



आरोग्यम् सुख सम्पदा

अखिल भारतीय आयुर्विज्ञान संस्थान, रायपुर (छत्तीसगढ़)  
All India Institute of Medical Sciences, Raipur (Chhattisgarh)

### **खण्डन@DISCLAIMER**

यह निविदा अखिल भारतीय आयुर्विज्ञान संस्थान, रायपुर (छ.ग.) के लिये बोलीदाताओं/फर्म/एजेंसी इत्यादी से प्रस्ताव नहीं बल्की प्रस्ताव प्राप्त करने का निमंत्रण है संविदात्मक दायित्व तब तक नहीं होगा जब तक औपचारिक अनुबंध पर हस्ताक्षर नहीं किया जाता और चयनित बोलीदाताओं/फर्म/एजेंसी इत्यादी के साथ एम्स रायपुर के विधिवत अधिकृत अधिकारियों के द्वारा निश्पादित किया गया हो।

This tender is not an offer by the All India Institute of Medical Sciences, Raipur, but an invitation to receive offer from bidders/firm/agency etc. No contractual obligation whatsoever shall arise from this tender process unless and until a formal contract is signed and executed by duly authorized officers of AIIMS, Raipur with the selected bidder/firm/agency.

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Tatibandh, G.E. Road, Raipur -492099 (CG),  
Tele: 0771- 2577279, 07712971307  
Website: [www.aiimsraipur.edu.in](http://www.aiimsraipur.edu.in)/[www.eprocure.gov.in](http://www.eprocure.gov.in)  
Email: [store@aiimsraipur.edu.in](mailto:store@aiimsraipur.edu.in)



अखिल भारतीय आयुर्विज्ञान संस्थान, रायपुर (छ.ग.) के दंत चिकित्सा विभाग के क्रय एवं इकाई की  
स्थापना (टर्नकी) की आपूर्ति हेतु निविदा आमंत्रण सूचना

**Notice Inviting Tender for Turnkey Setting up of Dedicated Department of  
Dental & Maxillofacial Surgery at  
All India Institute of Medical Sciences, Raipur**

**CRITICAL DATE SHEET**

Published Date	<b>02.04.2020 at 10: 30 am</b>
Bid Document Download / Sale Start Date	<b>02.04.2020 at 12:00 am</b>
Pre bid meeting	<b>17.04.2020 at 03:30 pm</b>
Bid Submission Start Date	<b>24 .04.2020 at 10:00 am</b>
Bid Submission End Date	<b>30 .04.2020 at 15:00 pm</b>
Bid Opening Date	<b>01 .05.2020 at 15:30 pm</b>

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Tele: 0771- 2577279, 07712971307  
Website: [www.aiimsraipur.edu.in/www.eprocure.gov.in](http://www.aiimsraipur.edu.in/www.eprocure.gov.in)  
Email: [store@aiimsraipur.edu.in](mailto:store@aiimsraipur.edu.in)



## अखिल भारतीय आयुर्विज्ञान संस्थान, रायपुर, छत्तीसगढ़

All India Institute of Medical Sciences, Raipur (Chhattisgarh)

Tatibandh, GE Road, Raipur-492 099 (CG)

Website : [www.aiimsraipur.edu.in](http://www.aiimsraipur.edu.in)

Tele: 0771- 2971307, e-mail: [store@aiimsraipur.edu.in](mailto:store@aiimsraipur.edu.in)

1. Tenders in Two Bids (Technical & Financial Online bids) are invited on behalf of the, Director, All India Institute of Medical Sciences from interested and eligible service providers under Open Tender for **“Turnkey Setting up of Dedicated Department of Dental & Maxillofacial Surgery”** Manual bids shall not be accepted.
2. Tender document may be downloaded from AIIMS web site [www.aiimsraipur.edu.in](http://www.aiimsraipur.edu.in) (for reference only) and CPPP site <https://eprocure.gov.in/eprocure/app> as per the schedule as given in CRITICAL DATE SHEET as under.
3. Bid shall be submitted online at CPPP website: <https://eprocure.gov.in/eprocure/app>.
4. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
5. Tenderer who has downloaded the tender from the AIIMS web site [www.aiimsraipur.edu.in](http://www.aiimsraipur.edu.in) and Central Public Procurement Portal (CPPP) eProcurement website <https://eprocure.gov.in/eprocure/app> shall not tamper/modify the tender form including downloaded price bid template in any manner. In case if the same is found to be tempered/modified in any manner, the bids will summarily rejected and EMD would be forfeited and tenderer will be liable to be banned from doing business with AIIMS Raipur.

The Technical bid should include the detailed specifications of main item/equipment and its accessories. All items should be numbered as indicated in the Annexure-I (Any deviation should be clearly mentioned and supporting document should be submitted).

6. Manual bid shall not be accepted in any circumstance.
7. The complete bidding process in online bidding, Bidder should be possession of valid digital Signature Certificate (DSC) for online submission of bids. Prior to bidding DSC need to be registered on the website mentioned above.
8. Tenderers are advised to follow the instructions provided in the 'Instructions to the Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>'.
9. Quotations should be valid for 180 days from the tender due date i.e. tender opening date. The bidder should clearly indicate the period of delivery & other terms.
10. Relevant literature pertaining to the items quoted with full specifications should be uploaded, where ever applicable.
11. **Tenderer must provide evidence of having supplied Setting up of Dedicated Department of Dental or Maxillofacial Surgery Unit in government hospital / reputed private hospital organizations in India of at least ₹ 2,44,89,500.00 of Tender value in the last three years and the copy of the same should be uploaded.**
12. The firm should be registered and should have average annual turnover at least ₹ **4,89,79,000.00** in the last three financial years. Copies of authenticated balance

- sheet & Profit & loss A/c/Income Expenditure for the past three financial years should be uploaded.
13. The tender document must be accompanied by copy of PAN, Certificate of firm/company registration, GST registration.
  14. The quantity shown against each item is approximate and may vary as per demand of the Institute at the time of placement of order.
  15. The bidder must be able to provide the product/items within specified time period as prescribed in the Purchase Order, failing which the EMD will be forfeited. Furthermore on completion of the stipulated time period, Purchase Order will be cancelled and award will be given to another qualified bidder with the negotiated terms & conditions as per Institutes norms.
  16. In the event of any dispute or difference(s) between the vendee (AIIMS Raipur) and the vendor(s) arising out of non-supply of material or supplies not found according to the specifications or any other cause what so ever relating to the supply or purchase order before or after the supply has been executed, shall be referred to the Director/AIIMS/Raipur who may decide the matter himself or may appoint arbitrator(s) under the arbitration and conciliation Act 1996. The decision of the arbitrator shall be final and binding on both the parties.
  17. The place of arbitration and the language to be used in arbitral proceedings shall be decided by the arbitrator.
  18. All disputes shall be subject to Raipur Jurisdiction only.
  19. **AIIMS Raipur reserves the rights to accept/reject any bid in full or in part or accept any bid other than the lowest bid without assigning any reason thereof. Any bid containing incorrect and incomplete information shall be liable for rejection.**
  20. The Tender/Bid will be opened Store office at AIIMS Raipur Premises.
    - i) Only those financial bids will be opened whose technical bids are found suitable by the expert committee appointed for the concerned instrument/equipment.
    - ii) No separate information shall be given to individual bidders. In incomparable situation, the committee may negotiate price with the technically and financially qualified bidder before awarding the bid.
  21. Copies of original documents defining the constitution or legal status, place of registration and principal place of business of the company or firm or partnership, etc. shall be submitted with Tech Bid.
  22. **Award of Contract**

AIIMS Raipur will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has bided the lowest evaluated quotation price.

    - i) Notwithstanding the above, AIIMS Raipur reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
    - ii) The bidder whose bid is accepted will be notified of the award of contract prior to expiration of the bid validity period. The terms of the accepted bid shall be incorporated in the purchase order.
  23. Normal comprehensive warranty/guarantee and CMC (if applicable) shall be applicable to the supplied goods as per Annexure-I.
  24. Rates should be quoted inclusive of packing, forwarding, postage and transportation charges etc.
  25. The competent authority reserves all rights to reject the goods if the same are not found in accordance with the required description/ specifications/quality.

26. A brochure displaying the product clearly is to be attached with the tender if required.

27. **Earnest Money:**

S.No.	Name of the items	EMD in ₹
1.	<b>Supply of Turnkey Setting up of Dedicated Department of Dental &amp; Maxillofacial Surgery</b>	<b>₹ 14,69,500.00</b>

Earnest money of as mentioned above by means of a Bank Demand Draft/ FDR is required to be submitted. A scanned copy of the same must be uploaded with the bid documents. It is also clarified that the bids submitted without earnest money will be summarily rejected. The DD/FD may be prepared in the name of "All India Institute of Medical Sciences, Raipur (AIIMS RAIPUR)". The original EMD instrument must reach the office of the Stores Officer Gate no. 5, Medical College Building, 2nd Floor, AIIMS, Raipur **before opening** of tender.

- i) No request for transfer of any previous deposit of earnest money or security deposit or payment of any pending bill held by the AIIMS Raipur in respect of any previous supply will be entertained. Tenderer will not be permitted to withdraw his bid or modify the terms and conditions thereof. In case the tenderer fail to observe and comply with stipulations made herein or backs out after quoting the rates, the aforesaid amount of earnest money will be forfeited.
  - ii) Tenders without Earnest Money will be summarily rejected.
  - iii) No claim shall lie against AIIMS Raipur in respect of erosion in the value or interest on the amount of EMD.
  - iv) If MSME firm is registered under National Small Industries Corporation (NSIC) for above tendered item, then the firm will be exempted from submission of EMD amount. Firm must upload scanned copy certificate for claiming exemption failing which the claim will not be entertained.
  - v) The earnest money will be returned/ refunded to the unsuccessful bidders after the tender is decided.
  - vi) EMD should remain valid for a period of **45 days** beyond the final bid validity period. When the tenderer agrees to extend the validity of bid, he shall also extend the validity of EMD suitably.
29. In case the supplier requires any elucidation regarding the tender documents, they are requested to contact the Store Officer, AIIMS Raipur through e-mail: store@aiimsraipur.edu.in on or before end date of clarification as per critical date sheet.
30. The EMD of the successful bidder will be returned to them without any interest after the submission of Security deposit/PSD.
31. GST rates applicable on your quoted item may please be confirmed.
32. **Please confirm if there any change (Upward/Reduction) in your Basic Price structure.** Bidders shall pass the Input Credit as per the following Anti Profiteering Clause of GST. "Upon Implementation of GST, any reduction in the rate of tax on supply of goods or service or the benefit of input tax credit shall be passed on to AIIMS Raipur by way of commensurate reduction in the prices".
33. In the event of increase in price, detailed justification and supporting evidence may be submitted for our consideration. The GST registration details may please be furnished.
34. Other terms and condition applicable as per manual for procurement of goods 2017, GFR-2017 etc.

**Sr. Administrative Officer,  
AIIMS Raipur**

**Other Terms & Conditions:****1. Pre-Qualification Criteria:**

- a) Bidder should be the manufacturer/authorized dealer/Distributor/Trader/ **Supplier of goods. Letter of Authorization from Manufacturer of the goods** and specific to the tender should be uploaded in the prescribed place.
- b) An undertaking from the original Manufacturer is required stating that they would facilitate the bidder on regular basis with technology/ product updates and extend support for the warranty as well. The scanned copy of same to be uploaded. (if applicable).

**2. Performance Security Deposit (PSD):**

- a) The successful bidder shall have to submit a Performance Security Deposit (PSD) within 30 days from the date of issue of Letter of Award (LOA). Extension of time for submission of PSD beyond 30 days and up to 60 days from the date of issue of LOA may be given by the competent authority to sign the contract agreement however a penal interest of 15% per annum shall be charged for the delay beyond 30 days. i.e. 31<sup>st</sup> day after the date of issue of LOA. In case the contractor fails to submit the requisite PSD even after 60 days from the date of issue of LOA the contract shall be terminated duly forfeiting the EMD and other dues, if any payable against the contract . The failed contractor shall be debarred from participating in re-tender (if any) for that item.
- b) Successful supplier/firm should submit Performance Security Deposit in favour of “AIIMS, Raipur” to be received in the Store Office, 2<sup>nd</sup> Floor, Medical College Building, Tatibandh, Raipur (C.G) Pin-492099 before the date of commencement of supply or 30 days from the date of acceptance of the LOA, whichever is earlier. The Performance Security Deposit shall be furnished in the form of FDR/DD/Bank Guarantee or performance guarantee bond as per proforma given in the tender documents, for an amount covering 10% of the contract value.
- c) The Performance Security Deposit should be established in favour of “AIIMS Raipur” through any Schedule Bank with a clause to enforce the same on their local branch at Raipur.
- d) Validity of the Performance Security Deposit shall be for a period of 60 days beyond entire warranty & CMC period from the date of issue of installation & commissioning.
- e) After completing of warranty period a fresh BG/DD/FDR of 10% of CMC cost will be submitted by the supplier for performance security against CMC validity of this new BG/DD/FDR will be 60 days beyond CMC period. After submission of new security deposits, old security deposit will be released.

**3. Delivery& Installation:** The successful bidder should strictly adhere to the following delivery schedule Supply, installation & commissioning should be effected **within 45 days / 90 days (in case of imported goods)** from the date of purchase order and this clause should be strictly adhere to failing which Liquidation Damages will be imposed as per **clause no. 5 hereunder**.**4. Purchase Order** will be placed as per requirement of institute.**5. Penalty:** If the suppliers fails to Supply, **Install & Commission and/or** place any or all the Equipment or perform the service by the specified date as **mentioned** in purchase order, penalty at the rate **of 0.5% per week or part thereof delayed** value of goods subject to the maximum of **10% of delayed goods value will be imposed**.**6. Training and Demonstration:** Suppliers needs to provide adequate training and demonstration at AIIMS Raipur to the nominated person of AIIMS Raipur at their cost. AIIMS Raipur will not bear any training or living expenditure in this regard. The supplier should arrange for regular weekly visit to the AIIMS, Raipur campus by its technical team and assist in maintenance of the item/equipment within warranty period. Assistance limited to locking companies with manufacturer will not be considered sufficient.

- 7. Right of Acceptance:** AIIMS, Raipur reserves the right to accept or reject any or all tenders/quotations without assigning any reason there of and also does not bind itself to accept the lowest quotation or any tender. AIIMS, Raipur also reserves the rights to accept all the equipment/instruments in the given tender or only part of it in any given schedule without assigning any reason.
- 8. Validity of the bids:** The bids shall be valid for a period of **180 days** from the date of opening of the tender. This has to be so specified by the tenderer in the commercial bid which may be extended, if required.
- 9. Risk Purchase & Recovery of sums due:**
- Failure or delay in supply of any or all items as per Requisition / Purchase Order, Specification or Brand prescribed in the tender, shall be treated as '**non-compliance**' or 'breach of contract' and the order in part of full be arranged from alternative source(s) at the discretion of the hospital authority and the difference in price can be recovered from the tenderer.
  - The amount can be recovered from any of his subsequent / pending bills or security Deposit.
  - In case the sum of the above is insufficient to cover the full amount recoverable, the contractor shall pay to the purchaser, on demand the remaining balance due.
- 10. Installation & Warranty Declaration:** Suppliers must give comprehensive onsite warranty for **5 year** from the date of successful installation of item/equipment against manufacturing defects. In the installation report the model number of instrument and all spares parts/ accessories numbers should be in the line of purchase order. Suppliers must mention in the warranty declaration that “everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship and shall be of the highest quality and material of the type ordered, shall be in full conformity with the specification and shall be completed enough to carry out the experiments, as specified in the tender document.” If any item covered under warranty fails, the same shall be replaced free of cost including all the applicable charges (shipping cost both ways). **Installation must be done within stipulated time period from the date of delivery of the item/ equipment as specified in the purchase order.**
- 11. Communication of Acceptance:** AIIMS, Raipur reserves all right to reject any tender including of those tenderers who fails to comply with the instructions without assigning any reason whatsoever and does not bind itself to accept the lowest or any specific tender. The decision of this Institute in this regard will be final and binding.
- 12. Guarantee/Warranty, Service, Maintenance:** The tenderers must quote for **5 year** onsite warranty from the date of completion of the satisfactory installation as certified by the stipulated committee/department. The warranty charges shall not be quoted separately otherwise the bid shall be summarily rejected.
- 13. Insolvency etc.:** In the event of the firm being adjudged insolvent or having a receiver appointed for it by a court or any other under the Insolvency Act made against them or in the case of a company the passing any resolution or making of any order for winding up, whether voluntary or otherwise, or in the event of the firm failing to comply with any of the conditions herein specified AIIMS, Raipur shall have the power to terminate the contract without any prior notice.

