders for the works for which performance certificate in form no 6 is being provided.

- (b) The Bidders shall invariably furnish documentary evidence in support of the satisfactory completion of works in the form of performance certificates issued by those end users whose purchase orders are referred in the performance statement as submitted in Annexure- VI by the bidders “. The completion certificate shall be issued by Competent Authority. **In case of private client, the completion certificate issued by Head of Hospital/Institution/ Medical Administrator/Superintendent/ Purchase head/ Financial Head/ Equivalent and the same should be certified by CA.**
- (c) The bidder should furnish authorization in the prescribed format given at Section VI, assuring full guarantee and warranty obligations as per GCC Clause 14 for the equipment offered
- (d) The sole bidder must have average annual turnover of Rs 40 Crores (average of any three years during the last 5 years). Bidder must submit copies of audited balance sheet and profit and loss statement detailing the same. Joint ventures and consortiums are not allowed for bidding.

15.3 Submission of Manufacturer’s authorization for the equipment manufactured by other than the bidder in Annexure-V is mandatory at the time of supply. However, this may not be compulsory in case of low-cost equipment. Viz the equipment costing less than Rs. 10000/-

16. DOCUMENTS ESTABLISHING GOODS CONFORMITY TO BIDDING DOCUMENTS

16.1 Pursuant to ITB Clause 11, the Bidder shall furnish, as part of its bid, documents establishing the conformity to the bidding documents of all goods and services which the Bidder proposes to supply under the contract.

16.2 The documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data, and shall consist of :

- (a) A detailed description of the essential technical and performance characteristics of the goods;
- (b) An item-by-item commentary on the Purchaser's Technical Specifications, demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

16.3 For purposes of the commentary to be furnished pursuant to ITB Clause 16.2 (c) above, the Bidder shall note that standards for workmanship, material, and references to brand names or catalogue numbers designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

17. EARNEST MONEY DEPOSIT (EMD)

17.1 Pursuant to ITB Clause 11, the bidder shall furnish, as part of his bid, an Earnest Money Deposit (EMD) for an amount of mentioned in Section IV – Schedule of Requirements in the form of Demand Draft/Bank Guarantee.

17.2 The Earnest Money Deposit (EMD) is required to protect the purchaser against the risk of bidder’s conduct, which would warrant the forfeiture of Earnest Money Deposit (EMD) pursuant to ITB Clause 17.7.

- 17.3 The Earnest Money Deposit (EMD) shall be in the form of Bank Draft/Bank Guarantee issued by a Nationalised/Scheduled Bank in the favour of Purchaser here it is Managing Director, BMSICL Patna.
- (i) The bank guarantee of adequate amount covering the requirement of EMD should be valid for a period of 30 days beyond the validity of Bid.
 - (ii) Bank Draft/BG issued to cover the requirement of EMD that should be issued from Nationalized Bank/ Scheduled Bank.
 - (iii) The BG/Bank Draft should be submitted in the technical bids in a separate cover. The cover should be subscribed as **"EMD for tender no. BMSICL/2022-23/ME-292"**.
 - (iv) In case where the document of Earnest Money Deposit (EMD) is not submitted in the manner prescribed above, the commercial, technical offers SHALL NOT BE OPENED AND THE BID SHALL BE REJECTED.

Note: - Bank Guarantee to be provided in the format provided in Annexure- 4

- 17.4 A bid not secured in accordance with para 17.1, and 17.3 shall be rejected by the Purchaser being non-responsive at the bid opening stage and returned to the bidder unopened.
- 17.5 The Earnest Money Deposit (EMD) of the unsuccessful bidder will be discharged/returned as promptly as possible, but after finalization of tender. No interest will be paid against EMD and or performance security deposited by the bidders and no presentation will be allowed in this case.
- 17.6 The successful bidder's Earnest Money Deposit (EMD) will be discharged upon the bidder's acceptance of the advance purchase order satisfactorily in accordance with GCC Clause 5 and furnishing the performance security.
- 17.7 The Earnest Money Deposit (EMD) may be forfeited:
- (a) If the bidder withdraws his bid during the period of bid validity as specified in this bidding document.
 - (b) In the case of successful bidder if the bidder fails:
 - (i) To sign the contract in accordance with ITB Clause 29 or
 - (ii) To furnish performance security in accordance with GCC Clause 5.

18. PERIOD OF VALIDITY OF BIDS

- 18.1 Bid shall remain valid for **180 days** from the date of opening of bids prescribed by the purchaser pursuant to ITB Clause 24.1. A bid valid for a shorter period shall be rejected by the purchaser being non-responsive.
- 18.2 In exceptional circumstances, the purchaser may request the consent of the bidder for an extension to the period of bid validity. The request and the response there to shall be made in writing. The Earnest Money Deposit (EMD) provided under ITB Clause 17 shall also be suitably extended. The bidder may refuse the request without forfeiting his Earnest Money Deposit (EMD). A bidder accepting the request and granting extension will not be permitted to modify his bid.

19. PREPARATION OF BID

- 19.1 The Bid shall be submitted online and in physical form in parts / covers as mentioned below:-

- (i) Tender Fee, EMD (Both Online & Physical).
- (ii) Tender Processing Fee (Only Online)
- (iii) Technical Bid (Both Online & Physical)
- (iv) Price Bid (Only Online).

Bidders are requested not to submit the hard copy of Financial Bid, along with the physical documentary evidence of submission of Tender Fee, EMD of tender, Technical bid, and sample of quoted item. In case the hard copy of financial bid is submitted the tender shall be straightway rejected.

Also, uploading of the price bid in prequalification bid or technical bid will result in rejection of the tender.

The entire Document which will become part of the tender (Online, Physical) should be either typed or written in indelible ink and the same shall be signed (& with official seal) by the tenderer or by a person(s) who has been duly authorized to bind the tenderer to the contract.

The tender shall be duly signed at the appropriate places as indicated in the TE documents and all other pages of the tender including printed literature, if any shall be initialed by the same person(s) signing the tender. The tender shall not contain any erasure or overwriting, except as necessary to correct any error made by the tenderer and, if there is any such correction; the same shall be initialed by the person(s) signing the tender. The entire document being part of tender document should be page numbered.

A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warranty that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages.

19.2 In case Bidder is clamming for exemption from payment of Earnest Money, in accordance with SCC clause, then documentary evidence must be submitted in both Physical and in Online Mode.

19.3 (a) Prices are to be quoted in the attached Price Bid format online as per the directions on the official website.

Note: - It is the responsibility of tenderer to go through the TE document to ensure furnishing all required documents in addition to above, if any.

D. SUBMISSION OF TENDERS

20. Method of Bids submission

- 20.1 (a) The tender shall be submitted in online and in physical form as mentioned in ITB clause 19.
- (b) Technical bid should contain the clause by clause compliance statement for the quoted goods vis-à-vis the technical specifications in the tender enquiry in addition to other required document as mentioned in TE Document.
 - (c) Technical bid should contain the brochure, catalogue of offered/ quoted items which should reasonably explain in detail about the quoted items & it should also confirm the clause –by-clause compliance of technical specification as asked in TE Document and other technical details incorporated by the purchaser in the TE documents to establish technical responsiveness of the goods and services offered in its tender.
 - (d) In case there is any variation and/or deviation between the goods & services prescribed by the purchaser and that offered by the tenderer, the tenderer shall list out the same in a chart form without ambiguity and provide the same along with its tender.
 - (e) If a tenderer furnishes wrong and/or misleading data, statement(s) etc. about technical acceptability of the goods and services offered by it, its tender will be liable to be ignored and rejected in addition to other remedies available to the purchaser in this regard.

Failure in complying above mentioned clause 20.1, may lead to rejection of tender.

Bidders are requested not to submit the hard copy of Financial Bid, along with the physical documentary evidence of submission of Tender Fee, EMD of tender, Technical Bid. In case the hard copy of financial bid is submitted in physical form, the tender shall be straightway rejected.

Also, uploading of the price bid in prequalification bid or technical bid will result in rejection of the tender. Unless otherwise specified, the tenderers are to submit its tender online and deposit the physical form of tenders (Tender Fee, EMD, Technical bid and if applicable documentary support for seeking exemptions of EMD as per SCC clause are to be submitted in physical form, no other documents are required to be submitted in physical form) in sealed envelope to the purchaser address.

20.2 (a) The envelopes shall be addressed to the purchaser at the following address:

“Bihar Medical Services and Infrastructure Corporation Limited, 4th Floor, Bihar State Building Construction Co. Ltd, Hospital Road, Shastri Nagar, Patna (Bihar)”.

The envelope shall bear (the name and address of the Purchaser), the tender number and the words ‘DO NOT OPEN BEFORE’ (due date & time) & may be sent by registered post or delivered in person on above mentioned address (address is given in Clause 20.2 (a) above). The responsibility for ensuring that the Sealed envelope containing documentary evidence of Tender Fee, EMD and / documentary support for seeking exemptions of, EMD as per SCC clause are delivered in time would vest with the bidder and The purchaser shall not be responsible for any delay. In the event of the specified date for physical submission of tender falls on /is subsequently declared a holiday or closed day for the purchaser, the tenders will be received up to the appointed time on the next working day.

The Physical form of tender shall be delivered **upto 27th May 2022 by 14:00 Hrs.** Bihar Medical Services and Infrastructure Corporation Limited, 4th Floor, Bihar State Building Construction Co. Ltd, Hospital Road, Shastri Nagar, Patna -800023 (Bihar) India if delivered elsewhere will be rejected.

- (b) Venue of bid opening: **27th May 2022 by 15:00 Hrs** on the website of www.eproc.bihar.gov.in at BMSICL, Patna, If due to administrative reason, the venue of Bid opening is changed, it will be displayed prominently on the notice board of the Purchaser’s office/at the Website address <https://www.eproc.bihar.gov.in>.

21. DEADLINE FOR SUBMISSION OF BIDS

- 21.1 Bids must be received by the Purchaser at the address and up to the due date and time specified under ITB Clause 20.2.
- 21.2 The Purchaser may, at its discretion, extend this deadline for the submission of bids by amending the Bid Documents in accordance with clause 6 in which case all rights and obligations of the purchaser and bidders previously subject to the deadline will thereafter be subjected to the deadline as extended.

22. LATE BIDS

Any bid received by the purchaser after the deadline for submission of bids prescribed by the purchaser pursuant to clause 21, shall be rejected and the physical form of technical bid will be returned unopened to the bidder.

23. MODIFICATION AND WITHDRAWAL OF BIDS

- 23.1 No bid may be modified subsequent to the deadline for submission of bids. The bidder may modify or withdraw its bid after submission, provided that written notice of the modification or withdrawal is received by the purchaser prior to the deadline prescribed for submission of bids along with a written power of attorney authorizing the signatory of the withdrawal.
- 23.2 The bidder’s modification or withdrawal notice shall be prepared, sealed, marked and dispatched as required in the case of bid submission in accordance with the provision of ITB Clause 20. A withdrawal notice may also be sent by FAX/ e-mail but followed by a signed confirmation copy by

post not later than the deadline for submission/ uploading of bids.

- 23.3 Bids requested to be withdrawn in accordance with ITB Clause 23.1 above, shall be returned unopened to the Bidders.
- 23.4 No bid may be withdrawn in the interval between the bid submission deadline and the expiration of the bid validity period specified in ITB Clause 18. Withdrawal of a bid during this interval may result in the forfeiture of the Bidder's Earnest Money Deposit (EMD), pursuant to ITB Clause 17.7

E. BID OPENING AND EVALUATION

24. OPENING OF BIDS BY PURCHASER

- 24.1 The purchaser shall open the technical bids in the presence of bidders or their authorized representatives who chose to attend, at the due date and time of bid opening. The bidder's representatives, who are present, shall sign in an attendance register. Authority letter to this effect shall be submitted by the bidders before they are allowed to participate in bid opening (A Format is given in Section VI).
- 24.2 A maximum of two representatives of any bidder shall be authorized and permitted to attend the bid opening.
- 24.3 The bidder's names, modifications, bid withdrawals, requisite Earnest Money Deposit (EMD) and such other details as the purchaser, at its discretion, may consider appropriate will be announced at the time of opening. No bid shall be rejected at the time of bid opening, except for late bids, bids without Tender Fee, EMD (except in case where exemption of EMD has been requested in pursuant to Special condition of Contract) & for such rejected bid no further evaluation will be done .
- 24.4 The price bids of bidders whose Technical bids are found technically responsive and comply with the bid documents will only be considered for financial evaluation. The date of opening of financial bids shall be communicated to such bidders, whose Technical bids are found technically responsive. The bidder's representative may be present at the time of opening of price bid at the pre-appointed time, date and venue.
- 24.5 The date fixed for opening of bids, if subsequently declared as holiday by the Government, the revised date of schedule will be notified. However, in absence of such notification, the bids will be opened on next working day, time and venue remaining unaltered.

25. CLARIFICATION OF BIDS

To assist in the examination, evaluation and comparison of bids, the purchaser may, at its discretion ask the bidder for the clarification of its bid. The request for the clarification and the response shall be in writing. Unless the purchaser asks for change in price due to clarifications sought, the bidder is not permitted to alter the price Bid (online submission only).

26. PRELIMINARY EVALUATION

- 26.1 Purchaser shall evaluate the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and whether the bids are generally in order. Bids from representatives, without proper Authorization from the manufacturer as per Section VI, shall be treated as non-responsive
- 26.2 Arithmetical errors shall be rectified on the following basis. If there is a discrepancy between the unit price and total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected by the purchaser. If there is a discrepancy between words and figures, the amount in words shall prevail. If the supplier does not accept the correction of the

errors, his bid shall be rejected.

- 26.3 Prior to the detailed evaluation pursuant to ITB Clause 27, the Purchaser will determine the substantial responsiveness of each bid to the Bid Document. For purposes of these clauses, a substantially responsive bid is one which confirms to all the terms and conditions of the Bid Documents without material deviations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC clause 5) , Warranty (GCC clause 14), Force Majeure (GCC clause 21), Applicable Law (GCC clause 28) and Taxes and duties (GCC clause 30) along with deviation in Technical Specifications will be deemed as material deviation. The purchaser's determination of bid's responsiveness shall be based on the contents of the bid itself without recourse to extrinsic evidence.
- 26.4 A bid determined as substantially non-responsive will be rejected by the purchaser and shall not subsequent to the bid opening be made responsive by the bidder by correction of the non-conformity.
- 26.5 The Purchaser may waive any minor infirmity or non-conformity or irregularity in a bid which doesn't constitute a material deviation, provided such waiver doesn't prejudice or affect the relative ranking of any bidder.

27. EVALUATION AND COMPARISON OF SUBSTANTIALLY RESPONSIVE BIDS

- 27.1 **Financial bid shall be considered for opening of whose technical bid which has been found eligible by the technical evaluation committee.** The Purchaser shall evaluate in detail and compare the bids previously determined to be substantially responsive pursuant to ITB Clause 26.
- 27.2 The purchasers evaluation of bid will take into account, in addition to the bid price (ex-factory/ex-warehouse/off-the-shelf price of goods offered from India, such price to include all costs as well as duties and taxes paid or payable on components and raw materials incorporated or to be incorporated in the goods, and excise duty on finished goods if payable) and price of incidental services, the following factors, in the manner and to the extent indicated in ITB clause 27.3 and in the Technical Specifications:
- (a) i) cost of inland transportation, insurance and other costs within India incidental to the delivery of goods to their final destination.
- 27.3 Pursuant to ITB clause 27.2 the following evaluation methods will be applied:
- (a) **Inland transportation, ex-factory/ from port-of-entry, insurance and incidentals.**
- (i) Inland transportation, insurance and other incidentals, for delivery of goods to the Project site as stated in ITB clause 13.2. These costs will be added to bid price.
- (b) **Deviation in Payment Schedule:**
- (a) The General Conditions of Contract clause 15 indicate the payment schedule offered by the **Purchaser**. If a bid deviates from the schedule and if such deviation is considered acceptable to the **Purchaser**, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared to those stipulated in this invitation at a rate of 12% per annum.
- (b) Spare parts and after sales service facilities in India:
The cost of the **Purchaser** of establishing the minimum service facilities and parts inventories, as outlined elsewhere in the bid invitation, if quoted separately, shall be added to the bid price.
- (c) **Compressive Annual Maintenance Contract (CMC):**
- (i) The Purchaser desires to have **separate** comprehensive maintenance charges for all equipment contract for which the bidder has to quote charges separately in Price bid for a period of 7 years after the expiry of free maintenance period (Warranty), clearly indicating year wise

comprehensive maintenance charges, which shall be not more than 5% of the price of the equipment. **Bids without this charge will be considered as non-responsive.**

- (ii) Any major repair pointed out by the **Purchaser** shall be rectified by the Supplier from the date of intimation within a period of **3 calendar days** and commission the equipment to the satisfaction of the Purchaser, failing which the purchaser has write to levy a penalty on the Supplier a sum of **Rs.2,500/- per day** or part thereof for each equipment until the equipment are repaired and commission to the satisfaction of the Purchaser. Failure to repair may also lead to forfeit of Security deposit.
- (d) **Spares:**
 - (i) **The supplier shall be required to provide a list and rates of consumables required for an equipment which is a closed system.Contract, if applicable.**
 - (ii) The cost of spares quoted by bidder will not be used to arrive at final price.
 - (iii) In the event of termination of production of the equipment/ spare parts, the supplier shall notify the purchaser **at least two years in advance** of the impending termination to enable the purchaser to procure life-time spares. The supplier shall also provide at his own cost to the purchaser, the blue-print drawings and specifications of spare parts if and when
- (e) **Repair of faulty equipment and setting up of Repair Facilities:**
 - (i) The supplier shall establish adequate repair facilities for repair of faulty equipment in India within a period six months from the date of purchase order.

27.4 (i). Technical evaluation of the Bid will be done on the basis of technical qualification criteria and documents mentioned (TECHNICAL BID- COVER ‘A’) in Mandatory Documents Link present in the web portal of the www.eproc.bihar.gov.in. Failing which the bid will not be considered for technical evaluation.

(ii). Hard copy of tender documents uploaded shall be submitted along with the tender fee and EMD as on or before the last day of submission of tender for purely evaluation purposes. However, the submission of hard copy of uploaded tender document submitted does not substitute/modify the provisions of e-tendering system.

(iii). The technical evaluation shall be done only on the basis of documents/papers submitted by the bidder on www.eproc.bihar.gov.in.

(IV) However hard copy of uploaded tender shall be provided by the bidder firm along with the mandatory tender document fee and EMD for evaluation purpose only. This hard copy shall under no case substitute/modify the provisions of e-tender system.

28. CONTACTING THE PURCHASER

- 28.1 Subject to ITB Clause 25, no bidder shall try to influence the Purchaser on any matter relating to its bid, from the time of the bid opening till the time the contract is awarded.
- 28.2 Any effort by a bidder to modify his bid or influence the purchaser in the purchaser’s bid evaluation, bid comparison or contract award decision shall result in the rejection of the bid.

AWARD OF CONTRACT

29. POST-QUALIFICATION

- 29.1 The Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the Contract satisfactorily, in accordance with the criteria listed in ITB Clause 15 & 16 and the information submitted by the bidder in the proforma for performance statement for the period of last three years given in Sec VI as well as other

information the Purchaser deems necessary and appropriate.

- 29.2 An affirmative post-qualification determination will be a prerequisite for award of the contract to the lowest evaluated Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Purchaser will proceed to the next-lowest evaluated Bidder to make a similar determination of that Bidder's capabilities to perform satisfactorily.

30. AWARD CRITERIA

Subject to ITB Clause 32, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid and whose goods have been type approved/validated by the purchaser.

31. PURCHASER'S RIGHT TO VARY QUANTITIES

The Purchaser reserves the right at the time of Contract award or within the stipulated last date of delivery, to increase or decrease, by **25%**, the quantity of goods and services beyond that originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.

32. PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of contract without assigning any reason whatsoever and without thereby incurring any liability to the affected bidder or bidders on the grounds of purchaser's action.

33. ISSUE OF NOTIFICATION OF AWARD

33.1 The issue of Notification of Award shall constitute the intention of the Purchaser to enter into contract with the bidder.

33.2 Prior to the expiration of the period of bid validity, the Purchaser will notify the successful Bidder in writing by registered letter or by cable, to be subsequently confirmed in writing by registered letter, that its bid has been accepted

33.3 The bidder shall within 15 days of issue of the Notification of Award, given his acceptance along with performance security in conformity with Section VI provided with the bid document.

34. SIGNING OF CONTRACT

34.1 The issue of Notification of Award shall constitute the award of contract on the bidder.

34.2 Promptly after the Purchaser notifies the successful Bidder that its bid has been accepted, the Purchaser will send the Bidder the Contract Form provided in the Bidding Documents, incorporating all agreements between the parties.

34.3 Within fifteen (15) days of receipt of the Contract Form, the successful Bidder shall sign and date the Contract Form and return it to the Purchaser.

35. PERFORMANCE SECURITY

35.1 Within fifteen (15) days of the receipt of notification of award from the Purchaser, the Contract, using the Performance Security Form provided in the Bidding Documents or in another form acceptable successful Bidder shall furnish the performance security in accordance with the Conditions of to the Purchaser.

35.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 34 and ITB Sub Clause 35.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Earnest Money Deposit (EMD), in which event the Purchaser may make the award to the next-lowest evaluated bid submitted by a qualified Bidder or call for new bids.

36 GENERAL GUIDELINES FOR THE SUBMISSION OF E-TENDER

Instructions/ Guidelines for tenders for electronic submission of the tenders online have been annexed for assisting the prospective Tenderers to participate in e- Tendering.

- a) **Registration of Tenderers:** Any tenderer willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e- Procurement system, through logging on to <https://eprocbihar.gov.in>. The prospective Tenderer is to click on the link for e-Tendering site as given on the web portal.
- b) **Digital Signature certificate (DSC):** Each Tenderer is required to obtain a class-II or Class-III Digital Signature Certificate (DSC) from NIC for submission of tenders, from the approved service provider of the National Information's Centre (NIC) on payment of requisite amount.
- c) The Tenderer can search & download NIT & Tender Documents electronically from computer once he logs on to the website using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.
- d) **Submission of Tenders:** General process of submission, Tenders are to be submitted through online to the website at a time for each work, one in technical Proposal & the other is Financial Proposal before the prescribed date &time using the Digital Signature Certificate (DSC) the documents are to be uploaded virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non-readable formats).

Also hard copy of technical bid should be submitted as per the schedule mentioned in NIT.

SECTION II- GENERAL CONDITIONS OF CONTRACT

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1.DEFINITIONS

In this Contract, the following terms shall be interpreted as indicated:

- (a) **“The Purchaser”** means the Bihar Medical Services and Infrastructure Corporation Limited (BMSICL), the organization purchasing the Goods.
- (b) **“The Bidder”** means the individual or firm who participates in the tender and submits its bid.
- (c) **“Days”** means calendar days.
- (d) **“Sole Bidder”** means Bidder who will be a sole provider of all the equipment (Company including OPC /LLP/Partnership etc.) The Sole Provider should be registered as a legal entity such as company registered under Companies Act, Partnership Act or an equivalent law applicable in the region/state/ country.
- (e) **“GCC”** means Conditions of Contract.
- (f) **“The Supplier”** means the individual or firm supplying the goods and Services under the contract.
- (g) **“The Goods”** means all equipment, machinery, and/or other materials which the Supplier is required to supply to the Purchaser under the contract.
- (h) **“Services”** means services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the Contract.
- (i) **“End User”** means the consignees stated in the Schedule of Requirements.
- (j) **“The Notification of Award”** means the intention of the Purchaser to place the Purchase order on the bidder or to enter in to contract with the bidder.
- (k) **“The Contract”** means the agreement entered into between the Purchaser and the Supplier, as recorded in the Contract Form signed by the parties, including all the attachments and the appendices thereto and all documents incorporated by reference therein.
- (l) **“The Contract Price”** means the price payable to the Supplier under the contract for the full and proper performance of its contractual obligations.

(m) “**Validation**” is a process of testing the equipment as per the specifications including requirements for use in hospital is carried out in simulated field environment.

1.1 **Application:** The General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the contract.

2. STANDARDS

The bidder shall supply, demonstrate, install & commission equipment in accordance with the schedule of requirement of the client as per Specifications mentioned in bid document. Detailed compliance with technical data sheet and catalogue to be submitted along with the bid in hard copy & soft copy. *The bidder shall furnish, at the time of delivery of equipment, the documents as called for in the Check List(Annexure – 13): Manufacturer's Authorization (if quoted by bidder other than manufacturer) as per Annexure 5.* Quality Standard Certification (FDA/CE/BIS/ISO) in accordance with technical specification of the specific equipment in this bid document. These quality certificates of the offered makes and models should be attached in technical bid documents. Bidder can offer TWO alternate makes & Models of an equipment matching with technical specification in all respect.

Before the equipment are procured and the orders are placed, the supplier shall get specifications, make & model of the equipment and approved from the technical specification committee. No change or deviation in the broad specifications will be permitted in the schedule of requirements. The bidder will submit authorization certificate of the respective equipment to quote, execute the agreement, supply and provide the maintenance against this order.

The supplier shall provide OEM warranty for each medical equipment procured, installed & Commissioned under this contract. The minimum warranty period shall be 3 years.

End of life (EOL) Product-Bidder must quote for the model with latest hardware and versions and make sure that no quoted equipment including hardware/software should come to an end of life within next five years from date of handing over to the Medical colleges/Institutions/health facilities& spare supports for 10 years. The bidder must submit a certificate from the respective company on their letter head in support of Non-EOL of the equipment. No compliance of this would result the rejection of the bid.

The goods supplied under this contract shall conform to the standards prescribed in the Technical Specifications mentioned in section V.

3. USE OF CONTRACT DOCUMENTS AND INFORMATION; INSPECTION AND AUDIT BY THE PURCHASER

3.1 The Supplier shall not, without the Purchaser’s prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.

3.2 The Supplier shall not, without the Purchaser’s prior written consent, make use of any document except for purposes of performing the Contract.

3.3 Any document, other than the Contract itself, enumerated in GCC Sub-Clause 3.1 shall remain the property of the Purchaser and shall be returned (all copies) to the Purchaser on completion of the Supplier’s performance under the Contract if so required by the Purchaser.

- 3.4** The Supplier shall permit the Purchaser to inspect the Supplier's accounts and records relating to the performance of the Contract and to have them audited by auditors appointed by the Purchaser, if so required.

4. PATENT RIGHTS

The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the goods or any part thereof in India.

5. PERFORMANCE SECURITY

- 5.1** The supplier shall furnish performance security to the purchaser for an amount equal to **10%** of the value of purchase order within **15days** from the date of issue of Notification of Award by the Purchaser.
- 5.2** The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the supplier's failure to complete its obligations under the contract.
- 5.3** The performance security denominate in Indian Rupees shall be in the form of Bank Guarantee issued by a Scheduled/Nationalized Bank or demand draft. The performance security should be valid for the period beyond one hundred eighty (180) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty/ shelf Life Duration obligations
- 5.4** The performance security will be discharged by the Purchaser and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations.

6. INSPECTION AND TESTS

- 6.1** The Purchaser or his representative shall have the right to inspect and test the goods as per prescribed test schedules for their conformity to the specifications. Where the Purchaser decides to conduct such tests on the premises of the supplier or its subcontractor(s), all reasonable facilities and assistance like Testing instruments and other test gadgets including access to drawings and production data shall be furnished to the inspectors at no charge to the purchaser. The supply will be accepted only after quality assurance tests are carried out by the Purchaser as per prescribed schedule and material passing the test successfully.
- 6.2** Should any inspected or tested goods fail to conform to the specifications the purchaser may reject them, and the supplier shall either replace the rejected goods or make all alterations necessary to meet Specification requirements free of cost to the purchaser.
- 6.3** Notwithstanding the pre-supply tests and inspections prescribed in GCC Clause 6.1 & 6.2 above, the items /goods and accessories (if any) on receipt in the Purchaser's premises will also be tested during actual but before "take over" and if any equipment/ items /goods or part thereof is found defective, the same shall be replaced free of all cost to the purchaser as laid down in GCC Clause 6.4 below.
- 6.4** If any goods/ material or any part thereof, before it is taken over under GCC Clause 6.5, is found

defective or fails to fulfill the requirements of the contract, the inspector shall give the Supplier notice setting forth details of such defects or failure and the supplier shall make the defective item good, or alter the same to make it comply with the requirements of the contract forthwith and in any case within a period not exceeding three months of the initial report. These replacements shall be made by the supplier free of all charges at site. Should it fail to do so within this time, the purchaser reserves the discretion to reject and replace at the cost of the supplier the whole or any portion of items/ goods as the case may be, which is defective or fails to fulfill the requirements of the contract. The cost of any such replacement made by the purchaser shall be deducted from the amount payable to the supplier.

6.5 When the performance tests called for have been successfully carried out, the inspector / ultimate consignee will forthwith issue a Taking over Certificate. The inspector /ultimate consignee shall not delay the issue of any “taking Over Certificate” contemplated by this clause on account of minor defects in the items /goods which do not materially affect the commercial / actual/intended use thereof provided that the supplier shall undertake to make good the same in a time period not exceeding two months. The Taking Over Certificate shall be issued by the ultimate consignee within six weeks of successful completion of tests. In this case, a Consignee Receipt Certificate issued by the consignee as per the Format given in Section VI shall be equivalent to “Taking Over Certificate”, issuance of which shall certify receipt of goods in safe and sound condition. However, they shall not discharge the supplier of their warranty/ Shelf life obligation. The Consignee Receipt Certificate in respect of last consignment against the Contract will be equivalent to “Taking Over Certificate”.

6.6 Nothing in GCC Clause 6 shall in any way release the Supplier from any warranty or other obligations under this contract.

7.1 PACKING

The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt, and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods’ final destination and the absence of heavy handling facilities at all points in transit.

7.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the purchaser.

7.3 Packing Instruction: The supplier will be required to mark separate packages for each consignee. Each package will be marked on three sides with proper paint/indelible ink, the following:

- i. Purchaser:
- ii. Contract No.
- iii. Supplier Name
- iv. Packing List reference Number

8. DELIVERY AND DOCUMENTS

8.1 Upon or before delivery of the Goods, the Supplier shall notify the Purchaser in writing and deliver the following documents to the Purchaser:

- (i) One original and three copies of the contractor's invoice, showing Purchaser, the Contract number, Goods' description, quantity, unit price, and total amount. Invoices must be signed in original and stamped or sealed with the company stamp/seal;
- (ii) Three copies of delivery note, railway consignment note, road consignment note, truck or air waybill, or multi-modal transport document showing Purchaser as Bihar Medical Services and Infrastructure Corporation Limited [enter correct name of Purchaser for excise purposes] and delivery through to final destination as stated in the Contract;
- (iii) Copy of the Insurance Certificate, showing the Purchaser as the beneficiary;
- (iv) Three copies of the packing list identifying contents of each package;
- (v) One original of the manufacturer's or Supplier's Warranty certificate covering all items supplied should be submitted along with the installation certificate. Warranty starts from the date it is successfully installed and warranty certificates should mention clearly date of installation and from that date warranty is for a period of 3 years.
- (vi) Original copy of the Certificate of Inspection furnished to Supplier by the nominated inspection agency if any.

The above certificate shall be received by the Purchaser upon arrival Warranty and installation certificate alone upon installation.

Note: *In the event that the documents presented by the Supplier are not in accordance with the Contract, then payment will be made against issue of the 'Consignee Receipt Certificate', to be issued in accordance with GCC Clause 6 above and after installation verification by BMSICL. The exact method of installation verification will be decided by Tender Inviting Authority.*

- 8.2 The actual delivery schedule will be given in Schedule of Requirement and / Notification of Award/ supply order. The delivery of the goods and documents shall be completed within 45 days from the date of issue of supply order.
- 8.3 All Technical assistance for installation, commissioning and monitoring of the equipment shall be provided by the Supplier at no extra cost during laboratory evaluation, validation/ type approval and field trial, if any.
- 8.4 The delivery period should include supply of items at the consignee place and there after successfully installation, demonstration of equipment at consignee place wherever required it should also include trial, run and commissioning.

9. TRAINING

- 9.1 The bidder shall demonstrate and provide training on use and proper application of the Equipment to the consignee's personnel/ purchaser free of cost.
- 10.1 The supplier may be required to provide any or all of the following services:

- (a) Performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) Furnishing of tools required for assembly and/or maintenance of supplied Goods;
- (c) Performance of supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties provided that this service shall not relieve the supplier of any warranty obligations under this contract.
- (d) Furnish detailed operations and maintenance manual for each appropriate unit of supplied goods.

11.1 The supplier shall be required to provide a list of the following material and notifications pertaining to spare parts manufactured or distributed by the supplier of spares including cost and quantity considered for arriving at the price of spares.

Such spare parts as the purchaser may elect to purchase from the supplier provided that such purchase shall not relieve the supplier of any warranty obligation under the contract.

In the event of termination of production of the spare parts, the supplier shall:

- i) give advance notification to the purchaser pending termination (not less than 2 years), in sufficient time to enable the purchaser to procure life-time spare; and

Following such advance intimation of termination, furnish at no cost to the purchaser, the blueprint, drawings and specifications of spare parts, if and when requested.

12. INSURANCE

12.1 The Goods supplied under the Contract shall be insured in an amount equal to **110%** of the EXW value of the Goods from “warehouse to warehouse” on “all risks” basis including war risks and strikes.

13. TRANSPORTATION

Where the Supplier is required under the Contract to transport the Goods to a specified place of destination, defined in Consignee list, transport to such place of destination, including insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.

14. WARRANTY/ SHELF LIFE

14.1 The supplier shall warrant that the goods to be supplied shall be new and free from all defects and faults in materials used, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards for materials of the type ordered and shall perform in full conformity with the specifications and drawings. The supplier shall be responsible for any defect that may develop under the conditions provided by the contract and under proper use, arising from faulty material, design or workmanship such as corrosion of the equipment, inadequate quantity of material to meet equipment requirements, inadequate contact protection, deficiencies in circuit design and/or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect the stores are faulty. This warranty shall survive inspection or payment for / and acceptance of goods, but shall expire (except in respect of complaints notified prior to such date) three years after the goods have been taken over under GCC Clause 6.5 above.

14.2 This warranty shall remain **valid for three (3) years** after the goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract.

- 14.3 If it becomes necessary for the Supplier to replace or renew any defective portion(s) of the equipment under this clause, the provisions of the GCC Clause 14.1 shall apply to the portion(s) of the equipment so replaced or renewed or until the end of the above mentioned period of three years, whichever may be later. If any defect is not remedied by the supplier within a reasonable time, the Purchaser may proceed to get the defects remedied from other supplier etc., at the supplier's risk and expenses, but without prejudice to any other rights which the purchaser may have against the supplier in respect of such defects.
- 14.4 Replacement under warranty clause shall be made by the supplier free of all charges at site including freight, insurance and other incidental charges.
- 14.5 A. No conditional warranty will be acceptable.
- B. Warranty as well as Comprehensive Maintenance contract will be inclusive of all Accessories and Turnkey work if any and it will also cover the following wherever applicable: -
- Any kind of motor.
Plastic & Glass Parts against any manufacturing defects.
All kind of sensors.
All kind of coils, probes and transducers.
Printers and imagers including laser and thermal printers with all parts.
Air-conditioners
- C. Replacement and repair will be undertaken for the defective goods.
- D. Proper marking has to be made for all spares for identification like printing of installation and repair dates.
- 14.6 In case of any claim arising out of this warranty, the Purchaser/Consignee shall promptly notify the same in writing and /e- mail to the supplier.
- 14.7 Upon receipt of such notice, the supplier shall, within 72 hours on a 24(hrs) X 7 (days) X 365 (days) basis respond to take action to repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The supplier shall take over the replaced parts/goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/goods thereafter. The penalty clause for non-rectification will be applicable as per tender conditions, mentioned under ITB clause 27.3 (d) under Comprehensive Annual maintenance contract. It may include but not limited to forfeiting of performance security & taking legal proceeding deemed fit as per applicable Indian Law.
- 14.8 The Purchaser/Consignee reserve the rights to enter into Annual Maintenance Contract / Comprehensive Maintenance Contract between Consignee and the Supplier for the period as mentioned in TE document.
- 14.9 The supplier along with its Indian Agent and the CMC provider shall ensure continued supply of the spare parts for the machines and equipment supplied by them to the purchaser for 10 years from the date of installation and handing over.
- 14.10 The Supplier along with its Indian Agent and the CMC Provider shall always accord most favoured client status to the Purchaser vis-à-vis its other Clients/Purchasers of its equipment /machines/goods etc. and shall always give the most competitive price for its machines /equipment supplied to the Purchaser/Consignee.

15. PAYMENT TERMS

- 15.1 The method and conditions of payment to be made to the supplier under the contract may be specified in the Special Conditions of Contract &/Notification of Award.
- 15.2 The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and by documents submitted pursuant to GCC Clause 8, and upon fulfillment of other obligations stipulated in the Contract.
- 15.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or claim by the Supplier.

[Hint: The actual payment conditions for new products or procurements having installation and CMC/AMC services may be decided on case to case basis and incorporated in special conditions of the contract if required]

15.4 (i) No payment will be made for goods rejected at the site on testing

15.5 Payment for goods shall be made in Indian Rupees as follows:

- a) No advance payment is payable.
- b) 50% payment will be made against supply of items at the respective sites and after submission of satisfactory inspection report from the consignee and 40% payment will be made against certification from the consignee in the format provided in schedule VI and after verification of installation /supply by purchaser (BMSICL, Patna.) or its nominated agency /person.
- c) The Balance 10% payment will be released after confirmation of submitted performance bank guarantee.

16. PRICES

- 16.1.1 (i) (a) Prices charged by the supplier for goods delivered and services performed under the contract shall not be higher than the prices quoted by the Supplier in his Bid.

In the case of revision of Statutory Levies/Taxes during the finalization period of tender, the Purchaser reserves the right to ask for reduction in the prices.

(a) Prices once fixed will remain valid during the schedule delivery period. In case of Increase and decrease of Taxes and other statutory duties the affect in price will be decided by BMSICL. The decision of Tender Inviting Authority will be final for the same.

