TENDER DOCUMENT WITH TERMS AND CONDITION

Principal
Arts, Commerce and Science College, Lanja
Zapade-kante road, At Post Lanja,
District Ratnagiri PIN 416701.

Laboratory Equipment's for Arts, Commerce and Science College, Lanja

TENDER NOTICE

E-Tender for Purchase of Laboratory Equipment's under RUSA for Arts, Commerce and Science College, Lanja

Year 2020-2021

Sr No.	Name of items	Estimated Cost in lakh (Rs.)	Time limit for completion (Months)	Earnest Money in(Rs)	Cost of Blank tender form (Rs.)
1	2	3	4	5	6
1	Laboratory equipment's as per Annexure I	30	30 Days	30,000	3,000

The tender schedule and Key dates are as under

Seq No.	Stage	Date	Time
1	Publishing Date	10/12/2020	10.00
2	Document download Start date	10/12/2020	10.00
3	Bid Submission start date	10/12/2020	10.00
4	Bid Submission End date	24/12/2020	17.00
5	Bid Opening date (if possible)	26/12/2020	11.00

The online tender Time Schedule (Key Dates) is displayed on the e-Tendering Portal of government of Maharashtra www.mahtenders.gov.in of Tender form along with Terms and conditions can be downloaded from above website w. e. f. 10/12/2020 to 24/12/2020 by payment of Rs.3,000/-(Rupees Five Thousand only) as the cost of tender form.
Payment shall be made during the bid process via online payment through e tendering website.
Right to accept or reject any or all tenders without assigning any reason rest with the undersigned.

1. ITEMS UNDER TENDER PROCESS FOR FIXING RATE OF EUIPMENTS

Online tenders are invited by the **Notice Inviting Tender** The Principal Arts, Commerce and Science College, Lanja Zapade-kante road, At Post Lanja, District Ratnagiri PIN 416701 invites tenders for the "Laboratory Equipment's for Arts, Commerce and Science College, Lanja" through the website www.mahtenders.gov.in

2. ELIGIBILIY FOR PARTICIPATION IN TENDER PROCESS

a) The Manufactures with valid manufacturing license/Certificate of Registration, issued by competent authority for items listed in Annexure-A OR the Dealers/Distributors authorized by manufacturing company in course of their regular business having valid certificate, are eligible to submit the tenders.
b) The items to be purchased must have ISI/CE/NABL/ISO etc quality standard, wherever applicable.
c) It must be noted that the tenderer should not have been black-listed by any Government agency/Institution of local self-Government /Public sector in India under any contractual relation with them or pending legal/penal action for complaints of quality. The undersigned reserves the right for insisting upon submission of Good Performance Certificate issued by any such agency.
d) The registration certificate of manufacturing company must indicate that production of the item shown in Annexure-A is commenced. Only provisional registration of the item without commencement of production is not sufficient.
e) Copy of Factory License of the firms whose products are quoted should be furnished with tender documents
f) The bidder company/Dealer /Distributor should clearly state whether the firm is registered with NSIC/SSI unit/MSME Reg.
g) In case the tenderer is submitting tender as Dealer/Distributor of any manufacturing company, he must submit valid certificate of appointment as Dealer/Distributor issued by the manufacturing company.
h) Non-compliance with the above conditions will render the tender ineligible for further processing and the Commercial bid in such case will not be opened.
i) Latest satisfactory performance certificate should be furnished with tender documents.
j) Tender will be awarded to the party quoting & agreeing to provide complete list of instruments mentioned in the Annexure A. The tenderer should also match all the specifications of instruments and terms of condition of the tender
k) **After Sales Service :**
The supplying firm should have well established service, repair & maintenance center with dedicated service engineers and this service back up site in the state of Maharashtra. Documents of the same should be submitted with the tender documents
l) The points of presence with contact details are required to be submitted along with the technical bids.
m) **Demo of the equipment's:**
The supplying firm if required by the tenderer should give demonstration of the equipment quoted in the tender. The cost TA/DA of the inspection team coming for demo should be borne by the suppling firm. Or if demanded by the tenderer the instruments should be brought at the tenderer site by bidder for demonstration. No charges for the same will be provided by the tenderer

3. HOW TO GET A TENDER FORM

Tender Form along with Terms & Conditions can be downloaded from e-Tendering Portal of government of India www.mahtenders.gov.in.in w.e.f 10.00 hrs 10/12/2020 to 17.00 hrs of 24/12/2020 by payment of Rs. 3,000/- (Rupees three Thousand only) as the cost of tender form. The payment shall be made in the form of online payment through e tendering website.

