

GOVERNMENT OF ASSAM
OFFICE OF THE PRINCIPAL CUM CHIEF SUPERINTENDENT
Tezpur Medical College & Hospital, Tezpur, Bihaguri - 784010, Assam
(Under Society for Medical Education, Tezpur)

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Ref No. SMET/TMC/e-NIT/792/2017/2287

Dated: 12/07/2017

SHORT NOTICE INVITING TENDER

Online bids under two bid systems are invited through e-tendering from reputed original manufactures or from their registered/authorized suppliers/distributors/ dealers/authorized sales & service partners only for supply and installation of instrument/equipment for use of Viral Research & Diagnostic Laboratory (VRDL), at TMC&H, Tezpur. The bid documents for the supply and installation of the required items will be available online from 13/07/2017 (17.00 Hrs. onwards). Last date to fill/upload the tender through e-tendering is 11/08/2017 upto 14:00 hrs. & technical bid will be opened at 11:00 hrs. on 17.08.2017. For submission and to view tender's other details, please refer detailed NIT on e-tender portal at <https://assamtenders.gov.in>

The Principal, TMC&H, does not bind himself to accept the lowest tender and reserves to himself the right to accept any or reject any or all tenders without assigning any reasons thereof.

Sd/-

Principal cum Chief Superintendent
Tezpur Medical College & Hospital
Tumuki, Bihaguri, Tezpur, Sonitpur, Assam

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DETAILED NOTICE INVITING TENDER

For

Supply and Installation of Instruments/Equipment for Viral Research & Diagnostic Laboratory
(VRDL), at TMC&H, Tezpur

e- Tenders are invited by the Principal of Tezpur Medical College & Hospital (TMC&H), Tezpur, from reputed original manufactures or from their registered/authorized suppliers/distributors/dealers/authorized sales & service partners only for supply and installation of instrument/equipment for use of Viral Research & Diagnostic Laboratory (VRDL), at TMC&H, Tezpur as per terms & conditions contained in this Tender document.

Any future corrigendum(s)/addendum (s) etc., if any, shall be communicated through the e-procurement portal only.

The Contractual Agencies should follow the following key dates in order to properly participate in the tender process:

Key Dates

S. No	Tender activity schedule	Date & Time
1	Publishing Date	13.07.2017 15.00 Hrs

2	Document Download Start Date	13.07.2017 17.00 Hrs
3	Pre-bid meeting	19.07.2017 14.00 Hrs
4	Issue of Corrigendum/Addendum, if any	20.07.2017 15.00 Hrs
5	Bid Submission Start Date	21.07.2017 14.00 Hrs
6	Bid Submission Closing Date	11.08.2017 14.00 Hrs
7	Manual Submission of Tender Fee, EMD and Hard Copies of Technical Bid	11.08.2017 Upto 13.00 Hrs.
8	Bid Opening Date (Technical Bid)	17.08.2017 11.00 Hrs.
9	Financial Bid Opening Date	Will be intimated Later

In case the day of opening of e-tenders happens to be holiday, the tenders will be opened on the next working day.

The date of opening of Financial Bid shall be fixed at the time of opening of Technical Bid.

GENERAL TERMS AND CONDITIONS

- Earnest Money Deposit (EMD) of Rs 2,00,000/-** (Rupees two lakhs only) in the form of a Demand Draft of a Nationalized or scheduled bank issued in favor of “Member Secretary, SMET, Tezpur” and payable at Tezpur shall be required to be tendered by the prospective contractors . The EMD shall be released to un-successful bidder after completion of the tender process, subject to compliance to all other terms & conditions of Tender. The EMD of the successful bidder will be returned after completion of supply as ordered. **Payment will be approved only after physical receipt of the Demand Draft.**
- Tender Fee** of Rs. 2,000/- (Rupees two thousand only) (Non-refundable) in the form of demand draft only, payable to “Member Secretary, SMET, Tezpur” and payable at Tezpur shall be required

to be submitted by the bidders without which the tender will be regarded as non-responsive.

Payment will be approved only after physical receipt of the Demand Draft.

3. Qualification criteria:

- (i) The tenderer should be original manufacturer or their registered/authorized suppliers/distributors/dealers/authorized sales & service partners only. All bidders, who are not manufacturers, must get a valid letter of authorization from the principal supplier or manufacturer.
- (ii) The tenderer should have minimum 3 years of experience in the supply and installation of similar and/or identical items to the Govt. sector-Research Institute only, Medical College, ICMR project etc. the value of which is minimum 70.00 Lac has to be submitted. Necessary supporting documents like supply orders, performance certificates to this effect must be submitted in the technical bid along with the offer.
- (iii) Commitment of efficient after sales service from the bidder and that should be locally available for prompt action.

4. If the tenderer would like to quote for more than one model for the same specifications, say for example for two models, two separate tenders with separate EMD's shall have to be submitted.

5. Bid Price: The rates should be quoted in Indian Rupees (INR) only. All quoted rates should be for F.O.R. destination at TMC&H, Tezpur (including packing, forwarding and insurance charges). Foreign/imported goods should also be quoted in Indian Currency with foreign exchange rate and have to be supplied by the supplier directly to us without opening of Letter of Credit. For imported items the quoted rate should be on FOB basis. Freight Charges and Insurance may be mentioned separately. The rate should be inclusive of all charges and mandatory Govt. levies and taxes, where applicable. The chargeable amounts should be clearly mentioned in financial bid/commercial envelope. In absence of any specific mention, the same shall be treated to be included in the cost of the equipment.

6. The tender of the bidders who does not satisfy the qualification criteria as mentioned above are liable to be rejected summarily without assigning any reason and no claim whatsoever on this account will be considered.

7. All quotations/tenders should be deemed valid for at least 90 days from the date of opening the tender.

8. The tender not quoted according to the laid down standard specification and conditions will be rejected straightway.

9. Bidder will quote firm & competitive rates. No condition like discount in price, free goods /incentives will be accepted towards finalization of the tenders.