**14. Force Majeure:** If, at any time during the subsistence 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, act of public enemy, civil commotion, sabotage, fire, floods, exception, epidemics, quarantine restriction, strikes, lockout or act of God (hereinafter referred to as events) provided notice of happening of any such eventuality is given by party to 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.

Further, that if the performance in whole or in part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, AIIMS, Raipur may, at its option to terminate the contract.

**15. Breach of Contract:** In case of breach of any terms and conditions as mentioned in agreement/contract, the Competent Authority, will have the right to cancel the contract without assigning any reasons thereof and nothing will be payable by AIIMS, Raipur. In that event the security deposit shall also stand forfeited.

**16. Subletting of Contract:** The firm shall not assign or sublet the contract or any part of it to any other person or party without having prior permission in writing of AIIMS, Raipur, which will be at liberty to refuse if it thinks fit. The tender is not transferable.

**17. Right to call upon information regarding status of contract:** AIIMS, Raipur will have the right to call upon information regarding status of contract at any point of time.

**19. Terms of payment:**

**19.1.**

Payment shall be made subject to recoveries, if any, by way of liquidated damages or any other charges as per terms & conditions of contract in the following manner.

**A) Payment Terms & Conditions**

Payment shall be made in Indian Rupees as specified in the contract in the following manner:

1. First payment will be released on completion of 20% works on recommendation of department ( On actual work done)
2. Second payment shall be released on completion of 30% work on ( Total 50% work ) recommendation of department ( on actual work done)
3. 3rd payment shall be released on completion of 75% works on recommendation of department ( on actual work done)
4. On achieving every milestone 75% payment of total certified bill shall be released.
5. Final payment will be released of FAC Issued by department.

**B) Payment for Imported Goods:**

Payment of foreign currency portion shall be made in the currency as specified in the contract in the following manner:

**(a) On Shipment:**

Seventy (70) % of the CIP destination price of the goods shipped shall be paid through irrevocable, non-transferable Letter of Credit (LC) in favour of the supplier in a bank in his country in case of Foreign Tenderer and upon submission of documents specified



here under:

- (i) Four copies of supplier's invoice showing contract number, goods description, quantity, Unit price and total amount with revenue stamp.
- (ii) Original and four copies of the negotiable clean, on-board Bill of Lading/Airway bill, marked freight pre-paid and four copies of non-negotiable Bill of Lading/Airway Bill.
- (iii) Four copies of packing list identifying contents of each package.
- (iv) Insurance Certificate and a documents also to be submitted for payment of LC confirming that dispatch documents has already been sent to all concerned as per the contract within 24 hours.
- (v) Manufacturer's/Supplier's warranty certificate.
- (vi) Certificate of origin.

**(b) On Acceptance:**

Balance payment of 30% of net CIP price of goods would be made against 'Final Acceptance Certificate' to be issued by the consignee through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the Foreign Principal in a bank in his country, subject to recoveries, if any.

**Payment of Indian Agent Commission:**

Indian Agency Commission will be paid to the manufacturer's agent in the local currency for an amount in Indian rupees indicated in the relevant Price Schedule (as per prevailing rate of exchange ruling on the date of contract) and shall not be subject to further escalation/exchange variation. Payment shall be paid in Indian Rupees to the Indian Agent on proof of 100% payment **to the** Foreign Principal.

**19.3** Where there is a statutory requirement for tax deduction at source, such deduction towards income tax and other tax as applicable will be made from the bills payable to the supplier at rates as notified from time to time.

**19.4** No payment shall be made for rejected stores. Rejected equipment's must be removed by the supplier within two weeks of the date of issue of rejection advice at their own cost & replace immediately. In case these are not removed these will be auctioned at the risk and responsibility of the suppliers without notice.

**20. Compulsory Enlistment of Indian Agents**

As per the Compulsory Enlistment Scheme of the Department of Expenditure, Ministry of Finance, it is compulsory for Indian agents who desire to quote directly on behalf of their foreign manufacturers/principals, to get themselves enlisted with the Department of Expenditure, through the Central Purchase Organization (e.g. DGS&D).

The compulsory enlistment of Indian Agents under the scheme of Ministry of Finance is simpler and differs from the registration of Indian Agents with the Central Purchase Organization (e.g. DGS&D) described in the earlier paragraphs.

The registration of the foreign manufacturer is not a must for enlisting the Indian Agent under this scheme. No Inspection Report in respect of the foreign manufacturer/principal is necessary.

The enlistment under the scheme is not equivalent to the Registration with DGS&D. Such firms do not enjoy the same status as that of DGS&D registered suppliers. A note to this effect is given in the Enlistment Letter to the firm.

**21. Custom Duty on Imported Goods**

In respect of imported goods, the tenderers shall also specify separately the total amount of custom duty **which shall form part of the bid price**. The tenderers should also indicate correctly the rate of custom duty applicable for the goods in question and the corresponding Indian Customs Tariff Number. Where customs duty is payable, the contract should clearly stipulate the quantum of duty payable etc. in unambiguous terms. AIIMS, Raipur is exempted from payment of excise duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand. **However, the bidders shall quote full rates of custom duty on the BOQ without making any provision for exemption.** AIIMS, Raipur will not make any arrangements for clearance of imported goods at the airport.

**22. Custom Duty Reimbursement:**

The supplier will pay the customs duty wherever applicable, which will be reimbursed by purchaser as per documentary evidence. The custom duty exemption certificate will be provided to the supplier as and when required.

**23. Good & Service Tax –**

GST rates applicable on the quoted item may please be mentioned in the bid document.

2. It may be confirm if there is any (Upward/Reduction) in the Basic Price structure. Bidders are required to pass the Input Credit as per the following Anti Profiteering Clause of GST.

**“Upon Implementation of GST, any reduction in the rate of tax on supply of goods or service or the benefit of input tax credit shall be passed on to AIIMS Raipur by way of commensurate reduction in the prices”.**

3. HSN Code for each item should be clearly mentioned.

**24. Fall Clause:**

1. Prices charged for supplies under Rate Contract by the supplier should in no event exceed the lowest prices at which he bids to sell or sells the stores of identical description to any other State Government/DGS&D/Public Undertaking during the period of the contract.
2. If at any time during the period of contract, the prices of tendered items is reduced or brought down by any law or Act of the Central of State government, the supplier shall be bound to inform Purchasing Authority immediately about such reduction in the contracted prices, in case the supplier fails to notify or fails to agree for such reduction of rates, the Purchasing authority will revise the rates on lower side. If there is a price increase for any product after quoting the rates, the bidder will have to supply the item as per quoted rates. This office will not accept any higher rates after wards.
3. If at any time during the period of contract, the supplier quotes the sale price of such goods to any other State Govt./DGS&D and Pubic Undertakings at a price lower than the price chargeable under the rate contract he shall forthwith notify such reduction to Purchasing Authority and the prices payable under the rate contract for the equipment's supplied from the date of coming into force of such price stands correspondingly reduced as per above stipulation.

Any deviation in the material or specifications from the accepted terms may liable to be rejected and the suppliers need to supply all the goods in the specified form to the satisfaction/ specifications specified in the Purchase order and demonstrate at the their own cost.

**25. Arbitration:**

If any difference arises concerning this agreement, its interpretation on payment to the made there under, the same shall be settled out by mutual consultation and negotiation. If attempts for conciliation do not yield any result within a period of 30 days, either of the parties may make a request to the Director, AIIMS Raipur to settle the dispute by Sole Arbitrator. Sole arbitrator will be appointed by the Director, AIIMS Raipur. The provision of Arbitration and Conciliation Act, 1996 and the rule framed there under and in force shall be applicable to such proceedings.

**26. Option Clause/ Tolerance Clause:** If essentially stipulated by indenting authority, which is duly approved by competent authority of AIIMS Raipur. Then purchaser retains the right to place the repeat order for an additional quantity of the equipment with the same rate and terms of contract. This clause should be a part of bid document and the contract.

**27. Legal Jurisdiction:**

The agreement shall be deemed to have been concluded in Raipur, Chhattisgarh and all obligations hereunder shall be deemed to be located at Raipur, Chhattisgarh and Court within Raipur, Chhattisgarh will have Jurisdiction to the exclusion of other courts.

**28.** Rate wise comparison of the quotes will be made and L1\* for each item will be determined accordingly. In this context, final decision of the committee will be binding on all and no claim in this regard will be entertained. The quantity indicated is tentative and may vary, and any decision in this regard by Director AIIMS Raipur shall be final.

**L1 firm will be decided on the basis of total price of item FOR AIIMS Raipur (including all taxes & duty) Warranty 5 Year + CMC 5 year.**

**Sr. Administrative Officer,  
AIIMS Raipur**

### **Technical Bid**

The following documents are required to be uploaded by the Bidder along with Technical Bid as per the tender document:

- a) Scanned Copy of EMD document must be uploaded.
- b) Please **state whether the bidder** is Manufacturer /Distributor /Dealer / Trader/Supplier relevant document should be uploaded.
- c) In case of distributor/dealer/trader/supplier must be upload tender specific authorization certificate from OEM/ manufacturer (Form C) should be uploaded.
- d) **Scanned copy of** undertaking from the original Manufacturer stating that they would facilitate the bidder on regular basis with technology/product updates and extend support for the warranty as well, shall be uploaded.
- e) Copy of PAN Card **should be uploaded.**
- f) Firm/Company registration certificate should be uploaded.
- g) The equipment should be US-FDA/CE certified/BIS/ISO certified.
- h) The GST registration details may be furnished.
- i) Income Tax Return of last three years should be uploaded.
- j) Evidence of experience/supplied materials as mentioned in tender document should be uploaded
- k) Annual turnover & balance sheet of last three year duly certified by CA as mentioned in tender document should be uploaded.
- l) "Declaration by the Bidder "(Form B) as mentioned in tender document should be uploaded.
- m) Relevant brochure/catalogue pertaining to the items quoted with full specifications etc. should be uploaded.**
- n) Tenderer must provide a certificate on letter head that proprietor/firm has never been black listed by any organization should be uploaded.
- o) Form A with duly filled by bidder should be uploaded.
- p) Technical Specifications Compliance Report. Should be uploaded.
- q) Have you previously supplied these items to any government/ reputed private organization? If yes, attach the relevant proof. Please provide a certificate on letter head that you have not quoted the price higher than previously supplied to any government Institute/Organisation/reputed Private Organisation or DGS&D rate in recent past. If you don't fulfil this criteria, your tender will be out rightly rejected.

### **PRICE BID**

- (a) Price bid in the form of BOQ\_XXXX.xls.
- (b) Custom Duty tariff.
- (c) CMC Sheet.
- (d) Miscellaneous Sheet.

**PERFORMANCE GUARANTEE BOND****(To be typed on Non-judicial stamp paper of the value of Indian Rupees of Two Hundred)****(TO BE ESTABLISHED THROUGH ANY OF THE SCHEDULED BANK (WHETHER SITUATED AT RAIPUR OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT RAIPUR. BONDS ISSUED BY CO- OPERATIVE BANKS ARE NOT ACCEPTED)**

To,  
 The Director  
 All India Institute of Medical Sciences (AIIMS),  
 Tatibandh, GE Road, Raipur-492 099 (CG)

**LETTER OF GUARANTEE**

WHERE AS All India Institute of Medical Sciences (AIIMS) Raipur (Buyer) have invited Tenders vide Tender No.....Dt.....for purchase of.....AND WHERE AS the said tender document requires the supplier/firm(seller)whose tender is accepted for the supply of instrument/machinery, etc. in response there to shall establish an irrevocable Performance Guarantee Bond in favour of "AIIMS Raipur" in the form of Bank Guarantee for Rs.....[10% (ten percent)of the purchase value] which will be valid for entire warranty period from the date of installation & commissioning, the said Performance Guarantee Bond is to be submitted within 30(Thirty) days from the date of Acceptance of the Purchase Order.

NOW THIS BANKHERE BY GUARANTEES that in the event of the said supplier/firm (seller) failing to abide by any of the conditions referred to intender document/purchase order/performance of the instrument/machinery, etc. This Bank shall pay to All India Institute of Medical Sciences (AIIMS) Raipur on demand and without protest or demur ..... (Rupees.....).

This Bank further agrees that the decision of All India Institute of Medical Sciences (AIIMS) Raipur(Buyer) as to whether the said supplier/firm (Seller) has committed a breach of any of the conditions referred in tender document/ purchase order shall be final and binding.

We,.....(name of the Bank& branch) here by further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the supplier/firm(Seller)and/or All India Institute of Medical Sciences (AIIMS) Raipur(Buyer).

Not with standing anything contained herein:

a.Our liability under this Bank Guarantee shall not exceed`..... (Indian Rupees.....only).

b.This Bank Guarantee shall be valid upto..... (date) and

c.We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if AIIMS Raipur serve upon us a written claim or demand on or before..... (Date)

**claim period should be beyond six months from the date of validity i.e. (b) above.**

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at .....situated at..... (Address of local branch).

Yours truly,

Signature and seal of the Guarantor

Name of the Bank:.....

Complete Postal Address: .....

**Form-A****PARTICULARS FOR REFUND OF EMD TO SUCCESSFUL/UNSUCCESSFUL BIDDER  
RTGS/National Electronic Fund Transfer (NEFT)Mandate Form**

1	Name of the Bidder	
2	Permanent Account No(PAN)	
3	Particulars of Bank Account	
	a) Name of the Bank	
	b) Name of the Branch	
	c) Branch Code	
	d) Address	
	e) City Name	
	f) Telephone No	
	g) NEFT/IFSC Code	
	h) RTGS Code	
	i) 9 Digit MICR Code appearing on the cheque book	
	j) Type of Account	
	k) Account No.	
4	Email id of the Bidder	
5	Complete Postal Address of the bidder	

**FORM-B**

**Declaration by the Bidder:**

1. I/We have downloaded the tender from the internet site and I/We have not tampered /modified the tender documents in any manner. In case the same is found tampered/ modified, I/We understand that my/our offer shall be summarily rejected and I/We are liable to be banned from doing business with AIIMS Raipur and/or prosecuted as per laws.
2. I/We have read and fully understood all the terms and conditions contained in Tender document regarding terms & conditions of the contract& rules and I/we agree to abide them.
3. The bidder should not have been blacklisted before at any government organisation
4. No other charges would be payable by Client and there would be no increase in rates during the Contract period.

Place:.....

(Signature of Bidder with seal)

Date:.....