4. EARNEST MONEY DEPOSIT (EMD)

A. An Earnest Money Deposit (EMD Rs.30,000/-) as per Annexure-A should be paid via online payment gateway only. In case of EMD exemption certificate duly attested shall be uploaded at the time of submission.
B. The following categories of suppliers are exempted from payment of Earnest Money Deposit-
    i. The firms located in Maharashtra & Registered with Director General of Suppliers &

Disposals, New Delhi.

ii. Small Scale Industries Units / Micro & Small Enterprises (MSEs) registered with Director of Industries, Maharashtra, only for items manufactured by them.

iii. Small Scale Industrial Units registered with National Small Industries Corporation and Small Industries Service Institute of Govt. of India for their manufacturing items.

iv. Suppliers registered with the Central Stores Purchasing Officer of the Directorate of Industries, Maharashtra, who has satisfactorily supplied the material for last five years.

C. In case of claim for exemption the bidder must submit necessary documents/exemption certificate from appropriate authorities.

D. The EMD is liable to be forfeited, in case the rates quoted by the tenderer are approved but the party refuses to enter into the agreement for supply.

5. TENDER TIME SCHEDULE (KEY DATES)

Seq No.	Stage	Date	Time
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6. MANNER OF SUBMISSION OF ONLINE TENDER FORMS

Tenderers should prepare & submit tenders online on e-Tendering Portal of government of Maharashtra www.mahtenders.gov.in in two bid system. Accordingly the rates for the items in Annexure-A, and submit online in prescribed form-commercial envelope, duly encrypted with tenderer's digital signature certificate. The required documents as mentioned below need to be uploaded in technical envelope T given in online e-Tender. It may be noted that while online opening of the e-Tender. Technical Envelope T will be opened in the first stage. Commercial Envelopes of only such tenderers will be opened online, who have fulfilled all requisite terms and conditions approved by the designed authority. The tender not fulfilling any of the requisite terms and conditions, will be rejected and no further claim will be entertained.

a. Technical Envelope T (Technical Bid)

The technical information in the form of following documents is mandatory.

i. Copy of valid manufacturing license for the manufacturers /Certificate of appointment as authorized Dealer/Distributor, issued by manufacturing company for the Dealer/Distributor.

ii. Copy of GST Registration Certificate of the manufacturing /Dealer/Distributor unit, with registration number valid on the date of filing the tender.

iii. Copy of e-Banking Receipt of payment made for Tender fee & EMD

iv. Copy of PAN card

v. Copy of Factory License of the firm's whose products are quoted

vi. The Tenderer should submit catalogues giving full details of machinery and make of all the quoted tender items

vii. Warranty details of the quoted products

viii. After sales service center details with supporting documents

ix. Declaration duly signed by the tenderer (Annexure-B)

x. Check list duly signed (Annexure-D)

xi. Last year's annual financial statement balance sheet with ITR of bidding firm.

xii. Technical documents Uploaded in Technical Envelope T1 except the financial bid to be submitted at office of The Principal Arts, Commerce and Science College, Lanja before 17.00 . on 24/12/2020 **(**All the documents and certificates shall be

either in original or true copy of the same duly notarized or attested by Government Gazetted officer.)

b. Commercial Envelope (Commercial Bid)

The rates should be quoted only in the online price tender. The rates not quoted in prescribed online tender form or quoted on separate paper will not be considered and the tender form will be rejected. The rates should be quoted as described in the tender document. The Principal Arts, Commerce and Science College, Lanja reserves the right to call for breakup of rates quoted, if necessary.

The rates quote in BOQ should be for full tender, quoting for half tender will not be considered valid.

c. Commercial Envelope and Technical Envelope T should be submitted online as per the stipulated procedure. No tenders will be accepted after stipulated date & time. Also no request for extension of time will be entertained.

d. Tenders sent by Registered Post or by Speed Post/ Courier will not be accepted.

e. The firm making any undue effort to bring pressure from outside/Departmental authority will be liable for outright rejection.

7. CHECK LIST

The documents in the check list must be compulsorily uploaded online with e-Tender form. Any omission in this regard, will make the tender liable for rejection. Before preparation of the online tender, the tenderer is advised to check each item and score at the appropriate place as Yes or No in the checklist.

