

**Cost Rs. 500/-**

**ICAR-NATIONAL RESEARCH CENTRE ON POMEGRANATE,  
NH-65, SOLAPUR-PUNE HIGHWAY, KEGAON, SOLAPUR-413255 (MS)**

**Tender No. NRCP/ Open Tender/10/Procurement of Equipment/15-16**

**TENDER NOTICE**

Sealed tenders under two bid system (Commercial /Technical bids) on behalf of Secretary, ICAR are invited by the Director, ICAR-NRCP, Solapur from the **reputed firms for procurement of equipment**. The details of the tender are as under: -

**1. Name of the item:** - Procurement of equipment.

- |  |   |
|--|---|
| 2. Sale of tender form: -  | <b>26.11.2015 onwards</b>   |
| 3. Last date for submission of tender  | <b>21.12.2015</b>   |
| 4. Opening of tender: -  | <b>22.12.2015</b>   |
| 5. Earnest Money: -<br>(It should minimum of 2.5 to 5% of<br>the total cost of the equipment/item<br>to be procured) | Rs. _____/- in the form of Demand Draft<br>from the Nationalized Bank in favour of "ICAR<br>UNIT: NRCP" payable at Solapur (To be<br>enclosed with Technical bid) |

The tender form can be obtained from the office of ICAR-NRCP, Kegaon Solapur, on cash payment of Rs. 500/- from **26.11.2015 to 21.12.2015** up to 01:00 p.m. Tender form can also be downloaded from the institute website [www.nrcpomgranate.org](http://www.nrcpomgranate.org) and [www.eprocurement.gov.in](http://www.eprocurement.gov.in). The firms who are using tender form by downloading from the website are also required to submit cost of tender form viz. Rs.500/- in the form of Demand Draft drawn in favour of "ICAR UNIT: NRCP" payable at Solapur separately, in addition to Earnest Money Deposit (EMD) of Rs. \_\_\_\_\_/-(It should minimum of 2.5 to 5% of the total cost of the equipment/item to be procured). In no case cost of tender form & Earnest Money amount should be combined and bids containing combined tender form cost and EMD as single DD shall be summarily rejected. Both the Demand Drafts are to be compulsorily enclosed with Technical bid. No interest will be paid on earnest money amount.

Those who want to get the Tender Document by post, should send a Demand Draft (for Rs.500/- + Rs.100/- towards postal charges) drawn in favour of "ICAR UNIT: NRCP" payable at Solapur. This Centre will not take any responsibility for any postal delay. A copy of receipt issued by office of ICAR-NRCP, Solapur along with the Technical Bid should be enclosed with the Tender Document purchased from the office of ICAR-NRCP whether by Cash/Demand Draft/Banker's Cheque.

**ASSTT. ADMN. OFFICER**

**SCHEDULE OF TENDER**  
**(ADVERTISED TENDER ENQUIRY)**

**ICAR-NATIONAL RESEARCH CENTRE ON POMEGRANATE,**  
**NH-65, SOLAPUR-PUNE HIGHWAY, KEGAON, SOLAPUR-413255 (MS)**  
**Tel: No. 0217-2350074/ 2350330**

**Tender No. NRCP/ Open Tender/10/Procurement of Equipment/15-16**

For and on behalf of the Secretary, ICAR, the Director, ICAR-NRCP, Solapur invites sealed tenders under **Two Bid System** (Technical and Commercial Bid) on the prescribed forms **Chapter -IV** and **V**, for the purchase of the following item as detailed in chapter III of the tender document. However, it may be noted that it will be the discretion of the ICAR-NRCP authority whether to purchase goods/services or cancel the whole/part of tendered goods / services etc. from this advertized tender enquiry.

1. Description of item(s) required: Procurement of equipment.
2. **THIS TENDER ENQUIRY HAS THE FOLLOWING CHAPTERS AND ANNEXURES:**

**Schedule to Tender**

|              |   |
|--------------|---|
| Chapter I    | : Instructions to Bidders                           |
| Chapter II   | : Conditions of Tender/Contract                     |
| Chapter III  | : Schedule of requirement (Technical specification) |
| Chapter IV   | : Proforma for Technical Bid                        |
| Chapter V    | : Proforma for financial bid                        |
| Annexure-I   | : Performance Statement for the quoted equipments   |
| Annexure-II  | : Certificate for compliance of instructions        |
| Annexure-III | : Checklist for tenderers                           |

3. You are requested to study the tender documents completely and ensure **all documents and Annexures are correctly filled-in, signed and stamped** where applicable and then submit your offer.
4. Tenderers are advised to carefully go through all the conditions and documents attached with this tender enquiry, before filling in the tender. All tender documents attached with the tender are sacrosanct for considering any offer as a complete offer. **All tender documents must be duly completed, signed by authorized signatory on each page and returned with the offer.**
5. This tender is not transferable.

**Signature of Tenderer with office seal**

**ASSTT. ADMN.OFFICER**

## Chapter-I: Instructions to Bidders

|     |   |   |   |
|-----|---|---|---|
| 1.  | <u>Tender Cost</u>                          | : | <b>Rs. 500/- (Rs. Five hundred only for <u>each</u> equipment)</b>  |
|     |   |   | <b>Those who downloaded the tender set from the ICAR-NRCP website must submit the cost of tender through a Bank Draft/Banker's Cheque drawn in favour of "ICAR UNIT: NRCP" payable at Solapur at the time of submission of tender. Tender documents submitted without the cost of form will be rejected.</b>  |
| 2   | Last Date & time of Sale of Tender Document | : | <b>21.12.2015</b> upto 01.00 p.m  |
| 3   | Last Date & Time of Receipt of Tender:      | : | <b>21.12.2015</b> up to 03.30 p.m.  |
| 4   | Date & Time of Tender Opening               | : | <b>22.12.2015</b> at 11.00 a.m.   |
| 5   | Submission of Tender Documents              |   | <ul style="list-style-type: none"> <li>i) TENDER BOX placed in the office of the ICAR-NRCP, Kegaon, Solapur</li> <li>ii) The envelope containing tender documents must be clearly superscribed with the Tender No. Name of item and Date of Opening.</li> <li>iii) The ICAR-NRCP, Solapur will not be responsible for tenders submitted at any other place.</li> <li>iv) Tenderers are requested to study the tender documents carefully before submitting the tender.</li> </ul>   |
| 6   | Earnest Money Deposit and Validity          | : | Rs. _____/- (Minimum of 2.5 to 5% of the cost quoted) in the form of Demand Draft drawn in favour of "ICAR Unit: NRC on Pomegranate payable at Solapur from the Nationalized Bank and should have minimum 45 days validity.   |
| 7   | OFFER VALIDITY                              | : | <b><i>Minimum 6 months from date of opening of tender</i></b>   |
|     |   |   | <b>In the absence of any indication in the tender documents submitted, of the date upto which the offer has been kept valid, it will be taken that the offer will remain open for acceptance for the period specified in the Schedule to Tender.</b>  |
| 8.  | Extension of validity & Earnest Money       | : | If the validity of the tender is extended, the validity of the Earnest Money will also have to be suitably extended by the tenderer failing which their tender shall not be considered by the purchaser after the expiry of the aforesaid period.   |
| 9.  | Responding to tenderer enquiry              | : | <ul style="list-style-type: none"> <li>i) Only those firms should respond who are the manufacturers or authorized dealers/agents of the item specified in the tender specifications.</li> <li>ii) Indian agents of foreign manufacturers/principals are allowed to participate in the tender along with a copy of valid authority letter/agreement from the foreign manufacturer/principal for sale and providing service to the item(s).</li> <li>iii) <b>The tenderer must have a valid TAN/PAN Number.</b></li> <li>iv) <b>The tenderer must have VAT/S.T. registration number.</b></li> </ul> |
| 10. | Opening of Tender                           | : | Tendering firms can authorize a representative to be present at the opening of the tender. <b>The representative must bring with him a letter of authority from the firm to be remain present at the time of opening of tender.</b>   |