Name :

Seal :

Address :

**Form-C****MANUFACTURER's / PRINCIPAL's AUTHORIZATION FORM**

To  
The Stores Officer,  
All India Institute of Medical Sciences Raipur

Dear Sir,

TENDER: \_\_\_\_\_.

we, \_\_\_\_\_, who are established and reputable manufacturers of \_\_\_\_\_, having factories at \_\_\_\_\_ and \_\_\_\_\_, hereby authorize Messrs. (Authorised Dealer/Sole Distributor/Supplier) \_\_\_\_\_ (name and address of agents) to bid, negotiate and conclude the contract with you against Tender No. \_\_\_\_\_ for the above goods manufactured by us. No company or firm or individual other than Messrs. \_\_\_\_\_ are authorized to bid, negotiate and conclude the contract in regard to this business against this specific tender.

We hereby extend our full guarantee and warranty as per the conditions of tender for the goods bided for supply against this tender by the above firm.

The authorization is valid up to \_\_\_\_\_

Yours faithfully,

(Name)

For and on behalf of M/s. \_\_\_\_\_  
(Name of manufacturers)/Principal



## **Specification**

### **DEPARTMENT OF DENTAL & MAXILLOFACIAL SURGERY**

#### **ANNEXURE - I**

#### **LIST OF EQUIPMENTS – Setting up of Dedicated Department of Dental & Maxillofacial Surgery**

<b>Sr. No.</b>	<b>Equipment</b>	<b>Phase-1</b>	<b>Unit</b>
1	OPD Dental Chairs units	3	Nos.
2	Radiology Dental Chairs units	2	Nos.
3	X Ray machine	2	Nos.
4	Digital intra oral sensor	2	Nos.
5	Dental Treatment units	10	Nos.
6	X ray viewers	10	Nos.
7	Caries Detection Unit	3	Nos.
8	Cordless Light Cure Unit	3	Nos.
9	Apex Locator	3	Nos.
10	Obturation unit	3	Nos.
11	Implant Micromotor with Physio Dispenser	2	Nos.
12	soft tissue laser	1	No.
13	Sectional Matrix system	5	Kits
14	Cervical Matrix kit	5	Kits
15	Anterior Matrix	5	Kits
16	Diagnostic instruments	1	Set
17	Dental Restorative Instruments	1	Set
18	Surgical Dental Instruments	1	Set
19	Periodontal Instruments	1	Set
20	Prosthodontic Instruments	1	Set
21	X ray viewers	2	Nos.
22	Caries Detection Unit	1	No.
23	Cordless Light Cure Unit	2	Nos.
24	Apex Locator	2	Nos.
25	Obturation unit	2	Nos.

<b>Sr. No.</b>	<b>Equipment</b>	<b>Phase-1</b>	<b>Unit</b>
26	Implant Micromotor with Physio Dispenser	2	Nos.
27	soft tissue laser	2	Nos.
28	Sectional Matrix system	2	Kits
29	Cervical Matrix kit	2	Kits
30	Anterior Matrix	2	Kits
31	dental simulation unit	2	Nos.
32	Hand piece maintenance unit	1	No.
33	Ultrasonic Cleaner	2	Nos.
34	Denture cleaning unit	2	Nos.
35	Class B Autoclave	2	Nos.
36	Compressor unit	1	No.
37	Suction unit	3	Nos.
38	Ceramic Press Furnace	1	No.
39	All ceramic Press material kit	1	Set
40	All Ceramic layering material	1	Set
41	All ceramic Investment Material	1	Set
42	Plaster Dispenser	2	Nos.
43	Vibrating Machine	1	No.
44	Semi Adjustable Articulator with compatible Face bow and Accessories	2	Sets
45	Hydraulic Bench Press	1	No.
46	Basic Laboratory Instrument	10	Nos.
47	Remodelling of Ducting - AHU	1	Job
48	Online UPS – 90 KVA	1	Job
48	Civil & Electrical works	1	Job

**ANNEXURE - II****EQUIPMNTS DETAIL TECHNICAL SPECIFICATION****A) DETAILS FOR OPD AREA****Specifications for OPD chairs Units– 3 units**

1. Technical preliminary remarks and quality specifications
  - i. Patient chair and treatment unit in consistent design
  - ii. Can be installed as left or right-handed version.
2. Patient chair
  - i. For oral diagnosis and treatment.
  - ii. Comfortable upholstery
  - iii. Arm rest swivel or fixed
  - iv. Double Articulated headrest
  - v. Chair with silent and smooth movement
  - vi. High quality metallic parts and painting process to prevent corrosion.
  - vii. Multifunctional foot control, for instrument activation, zero position, 2 programmable working position and last position, chair light functioning
  - viii. Tumbler filler
  - ix. Instrument table with 1x3way Syringe and 2xBorden tubing
  - x. P5 booster
  - xi. Operating Halogen light operated by foot control
  - xii. Variable light intensity 8,000 - 22,000 Lux
3. Assistant's Element
  - i. Swivel movement of 45° for assistant accessibility
  - ii. Air-driven 9.5mm., saliva ejector tubing
  - iii. 6.3mm, Air-driven ejector tubing
4. Dentist Stool
  - i. Anatomical seat and backrest.
  - ii. Ergonomically designed to ensure that the human body does not suffer from unnecessary Tension
  - iii. Soft, elastic upholstery, which is easy to exchange.
  - iv. Gas system for height adjustment of the seat.
  - v. Swivel base with five casters.
  - vi. Easy adjustment of backrest tilt and height with independent lever, allowing anatomical fit.
  - vii. Thick foam upholstery, covered with laminated PVC, ensuring greater resistance and strength.
  - viii. Seamless to enable easy sterilization.

**Specifications for Radiology chairs Units– 2 units**

1. Technical preliminary remarks and quality specifications
    - i. Patient chair and treatment unit in consistent design
    - ii. Can be installed as left or right-handed version.
  2. Patient chair
    - i. For oral diagnosis and treatment.
- Replaces the foul air & reduce growth of microbes.
    - ii. Comfortable upholstery

- iii. Arm rest swivel or fixed
- iv. Double Articulated headrest
- v. Chair with silent and smooth movement
  - i. High quality metallic parts and painting process to prevent corrosion.
- ii. Multifunctional foot control, for instrument activation, zero position, 2 programmable working position and last position, chair light functioning
- iii. Tumbler filler
- iv. Operating Halogen light operated by foot control
- v. Variable light intensity 8,000 - 22,000 Lux

### **Specifications for Intra oral X ray unit – 2units**

1. The unit must be of exceptional build quality for long lasting use
2. Unit should offer a microprocessor controlled intraoral x-ray unit with a Constant Potential and High Frequency DC generator.
3. Unit should come with extremely stable arm with Anti Drift Mechanism for ease of usage.
4. Unit should come with intuitive control panel with preprogrammed exposure settings for all areas of both adult and pediatric dentitions.
5. The unit arm must have a maximum reach of at least 80 inches
6. 1 year manufacturer warranty
7. Unit should come with following technical specifications
 

i	Generator	Constant potential (high voltage DC, 100–200 kHz)
ii	Tube voltage	Selectable 60 kV or 70 kV
iii	Tube current	7 mA
iv	Focal spot	0.7 mm (IEC 60336)
v	Anode Heat Content	7 kJ
vi	Total filtration	2.0 mm Al (70 kV)
vii	Exposure time	Range of 0.02 to 3.2 seconds
ix	Line voltage	115—230 VAC $\pm$ 10%, 50 /60 Hz
x	Weight	Less than 35 kg

### **Specifications for Digital intra oral sensor – 2 units**

1. The unit must have Advanced CMOS sensor technology
2. The sensor must work with wide range of X-ray exposure settings
3. The sensor must capture high-resolution images, providing minimum 20 visible line pairs per millimeter
4. The sensor must have rounded corners and smooth edge for patient comfort
5. The sensor must have a Hi-Speed USB 2.0 connectivity without need for USB controllers, adapters, or docking stations
6. The sensor must be continually ready to automatically recognize the presence of radiation and start image capture without initiating by the user
7. The unit must be supplied with a cable length of at least 8 feet
8. The unit must be supplied with 2 sensor sizes, one each for adults and children
9. The sensor must be compatible with Windows 7 and Windows 10 software
10. Should conform to FDA or CE standards

**B) DETAILS FOR TREATMENT AREA**  
**Specifications for Dental treatment unit – 10 units**

1. Technical preliminary remarks and quality specifications
  - i. Patient chair and treatment unit in coherent design, central control.
  - ii. Can be installed as left- or right-handed version.
  - iii. Right/left hand operator convertible version (conversion within max. 5 min.)
  - iv. Should conform to FDA or CE standards
2. Patient chair
  - i. For dental, oral and orthodontic treatment. Predominantly designed for working while seated
  - ii. Motion sequence driven by servomotor.
  - iii. Seat height range of ca. 350 mm - 830 mm.
  - iv. Maximum patient load 180 kg.
  - v. Anatomical seating area and backrest, left and right arm rest are optional and can be folded upwards
  - vi. Soft, elastic upholstery technique, upholstery easily interchangeable.
  - vii. Trendelenburg movement
  - viii. Anatomically shaped extendable double-jointed headrest with mechanical adjustable inclination for
  - ix. Operation via ergonomic rotating head.
  - x. Enhanced legroom for the dentist and assistant when treating both reclining and sitting patients.
  - xi. Backrest with reduced width in the shoulder pad area for enhanced access to the work area.
  - xii. Safety switch-off in the chair base plate and in the bracket on the foot control.
3. Dentist element Swing Arm version
  - i. Combination of dental element and tray holder system
  - ii. Smooth-running spring-loaded swivel arm with extensive pivoting range.
  - iii. Height adjustable, stable in every position. Pneumatic break to fix position.
  - iv. With tray holder for the storage with options of 5 instruments.
  - v. Handpiece holders (silicone mat), the instrument arm and swivel rollers can be removed for cleaning
  - vi. Integrated anti-retraction stop at the instruments. Smooth, wipeable instrument.
  - vii. Hoses with device-sided screw couplings.
  - viii. Considerable free length of the instrument hose (maximum extension length of instruments hoses 90cm)
  - ix. Table height only 45 cm.
  - x. Folding upper housing incl. swings allows optimal access to the electronic components for service
  - xi. 1 x air hose for compressed air driven instruments with coupling for pneumatically driven instruments
  - xii. 1 x brushless electrical micromotor (can be sterilised) speed range 100-40.000 min-1 with speed control for endodontic applications.
  - xiii. 1 x dental scaler (ultrasonic, piezoceramic)
  - xiv. 1 x three functional fibreoptichandpiece with air, water spray.
  - xv. Operating elements controlled via panel technology with display on the instrument stand for detailed instrument, spittoon and chair function
  - xvi. Device operation via display.

- xvii. Keys for multifunction corresponding to the menu display.
  - xviii. 4 Direct select buttons, assignment to the menu functions
  - xix. Keys for instrument light control with light intensity setting, instrument spray and motor direct
  - xx. Keys for bowl rinsing, tumbler filling, x-ray viewer.
  - xxi. Sensor-controlled filling function for the tumbler.
  - xxii. Key for timer.
  - xxiii. Keys for 3 x working position, last position and collapse position. Switch over for settings for 6 practitioners (chair functions, spray, instrument light, motor right/left).
  - xxiv. Key for treatment lamp ON/OFF
  - xxv. User menu: User relevant settings and options (bowl rinsing, mouth glass fill time, display contrast, number of users, etc.).
  - xxvi. Service menu: Service technician relevant settings and options (version control, light intensity,
  - xxvii. Central supply element integrated in chair base cover, fix-mounted to floor
  - xxviii. All components are easily accessible, service friendly.
  - xxix. Centralized software update (SD-card reader)
4. Assistant element
- i. Pivoting extension arm
  - ii. Holder for 1 x saliva ejector, 1 x spray mist hose. Electric instrument holder switch.
  - iii. The suction line can be switched off during treatment by stepping on the base plate of the chair.
  - iv. Triple-Function Handpiece
  - v. Spray mist suction
  - vi. Saliva ejector
  - vii. Patient element incl. spittoon that can be outward rotated by 60° for maximum space of the assist
  - viii. Porcelain spittoon bowl are removable for cleaning and thermo disinfection.
  - ix. Electrical control for the tumbler filler and spittoon bowl rinsing functions.
  - x. Controls via foil technology.
  - xi. Device operation via LED-display.
  - xii. Keys for bowl rinsing, tumbler filling, operating light, timer.
  - xiii. Keys for 4 x working position, last position.
  - xiv. Connection for external wet suction.
  - xv. Function for rinsing the spittoon bowl.
  - xvi. Compact filter housing, with connection for suction tubing and easily exchangeable suction filter
  - xvii. Central electrical overload-protected power supply for device and chair control.
  - xviii. Compressed air filter with automatic condensation removal and pressure regulator.
  - xix. Electric main switch to switch off the electricity.
5. Multifunctional foot control
- i. Electrical infinitely speed control with spray selection and chipblower function
  - ii. Chair functions retrievable even when handpiece has been extracted.
  - iii. Chair automatic positions with all foot control operated elements for stopping operation (safety
6. Treatment lamp (chair Light)
- i. Operating light based on LED – technology
  - ii. Illumination from 3.000 to 35.000 Lux

- iii. Optional composite anti-polymerization filter, sterilizable
  - iv. Constant colour temperature (equal to 5.000 K)
  - v. CRI equal to 85%
  - vi. Lighting spot 170 x 85mm
  - vii. Max absorbed power 9VA
  - viii. Removable and sterilizable handles, sterilisable up to 135°C.
  - ix. Optional proximity sensor with permanent memory and dimming management
  - x. Rotation on two axis's
  - xi. Minimised shadowing with 9x6mm ellipse
  - xii. The accurate definition of the spotlight removes the glare
  - xiii. Fan less desing for optimized hygienic handling
  - xiv. Minimized noise emission through abandonment of fan
7. Dentist Stool
- i. Anatomical seat surface.
  - ii. Anatomical backrest.
  - iii. Anatomical angle between seat surface and backrest.
  - iv. Seat and backrest inclination adjustable.
  - v. Soft, elastic upholstery, upholstery easy to exchange.
  - vi. Manual operation.
  - vii. Chair height adjustment from 465 – 660 mm.
  - viii. GS mark (tested safety)
  - ix. Shock-resistant chair chassis with five casters.
8. Assistant stool
- i. Anatomical seat surface.
  - ii. Comfortable seat and backrest.
  - iii. Upholstery easy to exchange.
  - iv. Manual operation.
9. Surface protection
- i. Membrane keyboard for simple surface hygiene.
  - ii. All surface areas of the treatment centre are designed to enable good surface cleaning.
  - iii. Surface protection of all visible metal parts.
  - iv. Environmentally-friendly water-based primer coat, powder coating or top coat of high-quality PUR
  - v. Layer thickness ca. 100 - 150  $\mu$ , as far as possible medicament and scratch resistant.
10. Hygiene maintenance
- i. In accordance with the valid guideline of Robert Koch Institute.
  - ii. Automatic cleaning / rinsing function of the spittoon bowl with fresh water.
  - iii. Free outlet in the drinking water components in accordance with DVGW EN 1717 or DIN 1988 Section
  - iv. Integrated permanent disinfection (in conjunction with water bottle).
  - v. Manual intensive disinfection.