- (c) Any increase in taxes and other statutory duties/levies from the date of submission of bid till the end of the delivery period will be paid extra, however. Any increase in the taxes and other statutory duties / levies after the expiry of the delivery date shall be to the supplier's account. However, benefit or any decrease in the taxes/duties shall be passed on to the purchaser by the supplier, after the expiry of the delivery date shall be to the suppliers' account. However, benefit or any decrease in the taxes/duties shall be passed on to the purchaser by the supplier.

17. CHANGE ORDERS

- 17.1 The purchaser may, at any time, by a written order given to a supplier, make changes within the general scope of the contract in any one or more of the following:

- (a) drawings, designs or specifications, where Goods to be supplied under the contract are to be specifically manufactured for the Purchaser;
- (b) the method of transportation or packing;
- (c) the place of delivery; or
- (d) the services to be provided by the supplier.

17.2 If any such change causes an increase or decrease in the cost of, or the time required for the execution of the contract an equitable adjustment shall be made in the contract price or delivery schedule, or both, and the contract shall accordingly be amended. Any proposal by the supplier for adjustment under this clause must be made within thirty days from the date of the receipt of the change in order.

18. SUBCONTRACTS

The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this contract if not already specified in his bid. Such notification, in his original bid or later shall not relieve the supplier from any liability or obligation under the Contract.

19. DELAYS IN THE SUPPLIER'S PERFORMANCE

19.1 Delivery of the Goods and performance of the services shall be made by the Supplier in accordance with the time schedule specified by the purchaser in its purchase order. In case the supply is not completed in the stipulated delivery period, as indicated in the Purchase Order, purchaser reserves the right either to short close/cancel this purchase order and/or recover liquidated damage charges. The cancellation/short closing of the order shall be at the risk and responsibility of the supplier and purchaser reserves the right to purchase balance unsupplied item at the risk and cost of the defaulting vendors.

19.2 Delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to any or all of the following sanctions: forfeiture of its performance security, imposition of liquidated damages and/or termination of the contract for default.

19.3 If at any time during the performance of the contract, the supplier encounters condition impeding timely delivery of certain goods (except low cost equipment) and performance of service, the Supplier shall promptly notify to the Purchaser in writing the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the period for performance of the contract (by not more than 20 weeks) subject to furnishing of additional performance security by the supplier @ 5% of the total value of the Purchase Order.

[Hint: Each case of delivery extension shall have to be examined a fresh vis-à-vis the prevailing market prices]

19.4 If supplier fails to perform its contractual obligations, pursuant to GCC Clause 19.3 above, the purchaser may consider debarring the firm for the period of 1-5 years for participation in future invitation of bids. The period of debar, as stated above, shall be at the sole discretion of the Purchaser.

20 LIQUIDATED DAMAGES

20.1 The date of delivery of the goods stipulated in the acceptance of the tender should be deemed to be the essence of the contract and delivery must be completed no later than the dates specified therein. Extension will not be given except in exceptional circumstances. Should, however, deliveries be made after expiry of the contracted delivery period, without prior concurrence of the purchaser and be accepted by the consignee, such delivery will not deprive the purchaser of his right to recover liquidated damage under GCC Clause 20.2 below.

- 20.1 If the supplier fails to deliver the store or any consignment thereof within the period prescribed for delivery, the purchaser shall be entitled to recover 0.5 % of the value of the delayed supply for each week of delay or part thereof. In the case of package supply where the delayed portion of the supply materially hampers installation and commissioning of the systems, L/D charges shall be levied as above on the total value of the concerned package of the Purchase Order. Quantum of liquidated damages assessed and levied by the purchaser shall be final and not challengeable by the supplier. However, when supply is made within 21 days of QA clearance in the extended delivery period, the consignee may accept the stores and in such cases the LD shall be levied up to the date of QA clearance.

21. FORCE MAJEURE

21.1 If, at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract is prevented or delayed by reasons of any war or hostility, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts or act of God (hereinafter referred to as events) provided notice of happenings of any such eventuality is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such event be entitled to terminate this contract nor shall either party have any claim for damages against other in respect of such non-performance or delay in performance, and deliveries under the contract shall be resumed as soon as practicable after such an event come to an end or cease to exist, and the decision of the Purchaser as to whether the deliveries have been so resumed or not shall be final and conclusive. Further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reasons of any such event for a period exceeding 60 days, either party may, at its option, terminate the contract.

21.2 Provided, also that if the contract is terminated under this clause, the Purchaser shall be at liberty to take over from the Supplier at a price to be fixed by the purchaser, which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture which may be in possession of the Supplier at the time of such termination or such portion thereof as the purchaser may deem fit, except such materials, bought out components and stores as the Supplier may wish with the concurrence of the purchaser elect to retain.

22. TERMINATION FOR DEFAULT

22.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the supplier, terminate this contract in whole or in part

- a) If the supplier fails to deliver any or all of the goods within the time period(s) specified in the contract, or any extension thereof granted by the purchaser pursuant to GCC Clause 19;
- b) if the supplier fails to perform any other obligation(s) under the Contract; and
- c) if the supplier, in either of the above circumstances, does not remedy his failure within a period of 15 days (or such longer period as the purchaser may authorize in writing) after receipt of the default notice from the purchaser.
- d) If the Supplier, in the judgment of the Purchaser, has engaged in corrupt and fraudulent

practices in competing for executing the Contract, pursuant to ITB Clause 2.

22.2 In the event the purchaser terminates the contract in whole or in part pursuant to GCC Clause 22.1, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered and the supplier shall be liable to the Purchaser for any excess cost for such similar goods. However the supplier shall continue the performance of the contract to the extent not terminated.

22.3 In the event, any sums found due to the Purchaser / Government under or by virtue of the fulfillment of contractual obligations, these shall be recoverable from the Supplier and his / its properties, movable and immovable, under the provisions of the Revenue Recovery Act, for the time being in force as tough as they are arrears of land revenue or in any manner and within such time as the Purchaser / Government may deem fit. Any sum of money due and payable to the Supplier from Government / Purchaser may be adjusted against sum of money due to the Supplier under any other contract.

23. TERMINATION FOR INSOLVENCY

The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, without compensation to the supplier. If the supplier becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

24. TERMINATION FOR CONVENIENCE

24.1 The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

24.2 The Goods that are complete and ready for shipment within thirty (30) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

(a) to have any portion completed and delivered at the Contract terms and prices; and/or.

(b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Supplier.

25. SETTLEMENT OF DISPUTES

25.1 If any dispute or difference of any kind whatsoever shall arise between the Purchaser and the Supplier in connection with or arising out of the Contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

25.2 If the parties even after 30 days fail to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, with respect to such disputes or differences arising out of the terms and conditions of the contract In accordance with the procedure prescribed under Bihar Public Works Contracts Disputed Arbitration Tribunal Act 2008.

25.2.1 The arbitration shall be in accordance with the procedure prescribed under the Bihar Public Works Contracts Disputed Arbitration Tribunal Act 2008.

25.3 Notwithstanding any reference to arbitration herein,

- (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- (b) the Purchaser shall pay the Supplier any monies due the Supplier.

25.4 The contract shall be governed by and interpreted in accordance with the laws of India from the time being in force. All disputes arising out of this tender will be subject to jurisdiction of courts of law in Patna, Bihar only.

26. LIMITATION OF LIABILITY

26.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to GCC Clause 4,

- (a) the Supplier shall not be liable to the Purchaser, whether in contract, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser and
- (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective items/goods

27. GOVERNING LANGUAGE

27.1 The Contract shall be written in English language. All correspondence and other documents pertaining to the Contract that are exchanged by the parties shall be written in the Hindi / English language.

28. APPLICABLE LAW

28.1 The Contract shall be interpreted in accordance with the laws of Union of India.

29. NOTICES

29.1 Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party's address.

29.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later

30. Taxes and Duties

30.1 The Supplier shall be entirely responsible for all taxes, duties, 35trov, road permits, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

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SECTION III- SPECIAL CONDITIONS OF CONTRACT

SPECIAL CONDITIONS OF CONTRACT

1. The special conditions of contract shall supplement the ‘ **Instructions to the Bidders**’ as contained in Section I & “ **General Conditions of the Contract**” as contained in Section II and wherever there is a conflict, the provisions herein shall prevail over those in Section I and Section II.
2. No Exemption from payment of EMD and Tender Fee is permitted except in case registered MSMEs as per provisions of New Industrial Investment Promotion Policy 2016 as amended in 2020.
3. The tender will be processed through E –tender mode only, So tender should be submitted in following manner:-

Tender fee & EMD fee. – Both Online & physical form
Technical Bid – Both Online & physical form.
Price Bid – Online Only.

Bidders are requested not to submit the hard copy of Financial Bid along with the physical form of Tender Fee & EMD fee, Technical bid. In case the hard copy of financial bid is submitted in physical form, the tender shall be straightway rejected. Also, uploading of the price bid in technical bid will result in rejection of the tender.

4. If asked by the purchaser of the equipment the tenderer must carry out demonstration of equipment. In the demonstration tenderer has to show the clause by clause compliance of technical specification. Demonstration of quoted items will be at the respective Govt. Dental Medical College & Hospitals, Bihar.
5. L1 shall be decided on the basis of the overall lowest rate to be arrived at by summing up of all the individual rates quoted for each item as detailed in the BOQ/Price bid/Financial bid. Missing of any individual rate of item/s shall be considered as zero and shall be computed accordingly to arrive at final price. It is pertinent to mention here that the individual rate of any main item shall be computed on the basis of unit price of the said item(equipment) along with the cost of consumables/reagents(wherever applicable) required for conducting a total number of one thousand tests by the said item (equipment).
6. The rate quoted by the bidder for the consumables/reagents shall be valid for the period of ten years (Wherever applicable).

SECTION IV- SCHEDULE OF REQUIREMENTS

SCHEDULE OF REQUIREMENTS

Schedule No.	Brief Description of Goods and Services on turkey basis	Qty./No.	Delivery Schedule (in days)	Earnest Money Deposit (EMD) in Indian Rupees
1	Tender For Supply, Installation & Commissioning of Medical Equipment on Turn-key Basis for Government Dental College & Hospital, Rahui in Nalanda of Bihar.	(As mentioned in section –IV) of the bid document	45 days	60,00,000

Note- In case of a rate contract for any above mentioned equipment exists with BMSICL at the time of Award of Contract such equipment may be deleted from the scope of work in the Award of Contract.

SL N.	Department	Name of Equipment	Qty.	Specification	Remarks
1	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Dental chair and unit	34	As per Annexure-V	Item to be Quoted
2	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Extra oral and intra oral tracer	4	As per Annexure-V	Item to be Quoted
3	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Dewaxing unit	2	As per Annexure-V	Item to be Quoted
4	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Semi adjustable articulator	4	As per Annexure-V	Item to be Quoted
5	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Curing unit	2	As per Annexure-V	Item to be Quoted
6	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Dental induction casting Machine	1	As per Annexure-V	Item to be Quoted
7	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Wax burn out furnace	1	As per Annexure-V	Item to be Quoted
8	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Pre Heating furnace	1	As per Annexure-V	Item to be Quoted
9	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Surveying Unit	1	As per Annexure-V	Item to be Quoted
10	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Heavy duty Hand piece Lab	4	As per Annexure-V	Item to be Quoted
11	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Autoclave	2	As per Annexure-V	Item to be Quoted
12	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	Needle Burner with Syring Cutter	2	As per Annexure-V	Item to be Quoted
13	DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE	CADCAM	1	As per Annexure-V	Item to be Quoted
14	LAB	Plaster dispenser	22	As per Annexure-V	Item to be Quoted

15	LAB	Model trimmer with Carborandum disc	2	As per Annexure-V	Item to be Quoted
16	LAB	Model trimmer with Diamond disc	2	As per Annexure-V	Item to be Quoted
17	LAB	Acrylier	3	As per Annexure-V	Item to be Quoted
18	LAB	Lathe	2	As per Annexure-V	Item to be Quoted
19	LAB	Flask Press	4	As per Annexure-V	Item to be Quoted
20	LAB	Deflasking unit	4	As per Annexure-V	Item to be Quoted
21	LAB	Dewaxing unit	3	As per Annexure-V	Item to be Quoted
22	LAB	Hydraulic press	3	As per Annexure-V	Item to be Quoted
23	LAB	Mechanical Press	2	As per Annexure-V	Item to be Quoted
24	LAB	Vacuum mixing machine	1	As per Annexure-V	Item to be Quoted
25	LAB	Curing pressur Pot	1	As per Annexure-V	Item to be Quoted
26	LAB	Hot water sterilier	2	As per Annexure-V	Item to be Quoted
27	LAB	Geyser	2	As per Annexure-V	Item to be Quoted
28	LAB	Phantom head	50	As per Annexure-V	Item to be Quoted
29	LAB	Pre clinical working table with gas connection & burner	10	As per Annexure-V	Item to be Quoted
30	CERAMIC AND CAST PARTIAL LABORATORY	Plaster Dispenser	2	As per Annexure-V	Item to be Quoted
31	CERAMIC AND CAST PARTIAL LABORATORY	Duplicator	1	As per Annexure-V	Item to be Quoted
32	CERAMIC AND CAST PARTIAL LABORATORY	Pindex System	1	As per Annexure-V	Item to be Quoted
33	CERAMIC AND CAST PARTIAL LABORATORY	Circular Saw	1	As per Annexure-V	Item to be Quoted
34	CERAMIC AND CAST PARTIAL LABORATORY	Burn Out furnace	1	As per Annexure-V	Item to be Quoted
35	CERAMIC AND CAST PARTIAL LABORATORY	Sand blasting Machine	1	As per Annexure-V	Item to be Quoted
36	CERAMIC AND CAST PARTIAL LABORATORY	Electro Polisher	1	As per Annexure-V	Item to be Quoted
37	CERAMIC AND CAST PARTIAL LABORATORY	Model trimmer with Carbodium disc	1	As per Annexure-V	Item to be Quoted
38	CERAMIC AND CAST PARTIAL LABORATORY	Model trimmer with Diamond disc	1	As per Annexure-V	Item to be Quoted
39	CERAMIC AND CAST PARTIAL LABORATORY	Induction casting machine	1	As per Annexure-V	Item to be Quoted
40	CERAMIC AND CAST PARTIAL LABORATORY	Programmable Porcelian furnace with vacuum pump and instrument & material kit	1	As per Annexure-V	Item to be Quoted

41	CERAMIC AND CAST PARTIAL LABORATORY	Spot welder with soldering attachmelent and cab	1	As per Annexure-V	Item to be Quoted
42	CERAMIC AND CAST PARTIAL LABORATORY	Vacuum mixing machine	1	As per Annexure-V	Item to be Quoted
43	CERAMIC AND CAST PARTIAL LABORATORY	Steam Cleaner	1	As per Annexure-V	Item to be Quoted
44	CERAMIC AND CAST PARTIAL LABORATORY	Spindle grinder 24,000 RPM and Vacuum pump	1	As per Annexure-V	Item to be Quoted
45	CERAMIC AND CAST PARTIAL LABORATORY	Wax Heater	1	As per Annexure-V	Item to be Quoted
46	CERAMIC AND CAST PARTIAL LABORATORY	Wax Carver	1	As per Annexure-V	Item to be Quoted
47	CERAMIC AND CAST PARTIAL LABORATORY	Curing Pressure Pot	1	As per Annexure-V	Item to be Quoted
48	CERAMIC AND CAST PARTIAL LABORATORY	Milling Machine	1	As per Annexure-V	Item to be Quoted
49	CERAMIC AND CAST PARTIAL LABORATORY	Heavy duty lathe with suction	1	As per Annexure-V	Item to be Quoted
50	CERAMIC AND CAST PARTIAL LABORATORY	Pre Heating furnace	1	As per Annexure-V	Item to be Quoted
51	CERAMIC AND CAST PARTIAL LABORATORY	Palatal trimmer	1	As per Annexure-V	Item to be Quoted
52	CERAMIC AND CAST PARTIAL LABORATORY	Ultra sonic cleaner 5 Lit capacity	1	As per Annexure-V	Item to be Quoted
53	CERAMIC AND CAST PARTIAL LABORATORY	Composite curing unit	1	As per Annexure-V	Item to be Quoted
54	CERAMIC AND CAST PARTIAL LABORATORY	Micro surveyor	1	As per Annexure-V	Item to be Quoted
55	CERAMIC AND CAST PARTIAL LABORATORY	Pre clinic prosthetics	60	As per Annexure-V	Item to be Quoted
56	CERAMIC AND CAST PARTIAL LABORATORY	micro motor lab with attached hand piece	20	As per Annexure-V	Item to be Quoted
57	PLASTER ROOM FOR PRE CLINICAL WORK	Plaster dispenser	2	As per Annexure-V	Item to be Quoted
58	PLASTER ROOM FOR PRE CLINICAL WORK	Vibrator	2	As per Annexure-V	Item to be Quoted
59	PLASTER ROOM FOR PRE CLINICAL WORK	Lathe	2	As per Annexure-V	Item to be Quoted
60	PLASTER ROOM FOR PRE CLINICAL WORK	Model Trimmer with carboradium disc	1	As per Annexure-V	Item to be Quoted
61	PLASTER ROOM FOR PRE CLINICAL WORK	Model trimmer with diamond disc	1	As per Annexure-V	Item to be Quoted
62	CONSERVATIVE DENTISTRY & ENDODONTICS	Dental chairs and unit	34	As per Annexure-V	Item to be Quoted

63	CONSERVATIVE DENTISTRY & ENDODONTICS	Rubber Dam Kit	6	As per Annexure-V	Item to be Quoted
64	CONSERVATIVE DENTISTRY & ENDODONTICS	Restorative Instrument Kit	10	As per Annexure-V	Item to be Quoted
65	CONSERVATIVE DENTISTRY & ENDODONTICS	RCT Instrument kit	10	As per Annexure-V	Item to be Quoted
66	CONSERVATIVE DENTISTRY & ENDODONTICS	Autoclaves	3	As per Annexure-V	Item to be Quoted
67	CONSERVATIVE DENTISTRY & ENDODONTICS	Ultrasonic cleaner	2	As per Annexure-V	Item to be Quoted
68	CONSERVATIVE DENTISTRY & ENDODONTICS	Needle burner with syringe cutter	4	As per Annexure-V	Item to be Quoted
69	CONSERVATIVE DENTISTRY & ENDODONTICS	Amalgamator	3	As per Annexure-V	Item to be Quoted
70	CONSERVATIVE DENTISTRY & ENDODONTICS	Pulp tester	4	As per Annexure-V	Item to be Quoted
71	CONSERVATIVE DENTISTRY & ENDODONTICS	Apex locator	2	As per Annexure-V	Item to be Quoted
72	CONSERVATIVE DENTISTRY & ENDODONTICS	Glass bead sterilier	6	As per Annexure-V	Item to be Quoted
73	CONSERVATIVE DENTISTRY & ENDODONTICS	Plaster dispenser	2	As per Annexure-V	Item to be Quoted
74	CONSERVATIVE DENTISTRY & ENDODONTICS	Vibrator	2	As per Annexure-V	Item to be Quoted
75	CONSERVATIVE DENTISTRY & ENDODONTICS	Intra Oral X Ray Unit	1	As per Annexure-V	Item to be Quoted
76	CONSERVATIVE DENTISTRY & ENDODONTICS	Automatic Developer	1	As per Annexure-V	Item to be Quoted
77	CONSERVATIVE DENTISTRY & ENDODONTICS	RVG	1	As per Annexure-V	Item to be Quoted
78	CONSERVATIVE DENTISTRY & ENDODONTICS	EndoMotor with Torque control handpiece	3	As per Annexure-V	Item to be Quoted
79	CONSERVATIVE DENTISTRY & ENDODONTICS	Bleaching Unit	1	As per Annexure-V	Item to be Quoted
80	CONSERVATIVE DENTISTRY & ENDODONTICS	Magnifying loop	2	As per Annexure-V	Item to be Quoted
81	CONSERVATIVE DENTISTRY & ENDODONTICS	Injectable gutta purcha	3	As per Annexure-V	Item to be Quoted
82	CONSERVATIVE DENTISTRY & ENDODONTICS	CADCAM	1	As per Annexure-V	Item to be Quoted
83	CONSERVATIVE DENTISTRY & ENDODONTICS	Phantom Lab Unit	60	As per Annexure-V	Item to be Quoted

84	CLINICAL LABORATORY	Plaster dispenser	2	As per Annexure-V	Item to be Quoted
85	CLINICAL LABORATORY	Model trimmer Carbodium disc	1	As per Annexure-V	Item to be Quoted
86	CLINICAL LABORATORY	Model trimmer Diamond disc	1	As per Annexure-V	Item to be Quoted
87	CLINICAL LABORATORY	Lathe heavy duty	2	As per Annexure-V	Item to be Quoted
88	CLINICAL LABORATORY	Lab micromotor with heavy duty hand piece	3	As per Annexure-V	Item to be Quoted
89	CLINICAL LABORATORY	Ultrasonic cleaner 5 ltr	1	As per Annexure-V	Item to be Quoted
90	CLINICAL LABORATORY	Spindle grinder	1	As per Annexure-V	Item to be Quoted
91	CLINICAL LABORATORY	vibrator	2	As per Annexure-V	Item to be Quoted
92	CLINICAL LABORATORY	Burn out furnace	1	As per Annexure-V	Item to be Quoted
93	CLINICAL LABORATORY	Porcelain furnace	1	As per Annexure-V	Item to be Quoted
94	CLINICAL LABORATORY	sand blasting machine	1	As per Annexure-V	Item to be Quoted
95	CLINICAL LABORATORY	Lab airtors	1	As per Annexure-V	Item to be Quoted
96	CLINICAL LABORATORY	Pindex system	1	As per Annexure-V	Item to be Quoted
97	CLINICAL LABORATORY	Circular saw	1	As per Annexure-V	Item to be Quoted
98	CLINICAL LABORATORY	Vacuum mixer	1	As per Annexure-V	Item to be Quoted
99	CLINICAL LABORATORY	Pneumatic chisel	1	As per Annexure-V	Item to be Quoted
100	CLINICAL LABORATORY	Casting Machine (Induction)	1	As per Annexure-V	Item to be Quoted
101	CLINICAL LABORATORY	Ceramic unit	1	As per Annexure-V	Item to be Quoted
102	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	Dental chair and unit	2	As per Annexure-V	Item to be Quoted
103	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	slides	150	As per Annexure-V	Item to be Quoted
104	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	slides boxes	4	As per Annexure-V	Item to be Quoted
105	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	Microscopes	50	As per Annexure-V	Item to be Quoted
106	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	Micetome	1	As per Annexure-V	Item to be Quoted

107	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	Wax Bath	1	As per Annexure-V	Item to be Quoted
108	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	water Bath	1	As per Annexure-V	Item to be Quoted
109	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	Knife sharpner	1	As per Annexure-V	Item to be Quoted
110	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	Hot plate	1	As per Annexure-V	Item to be Quoted
111	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	Spencer Knife	1	As per Annexure-V	Item to be Quoted
112	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	Adequate slides projecting system	1	As per Annexure-V	Item to be Quoted
113	Department of oral & Maxillofacial surgery	Dental chairs and unit	25	As per Annexure-V	Item to be Quoted
114	Department of oral & Maxillofacial surgery	Autoclaves	4	As per Annexure-V	Item to be Quoted
115	Department of oral & Maxillofacial surgery	Ultrasonic cleaner	2	As per Annexure-V	Item to be Quoted
116	Department of oral & Maxillofacial surgery	Needle burner and syringe cutter	8	As per Annexure-V	Item to be Quoted
117	Department of oral & Maxillofacial surgery	Extraction forceps set	20	As per Annexure-V	Item to be Quoted
118	Department of oral & Maxillofacial surgery	Dental elevators	10	As per Annexure-V	Item to be Quoted
119	Department of oral & Maxillofacial surgery	Minor Oral surgery kit	6	As per Annexure-V	Item to be Quoted
120	Department of oral & Maxillofacial surgery	Emergency drug tray	2	As per Annexure-V	Item to be Quoted
121	Department of oral & Maxillofacial surgery	X ray viewers	2	As per Annexure-V	Item to be Quoted
122	Department of oral & Maxillofacial surgery	Pulse oxymeter	2	As per Annexure-V	Item to be Quoted
123	Department of oral & Maxillofacial surgery	BP Aparatus	2	As per Annexure-V	Item to be Quoted
124	Department of oral & Maxillofacial surgery	Stethoscope	2	As per Annexure-V	Item to be Quoted
125	Department of oral & Maxillofacial surgery	Thermometer	2	As per Annexure-V	Item to be Quoted
126	Department of oral & Maxillofacial surgery	Glucometer	1	As per Annexure-V	Item to be Quoted
127	Department of oral & Maxillofacial surgery	Oxygen cylinder	2	As per Annexure-V	Item to be Quoted
128	Department of oral & Maxillofacial surgery	Oxygen mask adult	2	As per Annexure-V	Item to be Quoted
129	Department of oral & Maxillofacial surgery	Oxygen mask pedo	2	As per Annexure-V	Item to be Quoted

130	Department of oral & Maxillofacial surgery	Impaction kit	3	As per Annexure-V	Item to be Quoted
131	Department of oral & Maxillofacial surgery	Lab micro motor ith hand piece	3	As per Annexure-V	Item to be Quoted
132	Department of oral & Maxillofacial surgery	Trauma kit	1	As per Annexure-V	Item to be Quoted
133	Department of oral & Maxillofacial surgery	High volume Suction	2	As per Annexure-V	Item to be Quoted
134	Department of oral & Maxillofacial surgery	surgical straight handpiece	4	As per Annexure-V	Item to be Quoted
135	MINOR SURGERY	Dental chairs and unit	5	As per Annexure-V	Item to be Quoted
136	DEPARTMENT OF PERIODONTOLOGY	Dental chair and units	34	As per Annexure-V	Item to be Quoted
137	DEPARTMENT OF PERIODONTOLOGY	surgical instruments set	6	As per Annexure-V	Item to be Quoted
138	DEPARTMENT OF PERIODONTOLOGY	Autoclave	3	As per Annexure-V	Item to be Quoted
139	DEPARTMENT OF PERIODONTOLOGY	Ultrasonic cleaner	2	As per Annexure-V	Item to be Quoted
140	DEPARTMENT OF PERIODONTOLOGY	Electro surgical cautery	1	As per Annexure-V	Item to be Quoted
141	DEPARTMENT OF PERIODONTOLOGY	Needle burner with syringe cutter	4	As per Annexure-V	Item to be Quoted
142	DEPARTMENT OF PERIODONTOLOGY	LASER (SOFT TISSUE)	1	As per Annexure-V	Item to be Quoted
143	DEPARTMENT OF PERIODONTOLOGY	Physio dispenser with Implant kit	1	As per Annexure-V	Item to be Quoted
144	DEPARTMENT OF PERIODONTOLOGY	X ray viewer (Extra Oral)	2	As per Annexure-V	Item to be Quoted
145	DEPARTMENT OF PERIODONTOLOGY	Hand scaler supra gingival	10	As per Annexure-V	Item to be Quoted
146	DEPARTMENT OF PERIODONTOLOGY	Set of Curettes	2	As per Annexure-V	Item to be Quoted
147	DEPARTMENT OF PERIODONTOLOGY	Periodontal surgery kit	3	As per Annexure-V	Item to be Quoted
148	DEPARTMENT OF ORTHODONTICS	Dental chair and unit	18	As per Annexure-V	Item to be Quoted
149	DEPARTMENT OF ORTHODONTICS	Unit mount scaler	5	As per Annexure-V	Item to be Quoted
150	DEPARTMENT OF ORTHODONTICS	Autoclave	2	As per Annexure-V	Item to be Quoted
151	DEPARTMENT OF ORTHODONTICS	Ultrasonic cleaner	2	As per Annexure-V	Item to be Quoted
152	I Lab	Plaster dispenser	2	As per Annexure-V	Item to be Quoted
153	I Lab	Vibrator	2	As per Annexure-V	Item to be Quoted
154	I Lab	Model trimmer	2	As per Annexure-V	Item to be Quoted
155	I Lab	Micromotor Lab	4	As per Annexure-V	Item to be Quoted
156	I Lab	Lathe	2	As per Annexure-V	Item to be Quoted
157	I Lab	X Ray viewer	2	As per Annexure-V	Item to be Quoted
158	I Lab	Welders	4	As per Annexure-V	Item to be Quoted
159	I Lab	Blue torch	1	As per Annexure-V	Item to be Quoted
160	I Lab	Base Formers	4	As per Annexure-V	Item to be Quoted

161	I Lab	Typhodont	4	As per Annexure-V	Item to be Quoted
162	I Lab	Set of Plyers	10	As per Annexure-V	Item to be Quoted
163	I Lab	Welder with soldering attachments	1	As per Annexure-V	Item to be Quoted
164	I Lab	Hydro solder	1	As per Annexure-V	Item to be Quoted
165	I Lab	Typhodont articulator	4	As per Annexure-V	Item to be Quoted
166	I Lab	Pressure moulding machine	1	As per Annexure-V	Item to be Quoted
167	I Lab	soldering torch	1	As per Annexure-V	Item to be Quoted
168	I Lab	spot welder	1	As per Annexure-V	Item to be Quoted
169	Department of Paediatrics and Preventive Dentistry	Dental chair and unit	20	As per Annexure-V	Item to be Quoted
170	Department of Paediatrics and Preventive Dentistry	Autoclaves	2	As per Annexure-V	Item to be Quoted
171	Department of Paediatrics and Preventive Dentistry	Ultra sonic cleaner	2	As per Annexure-V	Item to be Quoted
172	Department of Paediatrics and Preventive Dentistry	Needle burner with syringe cutter	3	As per Annexure-V	Item to be Quoted
173	Department of Paediatrics and Preventive Dentistry	Amalgammotor	1	As per Annexure-V	Item to be Quoted
174	Department of Paediatrics and Preventive Dentistry	Pulp tester digital	1	As per Annexure-V	Item to be Quoted
175	Department of Paediatrics and Preventive Dentistry	Rubber Dam Kit ffor Pedo	5	As per Annexure-V	Item to be Quoted
176	Department of Paediatrics and Preventive Dentistry	Apex locator	1	As per Annexure-V	Item to be Quoted
177	Department of Paediatrics and Preventive Dentistry	Endo Motor	1	As per Annexure-V	Item to be Quoted
178	Department of Paediatrics and Preventive Dentistry	Injectable Guttapurcha with condensation	1	As per Annexure-V	Item to be Quoted
179	Department of Paediatrics and Preventive Dentistry	RVG	1	As per Annexure-V	Item to be Quoted
180	Department of Paediatrics and Preventive Dentistry	Intra Oral camera	1	As per Annexure-V	Item to be Quoted
181	Department of Paediatrics and Preventive Dentistry	Scaling instruments	10	As per Annexure-V	Item to be Quoted
182	Department of Paediatrics and Preventive Dentistry	Restorative Instruments	10	As per Annexure-V	Item to be Quoted
183	Department of Paediatrics and Preventive Dentistry	Extraction forceps pedo	10	As per Annexure-V	Item to be Quoted
184	Department of Paediatrics and Preventive Dentistry	Intra oral x ray	1	As per Annexure-V	Item to be Quoted
185	Department of Paediatrics and Preventive Dentistry	RCT Instrument kits	5	As per Annexure-V	Item to be Quoted

186	Department of Paediatrics and Preventive Dentistry	Automatic developer	1	As per Annexure-V	Item to be Quoted
187	Pedo Lab	Plaster dispenser	2	As per Annexure-V	Item to be Quoted
188	Pedo Lab	Model trimmer with Diamond disc	1	As per Annexure-V	Item to be Quoted
189	Pedo Lab	Model disc with Carbadoium disc	1	As per Annexure-V	Item to be Quoted
190	Pedo Lab	Welder with soldering attachment	1	As per Annexure-V	Item to be Quoted
191	Pedo Lab	Vibrator	2	As per Annexure-V	Item to be Quoted
192	Pedo Lab	Lab micromotor heavy duty with hand piece	3	As per Annexure-V	Item to be Quoted
193	Pedo Lab	Dental Lathe	1	As per Annexure-V	Item to be Quoted
194	Pedo Lab	Steam Cleaner	1	As per Annexure-V	Item to be Quoted
195	Pedo Lab	Pressure moulding Machine	1	As per Annexure-V	Item to be Quoted
196	Department of oral Medicine and Radiology	Dental chair units	12	As per Annexure-V	Item to be Quoted
197	Department of oral Medicine and Radiology	Panoramic X Ray with Cephalometry AERB certified	1	As per Annexure-V	Item to be Quoted
198	Department of oral Medicine and Radiology	Intra Oral x ray unit	3	As per Annexure-V	Item to be Quoted
199	Department of oral Medicine and Radiology	Pulp tester digital	3	As per Annexure-V	Item to be Quoted
200	Department of oral Medicine and Radiology	Auto matic periapical	1	As per Annexure-V	Item to be Quoted
201	Department of oral Medicine and Radiology	x ray developer	2 sets	As per Annexure-V	Item to be Quoted
202	Department of oral Medicine and Radiology	X Ray viewer for pan / Ceph	2	As per Annexure-V	Item to be Quoted
203	Department of oral Medicine and Radiology	RVG	1	As per Annexure-V	Item to be Quoted
204	Department of oral Medicine and Radiology	Intera oral camera	1	As per Annexure-V	Item to be Quoted
205	Department of oral Medicine and Radiology	Gen X Ray Unit	1	As per Annexure-V	Item to be Quoted
206	Department of oral Medicine and Radiology	Auto matic Developer	1	As per Annexure-V	Item to be Quoted
207	Department of oral Medicine and Radiology	Lead Apron	2	As per Annexure-V	Item to be Quoted
208	Department of oral Medicine and Radiology	Lead Gloves	2	As per Annexure-V	Item to be Quoted
209	Department of oral Medicine and Radiology	Lead Collor	2	As per Annexure-V	Item to be Quoted

210	Department of oral Medicine and Radiology	X Hanger	6	As per Annexure-V	Item to be Quoted
211	Department of oral Medicine and Radiology	Diagnostic Kit	65	As per Annexure-V	Item to be Quoted
212	Department of oral Medicine and Radiology	Lead screen	1	As per Annexure-V	Item to be Quoted
213	Department of oral Medicine and Radiology	Biopsy kit	3	As per Annexure-V	Item to be Quoted
214	Department of oral Medicine and Radiology	Autoclave	2	As per Annexure-V	Item to be Quoted
215	Department of oral Medicine and Radiology	Needle burner with syringe cutter	2	As per Annexure-V	Item to be Quoted
216	Department of oral Medicine and Radiology	CBCT AERB Approved	1	As per Annexure-V	Item to be Quoted
217	Department of oral Medicine and Radiology	Sialography equipment and kit	Qty Details in specificat ion	As per Annexure-V	Item to be Quoted
218	Department of Public Health	Dental Chair and unit	16	As per Annexure-V	Item to be Quoted
219	Department of Public Health	Autoclave	2	As per Annexure-V	Item to be Quoted
220	Department of Public Health	Ultra sonic cleaner	2	As per Annexure-V	Item to be Quoted
221	Department of Public Health	Needle burner and syringe cutter	4	As per Annexure-V	Item to be Quoted
222	Department of Public Health	Mobile Dental van with all attachemnts & adequate sitting space for 15-20 people (Dental Chair -2 Units, Autoclave -1 , 1 HP Compressor-1, Intra Oral X-ray -1 & RVG -1)	1 units	As per Annexure-V	Item to be Quoted
223	Department of Public Health	Central Air Compressor Plant	1 units	As per Annexure-V	Item to be Quoted

100 Bedded Hospital General Equipment List

SL N.	Department	Name of Equipment	Qntity	Specification	Remarks
1	Imaging	300 M.A. X-ray machine	1	As per Annexure-V	Item to be Quoted
2	Imaging	Dental X-ray machine	1	As per Annexure-V	Item to be Quoted
3	Imaging	USG	1	As per Annexure-V	Item to be Quoted
4	X-Ray Room Accessories	Lead Apron	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
5	X-Ray Room Accessories	Thyroid Collar	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
6	X-Ray Room Accessories	Lead Gloves-01 pair	01 pair	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
7	Cardiopulmonary (OPD)	Peak Expiratory Flow Rate (PEFR) Meter (Desirable) (PFT Machine)	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
8	Cardiopulmonary (OPD)	Finger Pulse Oxy Meter	20	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
9	Cardiopulmonary (OPD)	Thermometer	20	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
10	Cardiopulmonary (OPD)	B.P. Apparatus Table Model	12	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
11	Cardiopulmonary (OPD)	B.P. Apparatus Stand Model	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
12	Cardiopulmonary (OPD)	Sethpscope	15	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
13	Cardiopulmonary (OPD)	Nebulizer	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

14	Labour ward & Neo Natal	Phototherapy Unit	1	As per Annexure-V	Item to be Quoted
15	Labour ward & Neo Natal	Emergency Resuscitation Kit - Baby*	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
16	Labour ward & Neo Natal	Standard weighing scale		Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
17	Labour ward & Neo Natal	Newborn Care Equipment		Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
18	Labour ward & Neo Natal	Radiant Warmer	4	As per Annexure-V	Item to be Quoted
19	Labour ward & Neo Natal	Warmer Room	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
20	Labour ward & Neo Natal	Doopler Foetal	2	As per Annexure-V	Item to be Quoted
21	Labour ward & Neo Natal	Cardio Toco Graph (CTG) Monitor	1	As per Annexure-V	Item to be Quoted
22	Labour ward & Neo Natal	Delivery Kit	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
23	Labour ward & Neo Natal	Episiotomy kit	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
24	Labour ward & Neo Natal	Forceps Delivery Kit	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
25	Labour ward & Neo Natal	Craniotomy	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
26	Labour ward & Neo Natal	Silastic vacuum extractor	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
27	Labour ward & Neo Natal	Pulse Oximeter baby & adult	1	As per Annexure-V	Item to be Quoted