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| 11. | Delivery                    | : | <p><b>For Indian manufacturer</b> -Within 45 days from the Date of issue of award letter or as specified in the supply order. However, the Competent Authority will have the discretionary power to take appropriate decision.</p> <p><b>For Foreign firms</b> – 90 days from the date of opening of letter of credit (LC)/Foreign Demand Draft or as per the directives of the Competent Authority.</p>   |
|     |                             |   | <p><b>For Indian manufacturer/suppliers: Delivery including CIF to the NRC on Pomegranate, NH-65 Solapur-Pune Highway, Kegaon, Solapur 413255 (MS)</b></p> <p><b>For Foreign manufacturer/suppliers: -On FOB Basis</b></p> <p><u>Inspection After Receipt of Goods:</u> The inspection will be done by the Institute Committee in the presence of firms representative. The successful tenderer will have to make arrangement for technically qualified personnel at the consignee's location for joint inspection during unpacking, assembling, and demonstrating of the equipment at their own cost. In case of receipt of materials in damaged condition the suppliers will have to arrange the replacement of goods free of cost. All expenses in this regard will be borne by the supplier.</p> |
| 12  | Packing and Marking         | : | <p>The packing and preservation of the supplied goods shall be airworthy/seaworthy/roadworthy (as the case may be) so that it may provide their safety during transit period.</p> <p>Each packing case shall have labels as follows:</p> <p>Contact No.0217-2350074</p> <p>Consignee: <b>ICAR-NRC on Pomegranate, NH-65, Solapur-Pune Highway, Kegaon, Solapur 413255 (MS)</b></p> <p>Purchaser: <b>ICAR-NRC on Pomegranate, NH-65, Solapur-Pune Highway, Kegaon, Solapur 413255 (MS)</b></p> <p>(All damages which may occur as a result of defective packing shall be borne by the seller).</p>  |
| 13. | Compliance Statement        | : | <p><b>The firms must submit compliance statement -cum-technical bid in the format given in Chapter IV failing which their offer will be treated as incomplete and is liable to be rejected.</b></p>  |
| 14. | Guarantee/Warranty          | : | <p>Minimum one year comprehensive on-site warranty required. Warranty <u>Terms</u> period will start from the date of installation of items. In case at installation stores/part of stores are found defective /damaged during or after delivery to consignee, the suppliers will replace or repair the store under warranty at consignee's location in India free of cost or if in any case it is required to send back to the foreign manufacturer, Bank Guarantee equivalent to the cost of equipment is required to be submitted before lifting the store. All expenses in this regard will be borne by the supplier.</p>  |
| 15. | Performance Security        | : | <p>The successful bidder will have to submit a Performance security of equivalent to 10% of the Contract/Order value, having validity till expiry of the Warranty/Guarantee period in form of <b>DD in favour of 'ICAR Unit: NRC on Pomegranate payable at Solapur</b>, Fixed Deposit Receipt from a Commercial Bank, Bank Guarantee from a Commercial bank in a acceptable form/prescribed proforma.</p>  |
| 16. | Liquidated damages Security | : | <p>In case the firm does not complete the supply within the laid down agreed delivery period as per contract, liquidated damages will be charged @ 2% of the contract value per month or part thereof. However, the Institute reserves the right to either further extend or cancel the contract after expiry of delivery date and recover the liquidated damages from the dues of the firm or by legal means.</p>   |

|     |  |   |  |
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| 17. | Dispute settlement   | : | The dispute arising out of this contract shall be subject to the jurisdiction of Indian laws & court at Solapur. Sole arbitrator is appointed by the Secretary, ICAR, New Delhi. His decision will be final and binding to both parties  |
| 18. | <b>Process of submission of tenders and screening of proposal<br/>TWO BID SYSTEM</b> | : | <p>The tenderers must submit the tenders in TWO BID SYSTEM</p> <p>i) The tenderers should submit the tenders in TWO BID SYSTEM i.e. the Tenderers should give the price bid as per Chapter -V in a separate sealed cover super scribed as “Price Bid” and the technical details/bid as per Chapter -IV in a separate sealed cover super scribed as “Technical Bid” as along with detailed specifications of the store offered supported by leaflets, Brochure, diagram, undertakings / certificates etc.</p> <p>ii) Both the above mentioned covers should be sealed separately and thereafter be kept in one big cover and again sealed.</p> <p>iii) This big cover should also be superscribed with the Tender No., Name of the item and date of Tender opening.</p> <p>iv) Composite bid i.e. rates indicated in the technical bid shall be rejected straightway.</p> <p>v) Only the first cover shall be opened on the date of tender opening and names of firms participation in the tender process for the specific item shall be disclosed.</p> <p>vi) Separate bid documents is necessary for each equipment. Firms quoting bids from multiple equipment/item shall normally be rejected. However, Competent Authority may considered bids of multiple equipment as bid for any one equipment/item, if required.</p> <p>vii) Bids fulfilling check list of administrative requirements shall be considered for further technical evaluation.</p> <p>viii) Price bids of technically qualified firms shall be opened later depending on the completion of technical evaluation. Only technically qualified firms shall be informed by phone/fax/e-mail for reporting on the date, time and venue of opening of price bids. No request for change of date/time of opening of financial bids from the firms shall be entertained.</p> |
| 19. | Submission of tender documents   | : | <p><b>A. The FIRST COVER - Technical Bid:</b><br/><b>It should contain</b></p> <p>i) Earnest Money.</p> <p>ii) Cost of tender form Rs.500/-if downloaded from website.</p> <p>iii) The technical details of the models offered along with the supporting original technical literature, leaflets, brochures etc. as per Chapter-IV</p> <p>iv) Details of supplies of similar equipment/item to other organization(s).</p> <p>v) Latest agreement /authorization from the foreign firms in case Indian agent is submitting tender on its behalf.</p> <p>vi) Copy of TAN/PAN card</p> <p>vii) VAT/S.T. registration number/certificate.</p> <p>viii) Technical compliance statement as per Chapter –IV.</p>  |
|     |  |   | <p><b>B. SECOND COVER – Financial Bid</b></p> <p>i) Details of rates, taxes, duties, discounts, if any, quoted by the bidder, and should be submitted as per Chapter-V.</p> <p>ii) Copy of latest supply order(s) to any organization(s).</p> <p>iii) For Indian manufacturer rate should include CIF for delivery upto destination.</p> <p>iv) For foreign supplier rates should be at FOB basis.</p> <p><b>C. OUTER COVER – Containing A (sealed) and B (sealed).</b><br/>It should contain</p> <ul style="list-style-type: none"> <li>- <b>Name of Equipment</b></li> <li>- <b>Date of Tender Opening</b></li> <li>- <b>Advertisement No.</b></li> </ul>  |