8. HOW TO QUOTE RATES

a) Rates for supply of equipment items, in Annexure-A, should be quoted in the prescribed online form for F.O.R. (Destination) at any place in the Maharashtra State. The rates quoted should be inclusive of all taxes, levies, octroi and transport charges etc. As applicable.

b) Rates must be submitted only in Online Prescribed Tender form.

c) Tenderer should mention make/model of the item/ spare parts. The tenderer should also specify whether the spare parts are of, genuine/ imported equivalent make/ISI/CE/NABL etc. standard. They are required to give guarantee for exact 2 years and satisfactory performance Certificate of users.

d) Validity of Rates- The rates quoted would be valid up to last installation and commissioning of instrument. Repeat order for the tendered items can be given by the purchaser within this period. The tenderer is bound to supply the items with the accepted rates.

e) In case the decision of acceptance of rates remains pending beyond the 'period of validity of rates' and the tenderer proposes the change in the rates quoted, subsequently the case will be inspected on merit.

f) Rate is inclusive of Installation charges and no extra charges will be applicable for installation.

9. PRICE VARIATION/ESCALATION

a) Increase in rate on any account such as increase in input cost etc. will not be admissible in any case.

b) The tenderer will not quote higher prices than the actual cost of the equipment or (after applying all relevant discount structures) during the current financial year i.e.2020-21 Tenderer will have to remit the difference amount accrued on account of higher price.

10. ACCEPTANCE OF TENDERS

a) The Principal Arts, Commerce and Science College, Lanja reserves the right of accepting whole or any part of the tender or to refuse all tenders without assigning any reason.

b) The Principal Arts, Commerce and Science College, Lanja reserves the right to call for break-up of the quoted rates if required.

11. SIGNING OF AGREEMENT

a) Successful tenders / authorized representative as detailed under condition 12-c, shall enter in the contract Agreement with the competent authority i.e. The Principal Arts, Commerce and Science College, Lanja preferably within 10 days of acceptance of or when called for by The Principal Arts, Commerce and Science College, Lanja in this regard.
b) The successful tenderer will be required to execute an agreement on judicial stamp paper for warranty/Guarantee & services for a period not less than 1 year
c) Only the person authorized by due resolution in this contest is allowed to sign the agreement on behalf of the successful tenderer.
d) The earnest money deposit will be forfeited in the case the tenderer fails to sign the agreement after acceptance of his tender. The tenderer is liable to be black listed in such condition.

12. SECURITY DEPOSIT

The successful tenderer will have to give a security deposit of 2% of contract value which is decided at the time of agreement. The security deposit should be in the form of online transfer to The Principal Arts, Commerce and Science College, Lanja

a) Security Deposit will valid at least 12 month.
b) The security deposit will be returned after 12 months of successful completion of warranty period and proper functioning of the supplied material, machinery equipments, Indemnity bond after the above period will be required to be given by the party agreeing and assuring that in case of any complaint of losses the same will be paid by the contractor to the Project Head Center of Excellence for genetic improvement, Security deposit will be stand forfeited in case of any breach of terms and or conditions of the tender and or contract.

13. INDENTING PARTIES

The Principal Arts, Commerce and Science College, Lanja will be the Indenting officer for the items under this tender.

14. DEMAND AND SUPPLY SCHEDULE

a) Successful tenderer will have to supply the goods as per order placed within 30 (Thirty days) days or the period given by indenting officer after receipt of supply order. For failure within the above stipulated period, the tenderer is liable for a penalty of 0.5% (half percent) of the goods, per week or part thereof for late delivery of such goods till the date of final supply/receipt. A sum not exceeding a 0.5% (Half percent) the price of stores, which the tenderer has failed to deliver as aforesaid for each week or part of week during which the delivery of such goods may be in arrears, subject to maximum limit in case of order not exceeding rupees one lakh in value of 10% and in case of order not exceeding rupees one lakhin value of 10% and in case of an order exceeding rupees one lakh in value of 5% of stipulated price of the stores so undelivered and/or
b) A repeat order within the validity period of the rate contract may be given if required
c) The number of items to be purchased may be changed as per the discretion of the indenting department.
d) The contractor will have to necessarily supply the item of the same quality and make, as have been specified in his bid.

15. BILL RAISING, PAYMENT AND PROCEDURE THEREOF

a) The supplier should be made F.O.R. destination at The Principal Arts, Commerce and Science College, Lanja (M.S.) the supplier should transport and install the machinery and equipment's at his own cost at the places mentioned in supply order.
b) Submission of inspection certificate at the machinery the machinery and equipment's as mentioned in Annexure-A must get tested from concerned competent authority or Committee appointed by The Principal Arts, Commerce and Science College, Lanja. An inspection report certifying that the submitted machinery is as per the specifications should be obtained from Concern competent authority or Committee.
c) The 100% payment will be released after delivery of machine/equipment in good condition, successful commissioning, installation, testing of machines or equipment and inspection report of the machinery as per specifications and successful inspection from RUSA officials.
d) Payment shall be made by the indenting officer on production of bills raised by Contracting Company. All payment shall be made in the name of contracting company/firms only.
e) As the payments are made from the project account, the undersigned shall not be responsible for any delay in receipts of grants from Government or procedural delay due to treasury operations, which is beyond control of undersigned or the indenting officer.