28	Labour ward & Neo Natal	baby Cardiac monitor	1	As per Annexure-V	Item to be Quoted
29	Labour ward & Neo Natal	Nebulizer baby	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
30	Labour ward & Neo Natal	infant Weighing machine	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
31	Immunization	Stabilizer ILR with	1	As per Annexure-V	Item to be Quoted
32	Immunization	Deep Freezer (-20 C) with Stabilizer	1	As per Annexure-V	Item to be Quoted
33	Immunization	Spare ice pack box	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
34	Immunization	Room Heater	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
35	Immunization	bucket Waste disposal twin	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
36	Immunization	Almirah	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
37	Immunization	Immunization table	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
38	Immunization	Chair	3	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
39	Immunization	room Stools for immunization	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
40	Immunization	area Bench for waiting	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

41	Immunization	Dustbin with lid	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
42	Immunization	Water container	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
43	Immunization	Hub cutters	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
44	Ear Nose Throat	Indigenous Digital Audiometer	1	As per Annexure-V	Item to be Quoted
45	Ear Nose Throat	Impedance Audiometer	1	As per Annexure-V	Item to be Quoted
46	Ear Nose Throat	Head light (ordinary) (Boyle Davis)	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
47	Ear Nose Throat	ENT Operation set including headlight, Tonsils	1	As per Annexure-V	Item to be Quoted
48	Ear Nose Throat	Ear Surgery Instruments	2 sets	As per Annexure-V	Item to be Quoted
49	Ear Nose Throat	Mastoid Set	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
50	Ear Nose Throat	Micro Ear Set myringoplasty	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
51	Ear Nose Throat	Laryngoscope indirect (Basic)	8	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

52	Ear Nose Throat	Otoscope	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
53	Ear Nose Throat	Head Light (cold light)	1	As per Annexure-V	Item to be Quoted
54	Ear Nose Throat	Set Tracheostomy	1+1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
55	Ear Nose Throat	Tuning fork	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
56	Ear Nose Throat	Oto Acoustic Emission (OAE) OAE Analyzer	1	As per Annexure-V	Item to be Quoted
57	Eye	Slit Lamp	1	As per Annexure-V	Item to be Quoted
58	Eye	Binomags	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
59	Eye	Distant Vision Charts	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
60	Eye	Foreign Body spud and needle	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
61	Eye	Lacrimal cannula and probes	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
62	Eye	Lid retractors (Desmarres)	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
63	Eye	Near Vision charts	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

64	Eye	Punctum Dilator	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
65	Eye	Rotating Visual acuity drum	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
66	Eye	Torch	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
67	Eye	Trial Frame Adult/Children	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
68	Eye	Trial Lens Set	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
69	Eye	IOL Operation set	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
70	Eye	Operating Microscope	1	As per Annexure-V	Item to be Quoted
71	Eye	A-Scan Biometer	1	As per Annexure-V	Item to be Quoted
72	Eye	Flash Autoclave	1	As per Annexure-V	Item to be Quoted
73	Eye	Applanation Tonometer	1	As per Annexure-V	Item to be Quoted
74	Operation Theatre	Auto Clave HP Horizontal (150-200 Ltr.)	2	As per Annexure-V	Item to be Quoted
75	Operation Theatre	Operation Table Hydraulic Major	1	As per Annexure-V	Item to be Quoted
76	Operation Theatre	Operation Table Hydraulic Minor	1	As per Annexure-V	Item to be Quoted
77		Operation Table Non - Hydraulic Field Type	1	As per Annexure-V	Item to be Quoted
78	Operation Theatre	Operating Table Orthopedic*	1	As per Annexure-V	Item to be Quoted

79	Operation Theatre	Shadow less lamp ceiling type major*	2	As per Annexure-V	Item to be Quoted
80	Operation Theatre	(LED O.T light-Dubble Dome)		As per Annexure-V	Item to be Quoted
81	Operation Theatre	Shadow less lamp ceiling type minor*	1	As per Annexure-V	Item to be Quoted
82	Operation Theatre	(LED O.T light-Single Dome)		As per Annexure-V	Item to be Quoted
83	Operation Theatre	Focus lamp Ordinary	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
84	Operation Theatre	Sterilizer Small (Instruments)	3	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
85	Operation Theatre	Bowl Sterilizer - big*	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
86	Operation Theatre	Bowl sterilizer - Medium*	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
87	Operation Theatre	Diathermy Machine (Electric Cautery)	2	As per Annexure-V	Item to be Quoted
88	Operation Theatre	Suction Apparatus - Foot operated	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
89	Operation Theatre	Ultra violet lamp 4 feet	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
90	Operation Theatre	Defibrillator (with AED)	2	As per Annexure-V	Item to be Quoted

91	Operation Theatre	scope Broncho	1	As per Annexure-V	Item to be Quoted
92	Operation Theatre	Doppler Foetal	1	As per Annexure-V	Item to be Quoted
93	Operation Theatre	Laryngoscope	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
94	Laboratory	Binocular Microscope	4	As per Annexure-V	Item to be Quoted
95	Laboratory	Balance (Electrical Monopan)	1	As per Annexure-V	Item to be Quoted
96	Laboratory	Simple balance	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
97	Laboratory	Semi auto analyzer	1	As per Annexure-V	Item to be Quoted
98	Laboratory	Micro pipettes of different volume range	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
99	Laboratory	Distilled water plant (Capacity not more than 20 Ltr. Per Day)	1	As per Annexure-V	Item to be Quoted
100	Laboratory	Top Electricentrifuge Table	2	As per Annexure-V	Item to be Quoted
101	Laboratory	Cell Counter Electronic* (CBC) (3-part)	2	As per Annexure-V	Item to be Quoted

102	Laboratory	Hot plates	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
103	Laboratory	Rotor/Shaker	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
104	Laboratory	Counting chamber	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
105	Laboratory	PH meter	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
106	Laboratory	Paediatric Bilirubinometer	1	As per Annexure-V	Item to be Quoted
107	Laboratory	TCDC count apparatus	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
108	Laboratory	ESR stand with tubes	3	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
109	Laboratory	Test tube stands*	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
110	Laboratory	Test tube rack*	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
111	Laboratory	Test tube holders*	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
112	Laboratory	Spirit lamp*	6	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
113	Laboratory	Timer stop watch	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
114	Laboratory	Alarm clock	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

115	Laboratory	Refrigerators	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
116	Laboratory	Whole Blood Finger Prick HIV Rapid Test and STI Screening Test each	2000	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
117	Surgical Equipment Sets	P.S. Set	10	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
118	Surgical Equipment Sets	MTP Set	3	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
119	Surgical Equipment Sets	Biopsy Cervical Set*	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
120	Surgical Equipment Sets	D & C Set	3	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
121	Surgical Equipment Sets	Kit I.U.C.D.	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
122	Surgical Equipment Sets	LSCS set	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
123	Surgical Equipment Sets	MVA Kit	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
124	Surgical Equipment Sets	Proctoscopy Set	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
125	Surgical Equipment Sets	Abdominal Hysterectomy set	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
126	Surgical Equipment Sets	Laparotomy Set	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
127	Surgical Equipment Sets	Suturing Set*	3	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
128	Surgical Equipment Sets	apparatus MTP suction	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

129	Surgical Equipment Sets	I M Nailing Kit	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
130	Surgical Equipment Sets	SP Nailing	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
131	Surgical Equipment Sets	TURP resectoscope*	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
132	Surgical Equipment Sets	Amputation set	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
133	Surgical Equipment Sets	Drill Universal Bone	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
134	Surgical Equipment Sets	Crammer wire splints	8	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
135	Anaesthesia	Anaestheti c - laryngoscope magills with four blades	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
136	Anaesthesia	Endo tracheal tubes sets	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
137	Anaesthesia	Magills forceps (two sizes)	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
138	Anaesthesia	ETT Connector set of six for	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
139	Anaesthesia	E.T.T Tubes connecting for	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
140	Anaesthesia	female* Air way	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
141	Anaesthesia	male* Air way	10	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

142	Anaesthesia	Mouth prop*	6	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
143	Anaesthesia	Tongue depressors*	8	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
144	Anaesthesia	Multi-parameter monitor (With EtCO2& O2 IABP	3	As per Annexure-V	Item to be Quoted
145	Anaesthesia	Regional anaesthesia devices*	1 set	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
146	Anaesthesia	O2 therapy devices*	1set	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
147	Anaesthesia	Exchange Transfusion Sets*	1 set	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
148	Furniture & Hospital Accessories	ICU Bed with foot table and medicine locker (ICU +Pre and Post O.T.)	16	As per Annexure-V	Item to be Quoted
149	Furniture & Hospital Accessories	Foot Stape	24	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
150	Furniture & Hospital Accessories	Revolving Stools with back support	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
151	Furniture & Hospital Accessories	Revolving Stools	24	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
152	Furniture & Hospital Accessories	Round Stools (non Revolving)	90	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
153	Furniture & Hospital Accessories	Baby Cradle/Cot	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
154	Furniture & Hospital Accessories	Dressing Trolley (SS)	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

155	Furniture & Hospital Accessories	(SS) Instrument Trolley	6	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
156	Furniture & Hospital Accessories	(SS) Wheel Chair	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
157	Furniture & Hospital Accessories	(SS) Stretcher/Patient Trolley	3 each	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
158	Furniture & Hospital Accessories	Assorted Instrument Tray (SS)	30	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
159	Furniture & Hospital Accessories	Assorted Kidney Tray (SS) -	30	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
160	Furniture & Hospital Accessories	(SS) Basin Assorted	30	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
161	Furniture & Hospital Accessories	Basin Stand Assorted (SS)		Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
162	Furniture & Hospital Accessories	a. (2 basin type)	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
163	Furniture & Hospital Accessories	type) b. (1 basin	8	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
164	Furniture & Hospital Accessories	melter Needle cutter and	15	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
165	Furniture & Hospital Accessories	clinical* Thermometer	20	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

166	Furniture & Hospital Accessories	Rectal* Thermometer	3	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
167	Furniture & Hospital Accessories	Cheatles forceps assorted*	8	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
168	Furniture & Hospital Accessories	Stomach wash equipment*	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
169	Furniture & Hospital Accessories	Infrared lamp*	3	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
170	Furniture & Hospital Accessories	Wax bath*	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
171	Furniture & Hospital Accessories	Emergency Resuscitation Kit-Adult*	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
172	Furniture & Hospital Accessories	Enema Set*	6	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
173	Furniture & Hospital Accessories	Bed Side Screen (Three Fold)	5	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
174	Furniture & Hospital Accessories	Adult Weighing machines	12	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
175	Furniture & Hospital Accessories	Pediatrics Weighing machines	6	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
176	Refrigeration	litres Refrigerator 165	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
177	Refrigeration	Blood Bank Refrigerator	1	As per Annexure-V	Item to be Quoted
178	Refrigeration	ILR	1	As per Annexure-V	Item to be Quoted
179	Refrigeration	Deep Freezer (-20 C)	1	As per Annexure-V	Item to be Quoted
180	Refrigeration	Spare ice pack box (5 Lit.)	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

181	Refrigeration	Waste disposal twin bucket, hypochlorite solution/ bleach		Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
182	ICU (4 Bedded)	Multipara monitor	5	As per Annexure-V	Item to be Quoted
183	ICU	O2 therapy device	1	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
184	ICU	ICU bed	4	As per Annexure-V	Item to be Quoted
185	ICU	Nabulizer (Ultrasonic)	2	As per Annexure-V	Item to be Quoted
186	ICU	Defibrillator	1	As per Annexure-V	Item to be Quoted
187	ICU	BiPap	2	As per Annexure-V	Item to be Quoted
188	ICU	Transport Ventilator	1	As per Annexure-V	Item to be Quoted
189	ICU	Ambu bag (Adult)	4	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
190	ICU	Ambubag (Ped.)	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
191	ICU	Laryngoscope	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
192	ICU	Stethoscope	2	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
193	ICU	Non- Rebreather mask	50	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
194	ICU	Venturi Mask	50	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

195	ICU	Nasal Canula (Adult & Child)	50 Each	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
196	ICU	Oxygen Mask(Adult & Child)	50 Each	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item
197	ICU	Nebulizer Mask (Adult and Child)	50 Each	Item to be supplied as per NMC Guideline/ Norms	Complimentary Item

Note: 1. Complimentary Item Not to be quoted & to be Supplied free of cost .

2 Complimentary Items Warranty One Year.

Section-V

Technical Specification

Technical Specifications of Medical Equipments

Name of Equipment	Specifications	Qty (In tender)
DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE		
Sl. No.	(Dental chair and unit) Item	
DEPARTMENT OF PROSTHODONTICS AND CROWN AND BRIDGE		
Dental chair and unit	Dental chair mount unit	34
	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	
	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	
	It should have Ultrasonic Scaler with 5 scaling tips and one set of perio-curette tips.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanging).	

	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	
	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	
	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/ manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	
	Base should solid metal with heavy casting.	
	It should have LED based X-ray viewer.	
	It should be provided with rotatable right arm rest (90 degree).	
	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	
	Three (3) Chairs should have-Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge. In Rest Chairs individual compressor is not required, it should have facility to connect with Central Air Compressor plant.	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	
	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	
	The unit shall be capable of operating continuously in normal room temperature.	

	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
	Power supply	
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	
	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
	i. Model Should be US FDA / CE (Issue by Notified body) / BIS approved.	
	ii. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.	
	Documentation:	
	i. User manual in English.	
	ii. Service manual in English.	
	iii. List of important spare parts and accessories with their part number and costing available in stock with the supplier.	
	iv. Certificate of calibration and inspection from factory.	
	v. Log book with instruction for daily, weekly, Monthly and quarterly maintenance checklist.	
	vi. The job description of the hospital technician and company service engineer should be clearly spelt out.	
	vii. List of Equipment available for providing calibration and routine preventive Maintenance support as per manufacturer documentation in service/ technical Manual.	
INTRA ORAL EXTRA ORAL TRACERS, INTRA ORAL EXTRA ORAL TRACERS, It is used to verify centric relation and to take protrusive records		4
Dewaxing unit	• Digital furnace for pre-heating and dewaxing.	2
	• Heating upto 999 degree C	
	• Double body furnace insulated with ceramic wool.	
	• Faster heating and cooling cycle allows continuous usage.	

	<ul style="list-style-type: none"> • Chamber and door fitted with high quality moulded ceramic. 	
	<ul style="list-style-type: none"> • Size: Width 130 mm, Height 100mm, Depth 250mm. 	
Semi adjustable articulator	With face bow,semi adjustable /acron type,fixed intercondylar aerage distance of 110 mm,condylar guide set at average 30 degree, bennet angle set at 15 degree.curved condylar guide , innovative central lock.	4
Curing unit		2
	UV polymerizing equipment for resin and photosensitive materials.	
	It's made in stainless steel and it includes:	
	<ul style="list-style-type: none"> • 1 sliding drawer that can contain 3 models. 	
	<ul style="list-style-type: none"> • 4 bulbs 9 W each one. 	
	<ul style="list-style-type: none"> • 1 timer 120-180 sec. 	
	<ul style="list-style-type: none"> • 1 switch for endless time. 	
Dental Induction casting Machine	Automatic tabletop dental casting unit with high frequency induction melting and centrifugal casting.	1
	designed for casting of dental Co-Cr, Ni-Cr	
	and precious alloys tabletop design both	
	manual and automatic mode of melting	
	automatic maintenance of optimum power	
	automatic casting mode autonomic cooling	
	system Accessories: crucible tray ring	
	gripper crucible	
	silicon ring №2	
	silicon ring №3	
	silicon ring №4	
	graphite insert	
	Certification-US FDA/EU CE(Issued by notified body)/BIS approved	
Wax burn out furnace		1

	<p>Electronic control with microprocessor, the furnace manages 7 programmes with 4 phases per programme. The following can be set for each phase: temperature, raising speed and holding time. An ignition delay upto 100 hours can also be set. The furnace comes in 3 versions: small S, medium M and large L. The furnace ZEUS comes with a</p> <p>monobloc ceramic muffle with an external wrapped around resistance. This enables the temperature to be homogeneous in all its 4 sides: upper, lower and laterals. The fumes follow a natural circulation and come out from a rear chimney. To improve the exit of the fumes a chimney, which is supplied as an accessory, can be installed. Such installation is extremely simple and can be done by the operator.</p>	
	<p>The oven features a safety micro-switch, which stops the resistance in case the chamber is opened. The oven is airtight with environmental materials in compliance with the requirements. Another useful accessory is the dewaxing plate which we also advise to buy, in fact it prevents the liquid wax from being absorbed by the muffle, keeping it free from abrasions and deteriorations which can damage it.</p>	
	TECHNICAL FEATURES:-	
	Feeding : 220-240V	
	Overall dimensions : 32x40x50 cm +_10%	
	Chamber dimensions : 16x16x10 cm +_10%	
	Max. Temperature : 1100°C	
Pre Heating furnace		1
	<p>The oven can storing not less than 4 pre-heating cycles (or programs) which are kept in the memory until the operator decides to modify them.</p>	

	Each program contains 4 phases and for each phase it is possible to set 3 variables: temperature, increase rate, holding time. It is also possible to set an Ignition delay and the fumes aspiration fan Off temperature (fume chimney). Furthermore it is possible to set a final temperature holding time at the end of the cycle: this is to keep the cylinders at a certain temperature and allow some time for the operator to be ready with the next work.	
	Certification-US FDA/EU CE(Issued by notified body)/BIS approved	
Surveying Unit	It should ensure precision and high quality laboratory work. Surveyor unit to be supplied with a table and a set of standard surveying tools. Handpiece support Made of aluminum.	1
Heavy duty Hand piece Lab	heavy duty micromotor with 2000 to 50,000 RPM.High performance brushless micromotor,portable with variable speed control and operational by both foot and hand.automatic overload protection,contra angle hand piece autoclavable 20,000 to 40,000 RPM and straight hand piece autoclavable 40,000 RPM	4
Autoclave	Hot and wet – class -B	2
	Should have container for distilled water, and exhaust condensed waste water	
	The chamber should be of minimum 20 to 23 ltrs	
	Technical Info :	
	Sterilizer chamber (diameter x depth) - 245mmx465mm +_10%	
	Power Supply - 220V/AC/50Hz	
	Sterilization temperature/Pressure : 121/1.0~1.3Bar / 134/2.1~2.3Ba	
	Fuse tube - T15A	
	The storage tank volume - not less than 3.0L	
	Ambient pressure - +5°~ +40°	
	should have stainless steel container to store the distal water and should be supplied with a distal water plan.	
	Instrument tray - 3 Pcs	
	Instrument rack -1PC	
	Operation manual -1PC	

	Handle tongs - 1PC	
	1.5m water-outlet pipe -1PC	
	Water outlet connector - 2PCS	
	Measuring cup - 1PC	
	Sealing ring - 1PC	
	Power cable - PC	
Needle Burner with Syringe cutter	Needle destroyer should have needle burner and motorised syringe cutter with debri collector	2
	Main Input Supply (V, Hz, A) : $230 \pm 10\%$, $50 \pm 3\%$ Hz, AC/5 A fuse.	
	Body Material : stainless steel or ms powder coated	
	Power consumption of continuous rating, W in use : 100 W.	
	Type of Electrodes used : Copper Electrode – Nicket plated.	
	Destruction Rate, Seconds / Needle : 25 Second / Needle.	
	Thickness & Length of Needle : Recommended : MAX . 1.6 mm Dia, 80 mm Length.	
	Burning Temperature, deg. C: 1600 C.	
	Grade of Steel & Guaranteed Life of Cutting Blade (Approximate No. of Syringes and needle it can destroy): SS Grade is SS 316 L.	
	Tray capacity No. of Syringes & Needles: 100 pcs.	
	Safety features provided : Glass Cartilage Fuse.	
	motorised syringe cutter: with wheel	
CADCAM	A Complete System for Computer Aided Design /Computer Aided manufacturing of im lays ,on lays,crowns,bridges for Dental Restoration through fine milling process of ready Ceramic block.It should include supply ,installation ,training & commissioning of the complete system consisit of atleast the following components -	1
	MILLING MACHINE:	
	Functioning of milling should be fully automatic and should be with standardized precision.	
	Dry Milling machine should be suitable for all type of material which can be milled Dry.	

	The machine should have X, Y, Z, spindle rotation A & B Axis.	
	Should mill zirconium oxides, wax, PMMA, COMPOSITE etc, quickly, precisely and cleanly.	
	The milling machine should be able to mill all types of indications : inlays, onlays, crowns, bridges, framework, full mouth restorations etc.	
	Efficient and compact milling machine for quick and precise framework milling	
	Should mill perfectly with minimum error.	
	Should Mill up to 14 unit bridges and the burs should be changed automatically.	
	Tool holding fixture for automatic tool change based on automatic tool length measurement and broken tool detection.	
	Open interface for an open scanner	
	The milling machine should be STL open for import of other files scanning data.	
	High quality and high frequency spindle with 25000 or more speed.	
	Noise level should not be more than 75dbA	
	Suction & dust collector should be provided.	
	Tenderer or company should have supplied the similar quoted model machine to state/ central government or private hospitals or dental laboratory.	
	The milling machine should have the CAM software for automatic size detection of the restorations for positioning, height optimization in the disc for calculation.	
	Scanner, Milling unit, Dust extractor, software and frame work materials should be from the same Manufacturer.	
	Minimum 15 or more automatic tool changer fitted with tool measurement sensor.	
	Should be provide with branded suitbale desktop/ laptop.	
	LAB SCANNER	
	Fully automatic scanner with 5 axis scanning with high quality 3D image.	
	Should scan upto 14 unit bridges quickly and easily	
	Scanning accuracy should be less than 12micron	

	The scanner must have two high speed measuring cameras minimum 5mp.	
	Should have large measuring field and also facility to scan models in intermaxillary relationship	
	Should have intelligent scan strategy for even quicker scan times	
	The scanner should be able to scan the whole model jaw in less than 140 seconds using the large scanning field.	
	Should have multiple die holder for scanning up to 7 or more	
	The scan field should be identified and assessed automatically, which means that large spanned bridges frameworks can be quickly and efficiently documented.	
	The scanner should have ample space for placing articulators.	
	Should have facility to transfer articulated models	
	Bite registration, situation models, gingiva and wax-up scan should be possible for optimal framework fabrication	
	Should have Automatic user-guidance through the scan program for easy and safe operation	
	Scanner should be with an open interface, scans (stl-files) can also be downloaded into other CAD software	
	The software should have modern controls that incorporates the most up to date technologies, supports multi core CPUs and takes advantage of 64 bit operating system.	
	Should be a compact and table top unit.	
	Should be provide with branded suitable desktop/ laptop for scanning and designing purpose.	
	CAD SOFTWARE:	
	An intelligent designing Software for the framework fabrication to be provided free of cost	
	Software should have features of precise recognition of the prepared margin, automatic bridge and connector design, different tooth libraries, individual tooth part movements, compilation and the open system structure	
	Large indication spectrum should be available viz. i.Fully anatomical and anatomically reduced crowns and bridges, Inlays/onlays, Reducing, Virtual articulator.	

	The software must have a dental database.	
	Should have a virtual articulator with the same functionalities of adjustment of horizontal inclination of condylar guidance; Bennett's angle; retrusion; protrusion; immediate side shift etc. to calculate the fully anatomical construction dynamically and statically	
	This also should function to simulate the mandibular excursions and automatically construct a fully anatomical framework proposal, according to the dynamic occlusion, to reduce grindings the surfaces after milling	
	Spurious structures in the designing should be automatically removed and adapted during the movement of the virtual articulator	
	Synchronized accessories to be provided for transferring the models from the articulator into the Scanner to guarantee the precision at the functional interface between manual and digital technology	
	Model acquisition : it offers additional flexibility by allowing data to be imported from any 3D scanner by using an import module.	
	Model export : After completing the modelling prosthesis, there should be facility to export the models in STL open format for further processing with CAM software for milling and prototyping. The software should be integrated with third party solutions	
	Intra oral scan data should be imported directly into the design software record card and loaded for designing, also with virtual articulator functionality.	
	The software should be user friendly.	
	The software should comprise optionally of different sets of tooth libraries	
	The software also should comprise of a free interface module to upload STL data from other open scanners very easily.	
	The software should be capable of designing full contour bridges so that framework and matching veneering structure, can be designed in a single step	
	SINTERING FURNACE	
	The sintering furnace should have high process reliability due to constant temperature control, homogeneous temperature distribution in the firing chamber for final sintering of distortion-free zirconia frameworks.	
	The capacity of the furnace should BE with Minimum 1 bowl	

	The sintering furnace should have Maximum process reliability due to optimally coordinated, fully-automated sintering programs for different restoration sizes	
	The sintering furnace should have option for 9 sintering program locations; 6 of them individually programmable by the user	
	The sintering furnace should have minimum required space and installation time (supply required)	
	The furnace should perform sintering at the press of a button – very easy operation	
	The heating rate should be 1C-30C/min.	
	Automatic start time calculation by hours and weekdays.	
	The sintering furnace should have clear display of the sinter status	
	The sintering furnace should have compatible electrical connections: V/Hz 220- 240/50-60, Power: 1720 - 3500 W, Fuse (fast): 12.5 A, Temp Degree protection – IP20	
	All necessary accessories should be provided.	
	Heating elements made of molybdenum disilicide (MoSi ₂) offer a maximum furnace temperature of 1650°C	
	GLAZING FURNACE :	
	Microprocessor based programmable vacuum furnace for dental ceramics (Elevator model) should have	
	100 operating programs for all types of ceramics	
	Vacuum range from 60 to 100 mbar	
	Automatic parameter control	
	Operating voltage 220V / 50 Hz	
	Power consumption with vacuum pump : 1700 W, Without vacuum pump : 1500 W	
	Vacuum pump data :	
	Suction capacity upto 22 L/min	
	Vacuum from 0.9-0.94 bar	
	Weight with vacuum pump : 35 kg	
	INTRA ORAL 3D SCANNER	

	1. It should be able to provide Precise, accurate HD 3D real color scanning. The image should be with vivid color and details that offer visually appealing images that improve and simplify case review, analysis and communication between doctors, referrals and labs.	
	2. Scanner should not require powder or liquid for scanning high reflecting surfaces.	
	3. The scanner should not weigh more than 400 Grams.	
	4. The scanner should be handheld 3D scanner with Ultrafast Optical Sectioning. It should maintain full scan speed during full arch scan.	
	5. The scanner should be capable of measuring shades of teeth and adding HD photos to the 3D model.	
	6. The model should have integration with practice management system.	
	7. The software should have instant scan preparation validation tools.	
	8. Unit should be able to capture patient's accurate and detailed intra-oral data in digital form critical for dental diagnosis, treatment planning, record keeping and model/appliance fabrication.	
	9. It should be able to measure the shade of the tooth accurately.	
	10. It should have accuracy up to 8 microns.	
	11. It should provide accurate data in open STL format for accurate model preparation using three dimensional printing or CAM.	
	12. Scan the operative and opposing quadrant or arch and take a bite scan with patient in any occlusion.	
	13. Unit should have anti-fogging heater that works actively without any interruption to scanning when working intra-orally.	
	14. It should have possibility of high-speed dual-arch scan in less than 5 minutes.	
	15. Scanner should have autoclavable non bulky tips to allow its use multiple times. One tip should be able to be used up to 200 times before disposing.	
	16. The user should have possibility to check or rotate the final scan model on display screen infinite times for heightened visibility of data captured before finalizing.	

	17. User should be able to jump to any position in the mouth at any point.	
	18. The scanning process to fill in uncaptured image, without a need to indicate an exact location to the system. Should be freely movable and user friendly.	
	19. Scanner should be capable of scanning implant cases with standard abutments as well as custom abutments with scanned bodies. Also should be compatible with open system implant planning and surgical guide software.	
	20. User should be able to identify margin lines, contact points, and undercuts before proceeding for sending files to CAD system.	
	21. The STL file can be accessed by lab for design and fabrication or can choose to design and mill chairside, restore implants or create orthodontic appliances through one of the broad array of trusted Connections. Or, export the STL files and share them with any open CAD/CAM system.	
	22. Unit should have facility to store patient data in hard disc/ computer and CD/DVD and also wirelessly upload patient data to cloud / any mail account to be accessed later on from any computer in the centre.	
	23. Complete operating manual and product literature to be supplied at the time of delivery of the equipment.	
	24. Availability of spares for– All time during warranty and AMC.	
	25. Manufacturer and Supplier should furnish a certificate stating that the equipment is original not a reconditioned one.	
	26. Training – On site during installation by an OEM trained instructor.	
	USFDA/EU CE(Issued by notified body) BIS approved model	
	3D Printer	
	1) Equipment should be able to perform following functions. Fabricate Dentures, Long Term temporary Crown and Bridges, Surgical Guides, Prosthetic Models, Orthodontic models, Denture Trials, Castable copings/bridges/RPDs, Ortho Indirect Bonding Trays, Splints, Night Guards, Customized Trays, Flexible Gingiva for Implant.	
	2) Equipment should have following features -	
	a) Resolution should be more than 1900 X 1000 pixels.	

	b) Wavelength of light in projector system should be more than 400 nm.	
	c) Pixel pitch should be lower than 75 microns.	
	3) The system should have compatible software to slice 3D files and to communicate with the 3D printer.	
	4) The software should be updated by the supplier from time to time for next 10 years.	
	5) The Software should be based on following features -	
	a) Windows Operating System 10 or compatible.	
	b) STL File input.	
	c) System is based on the CAM Features.	
	d) Software should come with compatible and customized material build style for different resins.	
	e) Software should have multiple safety features like verification of the file before printing.	
	f) Software should have the ability to automatically generate supports for the models.	
	6) 3D Printer should be able to fabricate the model with	
	a) Fine detail and smooth surface finishing with layer thickness of 50 microns.	
	b) Should be able to work with variety of 10 or more resins with variable rigidity, detail and color.	
	c) Should be able to paint and finish for presentation, demonstration and photo reproduction.	
	d) Functional parts produced within 60 minutes depending upon size and complexity of job.	
	7) System should have built styles with below details -	
	a) Normal build style in range of 0.03-0.05mm.	
	b) Quick Build style 0.05mm.	
	c) Precision build style 0.05mm.	
	8) There should be a system for automated mixing of resin before pouring to have optimum consistency for precise printing. Mixing unit should be able to mix 2 or more bottles at a time.	

	9) Tank capacity should be in range of 0.4 to 0.75 liters.	
	10) Build volume of tray should have measurements less than 130X 75X 200 mm.	
	11) Complete system should be able to function precisely with different materials without deviation and should not require calibration.	
	12) It should have alcohol ultrasonic bath in work flow for cleaning of printed parts.	
	13) Printer should have easy to change resin tank and print platform.	
	14) The system should have safety features such as automatic abort if print chamber is opened during printing to protect from harmful UV exposure.	
	15) System should work and fabricate models accurately, repeatedly with unmatched productivity with range of 10 or more resins.	
	16) There must be a dedicated system for uniform UV curing for the post-processing of printed parts. UV Curing System should have 10 or more UV bulbs (more than 12 Watts) for complete curing of models (6-8 nos). The system should have both UV-A and UV-B bulbs for proper surface and deep curing of the parts.	
	17) Materials which need to be used in the mouth must be certified biocompatible.	
	18) 3D Printer should have non-contact membrane based printing requiring no peel process.	
	19) 3D printer, software, resin mixing system and post UV curing system in the complete work flow should be from same OEM.	
	20) 20lt of biocompatible USFDA approved Resin and 20lt non-biocompatible USFDA approved Resin should be provided.	
	Compressor & UPS	
	Suitable medical grade compressor with radiator, cooling fan, dryer and silicone column filter should be supply.	
	Suitable UPS with minimum 30 minutes back up for all machines including Sintering Machine.	
	Consumables	
	5 set of DC tools	
	50 Zirconia blanks.	
	Certification	

	USFDA/EU CE(Issued by notified body)BIS approved model	
LAB		
Plaster dispenser	One each for plaster and stone plaster	22
	• High Frequency Dispenser.	
	• High quality rubber bucket for storing Plaster.	
	• Dispenses plaster in total powder form.	
	• Bottom lever starts and stops flow of plaster instantly.	
Model trimmer with Carborandum disc		2
	• Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	
	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Imported grinding wheel.	
	• Adjustable work table for accurate trimming.	
Model trimmer with Diamond disc	• Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	2
	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Imported grinding wheel.	
	• Adjustable work table for accurate trimming.	
Acrylier	• Digital type programming	3
	• Digital control unit with 2 timers and temperature controls	
	• Programmable pre-heating Time & Temperature, curing time and temperature.	
	• Capacity – 8 flasks or as per requirement.	
Lathe	• Heavy duty, continuous rating motor.	2
	• Well balanced bearing for smooth work.	
	•to be Supplied with different attachments.	

	<ul style="list-style-type: none"> • 1,400/2,800 rpm 	
Flask Press	Simple manual press for pressing large and manual flasks, sturdy metal body	4
Deflasking unit	robust high performance chisel operated by compressed air for deflasking and universal use in the laboratory with high frequency chisel for deflask dentures	4
Dewaxing unit	<ul style="list-style-type: none"> • Digital furnace for pre-heating and dewaxing. 	3
	<ul style="list-style-type: none"> • Heating upto 999 degree C 	
	<ul style="list-style-type: none"> • Double body furnace insulated with ceramic wool. 	
	<ul style="list-style-type: none"> • Faster heating and cooling cycle allows continuous usage. 	
	<ul style="list-style-type: none"> • Chamber and door fitted with high quality moulded ceramic. 	
	<ul style="list-style-type: none"> • Size: Width 130 mm, Height 100mm, Depth 250mm. 	
Hydraulic press	Hydraulic Press,	3
	<ul style="list-style-type: none"> • Hydraulic press for pressing flasks. 	
	<ul style="list-style-type: none"> • should Allows up to 3 flasks at a time. 	
	<ul style="list-style-type: none"> • High quality, continuous working results. 	
	<ul style="list-style-type: none"> • 150,000 Kilos. 	
Mechanical Press	<ul style="list-style-type: none"> • A simple manual press. 	2
	<ul style="list-style-type: none"> • For pressing large and small flasks. 	
	<ul style="list-style-type: none"> • Sturdy metal body. 	
Vacuum mixing machine	Small and powerful. They should be suitable for mixing in AIR ABSENCE any kind of plaster, coating and silicone. They should be equipped with a low-noise motor reducer, a dry running vacuum pump and an electronic timer of proven reliability. voltage 220 Volt,	1
Curing pressur Pot	<ul style="list-style-type: none"> • Robust stainless steel structure which makes the equipment extremely dependable 	1
	<ul style="list-style-type: none"> • Satisfies all technical requirements requested for resins treatment 	
	<ul style="list-style-type: none"> • Durable and easy maintenance 	

	<ul style="list-style-type: none"> • 4 discharge cycles (air/water) can be set and can be combined with 2 cooling cycles 	
	<ul style="list-style-type: none"> • (slow/fast) 	
	Characteristics	
	<ul style="list-style-type: none"> • Front panel display shows polymerizer temperature and time 	
	<ul style="list-style-type: none"> • Up to 10 memorisable programs 	
	<ul style="list-style-type: none"> • Setting of working time from 1 minute to 99 hours 	
	<ul style="list-style-type: none"> • 100% stainless steel support structure 	
	<ul style="list-style-type: none"> • Safety microswitch which detects opening of lid 	
	<ul style="list-style-type: none"> • Internal machine safety valve 	
	<ul style="list-style-type: none"> • Equipped with filter with air pressure regulator 	
	<ul style="list-style-type: none"> • Self-locking lid closure 	
	<ul style="list-style-type: none"> • Polimer are able to contain 2 self-standing medim size flask 	
	<ul style="list-style-type: none"> • Maximum working pressure 6 bar 	
	<ul style="list-style-type: none"> • Precise and flexible electronic controlo allow an optimal treatment of resins 	
Hot water sterilier	instrument steriliser , electric stainless steel, chamber size not less than 10 inch	2
Geyser	25 L Storage Water Geyser, electrical, energy efficient, with over heat protection,	2
Phantom head	Phantom Table fitted with Phantom Head with light and Air rotor and micro motor, with contra angle Handpiece attachment, 3-way syringe with suction or drainage system, operator's stool	50
	PRE-CLINICAL UNIT	
	Phantom Head Table with Two working place.	
	Top complete Stainless Steel, inbuilt drawer to	
	keep the materials	
	LED Operating Light, with on and off and intensity control	

	Reflector having two Intensity .	
	Modular fitted with	
	· Airotor Control Box fitted with Transparent	
	Water Tank, Tubing with Nut Fittings for Airotor	
	with Tubing and Foot Control	
	Supreme Micromotor with 35,000 rpm 1 No ,	
	Three Way Syringe 1 No	
	<ul style="list-style-type: none"> • Phantom head with mankin body & pneumatic piston for tilting movement, phantom head with ball and socket , neck joint for all the movement of neck, TMJ movement, even provision to fix TMJ in open position. Heavy Duty –Phantom head with the excellent quality face mask , total closed oral cavity, drain nipple for drain of water. 	
	working stool for the opertor moving on five wheels with pneumatic piston for height adjustment, seat and backrest thickly cushioned covered with rexine	
Pre clinical working table with gas connection & burner	it should be for two working students with single burner,each table for 10 students(5 burners) ,SS Top one set of drawers for each student, gas connection, air blower LED iluminatin light on the top of the table for sufficient light to each student. Qty-10	10
	working stool: moving on five wheels pneumatic piston for up and down movemnt thickly cushioned seat and back rest	
	CERAMIC AND CAST PARTIAL LABORATORY	
Plaster Dispenser	One each for plaster and stone plaster	2
	<ul style="list-style-type: none"> • High Frequency Dispenser. 	
	<ul style="list-style-type: none"> • High quality rubber bucket for storing Plaster. 	
	<ul style="list-style-type: none"> • Dispenses plaster in total powder form. 	
	<ul style="list-style-type: none"> • Bottom lever starts and stops flow of plaster instantly. 	
Duplicator	it should be programmable brushless agitatot motor which should offer durability and reliabilty. It should have temperature control for gauranteed precision warmup and cool down cases. , melting cycles to be set separately. The time at which the gel is required can be easily pre programmed for optimum processing - electrical 220V/50HZ.02 nos of duplicating flasks,not less than 500ml	1

Pindex System	pindex system or Laser pinsetter has been designed for the most efficient and ergonomic approach to pin drilling, for easy die pin placement.	1
	<ul style="list-style-type: none"> Combines “State of the art” laser light technology with an easy to use design. 	
	<ul style="list-style-type: none"> The carbide bur provides effective and smooth drilling. 	
	<ul style="list-style-type: none"> 15,000 rpm. 	
Circular Saw	<ul style="list-style-type: none"> This high speed circular saw is supplied with a diamond disc for precision slitting through models that can be held firmly on the electro magnetic model holder. 	1
	<ul style="list-style-type: none"> Provided with a funnel for aspiration and provision for attaching suction unit. 	
	<ul style="list-style-type: none"> High intensity illuminations for clear view of the working model. 	
	<ul style="list-style-type: none"> Dual control switch for safety while working. 	
	<ul style="list-style-type: none"> Diamond blade; 080mm and thickness 0.26 mm. 	
Burn Out furnace	Electronic control with microprocessor, the furnace manages 7 programmes with 4 phases per programme. The following can be set for each phase: temperature, raising speed and holding time. An ignition delay upto 100 hours can also be set. The furnace comes in 3 versions: small S, medium M and large L. The furnace ZEUS comes with a monobloc ceramic muffle with an external wrapped around resistance. This enables the temperature to be homogeneous in all its 4 sides: upper, lower and laterals. The fumes follow a natural circulation and come out from a rear chimney. To improve the exit of the fumes a chimney, which is supplied as an accessory, can be installed. Such installation is extremely simple and can be done by the operator.	1
	The oven features a safety micro-switch, which stops the resistance in case the chamber is opened. The oven is airtight with environmental materials in compliance with the requirements. Another useful accessory is the dewaxing plate which we also advise to buy, in fact it prevents the liquid wax from being absorbed by the muffle, keeping it free from abrasions and deteriorations which can damage it.	
	TECHNICAL FEATURES:-	
	Feeding : 220-240V	
	Overall dimensions : 32x40x50 cm +_10%	
	Chamber dimensions : 16x16x10 cm +_10%	

	Max. Temperature : 1100°C	
	Weight : 28 Kg +_10%	
Sand blasting Machine	With two containers	
	<ul style="list-style-type: none"> • The double jar sand blaster offers excellent results which until was achieved only by very expensive devices . 	1
	<ul style="list-style-type: none"> • USED for roughing and polishing of metals, ceramic and acrylic materials. 	
	<ul style="list-style-type: none"> • Technical Characteristics; 	
	<ul style="list-style-type: none"> • Excellent ergonomics 	
	<ul style="list-style-type: none"> • Alluminium oxides from 50 microns to 250 microns can be used 	
	<ul style="list-style-type: none"> • Inner air gun 	
	<ul style="list-style-type: none"> • Highly durable, long lasting blasting tips of 2 sizes provides precision sand blasting. 	
	<ul style="list-style-type: none"> • Chamber selection by directional mechanical valve 	
	<ul style="list-style-type: none"> • Glass protection with interchangeable plastic film 	
	<ul style="list-style-type: none"> • Electric Components according to international regulations 	
	<ul style="list-style-type: none"> • Pneumatic foot control 	
Electro Polisher	Electro polisher	1
	<ul style="list-style-type: none"> • 2 tanks for chemical provision for power variation with a rotary switch 	
	<ul style="list-style-type: none"> • Special titanium electrode for long life total body construction non corrosion material 	
Model trimmer with Carbodium disc	Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	1
	<ul style="list-style-type: none"> • Precision water flow control valve. 	
	<ul style="list-style-type: none"> • Aluminum, non-rusting body. 	
	<ul style="list-style-type: none"> • carborandum Grinding wheel. 	
	<ul style="list-style-type: none"> • Adjustable work table for accurate trimming. 	
Model trimmer with Carborandum disc	Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	1

	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Grinding wheel. Diamond disc	
	• Adjustable work table for accurate trimming.	
Induction casting machine	Machine for centrifugal casting with inductive high frequency metal melting.	1
	• Design for Casting Co-Cr-Mo, Ni-Cr-Mo and precious alloys used in dentistry.	
	• An autonomous water cooling.	
	Technical data:	
	• Power Supply : 220V/ 50Hz	
	• Maximum power consumption : 3kW	
	• Minimum alloy quantity in the crucible : 7g	
	• Maximum alloy quantity in the crucible : 80g	
	• Crucible material : Ceramics	
	• Crucible material When casting precious alloys : Ceramics with graphic insertion	
	• Maximum time for full melting	
	of 30g alloy : 60s	
	• Cooling : Water autonomous	
	• HF Power rating adjustment when	
	Melting Ni-Cr-Co alloys or precious alloys : Manual	
	• Motor acceleration adjustment : Manual	
	• Casting : Manual.	