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| 20. | Evaluation of the Proposal | : | <p>A three stage procedure will normally be adopted:</p> <p>i) <b>Stage-I:</b> Eligibility of Responders Preliminary evaluation as per Sl. No. 19 of Chapter-I (Instruction to Bidder)</p> <p>ii) <b>Stage-II</b> Technical Evaluation: Only eligible respondents qualified in the preliminary evaluation (Stage – I) shall be considered for further technical evaluation w.r.t. indented specification as per Chapter-III.</p> <p>iii) <b>Stage – III: Financial Evaluation (Comparison of Price bids):</b> Price bid of only technically qualified respondents shall be opened for comparison. At this stage the Competent Authority may seek clarification from the technically qualified respondents in order to arrive at a logical comparison, if required.</p>  |
| 21. | Mode of Payment            | : | <p><b>A. FOR INDIGENOUS SUPPLIES:</b><br/>Payment on bill basis after supply, satisfactory installation, commissioning and performance of the equipment at Solapur and after certification by our Scientists concerned.</p> <p><b>B. FOR IMPORTS: -</b>The payment shall be made through irrevocable L.C. LC will be opened on 90% value of the equipment/item on FOB value and shall be released on presentation of complete and clear shipping documents. Rest 10% will be released only after satisfactory installation and commissioning of the equipment. This will not include commission to the Indian Agent. Payment of Commission to the Indian agent will strictly be made in Indian Rupees after satisfactorily commissioning of equipments.<br/><b>All bank charges outside India will be borne by the supplier</b></p> |
| 22. | Training                   | : | <p><b>THE TENDERERS SHALL PROVIDE TRAINING TO THE USER AS PER THE TERMS &amp; CONDITIONS OF THE CONTRACT AS HAS BEEN SPECIFIED IN TECHNICAL &amp; FINANCIAL BIDS FREE OF COST AT THE TIME OF INSTALLATION/COMMISSION OF EQUIPMENT, AT THE CONSIGNEES/USERS LOCATION.</b></p>  |
| 23. | Insurance                  | : | <p>As applicable in the case of imported goods.<br/>For indigenous item, it will be responsibility of the supplier to supply the material in good condition on FOR basis without involving the risk of the purchaser.</p>   |

**Signature of Tenderer with office seal**

## CHAPTER-II: CONDITIONS OF TENDER/CONTRACT

1. All annexures, attached with the Tender should be duly filled in and supported with requisite documents for considering any offer as a complete offer.
2. Director, ICAR-NRCP, Solapur reserves the right to accept/cancel/reject any or all the tenders without assigning any reason. In case of open tender form downloaded from website tenderers must enclose Demand Draft of tender cost Rs.500/- (Rs. Five hundred only for each equipment/item) in favour of "ICAR UNIT: NRCP" payable at Solapur. The tender received without required Demand Draft shall be rejected.
3. **EARNEST MONEY DEPOSIT:-**EMD Rs. \_\_\_\_\_/- (Minimum of 2.5 to 5% of the cost of the equipment) must be deposited in the form of DD in favour of "ICAR UNIT: NRCP" payable at Solapur and **enclose with the technical bid. Technical bid without supported with earnest money will be rejected.**

- No interest shall be payable by the purchaser on the EM deposited by the tenderer.
- The EM deposited is liable to be forfeited, if the tenderer withdraws or amends or impairs or derogates from the tender in any respect within the period of validity of his tender.
- If the successful tenderer fails to furnish the performance security as required in the contract within the stipulated period, the **Earnest Money** shall be liable to be forfeited by the purchaser.
- **EMD** of the unsuccessful tenders shall be returned after finalization of tender.

#### 4. GUARANTEE/WARRANTY

Except otherwise provided in the invitation to tender, the contractor hereby declares that the goods/stores/articles/equipment sold/supplied to the purchaser/consignee under this contract shall be of best quality and workmanship and new in all respects and shall be strictly in accordance with the specification and particulars mentioned/contained in the contract. The contractor hereby guarantees that the said goods/stores/articles would continue to conform to the description and quality aforesaid for a period of one year from the date of receipt of goods/articles/equipment in good condition at site by the consignees in case of supply contract and one year from the date of installation and satisfactory taking over of the goods/stores/articles/equipment at site by consignee where installation and commission is involved and notwithstanding the fact that the purchase /inspection authority has inspected and/or approved the said goods/stores/articles equipment or such if during the one year the said goods/stores/articles/equipment be discovered not to conform to the description and quality aforesaid or not giving satisfactory performance or have deteriorated and the decision of the purchase/consignee in that behalf shall be final and binding on the contractor/seller and the purchaser shall be entitled to call upon the contractor/seller to rectify the goods/stores/articles/equipment or such specified period as may be allowed by the purchaser in his discretion on application made thereof by the contractor/seller, and in such an event, the above period shall apply to the goods/stores/articles/equipment rectified from the date of rectification mentioned in the warranty thereof, otherwise the contractor/seller shall pay the purchaser such compensation as may arise by reason of the breach of warranty therein contained.