16. TAX DEDUCTIONS FROM BILLS

Government taxes will be deducted as per the existing rules if applicable.

17. QUALITY CONTROL

If the undersigned desires to inspect the material, manufacturing facility and stores, they should be offered for inspection to him or to his agent at the cost of supplier will have to inspect each item from concern competent authority prior to supply and the cost of such inspections will be borne by the successful tenderer, Inspection report shall be attached with the delivery of the item.

18. PENALTY CLAUSE

In case, contracting party fails to deliver consignment thereof within the contract period of delivery or in case the goods are found not in accordance with prescribed specifications and/ or as per approved samples, The Principal Arts, Commerce and Science College, Lanja indenting officer on his behalf, shall exercise his discretionary power to take one or more following actions. Any loss penalty imposed on supplier shall be deducted from the bills payable to him to the bill amount and any other amount due to contractor under the same or any other contract with the undersigned or any of indenting agencies.

a) To recover from tenderer as liquidated damages, a sum not exceeding a 0.5% (Half Percent) The price of the stores, which the tenderer has failed to deliver as aforesaid for each week or part of week during which delivery of such goods may be in arrears, Subject to maximum limit in case of order not exceeding rupees one lakh in value of 10% and in case of an order exceeding rupees one lakh in value of 10% and in case of another exceeding rupees one lakh in value of 5% of the stipulated price of the stores so undelivered

b) To purchase such goods from any other sources and at such a price as the purchasing officer in his sole discretion feels fit and to recover the differences of cost if any from the tenderer. The additional amount of expenditure incurred over and above approved rates will be liable for recovery from the approved tenderer. The defaulting contractor will be penalized to the extent of differences in the rate of 100% of the value of the order. If the defaulting contractor fails to pay penalty, he will be permanently delisted from the list of approved contractors of departments of Maharashtra Government/Central Government and security deposits of contractor will be forfeited.

c) To forfeit entire amount of security deposit of the contractor.
d) To cancel the contract or part of thereof with supplier.
e) To blacklist the supplier permanently from list of departmental suppliers.

19. WARRANTY CLAUSE AND ITS OPERATION

The tenderer/ supplier /contractor/ Successful Bidder should declare that the goods/ store/ article sold to buyer under this contract, shall be of best quality and workmanship and shall be strictly in accordance with the specifications and particulars contained/ mentioned in Annexure –A. Moreover the supplier should give an onsite replacement warranty of one year's for the items to be supplied under Annexure A.

20. FORCE MAJEURE

If, any time during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lock outs or acts of God (hereinafter referred to as events), provided notice of happening of any such Eventuality is given by either party to the over within 21 days from the date of occurrence thereof, neither party shall be reason of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the others, in respect of such nonperformance or delay in performance; and delivers under the contact shall be resumed as soon as practicable, after such an event has come to an end or ceased to exist and the decision of purchasing officer as to whether the deliveries have been so resumed or not shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, either party may at its option terminate the contract, provided also that if the contract is terminated under this clause, the purchaser shall be at liberty to take over from the contractor at a price to be fixed by purchasing officer, which shall be final and all the unused, undamaged and acceptable materials, bought out components and stores in course manufacturer in possession of the time of such termination or such portion thereof, as the purchaser may deem fit accepting such materials, bought out components and stores as the contractor may with the concurrence of the purchaser elect to retain.

21. PERIOD OF VALIDITY OF CONTRACT

The contract shall be valid up to commissioning and operation of equipment.

22. SETTLEMENT OF DISPUTES

a) It will be responsibility of the tenderer to prove beyond doubt his liability for any exemption from paying the earnest money Deposit and/ or Security Deposit wherever applicable, The tenderer should produce relevant document/ certificates from the competent authority in such case.
b) All the disputes between indenting agencies and the supplier shall be settled by the undersigned. However, the disputes between the contractor and undersigned or the appeal against the decision of undersigned in disputes refer to him, shall lie with The Principal Arts, Commerce and Science College, Lanja proceedings if any will be under the Ratnagiri Court only.