10. Any terms and conditions of the tendering firms not appearing in the body of the tender document will not be considered as forming part of their tenders. Tendering firms should submit their tenders with reference to the terms and conditions prescribed hereinafter which shall form part of terms of supply orders to the approved tenderers.

11. **Documents establishing good conformity to tender document.** The tenderer shall provide in its tender the required as well as the relevant documents like technical data, literature, catalogues etc. to establish that the goods and services offered by him in the tender fully conform to the goods and services specified by the purchaser in the tender documents. For this purpose the tenderer shall also provide a clause-by-clause comment on the technical specifications and other technical details incorporated by the purchaser in the tender documents to establish technical responsiveness of the goods and services offered in its tender. In case there is any variation and/or deviation between the goods & services prescribed by the purchaser and that offered by the tenderer, the tenderer shall list out the same in a chart form without ambiguity and provide the same along with its tender. If a tenderer furnishes wrong and/or misleading data, statement(s) etc. about technical acceptability of the goods and services offered by it, its tender will be liable to be ignored and rejected in addition to other remedies available to the purchaser in this regard.

12. The Tenderer may be required to demonstrate the functioning of the equipment offered by them at the time of consideration of the technical bid. The demonstration, if necessary shall be done at TMC&H, Tezpur at the tenderer's own cost.

13. Since it is an Item Rate Tender, tender for part of the requisite items will also be accepted. However, in that case, the amount EMD will remain the same.

14. The tenderer will have to produce original copy of all documents if asked for when required.

15. Manual Submission of Tender Fee and EMD along with Hard Copies of Technical Bid: In this envelope, the bidder shall include the following documents in physical form. The Tender Reference No, name of work and name of tenderer are to be mentioned clearly on the envelope. This envelope must reach the tender inviting authority before the expiry date & time of bid submission.

- a. Demand Draft towards tender fee in original.
- b. Demand Draft towards EMD in original.
- c. Hard copies of Technical bid. For any discrepancy between the online technical bid and the hard copies of the technical bid, the online technical bid will prevail and govern the evaluation.

Note: As the reference details of EMD and tender fee instruments are required to be filled at the time of online bid submission stage, the bidders are required to keep a copy of the same before manual submission.

16. Canvassing, whether directly or indirectly in connection with the tender, is strictly prohibited and the tenders, submitted by the bidders, who resort to canvassing, will be liable to rejection.

INSTRUCTIONS TO BIDDERS

- 1. Clarification on e-Tender Document:** A bidder requiring any clarification on any issue of the e - tender document may take up the same with the e-tender inviting authority in the pre-bid meeting. Further, any doubt to the implication of any of part of the terms & conditions or of the specifications may be clarified from this office before submission of tender.
- 2. Documents to be submitted along with the Technical Bid :-** It should contain all the relevant information and desired enclosures along with Tender Fee & Earnest Money Deposit (EMD). The tenderer must upload and submit the following documentary proofs duly signed, stamped on each page of the same in the technical bid:
 - (a) Scanned copy of Demand Draft (EMD) or documents in support of EMD exemption.
 - (b) Scanned copy of Demand Draft (Tender Fee).
 - (c) The entire tender notice in token of acceptance by the tenderer of all terms & conditions.
 - (d) Income Tax Pan.

- (e) VAT/CST/Service Tax/GST registration certificate (As statutorily applicable) clearly showing the class/classes of goods/services for which registration has been obtained along with copy of last return filed.
- (f) Declaration in case of manufacturer or current authorization letter.
- (g) Certificate of Incorporation/Partnership Deed.
- (h) Proof of office address.
- (i) Valid Manufacturer/Trade Licence.
- (j) Literature & Catalogues in support of items quoted must be enclosed.
- (k) ISO, CE, ULT or other quality certificates issued from the competent authority.
- (l) If any Instrument/Equipment is proprietary nature, Proprietary Article Certificate should be provided.
- (m) The bidder must give details about the nearest service centre and service engineers contact details including phone number and email id.
- (n) Power of Attorney in favour of signatory of bid.
- (o) User List along with supply orders and performance certificates.
- (p) Income Tax Return Filed Acknowledgements for last Three years along with audited Balance Sheet and Profit & Loss A/c for last 3 years duly authenticated by a Chartered Accountant.
- (q) Turnover certificates for the last three years duly authenticated by a Chartered Accountant.
- (r) The tenderers shall furnish a non —blacklisting certificate in the form of an Affidavit, attested by the Notary Officer on a non-judicial stamp paper of appropriate value that there is no vigilance/CBI case pending against the firm/supplier and that the firm has not been blacklisted in the past by any government/Private institution.
- (s) Bidder's undertaking.

Important Points:

- a. In the event of non-receipt of any of the above documents with the Technical Bid, it will be presumed that the bidder could not fulfill that particular criteria and hence the bidder will be disqualified from the process.
- b. Tender found defective in any of above codal formalities shall be rejected directly.
- c. It is the responsibility of bidder to go through the e-tender document to ensure furnishing of all required documents in addition to above, if any.

- d. **Hard copies of documents uploaded and submitted in the technical bid along with the original copies of demand drafts in respect of EMD and Tender Fee should reach the e-tender inviting authority on or before closing date and time as mentioned in the key dates.**
3. Documents to be submitted along with the Financial Bid:- It should contain Price Schedule/Bill of Quantity (BOQ): Here the bidder should quote rates online in the Bill of Quantity (BOQ) in the space marked for quoting rates. **The tenderer must also additionally upload and submit the Supplementary to BOQ Part-I and Supplementary to BOQ Part-II, as per prescribed formats, with Financial Bid.**
4. **ACCEPTANCE OF TENDER:**
- a. This office does not pledge itself to accept the lowest or any tender and reserves the right to accept the whole or any portion of the tender. Also this office itself has right to increase or decrease or drop or split up the quality and place the supply order on one or more tenders and the tenders must supply at the quoted rates.
 - b. Brand value and productivity of the quoted items will be considered while selecting the items. The purchaser's evaluation of bids will take into account, in addition to the bid price and the price of incidental services, the following factors:
 1. Delivery schedule offered in the bid,
 2. Deviations in payment schedule from that specified in NIT.
 3. The cost of CMC.