Guarantee that they will supply the spare parts, if and when required on agreed basis for an agreed price. The agreed basis could be and including but without limitation an agreed discount on the catalogue price or an agreed percentage of profit on landed cost.

Warranty to the effect that before going out of production for the spare parts they will give adequate advance notice to the purchaser of the equipment so that the later may undertake the balance of lifetime requirements.

5. **Price:** -The price quoted shall be on firm and fixed basis and should be reasonable leaving no scope for any further negotiation on price.

A. For goods manufactured in India: -on FOR basis (including all kind of charges and taxes)

i) Installation commissioning charges, if any

B. For goods manufacture abroad: -The price of the goods should be quoted on FOB basis excluding the Indian agent commission if any. Installation commissioning charges, if any

**The Institute is exempted from payment of excise duty. Hence, excise duty will not be paid to the firm. Sales tax we are not authorized to issue Sales Tax Form C&D. The Institute is exempted from payment of Custom Duty.**

5. **Penalty for use of undue influence:**  
The seller should undertake that he has not given or offered or promised to give directly or indirectly any gift, consideration, reward, commission, fees brokerage of inducement to any person in service of the Purchaser or otherwise in procuring the contract or forbearing to do or for having done or for borne to do any act in relation or execution of the contract or any other contracts with the Institute for showing or for bearing to show favour or disfavor to any person in relation to the contract or any other contract in the NRCP. Any breach of the aforesaid undertaking by the seller or any one employed by him or acting his behalf whether with or without the knowledge the seller or the commission of any offers by the seller or any one employed or acting on his behalf, as defined in Chapter-IX of the IPC, 1860 or the Prevention of Corruption Act, 1947 or any other Act enacted for the Prevention of Corruption shall entitle the purchase to cancel the contract and all or any other contract with the Institute seller and recover from the seller the amount of any loss arising from such cancellation. A decision of the purchaser or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the seller.  
Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the seller towards any officer /employee of the purchaser or to any other person in a position to influence any officer /employees of the purchaser for showing any favour in relation to this or any other contract sell tender
6. **Past Performance:**-Bidders must enclose performance statement for the item quoted by them in the proforma supplied with the tender at Annexure-I.
7. **LAWs GOVERNING THE CONTRACTS :** -The contracts shall be governed by the laws of India for the time being in force. The contract shall be interpreted in accordance with these laws.
8. **Jurisdiction of Court:** -The court of the Solapur shall have a Jurisdiction to decide any dispute arising out of or in respect of contract.
9. **Force Majeure Clause:** -The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure. For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such event may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, Epidemics, quarantine restrictions, strikes, lockout or any act of war. Notice of the happening of any such event is given by either party to the other within 15 days from the date of occurring thereof, either party at its discretion can terminate the contract.
10. **Termination of contracts:**-Time shall be the essence of the contract. The purchaser shall have the right to terminate the contract without any notice in part or in full in any of the following cases.
- The delivery of the material is delayed for causes not attributed to Force Majeure after the scheduled date of delivery.
  - The seller is declared bankrupt or becomes insolvent.
  - The delivery material is delayed due to causes of Force Majeure by more than reasonable time.
  - In case Performance Security is not furnished within the time period specified by the purchaser.
  - Supply in the case of successful Tenderer should strictly confirm to the specifications of the equipment being purchased.
  - Any change in Address /Telephone/Fax/e-mail of the tenderer should immediately be informed. The state of non-communication by the firm will make the offer liable for rejection.
11. **Govt. Regulations:** -It shall also be confirmed that there are no Govt. restrictions or limitation in the country of the supplier or countries from which sub-components are being procured and/or for the export of any part of the system being supplied. Supplies/Contracts shall provide a certificate this effect.
12. **Late /Delayed tenders** shall not be considered at all. These will be returned to the firm as it is at their expenses. Post tender revision/correction shall also not be considered.
13. **Acceptance or rejection of offer:** -The Director, ICAR-NRCP, Solapur reserves the right to accept or reject any tender in part or full without assigning any reason thereof. The successful bidder should submit order of acceptance letter within 15 days from the date of issue along with performance security.
14. **Page Numbering & Signatures:** -Every page of the tender must be numbered and signed by the authorized signatory giving his/her name and designation below the signature.

**Signature of Tenderer with office seal**

**ASSTT. ADMN. OFFICER**



## CHAPTER-III

### DETAILS OF ITEMS AND THEIR TECHNICAL SPECIFICATIONS

#### 1) AIR CURTAIN (3 NOS.)

- I. **AIR CURTAIN** for Size suitable for a door of approximate width 38 inches cm and Height 80inches
- II. dynamically balanced blowers,
- III. All metallic light weight body Stainless Steel,
- IV. suitable motor(s) to run 12-15 hours continuously
- V. Buttons to control high/low velocity
- VI. High air velocity with evenly distributed laminar flow.
- VII. should have over heating protection
- VIII. Noise level should be low (mention maximum decibels)
- IX. Should have adjustable levers to streamline air delivery.
- X. Should have light weight impellers made of best material like Stainless steel /fiber glass reinforced plastic / ABS
- XI. Climatic conditions should not affect Performance of the unit
- XII. Should also supply **AIR SHOWER** for buffer chamber with inner area **wxdxh:: 1200mm x 1200mm x 2100mm (should visit for exact requirement)** with following specifications
- XIII. Made out of SS – 304, 1-1.5 mm thick sheet.
- XIV. Blower: Adequate capacity, dynamically and statically balanced with motor of GE/ Dynamic/Crompton Greaves/ABB/ other standard brand
- XV. Nozzles: Made of best quality SS, and number as per requirement of the size (Rotating and Adjustable) installed on three side of walls and ceiling velocity 18 to 25 Mtr per seconds.
- XVI. HEPA filters: With 0.3 micron particulate of 99.978% efficiency and should be duly DOP tested, frame made of Aluminium Alloy. Size- Standard and appropriate, Micro fibre glass media of M/s H&V –UK epoxy sealed or equivalent, Non washable.
- XVII. Operations: Automatic actuation operation and adjustable time operation through Solid State Control Unit
- XVIII. Noise level: Noise level less than 65 db
- XIX. Power Supply: Single/ 3 Phase. Suitable MCBs with bracket.
- XX. Supply all necessary fixing arrangements for installing the unit
- XXI. Quote only brands with standard International Certification.