23. REMOVAL OF DIFFICULTY

a) The undersigned shall take such decisions to remove difficulties due to ambiguity of provisions in the tender documents or due to provisions which are inconsistent with the objectives of this tender.
b) The dates quoted in the tender form are subject to change any reason or in the event of any holiday, abruptly declared by government.

The Principal Arts, Commerce and Science College, Lanja, Zapade-kante road, At Post Lanja, District Ratnagiri PIN 416701

Annexure- B

TENDER FORM

NAME OF WORK FOR SUPPLY OF "LABORATORY EQUIPMENTS" under RUSA for Arts, Commerce and Science College, Lanja through the website http:// www.mahatenders.gov.in TENDER SHALL BE OPENED ON 26/12/2020 at 11.00AM hrs

1. Name & address of the Proprietor/Director : _____

2. Name & address of firm/address of firm : _____

3. Telephone No : Office_____

Residence_____

Mobile No_____

4. Particulars of firm/agency/company (Partnership Deed/Constitution in case of Society) :

_____

_____

_____

5. P.A.N. : _____

6. GST Registration No. : _____

7. Name of Banker with full postal address :

_____

8. Account No : _____

9. IFSC No : _____

10. The Bidder(s) may note that only "Sealed Envelope" will be accepted. All the requisite supporting documents as mentioned in the above format must be submitted. The Bids sent through any other mode shall not be considered and will be summarily rejected.

I accept all Terms and Conditions for this tender

Date: **Name, Signature and Seal**

Place:

Annexure-D (Document Check List)

Sr. No.	Name of document	Attached YES/NO	Page No.
1.	Copy of valid manufacturing license for the manufacturers /Certificate of appointment as authorized Dealer/Distributor, issued by manufacturing company for the Dealer/Distributor.		
2	Copy of GST/CST Registration Certificate of the manufacturing /Dealer/Distributor unit, with registration number valid on the date of filing the tender.		
3	Copy of Demand draft of payment made for Tender fee & EMD		
4	Copy of PAN card		
5	Copy of Factory License of the firms whose products are quoted		
6	Information brochure of all the quoted tender items		
7	One year Service and Warranty on letter head		
8	After sales service center details with supporting documents		
9	Tender Form duly signed by the tenderer (Annexure-B)		
10	Check list duly signed (Annexure-D)		
11	Last year's annual financial statement with ITR of bidding firm		

Annexure-A

Sr. No.	**Name of Equipment**	**Specification**	**QTY**
1	**Flame Photometer**	1. Machine body made of engineering plastic 2. 7 inch LCD display for visibility of set parameters and results 3. Touch screen operation 4. Microprocessor based – fully automatic system. 5. USB Interface 6. Five element analysis (K, Na, Li, Ca, Ba) 7. A Built-in auto gas ignition system 8. Built-in Gas leak safety protection system 9. In-built flameout protection device 10. Air-compressor complementary with Flame photometer	1

		11. Response time less than 8 seconds 12. In-built software to calculate correlation coefficient, direct concentration read-out, feasibility to select frame size and possibility of changing measuring range	
2	**Double Beam Spectrophotometer**	1. Android Operation System 2. Body made of engineering plastic 3. Wavelength range 190-1100nm 4. Display through 8.5 inch 800 × 480 pixel touch screen 5. One Touch operation to enter into programs 6. Spacious sample compartment with auto 8 allied motorized cuvette rack 7. Should have different programmes - Photometric, Quantitative, Spectrum, Multiwavelength, DNA:RNA ratio and Kinetic analysis 8. High accuracy of ± 0.5 nm of measurement readings 9. Excellent reliability of 0.2 % (τ) and stability of <0.001A /hr 10. Advanced optical system: C-T configuration diffraction grating monochromator 11. Double beam system 12. Built in SCM technology for circuit control 13. High quality blazed holographic grating and low stray light of ≤ 0.1% (τ) 14. 1 nm bandwidth 15. Auto 0%, auto 100 % and error free T/A transformation 16. Complimentary 2 Quartz cuvette to be provided with machine 17. Data and graphic storage through high capacity integrated mass and SD card 18. Storage memory up to 512 mb 19. Software to perform whole operation on laptop or desktop 20. Printer interface	1
3	**Visible Spectrophotometer**	1. Spectrophotometer body made up of engineering plastic 2. Android operations 3. Wavelength range 340-1000nm 4. Crystal clear 8 inch touch screen display 5. Spacious sample compartment with flexible 4 position cell rack 6. Dedicated wavelength drive for easy shuffling of wavelength 7. Internal memory to store files test files 8. Auto 0%, auto 100% and error free T/A transformation 9. Complimentary 4 cuvette to be provided with machine 10. Printer interface	3