### **Specifications for Led X-Ray View Box – 10 units**

- 1. Sleek and effective LED Viewing System
- 2. LED brightness of more than > 10,000 LUX
- 3. Latest LED backlight technology. 4-5 times longer than regular CCFL/EEFL
- 4. Power efficient. L.E.D Light with long life- upto 100,000 hours
- 5. Initial brightness can be set

6. Film activated switch, automatic shutdown if no film inside for 2 sec
7. Variable digital dimmer to get the perfect brightness
8. Technical Specifications
  - i. Screen Viewing area 360 x 440mm
  - ii. Power consumption 15W
  - iii. Power Supply 100-240V, 50/60Hz

#### **Specifications for Caries Detecting Unit – 3 units**

1. Laser fluorescence technology for detection of initial caries
2. Must also be useful in the detection of calculus.
3. Perfect support for simple and safe diagnosis
4. Must offer accurate reading specially in children and pregnant women to help avoid unnecessary ionising radiation
5. Easy handling, thanks to acoustic signals and easy-to-read display
6. Pleasant and safe detection method for patient
7. High-quality, low-maintenance
8. Unit must be cordless and can be set up anywhere without computer installation
9. Should offer Fast, easy calibration
10. Should conform to FDA or CE standards

#### **Specifications for Cordless LED light cure unit – 3 units**

1. Cordless LED curing light for all light cure indications
2. The broad-band wavelength spectrum between 385 and 515 nanometers to cure materials containing all types of photo-initiators
3. A guaranteed light intensity of 1,200 mW/cm<sup>2</sup>
4. Must offer 3 curing modes
  - i. High Power (1,200 mW/cm<sup>2</sup>) for quick polymerization
  - ii. Low Power (650 mW/cm<sup>2</sup>) for polymerization near the pulp
  - iii. Ramp Curing (650 - 1,200 mW/cm<sup>2</sup>) for polymerization with reduced shrinkage stress
5. Rotatable 10-mm light probe
6. Must have a The integrated lithium-polymer battery with an indicator of battery strength
7. Must offer the possibility to connect the handpiece to the power cord of the charging base in order to have continuous operation in case of low battery
8. Should conform to FDA or CE standards

#### **Specifications for Apex Locator – 3 units**

1. Must be compact apex locator, which used to locate the anatomical apex during endodontic therapy.
2. Apex locator must features the 'User-set zero point'
3. Audible signal to inform when preferred zero point is reached
4. Must be designed to work under any canal condition including dry, wet or bleeding canals.
5. Must provide precise measurements in canals filed with saline, EDTA, NaOCl or chlorhexidine.
6. The measurements are displayed in 0.1 mm
7. Must Continuously calibrate for accurate, uninterrupted readings in real-time.
8. The weighted base must offer better stability of the device.



9. Should conform to FDA or CE standards

10. Technical Specifications

- i. Rated voltage: DC4.5V (1.5V Alkaline Battery AAA x 3EA)
- ii. Input current: less than DC 60mA
- iii. Power consumption: less than 0.27VA
- iv. Patient auxiliary current: less than AC 10 $\mu$ A
- v. Oscillation frequency: 500Hz  $\pm$ 0.2Hz, 5kHz  $\pm$ 0.002kHz
- vi. Continuous operation time: 62hours (at 1250mAh Battery x 3EA)

**Specification for Obturation unit – 3 units**

1. Complete Endodontic Cordless Obturation System with fill and pack units
2. Compact shape and long-lasting interchangeable batteries
3. The filling unit must have a ergonomic handpiece with controlled extrusion of guttapercha
4. The filling unit must come with two rechargeable batteries, needles and a charging unit.
5. The Pack unit must features a 360° one-touch activation
6. The Pack tip must heats and cools almost instantly for optimal safety, accessibility and control.
7. Pack unit must come with two rechargeable batteries and a charging unit.
8. Should conform to FDA or CE standards
9. The unit must be supplied with
  - i. 300 pellets
  - ii. 5 packing tips
  - iii. 5 filling tips

**Specifications for Implant Micromotor - 2 units**

1. The implant motor must be supplied with lightweight contra-angle and straight fiber optic handpieces with foot control and physio-dispenser and set of autoclavable tubing
2. Should operates safely with High Precision
3. The motor should have Auto Calibration.
4. The motor must be able to produce 80 Ncm Torque at the instrument.
5. The motor must have a Color Display for easy readings
6. The motor must feature Intuitive Programming
7. Should conform to FDA or CE standards

**Specifications for Soft tissue Laser – 1 No.**

1. Unit must have a 3 W class 4 laser with wavelength of 810 nm
2. It must features enhanced ergonomics, a simple interface
3. It must high-contrast aiming beam for easy detection
4. The laser must offer efficient and effective soft-tissue removal along with excellent hemostasis and should be safe to use around implants
5. Unit must come with Wireless foot pedal and three Safety glasses
6. Unit must be powered by easily available AA batteries
7. Unit must be supplied with 50 Disposable 4 mm Tips
8. A removable key switch should be provided to prevent the unauthorized operation of the laser.

### **Specifications for Sectional Matrix System – 5 Kits**

1. The sectional rings must be in three different sizes in order to cover all clinical applications of class II restorations
2. The rings must have a soft silicone covering at the working end
3. The sectional rings must be designed to be stackable
4. The rings must have space designed to accommodate the wedge
5. The rings must be durable and made of stainless steel
6. The ring forceps must be made of stainless steel
7. The ring forceps must have a lock to hold the grip
8. The matrices must be dead soft stainless steel and must have non stick coating to prevent bonding with the restorative materials
9. The matrices must be have thickness less than 0.0018"
10. The matrices must be anatomically contoured and large enough to cover wide proximal boxes
11. Matrices must be available in at least 5 different sizes with at least one size having gingival extension
12. The wedges must be made of inner plastic with soft covering
13. The wedges must offer a pain free insertion
14. The wedges must have a defined holding area for easy placement and removal
15. The wedges must be available in four different sizes for different size of embrasures
16. The protective wedges must be made of plastic with a stainless steel shield
17. Matrix Forceps must provide necessary hold for band removal
18. Matrix forceps must have tungsten carbide tips for good grip and tactile control
19. Composite Instrument must have titanium nitride coating for non stick working
20. Composite instrument must have 5 working ends

### **Specifications for Cervical Matrix – 5 Kits**

1. The matrices must be anatomically shaped for restoration of Class V cavities
2. Must have a contrast colour to the tooth
3. The edges of the matrix must allow flow of excess restorative material
4. The matrix must be designed to help eliminate air inhibited layer while not compromising the curing of the material

### **Specifications for Anterior Matrix – 5 Kits**

1. Contoured anterior matrix band
2. The band height must increase from one to the other end
3. Band thickness must be less then 0.0030"
4. Band must have a contrast colour to the tooth
5. The band must not compromise curing of restorative materials

### **Specifications for Diagnostic Dental Instruments – 1 Set**

6. The instruments should have resistance to wear and corrosion
7. The instrument should be autoclaveable
8. The instruments should have efficient and long-lasting cutting edges with possibility of re-sharpening
9. Instruments should have ergonomic design of the handle with gentle textured groove
10. 60 x Diagnostic Instrument set containing one each of

- i. Mouth mirror with reflection layer with double pure silver coating and larger diameter handle
- ii. Double ended dental explorer
- iii. Diagnostic tweezers

**Specifications for Dental Restorative Instruments – 1 Set**

1. The instruments should have resistance to wear and corrosion
2. The instrument should be autoclaveable
3. The instruments should have efficient and long-lasting cutting edges with possibility of re-sharpening
4. Instruments should have ergonomic design of the handle with gentle textured groove
5. 20 x Anterior Composite Plasma Coated Instruments with Cassette including one each of
  - i. Composite Anterior Placing/Condensing
  - ii. Composite Anterior Mini 1
  - iii. Composite Anterior Placing/Condensing
  - iv. Composite Anterior Micro Mini 1
  - v. Composite Anterior Extra Flex
6. 20 x Posterior Composite Plasma Coated Instruments with Cassette including one each of
  - i. Composite Posterior Hollenback
  - ii. Composite Posterior Small/ Medium Contact
  - iii. Composite Posterior Tanner
  - iv. Composite Posterior Medium / Large Contact
  - v. Composite Posterior Plugger
7. 20 x Amalgam filling instruments set including one each of
  - i. Single Ended Amalgam Carrier
  - ii. Spoon Excavator
  - iii. Ball Burnisher
  - iv. Plugger
  - v. Plastic Filling
  - vi. Margin Trimmer
  - vii. Enamel Hatchet
  - viii. Diamond Shape Carver
  - ix. Hollenback Back Carver
  - x. Ward Carver
8. 10 x Endo Surgical Instruments with Cassette including the following
  - i. 1 x B.P Handle
  - ii. 1 x Periosteal Elevator Benque
  - iii. 1 x Surgical Curette Lucas
  - iv. 2 x Endo Excavator
  - v. 4 x Root Canal Plugger
  - vi. 1 x Tissue Holding Forcep Adson
  - vii. 1 x Castroviejo Scissor Curved
  - viii. 1 x Needle Holder Castroviejo Needle Holder Straight
  - ix. 1 x Goldman Fox Scissor Curved
9. 10 x set of double sided, colour coded endodontic pluggers including one each of
  - i. Tip diameter is 0.40mm to 0.45mm
  - ii. Tip diameter is 0.50mm to 0.75mm
  - iii. Tip 1 mm to 1.15mm

**Specifications for Surgical Dental Instruments – 1 Set**

1. The instruments should have resistance to wear and corrosion
2. The instrument should be autoclaveable
3. The instruments should have efficient and long-lasting cutting edges with possibility of re-sharpening
4. Instruments should have ergonomic design of the handle with gentle textured groove
5. 10 x Extraction ForcepPaedodontic including one each of
  - i. Upper Anterior
  - ii. Upper Premolar
  - iii. Upper Molar
  - iv. Upper Root
  - v. Lower Premolar
  - vi. Lower Molar
  - vii. Lower Root
6. 15 x Extraction Forcep set including one each of
  - i. Upper Anterior
  - ii. Upper Premolar
  - iii. Lower Premolar
  - iv. Upper Molar Right
  - v. Upper Molar Left
  - vi. Upper Root
  - vii. Upper Third Molar
  - viii. Lower Molar
  - ix. Lower Root
  - x. Lower Molar
  - xi. Upper Molar Right
  - xii. Upper Molar Left
7. 15 x Root Elevator set including one each of
  - i. Flohr
  - ii. Flohr Left
  - iii. Flohr Right
  - iv. Cryer Left
  - v. Cryer Right
  - vi. London Hospital
  - vii. Coupland
  - viii. Winter Cryer Left
  - ix. Winter Cryer Right
8. 10 x Surgical Instruments with Cassette including one each of the following
  - i. B.P Handle
  - ii. Needle Holder Mayo Hegar
  - iii. Artery Forceps
  - iv. Iris Scissor Straight
  - v. Iris Scissor Curved
  - vi. Moon Probe
  - vii. Surgical Curette Lucas
  - viii. Bone Rongeurs
  - ix. Periosteal Elevator
  - x. Bone File Millet
9. 2 x Cleft Lip & Palate Instruments in Aluminium Anodized Box including one each of the following
  - i. Dingman Mouth gag with 3 Blades - Adults - 1 Set
  - ii. Cleft Palate Raspatory French Pattern - Left & Right - 1 Pair

- iii. Cleft Palate Raspatory Barsky Type Double Ended - 1 Pcs
- iv. Cleft Palate Raspatory - Curved Upward - 1 Pcs
- v. Cleft Palate Raspatory - Curved Downward - 1 Pcs
- vi. McIndoe Cleft Palate Raspatory - Medium - 1 Pcs
- vii. Mitchell Trimmer Double Ended - 1 Pcs
- viii. Cleft Palate Knife - Triangular - 1 Pcs
- ix. Cleft Palate Hooks Right Angle & Down Bent - 2 Pcs
- x. Cronin Cleft Palate Elevator - Medium Right - 1 Pcs
- xi. Palate Dissector - Left & Right - 1 Pair
- xii. Spoon Shape Elevator Double Ended - 1 Pcs
- xiii. Miller Bone File Double Ended - Curved - 1 Pcs
- xiv. Cleft Palate Elevator Double Ended - Angled To Left & Right - 1 Pcs
- xv. Cleft Palate Elevator Double Ended - Angled to Side & Flat - 1 Pcs
- xvi. Howarth Elevator Double Ended - 1 Pcs
- xvii. Kilner Skin Retractor - 1 Pcs

### **Specifications for Periodontal Instruments – 1 Set**

1. The instruments should have resistance to wear and corrosion
2. The instrument should be autoclaveable
3. The instruments should have efficient and long-lasting cutting edges with possibility of re-sharpening
4. Instruments should have ergonomic design
5. 20 x instruments for periodontics
  - i. Perio Probes with long, thin, and blunted tip and markings of 1 – 10mm
  - ii. Periodontal Knives to remove or recontour soft tissue
  - iii. Periodontal Files
  - iv. Periodontal Chisel
  - v. BP Blade Handle
6. 5 x colour coded Gracey Curettes with Cassette including one each of the following
  - i. Double ended size 1/2
  - ii. Double ended size 3/4
  - iii. Double ended size 5/6
  - iv. Double ended size 7/8
  - v. Double ended size 9/10
  - vi. Double ended size 11/12
  - vii. Double ended size 13/14
7. 10 x set of 7 Sub Gingival Scalers
8. 10 X set of 8 Supra Gingival Scalers
9. 5 X Perio Surgical Instruments with Cassette including one each of the following
  - i. Peridontal Probe
  - ii. Suction Tube
  - iii. Scaler Towner Jaquette
  - iv. Tissue Plier Gerald Straight
  - v. Tissue Plier Gerald Curved
  - vi. Casteroveijo Scissor Curved
  - vii. Surgical Curette Lucas
  - viii. B.P Handle
  - ix. Periosteal Elevator Benque

- x. Corn Suture Plier Premium
- xi. Needle Holder Mayo-Hegar
- xii. Tissue Holding Forcep Adson

**Specifications for Prosthodontic Instruments – 1 Set**

- 1. The instruments should have resistance to wear and corrosion
- 2. The instrument should be autoclaveable
- 3. Instruments should have ergonomic design
- 4. 10 X set of Prosthodontic Instruments containing one each of the following
  - i. Wax knife and spatula with wooden handle
  - ii. Plaster Spatula
  - iii. Alginate spatula
  - iv. Lecron carver
  - v. Articulating paper holder
  - vi. Gingival cord packer
  - vii. Cement spatula
- 5. 5 X Set of Perforated Impression Trays for Dentulous arch containing 4 sizes for each arch
- 6. 2 X Set of Perforated Impression Trays for Children
- 7. 5 X Set of Perforated Impression Trays for Edentulous arch containing 4 sizes for each arch
- 8. 5 X Set of 8 Partial Impression Trays
- 9. 3 X Set of 5 Color Coded PKT Carvers

**C) DETAILS FOR PRIVATE TREATMENT AREA**

**Specifications for Led X-Ray View Box – 2 units**

- 1. Sleek and effective LED Viewing System
- 2. LED brightness of more than > 10,000 LUX
- 3. Latest LED backlight technology. 4-5 times longer than regular CCFL/EEFL
- 4. Power efficient. L.E.D Light with long life- upto 100,000 hours
- 5. Initial brightness can be set
- 6. Film activated switch, automatic shutdown if no film inside for 2 sec
- 7. Variable digital dimmer to get the perfect brightness
- 8. Technical Specifications
  - i. Screen Viewing area 360 x 440mm
  - ii. Power consumption 15W
  - iii. Power Supply 100-240V, 50/60Hz

**Specifications for Caries Detecting Unit – 1 unit**

1. Laser fluorescence technology for detection of initial caries
2. Must also be useful in the detection of calculus.
3. Perfect support for simple and safe diagnosis
4. Must offer accurate reading specially in children and pregnant women to help avoid unnecessary ionising radiation
5. Easy handling, thanks to acoustic signals and easy-to-read display
6. Pleasant and safe detection method for patient
7. High-quality, low-maintenance
8. Unit must be cordless and can be set up anywhere without computer installation
9. Should offer Fast,easy calibration
10. Should conform to FDA or CE standards