SPECIAL TERMS AND CONDITIONS

(Annexure to Agreement)

1. The rate quoted by the bidder should not be higher than the rates at which it may have supplied and installed such items to other Government Institutes/ Ministries/ Departments/ PSUs etc.
2. Brand names, models, manufacturer names and customer list of the items should be furnished clearly.
3. The bidder should clearly indicate the guarantee / warranty status of each item separately. Guarantee/ Warranty Certificate must be provided at the time of supply.
4. All quoted items should have warranty/guarantee for a period of at least 2 years with spares from the date of installation followed by Comprehensive Maintenance Contract (CMC) for a period up to 3 years after warranty/guarantee period. The warranty charges should not be quoted separately otherwise the offer shall be summarily rejected. All software updates should be provided free of cost during warranty

period. Also the bidders are requested to submit their quote for comprehensive AMC in respect of equipment. Failure to comply this condition will entail the rejection of the bids. Charges for CMC including all spares and accessories for the quoted items should be mentioned on %age and p.a. basis and attached separately. While deciding the tender, CMC charges shall also be taken into account as the the price comparison shall be made taking into account on basic price and post warranty AMC.

5. **Delivery Period and applicable penalty for delayed supply and non-supply:** The maximum delivery period from the date of placing the supply order shall be 1 month. For delayed supply penalty @ 10% p.a. of the amount involved shall be imposed & calculated on daily basis for a maximum period of further 1 month. Thereafter, the supply order shall stand cancelled and the EMD shall be forfeited besides debarring the supplier for participation in tendering process in future. For imported Instruments/Equipment, the delivery period shall be up to 90 days. In case the items are urgently required the firms will have to supply the items on urgent basis. However in exceptional circumstances and on written request the extension of the date of supply may be considered at the discretion of the Principal, TMC&H.
6. **Training:** The tenderer will be required to organize training if required for using the equipment/instruments and conduct such training at his own cost.
7. **Contract:** The successful bidders will be required to enter into an agreement with the college on a non-judicial stamp paper of Rs.20/- for the supply and satisfactory installation & running of the equipment as per specification and terms and conditions listed in this tender document and agreed upon.
8. Rates of quoted items should include the rates of main equipment/instrument and its standard accessories only. Optional items shall not be taken into account for finalization of the total cost.
9. **Payment/ Payment Schedule:** Payment will be made only after the receipt of the items in good condition as per specification against the order. In case of equipment, 90 % payment will be released after receipt of the certificate from the concerned department that the equipment has been installed by the firm in fully functional condition according to their specifications, and the balance 10 % will be released after the expiry of the guarantee/warranty period from the date of installation (Alternatively, the tenderer should be required to submit Bank Guarantee from a **Nationalized Bank** of 10% of the cost of the equipment at the time of delivery of the Instrument which will be retained by the institute upto the expiry of the guarantee/warranty period from the date of installation. No advance payment will be made.
10. Any dispute arising thereafter will be subject to the jurisdiction of District courts Dharamshala.

11. **Disputes Settlement:** All disputes or differences arising under, out of or in connection with the contract/supply shall be subject to the exclusive jurisdiction of Court within the local limits of Tezpur, Assam State.

Schedule-I

List of Equipment/Instruments and Tentative Requirement

Sr no	Item/Equipment	Qty (tentative)
01	Gradient PCR	01
02	Electrophoresis system with Power Pack	01
03	Gel doc system	01
04	Ultra Pure Water Purification System	01
05	Bio-safety cabinet	01
06	Refrigerated Centrifuge	01
07	Nanodrop Microplate Spectrophotometer	01
08	Microcentrifuge	01
09	ELISA Washer	01
10	CO2 Incubator	01
11	-80°C Vertical Ultra Low Freezer	01
12	Deepfreeze -20°C	01
13	Laboratory Refrigerator	01
14	Microbiological Incubator	01
15	Hot Air Oven	01
16	Pipette	01
17	Non Refrigerated Centrifuge	01
18	LN2 container	01
19	Liquid Nitrogen Transport Container	01
20	BOD Incubator	01
21	Digital Dry Bath	01
22	Magnetic Hotplate Stirrer	01
23	Shaking Incubator	01
24	Water Bath	01
25	Inverted Fluorescent Microscope	01
26	Vertical Autoclave	01
27	Adjustable Volume Single Channel Pipettes	01
28	Adjustable Volume Digital Multi Channel Pipettes	01
29	Fine Analytical Balance	01
30	Vertical electrophoresis unit and power supply	01
31	Rocking shaker	01
32	Elisa Reader	01
33	Vortex shaker	01

Schedule-II

Required Technical Specifications of Equipment/Instruments

It should be understood that Technical Specification mentioned hereunder are intended to be descriptive/indicative only and not restrictive. The tenderer may substitute alternative standards, brand name in its bid, provided that it demonstrate the purchaser's satisfaction that the substitutes are substantially equivalent or superior to those designated in the "Technical Specification" or more suitable for VRDL project.