Programmable Porcelian furnace with vacuum pump and instrument & material kit	Automatic programmable vacuum furnace for dental and ceramic, designed for all types of dental ceramics, completely processor controlled, 14 programs, in every program name, idle temp, dry temp, pre drying temp, dry timing, firing timing, first cooling, second cooling, vacuum controlled, with self diagnostic and auto calibration. an option for automatic continuation of program after power break down. an option for program transfer on USB. an option of remote analysis of damage.	1
Spot welder with soldering attachment and cable	Pulse Welder with Digital Timer Accuracy 0.01 to 1.0 Sec	1
	LED base five different welding temperature settings.	
	Both welding and soldering operation in one unit.	
	All switches on front panel for easy operation.	
	Perfectly matching electrodes in 4 different shapes	
Vacuum mixing machine	Small and powerful. They should be suitable for mixing in AIR ABSENCE any kind of plaster, coating and silicone. They should be equipped with a low-noise motor reducer, a dry running vacuum pump and an electronic timer of proven reliability. voltage 220 Volt,	1
Steam Cleaner	<ul style="list-style-type: none"> • Steam generator built in compliance with international safety regulations. 	
	<ul style="list-style-type: none"> • A simple easy to operate steam cleaner with safety valve and high volume water holding tank with water level indicator. 	1
	<ul style="list-style-type: none"> • 3 – 4 bar constant pressure. 	
	<ul style="list-style-type: none"> • Convenient foot control. 	
	<ul style="list-style-type: none"> • Handy gun with flexible hose. 	
Spindle grinder 24,000 RPM and Vacuum pump	This should be a Compact Alloy Grinder Offering high speed grinding and dependable trouble free operation.	
	<ul style="list-style-type: none"> • Equipped with fully automatic spindle. 	1
	<ul style="list-style-type: none"> • Provided with suction, foot control and high intensity illumination. 	
	<ul style="list-style-type: none"> • Safety glass for glare elimination and visual protection. 	

	<ul style="list-style-type: none"> • 20,000 rpm.to 24000 rpm 	
Wax Heater	<ul style="list-style-type: none"> • Electronic controlled wax pot. 	1
	<ul style="list-style-type: none"> • Four individual square containers. 	
	<ul style="list-style-type: none"> • Uniform temperature maintenance. 	
	<ul style="list-style-type: none"> • Physical characteristics of wax unaltered. 	
	<ul style="list-style-type: none"> • 30 degree C – 110 degree C 	
Wax Carver	Oracraft / API/Jaypee	1
Curing Pressure Pot	<ul style="list-style-type: none"> • Robust stainless steel structure which makes the equipment extremely dependable 	1
	<ul style="list-style-type: none"> • Satisfies all technical requirements requested for resins treatment 	
	<ul style="list-style-type: none"> • Durable and easy maintenance 	
	<ul style="list-style-type: none"> • 4 discharge cycles (air/water) can be set and can be combined with 2 cooling cycles 	
	<ul style="list-style-type: none"> • (slow/fast) 	
	Characteristics	
	<ul style="list-style-type: none"> • Front panel display shows polymerizer temperature and time 	
	<ul style="list-style-type: none"> • Up to 10 memorisable programs 	
	<ul style="list-style-type: none"> • Setting of working time from 1 minute to 99 hours 	
	<ul style="list-style-type: none"> • 100% stainless steel support structure 	
	<ul style="list-style-type: none"> • Safety microswitch which detects opening of lid 	
	<ul style="list-style-type: none"> • Internal machine safety valve 	
	<ul style="list-style-type: none"> • Equipped with filter with air pressure regulator 	
	<ul style="list-style-type: none"> • Self-locking lid closure 	
	<ul style="list-style-type: none"> • Polimer are able to contain 2 self-standing medim size flask 	
	<ul style="list-style-type: none"> • Maximum working pressure 6 bar 	
	<ul style="list-style-type: none"> • Precise and flexible electronic controlo allow an optimal treatment of resins 	

Milling Machine	DENTAL MILLING milling machine ensures high precision work on fixed and removable prostheses and fittings. The articulated and/or fixed arm is equipped with a micromotor, providing a high precision vertical movement. It is supplied with fixed and/or mobile table, a standard set of gauge tips and a rod with a mandrel for wax outlining and milling. The column height is adjustable and the milling machine is robust, made of hard aluminum, with an imposing yet compact design that ensures long durability	1
	The arm's head is designed to adapt to most micromotor models available on the market	
	Certification-US FDA/EU CE(Issued by notified body)/BIS approved	
Heavy duty lathe with suction	<ul style="list-style-type: none"> • Heavy duty, continuous rating motor. 	1
	<ul style="list-style-type: none"> • Well balanced bearing for smooth work. 	
	<ul style="list-style-type: none"> • Supplied with different attachments. 	
	<ul style="list-style-type: none"> • 1,400/2,800 rpm 	
	<ul style="list-style-type: none"> • Universal suction Unit for laboratories Polishing Lathes. 	
	<ul style="list-style-type: none"> • Necessary for polishing and buffing works. 	
	<ul style="list-style-type: none"> • Essential and compact design, is equipped with a new suction System for the best performances. 	
	<ul style="list-style-type: none"> • The lighting is supplied with a neon lamp of the power of 18 watt. 	
Pre Heating furnace	The oven can storing not less than 4 pre-heating cycles (or programs) which	1
	are kept in the memory until the operator decides to modify them.	
	Each program contains 4 phases and for each phase it is possible to set	
	3 variables: temperature, increase rate, holding time. It is also possible	
	to set an Ignition delay and the fumes aspiration fan Off temperature	
	(fume chimney). Furthermore it is possible to set a final temperature	
	holding time at the end of the cycle: this is to keep the cylinders at a	
	certain temperature and allow some time for the operator to be ready	
	with the next work.	
	Certification-US FDA/EU CE(Issued by notified body)/BIS approved	

	The oven can storing not less than 4 pre-heating cycles (or programs) which	
Palatal trimmer	<ul style="list-style-type: none"> This is a single bur unit for simple, precise, safe and dustless operation for trimming palatal/lingual surface of models. 	1
	<ul style="list-style-type: none"> High speed, most efficient cylindrical bur, provides fine trimming without applying the slightest pressure on the model. 	
	<ul style="list-style-type: none"> Provision to attach dust suction unit. 	
	<ul style="list-style-type: none"> 2,800 rpm. 	
Ultra sonic cleaner	5 liters capacity	1
5 Lit capacity	High frequency and high intensity sound waves , less than 80 dB	
	<ul style="list-style-type: none"> Versatile and timer controlled 	
	<ul style="list-style-type: none"> Portable 	
	<ul style="list-style-type: none"> Suitable for continuous operation 	
	<ul style="list-style-type: none"> Automatic initialization and easy to set by touch buttons 	
	<ul style="list-style-type: none"> Capacity of the tank : 4 to 6 Ltr 	
	<ul style="list-style-type: none"> Digital LCD display 	
	<ul style="list-style-type: none"> 220-240 volts and frequency 30-60 HZ 	
Composite curing unit	UV polymerizing equipment for resin and photosensitive materials. It's should made in stainless steel and it includes: <ul style="list-style-type: none"> 1 sliding drawer that can contain 3 models. 4 bulbs 9 W each one. 1 Timer 120-180 sec. 1 switch for endless time. 	1
Micro surveyor	It should ensure precision and high quality laboratory work. surveyor unit to be supplied with a table and a set of standard surveying tools. Handpiece support Made of aluminum.	1
Pre clinic prosthetics LABORATORY	work table complete S S top fitted with light,bunsen burner air blower ,work stool	60
	micro motor lab with attached hand piece	20
	PLASTER ROOM FOR PRE CLINICAL WORK	
Plaster dispenser	One each for plaster and stone plaster	2
	<ul style="list-style-type: none"> High Frequency Dispenser. 	
	<ul style="list-style-type: none"> High quality rubber bucket for storing Plaster. 	

	• Dispenses plaster in total powder form.	
	• Bottom lever starts and stops flow of plaster instantly.	
Vibrator	• Works effectively for pouring bubble free models.	2
	• 3 Steps of Vibration- Low, Medium and High.	
	• Non sticky superior rubber, easy to remove and clean.	
	• Ideal for Institutions, Dental Laboratories and clinics.	
Lathe	• Heavy duty, continuous rating, vibration-free, low noise lathe used for polishing and trimming.	2
	• Dual working sides.	
	• Supplied with drill chuck, buffing cone and grinding stone.	
	• Dust proof motor.	
	• 2800 rpm.	
Model Trimmer with	• Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	1
carboradium disc	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Imported grinding wheel.	
	• Adjustable work table for accurate trimming.	
Model trimmer with	• Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	1
diamond disc	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Imported grinding wheel.	
	• Adjustable work table for accurate trimming.	
	DEPARTMENT - CONSERVATIVE DENTISTRY & ENDODONTICS	
Dental chair and unit	Dental chair mount unit	34
	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	

	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	
	It should have Ultrasonic Scaler with 5 scaling tips and one set of perio-curette tips.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanging).	
	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	
	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	
	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	
	Base should solid metal with heavy casting.	
	It should have LED based X-ray viewer.	
	It should be provided with rotatable right arm rest (90 degree).	

	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	
	Three (3) Chairs should have-Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge. In Rest Chairs individual compressor is not required, it should have facility to connect with Central Air Compressor plant.	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	
	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	
	The unit shall be capable of operating continuously in normal room temperature.	
	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
	Power supply	
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	
	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
	i. Model Should be US FDA / CE (Issue by Notified body) / BIS approved.	
	ii. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.	
	Documentation:	
	i. User manual in English.	
	ii. Service manual in English.	

	iii. List of important spare parts and accessories with their part number and costing available in stock with the supplier.	
	iv. Certificate of calibration and inspection from factory.	
	v. Log book with instruction for daily, weekly, Monthly and quarterly maintenance checklist.	
	vi. The job description of the hospital technician and company service engineer should be clearly spelt out.	
	vii. List of Equipment available for providing calibration and routine preventive Maintenance support as per manufacturer documentation in service/ technical Manual.	
Rubber Dam Kit	Rubber Dam Kit 11 clamps with sheet, Clamp holder, Rubber dam holder, Rubber dam hole puncture	6
Restorative Instrument Kit	restorative, amalgam carrier, amalgam plugger, ball burnisher, cement carrier, cement pluggere trimmer, spoon excavator, small mediam and large, gingival marginal, sectional matrix Specifications-Made of SS, Rust free, autocable, sharp working end	10
RCT Instrument kit	RCT Instrument kit-Protaper SX, S1, S2, F1, F2, F3 (SET OF 6), Protaper DI, D2 (SET OF 6), 2% files	10
Autoclaves	Hot and wet – class -B	3
	Should have container for distilled water, and exhaust condensed waste water	
	The chamber should be of minimum 20 to 23 ltrs	
	Technical Info :	
	Sterilizer chamber (diameter x depth) - 245mmx465mm +_10%	
	Power Supply - 220V/AC/50Hz	
	Sterilization temperature/Pressure : 121/1.0~1.3Bar / 134/2.1~2.3Ba	
	Fuse tube - T15A	
	The storage tank volume not less than 3.0 L	
	Ambient pressure - +5°~ +40°	
	Instrument tray - 3 Pcs	
	Instrument rack -1PC	
	Operation manual -1PC	

	Handle tongs - 1PC	
	1.5m water-outlet pipe -1PC	
	Water outlet connector - 2PCS	
	Measuring cup - 1PC	
	Sealing ring - 1PC	
	Power cable - PC	
Ultrasonic cleaner	13 litres	2
	Ultrasonic Cleaner , Premium quality cleaner for cleaning surgical instruments before autoclaving should have lid and cage to keep the instruments, on.off switch and should have the capacity of minimum 13 ltrs	
Needle burner with syringe cutter	Needle destroyer should have needle burner and motorised syringe cutter with debri collector	4
	Main Input Supply (V, Hz, A) : 230 ± 10%, 50 ± 3% Hz, AC/5 A fuse.	
	Body Material : stainless steel or ms powder coated	
	Power consumption of continuous rating, W in use : 100 W.	
	Type of Electrodes used : Copper Electrode – Nicket plated.	
	Destruction Rate, Seconds / Needle : 25 Second / Needle.	
	Thickness & Length of Needle : Recommended : MAX . 1.6 mm Dia, 80 mm Length.	
	Burning Temperature, deg. C: 1600 C.	
	Grade of Steel & Guaranteed Life of Cutting Blade (Approximate No. of Syringes and needle it can destroy): SS Grade is SS 316 L.	
	Tray capacity No. of Syringes & Needles: 100 pcs.	
	Safety features provided : Glass Cartilage Fuse.	
	motorised syringe cutter: with wheel	
Amalgamator	The amaglam mixer is used fo rmixing and accurate portioning of mercury & silver tin powder until they have bonded, the time of mixing should be adjused from 1 to 60 seconds, the unit should supply with capsule operating device.	3

Pulp tester	DIGITAL PULP TESTER high frequency tip detachable, digital display	4
Apex locator	High-precision root canal measurement generated by using Smart Logic	2
	Auto-detects the apex accurately in any conditions, dry or wet	
	A stylish and compact body consuming very small space	
	Three different alert sounds depending on the location of the file tip, ensuring precise procedures	
	A three-colour LCD panel with very low reflectivity, allowing clinicians to accurately and instantly monitor procedure progress	
	Energy saving and low operation cost	
	Control unit	
	Probe (1.8m)	
	File Clip (3 pcs.)	
	Lip Hook (3 pcs)	
	AAA Manganese Dry Batteries (3 pcs.)	
	Tester	
Glass bead sterilier	• Variable from 150 - 250 deg C, and temperature within 25 to 30 minutes and maintain uniformly as long as it is on.	6
	• Instruments may be kept only for 10 to 30 seconds and will be ready for use.	
	• With High quality glass for retaining the temperature.	
	• Minimum Unit power consumption for day long work.	
	• On reaching required temperature indicator light should be on and the Unit should be ready.	
Plaster dispenser	One each for plaster and stone plaster	2
	• High Frequency Dispenser.	
	• High quality rubber bucket for storing Plaster.	
	• Dispenses plaster in total powder form.	

	<ul style="list-style-type: none"> • Bottom lever starts and stops flow of plaster instantly. 	
Vibrator	<ul style="list-style-type: none"> • Works effectively for pouring bubble free models. 	2
	<ul style="list-style-type: none"> • 3 Steps of Vibration- Low, Medium and High. 	
	<ul style="list-style-type: none"> • Non sticky superior rubber, easy to remove and clean. 	
	<ul style="list-style-type: none"> • Ideal for Institutions, Dental Laboratories and clinics. 	
Intra Oral X Ray Unit ,AERB Certified	1. Intra oral X-ray unit should be DC based. (7-10mA/65-70 KVa) with option for wall mount.	1
	2. X-ray unit should be supplied with lead apron-01nos., thyroid collar-01nos.	
	3. Power input to be 220-240VAC, 50Hz fitted with Indian plug	
	4 Servo Voltage stabilizer of appropriate ratings for X-ray machine.	
	5. Dental X ray should be - USFDA (510 K)/ European CE (Issued by notified body) & AERB approved model should be offered.	
Automatic Developer	Automatic x ray Developer : to be used for intra oral and perriapical films it should be suitable for all the intra orals films, temperature controlled heating. It should develop upto 8 films per five minutes	
RVG	chip type APS CMOS	1
	pixel size 20Um	
	active area 20x30 mm	
	signal out put USB	
	Theoretical resolution 25lp/mm	
	imaging time 3-4 s	
	true line pair resolution as 14 lp/mm	
	With computer & printer at Trolley	
EndoMotor with Torque	Endo Micromotor with Torque Control And Auto Reverse	3

control handpiece	Smart enough to memorise exact speed and torque settings for up to 9 Ni-Ti files. Its auto-reverse features 3 working modes – auto-reverse on, auto-stop, auto-reverse off. The motor reacts when load reaches the preset level of torque. With on-off switch, it offers flexibility of pedal-free operation (optional foot control unit available), while providing convenience of full portability with two-way power supply, either AC or battery driven. (NSK/J Morita/Kavo/w&h/densply)	
	Operative with AC Adapter	
	Auto Reverse Function, 9 programs	
	With Rechargeable Battery Back-up	
	Control unit	
	Adaptor - 1 no	
	Motor Cord & MP Handpiece	
	Motor stand	
	Spray nozzle - 1no	
Bleaching Unit	chair side bleaching unit with led with required blue light frequency, with time control	1
Magnifying loop	Should be type 2.5, and 3x magnification with light and battery backup	2
Injectable gutta purcha	Cord less obturator which should have both cutter and filling instruments with battery operated	3
CADCAM	A Complete System for Computer Aided Design /Computer Aided manufacturing of im lays ,on lays,crowns,bridges for Dental Restoration through fine milling process of ready Ceramic block.It should include supply ,installation ,training & commissioning of the complete system consist of atleast the following components -	1
	MILLING MACHINE:	
	Functioning of milling should be fully automatic and should be with standardized precision.	
	Dry Milling machine should be suitable for all type of material which can be milled Dry.	
	The machine should have X, Y, Z, spindle rotation A & B Axis.	

	Should mill zirconium oxides, wax, PMMA, COMPOSITE etc, quickly, precisely and cleanly.	
	The milling machine should be able to mill all types of indications : inlays, onlays, crowns, bridges, framework, full mouth restorations etc.	
	Efficient and compact milling machine for quick and precise framework milling	
	Should mill perfectly with minimum error.	
	Should Mill up to 14 unit bridges and the burs should be changed automatically.	
	Tool holding fixture for automatic tool change based on automatic tool length measurement and broken tool detection.	
	Open interface for an open scanner	
	The milling machine should be STL open for import of other files scanning data.	
	High quality and high frequency spindle with 25000 or more speed.	
	Noise level should not be more than 75dbA	
	Suction & dust collector should be provided.	
	Tenderor or company should have supplied the similar quoted model machine to state/ central government or private hospitals or dental laboratory.	
	The milling machine should have the CAM software for automatic size detection of the restorations for positioning, height optimization in the disc for calculation.	
	Scanner, Milling unit, Dust extractor, software and frame work materials should be from the same Manufacturer.	
	Minimum 15 or more automatic tool changer fitted with tool measurement sensor.	
	Should be provide with branded suitbale desktop/ laptop.	
	LAB SCANNER	
	Fully automatic scanner with 5 axis scanning with high quality 3D image.	
	Should scan upto 14 unit bridges quickly and easily	
	Scanning accuracy should be less than 12micron	

	The scanner must have two high speed measuring cameras minimum 5mp.	
	Should have large measuring field and also facility to scan models in intermaxillary relationship	
	Should have intelligent scan strategy for even quicker scan times	
	The scanner should be able to scan the whole model jaw in less than 140 seconds using the large scanning field.	
	Should have multiple die holder for scanning up to 7 or more	
	The scan field should be identified and assessed automatically, which means that large spanned bridges frameworks can be quickly and efficiently documented.	
	The scanner should have ample space for placing articulators.	
	Should have facility to transfer articulated models	
	Bite registration, situation models, gingiva and wax-up scan should be possible for optimal framework fabrication	
	Should have Automatic user-guidance through the scan program for easy and safe operation	
	Scanner should be with an open interface, scans (stl-files) can also be downloaded into other CAD software	
	The software should have modern controls that incorporates the most up to date technologies, supports multi core CPUs and takes advantage of 64 bit operating system.	
	Should be a compact and table top unit.	
	Should be provide with branded suitable desktop/ laptop for scanning and designing purpose.	
	CAD SOFTWARE:	
	An intelligent designing Software for the framework fabrication to be provided free of cost	
	Software should have features of precise recognition of the prepared margin, automatic bridge and connector design, different tooth libraries, individual tooth part movements, compilation and the open system structure	

	Large indication spectrum should be available viz. i. Fully anatomical and anatomically reduced crowns and bridges, Inlays/onlays, Reducing, Virtual articulator.	
	The software must have a dental database.	
	Should have a virtual articulator with the same functionalities of adjustment of horizontal inclination of condylar guidance; Bennett's angle; retrusion; protrusion; immediate side shift etc. to calculate the fully anatomical construction dynamically and statically	
	This also should function to simulate the mandibular excursions and automatically construct a fully anatomical framework proposal, according to the dynamic occlusion, to reduce grindings the surfaces after milling	
	Spurious structures in the designing should be automatically removed and adapted during the movement of the virtual articulator	
	Synchronized accessories to be provided for transferring the models from the articulator into the Scanner to guarantee the precision at the functional interface between manual and digital technology	
	Model acquisition : it offers additional flexibility by allowing data to be imported from any 3D scanner by using an import module.	
	Model export : After completing the modelling prosthesis, there should be facility to export the models in STL open format for further processing with CAM software for milling and prototyping. The software should be integrated with third party solutions	
	Intra oral scan data should be imported directly into the design software record card and loaded for designing, also with virtual articulator functionality.	
	The software should be user friendly.	
	The software should comprise optionally of different sets of tooth libraries	
	The software also should comprise of a free interface module to upload STL data from other open scanners very easily.	
	The software should be capable of designing full contour bridges so that framework and matching veneering structure, can be designed in a single step	
	SINTERING FURNACE	

	The sintering furnace should have high process reliability due to constant temperature control, homogeneous temperature distribution in the firing chamber for final sintering of distortion-free zirconia frameworks.	
	The capacity of the furnace should BE with Minimum 1 bowl	
	The sintering furnace should have Maximum process reliability due to optimally coordinated, fully-automated sintering programs for different restoration sizes	
	The sintering furnace should have option for 9 sintering program locations; 6 of them individually programmable by the user	
	The sintering furnace should have minimum required space and installation time (supply required)	
	The furnace should perform sintering at the press of a button – very easy operation	
	The heating rate should be 1C-30C/min.	
	Automatic start time calculation by hours and weekdays.	
	The sintering furnace should have clear display of the sinter status	
	The sintering furnace should have compatible electrical connections: V/Hz 220- 240/50-60, Power: 1720 - 3500 W, Fuse (fast): 12.5 A, Temp Degree protection – IP20	
	All necessary accessories should be provided.	
	Heating elements made of molybdenum disilicide (MoSi ₂) offer a maximum furnace temperature of 1650°C	
	GLAZING FURNACE :	
	Microprocessor based programmable vacuum furnace for dental ceramics (Elevator model) should have	
	100 operating programs for all types of ceramics	
	Vacuum range from 60 to 100 mbar	
	Automatic parameter control	
	Operating voltage 220V / 50 Hz	
	Power consumption with vacuum pump : 1700 W, Without vacuum pump : 1500 W	
	Vacuum pump data :	

	Suction capacity upto 22 L/min	
	Vacuum from 0.9-0.94 bar	
	Weight with vacuum pump : 35 kg	
	INTRA ORAL 3D SCANNER	
	1. It should be able to provide Precise, accurate HD 3D real color scanning. The image should be with vivid color and details that offer visually appealing images that improve and simplify case review, analysis and communication between doctors, referrals and labs.	
	2. Scanner should not require powder or liquid for scanning high reflecting surfaces.	
	3. The scanner should not weigh more than 400 Grams.	
	4. The scanner should be handheld 3D scanner with Ultrafast Optical Sectioning. It should maintain full scan speed during full arch scan.	
	5. The scanner should be capable of measuring shades of teeth and adding HD photos to the 3D model.	
	6. The model should have integration with practice management system.	
	7. The software should have instant scan preparation validation tools.	
	8. Unit should be able to capture patient's accurate and detailed intra-oral data in digital form critical for dental diagnosis, treatment planning, record keeping and model/appliance fabrication.	
	9. It should be able to measure the shade of the tooth accurately.	
	10. It should have accuracy up to 8 microns.	
	11. It should provide accurate data in open STL format for accurate model preparation using three dimensional printing or CAM.	
	12. Scan the operative and opposing quadrant or arch and take a bite scan with patient in any occlusion.	
	13. Unit should have anti-fogging heater that works actively without any interruption to scanning when working intra-orally.	
	14. It should have possibility of high-speed dual-arch scan in less than 5 minutes.	

	15. Scanner should have autoclavable non bulky tips to allow its use multiple times. One tip should be able to be used up to 200 times before disposing.	
	16. The user should have possibility to check or rotate the final scan model on display screen infinite times for heightened visibility of data captured before finalizing.	
	17. User should be able to jump to any position in the mouth at any point.	
	18. The scanning process to fill in uncaptured image, without a need to indicate an exact location to the system. Should be freely movable and user friendly.	
	19. Scanner should be capable of scanning implant cases with standard abutments as well as custom abutments with scanned bodies. Also should be compatible with open system implant planning and surgical guide software.	
	20. User should be able to identify margin lines, contact points, and undercuts before proceeding for sending files to CAD system.	
	21. The STL file can be accessed by lab for design and fabrication or can choose to design and mill chairside, restore implants or create orthodontic appliances through one of the broad array of trusted Connections. Or, export the STL files and share them with any open CAD/CAM system.	
	22. Unit should have facility to store patient data in hard disc/ computer and CD/DVD and also wirelessly upload patient data to cloud / any mail account to be accessed later on from any computer in the centre.	
	23. Complete operating manual and product literature to be supplied at the time of delivery of the equipment.	
	24. Availability of spares for– All time during warranty and AMC.	
	25. Manufacturer and Supplier should furnish a certificate stating that the equipment is original not a reconditioned one.	
	26. Training – On site during installation by an OEM trained instructor.	
	USFDA/EU CE(Issued by notified body) BIS approved model	
	3D Printer	

	1) Equipment should be able to perform following functions. Fabricate Dentures, Long Term temporary Crown and Bridges, Surgical Guides, Prosthetic Models, Orthodontic models, Denture Trials, Castable copings/bridges/RPDs, Ortho Indirect Bonding Trays, Splints, Night Guards, Customized Trays, Flexible Gingiva for Implant.	
	2) Equipment should have following features -	
	a) Resolution should be more than 1900 X 1000 pixels.	
	b) Wavelength of light in projector system should be more than 400 nm.	
	c) Pixel pitch should be lower than 75 microns.	
	3) The system should have compatible software to slice 3D files and to communicate with the 3D printer.	
	4) The software should be updated by the supplier from time to time for next 10 years.	
	5) The Software should be based on following features -	
	a) Windows Operating System 10 or compatible.	
	b) STL File input.	
	c) System is based on the CAM Features.	
	d) Software should come with compatible and customized material build style for different resins.	
	e) Software should have multiple safety features like verification of the file before printing.	
	f) Software should have the ability to automatically generate supports for the models.	
	6) 3D Printer should be able to fabricate the model with	
	a) Fine detail and smooth surface finishing with layer thickness of 50 microns.	
	b) Should be able to work with variety of 10 or more resins with variable rigidity, detail and color.	
	c) Should be able to paint and finish for presentation, demonstration and photo reproduction.	
	d) Functional parts produced within 60 minutes depending upon size and complexity of job.	

	7) System should have built styles with below details -	
	a) Normal build style in range of 0.03-0.05mm.	
	b) Quick Build style 0.05mm.	
	c) Precision build style 0.05mm.	
	8) There should be a system for automated mixing of resin before pouring to have optimum consistency for precise printing. Mixing unit should be able to mix 2 or more bottles at a time.	
	9) Tank capacity should be in range of 0.4 to 0.75 liters.	
	10) Build volume of tray should have measurements less than 130X 75X 200 mm.	
	11) Complete system should be able to function precisely with different materials without deviation and should not require calibration.	
	12) It should have alcohol ultrasonic bath in work flow for cleaning of printed parts.	
	13) Printer should have easy to change resin tank and print platform.	
	14) The system should have safety features such as automatic abort if print chamber is opened during printing to protect from harmful UV exposure.	
	15) System should work and fabricate models accurately, repeatedly with unmatched productivity with range of 10 or more resins.	
	16) There must be a dedicated system for uniform UV curing for the post-processing of printed parts. UV Curing System should have 10 or more UV bulbs (more than 12 Watts) for complete curing of models (6-8 nos). The system should have both UV-A and UV-B bulbs for proper surface and deep curing of the parts.	
	17) Materials which need to be used in the mouth must be certified biocompatible.	
	18) 3D Printer should have non-contact membrane based printing requiring no peel process.	
	19) 3D printer, software, resin mixing system and post UV curing system in the complete work flow should be from same OEM.	
	20) 20lt of biocompatible USFDA approved Resin and 20lt non-biocompatible USFDA approved Resin should be provided.	
	Compressor & UPS	

	Suitable medical grade compressor with radiator, cooling fan, dryer and silicone column filter should be supply.	
	Suitable UPS with minimum 30 minutes back up for all machines including Sintering Machine.	
	Consumables	
	5 set of DC tools	
	50 Zirconia blanks.	
	Certification	
	USFDA/EU CE(Issued by notified body) BIS approved model	
Phantom Lab Unit	Phantom Table fitted with Phantom Head with light and Air rotor and micro motor, with contra angle Handpiece attachment, 3-way syringe with suction or drainage system, operator's stool	60
	PRE-CLINICAL UNIT	
	Phantom Head Table with Two working place.	
	Top complete Stainless Steel, inbuilt drawer to	
	keep the materials	
	Halogen Operating Light, with Multi surface Glass	
	Reflector having two Intensity .	
	Modular fitted with	
	• Airotor Control Box fitted with Transparent	
	Water Tank, Tubing with Nut Fittings for Airotor	
	with Tubing and Foot Control	
	Supreme Micromotor with 35,000 rpm 1 No ,	
	Three Way Syringe 1 No	
	<ul style="list-style-type: none"> Phantom head with mankin body & pneumatic piston for tilting movement, phantom head with ball and socket , neck joint for all the movement of neck, TMJ movement, even provision to fix TMJ in open position. Heavy Duty –Phantom head with the excellent quality face mask , total closed oral cavity, drain nipple for drain of water. 	

	working stool for the operator moving on five wheels with pneumatic piston for height adjustment, seat and backrest thickly cushioned covered with rexine	
	CLINICAL LABORATORY	
Plaster dispenser	One each for plaster and stone plaster	2
	• High Frequency Dispenser.	
	• High quality rubber bucket for storing Plaster.	
	• Dispenses plaster in total powder form.	
	• Bottom lever starts and stops flow of plaster instantly.	
Model trimmer Carbodium	• Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	1
disc	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Imported grinding wheel.	
	• Adjustable work table for accurate trimming.	
Model trimmer Diamond	• Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	1
disc	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Imported grinding wheel.	
	• Adjustable work table for accurate trimming.	
Lathe heavy duty	• Heavy duty, continuous rating, vibration-free, low noise lathe used for polishing and trimming.	2
	• Dual working sides.	
	• Supplied with drill chuck, buffing cone and grinding stone.	
	• Dust proof motor.	
	• 2800 rpm.	
Lab micromotor with heavy	Brushless Lab Micromotor With Hand Piece 50,000 RPM	3
duty hand piece	Contents: - Control Unit, heavy dutyMicromotor Handpiece, Foot Control And Handpiece Stand	

Ultrasonic cleaner 5 ltr	5 liters capacity	1
	High frequency and high intensity sound waves , less than 80 dB	
	• Versatile and timer controlled	
	• Portable	
	• Suitable for continuous operation	
	• Automatic initialization and easy to set by touch buttons	
	• Capacity of the tank : 4 to 6 Ltr	
Spindle grinder	This should be a Compact Alloy Grinder Offering high speed grinding and dependable trouble free operation.	1
	• Equipped with fully automatic spindle.	
	• Provided with suction, foot control and high intensity illumination.	
	• Safety glass for glare elimination and visual protection.	
	• 20,000 rpm.to 24000 rpm	
vibrator	• Works effectively for pouring bubble free models.	2
	• 3 Steps of Vibration- Low, Medium and High.	
	• Non sticky superior rubber, easy to remove and clean.	
	• Ideal for Institutions, Dental Laboratories and clinics.	
Burn out furnace	Electronic control with microprocessor, the furnace manages 7 programmes with 4 phases per programme. The following can be set for each phase: temperature, raising speed and holding time. An ignition delay upto 100 hours can also be set. The furnace comes in 3 versions: small S, medium M and large L. The furnace ZEUS comes with a monobloc ceramic muffle with an external wrapped around resistance. This enables the temperature to be homogeneous in all its 4 sides: upper, lower and laterals. The fumes follow a natural circulation and come out from a rear chimney. To improve the exit of the fumes a chimney, which is supplied as an accessory, can be installed. Such installation is extremely simple and can be done by the operator.	1

	The oven features a safety micro-switch, which stops the resistance in case the chamber is opened. The oven is airtight with environmental materials in compliance with the requirements. Another useful accessory is the dewaxing plate which we also advise to buy, in fact it prevents the liquid wax from being absorbed by the muffle, keeping it free from abrasions and deteriorations which can damage it.	
	TECHNICAL FEATURES:-	
	Feeding : 220-240V	
	Overall dimensions : 32x40x50 cm +_10%	
	Chamber dimensions : 16x16x10 cm+_10%	
	Max. Temperature : 1100°C	
	Weight : 28 Kg+_10%	
Porcelain furnace	Automatic programmable vacuum furnace for dental and ceramic, designed for all types of dental ceramics, completely processor controlled, 14 programs, in every program name, idle temp, dry temp, pre drying temp, dry timing, firing timing, first cooling, second cooling, vacuum controlled, with self diagnostic and auto calibration. an option for automatic continuation of program after power break down. an option for program transfer on USB. an option of remote analysis of damage.	1
sand blasting machine	With two containers	1
	<ul style="list-style-type: none"> • The double jar sand blaster offers excellent results which until was achieved only by very expensive devices. 	
	<ul style="list-style-type: none"> • USED for roughing and polishing of metals, ceramic and acrylic materials. 	
	<ul style="list-style-type: none"> • Technical Characteristics; 	
	<ul style="list-style-type: none"> • Excellent ergonomics 	
	<ul style="list-style-type: none"> • Alluminium oxides from 50 microns to 250 microns can be used 	
	<ul style="list-style-type: none"> • Inner air gun 	
	<ul style="list-style-type: none"> • Highly durable, long lasting blasting tips of 2 sizes provides precision sand blasting. 	
	<ul style="list-style-type: none"> • Chamber selection by directional mechanical valve 	