**Specifications for Cordless LED light cure unit – 2 units**

1. Cordless LED curing light for all light cure indications
2. The broad-band wavelength spectrum between 385 and 515 nanometers to cure materials containing all types of photo-initiators
3. A guaranteed light intensity of 1,200 mW/cm<sup>2</sup>
4. Must offer 3 curing modes
  - i. High Power (1,200 mW/cm<sup>2</sup>) for quick polymerization
  - ii. Low Power (650 mW/cm<sup>2</sup>) for polymerization near the pulp
  - iii. Ramp Curing (650 - 1,200 mW/cm<sup>2</sup>) for polymerization with reduced shrinkage stress
5. Rotatable 10-mm light probe
6. Must have a The integrated lithium-polymer battery with an indicator of battery strength
7. Must offer the possibility to connect the handpiece to the power cord of the charging base in order to have continuous operation in case of low battery
8. Should conform to FDA or CE standards

**Specifications for Apex Locator – 2 units**

1. Must be compact apex locator, which used to locate the anatomical apex during endodontic therapy.
2. Apex locator must features the 'User-set zero point'
3. Audible signal to inform when preferred zero point is reached
4. Must be designed to work under any canal condition including dry, wet or bleeding canals.
5. Must provide precise measurements in canals filed with saline, EDTA, NaOCl or chlorhexidine.
6. The measurements are displayed in 0.1 mm
7. Must Continuously calibrate for accurate, uninterrupted readings in real-time.
8. The weighted base must offer better stability of the device.
9. Should conform to FDA or CE standards
10. Technical Specifications
  - i. Rated voltage: DC4.5V (1.5V Alkaline Battery AAA x 3EA)
  - ii. Input current: less than DC 60mA
  - iii. Power consumption: less than 0.27VA
  - iv. Patient auxiliary current: less than AC 10μA
  - v. Oscillation frequency: 500Hz ±0.2Hz, 5kHz ±0.002kHz
  - vi. Continuous operation time: 62hours (at 1250mAh Battery x 3EA)

### **Specification for Obturation unit- 2 Nos**

1. Complete Endodontic Cordless Obturation System with fill and pack units
2. Compact shape and long-lasting interchangeable batteries
3. The filling unit must have a ergonomic handpiece with controlled extrusion of guttapercha
4. The filling unit must come with two rechargeable batteries, needles and a charging unit.
5. The Pack unit must features a 360° one-touch activation
6. The Pack tip must heats and cools almost instantly for optimal safety, accessibility and control.
7. Pack unit must come with two rechargeable batteries and a charging unit.
8. Should conform to FDA or CE standards
9. The unit must be supplied with
  - i. 300 pellets
  - ii. 5 packing tips
  - iii. 5 filling tips

### **Specifications for Implant Micromotor– 2 Nos**

1. The implant motor must be supplied with lightweight contra-angle and straight fiber optic handpieces with foot control and physio-dispenser and set of autoclavable tubing
2. Should operates safely with High Precision
3. The motor should have Auto Calibration.
4. The motor must be able to produce 80 Ncm Torque at the instrument.
5. The motor must have a Color Display for easy readings
6. The motor must feature Intuitive Programming
7. Should conform to FDA or CE standards

### **Specifications for Soft tissue Laser – 2 Nos**

Unit must have a 3 W class 4 laser with wavelength of 810 nm

1. It must features enhanced ergonomics, a simple interface
2. It must high-contrast aiming beam for easy detection
3. The laser must offer efficient and effective soft-tissue removal along with excellent hemostasis and should be safe to use around implants
4. Unit must come with Wireless foot pedal and three Safety glasses
5. Unit must be powered by easily available AA batteries
6. Unit must be supplied with 50 Disposable 4 mm Tips
7. A removable key switch should be provided to prevent the unauthorized operation of the laser.

### **Specifications for Sectional Matrix System – 2 Kits**

1. The sectional rings must be in three different sizes in order to cover all clinical applications of class II restorations
2. The rings must have a soft silicone covering at the working end
3. The sectional rings must be designed to be stackable
4. The rings must have space designed to accommodate the wedge
5. The rings must be durable and made of stainless steel
6. The ring forceps must be made of stainless steel



7. The ring forceps must have a lock to hold the grip
8. The matrices must be dead soft stainless steel and must have non stick coating to prevent bonding with the restorative materials
9. The matrices must be have thickness less than 0.0018”
10. The matrices must be anatomically contoured and large enough to cover wide proximal boxes
11. Matrices must be available in at least 5 different sizes with at least one size having gingival extension
12. The wedges must be made of inner plastic with soft covering
13. The wedges must offer a pain free insertion
14. The wedges must have a defined holding area for easy placement and removal
15. The wedges must be available in four different sizes for different size of embrasures
16. The protective wedges must be made of plastic with a stainless steel shield
17. Matrix Forceps must provide necessary hold for band removal
18. Matrix forceps must have tungsten carbide tips for good grip and tactile control
19. Composite Instrument must have titanium nitride coating for non stick working
20. Composite instrument must have 5 working ends

**Specifications for Cervical Matrix – 2 Kits**

1. The matrices must be anatomically shaped for restoration of Class V cavities
2. Must have a contrast colour to the tooth
3. The edges of the matrix must allow flow of excess restorative material
4. The matrix must be designed to help eliminate air inhibited layer while not compromising the curing of the material

**Specifications for Anterior Matrix – 2 Kits**

1. Contoured anterior matrix band
2. The band height must increase from one to the other end
3. Band thickness must be less then 0.0030”
4. Band must have a contrast colour to the tooth
5. The band must not compromise curing of restorative materials

**D) DETAILS FOR ACADEMIC AREA**

**Specifications for Compact Dental Simulation Unit – 2 Nos**

1. The dental phantom head unit unit must be easy and quick to adjust and simulates all required treatment positions
2. The unit must be built robustly, the cabinet is stable and made of medical-grade, powder coated metal sheet
3. The unit must have Pneumatic adjustment of height and inclination
4. The unit should have a patient head equipped with jaw simulator and Face mask
5. The unit must be moveable on castors with mechanical brakes
6. The unit must have integrated Metal cabinet with 2 open shelves
7. The unit must have Disc foot control
8. The unit must have quick and easy pneumatic height adjustment of patient simulator and torso inclination
9. The Dentist element must have option to be interchanged from right to left without additional tools

10. The Dentist Element should have the following components
11. 4 instrument holder device
12. Automatic instrument selection
  - i. 1 air instrument without light
  - ii. 1 3-way syringe
  - iii. 1 suction
13. Technical Specifications
  - i. Power consumption below 10 W
  - ii. Minimum air pressure should be 5.6 to 7 bar
  - iii. Max. water consumption: 0.1 l/min

**E) DETAILS FOR STERILISATION AREA**  
**Specifications for Hand piece Maintenance unit – 1 No.**

The unit must accept at least 4 handpieces at a time

1. The unit must be capable of processing high speed and slow speed handpieces
2. The unit must clean & lubricate handpieces within approximately 1 min.
3. Must offers compressed air blasting of transmission system and spray channels, using purging function.
4. Must offer separate chuck care program.
5. Must use spray that expands inside the instrument at approx. 230 times of volume and dissolve all inorganic residues for healthier cleaning.
6. Unit must offer intra, multiflex, bordon 2 hole, chuck care, service couplings min. 1 each
7. The unit should be compact and ease to use
8. The weight of the unit should be under 12kgs.
9. The unit must be supplied with 30 lubricating spray cans
10. Should conform to FDA or CE standards
11. Technical specifications:  
voltage: 220 - 240 v, 50/60 hz

**Specifications for Ultrasonic Cleaner – 2 Nos**

1. Complete ultrasonic cleaning system
2. Gentle but effective cleaning of instruments
3. Quiet performance
4. Wear-resistant plastic housing which will not stain or dent easily
5. Raised ridges inside baskets for safe removal of instruments
6. Built in drain with extra long drain tube for safe disposal of contaminated Solutions
7. Must offer customization by selecting run times for different tank loads
8. Must have a Countdown Timer display
9. Power consumption must be automatically adjusted in the tank based on load requirements
10. Should conform to FDA or CE standards
11. Must be supplied with
  - i. 10 pre dose bottle of cleaning liquid, 473ml
  - ii. 10 General Purpose Solution With Corrosion Protection, 20x 15ml
  - iii. 5 Germicidal Cleaner bottles, 236ml
12. Technical Specification
  - i. Tank capacity 4.8 liters

- ii. Fill capacity 3.8 liters
- iii. Output 100 watts

### **Specifications for Denture cleaning unit – 2 Nos**

1. Unit should be compact and easy to use
2. Unit should be able to efficiently and quickly clean dentures, orthodontic appliances and temporary restorations
3. The unit should have a digital information display
4. The unit should have a rotational speed from 1200- 2000rpm
5. Unit should be supplied with 2 hygienically reprocess able bowl for cleaning small objects
6. Unit should be supplied with 2 hygienically reprocess able bowl for cleaning larger objects
7. Unit should be supplied with 2 packs of 75g needles made of an acid-resistant alloy and cut precisely at right angles
8. Unit should be supplied with 4 Liters of cleaning liquid used with the needles to eliminate deposits like plaque and tartar
9. Unit should be supplied with 4 Liters of solvent for zinc oxide based, dental temporary cements.

### **Specifications for class B Autoclave – 2 Nos**

1. Unit must be "Class B" steam sterilizer
2. Must offer the extremely high-performance membrane pump technology
3. The units should have an integrated water storage tank
4. Unit should offer a pre-vacuum phase and also a Fast program
5. Unit should have sensors connected to an innovative microprocessor that control the operation.
6. Autoclave capacity should be of volume 22 liters
7. Should conform to FDA or CE standards
8. Technical Specification
  - i. Power supply 230V / 50 hertz
  - ii. Power 2,300 watts

## **F) DETAILS FOR COMPRESSOR AREA**

### **Specifications for compressor Unit – 1 No.**

1. High Quality compressor with long service life
2. Compressor with high air delivery for large practices and dental labs.
3. Compressor must have system for a maximum of reliability for up to 20 operators.
4. Compressor must be supplied with a 90 liter tank and 4 Aggregates.
5. Compressor with air-delivery of 860 l/min
6. Small footprint of less than 1 square meter
7. High failure safety through redundant aggregates
8. Compressor aggregates can be exchanged during operation
9. Technical data
10. No. of Cylinder 16
11. Voltage (V 3~, Hz) 400, 50/60

- |                                |             |
|--------------------------------|-------------|
| i. Output at 5 bar 1) (l/min ) | 860/960     |
| ii. Tank capacity              | 90          |
| iii. Pressure range (bar)      | 6,5 - 8,5   |
| iv. Noise level at 5 bar dB(A) | ca. 77 - 80 |

### **Specifications for Suction Unit- 3 Nos.**

1. Unit must enable supply for up to 6 treatment workstations
2. Unit must work up to 4 workstations simultaneously
1. Unit must be vacuum-generating suction unit with integrated separation
2. Unit must be delivered ready-mounted on a floor-standing console
1. Unit should have high quality robust drive motors for reliable continuous operation
2. Unit should be supplied with accessories required for optimal functioning
1. Unit should have integrated auxiliary air valves to regulate the suction power and ensures sufficient internal cooling
2. Unit can be installed in any suitable room on upper or lower floor
3. Unit must have a quiet operation
4. Technical specification
 

i. Voltage (V 3~)	400
ii. Frequency (Hz)	50
iii. Current consumption (A)	3.6 – 4.0
iv. Power (kW)	2
v. Max. flow rate (l/min)	24

### **G) DETAILS FOR LABORATORY AREA**

#### **Specifications for Ceramic Press Furnace – 1 No.**

1. It may be used as both a press and firing furnace for metal/metal free ceramics
2. Equipped with 300 predefined programs and 50 free programs
3. Machine may be used for firing of any brand of ceramics
4. Equipped with Infrared Technology for precise control on preheating temperatures and to judge the temperature of the investment ring.
5. Furnace is equipped with Electronic press drive with force sensor to produce high-quality press results
6. User friendly LCD colour touch screen controls along with proven membrane-sealed keypad to operate and check the status of firing cycle
7. Equipped with Crack Detection System to detect cracks in the investment ring
8. Provision for software update via USB flash drive or WLAN
9. Automatic temperature adjustment at start of each program (+/- 1C)
10. USB interface for viewing patient images
11. Optical status and progress display for indicating the current status of the furnace
12. Easy and automatic temperature calibration
13. Supplied with vacuum pump by the same OEM and compatible voltage stabilizer
14. Supplied with tongs to hold casting ring, firing tray and cooling tray
15. Maximum firing temperature up to 1200 C
16. CMC of 5 years after expiry of warranty
17. Should conform to FDA or CE standards
18. Technical Specifications
  - a. Power supply 200–240 V / 50–60 Hz
  - b. Max. power consumption 8 A at 200–240 V
  - c. Vacuum pump Max. power consumption: 250 W

**Specifications for Pressable kit for all ceramic system – 1 set**

1. All Ceramic ingots of Low Translucency  
(Shades A1/3, A2/3, A3/2, A3.5/2, B1/2, B2/2, C1/1 )
2. All Ceramic ingots of High Translucency  
(Shades A1/3, A2/3, A3/2, A3.5/2, B1/2, B2/2, C1/1 )
3. All Ceramic ingots of Medium Opacity  
(Shades MO 0/2, MO1 /3, MO2/ 2, MO3/1)
4. All Ceramic ingots of High Opacity  
(Shades HO 0/1, HO 1 /1)
5. 01x Investment Ring System 100g
6. 02x Silicone Ring 100g
7. 01 x Sprue Guide 100g
8. 01x Investment Ring System 200g
9. 02x Silicone Ring 200g
10. 01 x Sprue Guide 200g
11. 02x Alox Plunger
12. 01x Plunger Separator 200mg
13. 01x Press LT Shade Guide
14. 01x Press HT Shade Guide
15. 01 x Ceramic etching gel

**Specifications for All Ceramic layering material – 1 set**

- (1) Basic Kit A-D should contain the following
- i. 16x20g Dentin Shades A1/2,A2/2,A3/2,A3.5/2,B1/2,B2/2,B3/1,C2/1,D2/1D3/1
  - ii. 6x20g TranspaIncisal, Shades : TI1/2, TI2/2, TI3/2
  - iii. 4x20g Transpa, Shades : Neutral/2, Clear/2
  - iv. 2x20g Add-On Shades : Dentin, Incisal
  - v. 2x60ml. Build-Up Liquid : All-round, Soft
  - vi. 2x3g Glaze Paste
  - vii. 2x15ml. Glaze & Stain Liquid : All-round, Long life
  - viii. 1x50ml. Model Sealer
  - ix. 1x15ml. Ceramic Separating Liquid with Brush
  - x. 1x Dentin A-D Material Shade Guide
  - xi. 1x Incisal / Transpa Material Shade Guide

(2) Deep Dentin Kit A-D should contain the following :-

- i. 8x20g Dentin Shades A1,A2,A3,A3.5,B2,B3,C2,D3
- ii. 1x Dentin A-D Material Shade Guide

(3) Characterization Kit should contain the following

- i. 1x Shade Dentin SD0 3g
- ii. 1x Shade Dentin SD1 3g
- iii. 1x Shade Dentin SD2 3g
- iv. 1x Shade Dentin SD3 3g
- v. 1x Shade Dentin SD4 3g
- vi. 1x Shade Dentin SD5 3g