		11. USB interface	
4	**Digital pH Meter**	1. Superior and attractive design with body made up of engineering plastic 2. Three parameters measurement pH, mV and temperature measurement 3. Big LCD with illuminous back light display 4. Adjustable probe holding stand 5. ±0.01 pH accuracy, ±1 mV accuracy 6. Automatic temperature compensation 7. Auto calibration with slope display 8. Extremely light in weight with 0.75 kg 9. Comes with specially designed probe cover for protection 10. Adjustable separate plastic molded probe holding stand 11. Three point user friendly calibration 12. USB Interface	6
5	**Six point - pH Analyzer**	1. Superior and attractive design with body made up of engineering plastic 2. Six parameters measurement pH, mV, EC, CF, TDS and Temperature measurement 3. Big LCD with Illuminous back light display 4. Adjustable multi probe holding stand 5. ±0.01 pH accuracy, ±1 mV accuracy 6. Automatic temperature compensation 7. Auto calibration with slope display 8. 9V rechargeable battery 9. Comes with specially designed probe cover for protection 10. Adjustable separate plastic molded probe holding stand 11. Internal calibration system for user ease 12. USB interface	1
6	**Autoclave**	1. Autoclave body made of engineering plastic 2. Large LCD display for visibility of autoclaving program and conditions 3. Microprocessor based – fully automatic system. 4. Auto set of programs with graphical view 5. Printer function to record the autoclaving cycles 6. Special program to make prion free material 7. Class N autoclave (according to European Standard EN 13060) 8. A Built-in independent steam generator to reduce the time of autoclaving 9. Storage tank water should be usable as single distilled water post autoclaving 10. Chamber volume 20 liters 11. Working noise less than 70 dB 12. Autoclaving possibility at two temperature cycles - 121°C / 1.1bar OR 134°C / 2.1bar 13. Single knob door autoclaving system for user ease	1

		14. Door Protection Locking System prevent autoclaving to start till the door is not closed 15. Door Protection Locking System also prevent the door from opening till presence of pressure in the chamber 16. Pressure Safety Valve prevents over pressure loudening in chamber and generator 17. Automatic power cut-off with voltage fluctuations 18. Failure alarm displayed along with the error code if the cycle is interrupted	
7	**Centrifuge**	1. Compact and bench top design 2. Centrifuge body is made up of high quality steel with three layer steel jacket 3. Big LCD with touch display 4. Speed limit 300rpm to 16000rpm 5. Maximum RCF : 35600Xg 6. Electric lid lock – actuated by unit lid 7. Rotor Detection & imbalance alarm 8. 10 acceleration & deceleration program must 9. Low working noise less than 58 dB 10. Rotor Detection & imbalance alarm 11. Brushless DC motor with simpler construction 12. Auto diagnosis of functional errors in the machine for easy understanding of user 13. Autoclavable Anodized aluminum or stainless steel rotors for consistent performance, durability and reliability 14. Multiple options for bucket and angle rotor 15. Provision of adaptors 16. Complementary rotor 12 places X 15ml tubes	1
8	**Microcentrifuge**	1. Body made of engineering plastic 2. Big LCD Display 3. Dome design for maximum heat release 4. Anodized aluminum rotor of 12 places X 1.5/2ml tubes 5. Rotor can be autoclaved 6. Provision of adaptors to work with 0.2ml and 0.5ml tubes 7. Low working noise less than 58 dB 8. Automatic lid release function when machine stops 9. Provision of Emergency Door opening 10. Rotor Detection & imbalance alarm 11. Minimum sample heating (only 1°C) after 20 minutes 12. Speed limit 800rpm to 15000rpm 13. Maximum RCF : 18,000 g	1
9	**Analytical Balance**	1. Molded body made of engineering plastic 2. Modular design with Large touch screen Display 3. USB interface 4. In-built rechargeable battery	1