	<ul style="list-style-type: none"> • Glass protection with interchangeable plastic film 	
	<ul style="list-style-type: none"> • Electric Components according to international regulations 	
	<ul style="list-style-type: none"> • Pneumatic foot control 	
Lab airotors	Lab Airotor with NSK/W&H/KAVO St Handpiece • Sleek and weightless NSK/W&H/KAVO straight handpiece (collect 01.6 mm) <ul style="list-style-type: none"> • must for precision carving of metals and ceramic. • High quality compressed air control. • Filter, lubricator regulator unit built in circuit. 	1
Pindex system	pindex system or Laser pinsetter has been designed for the most efficient and ergonomic approach to pin drilling, for easy die pin placement.	1
	<ul style="list-style-type: none"> • Combines “State of the art” laser light technology with an easy to use design. 	
	<ul style="list-style-type: none"> • The carbide bur provides effective and smooth drilling. 	
	<ul style="list-style-type: none"> • 15,000 rpm. 	
Circular saw	<ul style="list-style-type: none"> • This high speed circular saw is supplied with a diamond disc for precision slitting through models that can be held firmly on the electro magnetic model holder. 	1
	<ul style="list-style-type: none"> • Provided with a funnel for aspiration and provision for attaching suction unit. 	
	<ul style="list-style-type: none"> • High intensity illuminations for clear view of the working model. 	
	<ul style="list-style-type: none"> • Dual control switch for safety while working. 	
	<ul style="list-style-type: none"> • Diamond blade; 080mm and thickness 0.26 mm. 	
Vacuum mixer	Small and powerful. They should be suitable for mixing in AIR ABSENCE any kind of plaster, coating and silicone. They should be equipped with a low-noise motor reducer, a dry running vacuum pump and an electronic timer of proven reliability. voltage 220 Volt, 400 rpm/0,8 bar equipped with a 500 cc cup and table support.	1
Pneumatic chisel	PNEUMATIC CHISEL WITH CONTROL	1
	<ul style="list-style-type: none"> • Robust, high performance chisel operated by compressed air for universal use in the laboratory. High frequency chisel to deflask dentures and disinvest casting. Avoid, micro cracks formed by unconventional 	

	methods of plaster removal. High quality compressed air control. Filter, lubricator regulator unit built in circuit. Chisel tips – 3 Nos.	
Casting machine (induction)	Induction Casting Machine –	1
	Machine for centrifugal casting with inductive high frequency metal melting.	
	<ul style="list-style-type: none"> • Design for Casting Co-Cr-Mo, Ni-Cr-Mo and precious alloys used in dentistry. 	
	<ul style="list-style-type: none"> • An autonomous water cooling. 	
	Technical data:	
	<ul style="list-style-type: none"> • Power Supply : 220V/ 50Hz 	
	<ul style="list-style-type: none"> • Maximum power consumption : 3kW 	
	<ul style="list-style-type: none"> • Minimum alloy quantity in the crucible : 7g 	
	<ul style="list-style-type: none"> • Maximum alloy quantity in the crucible : 80g 	
	<ul style="list-style-type: none"> • Crucible material : Ceramics 	
	<ul style="list-style-type: none"> • Crucible material When casting precious alloys : Ceramics with graphic insertion 	
	<ul style="list-style-type: none"> • Maximum time for full melting 	
	of 30g alloy : 60s	
	<ul style="list-style-type: none"> • Cooling : Water autonomous 	
	<ul style="list-style-type: none"> • HF Power rating adjustment when 	
	Melting Ni-Cr-Co alloys or precious alloys : Manual	
	<ul style="list-style-type: none"> • Motor acceleration adjustment : Manual 	
	<ul style="list-style-type: none"> • Casting : Manual. 	
	<ul style="list-style-type: none"> • Dimensions L/B/H : 620/660/1060 mm 	
	<ul style="list-style-type: none"> • Weight : 120 Kg 	

Ceramic unit	Automatic programmable vacuum furnace for dental and ceramic, designed for all types of dental ceramics, completely processor controlled, 14 programs, in every program name, idle temp, dry temp, pre drying temp, dry timing, firing timing, first cooling, second cooling, vacuum controlled, with self diagnostic and auto calibration. an option for automatic continuation of program after power break down. an option for program transfer on USB. an option of remote analysis of damage.	1
	DEPARTMENT OF ORAL PATHOLOGY AND ORAL MICROBIOLOGY	
Dental chair and unit	Dental chair mount unit	2
	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	
	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	
	It should have Ultrasonic Scaler with 5 scaling tips and one set of perio-curette tips.	
	should have the PU moulded / cushioned handle and right arm moveable for easy access for the patient	
	head rest should be articulated with height variation and with twin joint to adjust for required patient position, with pneumatic locking	
	Chair should achieve the lowest and maximum height required for the patient ingress and dentist's operation by electrically operated actuators	
	Assistant side control should have high vacuum and saliva ejector connected to motorised suction. With individual filter and with a minimum of 300 ltrs of aerosol displacement.	
	one three way syringe and one light cure unit with light guide with shield. With variable modes of intensity. Should have intensity of 1200 mw/cm ²	

	Dentist element or trolley should have five point with Two airtor points ,one micromotor with digital display of speed, one piezotronic scaler with 5 scaling tips. With torque wrench to remove tip. One three way syringe. And modular should be of hanging cords, and should be supplied with iopa x ray viewer, on stainless steel tray. and control should have the pressure guage, water volume regulator, air regulator. micromotor controller	
	foot control should be supplied to operate up and down and backrest to and frow movement. Switch for operating microtor and scaler and airtor.	
	Should supply with one airtor handpiece, one micromotor contrangle handpiece, and one straight handpiece of branded(kavo, NSK, Bien air, W & H)	
	ceramic replacable bowl /glass should be easy to remove and rotate	
	should be supplied with all the floor box and its fittings so that we can connect the chari to all the central connections.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanganging).	
	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	
	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	
	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/ manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	
	Base should solid metal with heavy casting.	

	It should have LED based X-ray viewer.	
	It should be provided with rotatable right arm rest (90 degree).	
	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	
	Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge.	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	
	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	
	The unit shall be capable of operating continuously in normal room temperature.	
	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
	Power supply	
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	
	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
slides	i. Model Should be US FDA / CE (Issue by Notified body) / BIS approved.	150
slides boxes	ii. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.	4
Microscopes	Binocular type	50
Mictotome	Microtome-Mannual type,Including all accessories for dental students.	1

Wax Bath	Service manual in English.	1
water Bath	Rust free,stainless steel,min size 18X18X10 inches(LXWXH) minimum	1
Knife sharpner	Certificate of calibration and inspection from factory.	1
Hot plate	Electrcal,V-220+-20 V,AC,size 18X18X10 inches(LXWXH) minimum	1
Spencer Knife	The job description of the hospital technician and company service engineer should be clearly spelt out.	1
Adequate slides projecting system	Slides projecting system for Dental students,Certification-US FDA/EU CE/BIS	1
	Department of oral & Maxillofacial surgery	
Dental chair and unit	Fully Electrical Dental chair unit -Adult	25
	Dental chair mount unit	
	Body contoured electrically operated pantographic dental chair	
	seat, back rest and head rest are thickly cushioned and covered with seamless rexine.	
	Dental operating light with Led should give 30000 lux , on, off, and intensity control by non touch sensor	
	Ceromic or glass spittoon with auto water connection for spittoon and tumbler by switch, the spittoon should be moveable towards patientto be used during gorgle position	
	should have the pu moulded / cushioned handle and right arm moveable for easy access for the patient	
	head rest should be articulated with height variation and with twin joint to adjust for required patient position,with penumatic locking	
	Chair should achive the lowest and maximum height required for the patient ingress and dentists operation by Electrically operated actuators	
	Assistant side control should have high vacuum and saliva ejector connected to motorised suction. With individual filter and with a minimum of 300 ltrs of aerosol displacement.	
	one three way syringe and one light cure unit with light guide with shield. With variable modes of intensity . Should have intensity of1200 mwcm2	

	Dentist element or trolley should have five point with Two airtor points ,one micromotor with digital display of speed, one piezotronic scaler with 5 scaling tips. With torque wrench to remove tip. One three way syringe. And modular should be of hanging cords, and should be supplied with iopa x ray viewer, on stainless steel tray. and control should have the pressure guage, water volume regulator, air regulator. micromotor controller	
	foot control should be supplied to operate up and down and backrest to and frow movement. Switch for operating microtor and scaler and airtor.	
	Should supply with one airtor handpiece, one micromotor contrangle handpiece, and one straight handpiece of branded(kavo, NSK, Bien air, W & H)	
	ceramic replacable bowl /glass should be easy to remove and rotate	
	should be supplied with all the floor box and its fittings so that we can connect the chari to all the central connections.	
	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	
	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	
	It should have Ultrasonic Scaler with 5 scaleing tips and one set of perio-curette tips.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanganging).	
	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	
	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	

	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/ manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	
	Base should solid metal with heavy casting.	
	It should have LED based X-ray viewer.	
	It should be provided with rotatable right arm rest (90 degree).	
	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	
	Three (3) Chairs should have-Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge. In Rest Chairs individual compressor is not required, it should have facilit	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	
	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	
	The unit shall be capable of operating continuously in normal room temperature.	
	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
Autoclaves	Power supply	4
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	

	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
	Sterilizer chamber (diameter x depth) - 245mmx465mm +_10%	
	ii. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.	
	Documentation:	
	i. User manual in English.	
	ii.The storage tank volume -not less than 3.0 L	
	iii. List of important spare parts and accessories with their part number and costing available in stock with the supplier.	
	iv. Certificate of calibration and inspection from factory.	
	v. Log book with instruction for daily, weekly, Monthly and quarterly maintenance checklist.	
	vi. The job description of the hospital technician and company service engineer should be clearly spelt out.	
	vii. List of Equipment available for providing calibration and routine preventive Maintenance support as per manufacturer documentation in service/ technical Manual.	
	Handle tongs - 1PC	
	1.5m water-outlet pipe -1PC	
	Water outlet connector - 2PCS	
	Measuring cup - 1PC	
	Sealing ring - 1PC	
	Power cable - PC	
Ultrasonic cleaner	13 litres	2
	Ultrasonic Cleaner , Premium quality cleaner for cleaning surgical instruments before autoclaving should have lid and cage to keep the instruments, on.off switch and should have the capacity of minimum 13 ltrs	
Needle burner and syringe cutter	Needle destroyer should have needle burner and motorised syringe cutter with debri collector	8

	Main Input Supply (V, Hz, A) : 230 ± 10%, 50 ± 3% Hz, AC/5 A fuse.	
	Body Material : stainless steel or ms powder coated	
	Power consumption of continuous rating, W in use : 100 W.	
	Type of Electrodes used : Copper Electrode – Nickel plated.	
	Destruction Rate, Seconds / Needle : 25 Second / Needle.	
	Thickness & Length of Needle : Recommended : MAX . 1.6 mm Dia, 80 mm Length.	
	Burning Temperature, deg. C: 1600 C.	
	Grade of Steel & Guaranteed Life of Cutting Blade (Approximate No. of Syringes and needle it can destroy): SS Grade is SS 316 L.	
	Tray capacity No. of Syringes & Needles: 100 pcs.	
	Safety features provided : Glass Cartilage Fuse.	
	motorised syringe cutter: with wheel	
Extraction forceps set	Extraction forcep set : upper anteriors, upper premolars, upper molar right, upper molars left, upper roots, upper third molar ,upper molar right (cowhorn),upper molar left (cowhorn)lower premolars, lower molars, lower roots lower molar (cowhorn extraction forcep for pedo set of 6	20
Dental elevators	Root elevator set - pouch:Flohr, flohr right, flohr left, cryer right,cryer left london hospital, coupland, winter cryer right, winter cryer left	10
Minor Oral surgery kit	Minor Oral Surgery Instruments Set (Adson forcep,needle holder,Curved Scissor (small),Suture cutting Scissor,Artery forcep(small & medium),Sinus Forcep(medium)-Allis Forcep(medium) With Cassette	6
Emergency drug tray	emergency drug tray with partitions(not less than 10) to keep the drugs	2
X ray viewers	LED type,single view	2
Pulse oxymeter	battery operated to give pulse and oxygen level,hand hold ,finger tip	2
BP Aparatus	Digital,movable,trolley	2
Stethoscope	NC	2
Thermometer	Digital type	2
Glucometer	with 100 strips	1

Oxygen cylinder	B type,trolley mounted,ready to use(Regulator,Humidifier bottle etc)	2
Oxygen mask adult		2
Oxygen mask pedo		2
Impaction kit	Impaction Kit S/22 PCS with Pouch	3
Lab micro motor with hand piece	Brushless Lab Micromotor With Hand Piece 50,000 RPM	3
	Contents: - Control Unit, heavy dutyMicromotor Handpiece, Foot Control And Handpiece Stand	
Trauma kit	<ul style="list-style-type: none"> • Trauma Kit includes -1. MODELLING LEVER 2. PLIER ,3. BONE CUTTING FORCEP SINGLE ACTION 4. ZYGOMATIC BONE AWL, 5. ORDINARY SCREW DRIVER 1.5 mm, 6. ORDINARY SCREW DRIVER 2.0 mm, 7. ORDINARY SCREW DRIVER 2.5 mm, 8. SELF HOLDING SCREW DRIVER 1.5 mm, 9. SELF HOLDING SCREW DRIVER 2.0 mm, 10. SELF HOLDING SCREW DRIVER 2.5 mm 11. WIRE TWISTER , 12. BONE HOLDING FORCEP POINTED # BHP # 1PC 	1
High volume Suction	High volume Suction-not less than 250 lit/min	2
surgical straight handpiece	Brushless micromotor ,not less than 30000 RPM	4
	MINOR SURGERY	
Dental chairs and unit		5
	Dental chair mount unit	
	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	
	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	
	It should have Ultrasonic Scaler with 5 scaling tips and one set of perio-curette tips.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanging).	

	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	
	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	
	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/ manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	
	Base should solid metal with heavy casting.	
	It should have LED based X-ray viewer.	
	It should be provided with rotatable right arm rest (90 degree).	
	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	
	One (1) Chair should have-Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge. In Rest Chairs individual compressor is not required, it should have facility to connect with Central Air Compressor plant.	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	

	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	
	The unit shall be capable of operating continuously in normal room temperature.	
	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
	Power supply	
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	
	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
	i. Model Should be US FDA / CE (Issue by Notified body) / BIS approved.	
	ii. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.	
	Documentation:	
	i. User manual in English.	
	ii. Service manual in English.	
	iii. List of important spare parts and accessories with their part number and costing available in stock with the supplier.	
	iv. Certificate of calibration and inspection from factory.	
	v. Log book with instruction for daily, weekly, Monthly and quarterly maintenance checklist.	
	vi. The job description of the hospital technician and company service engineer should be clearly spelt out.	
	vii. List of Equipment available for providing calibration and routine preventive Maintenance support as per manufacturer documentation in service/ technical Manual.	
	DEPARTMENT OF PERIODONTOLOGY	
Dental chair and unit	Dental chair mount unit(25% should be air polisher)	34

	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	
	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	
	It should have Ultrasonic Scaler with 5 scaling tips and one set of perio-curette tips.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanging).	
	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	
	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	
	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	

	Base should solid metal with heavy casting.	
	It should have LED based X-ray viewer	
	It should be provided with rotatable right arm rest (90 degree).	
	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	
	Three (3) Chairs should have-Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge. In Rest Chairs individual compressor is not required, it should have facility to connect with Central Air Compressor plant.	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	
	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	
	The unit shall be capable of operating continuously in normal room temperature.	
	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
	Power supply	
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	
	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
	i. Model Should be US FDA / CE (Issue by Notified body) / BIS approved.	

	ii. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.	
	Documentation:	
	i. User manual in English.	
	ii. Service manual in English.	
	iii. List of important spare parts and accessories with their part number and costing available in stock with the supplier.	
	iv. Certificate of calibration and inspection from factory.	
	v. Log book with instruction for daily, weekly, Monthly and quarterly maintenance checklist.	
	vi. The job description of the hospital technician and company service engineer should be clearly spelt out.	
	vii. List of Equipment available for providing calibration and routine preventive Maintenance support as per manufacturer documentation in service/ technical Manual.	
surgical instruments set	Perio Surgical Instruments S/12 With Cassette.Should have sharp cutting edge.Certifications-USFDA/EU CE(issued by notified body) approved.	6
Autoclave	Hot and wet – class -B	3
	Should have container for distilled water, and exhaust condensed waste water	
	The chamber should be of minimum 20 to 23 ltrs	
	Technical Info :	
	Sterilizer chamber (diameter x depth) - 245mmx465mm +_10%	
	Power Supply - 220V/AC/50Hz	
	Sterilization temperature/Pressure : 121/1.0~1.3Bar / 134/2.1~2.3Ba	
	Fuse tube - T15A	
	The storage tank volume - not less than 3.0 L	
	Ambient pressure - +5°~ +40°	
	Instrument tray - 3 Pcs	
	Instrument rack -1PC	
	Operation manual -1PC	

	Handle tongs - 1PC	
	1.5m water-outlet pipe -1PC	
	Water outlet connector - 2PCS	
	Measuring cup - 1PC	
	Sealing ring - 1PC	
	Power cable - PC	
Ultrasonic cleaner	13 litres	2
	Ultrasonic Cleaner , Premium quality cleaner for cleaning surgical instruments before autoclaving should have lid and cage to keep the instruments, on.off switch and should have the capacity of minimum 13 ltrs	
Electro surgical cautery	Radio frequency cautery unit generating high frequencyalternating AC output.	1
	AC input power 225 W,Power consumption 150 W,HF out put power 200 W,Rated out put frequency3-4 M cycle	
	Intensity control - 6 settings,Unit wattage - 225 W,output wave form- alternating HF Sine wave.	
Needle burner with syringe cutter	Needle destroyer should have needle burner and motorised syringe cutter with debri collector	4
	Main Input Supply (V, Hz, A) : 230 ± 10%, 50 ± 3% Hz, AC/5 A fuse.	
	Body Material : stainless steel or ms powder coated	
	Power consumption of continuous rating, W in use : 100 W.	
	Type of Electrodes used : Copper Electrode – Nicket plated.	
	Destruction Rate, Seconds / Needle : 25 Second / Needle.	
	Thickness & Length of Needle : Recommended : MAX . 1.6 mm Dia, 80 mm Length.	
	Burning Temperature, deg. C: 1600 C.	
	Grade of Steel & Guaranteed Life of Cutting Blade (Approximate No. of Syringes and needle it can destroy): SS Grade is SS 316 L.	
	Tray capacity No. of Syringes & Needles: 100 pcs.	

	Safety features provided : Glass Cartilage Fuse.	
	motorised syringe cutter: with wheel	
Laser	LASER (SOFT TISSUE)	1
	Specifcation: Poratable type,Air cooling,battery back upNot less than 10 Watt,Hand piece : Surgical, Bleaching arch tip, Bio-stimulation (TMJ treatment),Certifications-US FDA/EU CE(issued by notified body) approved	
	General	
	*Dimensions : 5.7 in (W) x 4.4 in (H) x 6.5 in (L)	
	*Weight : 2kg or lesser	
	* Must be portable & password protected	
	* Must have a battery backup (Li-ion)	
	* Air cooling system for diode	
	* colour LCD display of minimum 3inch & micro touch panel Electrical	
	*Operating Voltage : 100V+-10% and 230V +-10%~ at 2A *Frequency : 50-60 Hz	
	*External Fuses : None	
	*Main Control : Power Switch	
	*On/Off Controls : Control Button,Emergency Stop	
	*Remote Interruption : Remote Interlock	
	* Saftey compliance : CE 0197 Laser	
	*Laser Classification : IV(4)	
	*Operating System : Microprocessor based Software	
	*Medium : InGaAsP *wavelength : 940+-10nm / 980+-10nm *Max Output Power : 10 Watts	
	*Power Accuracy : +-20% *Power Modes : Continues, single & Repeated pulse Modulation	
	*Hand piece : Surgical, Bleaching arch tip, Bio-stimulation (TMJ treatment)	
	*Pulse Duration : 0.01 ms -10 sec	
	*Pulse Interval : 0.01 ms - 10 sec	

	*Pulse Repetition rate : Up to 20KHz(fro reference)	
	Fiber Tip-200,300,400	
	Fiber connector	
	Eye protection goggles-03 no	
	*NOHD : 4.77 meters	
	*Beam Divergence : 8-22 degree per side angle *Standard Fiber Cable Length : 5 feet (1.524 meters)	
	*Feed-Through Fiber Cable Length : 8 feet (2.438 meters) Other Light Source	
	*Aiming Beam : Laser Diode, max 4mW, 650 nm+-10nm, Adjustable brightness	
Physio dispenser with Implant kit	Designed specially for oral surgery and Implant work,generating 210 watt power and 50 Ncm torque,speed range of 2000-40,000 range per minute.should be foot operated conforming to IPX8 standardsand should be certified for OT use.	1
	contrangle should be supplied with hand piece 20 :1 , irrigation tubc.	
X ray viewer (Extra Oral)	LED type,single	2
Hand scaler supra gingival	Should have sharp edges,Certification-US FDA/EU CE(issued by notified body) approved	10
Set of Curettes	Should have sharp edges,Certification-US FDA/EU CE(issued by notified body) approved	2
Periodontal surgery kit	Should have sharp edges,Certification-US FDA/EU CE(issued by notified body) approved	3
	DEPARTMENT OF ORTHODONTICS	
Dental chair and unit	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	18
	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	

	It should have Ultrasonic Scaler with 5 scaling tips and one set of perio-curette tips.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanging).	
	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	
	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	
	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	
	Base should solid metal with heavy casting.	
	It should have LED based X-ray viewer.	

	It should be provided with rotatable right arm rest (90 degree).	
	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	
	1. Two (2) Chairs should have-Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge. 2. In Rest Chairs individual compressor is not required, it should have facility to connect with Central Air Compressor plant.	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	
	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	
	The unit shall be capable of operating continuously in normal room temperature.	
	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
	Power supply	
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	
	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
	i. Model Should be US FDA / CE (Issue by Notified body) / BIS approved.	
	ii. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.	

	Documentation:	
	i. User manual in English.	
	ii. Service manual in English.	
	iii. List of important spare parts and accessories with their part number and costing available in stock with the supplier.	
	iv. Certificate of calibration and inspection from factory.	
	v. Log book with instruction for daily, weekly, Monthly and quarterly maintenance checklist.	
	vi. The job description of the hospital technician and company service engineer should be clearly spelt out.	
	vii. List of Equipment available for providing calibration and routine preventive Maintenance support as per manufacturer documentation in service/ technical Manual.	
Unit mount scaler	Main unit ith detachable hand piece ,Power out put 3W to 20 W , Frequency 28 KHz, Water supply pressure 0.01.Mpato 0.05MPa	5
Autoclave	Hot and wet – class -B	2
	Should have container for distilled water, and exhaust condensed waste water	
	The chamber should be of minimum 20 to 23 ltrs	
	Technical Info :	
	Sterilizer chamber (diameter x depth) - 245mmx465mm +_10%	
	Power Supply - 220V/AC/50Hz	
	Sterilization temperature/Pressure : 121/1.0~1.3Bar / 134/2.1~2.3Ba	
	Fuse tube - T15A	
	The storage tank volume - not less tha 3.0 L	
	Ambient pressure - +5°~ +40°	
	Instrument tray - 3 Pcs	

	Instrument rack -1PC	
	Operation manual -1PC	
	Handle tongs - 1PC	
	1.5m water-outlet pipe -1PC	
	Water outlet connector - 2PCS	
	Measuring cup - 1PC	
	Sealing ring - 1PC	
	Power cable - PC	
Ultrasonic cleaner	13 litres	2
	Ultrasonic Cleaner , Premium quality cleaner for cleaning surgical instruments before autoclaving should have lid and cage to keep the instruments, on.off switch and should have the capacity of minimum 13 ltrs	
	I Lab	
Plaster dispenser	One each for plaster and stone plaster	2
	• High Frequency Dispenser.	
	• High quality rubber bucket for storing Plaster.	
	• Dispenses plaster in total powder form.	
	• Bottom lever starts and stops flow of plaster instantly.	
Vibrator	• Works effectively for pouring bubble free models.	2
	• 3 Steps of Vibration- Low, Medium and High.	
	• Non sticky superior rubber, easy to remove and clean.	
	• Ideal for Institutions, Dental Laboratories and clinics.	
Model trimmer	• Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	2
	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Imported grinding wheel.	
	• Adjustable work table for accurate trimming.	

Micromotor Lab	Brushless Lab Micromotor With Hand Piece 50,000 RPM	4
Lathe	<ul style="list-style-type: none"> • Heavy duty, continuous rating, vibration-free, low noise lathe used for polishing and trimming. 	2
	<ul style="list-style-type: none"> • Dual working sides. 	
	<ul style="list-style-type: none"> • Supplied with drill chuck, buffing cone and grinding stone. 	
	<ul style="list-style-type: none"> • Dust proof motor. 	
	<ul style="list-style-type: none"> • 2800 rpm. 	
X Ray viewer	LED,Duoble View	2
Welders	Pulse Welder with Digital Timer Accuracy 0.01 to 1.0 Sec	4
	LED base five different welding temperature settings.	
	Both welding and soldering operation in one unit.	
	All switches on front panel for easy operation.	
	Perfectly matching electrodes in 4 different shapes	
Blue torch	Blow Torch	1
Base Formers	Lab Base Former Kit to be used to make diagnostic casts and it very easily separated from the stone models.	4
Typhodont	typodont with 32 teeth	4
Set of Plyers	NC	10
	Boon's Gauge, Band Pusher, Band Seater, Boley,10 each	
	Gauge, Height Gauge Wire Twister (15cm) (TC)-10 each	
	Wire Twister -10 nos	
	Boon's Gauge, Band Pusher, Band Seater, Boley,10 each	
Welder with soldering	Pulse Welder with Digital Timer Accuracy 0.01 to 1.0 Sec	1
attachments	LED base five different welding temperature settings.	
	Both welding and soldering operation in one unit.	
	All switches on front panel for easy operation.	
	Perfectly matching electrodes in 4 different shapes	

Hydro solder	Hydro Solder for dental soldering operations.	1
	Fine pointed blue flame.	
	Built-in non-return valve and flashback arrestor.	
	Seamless pressure tank.	
	Auto cutoff prevents excess gas generation.	
	Generates gas when needed minimum stored gas.	
	Flame size can be adjusted from the regulator on the torch.	
	Gas generation can be regulated by a power knob.	
	Easily available hypodermic needles can be used as tips for flame size adjustment.	
	Flashback arrestor and nonreturn value.	
	Flame size can e regulated from the torch gas regulator.	
	it should be Easy to maintain and use. Should supply the liquids required	
Typhodont articulator	Robust structure, assuring greater stability. Design that provides greater visibility	4
	Semi-adjustable / Arcon Type	
	Fixed Intercondylar distance at the average 110 mm	
	Condylar Guide set at the average of 30°	
	Bennet angle set at the average of 15°	
	Curved Condylar Guide	
	Built-in Magnetic Stabilization System for the Condylar Guide Movement	
	Pin to support the Upper Frame at the open position	
	Innovative Central Lock	
	1 Set :	
	Articulator - 1 no	
	Allen Screw - 1 no	
	Support Pin upper Frame - 1 no	
	Mounting Plate Knob - 1 no	

Pressure moulding machine	thermo forming machine with plates	1
soldering torch	soldering torch hand held	1
spot welder	• Pulse Welder with Digital Timer Accuracy 0.01 to 1.0 Sec	1
	Department of Paediatrics and Preventive Dentistry	
Dental chair and unit	Dental chair mount unit(40% are Paediatric Chairs out of 20 units_	20
	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	
	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	
	It should have Ultrasonic Scaler with 5 scaling tips and one set of perio-curette tips.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanging).	
	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	
	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	

	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/ manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	
	Base should solid metal with heavy casting.	
	It should have LED based X-ray viewer.	
	It should be provided with rotatable right arm rest (90 degree).	
	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	
	Two (2) Chairs should have-Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge. In Rest Chairs individual compressor is not required, it should have facility to connect with Central Air Compressor plant.	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	
	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	

	The unit shall be capable of operating continuously in normal room temperature.	
	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
	Power supply	
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	
	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
	i. Model Should be US FDA / CE (Issue by Notified body) / BIS approved.	
	ii. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.	
	Documentation:	
	i. User manual in English.	
	ii. Service manual in English.	
	iii. List of important spare parts and accessories with their part number and costing available in stock with the supplier.	
	iv. Certificate of calibration and inspection from factory.	
	v. Log book with instruction for daily, weekly, Monthly and quarterly maintenance checklist.	
	vi. The job description of the hospital technician and company service engineer should be clearly spelt out.	
	vii. List of Equipment available for providing calibration and routine preventive Maintenance support as per manufacturer documentation in service/ technical Manual.	
Autoclaves	Hot and wet – class -B	2
	Should have container for distilled water, and exhaust condensed waste water	
	The chamber should be of minimum 20 to 23 ltrs	
	Technical Info :	

	Sterilizer chamber (diameter x depth) - 245mmx465mm(23L) + _ 10%	
	Power Supply - 220V/AC/50Hz	
	Sterilization temperature/Pressure : 121/1.0~1.3Bar / 134/2.1~2.3Ba	
	Fuse tube - T15A	
	The storage tank volume - 3.5L+ _10%	
	Ambient pressure - +5°~ +40°	
	Instrument tray - 3 Pcs	
	Instrument rack -1PC	
	Operation manual -1PC	
	Handle tongs - 1PC	
	1.5m water-outlet pipe -1PC	
	Water outlet connector - 2PCS	
	Measuring cup - 1PC	
	Sealing ring - 1PC	
	Power cable - PC	
Ultra sonic cleaner	13 litres minimum	2
	Ultrasonic Cleaner , Premium quality cleaner for cleaning surgical instruments before autoclaving should have lid and cage to keep the instruments, on.off switch and should have the capacity of minimum 13 ltrs	
Needle burner with syringe cutter	Needle destroyer should have needle burner and motorised syringe cutter with debri collector	3
	Main Input Supply (V, Hz, A) : 230 ± 10%, 50 ± 3% Hz, AC/5 A fuse.	
	Body Material : stainless steel or ms powder coated	
	Power consumption of continuous rating, W in use : 100 W.	
	Type of Electrodes used : Copper Electrode – Nicket plated.	
	Destruction Rate, Seconds / Needle : 25 Second / Needle.	

	Thickness & Length of Needle : Recommended : MAX . 1.6 mm Dia, 80 mm Length.	
	Burning Temperature, deg. C: 1600 C.	
	Grade of Steel & Guaranteed Life of Cutting Blade (Approximate No. of Syringes and needle it can destroy): SS Grade is SS 316 L.	
	Tray capacity No. of Syringes & Needles: 100 pcs.	
	Safety features provided : Glass Cartilage Fuse.	
	motorised syringe cutter: with wheel	
Amalgammotor	The amalgam mixer is used for mixing and accurate portioning of mercury & silver tin powder until they have bonded, the time of mixing should be adjusted from 1 to 60 seconds, the unit should supply with capsule operating device.	1
Pulp tester digital	DIGITAL PULP TESTER high frequency tip detachable, digital display	1
Rubber Dam Kit for Pedo	Oracraft / API / Jaypee	5
Apex locator	High-precision root canal measurement generated by using Smart Logic	1
	Auto-detects the apex accurately in any conditions, dry or wet	
	A stylish and compact body consuming very small space	
	Three different alert sounds depending on the location of the file tip, ensuring precise procedures	
	A three-colour LCD panel with very low reflectivity, allowing clinicians to accurately and instantly monitor procedure progress	
	Energy saving and low operation cost	
	Control unit	
	Probe (1.8m)	
	File Clip (3 pcs.)	
	Lip Hook (3 pcs)	
	AAA Manganese Dry Batteries (3 pcs.)	
	Tester	

Endo Motor	Endo Micromotor with Torque Control And Auto Reverse	1
	Smart enough to memorise exact speed and torque settings for up to 9 Ni-Ti files. Its auto-reverse features 3 working modes – auto-reverse on, auto-stop, auto-reverse off. The motor reacts when load reaches the preset level of torque. With on-off switch, it offers flexibility of pedal-free operation (optional foot control unit available), while providing convenience of full portability with two-way power supply, either AC or battery driven.	
	Operative with AC Adapter	
	Auto Reverse Function, 9 programs	
	With Rechargeable Battery Back-up	
	Control unit	
	Adaptor - 1 no	
	Motor Cord & MP Handpiece	
	Motor stand	
	Spray nozzle - 1no	
Injectable Guttapurcha with condensation	Cord less obturator which Should have both cutter and filling instruments with battery operated	1
RVG	chip type APS CMOS	1
	pixel size 20Um	
	active area 20x30 mm	
	signal out put USB	
	Theoritical resolution 25lp/mm	
	imaging time 3-4 s	
	true line pair resolution as 14 lp/mm	
	With Computer,printer placed at Trolly	
Intra Oral camera	sony 1/4* CCD Providing high resolution 811X508 , auto focus operation 5mm to infinity,mini monitor on hand pieceto diagnose	1

	and freez image,hand piece having storage of 60 images	
Scaling instruments	Complete scaling instrument kit(approx 10-12 insturments)	10
Restorative Instruments	Complete scaling instrument kit(approx 12-15) insturments)	10
Extraction forceps pedo	Set of Extraction forceps pedo different size (7-10 nos)	10
Intra oral x ray	Dental X-Ray Unit 70 KV – DC X Ray	1
	1. Intra oral X-ray unit should be DC based. (7-10mA/65-70 KVa) with option for wall mount.	
	2. X-ray unit should be supplied with lead apron-01nos., thyroid collar-01nos.	
	3. Power input to be 220-240VAC, 50Hz fitted with Indian plug	
	4 Servo Voltage stabilizer of appropriate ratings for X-ray machine.	
	5. Dental X ray should be - USFDA (510 K)/ European CE (Issued by notified body) & AERB approved model should be offered.	
RCT Instrument kits	RCT Instrument kit-Protaper SX,S1,S2,F1,F2.F3(SET OF 6), Protaper DI,D2(SET OF 6) ,2% files	5
Automatic developer	Automatic x ray Developer : to be used for intra oral and perriapical films it should be suitable for all the intra orals films, temperature controlled heating. It should develop upto 8 films per five minutes	1
	Pedo Lab	
Plaster dispenser	One each for plaster and stone plaster	2
	• High Frequency Dispenser.	
	• High quality rubber bucket for storing Plaster.	
	• Dispenses plaster in total powder form.	
	• Bottom lever starts and stops flow of plaster instantly.	
Model trimmer with	• Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	1
Diamond disc	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Imported grinding wheel.	

	• Adjustable work table for accurate trimming.	
Model disc with	• Ergonomically designed most powerful, low noise, smooth running motor, 2,800 rpm.	1
Carbadoium disc	• Precision water flow control valve.	
	• Aluminum, non-rusting body.	
	• Imported grinding wheel.	
	• Adjustable work table for accurate trimming.	
Welder with soldering	Pulse Welder with Digital Timer Accuracy 0.01 to 1.0 Sec	1
attachmetn	LED base five different welding temperature settings.	
	Both welding and soldering operation in one unit.	
	All switches on front panel for easy operation.	
	Perfectly matching electrodes in 4 different shapes	
Vibrator	• Works effectively for pouring bubble free models.	2
	• 3 Steps of Vibration- Low, Medium and High.	
	• Non sticky superior rubber, easy to remove and clean.	
	• Ideal for Institutions, Dental Laboratories and clinics.	
Lab micromotor heavy duty with hand piece	Brushless Lab Micromotor With Hand Piece 50,000 RPM	3
Dental Lathe	• Heavy duty, continuous rating motor.	1
	• Well balanced bearing for smooth work.	
	•to be Supplied with different attachments.	
	• 1,400/2,800 rpm	
Steam Cleaner	• Steam generator built in compliance with international safety regulations.	1
	• A simple easy to operate steam cleaner with safety valve and high volume water holding tank with water level indicator.	
	• 3 – 4 bar constant pressure.	
	• Convenient foot control.	
	• Handy gun with flexible hose.	