Sl.no	Item/Equipment	Technical Specification
01	Gradient PCR	<ul style="list-style-type: none"> • Gradient PCR with three independent blocks • System can be used by 3 different users at 3 different / same time to perform 3 different experiments. • System should have an interchangeable & flexible block configuration which accepts four types of thermal blocks for optimization and throughput – 3x32 / 1x96 / 2x96 / 2x384 • Temperature in each block should be able to set independently. • Run up to 6 separate temperatures in the same plate with user defined time to determine the optimal annealing temperature • Maximum Block ramp rate should be 6 degree C/sec • Maximum Sample Rate should be 4.50 degree C/sec. • Temperature Accuracy should be +0.25 degreeC(35-99C) • Temperature Range is 0C to 100C. • Temperature Uniformity should be <0.5C(20sec after reaching 95C) • PCR Volume Range should be 10-80ul. • Instrument Memory-USB on Board. • Display Interface should be 8.4" color TFT LCD • 1KVA Online UPS with 1 hr back up should be supplied.
02	Electrophoresis system with Power Pack	<ul style="list-style-type: none"> • Gel casting case should be leak proof • Should be able to cast get that can be able to accommodate 2 comb slots • Dimensions (L x W) of casted Gel Size - should be 14 × 12cm • Buffer chamber should have lid, with attached power supply leads, Easy Cast gasketed U.V. Transmissible (UVT) gel tray, • Combs should be of 12 & 20 well, double-sided, 1.0/1.5 mm thick. • Output Voltage - 200 V • Max Current - 2000 mA • Jacks – 4 • Display Modes - Voltage or Current • Timer - 0-99 hr. 59 min • Instrument should have CE marked Certifications.

03	Gel doc system	<ul style="list-style-type: none"> • The system should be benchtop. • It should allow the use of safe blue-light transillumination without the risks of UV light transillumination. • The Camera should have at least 1.3Mp, • It should be compatible with a wide range of fluorescent and visible dyes (e.g. Qdot®, SYBR Safe®, ethidium bromide). • Compatible with different gel formats including precastgels and pour-it-yourself gels (agarose, or polyacrylamide). • It should perform Real-time sample imaging allowing detailed sample viewing. • It should come with white light screen for protein analysis. • Temperature: Ambient \pm 5°C to 40° C • It should do direct camera to PC image transfer. • Gel capture and data analysis software should be provided. • Branded compatible computer should be supplied with pre-installed latest version of the software.
04	Ultra Pure Water Purification System	<ul style="list-style-type: none"> • The instrument should be micro-processor based table top model with Reverse Osmosis, Ultra pure water System, re-circulation pump to generate ASTM Type II and ASTM Type I quality water for molecular biology applications and HPLC, ICPMS, TOC, etc. • RO Permeate Output capacity should be about 6 ltrs/hr • Ultra pure water capacity should be 1.0ltr/min • Ultra pure water Conductivity should be 0.055μS/cm • UV Photo-Oxidation with 185 and 254nm • Ultra filtration Module, should be internal and not external • Endotoxines < 0.01 EU/ml • Integrated tank capacity 6 ltr with vent filter, conical bottom and food grade polyethylene should be provided • Tank water should be re circulated through ultrapure cartridge after fixed interval • 99% Retention of bacteria • Instrument should be low-noise recirculation pump • LCD display should be there for monitoring the conductivity of output ultra pure water • The instrument should be easy to operate

<p>05</p>	<p>Bio Safety Cabinet</p>	<ul style="list-style-type: none"> • Class II Biosafety Cabinet Type A2 design. • Size 4 feet width and the front window must have 8/ 10” sash opening • It should be supplied with set of arm rest, an electrical outlet and a support stand provided with leveling bases. • Motor should be DUAL DC & must automatically adjust the airflow speed (balancing inflow and down flow) without the use of a damper to ensure continuous safe working conditions. • The microprocessor based Cabinet should use differential pressure sensor to display the inflow and down flow air velocities in real-time on an LED/LCD display. • Should have port for vacuum tubing and cables on the sides. • HEPA/ULPA Filter should be 99.995% MPPS(Most Penetrating Particle Size) • UV light must be programmable to allow for specific exposure times from 0 to 24 hours. Lightening power should >1100 Lux (100fc);cabinet noise level must be less than 65 dB(A) • Cabinet should be NSF (National Sanitation Foundation) certified and certificate of the quoted model should be attached. • Power Consumption in Normal mode :200W ±10% • CE certified with Warranty of 3 year
<p>06</p>	<p>Refrigerated Centrifuge</p>	<ul style="list-style-type: none"> • Minimum Capacity: 4x400ml • Temperature range should be: -10 °C to +40 °C • Minimum Speed should be above 15000 RPM • Maximum RCF should be about 25000 to 26000 xg • Change of rotors for different applications should be easy • The bucket lids for Swing out rotors should be bio-containment • The centrifuge must be able to display both air/chamber temperature as well as temperature in the sample in real time. • Dual Timer mode- At Start and at Speed • The centrifuge must have an option for automatic lid opening at the end of the run & also the facility of password protection for lid opening • The centrifuge must be able to display set parameters together with actual values, • The centrifuge must have a minimum of 5 “direct recall” program keys, and capability for up to 99 programs. • The centrifuge should have the option of Swing out Rotor capable of running up to 76 x 5 ml or 7 ml blood collection tubes and 56 x 10 ml blood collection tubes in certified sealed conditions at 5000RPM & 4700xg . The buckets and rotor sealing lids must be certified for bio-containment • The centrifuge must be supplied with Fixed Angle light weight non corrosive Rotor capable of running a minimum of 8 x 50 ml & 8x15ml conical tubes at speeds of at least 24000

		<ul style="list-style-type: none"> x g. The centrifuge must be supplied with Microplate Rotor of capable of running of 6 microplates of standard footprint and height at speed of at least 4000 rpm. 3KVA online UPS with 30mins back-up should be supplied
07	Nanodrop Microplate Spectrophotometer	<ul style="list-style-type: none"> A UV-visible spectrophotometer with microplate reading option. A monochromator based UV/Vis spectrophotometer with Xenon Flash lamp as light source and photo multiplier tube (PMT) as detector, for better performance. The system should be able to read 96 & 384 well plates. Should also have the facility to analyze samples in 2ul quantity at a time. Instrument should be able to run wavelength scan from 200nm to 1000nm with 1 nm steps. The instrument should have applications for nucleic acid quantification, protein assays, enzyme kinetic assays, immunoassays (ELISA) , cell toxicity assays, apoptosis and reporter gene assays. The instrument should have inbuilt incubation range from +4 °C to +45 °C and linear shaking options for ELISA, enzyme kinetic assays etc. Measurement speed should be about 6 sec. for 96 well and 10 sec. for 384 well plate Instrument should have an option for pathlength corrections to correlate the microplate data to cuvette, in case of nucleic acid quantification performed on microplate. It should be able to run in stand-alone mode OR with computer & software controlled. The instrument has USB port for the easy data transfer. It should have a self diagnostics option to give a guaranteed high quality data. It should be supplied with 1KVA online UPS with one hour back-up and branded compatible computer
08	Microcentrifuge	<ul style="list-style-type: none"> Maximum RCF : 21,000xg Maximum Speed: above 14,600 RPM Temperature Range: -9 °C to +40 °C per 1 °C increment Time Set Range: 1 min - 99 min; 1 min increments + HOLD mode Fixed angle rotor with 24x1.5ml/2ml/0.2ml at a speed of RCF of 20000 x g should be quoted Fixed angle rotor 10x 5ml conical tubes at a speed of RCF of 20000 x g should be quoted Large LED display for Time and Speed Max Noise Level: 51 dBA Accelaration/Deccelaration time 12Sec/12 Sec Toggle between RPM and RCF. Induction maintenance free rotor