		5. Max Capacity 1000gm 6. Readability 0.01g 7. Stabilization time : 3 seconds 8. Weighing units : gm, ct, oz, lb, tola, gn 9. Over load protection function 10. In built counting function 11. Full range tare function 12. Stainless steel pan 13. High quality transparent glass windshield with sliding doors 14. Easy calibration for user ease 15. Internal memory to store weighing programs Overweight indication alarm system	
10	**Precision Balance**	1. Machine body made of engineering plastic 2. High quality transparent windshield with sliding doors 3. Big LCD Display 4. 4inch touch screen display along with in-built rechargeable battery 5. USB interface 6. Max Capacity 200gm 7. Readability 1mg 8. Over load protection indication 9. In built counting function 10. Full range tare function 11. Stainless steel pan 12. Should be possible to calibrate in-house	3
11	**Magnetic Stirrer**	1. LED display with touch key operation 2. Glass ceramic platform for easy to clean, water-proof and resistant to strong acids and alkali 3. Electromagnetism driven mechanism 4. Auto reverse rotation function for excellent mixing 5. Speed range from 50 – 1500rpm 6. Maximum stirring quantity 5000ml 7. Ultrathin design with weight no more than 2 kg	1
12	**Magnetic Stirrer with Heating Function**	1. LED display 2. Ceramic platform for easy to clean, water-proof and resistant to strong acids and alkali 3. Electromagnetism driven mechanism 4. Auto reverse rotation function for excellent mixing 5. Speed range from 50 – 1500rpm 6. Temperature range from 50 – 310°C 7. Maximum stirring quantity 5000ml 8. Ultrathin design with weight no more than 2 kg	3
13	**Pipette Pump**	1. Volume range from 0.1ml to 25ml 2. Should be made or high quality material for chemical resistance 3. Suitable to best fit any standard brand glass pipette range from 0.1ml to 25ml	30

		4. Should be applicable to handle hazardous, toxic and sterile solutions 5. Should have mechanism to stop back flow of solutions in the tip-cone	
14	**Solvent Filtration Assembly**	1. Should be made of hard glass with even thickness and crystal clearness 2. Apparatus should be able to withstand high pressure 3. Should be absolute leak-proof system 4. Apparatus should be able to sterilize at high temperature and high pressure like autoclaving or temperature upto 200°C 5. Solvent filtration assembly should come with ready-to-use form which include vacuum pump, receiver bottle, filtration jar, clamps and tubing 6. Support screen should be made of pyrax glass only	1
15	**MicroPipettes**	1. Variable volume range from 2 - 20 µl 2. Fully Autoclavable pipette 3. Universal pipette tip-cone to fit most brand pipette tips 4. Should have handy volume setting dial for single handed operation 5. Tip ejection with single button operation 6. Should have wheel dialer lock 7. Should have easy identification of volume on cap	5
16	**Vortex Mixer**	1. Smallest foot-print to be fitted in palm 2. Body made of plastic and rubber holder 3. Weight no more than 1kg 4. Vortexing on touch function 5. Orbital movement with fixed speed of 3000rpm 6. Orbital diameter of not more than 5.5mm 7. Complete mixing within 5 seconds for full volume of 50ml 8. Should have foot pad to hold vortex mixer firmly in place when in mixing	1
17	**Electric Sterilizer**	1. Sterilization principle based on infrared heat 2. Should have ceramic core element to ensure absolute sterilization within 5-7 seconds 3. Maximum temperature of 1500°F (815°C) 4. Handy and small foot-print design 5. Adjustable angle of heater to ensure user convenience for sterilization 6. Should be ideal to use for both aerobic and anaerobic work areas	1
18	**Distillation Unit**	1. Machine body made of engineering plastic 2. Should be able to generate 1.5lit distilled water per hour 3. In-built cooling technology should able to condense the steam without water wastage	3

		4. Should offer auto-shut function once water is not available in chamber 5. Minimum capacity of tank should be 4 lit 6. Should come with water collection jar 7. Should not require connection with the tap water system 8. Should be a simpler system to clean and maintain	
19	**Gel Viewing System**	1. Transilluminator area should be minimum 25 X 25cm 2. F590 filter for sensitive viewing of gel 3. Use of white light, 302nm, 254nm and 365nm UV wavelength 4. Emission wavelength should average our light intensity to obtain shadow free images 5. Should be compatible with SYBR family stains 6. Quartz ultra violet light for longer shelf life 7. Transilluminator to be housed in closed chamber for ease of gel observation 8. Front and side door for precise gel cutting 9. Door handles should be provided for ease of operation 10. Gel viewing window for safe gel observation under UV light without need of UV safety guard for user 11. Should have camera panel to capture the images of gel with any branded digital camera 12. Should have option of capturing protein images on white light illuminator	1
20	**Submarine Electrophoresis Unit**	1. Submarine electrophoresis unit for handling various application like agarose gels for DNA/RNA, gels for immunoelectrophoresis and so on 2. Single molded acrylic construction 3. Minimum size of gel should be 10 X 7 cm 4. Complete system should be transparent with color coding for electrodes 5. Comb heads should be provided for easy use of system 6. Should be provided with gel casting system with silicon rubber and screwing system 7. Two comb position a must 8. Corrosion resistant platinum detachable electrode for ease of cleaning 9. Should be provided with complete set of combs, gel preparation boats, electric cords etc	5
21	**Vertical Electrophoresis Unit**	1. Vertical electrophoresis unit for handling various application like polyacrylamide gels for protein separation 2. Single molded acrylic construction 3. Minimum size of gel should be 10 X 10 cm 4. Color coding for electrodes a must	5

