



Notice Inviting E-Tender

For and on behalf of the Secretary, ICAR, the Director, ICAR-NIASM, Baramati invites e-tenders for Purchase of Lab and field equipment through the website www.eprocure.gov.in under two bid systems from reputed firms.

The closing and opening dates of the bidding documents will be as per schedule given as under:

Last date of issue of tender form	Date & time for submission of tender form	Date & time for opening of tender (Technical Bid)
14.02.2017 upto 12.00 noon	14.02.2017 upto 2.00 PM	15.02.2017 at 2.30. PM

Sd/-

I/c. Senior Administrative Officer

Signature of the Bidder
(with firm seal)

Important Notes:

1. Tender Documents can be downloaded from ICAR-NIASM website www.niam.res.in or from Central Public Procurement Portal www.eprocure.gov.in. Bidders should enroll / register in the e-procurement module of Central Public Procurement Portal through the website: www.eprocure.gov.in. Bidders should also possess a valid DSC for online submission of bids.
2. Bids received on e-tendering portal only will be considered. Bids in any other form sent through sealed cover/email/post/fax etc. will be rejected.
3. ICAR-NIASM, Baramati reserves the right to accept / reject any /all tenders in part /full without assigning any reason thereof.
4. ICAR- NIASM will not be responsible for any delay in enrollment/registration as bidder or submitting/uploading the offer on e-tender portal. Hence, bidders are advised to register in e-tendering website www.eprocure.gov.in and enroll their Digital Signature Certificate and upload their quotation well in advance.
5. Any changes/corrigendum/ extension of opening date in respect of this tender shall be issued through websites only and no press notification will be issued in this regard. Bidders are therefore requested to regularly visit our website for updates.

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INVITATION FOR BIDS

E-tenders are invited by the Director, ICAR-National Institute of Abiotic Stress Management, Malegaon kh, Baramati for an on behalf of Secretary, ICAR for the supply of following equipments from manufacturers/firms/authorized dealers of Indian/foreign manufacturers **on FOB, CIF and CIP basis for Imported equipments and FOR basis for Indian Make equipments.**

Sr. No	Name of Equipment	Quantity
1	NMR Seed Analyzer	1
2	Deep Freezer	2
3	Texture Analyzer	1
4	Chemical Fume Hood	3
5	Hot Air Oven	1
6	LC-MS	1
7	Soil Sampler	1
8	Tractor 55 Hp	1
9	Biosafety Cabinet	1
10	Inverted Microscope	1
11	Microscope	1
12	Power Tiller with Accessories	4
13	Tissue Culture Laboratory (Plant)	1

INSTRUCTION TO THE TENDERERS

The Tender shall be submitted in accordance with these instructions and any tender not confirming the instructions as under is liable to be rejected. These instructions shall form the part of the tender and contract.

1. For Online Bid Submission, as per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL:<http://eprocure.gov.in/eprocure/app>). The bidders are required to submit soft copies of their bids electronically on the CPP Portal using valid Digital Signature Certificates. More information useful for submitting online bids on the CPP Portal may be obtained at www.eprocure.gov.in/eprocure/app.
2. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL:<http://eprocure.gov.in/eprocure/app>) by clicking on the link "Click here to Enroll". Enrolment on the CPP Portal is free of charge.
3. The manufacturers/authorized distributors/dealers shall upload a self-declaration on their letterhead as PDF file in Cover-I of e-tender, along with the tender documents, confirming that they are regular in manufacturing/supplying of the item.
4. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF formats. Bid documents may be scanned with 100 dpi with black and white option.

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5. The Technical Bids will be opened as per schedule given on portal. The date & time for opening of Financial Bids will be notified on the portal. The bidders may regularly check the portal regarding the date of opening of financial bid.
6. While submitting the tender, if any of the prescribed conditions are not fulfilled or are incomplete in any form, the tender is liable to be rejected. If any Tenderer stipulates any condition of his own, such conditional tender is liable to be rejected.
7. Director, ICAR-NIASM, reserves the right to reject any tender/bid wholly or partly without assigning any reason.
8. All the tender documents & Price Bid to be uploaded as per this tender are to be digitally signed by the bidder.

Other terms and conditions:

1. Validity of tenders should be 180 days from the date of opening of the tenders.
2. All the tenderers should give an undertaking that they would render after sales service of the equipment/machine and will supply all spares/consumable for at least 5 years from the date of installation of the same.
3. Full bidding/tender document attached herewith must be signed by bidder.
4. Warranty/guarantee period of the equipment/machine should invariably be specified separately as per specifications of equipment.
5. Technical literature/brochure (Original copy), etc. of the equipment/machinery offered by the firm and list of customers/user with their detailed addresses including telephone no./e-mail ID to whom such machine has been sold/supplied **in last three years** in India should be sent along with the tender form.
6. The firm qualifying technical specification may be asked to demonstrate the performance/working of the quoted model of the equipment/machinery, if needed.
7. The tenderers should quote their rates of imported equipments/machine on **FOB, CIF and CIP basis**. If tender quotes some parts made in India, their rates should be quoted in Indian Rupees.
8. Indian Agency Commission (IAC) may be quoted as certain percentage (say 5% to 10%) of the price of imported component of goods & quoted on CIP (Mumbai) basis.
9. Price schedule must be properly filled in for each equipment based on its Foreign/Indian components/parts & related service, otherwise bid may be rejected.
10. The inferior supply not meeting the prescribed Technical Specifications will be rejected at no cost to this centre.
11. No CDEC will be issued to the firm who quoted the item in Indian Rupees.
12. **Qualification Criteria:**
 - i. No Blacklisted firm any Govt. department/organization during last 5 years
 - ii. Copies of satisfactory Performance certificate for minimum last 2 years for minimum 2 units of equipment in India from 2 different reputed end-users.

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- iii. Three purchase orders received during last 3 years for similar items with copies of purchase orders.
- iv. Minimum Annual turnover Rs.50.00 lakh during each of Last 3 years along with copies of financial statement.

13. Delivery Schedule:

- i. Within 90 days from the date of opening of clear and acceptable Letter of Credit for imported goods/components.
- ii. Within 60 days from date of issuing of purchase order for Indian goods/components.

14. Terms of Delivery and Destination:

- i. C.I.P. (Destination: Mumbai) and FOB for port of shipment (price may be quoted for F.O.B. and C.I.P. for imported goods/components).
- ii. F.O.R. for NIASM, Baramati for Indian goods.

15. A valid certificate of authorization in the format enclosed with the tender from the Principal firm must be enclosed by the Indian agents/firms quoting rates on behalf of their Principal. ***One agent cannot represent two suppliers.***
16. In case of imported equipment, Principal firm should give guarantee for after sales service of their equipment through their agent/authorized dealer located in India.
17. If the Indian agent is changed, it would be responsibility of the Principal firm to ensure to intimate the NISAM office about their changed agent in India and ensure after sale service through him.
18. If handling of the equipment requires training of the lab technician/scientist, the same will have to be provided in India either at the Institute or their Indian establishment, as the case may be, free of cost.
19. The tenders received late will be rejected. Check list (attached with tender document) should be filled & signed by the tenderer.
20. Other terms and conditions, if any, will be supplied along with the tender forms.
21. The Director, NIASM, Baramati reserves right to accept/reject any or all the tenders without assigning any reasons.
22. Firms registered under NSIC are exempted from the payment of tender fee and EMD.
23. Any tender not accompanied by Earnest Money will be straight way rejected.
24. **Performance Security:**
 - i. Within thirty (30) days, the successful tenderer shall furnish to the purchaser the Security Deposit equivalent to 10% of the purchase value.
 - ii. The Security Deposit shall be in one of the following forms: (a) Bank Guarantee, issued by a reputed bank or a FDR/Demand Draft payable to "ICAR Unit NIASM, Baramati".

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- iii. Failure of the successful Tenderer/bidder to sign the contract and/or furnish the Security Deposit shall constitute sufficient grounds for the annulment of the award and forfeiture of the Earnest Money, in which event the Purchaser may make the award to the next lowest evaluated Tenderer or call for new tenders.
- iv. The Security Deposit will be discharged by the purchaser and returned to the Supplier following the date of completion of the Supplier's performance obligations under the contract, including any warranty obligations after receiving agreement letter.

25. Incidental Services:

- i. The supplier may be required to provide any or all of the following services, including additional services, as specified in Technical Specifications:
- ii. Performance or supervision of on-site installation, etc. of the system. b) Furnishing of tools required for assembly and/or maintenance of the System.
- iii. Furnishing of detailed operations and maintenance manual for each appropriate unit of system.

26. Transportation:

The transportation costs etc. to transport the equipment to the consignee's place shall be borne by the tenderer.

27. Dispute Resolution Mechanism: If any dispute or difference arises between the purchaser and the supplier relating to any matter connected with the contract, the parties shall make every effort to resolve the same amicably by mutual discussions. However, if the parties fail to resolve the dispute or difference by such mutual discussion within 30 days, either the purchaser or the supplier may give notice to the other party of its intention to refer the same to arbitration. The arbitration shall commence thereafter. The arbitration shall be conducted by a sole arbitrator, who will be appointed by the Secretary, ICAR and the procedure to be followed in this respect will be as per the Indian Arbitration and Conciliation Act, 1996. The venue of the arbitration shall be the place from where the contract is issued.

28. You are also required to fulfil the following conditions and furnish the details as indicated in subsequent paragraphs.