<p>09</p>	<p>ELISA WASHER</p>	<ul style="list-style-type: none"> • The WASHER should be IVD , RoHS & CE certified • Should have capability to wash 96 well micro plates. • Should have a option for interchangeable wash heads option 1x 8 or 1 x12 way wash heads • Should have programmable washing time, volume and soaking time. • Should use non-pressurized bottles to minimize the risk of spillage and also choice for user to substitute bottles of different sizes. • Should provide two 2 liter wash bottles & one 4 liter waste bottle. • Should provide aerosol cover to prevent aerosols of infectious diseases from spreading. • Should have residual volume less than 1.5 µl. • Dispensing volume should be 50 – 400 µl for 96 well. • Should have a USB port for easy data transfer. • Should have large color screen for easy set-up of wash protocols. • Should have the liquid level sensors in both the wash and waste bottles to guarantee safe performance. • Should have plate sensor to recognize if a plate is present or not. • After using the instrument, the automatic rinse feature can be set to operate in a specified time sequence to ensure that the liquid channels do not get clogged.
<p>10</p>	<p>CO2 Incubator</p>	<ul style="list-style-type: none"> • The incubator with minimum capacity of 160 L chamber with interior components constructed of electropolished stainless steel with rounded corners, to minimize potential for unwanted contamination and simplify cleaning. • The water reservoir should be in direct contact with a heated surface to maximize humidification efficiency as opposed to removable water pans which impede heat transfer. • It should have water level sensor and alarm to alert user when humidification water refill is required. Water level is monitored and displayed on the touch screen at all times with advanced notice of refill needed. • Humidity reservoir may be filled without the removal of shelves or cultures and easily drained through built-in copper drain. • CO2 and optional N2/O2 gases are pre-humidified before entering the chamber, providing a more constant, uniform environment. • All control and measurement probes and sensors should be located inside the culture chamber to provide true and accurate values and foster faster parameter recovery times • It should use IR sensor. • An in-chamber HEPA filtered airflow system within the

		<p>culture environment continuously filters the entire chamber air volume every 60 seconds. This system ensures continuous protection against unwanted microbial contaminants that could enter during routine door openings, thus minimizing risk of product loss or inconvenient downtime.</p> <ul style="list-style-type: none"> • The incubator should have automated high temperature sterilization cycle under 12 hours • Should have touch screen user interface for selection and viewing of all basic parameters like humidity, temperature & CO2 etc. • All gas inlets, outlets and sample ports should have microbiological filters, to eliminate the potential of contamination entering the chamber from these points. • Incubator should be CSA certified and CE marked,
11	-80°C Vertical Ultra Low Freezer	<ul style="list-style-type: none"> • Volume: minimum 540 litres and is able to store 2 2mL vials: 40,000 or more • Temperature range: -50°C to -80°C • Refrigeration System: Industrial-Rated Two Stage Cascade System • Defrost Method: Manual • It should use natural refrigerants for lower environmental impact and higher cooling efficiency • It should use Water-blown foam insulation, eliminating chemical emissions and reducing the out-gassing common in other foam products • It should have whisper-quiet operation less than 48 dBA allowing the freezer to be used directly inside the lab • Touch-screen user interface featuring alarm status, door-opening status, temperature status, environmental conditions and back-up system status • Door-opening recovery time should be less than 20 minutes • It should feature Set-point security with individual user • It should be able to store up to 15 years worth of temperature and event data on our on-board computer • Single-hand operation, easy-to-use, padlock-compatible, ergonomic door handle with integrated key lock. • Energy Usage (kWh/day) should be less than 8kWh/day • Electrical requirement: 208-230V, 50/60, 1 Phase • Foot print: 8.46 sq. ft. • 5KVA stabilizer should be supplied along with the machine
12	Deepfreeze -20°C	<ul style="list-style-type: none"> • Capacity: minimum of 700 Liters • Temperature range: -18°C to -25°C • HCFC- and CFC-free insulation • Digital display • Shelves: 3 shelves • Defrost Type: automatic