## 2) BIOSAFETY CABINET

- I. Class II Biosafety Cabinet with international certification standards of EN 12469 by at least 2 of the following agencies - TUV-Nord (Germany), LNE (France), Health Protection Agency Porton Town (UK).
- II. Working space (cabinet Interior space) Width 1200-1250 mm, Height: 770-800mm and Depth: 460-475 mm with adjustable work surface height 750 to 950mm
- III. Table top should be made of stainless steel - SS 304/316 grade- Heavy gauge- 14 to 16 gauge]
- IV. Interior walls should have smooth finish and powder coated
- V. Working height of front window 200-250mm
- VI. Maximum opening height of front window 535-545 mm
- VII. Filter Mini pleated, H14 HEPA EN 1822,99.995% at the most penetrating particle size
- VIII. With suitable Ultra violet and fluorescent light system for lighting
- IX. It should have Night Set back mode shutter to maintain sterile working environment even when not in use
- X. Should have digital airflow velocity verification to alert the user when safety is compromised.
- XI. The microprocessor based LED display to display the inflow and down flow air velocities in real-time
- XII. Approx. 70-80% Air should be re-circulated and 20-30% of the air should be exhausted
- XIII. Programmable UV light from 20-30 minutes to 24 hours in 20-30 min increment
- XIV. Should have two DC motors for smart air flow.
- XV. The cabinet must use a pressure sensor to detect pressure drop across the supply filter, and the pressure sensor must be encased for protection
- XVI. Noise level must be less than 56 dB(A)
- XVII. Should work on 230V
- XVIII. Should have Warranty for at least 2 years
- XIX. Brochure/photocopy of model quoted should be enclosed without fail
- XX. While quoting each of the specifications should be clearly mentioned in the quote in same order as tender and highlighted in the enclosed Brochure.

## 3) TDR SOIL MOISTURE PROFILING SYSTEM

- I. Principle –Time Domain measurement method
- II. Automatic beginning and end determinations and full graphing abilities, allowing determination of both time and impedance differences along a waveguide
- III. Measuring range digital display: 0-100 VSW% (Volumetric Soil Water%) with minimum  $\pm 2$  % FS accuracy or less
- IV. Portable, battery operated for field use and use in the lab
- V. Automatic calibration facility
- VI. Response Time: 0.5 seconds or less

- VII. Stainless steel slammer Probes: 30 cm -10 Nos., 60cm-10 Nos. and 90cm-10 Nos.
- VIII. 16 Pulse TDR unit : 1.25V/ 120 ps
- IX. Complete set with: Cables, charges, replacement TDR card, external power 100 to 240 V, Jumper cables, Bluetooth power cables, Android tablet with installed software.
- X. Wave guide set, connector should be 15 cm or more length
- XI. Battery charging unit (i.e. 12 V, 1.3 Amp)/transfer,
- XII. Supplying 3 sets of tensiometers of 30 cm, 60 cm and 90 cm depths
- XIII. Printed catalogue having all technical specifications

#### **4) INDUSTRIAL RO SYSTEM**

- I. Capacity: purification capacity of 50litres/hour
- II. Technology: RO+UF+TDS Controller
- III. Max. duty cycle: 250 Liters/Day
- IV. Storage Tank Capacity: Extra 4 tanks of 20 litres each has to be provided
- V. Filter Cartridges: Sediment, Activated Carbon, Carbon Block, UF, Post Carbon
- VI. Flushing: Auto flushing arrangement
- VII. RO membrane: RO memberane of Filmtec 1812-75 GPD (4 Nos)
- VIII. UF membrane: of size 0.01 Micron
- IX. Min. Inlet water pressure: 0.3 kg/cm<sup>2</sup>
- X. Max. Inlet water pressure: 3 kg/cm<sup>2</sup>
- XI. Input Voltage 100-300V AC (50Hz)
- XII. The RO system must be of reputed brand such as Kent, Eureka forbes, LG, TATA, Pureit, Live pure.
- XIII. One year warranty should be provided with 1 Year Consumables like RO Membrane, UF Membrane, Sediment Filter, Carbon Filter & Post Carbon Filter etc.

#### **5) POMEGRANATE JUICE PASTEURIZATION LINE WITH ACCESSORIES**

An integrated juice line including juice storage tanks, filtration unit, pasteurizer, bottle filling and sealing unit of 100 lit/h Capacity. All the components should be of food grade stainless steel. The cleaning in place system should be provided to all components of processing line. (Refer flow diagram). All required accessories shall be supplied with line. The line should be of skidding type.

##### **I) Storage Tanks:**

Storage tanks should be connected with SS 316 piping with valves for each tank and via food pump to filtration unit. Three SS 316 calibrated buckets with handle each of 20 lit. should be provided for collection of juice, syrup and RTS.

## **II) Storage tanks for juice**

- Capacity: 100 lit.
- Construction material: food grade stainless steel AISI 316
- Top: 70% portion closed with arrangement for feeding of juice Valve: for dispensation of juice at height of 400 mm.

## **III) Storage tanks for RTS**

- Capacity: 100 lit.
- Construction material: food grade stainless steel AISI 316
- Top: 70% portion closed with arrangement for feeding of RTS
- Agitator: fitted with motor driven agitator for proper mixing

## **IV) Storage tanks for sugar syrup**

- Capacity: 75 lit.
- Construction material: food grade stainless steel AISI 316
- Top: 70% portion closed with arrangement for feeding of sugar, water etc.
- Agitator: fitted with motor driven agitator for proper mixing.
- Valve: Flush bottom valve for dispensation of syrup at height of 400 mm.
- Heating: Electric heating arrangement shall be provided for tank
- Insulation: Insulation should be provided to syrup tank

## **V) Plate and frame type juice filtration unit**

Juice filtration unit shall be fed by feed pump integral to filtration unit from Juice/Syrup/RTS storage tank.

Capacity 100 lit/h

- Suitable for carbonated and non-carbonated pomegranate juice
- Heavy duty frame in stainless steel on wheels
- Stainless steel piston pump or membrane pump
- Electrical components mounted on a waterproof body
- Panel compliant with protection IP 65 moisture and vermin proof
- Entire machine including Plate, packing's, fittings, gauges, valves should be made from food grade AISI 316 stain less steel
- Filter assembly closing unit by means of a large central screw
- Removable drip collection tray in stainless steel AISI 304
- Pressure buffer tank in stainless steel AISI 304
- Gasketed frames to provide drip-free filtration

## **VI) Juice Pasteurizer**

Double tube or tubular type of juice pasteurizer arranged in (spiral fashion) carrying pasteurization with hot water from inbuilt electric water heating system.