Pressure moulding Machine	thermo forming machine with plates	1
	Department of oral Medicine and Radiology	
Dental chair and unit	Dental chair mount unit	12
	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	
	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	
	It should have Ultrasonic Scaler with 5 scaling tips and one set of perio-curette tips.	
	should have the pu moulded / cushioned handle and right arm moveable for easy access for the patient	
	head rest should be articulated with height variation and with twin joint to adjust for required patient position, with pneumatic locking	
	Chair should achieve the lowest and maximum height required for the patient ingress and dentists operation by Electrically operated actuators	
	Assistant side control should have high vacuum and saliva ejector connected to motorised suction. With individual filter and with a minimum of 300 ltrs of aerosol displacement.	
	one three way syringe and one light cure unit with light guide with shield. With variable modes of intensity . Should have intensity of 1200 mw/cm ²	
	Dentist element or trolley should have five point with Two airtor points , one micromotor with digital display of speed, one piezotronic scaler with 5 scaling tips . With torque wrench to remove tip. One three way syringe. And modular should be of hanging cords, and should be supplied with iopa x ray viewer, on stainless steel tray. and control should have the pressure gauge, water volume regulator, air regulator. micromotor controller	

	foot control should be supplied to operate up and down and backrest to and from movement. Switch for operating microtor and scaler and airtor.	
	Should supply with one airtor handpiece, one micromotor contrangle handpiece, and one straight handpiece of branded(kavo, NSK, Bien air, W & H)	
	ceramic replacable bowl /glass should be easy to remove and rotate ,	
	should be supplied with all the floor box and its fittings so that we can connect the chari to all the central connections.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanganging).	
	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	
	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	
	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/ manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	
	Base should solid metal with heavy casting.	
	It should have LED based X-ray viewer.	
	It should be provided with rotatable right arm rest (90 degree).	
	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	

	<p>One (1) Chair should have-Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge.</p> <p>In Rest Chairs individual compressor is not required, it should have facility to connect with Central Air Compressor plant.</p>	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	
	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	
	The unit shall be capable of operating continuously in normal room temperature.	
	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
	Power supply	
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	
	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
Panoramic X Ray with Cephalometry AERB certified		1
	OPG X-Ray Machine should be AERB (Atomic Energy Regulatory Board) Certified	
	Should available as floor standing with wall anchoring	
	Should centralized control system	

	Should be easy and fast patient positioning with three positioning laser light	
	Should have DEC Dynamic Digital Exposure	
	Should constant potential micro- processor controlled resonance made X-Ray generator	
	Should have very high operating frequency	
	Should have exposures parameters range optimized for digital imaging 2-7 mA/60-80 KV	
	Should automatic cooling control	
	Should have using user friendly graphical user interface on a computer and from the console on the machine itself	
	The software must be user friendly. All the parameters like KV, mA should be selectable	
	Exposure time should be in between around 2 to 14 secs. Depending upon the patient's	
	type and programmer selection	
	Should have various positioning accessories like standard bite block edentulous hie blocks. Panoramic chin rest. TMJ Nose rest sinus chin rest	
	Should have DICOM compatible unit	
	Should have Universal power input including power factor corrector, mains voltage fluctuations automatically compensated, Should have automatic primary collimator. Should have optimized image geometry and constant magnification	
	Sensor should have high resolution CMOS sensors with protective optical fibre layer for protection and longevity of the sensor and have small and adjustable panel size, Ethernet connection to computer sensor should have low radiation dose & also attached cephalomarty and extra oral radiograph	
	Radiology examination to be possible as-	
	-Full Panoramic Adult and child.	
	-Segmented panoramic.	
	-Lateral TMJ -2 views	

	-Lateral TMJ-4 views	
	-Maxillary sinus.	
	Desirable Features:	
	Should have advanced programme like orthogonal panoramic, double lateral PATMJ, Lateral 3 angles TMJ, Left & right, Lateral Sinus programmer	
	Should have wide range of image processing and enhancement tools	
	Should have fast data link of image transfer	
	Physical space requirement:	
	Width: Atleast between 50-60 in (around 1500 mm) Depth: Atleast between 50-70 in (around 1950 mm) Height: Atleast between 70-95 in (around 2500 mm)	
	Technical Specification:	
	Generator From 40 Khz to 100KHz or above.	
	Focal spot size: 0.5 mm as per IEC standards.	
	Anode Voltage: 60-90 KV in 1-2 KV steps	
	Anode current: 2-15mA	
	Exposure compensation: Automatic Exposure control	
	Total filtration min: Equivalent to 2.5mm A/1 or more	
	Magnification of panoramic exposure: 1.22 - 1.29	
	Duty Cycle: 1:2 at full power operation	
	Exposure time: 2-14 sec.	
	Weight: Light weight upto 115kg.	
	Active Area CMOS sensor; 145-IS0x 5-7mm (Standard	
	PAN)	
	US FDA / European CE /BIS Approved model should be offered	

	Suitable online UPS with commensurate capacity for Enter unit (OPG, Computer & Laser printer) with maintenance free batteries for minimum one-hour back- up should be supplied	
	PC Requirement:	
	Computer be intel dual or core 2 due processor with 1 TB Hard Disk. Graphic card 8GB RAM with operating system of Window XP or Window 7 multimedia with drives or DVD ROM +writer	
	UPS requirement for supporting above system should have 3 KVA online	
	Printer: DICOM/ Dipro printer should be provided	
Intra Oral x ray unit AERB certified		3
	1. Intra oral X-ray unit should be DC based. (7-10mA/65-70 KVa) with option for wall mount.	
	2. X-ray unit should be supplied with lead apron-01nos., thyroid collar-01nos.	
	3. Power input to be 220-240VAC, 50Hz fitted with Indian plug	
	4 Servo Voltage stabilizer of appropriate ratings for X-ray machine.	
	5. Dental X ray should be - USFDA (510 K)/ European CE (Issued by notified body) & AERB approved model should be offered.	
Pulp tester digital	DIGITAL PULP TESTER high frequency tip detachable, Battery operated,digital display,multiple tooth attachment minimum 03 nos.,	3
Auto matic periapical	Automatic x ray Developer : to be used for intra oral and perriapical films it should be suitable for all the intra orals films(size no 0,1,2,3, & 4) temperature controlled heating. It should develop upto 8 films per five minutes	1
x ray developer	Mannual developing-All sizes tank(not less 8.0 lit) including master tank with chemicals 1 time use.	
X Ray viewer for pan / Ceph	LED type ,single film	2
RVG	chip type APS CMOS	1

	pixel size 20Um	
	active area 20x30 mm	
	signal out put USB	
	Theoritical resolution 25lp/mm	
	imaging time 3-4 s	
	true line pair resolution as 14 lp/mm	
	with computer,printer on trolley.	
Intera oral camera	sony 1/4* CCD Providing high resolution 811X508 , auto focus operation 5mm to infinity,mini monitor on hand pieceto diagnose	1
	and freez image,hand piece having storage of 60 images	
Gen X Ray Unit	General X Ray Unit(Floor mounted)	
	X-Ray Generator:	1
	A. High frequency X-Ray generator	
	B. Inverter frequency – 20 KHz or more	
	C. Output power 30KW or more.	
	D. KV Range – 40 to 125KVp	
	E. mA range- upto 300 mA or more	
	F. 3300mA @ 80 KV or better	
	G. mAs range – 2 to 200 mAs or more	
	X-Ray tube:	
	A. Rotating anode	
	B. Focal spot :- small - 1.2 x 1.2 mm & Large - 2 x 2 mm	
	C. One pair of High tension cable (at least 8 meters)	
	D. collimator with full field illumination and angle indicator	

	Table:	
	A. The table should be horizontal floating type.	
	B. Bucky table with floating table top with immense flexibility and ease in positioning.	
	C. Table top positioning with release of electromagnetic brakes controlled with a foot operated lever.	
	D. Table Height – 75 cm ($\pm 5\%$)	
	E. Table top – 218 x 80 cm ($\pm 10\%$)	
	F. Table top should be made up of low radiation absorption, water proof material, stain free	
	G. Longitudinal Travel: ± 40 cm ($\pm 2\%$)	
	H. Transverse Travel : ± 12.5 cm ($\pm 2\%$)	
	I. Electromagnetic locking of the table movement	
	Motorized Bucky:	
	A. Grid 10:1, 60 lines / cm, focused at 115 cm	
	B. 65 cm travel; movement arrested by electromagnetic brakes	
	C. Suitable for cassettes in cm and inch formats and should be capable to accommodate 14"x17"	
	X-Ray Ceiling column	
	A. Travel range: 195 cm ($\pm 10\%$); movement arrested with electromagnetic brakes	
	B. Vertical travel: 135 cm ($\pm 10\%$); movement arrested with electromagnetic brakes	
	C. Column rotation: 360°; from + 180° to -180° in 90° increments	
	D. X-ray tube rotation: $\pm 180^\circ$; locks at 0° / +90° / -90°	
	STANDARD ACCESSORIES	
	A. Three-fold X-ray protection barrier – 1no.	
	B. Lead apron 0.5mm lead equivalence with thyroid guard – 2 no.	

	C. Radiography cassettes with high speed screen (reputed make)-pl mention make, seprate for each cassette to be mentioned ,14 x 17 – 3 nos, 12x10 – 3 nos, 10x8 – 3 nos.	
	D. Should be supplied with chest stand and cone for skull x-rays.	
	POWER SUPPLY REQUIREMENTS	
	A. 380 to 440Vac, Three phase, 50/60 Hz.	
	SPECIFICATION OF LEAD APRON.	
	A. Should be AERB approved.	
	B. Should be light weight 0.5mm lead equivalent.	
	C. Should be hook and loop type (Velcro).	
	D. Should be supplied along with thyroid guard.	
	SPECIFICATION FOR THREE-FOLD LEAD PROTECTIVE BARRIER.	
	A. Should be a threefold mobile lead protective barrier.	
	B. Should be a mounted on heavy duty casters.	
	C. Should have a viewing window of 1.5 mm thick lead equivalence.	
	D. The centre part should have 3 feet width and 6 feet height. The sides should be 1.5 feet width and 6 feet height	
	US FDA / European CE /BIS & AERB Approved model should be offered.	
	Supplier is responsible to comply AERB guideline for installation. Lead of Patient entry door, Exposure Lamp & Radiation sinage is responsibility of supplier	
	QA test of the machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, cost is added in CMC cost of the machine.	
Auto matic Developer	Automatic x ray Developer : to be used for extra oral(Skul)films(8X10,10X12,5X7 & 6X12 inches), temperature controlled heating. Cassettes to be provided-one piece (each) for sizes-8X10 Inch,10X12 Inch,5X7 inch & 6X12 inch with films of 1 packet each.	1
Lead Apron	X Ray Lead Apron 0.5 mm Lead Equivalency	2
Lead Gloves	X Ray Lead Gloves, Lead Equivalency 0.35mm,	2

Lead Collor	Thyroid Shield (Pb Equivalency 0.35mm)	2
X Hanger		6
Diagnostic Kit	Diagnostic Kit-40 nos,High quality stainless steel-mounth mirror,mouth mirror probe,curve tweezer,explorer,kidney tray	65
Lead screen	moving on four wheel, lead screen with leaded glass window-not less than 10x10 inch, 3feet x 6 feet, lead shield should be sandwitched all over the sheild not less than 1.5 mm lead equilance	1
Biopsy kit	Stainless steel 3mm,5mm,10 mm punch biopsy,BP Handle,Scissor Straight,Scissor Curve,small needle holder,artery forcep,tooth head forcep	3
Autoclave	Hot and wet – class -B	2
	Should have container for distilled water, and exhaust condensed waste water	
	The chamber should be of minimum 20 to 23 ltrs	
	Technical Info :	
	Sterilizer chamber (diameter x depth) - 245mmx465mm +_10%	
	Power Supply - 220V/AC/50Hz	
	Sterilization temperature/Pressure : 121/1.0~1.3Bar / 134/2.1~2.3Ba	
	Fuse tube - T15A	
	The storage tank volume - not less than 3.0 L	
	Ambient pressure - +5°~ +40°	
	Instrument tray - 3 Pcs	
	Instrument rack -1PC	
	Operation manual -1PC	
	Handle tongs - 1PC	
	1.5m water-outlet pipe -1PC	
	Water outlet connector - 2PCS	
	Measuring cup - 1PC	
	Sealing ring - 1PC	
	Power cable - PC	

Needle burner with	Needle destroyer should have needle burner and motorised syringe cutter with debri collector	2
syringe cutter	Main Input Supply (V, Hz, A) : 230 ± 10%, 50 ± 3% Hz, AC/5 A fuse.	
	Body Material : stainless steel or ms powder coated	
	Power consumption of continuous rating, W in use : 100 W.	
	Type of Electrodes used : Copper Electrode – Nicket plated.	
	Destruction Rate, Seconds / Needle : 25 Second / Needle.	
	Thickness & Length of Needle : Recommended : MAX . 1.6 mm Dia, 80 mm Length.	
	Burning Temperature, deg. C: 1600 C.	
	Grade of Steel & Guaranteed Life of Cutting Blade (Approximate No. of Syringes and needle it can destroy): SS Grade is SS 316 L.	
	Tray capacity No. of Syringes & Needles: 100 pcs.	
	Safety features provided : Glass Cartilage Fuse.	
	motorised syringe cutter: with wheel	
CBCT AERB Approved	Optional	1
	Name Of Equipment: Cone Beam CT	
	Expected function of the Equipment: Cone-beam computed tomography is required for acquiring high-definition 3D volumetric imaging in axial, sagittal and coronal planes along with 2D imaging as an aid in diagnosis and treatment planning with life size images, precision and accuracy.	
	General Specifications	
	The CBCT machine should have cone beam technology.	
	It should have Laser guide user inter face for operation controls on machine or on monitor.	
	High System reliability and conveniences for maintenance.	
	Should allow for obtaining image while standing, sitting and wheelchair accessible patient position.	
	Noise free vertical movement — up/down movement, smooth and easy height adjustment, minimum vibration and noise.	

	Unit Should have facility for automatic and manual selection of radiological exposure parameters as per patient requirement and should have emergency stop button.	
	Meet all rules and regulations notified from time to time from AERB.	
	Should have option to select multiple FOVs and type of resolution required as per the examination.	
	Console along with exposure switch should be mounted outside CBCT room.	
	It should have amorphous silicon Flat panel/CMOS detector for 3D capture	
	Should have operator interactive interface on monitor for selection of different capture modes like dedicated 2D imaging (OPG, Lateral and PA Cephalogram, TMJ, sinus, bitewing and hand-wrist) and 3D Imaging.	
	Should have minimum 03 laser position guides: Frankfurt plane, Mid Sagittal and Canine Plane for quick and accurate positioning.	
	TECHINICAL SPECIFICATIONS:	
	a. Focal Spot - 0.5 mm or less	
	b.Voxel Size	
	(i) For minimum FOV (Size range 5X6 cm +_ 1cm) it should be in the range of 75 to 80 micron.	
	(ii) For Max FOV 16X14cm +_1 cm it should be in the range 150 to 200 micron	
	Automatic selection of multiple voxel size as per the resolution of scan.	
	c.CBCT Scan Time-Less than 30 seconds, Fast scan should not be more than 10 sec	
	d.Panoramic capture mode-Adult/child mode.	
	Ceph Capture mode-Water's ,Carpus, SMV, AP,PA ,Lateral View.	
	Rotating angle-Rotation 360 degree	
	Gray Scale-14-16 bit.	
	Collimation-Automatic	
	Image Format-It should have DICOM compatible format open to 3rd party software for import and export of image data.	

	Should have facility to convert image data from DICOM into STL format.	
	Input Voltage-220-240 V AC, 50 Hz frequency.	
	Generator-High Frequency	
	Tube Voltage-60-90 KvP +_2 KV	
	Tube Current-3-14 mA +_2 mA	
	Server Specifications:	
	Hardware Specifications: For 01 x console and 01x workstation separate	
	Intel Core i7 processor	
	1 TB SSD.	
	PCI-Express bus for GPU	
	Minimum 8 GB RAM.	
	Windows 10 OS original.	
	DVD ROM + Writer.	
	Gigabit Ethernet.	
	High—end Graphic card Radeon RX580 pulse 4GB GDDRS/Radeon RX 560 4GB GDDRS/Radeon PX570 4GB GDDRS Nitro or equivalent.	
	Minimum 24" LED monitor with full HD resolution allowing display of image at its native resolution.	
	Software Specification:	
	Should be from same OEM / vendor of licensed perpetually to OEM/ vendor. The responsibility of maintenance /repair/upgradation of Software during Guarantee/Warranty period/AMC and CAMC period rests with the Vendor/OEM	
	Should allow easy 2D and 3D examination, reporting and generate viewer CD	
	Annotations created on image such as linear and angular measurements, notes and signs should be printable.	
	Should have implant planning, simulation module, nerve tracing facility alongwith in-built implant library and customizable implant size selection	
	Should have Zoom reconstruction	
	Should have Multiple 3D filters.	

	Should have Panoramic reconstructions of multiple thickness from 3D volume	
	Should have Advanced image filters.	
	Should have Workstation software.	
	Should have Basic image manipulation for brightness, contrast & sharpness.	
	Should have Patient and image database.	
	Should have 3D slice view	
	Should have 3D surface rendering and 3D volume rendering.	
	Should have Surgical stent and prosthetic planning/simulation module.	
	Should have DICOM connectivity open to 3 rd party software	
	Should have MAR (Metal Artefact Reduction) module.	
	Should include scout/preview imaging before final 3D CT Scan which enables to ensure correct patient positioning	
	Should have Display at DAP (Dose Area Product) DAP value after every exposure.	
	Should have Display of MPR (Multi Planar Reformation) with 3 orthogonal planes —axial, sagittal and coronal which will allow navigation	
	Should have Ability to perform oblique and curved reformatting	
	Should have Display of grayscale value /Hounsfield unit	
	UPS-	
	Should have 5KVA Online with 30 minutes backup	
	Day Light Printer:	
	Should have DICOM printer	
	Should have Double Tray online with multiple film size loading options.	
	Should have Print Resolution Min. 500 dpi.	
	Should have 8 x10 inch, 10 x 12 inch, 14 x 17 Inch	
	Contrast resolution : 12 Bit.	
	Day light imaging loading system.	
	DICOM sheet printing Software.	

	Certifications-	
	USFDA/EU CE /BIS certified.	
	Should have AERB approval certificate prior to installation.	
Sialography equipment and kit	Added-Intra Oral hangers-06 hangers---12 pieces Polyethylene tubing with a special blunt end metallic tip cannula with side hole for parotid gland & end terminal hole for submandibular gland,lacrrimal dilator ,contrast media,sialagoue ,X ray Cassatte(5X7 inch)-01 no	1
	Added-Extra Oral hangers---1.12 Clamp-02 pieces hanger,2.4 Clamp-02 pieces hanger,3.2 Clamp-02 pieces hanger. Made of Stainless steel,Acid prof	6
	Added-Intra Oral hangers-Hanger for OPG film(6X12 inch)-02 2.Hanger for Cephalometry film(8X10 inch)-02, 3.Hanger for Cephalometry film(10X12 inch)-02 4.Hanger for film(5X7 Inch)-02	8
	9.DEPARTMENT OF PUBLIC HEALTH	
Dental chair and unit	Dental chair mount unit	16
	It should have two 3 way syringes (tip autoclave), with 3 spare tips.	
	It should have two high speed Air Rotor terminal with water control on coupling supplied with Hand piece.	
	Brushless micro motor (35,000 rpm or higher) terminal having straight and contra angle hand pieces.	
	It should have Ultrasonic Scaler with 5 scaleing tips and one set of perio-curette tips.	
	All hand pieces /terminals should be kept on Autoclavable & 6 spare autoclavable pads should be supplied (over hanganging).	
	It should have movable latest LED Light with glass reflector ON/OFF, intensity control, Detachable, autoclavable, handle, Minimum 28,000 Lux or higher at 80 cm distance.	
	It should have light cure unit.	

	It should have high and low vacuum motorized suction with auto drain and auto flush motorized suction should have minimum volume of 250 ltrs/min and provision for disinfected air exhaust.	
	It should have auto zero, gargle, P1 and P2(erasable programme) positions.	
	Chair should have up and down, backward and forward movement hand and foot control operated.	
	Seat, backrest rest-synchronized movement and head rest Pneumatic/manual movement	
	a. Chair should have Minimum & maximum height 360mm & 700mm. b Unit should have removable axillary tray (stainless steel), transparent water booster.	
	Base should solid metal with heavy casting.	
	It should have LED based X-ray viewer.	
	It should be provided with rotatable right arm rest (90 degree).	
	It should be provided with one doctor's stool with back rest. The base should be of stable metal moving on five wheels with pneumatic movement with level.	
	Two (2) Chairs should have-Suitable Oil Free Air Compressor (Medical grade). Tank and dryer. Also built in Thermo cut for excess of heat, Auto head release valve, automatic cut off, safety release valve, & drain valve gauge. In Rest Chairs individual compressor is not required, it should have facility to connect with Central Air Compressor plant.	
	Electrical point, water inlet and outlet facility will be provided by hospitals but All consumables required for installation and standardization of system to be given free of cost.	

	(a) It Should have Dental instrument cabinet with acid and fire resistant table top fitted with minimum 6 and above drawer/ Shelves	
	All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.	
	The unit shall be capable of operating continuously in normal room temperature.	
	Complete installation of the system including water input and drainage system, air compressor, required electrical connection has to be installed.	
	Power supply	
	i. Equipment shall operate on 220V-240V, 50 Hz, single phase electric supply.	
	ii. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective shall be there with the machines.	
	Standards, safety and training:	
	i. Model Should be US FDA / CE (Issue by Notified body) / BIS approved.	
	ii. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.	
	Documentation:	
	i. User manual in English.	
	ii. Service manual in English.	
	iii. List of important spare parts and accessories with their part number and costing available in stock with the supplier.	
	iv. Certificate of calibration and inspection from factory.	
	v. Log book with instruction for daily, weekly, Monthly and quarterly maintenance checklist.	
	vi. The job description of the hospital technician and company service engineer should be clearly spelt out.	
	vii. List of Equipment available for providing calibration and routine preventive Maintenance support as per manufacturer documentation in service/ technical Manual.	
Autoclave	Hot and wet – class -B	2

	Should have container for distilled water, and exhaust condensed waste water	
	The chamber should be of minimum 20 to 23 ltrs	
	Technical Info :	
	Sterilizer chamber (diameter x depth) - 245mmx465mm +_10%	
	Power Supply - 220V/AC/50Hz	
	Sterilization temperature/Pressure : 121/1.0~1.3Bar / 134/2.1~2.3Ba	
	Fuse tube - T15A	
	The storage tank volume - not less than 3.0 L	
	Ambient pressure - +5°~ +40°	
	Instrument tray - 3 Pcs	
	Instrument rack -1PC	
	Operation manual -1PC	
	Handle tongs - 1PC	
	1.5m water-outlet pipe -1PC	
	Water outlet connector - 2PCS	
	Measuring cup - 1PC	
	Sealing ring - 1PC	
	Power cable - PC	
Ultra sonic cleaner	13 litres	2
	Ultrasonic Cleaner , Premium quality cleaner for cleaning surgical instruments before autoclaving should have lid and cage to keep the instruments, on.off switch and should have the capacity of minimum 13 ltrs	
Needle burner and syringe Cutter	Needle destroyer should have needle burner and motorised syringe cutter with debri collector	4
	Main Input Supply (V, Hz, A) : 230 ± 10%, 50 ± 3% Hz, AC/5 A fuse.	
	Body Material : stainless steel or ms powder coated	
	Power consumption of continuous rating, W in use : 100 W.	
	Type of Electrodes used : Copper Electrode – Nicket plated.	

	Destruction Rate, Seconds / Needle : 25 Second / Needle.	
	Thickness & Length of Needle : Recommended : MAX . 1.6 mm Dia, 80 mm Length.	
	Burning Temperature, deg. C: 1600 C.	
	Grade of Steel & Guaranteed Life of Cutting Blade (Approximate No. of Syringes and needle it can destroy): SS Grade is SS 316 L.	
	Tray capacity No. of Syringes & Needles: 100 pcs.	
	Safety features provided : Glass Cartilage Fuse.	
	motorised syringe cutter: with wheel	
	Added-Mobile Dental van with 02 units of Dental chairs with all attachemnts & adequate sitting space for 15-20 people	
	· VEHICLE BODY	
	· Body for special purpose of mobile dental vehicle on the bus chassis	
	· Exterior dimensions:	
	o As per the approved dimensions of Central Motor Vehicle Rules Act, 1989, as amended from time to time, on bus chassis with a wheelbase of 5545 mm	
	o Complying with the norms of the Regional Transport Office, Department of Transport, Government of Bihar.	
	· External body frames:	
	o Of standard quality Galvanized Iron (GI pipes) square pipes	
	o Of adequate thickness (i.e. Class) to support the various rails and pillars	
	o Anti-corrosive treatment of good quality and standards of all fittings and welding	
	o All anti-corrosive treatment should be of Zinc Phosphate epoxy primer paint or of similar nature and of standard quality.	
	o All fixtures and welding should comply with Metal Inert Gas/Tungsten Inert Gas (MIG/TIG) technology	
	External and internal sheathings:	
	o External sheathing of GI sheets of 18-20G	

	o Interior sheathing with at least 2mm thick FRP (Fibre Reinforce Plastic) over a GI sheet of adequate thickness	
	o All internal sheathings/surfaces should be of medical grade material.	
	o Colour of interior ABS be as per approved scheme	
	o Riveting of the components	
	Insulation:	
	o Polyurethane Foam (PUF) of minimum 50 mm between external and internal sheathings including the roof and floor	
	Exterior Roof:	
	o Panelling of 18G Aluminium sheets	
	o Standard roof design with a gradient for water runoff	
	o External guttering for draining rain water	
	o A detachable roof ladder to be provided	
	Flooring:	
	o Should be done with seamless industrial grade, durable, non-slip waterproof vinyl mat of adequate thickness, of standard quality	
	O Colour of vinyl flooring to be as per the approved scheme	
	o Chequered board Aluminium sheet (wherever required) of adequate thickness to withstand functional load with a low VOC adhesive	
	o The floor shall be fitted with fire retardant marine board of adequate thickness (minimum 19 mm) and conforming to BIS standards	
	O Exterior aspect of flooring be coated for water proofing and adequate impervious under-coating protection be provided	
	Doors:	
	o 1 driver side door	
	o Two ergonomically placed doors	
	o Location of doors will be as per final design approved	
	o One door should be wide enough for entry of standard wheel chair with ramp	
	o 1 emergency exit as per the standard norms	

	o The doors should be securely lockable (from inside & outside) and latches provided	
	o Be properly sealed to avoid leakage of air	
	o The steps should be of anti-skid material of standard quality	
	Windows:	
	o Toughened glass	
	o UV tinted (except one window for LCD) within permissible limits of the transport norms.	
	o Windows in the passenger and dental clinic cabins should be sealed with proper gasket.	
	o Windows in the driver cabin should provide sufficient ventilation.	
	o The location, size and number of the doors and windows would be finalized as per the design approved.	
	Wind screen:	
	o UV tinted and conforming to the standards prescribed by the transport department of NCT of Delhi.	
	o Wipers of standard quality with provision for water spray be provided for front windshield area.	
	Rear view mirrors	
	o Good quality rear view mirrors on both sides of driver cabin, of adequate size & repute make	
	o Reverse sensors of repute make should be provided at the rear of the body.	
	Exterior Lighting:	
	o Ambulance siren and flasher of repute make to be placed as per Government rules.	
	o Other external lighting, signalling and indication system of the bus should be as per Central Motor Vehicle Rules, 1989, as amended from time to time.	
	Exterior body colour:	
	o Body be painted with graphics approved by user and confirming to Central Motor Vehicle Rules	
	o Of durable exterior polyurethane based paint with lamination.	

	· Roof top: Provision should be made for placement of AC condenser unit	
	· Undercarriage: Provision should be made for placement of:	
	o Generator Compressor	
	o Clean water tank o Waste water tank	
	o Storage area for Portable dental chair, foldable table (chair & table not to be provided by vendor)	
	o Additional storage area for storing stores & general items	
	o Provide proper access to maintain the undercarriage fixtures.	
	ELECTRICAL	
	· Generator:	
	To run 2 dental chairs, one air conditioner, compressor, autoclave, LCD TV, DVD player, public address system, refrigerator, fans and lights while vehicle is stationary reputed make, Petrol, Water Cooled, vibration free & silent.	
	o Housed in vibration free enclosed space with acoustic deadeners	
	o Have proper exhaust	
	o Facility of auto start is desirable	
	o Grouted and provision for sufficient shock absorption o Be from BIS/ISI/BES/Standard approved company	
	o Exact location to be decided as per final design approved	
	o Extra fuel jerrycan–20 litres for storing fuel for generator	
	· Roof mounted air conditioner for air cooling and heating with ducting in seating area and should be engine driven	
	o Be of reputed make confirming with BIS/ISI/BES standards	
	· One split type air conditioning system of minimum 1.5 ton and of reputed company which can run on generator or external power supply should be provided in dental clinic area	
	· Total capacity of both ACs should be of at least 22,000 British Thermal Units (BTU)	
	· Electrical systems:	

	o Stabilizers and voltmeters: of specifications matching the equipment on the mobile dental clinic along with earth leakage circuit breakers	
	o Proper safeguards be taken with respect to electrical connections including but not limited to insulated wiring, earthing, voltmeters, circuit breakers, colour coded wires, approved jointers and wiring chart	
	o Provision for External Power Source (Shore Power/Generator) Alternating Current Supply (AC) including alternate supply for air conditioning and dental equipment's	
	o UPS of sufficient capacity to run dental chairs, Compressor , lighting and fans in the clinic area & battery backup 1 hour.	
	o Electrical cables	
	§ Internally concealed and located such that no part can make contact with any fuel line or exhaust system	
	§ All cables used shall be BIS/ISI marked	
	§ Of approved thickness to withstand maximal estimated electrical flow.	
	§ Copper conductors with fire retardant PVC insulation, to withstand up to 70°C temperature	
	§ Cables ducted and secured at suitable places in such a manner that during normal use of vehicle the cables are not subjected to any tension, stretching, cutting, abrasion or chaffing.	
	§ No loose wire to wire connections shall be permitted.	
	o Special insulation to be provided where such electrical circuits are necessary. Non-conductive insulated backing for all switch boards.	
	o Plug points and switches: 10 plug points of adequate intensity along with equivalent number switches of standard quality (BIS) to run compressor, autoclave, air conditioner, 2 dental chairs, 2 curing light, LCD TV, DVD player, public address system and laptop and 5 additional plug points. Switches corresponding to lights and fans to be provided. Location to be	
	finalized as per approved design.	
	o Shore power socket at bus panel i.e. from outside to aid in attaching external power source.	

	o Interior lighting: The design and number of lamps, their position, type and wattage used shall be of type approved. Each compartment would have specified number of LED lights and switches for each group.	
	o Fans: Total 8 walls mount fans in driver, passenger, registration area and dental clinic cabin, with variable speed control and swing movement and of	
	standard quality.	
	o Adequate lighting and air circulation be available with and without the generator running, with the bus stationary and during commuting.	
	o Distribution Panels- Separate AC and DC distribution panel to be placed near main entrance with individual breakers (of adequate type and approved quality) for each equipment item. Ground fault circuit interrupter (of adequate type and standard quality) at sink. Change over switch from external power	
	source (shore power) or Generator.	
	o All panelling and equipment should be of standard BIS quality and should have display units.	
	o Wiring should be harness coloured, numbered & function coded	
	WATER SYSTEM	
	· Water purifier capacity 20 litre per hour.	
	· Clean water tank	
	o Capacity : 200 litres	
	o With booster pump	
	o High quality stainless steel, leak proof material and with external covering	
	o With locking sealed cap	
	o With sensor indicating status of water level	
	o To be placed in the undercarriage	
	· Waste water tank	
	o Drainage system from the dental chairs, washing areas should be identified	
	o Capacity : At least 100 litres	

	o To be placed in the undercarriage preferably on the passenger entry side o Of high quality stainless steel and leak proof material	
	o Provision for draining waste water should be easily accessible and operable o With sensor indicating status of water level	
	Location of the tanks & water purifier shall be as per the final design approved	
	INTERIORS	
	Driver Cabin	
	o Ergonomically designed	
	o Driver seat should comply with standard safety and quality and be provided with a retractable seat belt.	
	o The placement of instrument panel shall be such that the primary instruments and controls are visible unobstructed from the driver seat.	
	o Display of reverse sensor device to be included.	
	o The driver door should be of approved height and width with sliding windows and required lockings. The driver door aperture shall have minimum one hand hold.	
	o Provision of standard quality locks for all doors.	
	Internal Partition walls	
	o Of steel of approved thickness and should be powder coated.	
	o The partitions separating the passenger seating area, clinic area and registration area should have a hinge door.	
	Passenger sitting area	
	o Provision for seating 10 persons or more, as per the space availability of Adequate aisle space to be provided	
	o Passenger seats should have back rests and preferably head rests. The seat design	
	would be as per the final design approved.	
	O Front seats should have a horizontal bar in front to hold on for safety purposes.	
	O Overhead storage space to be provided as per the final design approved.	
	oDust free blinds or curtains	

	o Two foldable benches can be provided(if space permits) to increase seating capacity	
	Registration area:	
	· should have a registration counter	
	· location of area shall be as per final design approved	
	Dental clinic area	
	Dental equipment	
	1. Two electrically operated dental chairs: The chair should be electrically operated and have	
	o Thick seamless upholstery to prevent adherence of dust and thus cross-contamination, with lamination.	
	o Double articulated head rest for patient comfort	
	o 3 programmable working positions and auto return to zero.	
	o Independent up and down movement and backrest movement of the chair.	
	o Delivery unit with pneumatic locking arm, control panel, one 3-way syringe, instrument tray for placing instruments	
	o Inbuilt micro motor and piezo ultrasonic scaler.	
	o Included Accessories: Air Rotor Hand Piece Standard Head, Ceramic bearings with push button (NSK/similar), Micromotor with Straight & Contra Handpieces (NSK/similar) with Piezoelectric Ultrasonic Scaler (with minimum 3 Tips and Torque Wrench) detachable autoclavable hand piece and at least 5 Watt LED based, Cordless light cure unit with pulse, ramp and normal mode settings.	
	o Water unit: Ceramic spittoon with fixed cannulas for spittoon and cup water, 1litre water bottle, switch to control working of water unit, 1 point for low vac suction	
	O White and cold 3 LED sensor light (at least 20,000 LUX) o One x-ray viewer	
	o Multifunctional foot control	
	o Doctor's stool with adjustable backrest tilt & height adjustable foot ring.	
	o Provision for harnessing the doctor's stools when not in use.	

	o The company manufacturing the dental chair should be ISO, and products accredited with CE Mark.	
	o Provision for separate clamping of dental chair light to the roof of the bus and harnessing of the instrument tray arm.	
	o US FDA / European CE /BIS Approved model should be offered.	
	2. One Autoclave having wet and dry cycle, which can achieve 135°C, with minimum capacity of 20 litres, front loading. Should be:	
	o B-Type front loading fully automatic autoclave with vacuum & dry cycle o Micro-processor controlled	
	o Wrapped/unwrapped, porous, solid instrument including cotton swabs can be sterilized	
	o Bow and Dick test qualified	
	o Have digital display of pressure and temperature	
	o Have double safety lock on the door, silicon gasket to prevent any leakage of air and diagnostic automatic alarm for any malfunctioning	
	· Can be used at 121 ⁰ C/134 ⁰ C during sterilization.	
	· Grouted to prevent movement during transport	
	3. One compressor: minimum 1.0 HP, 20 litres tank, oil-free	
	o To provide medical grade air for dental use o With anti-rust-coating tank.	
	o To be placed in the undercarriage with encased tubings connecting to the dental chairs.	
	Dental X-Ray (DC-portable)	
	(1) Dental X-Ray (DC-portable) -for taking Intra Oral periapical and Occlusal X Ray	
	(2) 2) Certification EU CE (with 4 digits notified number)	
	(3) AERB approval Required for Dental X-Ray	
	(4) Electrical safety standards IEC- 60601/ IS 13450	
	Performance Parameters	
	Tube voltage in KV-70 KV	
	Availability of selection option for Bisecting angle technique & Parallel Technique -YES	

	Tube current in mA- 7-10mA	
	Focal spot in mm – (0.8)	
	Should have Total filtration and Inherent Filtration- Yes	
	Total filtration in mm Al - 2	
	Inherent filtration in mm Al – 0.5	
	Minimum range of exposure time in sec – 0.2	
	Power supply - 220-240 V , 50 Hz single phase	
	Based on DC Current- YES	
	RVG / X ray Film compatible - YES	
	Machine should have a stable base with sturdy locking wheel mechanism- YES	
	Machine shall be wall mountable - YES	
	Should have digital control equipped with an easy ready display indicating with precision - YES	
	Stool for the patient provided - YES	
	Soft positioning arms for accurate tube positions - YES	
	Light and flexible movements -YES	
	Internally lead coated head tube and cone to avoid scattered radiations - YES	
	Exclusive angular indicating system for head positioning in various radiography techniques- YES	
	High efficiency and greater sharpness of the radiography -YES	
	Additional Parameters	
	Should have high voltage generator with high efficiency in the emission of the X rays - YES	
	Should have free swivel head, which allows easy positioning of head – YES	
	Number of light weight lead equivalent aprons (AERB Approved) - 2 (with lead thickness 0.5 mm)	
	To be supplied with Thyroid shield -Yes	
	User manuals to be supplied - Yes	

	Reports	
	Manufacturer should have ISO certification -YES	
	Copies of all certifications and reports to be provided to buyer on demand at time of supplies - YES	
	RVG (Radio Visio graph) Technical Specifications	
	1. RVG is used for digital dental X-rays which can be instantly viewed and evaluated with minimal radiation exposure	
	2. High resolution RVG based on CMOS technology with optical fibre.	
	3. Maximum reduction in patient radiation as compared to X-ray film.	
	4. Should have easy positioning of sensor inside the mouth	
	5. Should supply sensor with minimum active area 600mm ² .	
	6. Should have a Pixel size: 20 µm x 20 µm +/-2	
	7. Size of the sensor in mm x mm:- 39mm x29mm with tolerance +/- 3	
	8. Sensor cable length (meters):- 2m to 3m.	
	9. Thickness of the sensor should be Upto 5 mm.	
	10. Spatial resolution approx. 25–35-line pairs/mm.	
	11. Sensor (including joint and part of cable length) is water and dust resistant as per IP Code (IP68, IP67) (Authentic test reports from NABL/ILAC/REPUTED GOVT LABS to support resolution claim are available and will be provided to buyer on demand)	
	12. Ability to Synchronize with Laptop/ Windows Software.	
	13. Software has facility to acquire images from intraoral camera which may be of a different manufacturer.	
	14. Laptop with LCD/LED color monitor not less than 14-inch screen, minimum I-5 processor, Windows 10, HDD 1TB, 8 GB RAM & Laser Printer.	
	15. Should have positioning devices a. Bitewing b. Periapical c. Endodontic.	
	16. For Radio Visio Graph - USFDA (510 K)/ European CE (Issued by notified body)/BIS certified model should be offered.	
	Thyroid Collar- 2 and lead Apron-2	

	Accessories in dental clinic area	
	· Fire detection and fighting system as per the Govt. norms, of reputed make, including but not limited to adequate number of fire extinguishers in all the cabins, fire alarms, smoke alarm. All fire extinguishers should be secured and easily accessible.	
	· LCD TV of a reputed make, with remote control, 32 inches, Full HD, USB compatible, mounted, with proper metal casing and padding, with metal shutter for protection	
	· DVD player of reputed make, with remote control: High definition, USB compatible, with HDMI cord, to be grouted behind LCD casing	
	· One Refrigerator of 40-50 ltrs capacity of reputed make, single door, semi-autodefroster, should run with and without the generator running, with the bus stationary and during commuting	
	· Public Address system of reputed make:	
	o 2 wireless microphones (with a range of at least 10m away from the vehicle)	
	o Amplifier of adequate power with two audio in (auxiliary so as to enable it to play audio from TV/ DVD, one for Microphone),	
	o 4 internal ceiling speakers of appropriate power	
	o 4 external weather-proof speakers of appropriate power or external speakers positioned in external body adequately protected by moisture and injury. External speaker should be adequate enough to address a gathering of 100 people in an open environment.	
	o The volume of internal and external speakers should be independently modifiable.	
	· One Oxygen cylinder and mobile stand , secured tightly to the vehicle body with removable clamps, along with regulator and delivery mask.	
	· Cabinets:	
	o The cabinets need to be fixed onto the body of the vehicle.	
	o The counter top should be of Seamless Galvanized medical grade stainless steel countertops of thickness so as to withstand weight of medical instruments and machines placed over it.	
	o Should be of at least an area of 6ft X 2 ft. in order to place the autoclave and sterilized instruments.	

	o Drawers should be made of powder coated stainless steel with silicone rollers. The cabinet hardware hinges should be fully adjustable high quality type. The latches should be easy to grip with magnetic locking.	
	o All drawers and cabinets need to be lockable and should be locked/unlocked with a single key.	
	o On the external surface of the cabinet, provision should be provided for inserting a label.	
	o The design and colour of the cabinets and drawers will be as per the final design approved.	
	o Cabinets should allow some shock absorption so as to prevent damage to stored items.	
	· One Metal Cabinet with stainless steel wash basin and tap: The sink should be corrosion proof with filter traps.	
	· Biomedical waste color-coded bins: The colour coding should be as per the Biomedical Waste (Management and Handling) Rules, 1998. The bins should have foot pedal and should be secured and concealed in the dental clinic area.	
	· Retractable/ Foldable prescription writing table	
	· Towel holders, apron hangers and attachments for placing soap dispensers and anti- microbial hand rubs.	
	· Dust free blinds or curtains on the windows	
	· Equipment mounting, tie downs, padding and bracing for operational transport of various equipment's such as the dental chairs.	
Central Air Compressor Plant	<p>· Locking provision for battery and other external equipment's and an anti-theft alarm system with door sensors for the vehicle.</p> <p>1. The compressor air plant to provide Air to whole area of Dental College for operating Dental chairs & other equipments. It should have the oil free Compressors, stack mounted and will be complete with all standard accessories like motor, Cooler, Controller, Safety Alarm, Temp and Pressure Sensors and all other standard accessories</p> <p>Supply, installation, testing and absolute oil free, bacteria free moisture free, compressed air fitted with dryer and refrigerant for cooling.</p>	01

Compressed air should be 100% oil free, bacteria free, moisture free and it should be refrigerant for cooling.