		<ul style="list-style-type: none"> • Features like high and low temperature alarms, door ajar alarm, remote alarm contacts, standard door locks, reversible doors, access ports and low energy consumption are desirable • Energy consumption should not be more than 10.6 kWh/day • CE marked
13	Laboratory Refrigerator	<ul style="list-style-type: none"> • Capacity: minimum of 700 Liters • Temperature range: +1°C to +11°C • HCFC- and CFC-free insulation • Digital display • Shelves: 3 shelves • Defrost Type: automatic • Energy consumption should not be more than 3.4 kWh/day • Facility of forced air circulation & interior fluorescent lighting should be there • CE marked
14	Microbiological Incubator	<ul style="list-style-type: none"> • Microprocessor control with vacuum fluorescent display • The Inner chamber should be made of AISI 430 / 1.4016 Stainless Steel • It should have automatic over-temperature alarm system • The incubator should have RS 232 interface providing data logging capability • Temperature Range: ambient +5 °C to 70 °C • Spatial temperature deviation: ± 0.6 / ± 0.2 °C • Temperature deviation over time: ± 0.1 °C • Footprint: 3.9 sqft • The incubator should be stackable with optionally available stacking kit • Internal dimensions W x H x D: 18.3 x 23.9 x 14.5 in
15	Hot Air Oven	<ul style="list-style-type: none"> • Oven with mechanical convection technology & minimum capacity of 95L • Operating temperatures from 50° to 320°C • Temperature uniformity of +/-2.5 °C with & temperature stability of +/-0.3 °C at 150 °C • The Inner chamber should be made of AISI 430 / 1.4016 Stainless Steel • It should have the feature of electronically controlled fan speed and damper position. • It should have the features to Programmable controller for temperature ramps and dwells. It should be able to save minimum 10 programs each with 10 discrete steps. • It should have automatic over-temperature alarm system & built in timer • Corrosion-resistant stainless-steel chambers with rounded corners • Large, easy to read vacuum fluorescent display • Easy to use, microprocessor-controlled touch button

		<p>operation</p> <ul style="list-style-type: none"> • The door should be able to open at 180° angle for complete access to chamber interior. • The oven should have RS 232 interface providing data logging capability • The ovens should be stackable with optionally available stacking kit • Internal dimensions W x H x D: 18.3 x 27.9 x 20.4in
16	Pipette	<ul style="list-style-type: none"> • Pipette should be autoclavable. • It should have facility of adjustable finger rest for comfortable position for pipetting and tip ejection. • Pipette Ranges: <ul style="list-style-type: none"> 1.Range: 0.2-2 µl ; Increment: 0.002 µl ; Accuracy µl: ±12.0-2.5% 2.Range: 2-20 µl ; Increment: 0.02 µl ; Accuracy µl: ±3.0-1.0% 3.Range: 20-200 µl ; Increment: 0.2 µl ; Accuracy µl: ±1.8-0.6% 4.Range: 100-1000 µl ; Increment: 1 µl ; Accuracy µl: ±1.0-0.6%
17	Non Refrigerated Centrifuge	<ul style="list-style-type: none"> • Table top centrifuge • Maximum Speed: Above 17000 RPM • Maximum RCF: above 30,000 xg • The Centrifuge should have a feature to install and remove rotor without tool in less than 5 seconds with just a push of a button for quick and easy change of rotors for different applications. • The centrifuge should be CE, UL Certified and IVD Compliant , ISO international standard. • It should accommodate microplate , swinging out & fixed angle rotor • The centrifuge must be supplied with Swinging out Rotor capable of running a minimum of 4 x 145 ml, 4 x50ml, 8x15ml conical tubes and 24x5/7ml blood collection tubes of at least 4500rpm. • The centrifuge must be capable of running a minimum of 6 x 50/15 ml conical tubes at speeds of at least 12000 x g. • All the rotors supplied should be certified for bio-containment.
18	LN2 container	<ul style="list-style-type: none"> • Portable Sample Storage Vessel of capacity minimum 70 Liters and can storage 2000 vials of 2ml • Static Holding Time: minimum of 83 Days • Vials, boxes & racks should be supplied • Monitor provides continuous LED readout of liquid nitrogen level • Secure locking clasp prevents unauthorized entry.
19	Liquid Nitrogen Transport Container	<ul style="list-style-type: none"> • LN2 capacity: 10 Liters • Neck Diameter: 2.0 inch

		<ul style="list-style-type: none"> • Canister Diameter: 1.8 inch • Static Evaporation Rate: 0.2 Liters / Day • Static Holding Time: 21 Days • Weight: empty weight should not be more than 17Kg • It should have feature worldwide shipment of infectious materials with the highest safety and security; approved by UN and IATA • Lockable cover with internal security compartment provides protection and sample isolation • Aluminium container with handle holds internal security compartment
20	BOD Incubator	<ul style="list-style-type: none"> • Capacity: minimum of 550 Liters • Temperature range: -10° to +50 °C • Temperature uniformity: ± 0.5°C • Temperature set point selection with high- and low-temperature protection and simple calibration • Available with dual lamp fluorescent lighting for plant growth studies and day/night cycles, programmable lighting conditions • Safety relay and alarm LED alert to over/under-temperature conditions • Access port for independent sensors/connection of equipment inside unit • Cooling switch provides high temperature accuracy and saves energy at temperatures above ambient • RS-232 and recorder jacks for data-logging • Approximate external dimensions (W x H x D) in: 34 x 77 x 31
21	Digital Dry Bath	<ul style="list-style-type: none"> • Block Capacity: 1 • Controller: PID Digital • Temperature range: Ambient +5° to 130°C • Temperature Uniformity: ≤ ± 1°C • Temperature Accuracy: ≤ ± 0.5°C • Heating Rate: ≤ 20 min. 30° to 130°C • Timer Range: 0 to 99:59 min or continuous • Digital controls and display of time and temperature • Advanced internal temperature sensing probe for outstanding temperature accuracy and control • Precise temperature control with PID circuit • Temperature calibration to enable to offset the temperature to desired value • Timer to allow the user to accurately monitor the heating time • Wide range of interchangeable aluminium alloy heat blocks provide versatility and allow for easy cleaning and disinfecting • Built-in over-temperature protection facility for sample and