- vii. 1x Shade Dentin SD6 3g
- viii. 1x Shade Dentin SD7 3g
- ix. 1x Shade Dentin SD8 3g
- x. 1x ShadeIncisal SI1 3g
- xi. 1x ShadeIncisal SI2 3g
- xii. 1x ShadeIncisal SI3 3g
- xiii. 1x Glaze Paste 9g
- xiv. 1x Glaze Paste FLUO 9g
- xv. 1x Mixing Liquid allround 15 ml

(4) Staining Kit should contain the following: -

- i. 1x Essence colour01 white 1.8g
- ii. 1x Essence colour02 creme 1.8g
- iii. 1x Essence colour03 lemon 1.8g
- iv. 1x Essence colour04 sunset 1.8g
- v. 1x Essence colour05 copper 1.8g
- vi. 1x Essence colour06 hazel 1.8g
- vii. 1x Essence colour07 olive 1.8g
- viii. 1x Essence colour08 khaki 1.8g
- ix. 1x Essence colour09 terracotta 1.8g
- x. 1x Essence colour10 mahogany 1.8g
- xi. 1x Essence colour11 cappuccino 1.8g
- xii. 1x Essence colour12 espresso 1.8g
- xiii. 1x Essence colour13 terra 1.8g
- xiv. 1x Essence colour14 profundo 1.8g
- xv. 1x Essence colour15 ocean 1.8g
- xvi. 1x Essence colour16 sapphire 1.8g
- xvii. 1x Essence colour17 anthracite 1.8g
- xviii. 1x Essence colour18 black 1.8g
- xix. 1x Essence colour19 rose 1.8g
- xx. 1x Essence colour20 coral 1.8g
- xxi. 1x Essence colour21 basic red 1.8g
- xxii. 1x Essence colour22 basic yellow 1.8g
- xxiii. 1x Essence colour23 basic blue 1.8g
- xxiv. 1x Glaze Powder 5g
- xxv. 1x Glaze Powder FLUO 5g
- xxvi. 1x Mixing Liquid allround15 ml
- xxvii. 1x Essence Fluid 15 ml
- xxviii. 1x Shade Guide Essence

**Specifications for All Ceramic Investment Material: 100 Packets Of 100 Grams Each**

1. A phosphate – bonded investment material compatible with all pressable ceramic and veneering material.
2. It should be quick – heating investment material
3. Shelf life of two years
4. To be supplied with compatible mixing liquid
5. Following equipments are required along with the material
6. Reusable Silicone rings in three sizes of capacity 110g, 200g, 300g should be provided for the investing all ceramic and veneer wax patterns

7. It should contain of a ring gauge and a ring base and used to sprue the contoured restorations
8. Plunger should be provided so that the ceramic ingot can be presses in its softened state into the hollow space in the investment ring
9. Plunger Separator should also be provided to prevent the ingot from sticking to plunger during pressing and cooling in the investment ring
10. Liquid is required that is used to soften the surface reaction layer formed on pressable ceramic frameworks during the pressing procedure
11. One pair of the Ingot Tongs will also be required

#### **Specifications for Plaster Dispenser – 2 units**

1. Pre-dosed plaster dispenser with automatic powder/water ratio.
2. Must be compatible with all major plaster manufacturers
3. Must offer precise, constant and quick dosing.
4. Must be capable of dispensing measured amount of water and plaster with a single button
5. Must be capable of dispensing multiple doses with simple button press
6. Machines must be capable for program up to four different materials
7. At the end of the rest period machine should give off an acoustic alarm
8. The tank should be transparent to easily check the amount of powder left
9. Must have an integrated Scale
10. Technical Specifications:
  - i. Voltage: 220 - 240 V, 50/60 Hz
  - ii. Power : 90W

#### **Specifications for Vibrating Machine – 1 unit**

1. Should be easy to use and of strong build quality
2. Should be extremely stable even under use
3. Should have a large vibration spectrum to processes wide range of materials
4. Should transfer little or no vibrations to the workbench
5. Should offer 4 levels of vibration intensity selectable with a simple switch
6. Should be supplied with a vibrating ball to ensure uniform flow of plaster / Investment materials
7. Should conform to FDA or CE standards
8. 3 year manufacturer warranty

#### **Specifications for Semi Adjustable Articulator with compatible Face bow and Accessories – 2 sets**

##### **ARTICULATOR**

- a. The articulator should accept Centric & Protrusive Records
- b. Provision for immediate side shift adjustment from 0-1.5mm
- c. Curvi Linear Condylar Path
- d. Adjustable to Frankfort's horizontal (F H) plane & Camper's plane (C P)
- e. Separable Upper & Lower Members
- f. Protrusive shift: 0 to 4 mm
- g. Retrusion shift: 0-2 mm
- h. 45 degree Incline Support
- i. Bennett angle: 0 - 30°
- j. Bonwill triangle: 108 mm

**2. FACE BOW**

- a. Adjustable earpiece width with: 85 to 175 mm
- b. Adjustable width: 87 mm to 160 mm
- c. Adjustable nosepiece height: 85 mm
- d. Adjustable nosepiece height: 85 mm
- e. Adjustable nosepiece length: 22 mm
- f. Adjustable earpiece height: 22 mm
- g. Adjustable reference indicator height: 66 mm
- h. Materials: Metal parts: Light weight aluminum, steel  
Side arms: Light Weight carbon composite material

**3. ACCESSORIES**

- a. Plane Indicator
- b. Bite fork Support
- c. C P Registration joint holder
- d. 3 D Setting Template
- e. F H Registration joint holder
- f. Mounting Plates - 5 pairs
- g. Intra Oral Tracers - 1 pairs

**Specifications for Hydraulic Bench Press– 1 unit**

1. Designed to have a stable construction.
2. The full-metal structure must be cast in one step to with stand heavy-duty usage.
3. Capable to operate between 4000 and 7000 kg. of thrust
4. Maximum capacity: 3 flasks
5. The Pressure gauge with heavy duty valve screw cap

**Specifications for Basic Laboratory Instruments– 10 sets**

1. Wax knife
2. Wax spatula
3. Plaster knife
4. Plaster spatula
5. Stainless steel B.P.Handle
6. Mandrills
7. Rubber bowl Small
8. Rubber bowl Large

**AIR HANDLING UNIT (AHU) WITH CENTRAL AIR CONDITIONING FOR ENTIRE DENTAL DEPARTMENT WITH MINIMUM OF 30 AIR CHANGES PER HOUR. AHU DUCTING FOR ENTIRE DENTAL DEPARTMENT FOR FRESH AND RETURN AIR.****Design Parameters**

<b>Standard</b>	: As per ISO 14644-1/ HTM/ ASHRAE standards
<b>Class Level</b>	: ISO 7
<b>Temperature</b>	: 23 Deg C ( +/- 2)
<b>RH Level</b>	: 55 % (+/- 5%)



**Design consideration:** After analyzing the site design and drawing of Dental department facility as per ISO standard level with central air condition, multiple ducting will be

provided based on the requirement of the dental department. And dental chair ratio and return air will ducting should be provided parallel from the side by side. With proper air circulation and good cooling effect in each and every room in entire dental department. Other VIP/other special rooms will have the same class level of ISO. The existing duct lines need to be removed, because it is not designed as per the ISO standard. The existing duct will not have good air velocity levels. Because of designing we have to design in such a way that the dental department should have the uniform air velocity and also uniform temperature with RH. A new duct line needs to be laid with appropriate return air velocity. We have designed based on return air design and not gone for 100% fresh air design considering the various downsides to it.

90 to 100% fresh air design should be considered only where it is mandatory. In dental department design will be (as per international standards) it only helps in increasing the energy consumption substantially (even with heat recovery) thereby increasing running costs to a very high level, especially during summer. 100% Fresh air is not possible in old design. We have designed a special AHU with superior ducting for entire dental department. With superior filtration technology, Recirculation design is widely being used. The new AHU is specially and precisely designed for recirculation design with exact air change ratio will be a fool proof system and the best option available for AIIMS dental department.

	<p align="center"><b>DETAIL TECHNICAL SPECIFICATION OF AHU &amp; DUCT</b></p>
<p align="center"><b>1</b></p>	<p><b>CRFS</b> - Factory build package type classified environment system, suitable for aseptic application with built arrangement to produce thermo hygrometric conditions (Temperature, Humidity etc). Also it is suitable to control V.O.C positive pressure. This system is chilled water type with cooling capacity and free air delivery of 12000 CFM with 150mm of water column air static. Unit made of panels consisting of hot dip G.I casing of thickness of 24 swg thick for both outside and inside layers encasing polyurethane foam insulation having a density of 38-40 Kg/cum factory injected by using injection molding machine. Unit equipped with EU 4, viscous washable synthetic type, bullet expanded inner grooved coil section of Direct Expansion, 6 Row deep for maximum dehumidification, and Aluminum fins with Hydraufillic coating, coil size shall be selected for a maximum face velocity of 500 feet/minute. Coils shall have automatic air vents, the vent outlets being</p>

1.	<p><b>Ducting &amp; Insulation:</b> Supply, installation, commissioning and testing and balancing of Air Distribution System consists of factory fabricated Galvanized Iron sheet metal ducting with TDF/TDC flanges complete with supports (anchor fasteners and tie-rods, cradles, angle iron supports, GI bolts and nuts, 4mm thick self- adhesive neoprene rubber gasket, stiffeners, zinc chromate painted angle iron flanges, chipping and plastering of openings made for duct supports etc., filling the gap with fibre glass wool and with sealant complete as per specification. The rates quoted shall include turning vanes, straightening vanes, splitters, inspection doors probe, inlets with test openings enclosures complete with locking caps, chain, gaskets, insulating plugs, and extension for insulated ductwork etc. Supply and erection of Thermal Insulation - Material shall be FM approved, open cell Nitrile Rubber foam, temperature range from -10°C to +60°C, Class O fire category and as per specification. The Thickness of the insulation material shall be 13/19 mm.</p>
2.	<p><b>Electrical Control Panel:</b> Electrical control panel consisting of various sets of controllers and VFD. The VFD is general purpose drive which controls AC motors up to 22KW with maximum reliability complies with RoHS directives. The drive is easy to install PLC controlled and with automatic motor adaptation technology with high efficiency. The power required for AHU will be drawn from the existing panels available at AHU room.</p>
3.	<p><b>Chilled water piping:</b> Chilled water piping with actuators and other arrangements will be provided as per site requirement with “C” class pipe of dia 65/75mm. Butterfly valve, flanges, thermometer, pressure gauge, Air vent, “Y” strainer with necessary fasteners. Thermocole, bitumen &amp; aluminum cladding shall be provided at AHU room.</p>
4.	<p><b>Testing &amp; Validation</b></p> <p>DQ, IQ, OQ &amp; PQ Air velocity test air changes test</p> <p>Air qty. check test</p> <p>Temp. &amp; RH test</p>

**ANNEXURE - III****CIVIL SHEDULE OF WORK**

<b>S.No</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>
	<b>DISMANTLING</b>		
1	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. In cement mortar	82	M.CUBE
2	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	4	M.CUBE
3	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead : Of area beyond 3 sq. metres	20	each
4	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead. For thickness of tiles above 25 mm and up to 40 mm	650	M.SQ
5	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge.	650	M.SQ
	<b>FALSECEILING</b>		

S.No	DESCRIPTION	QTY	UNIT
6	Providing and fixing tiled false ceiling of specified materials of size 595x595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections ( galvanized @ 120 grams/sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge. GI Metal Ceiling Lay in perforated Tegular edge global white color tiles of size 595x595 mm and 0.5 mm thick with 8 mm drop; made of GI sheet having galvanizing of 100 gms/sqm (both sides inclusive) and 20% perforation area with 1.8 mm dia holes and having NRC (Noise Reduction Coefficient ) of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation, and backed with a black Glass fiber acoustical fleece.	650	M.SQ
	<b>CURTAIN WALL FOR WORKSTATION</b>		
7	Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminium Composite Panel Cladding, with open grooves for linear as well as curvilinear portions of the building , for all heights and all levels etc. including: (a) Structural analysis & design and preparation of shop drawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design. (b) Providing, fabricating and supplying and fixing panels of aluminium composite panel cladding in pan shape in metallic colour of approved shades made out of 4mm thick aluminium composite panel material consisting of 3mm thick FR grade mineral core sandwiched between	120	M.SQ

S.No	DESCRIPTION	QTY	UNIT
	two Aluminium sheets (each 0.5mm thick). The aluminium composite panel cladding sheet shall be coil coated, with Kynar 500 based PVDF / Lumiflon based fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc. (c) The fastening brackets of Aluminium alloy 6005 T5 / MS with Hot Dip Galvanised with serrations and serrated washers to arrest the wind load movement, fasteners, SS 316 Pins and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and drawing The item includes cost of all material & labour component, the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working curtain wall with aluminium composite panel cladding, cleaning and protection of the curtain wall with aluminium composite panel cladding till the handing over of the building for occupation. Base frame work for ACP cladding is payable under the relevant aluminium item.s The Contractor shall provide curtain wall with aluminium composite panel cladding, having all the performance characteristics all complete , as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge. However, for the purpose of payment, only the actual area on the external face of the curtain wall with Aluminum Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two decimal places.		
8	Providing and fixing of 12 mm thick Dupont or equivalent approved Corian textured sheet (for interior use) on frame. Wherever necessary sheets are to be joined to make required size and shape with a finish so that joints are invisible		M.SQ
9	Factory made EPS light weight composite sandwitched wall/ roof panel (75mm thick) having core material of EPS granule balls/beads (conforming to IS 4671:1984 and shall have density not less than 15kg per cum). The outer face on both sides of the panels will be non asbestos fiber cement board confirming to IS 14862:2000 or Calcium silicate board confirming to EN 14306:2009 of 5mm thick each		M.SQ
	<b>DOORS</b>		

S.No	DESCRIPTION	QTY	UNIT
10	Providing laminated veneer lumber conforming to IS:14616 and TAD - 15: 2001 (Part B) in factory made frames of doors, windows, clerestory windows and other frames, wrought framed and fixing in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).	1	M.CUBE
11	Providing and fixing 35 mm thick factory made laminated veneer lumber door shutter conforming to IS : 14616 and TADS 15:2001 (Part B), fixing with butt hinges of required size with necessary screws, all complete as per directions of Engineer- in-charge and panelling with panels of : (Note:- Butt hinges and necessary screws shall be paid separately) 12 mm thick one side Pre-laminated particle board (decorative lamination on one side and other sides balancing lamination) grade -1, medium density flat pressed, three layer particle board FPT - I or graded wood particle board FPT-1 conforming to IS : 3087 bonded with BWP type synthetic resin adhesive as per IS : 848 and pre-laminated conforming to IS : 12823, Grade -1, Type II marked :	60	M.SQ
	<b>UNDER WINDOW CUPBOARDS (STORAGE UNIT)</b>		
12	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters. 25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. Piano hinges IS : 3818 marked with necessary screws	48	M.SQ
13	Providing and fixing special quality bright finished brass cupboard or ward robe locks with four levers of approved quality including necessary screws etc. complete. 75 mm	42	EACH
14	Providing and fixing special quality chromium plated brass cupboard locks with six levers of approved quality including necessary screws etc. complete. Size 75 mm	42	EACH
15	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc.	42	EACH