The compressor should consist of duplex stacks of compressors. Each compressor stack will have 2 compressors fixed on one stack.

The Compressor should be Resiprocating /Srew/Scrool type, oil free,each stack will have Motors of 30 HP, 50 Hz, 3 Phase.

One stack of Compressor capacity should be 100 cfm or higher, Free Air Delivery for each compressor at 8 Bar.

There should be two such stacks one running and one standby of 100 scfm each.

The air quality at outlet should be 100% Oil Free.

The Compressor must be with sound level, have low vibration, compact and suitable for both continuous and start / stop operation at outlet pressure of 8 Bar.

The compressor stack should be in (Duplex) configurations. There will be two such stacks

The Compressor package systems should have a Tank of capacity, not less than 1500 ltrs followed by Air Filtration System.

Air Filtration system will be stack mounted & should consist of a duplex Heatless Desiccant Dryer of 100 cfm capacity of minus 40 deg ADP.

Duplex 4 stage Air Filtrations system consisting of 5micron, 1 micron, 0.01 micron and Activated Carbon Filters Filter will be fitted after the Air Tank.

The Compressor should have duplex pressure reducing station.

The reducing station should have 2 different lines of 4 Bar and 8 Bar with the help of Pressure regulators. Along with interconnection piping and isolation valves.

	<p>The Compressor should have electrical panel with PLC connected to compressors, automation, duplexing and sequencing.</p> <p>It's should comply with HTM 2022/NFPA 99 standards</p>	
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Technical Specification of Equipment for 100 bedded Hospital

Impedance Audiometer

1. Probe tone: 220 and 1000Hz (For Pediatric testing also)
2. Probe assembly with contralateral test facility (with supra aural earphones: TDH 39/TDH39A/TDH49/TDH49A/TDH 50 with MX 41 AR ear cushions or insert earphones (ER Tone 3A)
3. Test cavities (0.5, 2, 5cc)
4. Probe tips - assorted
5. Shall have Printer
6. Tests required
 - a. Compensated tympanometry (ear canal volume and tympanometric peak pressure)
 - b. Ipsilateral and contralateral acoustic reflexes
 - c. Eustachian tube function tests - intact and perforated
7. Air pressure range: + 200da Pa to – 400 da Pa
8. Stimuli for acoustic reflexes: a. Type: Pure tones; b. Frequencies: 500Hz, 1000Hz, 2000Hz and 4000Hz
- c. ntensity : up to 120 dB HL
9. Shall have Self-calibration.
10. Power requirements 220 to 240V, 50 Hz
11. Battery operated Should have in built rechargeable battery. Recharge should be possible with direct mains supply.
12. USFDA/European CE (Issued by Notified body) approved model should be offered.

Head Light(Cold Light) ENT

1. It should be light weight with high colour-rendering index.
2. Colour temperature should be 5000 kelvin
3. Should have uniform and round focus and light should be white shadow free
4. Brightness adjustment with spot size adjustment.
5. Light intensity should be more than 35000 Lux.
6. Facula diameter at 42 cm should be 20-100 mm.
7. Bulb life should be more than 40000 hours.
8. It should work without direct power source
9. Charging time should be less than 4 hours and should have work time of more than 6 hours.
10. The headlight should be usable at the time of charging
11. 2 pc rechargeable Li-ion polymer battery with 1800MaH .
12. USFDA/European CE (Issued by Notified body) approved model should be offered.

EAR Surgery Instruments.

1. Fisch adjustable mastoid retractor 3 x 4 prongs, self retaining, sharp - 16 cms
2. Wullstein self retaining mastoid retractor 2 x 3 prongs
3. Shea aural speculum – oblique ended, anodized black – set of five
4. (3.3 x 4mm, 4 x 5.5mm, 5 x 7.5mm, 6 x 8.5 mm, 7 x 9.5 mm)
5. Mahadevaiya's self retaining endomeatal retractor
6. Farabeuf periosteal elevator, SS - Tip 11 mm wide
7. Lempert's periosteal elevator (3 mm) - 18 cms long
8. Cell seeker 45O with ball end - 15.5 cms long
9. Lempert's Mastoid Curette 21 cm long - set of 3 of different sizes 1.8 mm, 2.4 mm, 2.8 mm
10. Micro Ear alligator forceps, serrated, straight jawed, fine - 0.4 x 3.5 mm, 8cms working length
11. Micro Ear alligator forceps, serrated, straight jawed - 0.8x 3.5 mm
12. Wullstein Micro cupped forceps (round cup) - 2mm, 8cms working length
13. Micro cup forceps up-biting, oval cup - 0.9 x 1 mm, 8cms working length
14. Myringotomy knife adjustable (160mm)
15. Beales ear microelevator 160mm
16. Wullstein's ear raspatory blade rounded curved 160 mm
17. Rosen round knife, 45 degree angled, cutting – 1 mm dia. - 16 cms long
18. Rosen round knife, 45 degree angled, cutting with fenestrated blade - 3mmdiameter, 16 cmslong
19. Plester's flap knife – round cutting blade - 2.4 x 3mm, 160 mm long
20. Wullstein's needle, sharp, straight - 16 cm
21. Wullstein's needle, sharp, slight curved - 16 cm
22. Micro Pick 90 degree,0.4mm
23. Plester's sickle knife
24. Micro ear scissors – straight, 8cms working length - 4 mm/5 mm blade
25. Set forstapedectomy a) Teflon piston cutting jig b) Fisch Perforator 0.2mmtip c) Fisch Perforator 0.4mmtip

Oto Acoustic Emission (OAE) analyzer.

- a. TEOAE Specifications:
 - 1. Facility of click stimulus and Tone burst stimulus
 - 2. Configurable stimulus intensity
 - 3. Band analysis from 1 KHz to 8 KHz
 - 4. Reproducibility in half octave bands
 - 5. Should have suppression facility
 - 6. Full cross correlation, frequency analysis with reproducibility and signal to noise data on single test or between test pairs
- b. Customized TEOAE protocol DPOAE specifications:
 - 1. Frequency range Minimum of 500-10,000Hz.
 - 2. Number of test points per octave: Upto 32 points per octave
 - 3. Intensity: f1 and f2 levels from 0 to 70 dB SPL.
 - 4. Customizable measurement protocols.
 - 5. Variable Ratio: f2/f1.
 - 6. DP Definition Points: f2-f1; 2f2-f1; 2f1-f2; 3f1-2f2; 3f2-2f1; 4f1- 3f2; 4f2-3f1.
 - 7. Contra lateral suppression facility
- c. SNR assessment SOAE specification
 - 1. Sensitive microphone to pick up SOAE
 - 2. Multiple SOAE's
 - 3. Actual and latent spontaneous
- d. OAE Computer Specification:
 - 1. Minimum Core i5 Pentium processor
 - 2. 4 GB DDR 3 RAM

USFDA/European CE (Issued by Notified body) approved model should be offered.

SLIT LAMP

- 1. Magnification selection: 3 steps by rotation drum
- 2. Eyepiece: 12.5x/10x
- 3. Diopter adjustment: $\pm 5D$ or better
- 4. Slit width: continuous from 0 to 14mm
- 5. Slit length: continuous from 0 to 14 mm
- 6. Aperture : continuous from 0 to 14mm
- 7. Slit angle : 0° to 180°
- 8. Filter : blue, Red free
- 9. Light source :LED
- 10. Standard accessories and table
- 11. Should operate from 200 to 240Vac, 50 Hz input supply
- 12. Should provide suitable ups with 30 minutes backup
- 13. USFDA/European CE (Issued by Notified body) approved model should be offered.

Applanation Tonometer

- a. Should be light weight (upto 100g) and ergonomic design
- b. Based on Micro strain gauge technology with average of 10 readings
- c. Transducer tip 1.0mm
- d. Small inbuilt LCD screen for display of IOP measurement
- e. Transducer--Micro Strain Gauge
- f. Measurement Range-- 5 - 55 mmHg
- g. Power Source — Rechargeable batteries
- h. Spares to be provided - Should provide two additional batteries
- i. Disposable Caps 100 caps each.
- j. USFDA/European CE (Issued by Notified body) approved model should be offered.

Operation Table Hydraulic Major

1. Hydraulic Operating Tables are simple tables for performing surgical procedures and it works without electrical power.
2. Operational Requirements OT Table is required for general surgery and shall have X-Ray translucent tops.
3. Four section table top with divided foot section
4. Table top should be constructed from a high-pressure laminate to permit x-ray penetration and fluoroscopy
5. all table positioning, i.e., height, back section, lateral tilt, trendelen burg, and anti-trendelenburg, except foot and head section should be operated hydraulically
6. Should have a manual position selector, whose location should be interchangeable between foot and head end
7. The casings on the frame and centre supporting column should be made of hygienic stainless steel
8. Mattress should be radio lucent and suitable for fluoroscopy
9. Measurements :(all dimensions are approximated to +/- 10 % variations)
 - a. Height: 730-1040 mm
 - b. Side tilt: + 15 degrees
 - c. Back section adjustment: - 15 degrees to 70 degrees
 - d. Foot section adjustment: - 90 to 0 degree, detachable
 - e. Trendelenburg: 25 degree
 - f. Anti trendelenburg: 25degree
 - g. Head section adjustment: -40 to -30 degree & detachable
 - h. Maximum width: 555mm
 - i. Length: 1950 mm
10. Tabletop should be completely detachable and compatible with transfer trolley System Configuration Accessories, spares and consumables Accessories should include,
 - a. Padded arm rest with straps - pair with dampers
 - b. Anaesthesia screen with clamps

- c. Side supports: pair with clamps
- d. Shoulder supports: pair with clamps
- e. Knee crutches: pair with dampers
- f. X-ray cassette tray
- g. Kidney bridge
- h. SS bowl with clamps
- i. Infusion rod with clamp .

11. USFDA/European CE (Issued by Notified body) / ISO (NABCB Accredited) approved model should be offered.

Operation Table Orthopaedic

1. Operating tables provide an elevated surface that supports the patient's body during surgical procedures, stabilizing the patient's position and providing optimal exposure of the surgical field.
2. C-arm compatibility with electro-hydraulic operation table.
3. Minimum six section table-top, which should be X-Ray translucent for fluoroscopy with 'c' arm and with radiolucent mattress.
4. The table should have a provision to be operated in the following modes:
Electrically by remote control and should have a removable standby handset with rollable cord located on the table column as well as an additional manual auxiliary mode facility. It should have integrated batteries with a capacity for approx. 100 operations and an integrated battery charger.

It should have at least the following electrical functions:

- (i) High / low approx. 600-1200 mm
 - (ii) Side tilt / lateral left and right approx. 15-30°
 - (iii) Trendelenburg and Reverse Trendelenburg approx. 20-45°
 - (iv) Back section approx. +70° / -40°
 - (v) Leg section approx. +70° / -90° The leg section must be removable and the leg section interface must allow the alternative attachment of electrically adjustable leg holders or an optional electrically adjustable Back section for shoulder arthroscopy
 5. Manual adjustments (hydraulic/gas spring supported). It should have at least the following functions:
 - (i) Head section up and down approx. +25° / -45°
 - (ii) Divided leg section up & down approx. +20° / -90°
 - (iii) Swivelling of leg sections approx. 70°
 - (iv) Back section up & down approx. +70° / -40°
 - (v) High / low approx. 600-1200 mm
 - (vi) Side tilt / lateral left and right approx. 15-30°
 - (vii) Trendelenburg and Reverse Trendelenburg approx. 20-45°
5. The table can be operated manually, electrically on AC mains power or on batteries.

6. The remote control should have a clearly labelled control panel for main adjustments such as height, lateral, Trendelenburg / Reverse Trendelenburg, back section, leg section, return to basic position and reverse mode. It must have an indication of the load control of the batteries. The control unit should have a backlit display and control panel ensuring a safe and easy handling in the darkened operating room when doing minimally invasive surgery.
7. Optional Bluetooth remote control unit may be available.
8. should preferably have Integrated software information system to simplify maintenance and service of the table
9. Radiolucent six section table top in head section, short back section, back section extension, seat section with perineal cut, divided leg section. With quick release facility to remove or interchange head and leg sections (Reverse Mode).
10. should preferably have antistatic and liquid-tight mattresses with shock absorbing foam for Decubitus Prophylaxis and for reducing the cooling of the patient during surgery. The mattresses must be free from Latex material. Mattress must preferably have a thickness 50-80mm.
11. All metal components of the table should be made of corrosion resistant and disinfectant-proof stainless steel.
12. Mobile table-base on antistatic heavy duty swivel castors with central brake ensuring a stable base.
13. Should also be suitable for obese patients. Minimum tolerable weight should be 250 kg.
14. Should have stainless steel accessory rails on both sides of the table-top to hold various accessories.
15. Should be supplied with the accessories for orthopaedic traumatology, spinal surgery and shoulder and knee arthroscopy. Orthopaedic accessories: 1. Extension Device with following Acc. Pair of Adapters Countertraction Post for femur Telescopic bar long Telescopic bar short Screw tension device Foot Plate support Side rail Ext Supporting bars Radial Setting clamp Transport Cart 2. Foot Plate (Pair) 3. Counter traction post for femur 4. Rotation & tilting clamp 5. Traction Stirrup clamp 6. Countertraction Post tibia 7. Condyle Fixation 8. Universal support for positioning lower Leg 9. Pad for disc operations 10. Fixture for body support 11. Lateral Support 12. Shoulder support 13. Back buttocks support 14. Pubis-sacrum-sternum support 14. Allen Arm/Hand table (Radiolucent)
16. USFDA/European CE (Issued by Notified body) approved model should be offered.

LED OT LIGHT SINGLE DOME

1. Should be a Surgical Light unit incorporating the latest LED technology shadowless operating light field with the following specifications.
2. Should have high-performance LEDs with a lifetime of more than 40,000 hours.
3. Should be a Single dome & follow's.
 - a. LUX intensity 1,40,000 Lux or above.
 - b. Light Field diameter shall be above 20 cm or better

- c. Colour temperature should be between 3600 to 5000 degree K
 - d. Colour rendering index should not be less than 95
 - e. Depth of illumination should not be less than 100 cm.
 - f. Illumination adjustment 30% to 100%
 - g. The light dome shall be compatible for laminar airflow.
4. Should have stable illumination throughout the life period of the light. If the intensity reduces during the warranty or CMC period the LEDs has to be replaced free of cost if required.
 5. The LEDs must be suitable for long-term maintenance and ease of replacement.
 6. Temperature rise at the surgeon's head level should be less than 2 degrees C.
 7. Should have a control panel for light focusing adjustment fixed on the dome or arms.
 8. Should supply autoclavable handles 3 Nos for each dome.
 9. The intensity of light should be uniform during the surgery.
 10. Minimum spring arm stroke of 500mm and minimum action radius of the complete arm shall be 1500mm or more.
 11. Unit should function with 200-240Vac, 50 Hz input power supply.
 12. Should have a 330-degree rotation for dome and Arm.
 13. . USFDA/European CE (Issued by Notified body) approved model should be offered.

Bronchoscope

1. Equipment :Intubating fibre optic Bronchoscope
 - A. Intubation Fiberscope outer diameter 3.7mm to maximum 3.8mm
 - B. Portable light source LED Brite lite / equivalent to 300W Xenon light source
- A. Intubation Fiberscope outer diameter 3.7mm
 1. Compatible for minimum endotracheal tube size 4.5 mm to 6.5 mm internal diameter.
 2. Working length minimum 60 cm
 3. UP/down tip deflection should be 130/160 degree
 4. 5cm length marking on fiberscope

5. Should have a 90-degree angle of view with zero degrees portable LED operated light source connection or compatible lightweight and portable electricity operated LED or Xenon light source with light cable from the same manufacture.
6. should have an inbuilt suction port
7. Should have instrument working channel of at least 1.2 - 1.5mm to use flexible forceps or for oxygenation.
8. the scope should be able to connect through camera to monitor for visualization of image
9. scope should have the following accessories
 - a. Endotracheal tube holder
 - b. Cleaning Brush
 - c. Suction adapters
 - d. Leakage tester, Airway to guide tube orally.
 - e. Working channel compatible flexible biopsy forceps.
10. USFDA/European CE (Issued by Notified body) approved model should be offered.

Semi auto analyser

- 1.** Should be microprocessor controlled general purpose bi-chromatic photometer system with at least 6 filters ranging from 340 to 630nm.
2. Temperature 37 self monitoring built-in incubation systems for temperature controlled absorbance reading.
3. Light source : Tungsten/ halogen or higher grade with one additional bulb.
4. Should have end point, kinetic and two point kinetic measurement modes.
5. Should have flow cell measuring device.
6. Should have inbuilt printer or External Printer to be supplied.
7. Should have a measurement range from 0.001 to 2.300Abs
8. Should have facility for reading results on LCD display.
9. Should have quality control – two control/test QC survey of at least 30 points, Levy Jenny plot.
10. Should have a filter half bandwidth of 10nm or lesser.
11. Should have a test programme memory of 50 or more.

12. Should be provided with sample carry over prevention facility.
13. Aspiration should be based on Bellow/Peristaltic Pump
14. Should provide 500 ml of reagents for urea, S. creatine, S. bilirubin, sugar, cholesterol, and Quality control 5ml one each for normal, abnormal.
15. Should be supplied with UPS of suitable capacity with a minimum back of 30 minutes.
16. Should be provided with calibration certificate issued by the manufacturer at the time of installation and periodic calibration must be done and calibration certificate to be issued during warranty / CAMC period.
17. USFDA/European CE (Issued by Notified body) approved model should be offered.

Distilled water plant (Capacity not more than 20Ltr Per day

1. Maximum capacity 20 Ltr. & Minimum 10 Ltr.
2. Manufacturer should have ISO (NABCB accredited) CERTIFICATED.

Paediatric Bilirubinometer

1. Measuring method should measure the optical density difference at two wavelengths to determine the yellowness of the subcutaneous tissue.
2. The instrument should be suitable for non-invasive bilirubin measurement of neonates with gestational age 27 — 42 weeks and 1- month post-natal age; body weight 900 grams to 4000 grams.
3. Measurement range: 0.0mg/dL to 20mg/dL or 0 mon to 340iimol/L
4. Error of estimate (SEE): $\pm 1.5\text{mg/dL}$ or $\pm 25.5\text{Rmol/L}$
5. It should measure readings at sternum and forehead.
6. Should have alarms when measurements are greater than 20mg/dl or 340[Imol/L
7. Can be used in all skin colors, >35 weeks gestational age, prephototherapy.
8. Light source should be Pulse xenon arc lamp.
9. Light source should have life of more than 10000 measurements.
10. Light source checker should be built in to the charger base.
11. Should have detectors with Silicon photodiodes.
12. Should have Ni-MH battery as power source.
13. Should have a touch screen operation.
14. It should have a barcode scanner
15. It should be 1-1L7 compatible and able to transfer the reading to the existing CPMS.

16. Protection type and level Internally-powered instrument, BF type
17. It should measure at least 400 single measurements when fully charged.
18. It should have operating temperature range from 10°C to 40°C.
19. It should be light weight; less than 250 g.
20. It should be supplied with: Charger unit with a checker, AC adapter, Carrying case and wrist strap, Power cable adapter set.
21. USFDA/European CE (Issued by Notified body) approved model should be offered.

ICU BED WITH FOOD TABLE & MEDICINE LOCKER

1. Bed should be electrically operated Backrest, height, and Knee- break adjustment
2. Should have Electrically operated Trendelenburg /Reverse Trendelenburg tilt ($\pm 12^\circ$)
3. Under bed clearance to be 130 mm or more.
4. Should have four sectional mattresses with rexine cover, foam density should be 40 or more.
5. $70 \pm 5^\circ$ backrest for upright/ chest imaging.
6. Side rails should be split type made from ABS injection moulding with easy to lower by sideways swing (tuck-away) to save space between the ICU Beds.
7. Bed should have integral two pieces each side split safety sides with zero transfer gap.
8. Should have one button cardiac chair position.
9. Bed should have dual sided drainage bag holders.
10. Bed should have castors of size 5 inches or more.
11. Bed should be provided with telescopic IV rod one piece.
12. Bed should have Lockout switches on Attendant Control Pendant
13. Bed should have Angle indicator for backrest.
14. Bed should have removable/Bending Head and Foot end panels.
15. Bed should have locking mechanism for head and foot panels
16. Bed should have Linked braking / steering systems with four braking castors
17. Should have 125mm single wheel castors.
18. The Bed should have following Dimensions Height Range- 46 – 76 cm Overall Length- 220 cm or more Overall Width- 980 mm or more Platform size- 85x 199 cm
19. Corner bumper and IV socket should be integrated.

20. Bed should have mattress stopper for improving safety and better mattress positioning.
21. Manufacturer Should have ISO Certified
22. Break bar should be available for breaking mechanism
23. Safe working load of 170 kg or more. SWL means bed should operate while 170 kg weight on bed and all movement should be functional.
24. Bed should have corner buffers for protection.
25. **Should be supply with each ICU BED WITH FOOT TABLE & MEDICINE LOCKER.**
26. USFDA/European CE (Issued by Notified body) / ISO (NABCB Accredited) approved model should be offered.

Ultrasonic Nebulizer

1. Electronically controlled for warm nebulization
2. Nebulization chamber is autoclavable
3. Aerosol particle size 1-6 micron
4. Frequency: 1.7 Mh
5. Aerosol Quantity 0-2ml/Min
6. Heatable Air breathing Hose
7. Provided with bacteria filters
8. Connected to central Oxygen/compressed air.

USFDA/European CE (Issued by Notified body) approved model

300 mA X-Ray Machine

1	X-Ray Generator:
	A. High frequency X-Ray generator
	B. Inverter frequency – 20 KHz or more
	C. Output power 30KW or more.
	D. KV Range – 40 to 125KVp
	E. mA range- upto 300 mA or more
	F. 3300mA @ 80 KV or better
	G. mAs range – 2 to 200 mAs or more
2	X-Ray tube:
	A. Rotating anode
	B. Focal spot :- small - 1.2 x 1.2 mm & Large - 2 x 2 mm
	C. One pair of High tension cable (at least 8 meters)
	D. collimator with full field illumination and angle indicator
3	Table:
	A. The table should be horizontal floating type.
	B. Bucky table with floating table top with immense flexibility and ease in positioning.

	C. Table top positioning with release of electromagnetic brakes controlled with a foot operated lever.
	D. Table Height – 75 cm ($\pm 5\%$)
	E. Table top – 218 x 80 cm ($\pm 10\%$)
	F. Table top should be made up of low radiation absorption, water proof material, stain free
	G. Longitudinal Travel: ± 40 cm ($\pm 2\%$)
	H. Transverse Travel : ± 12.5 cm ($\pm 2\%$)
	I. Electromagnetic locking of the table movement
4	Motorized Bucky:
	A. Grid 10:1, 60 lines / cm, focused at 115 cm
	B. 65 cm travel; movement arrested by electromagnetic brakes
	C. Suitable for cassettes in cm and inch formats and should be capable to accommodate 14"x17"
5	X-Ray Ceiling column
	A. Travel range: 195 cm ($\pm 10\%$); movement arrested with electromagnetic brakes
	B. Vertical travel: 135 cm ($\pm 10\%$); movement arrested with electromagnetic brakes
	C. Column rotation: 360°; from + 180° to -180° in 90° increments
	D. X-ray tube rotation: $\pm 180^\circ$; locks at 0° / +90° / -90°
6	STANDARD ACCESSORIES
	A. Three-fold X-ray protection barrier – 1no.
	B. Lead apron 0.5mm lead equivalence with thyroid guard – 2 no.
	C. Radiography cassettes with high speed screen (reputed make)-pl mention make, seprate for each cassette to be mentioned ,14 x 17 – 3 nos, 12x10 – 3 nos, 10x8 – 3 nos.
	D. Should be supplied with chest stand and cone for skull x-rays.
7	POWER SUPPLY REQUIREMENTS
	A. 380 to 440Vac, Three phase, 50/60 Hz.
8	SPECIFICATION OF LEAD APRON.
	A. Should be AERB approved.
	B. Should be light weight 0.5mm lead equivalent.
	C. Should be hook and loop type (Velcro).
	D. Should be supplied along with thyroid guard.
9	SPECIFICATION FOR THREE-FOLD LEAD PROTECTIVE BARRIER.
	A. Should be a threefold mobile lead protective barrier.
	B. Should be a mounted on heavy duty casters.
	C. Should have a viewing window of 1.5 mm thick lead equivalence.
	D. The centre part should have 3 feet width and 6 feet height. The sides should be 1.5 feet width and 6 feet height
10	US FDA / European CE /BIS & AERB Approved model should be offered.
11	Supplier is responsible to comply AERB guideline for installation. Lead of Patient entry door, Exposure Lamp & Radiation sinage is responsibility of supplier
12	QA test of the machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, cost is added in CMC cost of the machine.

Ultrasonogram (Obs & gyne. Department)

The Portable DICOM compatible Ultrasound machine is useful to observe structures within the body for diagnostic purposes. It is used for vascular, abdominal, obstetric and gynaecological studies.

- 1 Should be able to operate both on AC and battery.
- 2 It should have in built full alphanumeric keyboard and track ball.
- 3 Latest technology all-digital portable Ultrasound System suitable for adult & paediatric ultrasound
- 4 Should have broad band frequency Transducer Technology.
- 5 Should have B mode, M-mode,
- 6 Should have inbuilt rechargeable Battery and the system should operate for at least 120 minutes on battery
- 7 Should have integrated display screen size at least 10”.
- 8 Should have standard calculation package.
- 9 Should have image storage facility for at least 1000 images.
- 10 Sorting of data base with patient name and date should be possible.
- 11 USB port connectivity to printer or computer.
- 12 Facility for storage on CDR/DVD should be available. Data should be transferable through the network to any other workstation.
- 13 Should have cineol memory. Power Doppler
- 14 Should be light weight system weighing less than 10kg.
- 15 Transducers: (1) Convex probe (2) Linear probe (3) Echocardiography/TVS probe.
- 16 System should also have the capability to be upgraded advance software.
- 17 Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Power (energy) Doppler should be available.
- 18 Should work on 200Vac +/- 10% 50Hz power supply.
- 19 Should supply online UPS of suitable capacity with 30 minutes’ backup.
- 20 US FDA / European CE Approved model should be offered.

Radiant warmer

1. Should have microprocessor based heater control and manual modes of operation.
2. Should have user friendly touch sensitive control panel with large easy to read LED displays for actual and set temperatures.
3. Should have Quartz Infrared Heater/ Calrod Heater with parabolic reflector / J shaped reflector for uniform heat radiation.
4. The heater unit should be protected by a suitable grill.
5. The heater unit should be swiveling type/ recessed heater type and should be able to position effortlessly for performing various procedures including X rays etc .

6. The probes should be detachable type and should be supplied as 2nos for each machines.
 7. Should have memory back up to retrieve set data against power failure.
 8. Should have calibration free temperature sensors.
 9. The heater should automatically cut off at 38⁰Celsius irrespective of the set parameters.
 10. Should be mounted on four smooth running swiveling casters with integrated brakes.
 11. Should have a monitor stand and IV drip pole.
 12. Should have alarms with visual indicators for the following i. Temp high Temp low ii. Probe failure iii. Power failure, iv. Heater failure etc.
 13. Should have an examination light with ON/OFF switch.
 14. Should be provided with integrated baby bed system with cassette tray compatible for taking X-ray.
 15. Should be provided with withdraw able bed with head raising facility on both end.
 16. Should be supported with easily removable side flaps.
 17. The unit should be made of mild steel tubular structure pretreated and powder coated.
 18. Should work with input 200 to 240Vac 50 Hz supply.
 19. The mains supply voltage variation may be 180-270V and frequency variation max. 3 %.
- The necessary protective device shall be there with the machines.
20. Model Should by US FDA / CE / BIS approve product.
 21. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450

Foetal Doppler

- a. Should be handy, work on Rechargeable battery.
- b. Should have an ON/OFF switch
- c. Should have an LCD display for FHR.
- d. Should have Auto counting.
- e. Should have probe storage facility to avoid accidental falling.
- f. Should have facility to control the volume of FHR sound.
- g. Should provide rechargeable battery along with recharging unit.
- h. Should have Automatic power off facility.
- i. Should have battery level indication.
- j. Should be supplied with a carry pouch.
- k. Should work 220VAC +/- 10 %, 50Hz
- l. US FDA and/ European CE /BIS approved model should be offered.

CTG Machine

3. 1. Fetal Monitor for recording and analyzing the Fetal Heart Rate (FHR) on beat- to beat basis.
4. 2. Toco and maternally sensed fetal movements, both manually and automatically detected.
5. 3. Should have facility of twin monitoring.
6. 4. Graph on thermal printer with the machine, only thermal paper is required.
7. 5. Display of FHR up to Twins FHR1 & FHR2 & TOCO on 10" or more TFT/LCD display.
8. 6. Uterine contractions alarm. Alarm delay facility, so that alarm is available only if the alarming condition is persistent for preset time. TFT/ LCD panel with ON-LINE user friendly alarm and patient data.

9. 7. Actual FHR in BPM.
10. 8. Blinking corresponding to each Beat.
11. 9. UA in % Alarm message display High/ Low FHR limits.
12. 10. Patient ID no. Memory Backup/ Graphical or Tabular trend for minimum 24 hours with fast printing facility. Feather touch key operated volume control.
13. 11. In-built /separate acoustic stimulator with a separate marker on the graph for acoustic stimulators.
14. 12. Ultrasound transducer should be multi crystal wide beam pulsed Doppler with frequency of 1MHz.
15. 13. Fetal Heart Rate: measurement Range: 50-220 BPM.
16. 14. Signal processing: Auto Correlation.
17. 15. External Toco transducer which should be a sealed waterproof unit. Guard ring designed to reduce maternal respiration artifact. Measurement Range: 0-100 Units.
18. 16. Event Marker-Hand held, patient operated as well as front panel operated. Voltage- 230 V AC \pm 10%, 50 Hz.
19. 17. Unit should be designed as per IEC -601-1 (certificate to be submitted)
20. 18. Unit should be BIS/CE certified and from ISO 9001:2008/ISO 13485 certified manufacturers.
21. 19. Firm should mention all the pre-installation requirements in technical bid.
22. 20. The company should mention the make & model name/number of the quoted equipment and submit the technical brochure of the quoted model in the technical bid along with compliance sheet as per technical specifications.
23. 21. User manual with trouble shooting guidelines should be provided by supplier.
24. 22. Should be supplied with the following accessories at the time of installation- Transducer belt, Belt buckles, Main cables, interconnecting cables, ultrasound gel bottles (10 no.).

Pulse Oxymeter (Baby & Adult)

1. Should have plethysmograph wave form with numeric display for SPO2 and Heart rate on LCD/TFT display screen.
2. Should have a SPO2 range of 0 to 100%.
3. Should have SPO2 accuracy of $\pm 2\%$ for range 70% -99%.
4. Should provide bar graph for pulse strength.
5. Audio and visual alarm for both upper and lower SPO2, Heart rate.
6. Beep sound and alarm sound should have separate volume control.
7. Should have a minimum of 2 hours' back-up time.
8. Should be a portable, light weight and desktop model.
9. Should work with input 200 to 240Vac 50 Hz supply.
10. Should have trend data of at least 72 hrs.
11. Model Should be US FDA and Europeans CE approved product.
12. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450

Cardiac Monitor

1. Should be able to monitor 5 lead ECG, SPO2, NIBP, Respiration rate and Temperature.
2. Should be portable with carrying handle.
3. Should have touch screen TFT display with at least 10 inches or higher with at least 6 waveforms and numeric display simultaneously.

4. Should have Lithium ion battery with 4 hours battery backup.
5. Should have keys for quick access to main functions.
6. Should have adult, pediatric and neonatal modes.
7. Should provide prominent prioritised audio, visual alarms for high, low heart rate, Spo2, RR, low battery, lethal arrhythmia recognition and ST Analysis.
8. Should have separate volume control for beep sound for QRS and alarm sound.
9. Should provide following accessories:
 - ☐ Reusable adult 3 lead ECG cable set – 2 nos.
 - ☐ Reusable adult and pediatric SPO2 finger probes – 1 each.
 - ☐ Adult and pediatric NIBP cuff of different size
10. Should work on 200-240V AC/50Hz with inbuilt rechargeable battery.
11. Model Should be by US FDA & CE approve product.
12. Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450.

ILR

1. Description of Function:

1.1 Ice-lined refrigerators maintain temperatures of +2°C to +8°C. Not more than 8 hrs. continuous or intermittent power should be sufficient per 24 hrs. to maintain vaccine temperature below 8 deg. C.

1.2 Ice-lined refrigerators are required at district and regional levels, since electricity supplies are rarely perfect and standby electricity supplies may not be available.

2 Operational Requirements:

2.1 Vaccine storage is required for RI, Campaign and new vaccine introduction.

2.2 Designed for tropical climates.

2.3 Target holdover time should be 20 hrs. or more in a continuous external temperature of 43 deg. C.

2.4 Hot and cold compressor starting at 172 volts (22% below rated voltage).

2.5 Manufacturing process of the product should not use or produce hazardous chemicals-gases.

2.6 Provision for drainage for the waste water.

2.7 Should have legs in the base with rotating screw type height adjustments to balance the weight on uneven floor.

2.8 The unit should have ground clearance of minimum 100 mm.

3 Technical Specifications:

3.1 Net Vaccine Storage Capacity: 135 to 160 liters within basket in place.

3.2 Construction:

3.2.1 Internal: Stainless 304 grade steel and 20 gauge.

3.2.2 An additional special ice lining consisting of icepacks covered by strong plastic shell.

3.3 External: Corrosion Resistance (CR at least 1 mm thickness)

3.4 Chest type with CFC – free insulation

3.5 Should have horizontal water cool pack covering the top of the basket.

3.6 Solid door with lock and handle

3.7 Type: Compression Cycled, CFC-Free (both for refrigeration and insulation) All system tubing (suction tube, freezer tube and condensing tube) should be of minimum 99.97% of pure copper coil.

3.8 Temperature of a full vaccines to remain +2 deg. C to +8 deg. C during continuous availability of energy at ambient temperature +5 to +45 deg. C with intermittent/continuous electricity supply 8 hrs. in a 24 hrs. cycle. The temperature difference between any two points in the cabinet should not be more than +2 deg. C once stabilized.

3.9 Inlet of Capillary should be outside the PUF body.

3.10 ON/OFF Switch and power indicator should be available

3.11 A Micro processor based control unit should be provided for setting of temperature and display following features:

3.11.1 3 digit digital display (to one decimal point) of cabinet temperature. The sensor should be placed 25 to 50 mm above base of storage chamber.

3.11.2 Power on LED/LCD indicator

3.11.3 Audio (minimum 65 dBA) and visual alarm against the violation of temperature

range (less than +2 and more than +8 degree C)

3.11.4 Min. & Max. Cabinet temperature digital display of last 24 hrs. and breaches viewing facility during last 24 hrs.

3.11.5 The unit should be sealed/protected from dust, moisture or condensed water falling over it.

3.12 Accuracy for digital controller ± 0.5 degree centigrade.

4 System Configuration

4.1 Programmable Micro-processor control unit with child lock facility.

4.2 Should have provision to set minimum and maximum temperature at 0.1 degree Centigrade to programme the unit for continuous operation.

4.3 Should have provision for defrosting.

5 Accessories, spares and warrantee:

5.1 Warrantee & CMC of equipment as per tender clause

5.2 Vaccine Storage Basket allowing free circulation of air, having the size to be able to accommodate 4 to 6 of them in the unit and suitable to match the net volume requirement. It should be minimum 5 wire basket.