		<p>user safety</p> <ul style="list-style-type: none"> • Temperature deviation adjustment facility • Electricals: 250V, 50/60Hz; 2.5A • Dimensions (L x W x H): 12.5 x 7.9 x 3.9 in
22	Magnetic Hotplate Stirrer	<ul style="list-style-type: none"> • Hot plate stirrer with ceramic top & four stirring positions • Speed: 50-1200rpm • Temperature range: 1° to 370°C • Digital displays which indicate temperature settings for heating and stirring, adjustable in 1°C and 1 rpm increments. • Should have option of timer to shut off heating, stirring or both after a preset user defined interval • Certifications: cCSAus, CE Marked
23	Shaking Incubator	<ul style="list-style-type: none"> • Temperature Range : 15°C Below Ambient to 80°C • Speed Range : 15–500; ±1 rpm • Orbit Diameter : Close to 20mm • Units should be stackable, minimum two. • System should have two adjustable-height shelves to provide added storage. • System should have large viewing window and internal light for better sample visibility. • System should have three individual displays for viewing temperature, speed and time simultaneously. • Corrosion-resistant stainless-steel chamber should accommodate a variety of universal and dedicated platforms. • There should be Electrical outlet inside chamber to provide power for safe operation of shakers, stirrers or rotators. • System should have Triple eccentric drive to handle heavy loads, provide uniform agitation and continuous 24-hour operation, even at high speeds. • System should have Continuous/timed operation from 0.1 hour to 999 hours or 0.1 minute to 999 minutes. • There should be Visual/audible alarms to alert if temperature deviates ±1°C of set point. • Shaker should shut down and visual/audible alarms signal if unit operates ±10% of set speed, preventing shaker from walking. • System should have unbalanced load sensor to stop platform motion when excess vibration is detected visual/audible alarms signal until condition is corrected. • System should have Soft start feature to eliminate sudden starts and stops, splashing of vessel contents or wetting of flask closure. • System parameters should be retained during power failure and should restart unit automatically after power is restore • System should also have Over-temperature safety feature with independent thermostat to provide additional backup by controlling heat if main temperature controller fails.

		<ul style="list-style-type: none"> • System should have Safety interlock to stop shaking motion when the door is open • Should include 18'x18' platform with available clamps like (1) microplate clamp, (2) 125 ml flask clamps, (4) 250 ml flask clamps, (4) 500 ml flask clamps, (8) 1L flask clamps, (4) 2L flask clamps.
24	Water Bath	<ul style="list-style-type: none"> • Capacity: minimum 10 Liters • Temperature range: ambient to 100°C • Temperature Stability: $\pm 0.1^{\circ}\text{C}$ • Temperature Uniformity: $\pm 0.2^{\circ}\text{C}$ • Temperature Presets: minimum 4 • It should have Icon-based graphical display for easy operation and monitoring • Interior chamber should be seamless stainless-steel. • It should have over-temperature safety to prevent thermal runaway; auto-on and auto-off timers to optimize operation schedules & audible alarms. • Exterior dimensions (L x W x H): 15.5 x 15.1 x 9.2 in. • Certifications: UL & CE are preferred
25	Inverted Fluorescent Microscope	<ul style="list-style-type: none"> • Single compact integrated unit including : Inverted Cell imaging system, CCD Camera, computer, high power fluorescence lighting system & LCD display • It should have high output LED illuminators with integrated hard coated fluorescence bandpass excitation & emission filters with lifespan of minimum 50,000 hrs • Instrument should have Adjustable LED light source; appropriate for Alexa 488/GFP, Alexa 555/ RFP and DAPI/Hoechst. • Microscope should be operable under normal laboratory illumination, no dark room Needed • Must automatically recognise which filter is installed and adjust the software configuration accordingly • Camera: Minimum 16 bit Monochrome or Color camera; must have minimum 1.3 MP and minimum 1280 X 960 resolution • System must include 10 X, 20X, 40X and 100X fluorite or apochromatic objectives It should have interchangeable vessel holders including tissue culture flasks, petri dishes, multiwell plates, microscopic slides and different culture systems • Must provide RGB channel overlay • System must be sequentially acquire a phase contrast image and a fluorescence image and then overlay them automatically for analysis • System must provide time lapse imaging capability with automatic movie creation • System must provide manual cell counting capability • Output file formats should be convertible to Jpg, bmp, tif and

		png																																
26	Vertical Autoclave	<ul style="list-style-type: none"> Fully automatic vertical autoclave suitable for sterilization under working steam pressure upto 15 PSI or more and temperature of 121 degree Celsius or more. Unite made SS 304 chamber approx inner dimensions 16'''' to 25'''' (diameter x depth). Lid made of heavy gauge lid. Die pressed SS304 with pressure gauge. Steam release valve & necessary safety valves with foot litting arrangement to open lid, programmable with all functional accessories. Capacity: 70 to 80 lit. Display: time and temperature LCD display. Low water level alarm and cut off / sensor open alarm. Perforated carriers made up of SS 304 (3-4 Nos) Sterilization check should be done. 220/230 volts AC 50 Hz or Suitable power supply. 																																
27	Adjustable Volume Single Channel Pipettes	<ul style="list-style-type: none"> ISO 8655 Certified. Fully autoclavable. Single channel pipettes of variable volume compatible with universal UPS. <table border="1"> <thead> <tr> <th>Range</th> <th>Increment</th> <th>Accuracy</th> <th>Precision</th> </tr> </thead> <tbody> <tr> <td>0.2 to 2 µL</td> <td>0.01 µL ±</td> <td>12.0 to 2.5%</td> <td>10.0 to 2.0%</td> </tr> <tr> <td>1 to 10 µL</td> <td>0.1 µL ±</td> <td>2.5n to 1.0%</td> <td>20 to 0.5%</td> </tr> <tr> <td>2 to 20 µL</td> <td>0.1 µL ±</td> <td>3.0 to 1.0%</td> <td>2.5 to 0.4%</td> </tr> <tr> <td>20 to 200 µL</td> <td>1 µL ±</td> <td>1.8 to 0.6%</td> <td>0.7 to 0.2%</td> </tr> <tr> <td>100 to 1000 µL</td> <td>5 µL</td> <td>± 1.0 to 0.6%</td> <td>0.6 to 0.2%</td> </tr> <tr> <td>5-50 µL</td> <td>0.1 µL</td> <td></td> <td></td> </tr> <tr> <td>10-100 µL</td> <td>1.0 µL</td> <td></td> <td></td> </tr> </tbody> </table>	Range	Increment	Accuracy	Precision	0.2 to 2 µL	0.01 µL ±	12.0 to 2.5%	10.0 to 2.0%	1 to 10 µL	0.1 µL ±	2.5n to 1.0%	20 to 0.5%	2 to 20 µL	0.1 µL ±	3.0 to 1.0%	2.5 to 0.4%	20 to 200 µL	1 µL ±	1.8 to 0.6%	0.7 to 0.2%	100 to 1000 µL	5 µL	± 1.0 to 0.6%	0.6 to 0.2%	5-50 µL	0.1 µL			10-100 µL	1.0 µL		
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28	Adjustable Volume Digital Multi Channel Pipettes	<ul style="list-style-type: none"> Must be of a reputed brand, from manufacturer/authorized dealers having calibration facility in Assam. Necessary evidence to be provided. ISO 8655 certified digital multichannel pipettes of variable volume compatible with universal tips. Provision for 6,24,96 well applications. <table border="1"> <thead> <tr> <th>Range</th> <th>Increment</th> <th>Precision</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>5 to 50 µL</td> <td>0.5 µL</td> <td>2.0 to 0.7%</td> <td>8 Channel 12 Channel</td> </tr> <tr> <td>30 to 300 µL</td> <td>5 µL</td> <td>1.5 to 0.3%</td> <td>8 Channel 12 Channel</td> </tr> <tr> <td>1 µL</td> <td>20 µL</td> <td></td> <td></td> </tr> </tbody> </table>	Range	Increment	Precision	Type	5 to 50 µL	0.5 µL	2.0 to 0.7%	8 Channel 12 Channel	30 to 300 µL	5 µL	1.5 to 0.3%	8 Channel 12 Channel	1 µL	20 µL																		
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29	Fine Analytical Balance	<ul style="list-style-type: none"> Single pan Analytical Balance with highest accuracy for weighing processes; readouts to have at least four decimal places. Equipped with a draft shield chamber to eliminate interfering ambient effects. Weighing Range: 0.01-60 g. Readability: 0.1mg. Calibration: External. 																																