S.No	DESCRIPTION	QTY	UNIT
	complete. Triple strip vertical type		
16	Providing and fixing sliding arrangement in racks/ cupboards/cabinets shutter by with stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	84	EACH
	<b>UPPER STORAGE UNIT</b>		
17	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters. 25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. Piano hinges IS : 3818 marked with necessary screws	108	M.SQ
18	Providing and fixing special quality bright finished brass cupboard or ward robe locks with four levers of approved quality including necessary screws etc. complete. 75 mm	60	EACH
19	Providing and fixing special quality chromium plated brass cupboard locks with six levers of approved quality including necessary screws etc. complete. Size 75 mm	60	EACH
20	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete. Triple strip vertical type	60	EACH
21	Providing and fixing sliding arrangement in racks/ cupboards/cabinets shutter by with stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	90	EACH

S.No	DESCRIPTION	QTY	UNIT
22	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with rectangular/ L-Type sections, made of 1.60 mm thick M.S. Sheet, joints mitred, welded and grinded finish, with profiles of required size, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer. Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	216	KG
	<b>CABINETS</b>		
23	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters. 25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. Piano hinges IS : 3818 marked with necessary screws	210	M.SQ
24	Providing and fixing special quality bright finished brass cupboard or ward robe locks with four levers of approved quality including necessary screws etc. complete. 75 mm	95	EACH
25	Providing and fixing special quality chromium plated brass cupboard locks with six levers of approved quality including necessary screws etc. complete. Size 75 mm	146	EACH
26	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete. Triple strip vertical type	95	EACH
27	Providing and fixing sliding arrangement in racks/ cupboards/cabinets shutter by with stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	126	EACH



S.No	DESCRIPTION	QTY	UNIT
28	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with rectangular/ L-Type sections, made of 1.60 mm thick M.S. Sheet, joints mitred, welded and grinded finish, with profiles of required size, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer. Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	448	KG
29	Providing and fixing in position Stainless steel Grade 304 plate-1.0 mm thick as per design for workstation top portion	21	M.SQ
30	Providing and fixing powder coated telescopic drawer channels 300 mm long with necessary screws etc. complete as per directions of Engineer in- charge.	120	EACH
	<b>OTHER STORAGE UNIT</b>		
31	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters. 25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. Piano hinges IS : 3818 marked with necessary screws	168	M.SQ
32	Providing and fixing special quality bright finished brass cupboard or ward robe locks with four levers of approved quality including necessary screws etc. complete. 75 mm	94	EACH
33	Providing and fixing special quality chromium plated brass cupboard locks with six levers of approved quality including necessary screws etc. complete. Size 75 mm	94	EACH
34	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete. Triple strip vertical type	94	EACH

S.No	DESCRIPTION	QTY	UNIT
35	Providing and fixing sliding arrangement in racks/ cupboards/cabinets shutter by with stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	148	EACH
36	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with rectangular/ L-Type sections, made of 1.60 mm thick M.S. Sheet, joints mitred, welded and grinded finish, with profiles of required size, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer. Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	456	KG
	<b>FLOORING</b>		
37	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade Area of slab over 0.50 sqm	32	M.SQ
38	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete. Size of Tile 600x600 mm	650	M.SQ
39	Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than 0.08% and conforming to IS: 15622, of approved brand & manufacturer, in all colours and shade, in skirting, riser of steps, laid with cement based	210	M.SQ

S.No	DESCRIPTION	QTY	UNIT
	high polymer modified quick set tile adhesive (water based) conforming to IS: 15477, in average 6 mm thickness, including grouting of joints (Payment for grouting of joints to be made separately).		
40	Grouting the joints of flooring tiles having joints of 3 mm width, using epoxy grout mix of 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg), including filling / grouting and finishing complete as per direction of Engineer-in-charge. Size of Tile 600x600 mm	210	M.SQ
	<b>MASONRY WORK</b>		
41	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in : Cement mortar 1:4 (1 cement : 4 coarse sand)	12	M.CUBE
42	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level. Cement mortar 1:3 (1 cement :3 coarse sand)	120	M.SQ
43	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.	120	M.SQ
44	12 mm cement plaster finished with a floating coat of neat cement of mix : 1:3 (1 cement: 3 fine sand)	420	M.SQ
	<b>PAINTING</b>		
45	Prepare surfaces and paint two coats of plastic emulsion paint of approved colour over two coats of Gypsum punning of 6 mm minimum thick and primer all complete as per manufacturers specifications to all ceilings in all floors.	QRO	M.SQ

S.No	DESCRIPTION	QTY	UNIT
46	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications : Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	1316.00	M.SQ
47	Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @0.75 ltr/10 sqm of approved brand and manufacture	128.00	M.SQ
48	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/ 10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand and manufacture	128.00	M.SQ
49	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	1316.00	M.SQ
50	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	1316.00	M.SQ
	<b>VERTICAL BLINDS</b>		
51	Providing and fixing of vertical/roller blinds width 100 mm regular quantity made from 100 % polyester/Fibre yarn coated with fade resistant polymer to ensure complete opaquety with zero light transmittance, having suitable coating on exterior, including all fixtures and fittings complete in all respect as per design and instruction of Engineer in-charge and as per site conditions. The colour will be approved by the competent authority Make-MAC/VISTA/NOVA or any equivalent make.	72	M.SQ
	<b>ALUMINUM WORK</b>		

S.No	DESCRIPTION	QTY	UNIT
52	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately) Powder coated aluminium (minimum thickness of powder coating 50 micron)		M.T
53	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge : Powder coated aluminium (minimum thickness of powder coating 50 micron)	0.45	MT
54	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	24.00	EACH
55	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete : 250x10 mm	39.00	EACH
56	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.	24.00	EACH
57	Providing and fixing glazing in aluminum door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in- Charge. (Cost of aluminum snap beading shall be paid in basic item): With float glass panes of 8 mm thickness.	QRO	SQM

S.No	DESCRIPTION	QTY	UNIT
58	Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	QRO	M.T
59	Providing and fixing aluminum tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc. complete as per direction of Engineerin-Charge. Anodized (AC 15 ) aluminum tubular handle bar	24.00	EACH
60	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	24.00	EACH
61	Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS : 6315 marked, for doors including cost of cutting floors as required, embedding in floors and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge. With Brass cover Plate	QRO	EACH
62	Filling the gap in between aluminium/ stone/ wood frame and adjacent RCC/ Brick/ Stone/ wood/ Ceramic/ Gypsum work by providing weather/structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete, complying to ASTM C920, DIN 18540-F & ISO 11600. Upto 20 mm depth and 20 mm width	288.00	RM
63	Providing and fixing 12 mm thick pre laminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in paneling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of Engineer-inCharge. Pre-laminated particle board with decorative lamination on	12.00	SQM

S.No	DESCRIPTION	QTY	UNIT
	both sides		
<b>PLUMBING</b>			
64	Providing and fixing wash basin with C.I. brackets, 15 mm dia CP Brass single hole basin mixer of approved quality and make, including painting of fittings and brackets, cutting and making good the walls wherever required:- (a) White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer	10	EACH
65	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS:13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required : Kitchen sink with drain board 510x1040 mm bowl depth 250 mm	15	EACH
66	Providing and fixing PVC Waste pipe for sink or wash basin including PVC waste fittings complete. :Semi rigid pipe 32mm dia	25	EACH
67	Providing and fixing CP Waste coupling for wash basin and sink of approved quality, colour and make. Waste coupling 31mm of 79mm length and 62mm breadth, weighing not less than 45 gms. Make:Hindware,Jaquar etc.,	25	EACH
68	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors : 100 mm inlet and 100 mm outlet Sand cast iron S&S as per IS: 3989	21	EACH
69	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc.	25	EACH

S.No	DESCRIPTION	QTY	UNIT
	complete.		
70	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	10	EACH
71	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour. 600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.	10	EACH
72	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour. weighing not less than 105 gms.	10	EACH
73	Providing and fixing floor mounted, white vitreous china single piece, double traps syphonic water closet of approved brand/make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litres with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.	8	EACH
74	Providing & fixing white vitreous china water less urinal of size 600 x 330 x 315 mm having antibacterial /germs free ceramic surface, fixed with cartridge having debris catcher and hygiene seal.	6	EACH
	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes conforming to IS 15801, UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer-in-		



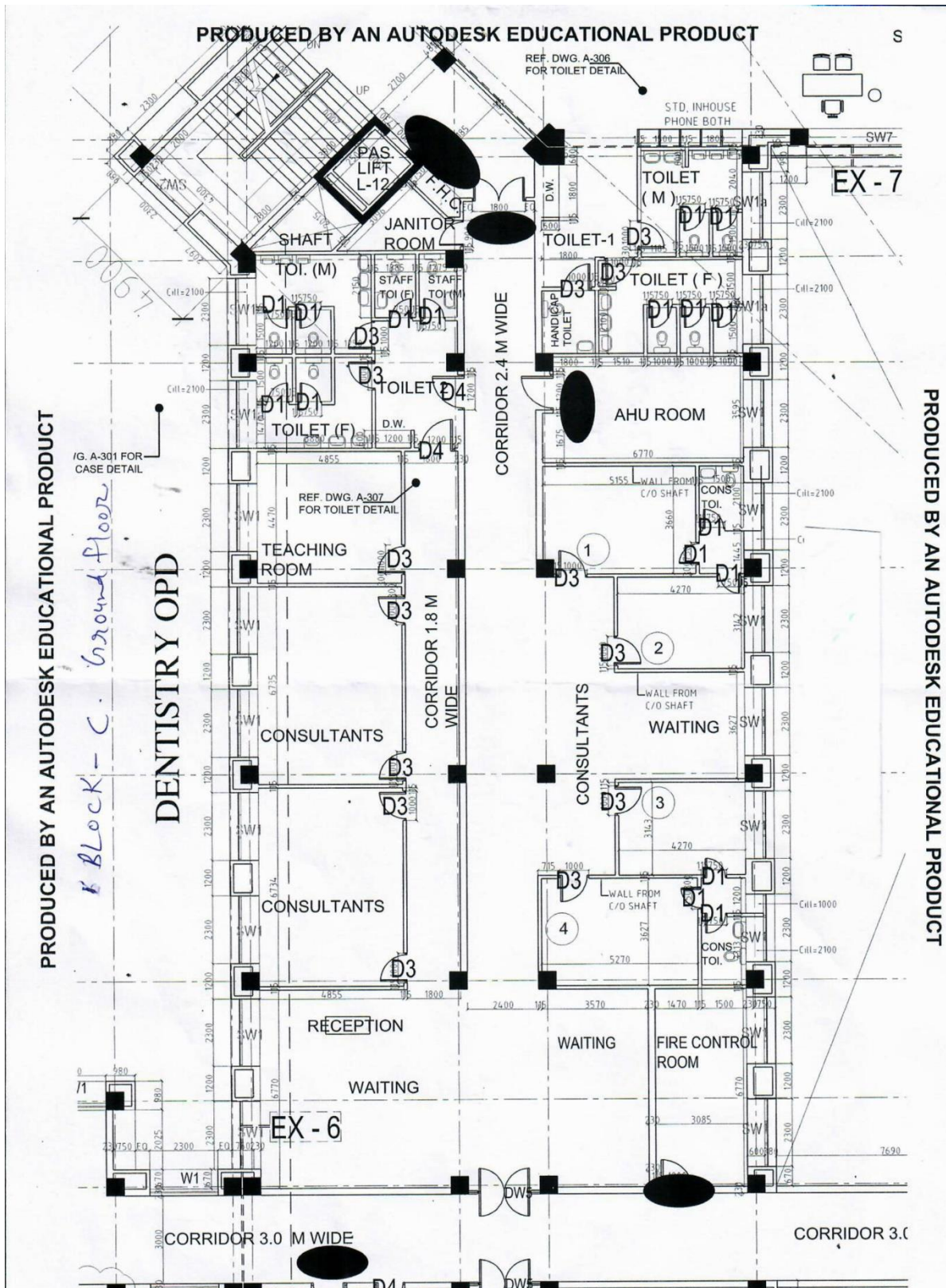
S.No	DESCRIPTION	QTY	UNIT
	Charge.		
75	PN - 16 Pipe, 20mm OD (SDR-7.4)	240	RM
76	PN - 16 Pipe, 25mm OD (SDR-7.4)	360	RM
77	PN - 16 Pipe, 32mm OD (SDR-7.4)	360	RM
78	PN - 16 Pipe, 40mm OD (SDR-7.4)	120	RM
79	PN - 10 Pipe, 50mm OD (SDR-11)	180	RM
80	PN - 10 Pipe, 90 mm OD (SDR-11)	80	RM
81	PN - 10 Pipe, 110 mm OD (SDR-11)	80	RM
	Providing and fixing PPR Unions		
82	PPR Union 20mm	120	EACH
83	PPR Union 25mm	120	EACH
84	PPR Union 32mm	80	EACH
85	PPR Union 40mm	80	EACH
86	PPR Union 50mm	100	EACH
87	PPR Union 63mm	40	EACH
88	PPR Union 75mm	40	EACH
89	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete : 25 mm nominal bore	60	EACH
90	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms. 15 mm nominal bore	30	EACH
91	Providing and fixing Elbow Tap of approved quality conforming to IS standards and weighing not less than 810 gms. 15 mm nominal bore	15	EACH

S.No	DESCRIPTION	QTY	UNIT
	<b>STEELWORK</b>		
92	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete. Hot finished seamless type tubes	4200	KG
	<b>CONCRETE WORK</b>		
93	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:4:8 (1 Cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size)	92	M.CUBE
94	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) : 3 graded stone aggregate 20 mm nominal size).	16	M.CUBE
95	Centering and shuttering including strutting, propping etc. and removal of form for : Suspended floors, roofs, landings, balconies and access platform	62	M.SQ
96	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.	2400	KG
	<b>FURNITURES</b>		

S.No	DESCRIPTION	QTY	UNIT
97	Providing & Fixing mid back chair .The seat & back are made up of 12mm thick hotpressed plywood, upholstered with fabric & moulded with Polyurethane foam seat and back covers. The back foam should designed with contoured lumbar support for extra comfort .The seat has extra thick foam on front edge to give extra comfort.Mid back size 475 mm Width x 580 mm Height mm. And seat size 470 mm Width x 480 mm The polyurethane foam should be moulded with density = 45 kg/m <sup>3</sup> and hardness = 16 +/- 2 kg on Hampden machine at 25% compression .Armrest are injection moulded from black copolymer polypropylene. The mechanism should be fixed 360 degree revolving type,Upright position locking, tilt tension adjustment, seat back tilting ratio 1:3. The pneumatic height adjustment has an adjustment stroke of 12 cm. The pedestal should be injection moulded in black 33 % glass filled in nylon 66 with 5 nos twin wheel castors. The pedestal should be 66.3 cm pitch-center diameter.	20	EACH
98	Supplying and fixing of Three Seater Waiting Area Visitor Chairs . Non-Magnetic SS perforated sheet seat and back shell made of high quality steel makes it strong and durable. . 1608mm (L)X 695 (H) X 555 (D). Legs and Armrests are made of cold rolled steel and are chrome plated for long life. Armrest and legs are anti rust and anti scratch.	8	EACH
99	Providing and Supplying table of size 1350W x 750 D x 750H, whose work surface is made of 18mm thick. Pre Laminated Particle Board (PLB) All work surface edges are duly sealed with 2mm thick PVC Edge banding. The modesty panel is made of 18mm thick. Pre Laminated Particle Board (PLB) All work surface edges are duly sealed with 2mm thick PVC Edge banding. The rectangular frame is fabricated component in 1.2mm thick CRCA (IS:513), Finish: Powder coated (Epoxy polyester). The leg is Fabricated component in 38mm x 25mm x 1.2mm thick MS ERW Tube (IS:7138), Finish: Powder coat (Epoxy polyester).The leveler glide for leg is Nylon 6 & MS Bolt. The shell and drawer tray are made of 0.6mm thick CRCA (IS:513), Finish: Powder coat (Epoxy polyester).The drawer front is 0.8mm thick CRCA (IS:513), Finish: Powder coat (Epoxy polyester) and frame assembly is 1.2mm thick CRCA (IS:513), Finish: Powder coat (Epoxy polyester).	2	EACH