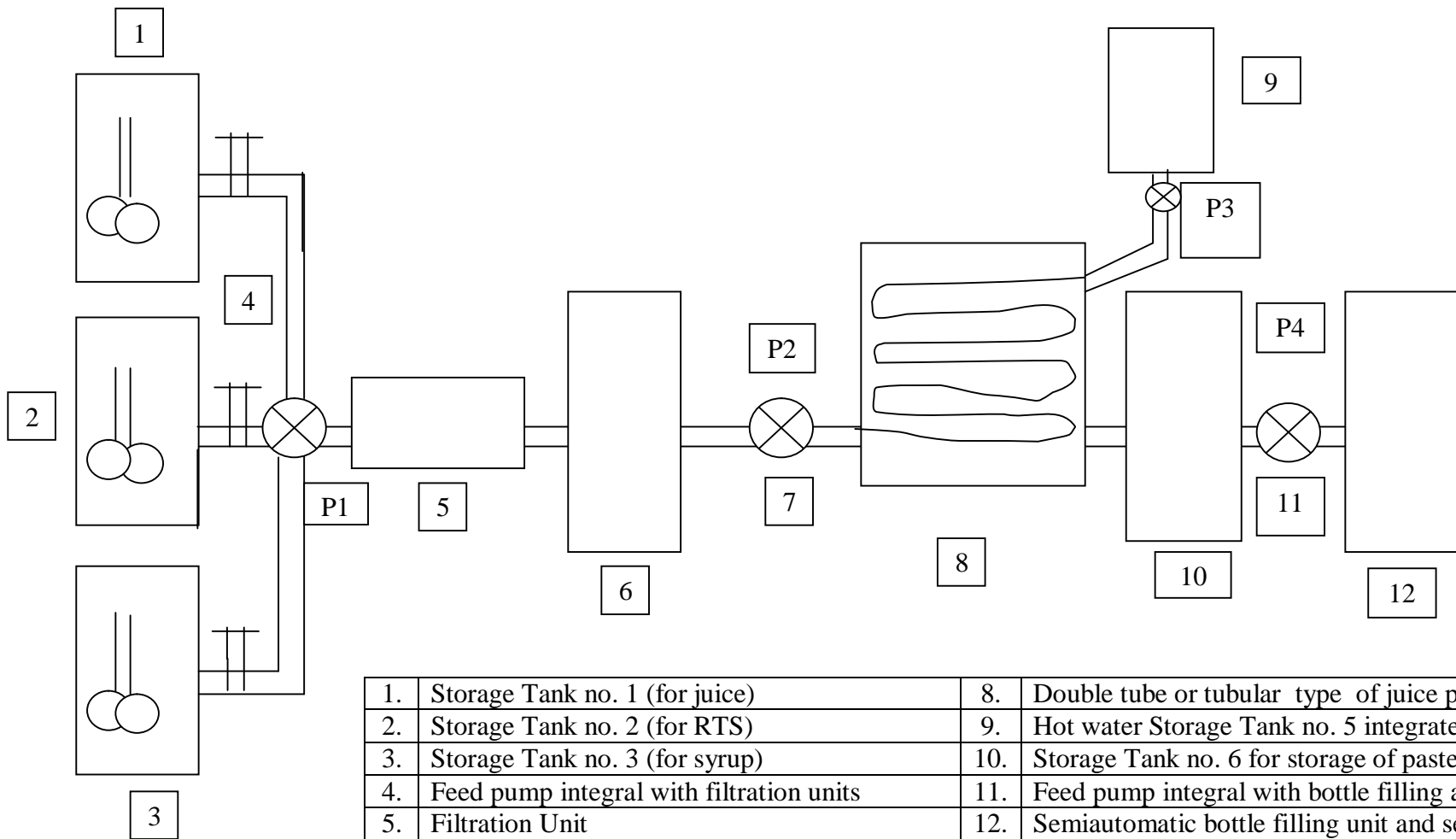
- Capacity: 100 Lit./h of pomegranate juice/RTS
- Type: double tube or tubular
- Three storage tanks should be provided for pasteurization section. One for filtered juice (100 lit capacity) collected from filtration unit made of AISI 316 food grade stainless steel, second for hot Water (100 lit) made of AISI 304 food grade stainless steel, and third for storage of pasteurized juice (100 lit) made of AISI 316 food grade stainless steel.
- Electric water heating system should be provided in water tank
- Feed pump for Juice and hot water controlled by PID controller
- Time and Temperature control: PID based automatic controller for temperature ranging from 70°C to 90°C (with minimum increment of 1°C ) and holding time after reaching desired temperature shall be variable from 2 min to 10 min (with minimum increment of 1 min).
- The system should be equipped with automatic flow diversion valve and necessary pipes and fittings
- Control panel: Consisting ON/OFF switch, indicator, buzzer, digital temperature and time controller. Panel compliant with protection IP 65 moisture and vermin proof
- Cleaning system: Cleaning In Place (CIP) system
- Material of construction: SS 316 food grade stainless steel for all parts
- Construction: Smooth finishing, without abrupt bends etc. in fabrication

## **VII) Semi-automatic juice filling and sealing machine**

Filling and sealing machine shall suck up required quantity (200 ml to 500 ml with minimum variation of 5ml) of hot juice at 80-90°C through feed pump from storage tank for pasteurized juice and drop it in juice bottles. The juice bottles of variable size shall be accommodated with filling nozzle and system. The juice bottles will be sealed manually using sealer using hot plate sealer.

- Capacity :08 to 10 bottles per minute
- Dosing : Two Head Liquid for precise volumetric filling
- Mechanism: Mechanical volumetric piston filler.
- Suitability: Bottle like, Glass, Pet, Aluminum etc.
- Motor: 1.0 HP, 3 Phase of standard make
- Power: Single Phase 230 V AC
- Food grade stainless steel SS 316 construction material for all components
- Control panel consisting ON/OFF switch, indicator. Panel compliant with protection IP 65 moisture and vermin proof

**NOTE:** The pasteurization line has to be installed and demonstrated by the supplier. NRCP will provide water supply and electric connection for the purpose.



|    |   |     |   |
|----|---|-----|---|
| 1. | Storage Tank no. 1 (for juice)            | 8.  | Double tube or tubular type of juice pasteurizer                |
| 2. | Storage Tank no. 2 (for RTS)              | 9.  | Hot water Storage Tank no. 5 integrated with juice pasteurizer. |
| 3. | Storage Tank no. 3 (for syrup)            | 10. | Storage Tank no. 6 for storage of pasteurized juice             |
| 4. | Feed pump integral with filtration units  | 11. | Feed pump integral with bottle filling and sealing unit.        |
| 5. | Filtration Unit                           | 12. | Semiautomatic bottle filling unit and sealing unit.             |
| 6. | Storage Tank no. 4 for filtered juice     |     |   |
| 7. | Feed pump integral with juice pasteurizer |     |   |

**Flow Diagram for Pomegranate juice pasteurization line**

## 6) ROTARY JUICE EVAPORATOR WITH ACCESSORIES

Rotary evaporator should be with evaporation and receiving flask (glass type) along with vacuum pump and chiller capable of pomegranate juice concentration at low temperature.