		<ul style="list-style-type: none"> • Display: LCD Display. • Verification interval: 0.001g. • Pan Size: 80-100mm. • Maintenances and calibration during warranty and afterwards every 6 months. • 210-240V/50-60 Hz Power Supply.
30	Vertical electrophoresis unit and power supply	<ul style="list-style-type: none"> • Dual electrophoresis unit for two slabs gel 10 x 8 cm • Should include buffer chamber safety lid with cables two alumina notched plates • Should have 10 well 1 mm thick combs, spacers of 1 mm thickness and dual gel caster. <p>For power supply it should run two units at constant voltage or constant current with maximum output of 300V, 400 mA and 80 Watts.</p>
31	Rocking shaker	<ul style="list-style-type: none"> • Speed should be ~50 rpm • Timer may be ~ 99hrs • Maximum load should be ~10 kg
32	Elisa Reader	<ul style="list-style-type: none"> • Wavelength range should be 200-1000 nm • Monochromator step size 1nm with bandwidth 5nm. • Imaging resolution should be of 0.5,0.75,1.0 mm • Indication range should be 0-4 OD • Accuracy should be $\pm 1.0\%$ or 0.015, 0–3.0 OD • Reproducibility should be 96-well plate; $\leq 1.0\%$ or 0.005, 0–3.0 OD at 405 nm • Read time should be 8 sec/96-well/single wavelength; 15 sec/384-well/single wavelength; 35 sec/1,536-well/single wavelength. • Max plate height should be 21 mm.
33	Vortex shaker	<ul style="list-style-type: none"> • Speed should be 100-800 RPM • Timer display should be 99 HRS 59 MINS. • Operating mode should be Timer and Continuous

Vertical electrophoresis unit and power supply

UNDERTAKING

**(To be submitted on judicial stamp paper/e-stamp of Rs. 20/- and should be attested by
Notary Public)**

To

The Principal cum Chief Superintendent, TMC&H.

1. I, _____
Son/Daughter/Wife of Shri _____
Proprietor/Director/Authorized signatory of the Agency/Firm/Company participating in
the tender, am competent to sign this declaration and execute the tender document;
2. I, the undersigned, hereby solemnly declare and undertake as under:
3. I, the undersigned, hereby certify that I have gone through all the terms and conditions
mentioned in the tender form document and I undertake to abide by them.
4. The information / documents furnished with the bid are true and authentic to the best of
my knowledge and belief. I / we, am / are well aware of the fact that furnishing of any
false information / fabricated document would lead to rejection of my tender at any stage
besides liabilities towards prosecution under appropriate law.
5. I/we undersigned hereby bind myself/ourselves to the purchaser to supply and install all
the offered instruments/equipment. The rates quoted by me/us for the items tendered for
are specified against each. It is certified that rates quoted are lowest quoted possible for
any institution in India and not higher than the MRP/prevaling market rate.
6. The items offered shall be strictly as per specification and of the best quality as per
requirement of the purchaser. The decision of the Principal, TMC&H as regard to the
quality and specification of items shall be final and binding on me/us.

7. I/we undertake to provide back-up services of trained technical personnel on round the clock basis for emergency problem.
8. I/we undertake and confirm that the item shall be covered by the standard warranty as applicable. In case of any defect reported, the defective part shall be replaced at the quickest possible time.
9. We agree to the conditions of the tender under which the EMD shall be forfeited to us.
10. We shall organize technical seminars/workshops at various locations within the State of the purchaser to impart education and training to the medical professional as and when requested by the purchaser.

Signature of the tenderer

Full Name

Designation

(Office seal of the tenderer)

Format of Supplementary to BOQ Part-I

S. No.	Name of Equipment/instrument offered by the bidder	Technical Specifications asked as per tender	Technical Specification offered by the bidder	Remarks

Format of Supplementary to BOQ Part-II

S. No.	Name of Equipment/ instrument offered by the bidder	Mention Brand/Make and Model of Item offered by the bidder	Applicable Warranty/Guarantee (Years)		CMC Rate in % p.a.
			By Manufacturer	By Bidder	