		5. Design of unit should offer cooling system for gel 6. Corrosion resistant platinum detachable electrode for ease of cleaning 7. Should be provided with complete set of combs, gel preparation plates, spacers, electric cords etc	
22	**Power Pack**	1. Compact foot-print 2. Maximum voltage 250 V and maximum current 100mA 3. Easy voltage adjustment within the range 4. Beam indicator to assess every increase in the voltage 5. Protection against voltage fluctuation through input and output fuse 6. Should be compatible to run electrophoresis unit of any brand	
23	**Incubator cum Oven**	1. Machine should come with dual function of being used as Incubator and Oven 2. Air circulation in the system should be through horizontal double air ducts 3. Should have over temperature protection function 4. There should be a switch to change oven to incubator and vice-versa 5. Should have high temperature blast motor 6. Anti-hot handle to be provided for user safety 7. LED digital display 8. Should have table top design 9. Touch button settings is a must 10. There should be provision of timer ranging from 0 -9999 min with pause function 11. Provision of internal parameter locking is a must to protect the machine program from tempering 12. Should have memory in case of power failure 13. Temperature range for Incubator is RT + 5 – 80°C 14. Temperature range for Oven is 80 - 300°C 15. Volume of chamber should be minimum 30L 16. Interchangeable shelf is a must 17. There should be a monitoring window to check inside the chamber without opening door 18. USB interface	1
24	**Ultrasonicator**	1. Machine body made of engineering plastic 2. 6.5 inch touch screen LCD display 3. Machine should be with sound abating chamber 4. Sample holding clamp should be adjustable with touch key 5. Operating frequency should be 20-25KHz 6. Ultrasonic time should be adjustable 999M 7. Sample should have temperature protection range from 0-99°C 8. Maximum ultrasonic power 950W	1

		9. Ultrasonic volume capacity 0.5ml – 1200ml 10. Should have options of titanium alloy tip from Φ2 to Φ28 11. Should come with complementary Φ6 titanium alloy tip 12. Should come with complementary temperature probe 13. There should be possibility to store 50 different programs 14. USB interface 15. Printer feasibility 16. Android operation is a must	
25	**Rotary Evaporator**	1. Whole machine should be designed to assemble and disassemble quickly for user ease and simplified operations 2. LCD display 3. Clamp fittings to be made of PTFE 4. Digital display for temperature and rotor speed 5. Vertical type glass condenser 6. Teflon and fluoro-rubber seal to maintain high vacuum 7. Bath kettle to be made of stainless steel 8. Shell material should be Teflon coated 9. Maximum bath kettle temperature 300°C 10. Rotational distance should be minimum 120mm 11. Temperature sensor a must 12. Electro-speed regulation to be provided 13. Rotation should be automatic up and down through main engine 14. There should be continuous charging through transparent cover for bath kettle	1
26	**Laminar Air Flow**	1. Table top design 2. Should be perfect for the processing requiring class 100 area 3. Machine should have user protection function like automatic cutting off of UV lamp when operating door opens 4. LED display 5. Microprocessor control system 6. Should have adjustable air speed 7. HEPA filter should have 99.9% efficiency at 0.3μM particle size 8. Pre-filter to be made of polyester fiber for easy washing and protection from UV light 9. From window to be made of toughened glass and should be UV protective 10. Internal chamber to be made of SS304 stainless steel 11. Should have one button function to start and stop lighting sterilization 12. Flow direction should be vertical	1
27	**Colorimeter**	1. Body made up of engineering plastic	3

		2. Android operations 3. Wavelength 340-1000nm 4. Crystal clear 8 inch touch screen display 5. Spacious sample compartment with flexible 4 position cell rack 6. Dedicated wavelength drive for easy shuffling of wavelength 7. Loaded with internal memory to store files 8. USB interface 9. Printer Interface 10. Auto 0%, auto 100% and error free T/A transformation 11. C-T configuration diffraction grating monochromator 12. Precise 1200lines/mm grating 13. Built in SCM technology 14. Complimentary 4 cuvettes with machine 15. Note: User friendly UV-win software for photometric, Kinetic analysis, spectrum and quantitative measurements.	