S.No	DESCRIPTION	QTY	UNIT
100	Providing and Supplying shoe rack of size 1175W x 1175 H x 375 D, whose work surface is made of 25mm thick. Pre Laminated Particle Board (PLB) OR Engineered Wood All work surface edges are duly sealed with 2mm thick PVC Edge banding. The modesty panel is made of 18mm thick. Pre Laminated Particle Board (PLB) All work surface edges are duly sealed with 2mm thick PVC Edge banding. Powder coat (Epoxy polyester). Brand: Evok OR Equivelent Assembly: Carpenter Assembly Dimensions: 1175W x 1175 H x 375 D Primary Material: Engineered Wood Room Type: Living Room	2	EACH
101	Providing & Fixing Sofa-2 seater. Size: 1320 mm (W) x 835 mm (D) x 690 mm (H) Seat Height from ground 415 mm. Frame is made up of Tropical Solid Wood with syntheatic leather Upholstery,Seat Foam : Polyurethane Foam with recron layer.Foam Density : 18 kg/ cubic cm. Back Foam : Polyurethane Foam with silicon fill at arms. Foam Density : 22 kg/cubic cm S-Spring webbing.The Sofa is based on wooden legs	5	EACH
102	Providing & Fixing HIGH back executive chair .The seat & back are made up of 12mm thick hotpressed plywood, upholstered with fabric & moulded with Polyurethane foam seat and back covers. The back foam should designed with contouredlumbar support for extra comfort .The seat has extra thick foam on front edge to give extra comfort.Mid back size 475 mm Width x 580 mm Height mm. And seat size 470 mm Width x 480 mm Thepolyurethane foam should bemoulded with density = 45 kg/m3 and hardness = 16 +/-2 kg on hampdem machine at 25% compression .Armrest are injection moulded from black copolymer polypropylene. The mechanism should befixed 360 degree revolving type,Upright position locking, tilt tension adjustment, seat back tilting ratio 1:3. The pneumatic height adjustment has an adjustment stroke of 12 cm. The pedestal should be injection moulded in black 33 % glass filled in nylon 66 with 5 nos twin wheel castors. The pedestal should be 66.3 cm pitch-center diameter.	20	EACH
103	Supply of the FEATHERLITE Versaline Executive Table as per the Featherlite specifications . 1.V-MT 1890, W 1800 x D 900 x H 750 2. V-ST 1245 (LH & RH), W 1200 x D 450 x H 750 and 3. V-CZ, W 1200 x D 450 x H 750	2	EACH

S.No	DESCRIPTION	QTY	UNIT
104	Conference Room table: Fabricated at site Conference System U shaped, open ended 20 seating in size of 1350x600x740 for two seats and 675x600x740 for one seat capacity with Table Top made of 25mm thick MDF with waterfall trop edge finished in pvc memberane using unique wrap around for better aesthetics & long lasting use. Understructure - Legs are made of 25mm thick standard black matt colour post formed panels connected with 18mm thick std black prelaminated modesty panels. Wire management - conealed wire management to take care both horizontally & vertically. For open configurations, wire channel is mounted on the inner side of modesty panel for horizontal wire carrying. Vertical wire management is through flexible wire manager. Std table top height is 740mm, pvc membrane tops areseamless surface, post formed legs for safe use.	1	EACH



The floor plan illustrates a comprehensive Dentistry OPD layout. Key features include:

- Entrance and Waiting Areas:** A large 'WAITING AREA' is located at the bottom left, and another 'WAITING AREA' is at the bottom right. A 'RECEPTION & WAITING AREA' is centrally located near the bottom.
- Diagnostic and Treatment Rooms:**
  - X-RAY ROOM:** Two rooms are shown on the left side.
  - CLARK ROOM:** Located near the bottom center.
  - CONFERENCE ROOM:** A large room with a long table and chairs.
  - DELUX ROOM:** A room with a desk and chair.
  - VIP ROOM:** A room with a desk and chair.
  - CONS. TOI. (Consultation Toilet):** Two rooms are shown on the right side.
  - HEAD LAB:** A room with a desk and chair.
  - CERAMIC ROOM:** A room with a desk and chair.
  - SISTER ROOM:** A room with a desk and chair.
  - HOD DOCTOR ROOM:** A room with a desk and chair.
  - CCTV ROOM:** A room with a desk and chair.
  - FIRE CONTROL ROOM:** A room with a desk and chair.
- Support and Service Rooms:**
  - TOILET (M), TOILET (F), HANDICAP TOILET:** Located in the top right corner.
  - TOILET-1:** A room with a desk and chair.
  - STURILISATION ROOM:** A room with a desk and chair.
  - PG ROOM:** A room with a desk and chair.
  - COMPRER ROOM:** A room with a desk and chair.
  - STAFF TOI (M), STAFF TOI (F):** Two rooms are shown near the top center.
  - JANITOR ROOM:** A room with a desk and chair.
  - PAS. LIFT L-12:** A lift located near the top center.
  - SHAF:** A shaft located near the top center.
  - STD. INHOUSE PHONE B0TH:** A room with a desk and chair.
  - AHU ROOM:** A room with a desk and chair.
  - STORAGE:** Multiple storage rooms are distributed throughout the plan.
- Corridors and Circulation:**
  - CORRIDOR 3.0 M WIDE:** Two corridors are labeled at the bottom.
  - DN (Down) and UP (Up):** Staircases are indicated near the top left.
  - ZMS:** A room with a desk and chair.
  - F.H.C.:** A room with a desk and chair.
  - D.W.:** A room with a desk and chair.
  - SW7:** A room with a desk and chair.
  - EX-7:** A room with a desk and chair.
  - GII=2100:** A room with a desk and chair.
  - CII=1000:** A room with a desk and chair.
  - D4b:** A room with a desk and chair.

## ANNEXURE - VI

## ELECTRICAL SCHEDULE OF WORK

Sl.No.	Description	Qty	Unit
	<b>Point wiring in PVC conduit with modular type switch.</b>		
	Wiring for light point/fan point/exhaust fan point /call bell point with 1.5 sq mm FR PVC insulated copper conductor single core cable in surface/recessed medium class PVC conduit, with modular switch, modular plate, suitable PVC box and earthing the point with 1.5 sq.mm FR PVC insulated copper conductor single core cable etc as required.		
105	Group C	90	Point
	<b>Wiring through PVC conduit</b>		
	Wiring for circuit/submain wiring along with earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/recessed medium class PVC conduit as required.		
106	2X1.5 sq.mm + 1X1.5 sq.mm earth wire	575	Metre
107	2X2.5 sq.mm + 1 X2.5 sq mm earth wire	2850	Metre
108	2X4 sq.mm + 1X4 sq.mm earth wire	2650	Metre
	<b>A/C point</b>		
109	<b>S/F 20A SPN MCB industrial socket outlet:</b> Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	0	Point
	<b>Modular type blanking plate:</b>		
110	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	20	Each



Sl.No.	Description	Qty	Unit
	<b>Modular boxes, bases &amp; cover plate:</b>		
	Supplying and fixing following size/modules, PVC box along with modular base & cover plate for modular switches in recess etc as required.		
111	2 module	5	Each
112	3 module	200	Each
113	6 module	150	Each
114	8 module	4	Each
	<b>Modular type switch/socket:</b>		
	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections but excluding modular plate etc as required.		
115	5/6 Amps switch	300	Each
116	3 pin 5/6 Amp socket outlet	300	Each
117	15/16 Amps switch	120	Each
118	6pin 15/16 Amps (universal) socket outlet	120	Each
119	Telephone socket outlet	6	Each
	<b>Telephone wiring in existing conduit:</b>		
	Supplying and drawing following pair 0.5 sq mm FR PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.		
120	2 Pair	190	Metre
	<b>S/F PVC conduit:</b>		
	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the		

Sl.No.	Description	Qty	Unit
	wall and making good the same in case of recessed conduit as required.		
121	20 mm	1200	Metre
122	32 mm	600	Metre
123	<b>ITC Fluorescent fitting directly on surface:</b> Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling/ wall, including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required.	26	Each
124	<b>ITC Ceiling fan:</b> Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable etc. as required.	0	Each
	<b>CABLE LAYING</b>		
	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1kV grade of following size clamped on wall surface with 1mm thick saddles as required complete.		
	<b>From VDB to LDB</b>		
125	4X16 sq.mm	25	Metre
	<b>From VDB to PDB</b>		
126	4X25 sq.mm	70	Metre
	<b>From DG to VDB</b>		
127	3.5X50 sq.mm	75	Metre
	<b>END TERMINATION</b>		

Sl.No.	Description	Qty	Unit
	Supply and making end termination with brass compression gland, earth clip and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable fo 1.1KV grade as required.		
128	4X16 sq.mm	2	Each
129	4X25 sq.mm	10	Each
130	3.5X50 sq.mm	6	Each
131	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required. 2 run of cable	2200	RM
132	Supply and installation of 20W recess mounted, decorative Soft lite luminaire, powder coated CRCA housing complete with all electrical accessories like electronic ballast, lamp holder, 20W LED etc complete with all mounting accessories like chain, anchor fastner etc as required. <b>(Make Crompton,Havells)</b>	60	Each
133	Supplying and fixing PVC angle batten/batten holder with 12W LED, including connection as required.	3	Each
134	Supply of 1x28W flourescent tube fitting sleek with decorative end cap, powder coated CRCA steel channel complete with all electrical accessories like electronic ballast, lamp holder, 28W T5 lamp etc complete as required. <b>(Philips TMS 540 HF / Wipro WRF 80128 SG / GE DMS 28 N N)</b>	3	Each
135	Supply & installation of 1x9 watts recess mounted down light fixture, with aluminium reflector, CRCA sheet housing, complete with all accessories like ballast, 9W LED lamp etc complete as required.	18	Each

Sl.No.	Description	Qty	Unit
136	Supply and installation of Ceiling fan with its all accessories(Make Havells/bajaj/usha)	0	Each
	S/F Enclosure for UPS		
137	Supplying and fixing following way, three pole and neutral, sheet steel, Enclosure 415 volts, on surface/recess.	2	Each
138	100A/25KV MCCB	2	Each
	<b>S/F Vertical Type TP MCB DB:</b>		
	Supplying and fixing following way, three pole and neutral, sheet steel, Vertical MCB distribution board, 415 volts, on surface/recess, complete with tinned copper busbar, neutral busbar, earth bar, din bar, detachable gland plate, interconnections, phosphatised and powder painted including earthing etc. as required (with provision for isolator as incomer) <b>(Make: Legrand/Havells/HPL)</b>		
139	4 way, double door	2.00	Each
	<b>S/F of FP Isolators</b>		
	Supplying and fixing following rating, four pole, (three phase and neutral) 415 volts isolators in the existing Vertical DB as incomer complete with connections, testing and commissioning etc as required. <b>(Make: Legrand/Havells/HPL)</b>		
140	63/100 A, 4P isolator	2.00	Each
	<b>S/F of TP MCB</b>		
	Supplying and fixing 6 amps to 63 amps rating, 415 Volts, "C" series, miniature circuit breaker suitable for lighting and other loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc as required. <b>(Make: Legrand/Havells/HPL)</b>		
141	32A TP MCB	2.00	Each
142	63A TP MCB	5.00	Each

Sl.No.	Description	Qty	Unit
	<b>S/F of TPN MCB PDB</b>		
	Supplying and fixing following way, three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/recess, complete with tinned copper bus bar, neutral busbar, earth bar, din bar, detachable gland plate, interconnections, phosphatised and powder painted including earthing etc. as required (But without MCB/RCBO/isolator) ( <b>Make: Legrand/Havells/HPL</b> )		
143	12 way Double door, horizontal type.	4.00	Each
	<b>S/F of TPN RCBO</b>		
	Supplying and fixing following rating, four pole, (three phase and neutral) 415 volts RCBO, having a sensitivity current upto 100/300 milliamperes in the existing MCB PDB complete with connections, testing and commissioning etc. as required.( <b>Make: Legrand/Havells/HPL</b> )		
144	63 A 4P RCBO 100mA	4.00	Each
	<b>S/F of SP MCB</b>		
	Supplying and fixing 6 amps to 32 amps rating, 240 Volts, "C" series, miniature circuit breaker suitable for power loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc as required.( <b>Make: Legrand/Havells/HPL</b> )		
145	15A SP MCB	120.00	Each
	<b>TPN MCB LDB</b>		
	Supplying and fixing following way, three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/recess, complete with tinned copper bus bar, neutral busbar, earth bar, din bar, detachable gland plate, interconnections, phosphatised and powder painted including earthing etc as required(But without MCB/RCBO /isolator) ( <b>Make:Legrand/Havells/ HPL</b> )		
146	8 way (4+12), double door	2.00	Each

Sl.No.	Description	Qty	Unit
	<b>S/F of TPN RCBO</b>		
	Supplying and fixing following rating, four pole, (three phase and neutral) 415 volts RCBO, having a sensitivity current upto 30 milliamperes in the existing MCB LDB complete with connections, testing and commissioning etc. as required.( <b>Make: Legrand/Havells/HPL</b> )		
147	32/40 A 4P RCBO 30mA	2.00	Each
	<b>S/F of SP MCB</b>		
	Supplying and fixing 6 amps to 10 amps rating, 240 Volts, "C" series, miniature circuit breaker suitable for lighting and other loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc as required.( <b>Make: Legrand/Havells/HPL</b> )		
148	6/10A SP MCB	18	Each
	<b>CABLE SUPPLY</b>		
	Supplying the following PVC insulated and PVC sheathed/XLPE power COPPER cable of 1.1 KV grade as per CPWD standards as required. ( <b>Make:Havells/ Glostar/Nicco</b> )		
149	4X10 sq.mm	25	Metre
150	3.5X25 sq.mm	70	Metre
151	3.5X50 sq.mm	75	Metre
152	Pipe earthing with G.I. earth pipe 2.5 metre, long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt ) as required complete.	2	Set

Sl.No.	Description	Qty	Unit
153	Supplying and laying 6 SWG Copper wire on, surface or in recess for loop earthing along with existing surface/recessed conduit/submain wiring/ cable as required.	40	Metre
154	Supplying and laying 10 SWG Copper wire on, surface or in recess for loop earthing along with existing surface/recessed conduit/submain wiring/ cable as required.	160	Metre
	<b>WORK COMPLETION</b>		
155	Leading, Positioning, Installation, testing and commissioning of 20-25 kVA DG set with all its accessories	1	LS
156	TESTING CT & ENERGY METER	1	LS
157	Preparation of all drawings submitting and getting approval from Electrical Inspectorate, submitting of Completion certificates and arranging inspection, getting sanction and energisation certificates from Electrical Inspectorate & OEB, obtaining power allocation & power connection etc. for commissioning of the whole installation in the premises. all statutory payments will be reimbursed on production of the original receipts. (Finding the exact Feeder to tap power is under the scope of Contractor)	1	LS
	<b>Miscellaneous Items</b>		
158	Miscellaneous electrical work, removing of existing conduits and interconnections of light,6A socket/16A socket/A/C point from existing DB	0	LS
159	Supply and pointing exhaust fan shutter type white colour-9"/10"(Make Havells/Bajaj/Almonard)	0	Each
160	Supply & Fixing of calling bell Intercom system with all accessories. [ Bazer ]	28	Each