- I. Capacity : 20 lit juice/batch
- II. Should be flameproof and GMP compliant
- III. Microprocessor based control panel for indication of water bath temperature, rotary speed of evaporation flask, vacuum level, vapour temperature and its control
- IV. Vertical double coil type condenser with borosilicate glass material
- V. Complete vacuum/airtight sealing
- VI. Completely insulated stainless steel water bath with arrangement for height adjustment
- VII. Separate receiving flask shall be provided for concentrated juice
- VIII. Should be provided with vacuum pump for creating absolute vacuum up to 14 millibar
- IX. Should be provided with recirculatory chiller with working temperature range of 10 - 15°C to Room temperature.

## 7) CARBONATION UNIT

- I. The carbonation unit shall be capable of post-mix carbonation for only water or with syrup of pomegranate and grape juice in the bottle, fill the bottles accurately which can be manually sealed.
- II. The level of carbonation should be varied using control system
- III. The filling system should be able to fill accurately desired quantity of product (200 to 500 ml) in PET/PP bottles
- IV. Operational Pressure: 3 bar
- V. Compact with integrated cooling system
- VI. Cooling temperature (internal): 4°C accuracy  $\pm 1^\circ\text{C}$
- VII. Automatic cleaning programs
- VIII. Cleaning temperature : 80°C
- IX. Throughputs of up to 50L/h
- X. CO<sub>2</sub> content of up to 10-11g/L
- XI. Manual sealing of PET or PP bottles of 200 ml to 500 ml
- XII. Post-mix capability
- XIII. Shall work with 230V/1ph/50Hz

### Standard accessories

- XIV. Suitable CO<sub>2</sub> cylinders with regulators, pressure gauge etc.
- XV. 1000 no. of PP and PET bottles suitable for packaging of carbonated beverage

## **8) DIGITAL GAS MIXER, BUFFER TANK AND GAS CYLINDERS WITH REGULATOR**

Digital gas mixer should be capable of mixing CO<sub>2</sub>, N<sub>2</sub> and O<sub>2</sub> in desired proportion using vacuum machine (available in NRCP Minivac of Dansensor make)

### **I) Digital gas Mixer**

- Mixer Configurations: 3 gas with LCD display
- Start/Stop control with alarm
- Power Supply: 103-132/207-264 VAC

### **II) Mixer Parameters:**

- Gas Media: Any mixture of dry O<sub>2</sub>, CO<sub>2</sub>, and N<sub>2</sub>.
- Gas Inlet Pressure: 7 to 8 bar
- Gas Outlet Pressure : 4 to 6 bar
- Gas flow: 20 to 400 L/min
- Mixer Accuracy:  $\pm 2\%$  absolute in flow ranges above 50 L/min total output flow

### **II) Gas Cylinders with regulators**

- It should integrate with Buffer tank, and digital gas mixer
- Gas tanks should be of size C
- With double stage regulators for O<sub>2</sub>, CO<sub>2</sub>& N<sub>2</sub> with necessary tubing's and fittings

### **IV) Buffer Tank**

- The stainless steel buffer tank compatible with digital gas mixer
- Floor or wall mounted.
- Tank volume of around 15 liters and the max. pressure is 10 bar

## **9) MICROWAVE OVEN**

The equipment is required for agarose gel preparation, melting of agarose gel and boiling of water. In view of frequent electric failure, the equipment with less electric power consumption and rapid cooling will be preferred.

- I. The microwave oven shall be simple in operation and with revolving glass plate.
- II. Oven Capacity: 25-28 liters
- III. Cavity: Stainless steel
- IV. Microwave Frequency: 2450 MHz
- V. Microwave Power: 760W



- VI. Power Consumption: 1200W approx.
- VII. Safety: The equipment shall be bonded to earth effectively in accordance with the wiring Regulations. Sufficient Safety interlocks to prevent leakage of microwave.
- VIII. Accessories: Should be provided alongwith necessary accessories.

**NOTE:** Warranty period and after sales services should be clearly mentioned with the quotations. The operating manual has to be provided for easy handling of the equipment.

### **10) DSLR CAMERA**

- I. Image sensor: 17-19.0 megapixels
- II. Image Processor: DIGIC 4-6
- III. Autofocus System/ Points: 8-10
- IV. ISO sensitivity range: 100-10000
- V. Focus selection: Both automatic& manual
- VI. Shooting range: 2-6fps
- VII. Monitor: 6-8 cm 300k-1M dot LCD
- VIII. Monitor coverage: 90-100%
- IX. Focal length: 1.0-2.0x the lens focal length
- X. Shutter: electronically controlled
- XI. Image type: RAW + JPEG
- XII. Storage: SD card, SDHC card or SDXC card
- XIII. Supported operating system: Windows XP/7/8/8.1
- XIV. Battery : Rechargeable
- XV. Power Supply : AC Adapter Kit

Required with proper bag for storing and safe handling of camera, alongwith all necessary accessories.