5.3 Stem Alcohol thermometer (specifications and standard as per MOHFW approved Annexure-1) - one piece per unit range of -30 to +50 degree centigrade.

5.4 The supplier is required to maintain all the spare parts as Per Tender clauses

6 Environmental factors:

6.1 The unit shall be capable of being stored continuously in ambient temperature of 0 to 50deg C and relative humidity of 95%

6.2 The unit shall be capable of operating continuously in ambient temperature of 5 to 45 deg C and relative humidity of 90%

6.3 The plug should be flexible and unbreakable sealed rubber type.

7 Power Supply:

7.1 Power input to be 220-240VAC, 50Hz as appropriate fitted with Indian plug

Voltage stabilizer as per the MOHFW approved specifications and standard.

8 Standards and Safety

8.1 USFDA or European CE (Issued by Notified Body) approved model should be Offered.

8.2 Should meet WHO/UNICEF Standard WHO/PQS/E03/RF03.1.for Ice Lined Refrigerators

8.3 Test and inspection as per WHO procedure reference WHO/PQS/E03/RF03-VP.1

Testing should be carried out from WHO certified lab/NABL/STQC Labs. Certificate of testing should be currently valid till the supply and same must be verified by inspecting authority.

8.4 Colour code : WHITE

9 Documentation:

9.1 A paper copy of user/operator manuals to be supplied in English.

9.2 A paper copy of technical/wiring diagram/maintenance manuals to be supplied in English.

9.3 Certificate of inspection for technical compliance from an independent laboratory approved

/recognized by WHO certified /National Accreditation Board for laboratories/STQC Labs is essential.

9.4 List of important spare parts and accessories with their part number and costing.

10 Packing of the equipment during shipment:

10.1 The supplier should provide strong and sufficient packing to ensure safe arrival of goods at the destination free from loss or damage.

10.2 A vertical arrow should be marked at the all sides of packages to ensure transportation of equipment in vertical position. TOP and BOTTOM should also be written.

10.3 To put label and signage's for HANDLE WITH CARE ON ALL SIDES OF THE CRATES as per packing & shipment norms.

11. Following messages should be written at the Top of the ILR

11.1 Place refrigerator at least 10 cms away from the wall and 20 cms away from other

equipment for free air circulation.

11.2 Use voltage stabilizer provided for the ILR

11.3 Safe temperature range +2 to +8 o C

11.4 Store all UIP vaccines in ILR at CHC/PHC (OPV should be stored in deep freezer at State/Regional and district vaccine store)

11.5 Open the lid, only when needed

11.6 Store only UIP vaccines (at PHCs store vaccines and diluents).

11.7 Keep all vaccine in wire baskets provided.

11.8 Leave space between the vaccine boxes for air circulation.

11.9 Place a thermometer in the basket in between the vaccines.

11.10 Keep freeze sensitive and closer expiry vaccines at TOP of the basket

11.11 Keep heat sensitive and further expiry date vaccines in the bottom of basket.

11.12 Avoid removing thermometer from the unit while reading temperature.

11.13 Net vaccine storage capacity in Litres

11.14old over time in hrs

Audiometer

Should be Completely Digital – No Frequent Calibrations

Pocket Size compact unit interfaced with pc

Automatic Synchronized Tone & Masking

Automatic calculation of Speech Scoring

TDH 49 Head Phones

With suitable Computer & Printer

Should have facility for AC, BC and Speech Audiometry

No of Channel : 2

Tone : Normal, Pulsed, Warble (Frequently Modulated 5% rate 5 Hz)

Frequency Range:-

- Air conduction 125 – 8000Hz

Bone Conduction 250 – 6000Hz

Special Tests:-

- ABLB

SISI with increment 1-2 or 5 dB

- DECAY Test
- BEKESY

Intensity Range (Pure Tone)

- TDH 49 120db HL/95 db (NBM)

Intensity Range (Speech Audiometry)

- TDH 49 100 dB HL/95 dB HL (SN – WN)

Optional

- Should be upgradable to High Frequency Audiometry
- Should be upgradable to Free Field Audiometry
- Should have option for Insert EAR PHONE.

Should be USFDA/European CE issued by notified body

Operation Microscope

1 Should have apochromatic optics

2 Should have motorized zoom system with factors 0.4 to 2.4, zoom ratio 1:5 or more.

3 Should have working distance of objective lens of focal length $F = 200\text{mm}$

4 Eye piece should be minimum 12.5x or 16x wide field.

5 Should have XY coupling & Adjustment range 50mm x 50mm or more

6 Should have cold light Halogen /LED coaxial illumination by fiber optic light guide.

7 Should have Lamp intensity adjustable, Retinal protection filter, Enhancement of depth of focus.

8 Should be floor standing type with fiber wheels with brake.

9 Attachments Camera with suitable recording system and monitor video & observer Scope

10 US FDA/ European CE approved model should be offered.

11 Power Supply 220VAC +/- 10 %, 50Hz.

12 Online UPS of suitable rating with voltage regulation, spike protection and maintenance free batteries for 60 minutes back up.

A-Scan machine

1. Should have easy readable LCD display

2. Should have adjustable gain control

3. Should have a probe frequency of 10 MHz with internal fixation light

4. Should use immersion & contact measurement technique

5. Should have automatic, manual, PMMA, Silicone, Acrylic, Aic capture modes

6. Should provide IOL formulas such as Holladay I, Hoffer Q, SRK/T, Haigis etc. and post refractive formulas like Shammas etc.

7. Should have a measurement range of 0.01 to 60mm.

8. Should measure Anterior Chamber Depth, VCD, Lens thickness and axial length.

9. Should have inbuilt thermal printer / external printer through USB

10. Should provide footswitch, immersion cup, carry case and probe hold

11. Should have LAN and USB port connectivity

12. Should operate from 200 to 240V / 50 Hz power supply

13. Certification- USFDA/European CE from notified body

LED OT Light (Double Dome)

1 Should be a surgical light unit incorporating the latest LED technology shadow less operating light field with the following specification.

2 Should have Single Colour high performance LEDs with life time more than 40,000

hours.

3 Should be a dual dome and the main light and satellite should have the following specifications.

- i. LUX intensity 1,60,000 Lux or above & Satellite 1,40,000 Lux or above.
- ii. Light Field diameter shall be above 14 cm or more
- iii. Colour temperature should be between 4000 to 4500 degree K.
- iv. Colour rendering index should not be less than 90
- v. Depth of illumination should not be less than 100 cm.
- vi. Illumination adjustment 30% to 100%
- vii. The light dome shall be compatible for laminar air flow.

4 Should have stable illumination throughout the life period of the light. If the intensity reduces during the warranty or CMC period the LEDs has to be replaced at free of cost if required.

5 The LED's must be of a single color suitable for long term maintenance and ease of replacement.

6 Temperature rise at the surgeon head level should be less than 2⁰ C.

7 Should have control panel for light focusing adjustment fixed on the dome or arms.

8 Should supply autoclavable handles 3 Nos for each dome.

9 The intensity of light should be uniform during the surgery.

10 Minimum spring arm stroke of 500mm and minimum action radius of the complete arm shall be 1500 mm or more.

11 Should work with input 200 to 240Vac 50 Hz supply.

12 The mains supply voltage variation may be 180-270V and frequency variation max. 3 %. The necessary protective device shall be there with the machines.

13 Model Should by US FDA / European CE / BIS approve product

14 Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450

Electrocautery

1	The unit should have mono-polar and bi-polar modes.
2	Should be compatible for both open and laparoscopic surgery.
3	Should have facility to connect two mono polar elect
4	Should have separate digital display of power settings for bipolar and mono-polar cut and coagulation modes.
5	Should have return electrode contact safety which display on main screen
6	Should have different audible alarm for cut and coagulation modes.
7	Should have maximum range mono-polar cut power from 300 to 400 Watts variable in steps of 1 watts in lower power and 5 watts in high power.

8	Should have mono-polar coagulation power minimum 100 Watts or more, variable in steps
9	Should have maximum bipolar coagulation power 100 Watts or more, variable in steps
10	The unit should be provided with suitable power cord and should be compatible with Indian standard wall socket
11	Should have a volume control for the audible alarm.
12	Should be supplied with reusable flexible silicon rubber patient return plate with return electrode safety 1 no.
13	The performance of the unit should not be affected by electro-magnetic interference radiated or conducted through power lines from another device.
14	The working of the equipment should not interfere with the functions of other devices.
15	Should have USFDA/European CE from notified body. Additional: should have IEC 60606-1-1/60606-1-2/60606-2-2
	Standard Accessories
1	Should be supplied with 3 pin hand pencil 5 nos. with reusable cable.
2	Reusable mono-polar active handle with cable compatible for foot operation. (With complete set of electrodes) - 10 nos & Silicon reusable rubber plate/ steel plate
3	Should be supplied with reusable insulated bayonet shaped bipolar hand piece with cable compatible for foot operation - 2 no.
4	Should be supplied with color coded pedals water proof foot switch for mono polar and bipolar.

. Defibrillator

1. Biphasic, Manual and AED with voice prompt, compact and light weight.
2. Energy selection 5J to 200J in steps.
3. Momentary energy selection access on front panel.
4. Should have adult and paediatric paddles integrated on same handle.
5. Monitor should display selected and delivered energy.
6. Charging time maximum 5 secs for 200J.
7. Should have battery backup for 50 discharges of 200J.
8. Should have ECG inputs through paddles or 5 lead cables.
9. Should have display for selected ECG input source
10. Should have an inbuilt thermal recorder.
11. Should supply 2 bottles of jelly, 12 roll of thermal paper.
12. Should supply three pairs of AED pads and the prices of AED Pads should be quoted separately in financial bid.

13. Should work on 220VAC +/-10%, 50 Hz.
14. US FDA / European CE Approved model should be offered.

CBC 3-Part

1. Should be fully automated three part haematology Analyzer providing 20 parameters including a 3-part differential
2. The system should give a differential count as Lymphocytes, mid population and Granulocytes.
3. System should be capable of processing samples at 60 -70 samples/hour & storage memory result capacity 10000.
4. The system should be based on “closed, maintenance free Sample Rotary Valve (SRV) / Needle for precise sample all quoting for dilution.
5. System should have auto Probe wiper to clean the sample probe automatically after sample aspiration and with pre dilution mode.
6. The system should use non cyanide based reagents for Hb estimation.
7. System for the reliability of the results should have “electrical Impedance” method of cell counting with an integrated temperature sensor for monitoring and compensating for shift in room temperature,.
8. The system should use to proven and approved “Volumetric & time Metering” of cell counting, for WBC RBC and PLT for high precision of the results and stability of the calibration with close measuring chamber.
9. The system should have a system of count and aperture monitoring every 30 sec or before each aspiration of sample for precision and reliability of counts.
10. The system should have automatic floating discriminator of RBC /PLT.
11. The system should have Open mode as well as pre diluted mode of sample aspiration.
12. The system should use high Intensity LED for HB estimation.
13. All reagents required should be available locally from the company or its authorized distributor
14. System should be user friendly with color touch screen and should option for external printer as well as data inter facing
15. System should be US FDA approved and European CE certified.
16. Price Evaluation will be done as per annexure-II
17. Reagent Consumption chart for 10 test per day (including two times ON/OFF) should be provided.
- 18 Should be provided with UPS for at least 60 min.
19. Should be provided with control
- 20 AMC/CMC of machine for 10 years
- 21 Blood mixer should be provided separately
22. Bar code for sample should be provided
- 23 Proper demonstration of machine should be provided before installations

24. Proper training of machine should be provided to lab technician & Doctors
25. Complementary Supply of reagents for first 5000 (Five Thousand) test free of cost
26. Should be provided with permanent printing facility (Not on thermo graph Paper) Printing facility should be covered in warranty.

Multiparamonitor

1. Should have facility for adult, paediatric and neonatal patient monitoring.
2. Should have touch screen/TFT display with at least 12" & Modular based system.
3. The waveforms should be user selectable.
4. Should have 3/5 lead ECG, SPO2, NIBP, Respiration rate, Temperature & 2 IBP.
5. Should be provided Battery backup for minimum two hours.
6. Should have automatic graphic and tabular trending of all monitored parameters as standards.
7. Should have event recall with waveforms, graphical and tabular trends, alarm logs.
8. SpO2 sensor with Plethysmograph & Pulse strength indicator With Variable pitch with change in SpO2.
9. NIBP should have display Systolic, diastolic, mean pressure in large, easy to read display.
10. NIBP should have manual/ stat mode or automatic mode with adjustable time intervals from 2- 30 minutes and adjustable alarm limits.
11. Should have Arrhythmia detection.
12. Pacemaker detection function
13. US FDA / European CE approved model should be offered.
14. Scope of supply must include: 2 Reusable 3-5 LEAD ECG Cable- 02 no. 2 Reusable SpO2 sensor for adult and paediatric- 02 no. Each 2 Reusable Rectal/ Esophageal temperature probe_ 02 no. 2 NIBP House - 02 no. 2 NIBP cuff – Adult -02 no. paediatric -02 no. & Neonatal -02 no. 2 IABP kit 10 nos. each. .
15. Power Supply 220VAC +/- 10 %, 50Hz fitted with Indian plug.
16. ETCO2 & CO module should be compatible to all monitors.
17. Wall mount monitor stand should be supply with each Monitor.

Note

- A. PLEASE QUOTE SEPARATE PRICES FOR ACCESSORIES/KIT/CABLE WHICH SHOULD BE FREEZED FOR NEXT 3 YEARS.**
- B. COST OF MULTI PARA MONITOR (ECG, SPO2, NIBP, RESPIRATION, TEMPERATURE & 2 IABP), ETCO2 & CO MODULES SHOULD BE QUOTED SEARETELY.**

BiPap Machine

1. It should be non-invasive (NIV) bi-level therapy.
2. Mode of operation CPAP, S, ST, PC, T
3. Pressure 4-30 cmH2O
4. Ramp Time 0-40 Minutes
5. Should have provision for oxygen supply
6. Should have Heated Humidifier.
7. Sound Level=Less than 40dB
8. Should have Memory Card.

9. Breath rate (BPM) 5-30.
10. Display should be LCD/LED/TFT.
11. Should have provision for oxygen supply
12. Should be supply with Reusable Silicon Mask (Small. Large & Medium size) each size 3 nos. Tubing & Heated humidifier)
13. US FDA/ European CE approved model should be offered.
14. Power Supply 220VAC +/- 10 %, 50Hz fitted with Indian plug.

Transport ventilator

1. Ventilation modes
 - a. Volume Controlled mode.
 - b. Pressure Controlled mode
 - c. Asst. Controlled mode.
 - d. SIMV(VC/PC)
 - e. Pressure Support
 - f. CPAP and PEEP
 - g. Shall have NIV in all modes
2. CPAP and PEE
 - 1 Tidal volume - 100 – 2000 ML
 - 2 Respiratory rate - 5 – 50 BPM.
 - 3 Inspiratory Pressure - 5 – 50 cm H₂O.
 - 4 Oxygen Concentration - 21 –100 %
 - 5 Audible alarms for low pressure, Apnea, high-pressure, High respiratory rate, Circuit disconnection
3. Standard Accessories (with each machine):
 - a. Patient circuit (Adult) - 1 complete set, Reusable.
 - b. O₂ Pressure Regulator - 1 No.
 - c. Hose for O₂ connection - 5 mts
 - d. Test lung - 1 No.
 - e. Shall supply with all other accessories necessary to operate the ventilator.
 - f. NIV Mask – 1 No (Adult, Reusable)
4. Power Source & Others
 8. 220/240 V Ac 50 Hz supply
 9. Internal battery (maintenance free) with 2.5 hours minimum operating
 10. Provision for mounting on trolley & bedrail with necessary clamps. Should have carry handle / provisions for transport easily.
 11. US FDA / European CE approved model should be offered.
 12. Patient Circuit –10 numbers (disposable) should be supplied along with the machine.
 13. Shall have weight <10kg.

Blood Bank Refrigerator

1. Purpose of Equipment: A refrigerator for storing whole Blood or red cell packs in a blood bank.

2. Type of equipment: compression type refrigerator that uses CFC –free refrigerant gas/
green gas.
3. Capacity: 140-150 blood bags of 450 ml or 170-200 blood bags of 350ml
4. Construction:
 - ☐ External corrosion resistant (CR at least 1mm thickness)
 - ☐ CFC- free insulation
 - ☐ Drawers Roll out type. Stainless steel scratch resistant material perforated on the bottom for perfect an homogeneous distribution of cold air. The separators, if provided in the drawers, should be such that blood bags are held in a vertical position with the label side visible.
 - ☐ Glass door, automatic closing of the front door below opening angle of 90 degree and opening angle limit to 110degree.
 - ☐ Insulation and gasket should be Silicone/Rubber.
 - ☐ Polyurethane insulation should be minimum 50- 80mm
 - ☐ Door opening audio and visual display alarm.
5. Temperature range.
 - ☐ 2 degree C to 6degree C and adjustable with setting accuracy of ± 0.5 degree C with set temperature of 4degreeC
 - ☐ User parameter settings set point high alarm point low alarm point buzzer off time. C/F Temperature choice.
6. Electrical characteristics Input voltage 220/240V 50Hz
 - ☐ Equipment meet electrical safety specification such as that if IEC (class I)
 - ☐ A line voltage corrector of appropriate rating will form part of standard configuration
7. Minimum compressor starting voltage 22% below nominal voltage.
8. Internal Temperature control
 - ☐ Electronic temperature control range $+2$ degree C to 6 degree C with setting accuracy of ± 1 degree C whatever the load.
 - ☐ Fan air cooling.
9. External Ambient Temperature: performs in an ambient temperature of $+10$ to $+40$ degree C
10. Hold –Over Time A full load of blood packs at $+4$ degree C (± 1 degree C) takes at least 30 minutes to rise to above $+6$ degree C.
11. Internal temperature hold over time in case of power failure should be at least 1.5 hours if door is closed.
12. Cooling Down Time. A full load of blood packs at $+25$ degree C takes a maximum of 13

hrs for all the packs to reach below +6degree C.

13. Temperature Monitoring

- ☐ Digital temperature (LED) display with 0.1 degree C graduation
- ☐ Microprocessor based temperature controller with integrated audio visual temperature and power alarm function with digital monitoring display.
- ☐ Independent safety thermostat to avoid negative temperature.
- ☐ At least 2 temperature Sensor for temperature monitoring shown on front display. Sensor for managing use of compressor.

14. Temperature recording devices.

- ☐ Visual and audible alarm system indicating unsafe temperature
- ☐ Battery backup for alarm and temperature recording device.
- ☐ Facility for remote alarm contact.
- ☐ Seven days graphic temperature recorder with range of -10degree C to +20 degree C with data logger with supply of free charts for a period of warranty.
- ☐ Ideal compressor running time of 17% at room temperature.
- ☐ Door locks should be available.
- ☐ Audio and visual alarm for variation in temperature.
- ☐ Auto defrosting
- ☐ Cooling time – Maximum 13 hours for all the packs to reach below such as that of IEC (class II A)
- ☐ US FDA / European CE Approved model should be offered.

Digital Haemoglobinometer

1. Working Principal- Reflectance photometry/Absorbance photometry using strip/cuvette method.
2. Sample: Capillary or venous Whole blood
3. Sample volume of < 100 µL required, automatic calibration facility.
4. Measuring range up to 25 g/dl.
5. Time for total concentration measurement: ≤ 15 seconds.
6. Should have error rate less than 5%.
7. The unit should have LCD screen for instant display of test result.
8. Shelf life of the test strip/cuvette must be one year with open vial stability of strip/cuvette must be at least three months.
9. Memory: 200 test results.
10. 200 strip/cuvette should be supplied free of cost with the equipment.
11. It should be operated with AAA battery/rechargeable, and battery should run for 1000 test
12. Should have facility of auto power-off
13. US FDA and/ European CE(Issued by Notified body) approved model should be offered.

Electricentrifuge Table Top

1. Microprocessor based table –top centrifuge with LED display of speed and time 0-60 minutes, digital count down timer.
2. Brushless induction motor with frequency drive.
3. Safety lid interlock to prevent opening of centrifugation.
4. Step-less speed regulator with speed indicator.
5. RPM 6000
6. It should be provided with interchangeable rotor head with the tube capacity of 24 tubes (515ml.).
7. Aerodynamic compact construction for vibration free performance.
8. Body should be made of strong fabricated steel and corrosion resistant.
9. Separate control panel- for start/stop switch, dynamic brakes.
10. Spare six (06) protective fuses to be supplied.
11. Electrical requirements: 220 volts-240 volts single phase, 50 Hz with power cord and plug.
12. European CE (issued by notified body) / US(FDA) approved model should be offered

DEEP FREEZER (-20 degree C)

1. Vertical type with twin door and adjustable shelves.
2. Capacity : 380 to 450 liters.
3. Temperature: -20 degree C
4. Accuracy +/- 1 degree C.
5. Must be able to perform at an ambient temperature up to 45 degree C. user friendly, non CFC refrigeration. Body is mounted on a sturdy angle iron (powder coated)frame and is mounted on castor wheels.
6. Temperature recording range:
For recording temperature tolerance limit 8 degree C to -20 degree C with graph paper for 1 yr
7. Power supply 230+/- 10 volts :50 Hz.
8. voltage stabilizer: Voltage regulator of appropriate rating to be included to cope with 160-260V.
9. Microprocessor control, digital display with battery back-up and alarm should be there.
- 10 European CE (issued by notified body) / US (FDA)/BIS approved model should be offered.

Section-VI (Sample Forms)

1.Bid Form

(Note: -This Annexure must be sworn before First-Class Magistrate/Notary)

Date: 2022

[insert: date of bid]

*[Purchaser specify: "IFB No.: **BMSICL/2022-23/ME-292**"]*

[Insert: Procurement and Contracting of Govt. Dental Medical College & Hospital, Bihar]

To:

Managing Director,

Bihar Medical Services and Medical Services Corporation,

4th Floor, Bihar State Building Construction Co. Ltd,

Hospital Road, Shastri Nagar, Patna -800023 (Bihar) India.

Dear Sir or Madam:

Having examined the Bidding Documents, including Amendment and all corrigendum, the receipt of which is hereby acknowledged, we, the undersigned, offer to supply and deliver the Goods under the above-named Contract in full conformity with the said Bidding Documents for the sum of Rs. 10,000/- (hereinafter called "the Total Bid Price") or such other sums as may be determined in accordance with the terms and conditions of the Contract. The above amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.

We undertake, if our bid is accepted, to deliver the Goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our bid is accepted, we undertake to provide an advance payment security and a performance security in the form, in the amounts, and within the times specified in the Bidding Documents.

We agree to abide by this bid, for the Bid Validity Period specified in Clause 18 of the ITB and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

Until the formal final Contract is prepared and executed between us, this bid, together with your written acceptance of the bid and your notification of award, shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any bid you may receive.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We confirm that we comply with the eligibility requirements as per ITB Clause 3 of the bidding documents.

We understand that you are not bound to accept the lowest or any bid you may receive.

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

Signed: _____

Date: _____

In the capacity of *[insert: title or position]*

Duly authorized to sign this bid for and on behalf of *[insert: name of Bidder]*

2.PRICE SCHEDULE

1	2	3	4	5						6	7	8
Sch No	Item Description	Country of origin	Quantity	Ex-factory warehouse Showroom shelf (A)	Ex-ex-off-shelf (B)	Packing & Forwarding (C)	Inland transport, Insurance & Incident al services as listed in GCC (D)	Incident al services as listed in GCC (E)	Customs Duty (F)	Unit Price A+B+C+D+E+F	Total Price per schedule for delivery at final destination (4X6)	GST payable if contract is awarded

Unit Price (6) (Rs. In words)

AMC Charges (Labour only)

Equipment name	AMC CHARGES						
	4 TH YEAR	5 TH YEAR	6 TH YEAR	7 TH YEAR	8 TH YEAR	9 TH YEAR	10 TH YEAR
TOTAL							

CMC CHARGES

Equipment name	CMC CHARGES						
	4 TH YEAR	5 TH YEAR	6 TH YEAR	7 TH YEAR	8 TH YEAR	9 TH YEAR	10 TH YEAR
TOTAL							

Price Quoted for Accessories/Consumable					
SL. No.	Name of Equipment	Name of Accessories/Consumable/ Reagent/Kits	Unit Price	GST	Unit Price Including GST

In case id discrepancy between unit price & total price Unit price shall prevail.

Place
Signatory.....

Date
(Should be submitted in format as available in e-mode only)

Signature of Bidder/Authorized

Name

Form – 3 Form of Contract Agreement

THIS CONTRACT AGREEMENT is made the _____ day of _____ *month and year purchase*] and between the Bihar Medical Services And Infrastructure Corporation Limited, Patna [*Name of Purchaser*] on behalf of Governor of Bihar (hereinafter referred to as the ‘Purchaser’) and _____ [*Name of Supplier*], having its principal place of business at _____ [*address of Supplier*] (hereinafter referred to as the “Supplier) on the other part.

WHEREAS the Purchaser invited bids for certain goods and ancillary services, viz., [*insert: brief description of goods and services*] and has accepted a bid by the Supplier for the supply of those goods and services in the sum of [*insert: contract price in words and figures*] (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

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

2. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:

- (a) This Contract Agreement
- (b) General Conditions of Contract.
- (c) Special Conditions of Contract
- (d) Technical Requirements (including Functional Requirements and Implementation Schedule).
- (e) The Supplier’s original Techno-commercial and Price bid
- (f) The Schedule of Requirements.
- (g) The Purchaser’s Notification of Award
- (h) [*Add here: any other documents*]

3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Brief particulars of the goods and services which shall be supplied /provided by the Supplier are as under:

SL	Brief Description of goods	Unit Price	Quantity to be supplied	Total price

TOTAL VALUE:

Delivery Schedule:

For and on behalf of the Purchaser

Signed: _____
in the capacity of [*insert: title or other appropriate designation*]

in the presence of _____

For and on behalf of the Supplier

Signed: _____
in the capacity of [*insert: title or other appropriate designation*]

in the presence of _____

CONTRACT AGREEMENT

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

BETWEEN

Bihar Medical Services And Infrastructure Corporation Limited, “the Purchaser”
and
[*insert: name of Supplier*], “the Supplier”

4. Performance Security Bank Guarantee

(Unconditional)

Date: *[insert: date]*

IFB: *[insert: name or number of IFB]*

Contract: *[insert: name or number of Contract]*

To:

Managing Director,

Bihar Medical Services And Infrastructure Corporation Limited,

Patna

Dear Sir or Madam:

We refer to the Contract Agreement (“the Contract”) signed on *[insert: date]* between you and *[insert: name of Supplier]* (“the Supplier”) concerning the supply and delivery of *[insert: a brief description of the Goods]*. By this letter we, the undersigned, *[insert: name of bank]*, a bank (or company) organized under the laws of *insert: country of bank* and having its registered/principal office at *[insert: address of bank]*, (hereinafter, “the Bank”) do hereby jointly and severally with the Supplier irrevocably guarantee payment owed to you by the Supplier, pursuant to the Contract, up to the sum of *[insert: amount in numbers and words]*. This guarantee shall be reduced or expire as provided for by GCC clause 5.

We undertake to make payment under this Letter of Guarantee upon receipt by us of your first written demand signed by your duly authorized officer declaring the Supplier to be in default under the Contract and without cavil or argument any sum or sums within the above-named limits, without your need to prove or show grounds or reasons for your demand and without the right of the Supplier to dispute or question such demand. Our liability under this Letter of Guarantee shall be to pay to you whichever is the lesser of the sum so requested or the amount then guaranteed under this Letter in respect of any demand duly made under this Letter prior to expiry of this Letter of Guarantee, without being entitled to inquire whether or not this payment is lawfully demanded.

This Letter of Guarantee shall be valid from the date of issue until the date of expiration of the guarantee, as governed by the Contract. Except for the documents herein specified, no other documents or other action shall be required, notwithstanding any applicable law or regulation. Our liability under this Letter of Guarantee shall become null and void immediately upon its expiry, whether it is returned or not, and no claim may be made under this Letter after such expiry or after the aggregate of the sums paid by us to you shall equal the sums guaranteed under this Letter, whichever is the earlier. All notices to be given under this Letter shall be given by registered (airmail) post to the addressee at the address herein set out or as otherwise advised by and between the parties hereto.

We hereby agree that any part of the Contract may be amended, renewed, extended, modified, compromised, released, or discharged by mutual agreement between you and the Supplier, and this security may be exchanged or surrendered without in any way impairing or affecting our liabilities hereunder without notice to us and without the necessity for any additional endorsement, consent, or guarantee by us, provided, however, that the sum guaranteed shall not be increased or decreased.

No action, event, or condition that by any applicable law should operate to discharge us from liability hereunder shall have any effect, and we hereby waive any right we may have to apply such law, so that in all respects our liability hereunder shall be irrevocable and, except as stated herein, unconditional in all respects.

For and on behalf of the Bank _____

Signed:

Date: _____

in the capacity of: *[insert: title or other appropriate designation]* Common Seal of the Bank

5. Manufacturer's Authorization Form
(Manufacturer's or Producer's letterhead)

To:
Managing Director,
Bihar Medical Services and Infrastructure Corporation Limited,
Patna

WHEREAS [*name of the manufacturer or producer*] (hereinafter, "we" or "us") who are established and reputable manufacturers or producers of [*name and/or description of the Goods requiring this authorization*] (hereinafter, "Goods") having production facilities at [*insert: address of factory*] do hereby authorize [*name and address of Bidder*] (hereinafter, the "Bidder") to submit bid, and sign the Contract with you against IFB [*title and reference number of the Invitation forbids*] including the above Goods produced by us.

We hereby extend our full guarantee and warranty for the above specified Goods against these Bidding Documents and also confirm full functionality of the said equipment during the entire post warranty Comprehensive Maintenance Contract Period as agreed.

For and on behalf of the Manufacturer or Producer

Signed: _____

Date: _____

In the capacity of [*title, position, or other appropriate designation*] and duly authorize to sign this Authorization on behalf of [*name of manufacturer or producer*]

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

6. Performa for performance statement

Bid No: _____ Date of Opening: _____ Time: _____ Hours

Name of the Firm: _____

Order Placed By (Full address of Purchaser)	Order No and Date	Description of works /project on turn key basis completed	Date of completion of projects		Was the completion of works/projects was Satisfactory? Yes/No	<i>Attach a certificate from the Purchaser/consignee (as applicable)</i>
			As per contract	Actual		

(Signature and seal of the Bidder/Authorised Signatory)

7. CONSIGNEE RECEIPT CERTIFICATE/ Installation Report/Project completion certificate

(To be given by consignee / end user of the project)

The following equipment has / have been received in good condition:

Name of Project completed	
Name of the Supplier / Manufacturer	
Quantity supplied / cost of the project	
Purchase Order reference no.	
Detailed item list of the project	
Place of the project executed	
Name and Address of the Consignee along with tel. no. and fax no.	
Date of receipt by the Consignee	
Date of completion	
Signature of Authorized Representative of Consignee with date	
Name and designation of the authorized representative	
Seal of the consignee	

Note: In case of Hospital the In charge of the hospital concerned would be treated as consignee. In case of office (other than hospital), the office in charge of the office would be treated as consignee.

(Hospital / Office In charge)

(User Department)

8. Statement for technical Deviation:

Sr. No	Specifications desired by BMSICL	Bidders specifications	Bidders Deviation if Any

(Signature of Bidder/ Authorized Signatory)

9. FORMAT FOR WARRANTY CERTIFICATE

(To be submitted on Firms Letterhead)

Warranty Certificate

Date:

We the Undersignedhereby
guarantee satisfactory operation of supplied by us to you
against your purchase order No.....for a period of..... *calendar*
months from the date of commissioning and shall be responsible for failure of the equipment to conform to
the standard of performance, proficiency, production and / or out-turn stipulated or implicit in the order and
for any defects that may develop under proper use arising from the use of faulty materials, design or
workmanship in the supply made and shall remedy such defects at our cost.

Consignee Name-

Serial number of Equipment-

For.....

Station: (Signature with Name and Designation)

Date:

Company Seal

10. Non Conviction Declaration (Duly notarized)

From:-

M/s.....

.....

.....

.....

To

Managing Director

BMSICL, Patna

1. I, _____ Son / Daughter / Wife of
Shri _____

Proprietor/Director authorized signatory of the agency/Firm, mentioned above, is competent to sign this declaration and execute this tender document;

2. I have carefully read and understood all the terms and conditions of the tender and undertake to abide by them;

3. The information / documents furnished along with the above application are true and authentic to the best of my knowledge and belief. I / we, am / are well aware of the fact that furnishing of any false information / fabricated document would lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate law.

4. I/We further undertake that none of the Proprietor/Partners/Directors of the Agency/agency was or is Proprietor or Partner or Director of any Agency with whom the Government have banned /suspended business dealings. I/We further undertake to report to the Managing Director, BMSICL, Patna immediately after we are informed but in any case not later 15 days, if any Agency in which Proprietor/Partners/Directors are Proprietor or Partner or Director of such a Agency which is banned/suspended in future during the currency of the Contract with you.

Yours faithfully,

(Authorized Signatory/Signature of the Bidder)

Date:

Place:

Seal of the Agency

Name:

Designation

Address:

(Note: - This annexure must be sworn before First Class Magistrate/Notary)

11.Bank Guarantee Form for Earnest Money Deposit (EMD)

Date: [insert: **date**]
IFB: [insert: **name and number of IFB**]
Contract: [insert: **name and number of Contract**]

To:
Managing Director,
Bihar Medical Services And Infrastructure Corporation Limited,
Patna

WHEREAS [insert: **name of Bidder**] (hereinafter called “the Bidder”) has submitted its bid dated [insert: **date of bid**] for the performance of the above-named Contract (hereinafter called “the Bid”)

KNOW ALL PERSONS by these present that WE [insert: **name of bank**] of [insert: **address of bank**] (hereinafter called “the Bank”) are bound unto [insert: **name of Purchaser**] (hereinafter called “the Purchaser”) in the sum of: [insert: **amount**], for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents.

Sealed with the Common Seal of the said Bank this [insert: **number**] day of [insert: **month**], [insert: **year**].
THE CONDITIONS of this obligation are the following:

1. If, after the bid submission deadline
 - (a) the Bidder withdraws or amends its tender or impairs or derogates from the tender in any respect before signing of the agreement or
 - (b) does not accept the Purchaser’s corrections of arithmetic errors in accordance with the Instructions to Bidders; or
 - (c) within the period of validity of its tender or if it comes to notice that the information/ documents furnished in its tender is incorrect, false, misleading or forged or
 - (d) engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity
 - (a) fails or refuses to sign the Contract Agreement when required; or
 - (b) fails or refuses to issue the performance security in accordance with the Instructions to Bidders.

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due it, owing to the occurrence of any one of the two above-named CONDITIONS, and specifying the occurred condition or conditions.

This guarantee will remain in full force up to and including [insert: **the date that is 30 days after the period of bid validity**].

For and on behalf of the Bank

Signed: _____

Date: _____
in the capacity of: [insert: **title or other appropriate designation**]

12. POWER OF ATTORNEY
(Notarized)

I/ We.....(name and address of the registered office) do hereby constitute, appoint and authorise Sri/ Smt.(name and address) who is presently employed with us and holding the position of As our attorney, to act and sign on my/our behalf to participate in the tender no..... for (Project Name).

I/ We hereby also undertake that I/we will be responsible for all action of Sri/Smt..... undertaken by him/her during the tender process and thereafter on award of the contract. His / her signature is attested below

Dated this theday of .. 2022_

Accepted _

For_____

(Signature) (Name, Title and Address of the Attorney) (Name, Designation and Address)

Date: _

13. CHECK LIST			
Name of the Tenderer			
SL. No.	Item	Whether Included Yes/No	Page No.
A. Tender Fee, EMD			
1.	Tender Fee (in the form of Demand Draft) – Rs.10,000/-		
2.	EMD (in the form of Demand Draft/Bank Guarantee as per annexure-11).		
B. Check list & Registration.			
1.	Make & Model Quoted items in the project. (Bidder can offer TWO alternates makes & Models.)		
2.	Document claiming the Registration for Trading/ Manufacturing		
3.	Certificate of Incorporation and Articles of Memorandum of Association/Partnership Deed (As applicable)		
4.	Copy of certificate from Central Excise and Trades Tax/ Sales Tax		
5.	Copy of average Turn over certificate for last five consecutive Assessment years issued by Chartered Accountant.		
6.	Copy of certificate of Balance Sheet of last five consecutive Assessment years under the stamp and signature of Chartered Accountant.		
7.	Copy of certificate of P&L Statement of last five consecutive Assessment years under the stamp and signature of Chartered Accountant.		
8.	Copy of self-attested IT Returns for any three of last four consecutive Assessment years		
9.	Non-Conviction Declaration (Sworn before First-Class Magistrate/Notary) as per Annexure 10		
10.	Submission of Manufacturer's Authorization (if quoted by bidder other than manufacturer) as per Annexure 5 at the time of supply is mandatory.		
11.	Bid Form (Sworn before First-Class Magistrate/Notary) as per Annexure 1		
12.	Supply/Purchase order issued by user institution to comply the completion of turn-key project criteria mentioned in ITB clause 15		
13.	Performance Statement for project completion in Annexure 6		
14.	Certificate from end user(s) indicating the Purchase order(s) as submitted by the Bidder, date of completion of project/installation of the Equipment.		
15.	Technical Data Sheet/Brochure/Catalogue of the model of quoted items may be submitted in hard copy along with the hardcopy of online submitted tender document as per the submission date in the tender. This fact should be mentioned in writing in online submitted bid document.		
16.	Technical Deviation Compliance for every quoted item in project as per annexure-8		
17.	Power of Attorney for the Signatory to the Bid as per annexure 12, duly notarized.		

18.	Quality Standard Certification (USFDA/CE issued by notified body/BIS) in accordance with technical specification in this bid document must be furnished in technical bid documents, Where able applicable		
19.	Notary attested declaration if exempted in EMD and Tender Fee, Technical Qualification as per Resolution no. 883 dated 29.06.2020 of Industries Department, Govt. of Bihar as mentioned in special condition of contract.		
20.	Approval from Reserve Bank of India in case of Foreign Collaboration		
21.	IEC Certificate if the bidder is an importer of the quoted items in project.		