### **11) THERMOCYCLER**

- |  |                             |
|--|-----------------------------|
| I. Sample capacity                       | 96 x 0.2/0.1 ml tubes       |
| II. Maximum ramp rate, °C/sec            | 4-6                         |
| III. Temperature range                   | 3–105°C                     |
| IV. Temperature accuracy                 | ±0.3-0.5°C                  |
| V. Temperature uniformity (well-to-well) | ±0.4-0.6°C                  |
| VI. Input power                          | 40–70 Hz; 600-700 W maximum |
| VII. Display                             | touch screen                |
| VIII. Port                               | 1-2 USB                     |
| IX. Memory                               | unlimited                   |

- |   |            |
|---|------------|
| X. LightWeight  | 8-10 kg    |
| XI. Gradient accuracy   | ±0.4-0.5°C |
| XII. Gradient range   | 30–98°C    |
| XIII. 2 KVA UPS for providing uninterrupted power supply to the equipment with minimum of 30-45 minutes backup. |            |

## **12) CAMERA**

- I. 18-24.2Mega pixels APS-C CMOS or Dx- Format CMOS Sensor
- II. Digic 5 processor or EXPEED 3 image processor
- III. ISO range 100-12,800
- IV. AF System
- V. Full HD Video/Movie recording
- VI. VR Kit (18-55mm)
- VII. Touch Screen LCD
- VIII. Rechargeable battery, Camera Bag, Lens cover and user manual

### **IX. Accessories**

1. Micro lens/ fixed lens (50-85mm) with 2.8 – 3.5 aperture

## **13) Y-TUBE OLFACTOMETER WITH ACCESSORIES**

### **I) Y-Tube Olfactometer consisting of three numbers having:**

Three Y-Tube bodies, one each of 10mm, 18mm, and 37 mm diameter. Each fitted with odour source adapters in each Y- tube Olfactometer.

### **II) Air Delivery system comprising of:**

- Compact air compressor having 50-60 PSI air source.
- Inlet part-2, outlet part-4.
- Pressure regulator and gauge (Digital).
- Hydrocarbon filter for air purification with respect to volatile organic compounds.

**Chapter IV: TECHNICAL BIDS**

**NATIONAL RESEARCH CENTRE ON POMEGRANATE,  
NH-65, SOLAPUR-PUNE HIGHWAY, KEGAON, SOLAPUR-413255 (MS)**

**(To be sealed in separate Cover)**

**Specification of the equipment/item (in detail) to be purchased**

Statement of compliance to technical specifications in tabular form as per Chapter – III

| Sl. No. | Details of Technical Specifications | Compliance |    | Remarks |
|---------|-------------------------------------|------------|----|---------|
|         |                                     | Yes        | No |         |
|         |                                     |            |    |         |
|         |                                     |            |    |         |
|         |                                     |            |    |         |

**Signature of Tenderer with office seal**

## Chapter –V: PROFORMA FOR PRICE BID

**NATIONAL RESEARCH CENTRE ON POMEGRANATE,**  
NH-65, SOLAPUR-PUNE HIGHWAY, KEGAON, SOLAPUR-413255 (MS)

**(Compulsory to be filled up with details by the bidder & sealed in separate cover)**

| Sl. No. | Item                        | Cost (Rs.) |
|---------|-----------------------------|------------|
| 1.      | Item/Equipment              |            |
| 2.      | Accessories (if any)        |            |
| 3.      | VAT/ST (if applicable)      |            |
| 4.      | Service Tax (if applicable) |            |
| 5.      | Any Other                   |            |
| 6.      | <b>Total Cost</b>           |            |

**Note: For foreign manufacturers/supplier are requested to quote only FOB basis.**

**Signature of Tenderer with office seal**

**PERFORMANCE STATEMENT**

| S.No. | Name of the item/equipment quoted for | Name of the office by whom order was placed for the equipment quoted by you | Order No. & date [Please enclose copy of supply order(s)] | Value of supply order | Delivered in time or not | If not, please specify the reason(s) | Attach satisfactory working report from each office (Yes/No) |
|-------|---------------------------------------|---|---|-----------------------|--------------------------|--------------------------------------|--|
|       |                                       |   |   |                       |                          |                                      |  |

**Signature of Tenderer with office seal**

**CERTIFICATE TO BE SIGNED BY THE TENDERER**  
**CERTIFICATE**

It is certified that I have read and understood and will comply all instructions contained in tender enquiry and its schedule. All pages of schedule to tender from page \_\_\_\_\_ to \_\_\_\_\_ have been filled properly and signed.

Signature of tenderer: - \_\_\_\_\_

Name in block letters: - \_\_\_\_\_

Name of firm: \_\_\_\_\_

Full address: \_\_\_\_\_

i) Telephone No. \_\_\_\_\_

ii) Mobile No. \_\_\_\_\_

iii) Fax No. \_\_\_\_\_

iv) Email id \_\_\_\_\_

v) Website \_\_\_\_\_

**Signature of Tenderer with office seal**

**Check list for Tenderer**

**Before submission of tender documents, Tenderer should check they have complied with the following requirements: -**

| S.No. | Requirements to be checked before submission of the tender   | Compiled (Please indicate) Yes after complying with the requirement) | Page No. (as mentioned in the tender Doc. submitted) |
|-------|--|--|--|
| 1.    | Cost of Tender has been enclosed with tender document, if downloaded from website. If not, then supporting documents proving exemption to this enclosed.   |  |  |
| 2.    | Earnest money Deposit (EMD) has been enclosed.   |  |  |
| 3.    | Enclose sales tax registration certificate and PAN No..  |  |  |
| 4.    | <b>Complete tender documents have been enclosed, after signature &amp; stamping on ALL pages.</b>  |  |  |
| 5.    | Signatures of witness with full name and address have been added wherever required on tender document.   |  |  |
| 6.    | Proposal has been submitted in two bid system – Technical Bid & separate Price Bid as per tender enquiry.  |  |  |
| 7.    | Offer validity (___ yrs) as required in tender has been accepted & clearly mentioned in tender document.   |  |  |
| 8.    | Delivery Terms & Period as per tender have been accepted and mentioned in tender.  |  |  |
| 9.    | Payment Terms as per tender have been accepted and mentioned in tender.  |  |  |
| 10.   | Compliance statement as per chapter-IV clearly showing it is complied with or not.   |  |  |
| 11.   | Performance statement as per annexure-I.   |  |  |
| 12.   | Annexure-II regarding compliance of all conditions mentioned in the tender form has been enclosed.   |  |  |
| 13.   | Status of tenderer has been clearly written in tender – manufacturer or manufactures authorized agent. If authorized agent, valid latest agreement authority letter/agreement for the stores quoted from the manufacturer has been enclosed.                           |  |  |
| 14.   | Technical and financial bid along with necessary documents have been sealed in separate envelopes and both envelopes again sealed in a big envelopes with prescribed writing on envelopes.   |  |  |
| 15.   | The tenderer has clearly mentioned in writing that business dealings with their firms have not been banned by any Govt./Private agency.  |  |  |
| 16.   | If the tenderer wants to mention any specific condition, it must be mentioned on the covering/forwarding letter only which will be placed on the first page of the technical bid. Such condition mentioned in any other document shall not be given any consideration. |  |  |
| 17.   | VAT/S. T. Registration Number/Certificate  |  |  |
| 18.   | Valid PAN Card   |  |  |

**Signature of Tenderer with office seal**