- a) At the time of awarding the contract/order, the purchaser reserves the right to increase or decrease the quantity of goods, without any change in the unit price or other terms & conditions.
- b) Please indicate if you are currently registered with any Govt. organization and if registered, furnish all relevant details.
- c) Please states whether business dealings with you presently stand banned by any Government organization and if so, furnish relevant details.
- d) A supplier/ manufacturer shall not submit more than one quotation for the same set of goods.
- e) The supplier shall at all times indemnify the purchaser, at no cost to the purchaser, against all third party claims of infringement of patent, trademark or industrial design rights arising from the use of the goods or any part thereof, with respect to the goods quoted by the supplier in its offer.
- f) The quotation (s) as well as the contract shall be written in Hindi/English language.
- g) The contract shall be governed by the laws of India and interpreted in accordance with such laws.

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h) The Director, NIASM, Baramati reserves the right to reject any tender in part or full without assigning any reason thereof.

29. Contract: The technically qualified vendor who is awarded the order will have to submit acceptance letter within 15 days of issue of order and will supply material within the stipulated time given in purchase order as per the quoted specifications.

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Check list for Tenderer

The tenderer is requested to kindly submit the check list alongwith the tender failing which tender will not be consider.

Sl. No.	Documents should attached	Page no. where document Attached
1	Technical Literature/Broacher	
2	Minimum turn over 50.00 lakhs during last 3 years	
3	Certificate of authorization (Manufacturers)	
4	List of Customers	
5	Bid Security/EMD	
6	Questionnaire filled in all respect	
7	Bid form and Price Schedule	
8	Technical Bid	
9	Warranty Obligation (as per specifications)	
10	Certificate of Regd., Taxes & duties	
11	Bid Validity (minimum 180 days)	
12	Under taking after sale service	
13	Under taking of Black Listing	
14	Technical specifications Compliance Statement	

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Online Bid Submission Details

Online Bid Submission:

The Online bids (complete in all respect) must be uploaded online in Two Covers as explained below:-

COVER - I (Following documents to be provided as PDF file)			
Sl. No.	Documents	Content	File types
1		Scan copy of Sales Tax/VAT Registration/ PAN	.PDF
2		Scan copy of Tender Fee and Earnest Money Deposit by way of Demand Draft	.PDF
3		Scan copy of certificate for EMD exemption if claiming	.PDF
4		Self-declaration in letter-head that they are regular in manufacturing/supplying of the item	.PDF
5		Details of supplies of similar item to other organization(s) if any	.PDF
6		Scan copy of Authorization letter	.PDF
7		Scan copy of Annual turnover	.PDF
8		Undertaking regarding after sale repair upto 5 years	.PDF
9		Technical literature/brochure (Original copy) etc of the equipment/machinery offered by the firm	.PDF
10		Certificate of No Blacklisted firm any Govt department/organization	.PDF
11		Scan copy of checklist	.PDF
COVER - II			
1	Financial Bid	Price bid (BOQ) to be filled in Excel format	.XLS

All the documents and BOQ has to be digitally signed by the bidder.

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Annexure- I: Technical Specifications

Item No 1: NMR Seed Analyzer

Specification:

1. Non-destructive quality parameters measurement for wide range of grain/oil seeds (e.g. wheat, sorghum, rice, soybean, mustard, barely, corn, groundnut etc.)
2. **Important fruit quality parameters** included moisture content, protein content, fat/oil content etc.
Optional quality parameters (starch, dry matter maturity index, internal cavity detection etc.)
3. Analysis time: $\pm 2-5$ min.
4. Wavelength Range: 800-1250 nm
5. PC Interface: USB/Wifi/ SD cards
6. Working environment: Temperature 0-50 °C
7. Display (digital/LCD)
8. Sample size : ± 50 to 500 ml (optional)
9. Provision of data recording and storage
10. Display (digital/LCD)
11. PC interface (USB/WiFi/SD card)
12. Power source: battery or standard power supply
13. GPS for tracking field location (optional)
14. Weight: approximate 4-10 kg (optional)
15. Warranty: two years

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Item No 2: Deep Freezer

Specification:

1. Upright type model with capacity of 450 liters or more.
2. Temperature range: -10°C to -30°C.
3. Should have manual/automatic defrosting. However, automatic version should have provision of changing to manual defrost mode at user end.
4. Solid single door model with casters for easy movement.
5. Quoted model should be CE/UL/cULus/TUV/ISO International Standards marked/certified. Should comply with minimum two international standards/certifications.
6. Removable washable filter for dust protection.
7. Padlock-compatible door handle with integrated key lock for sample security.
8. Freezer cabinet to be made of scratch and rust resistant steel.
9. Should have digital temperature display.
10. Should have minimum three standard internal shelves. Additional two shelves to be provided at installation.
11. Electric supply: 220-230V/ 50 Hz.
12. Warranty 2 years from the date of installation.

Note: Vendors to provide original technical literature/catalogue for the quoted model in support of the specifications.

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Item No 3: Texture Analyzer**Specification:**

1. Force (load cell capacity) - 1 to 700 kg with 0.1 to 1 g resolution and ± 0.3 to 1.5% load accuracy.
Load cells; ranged between (1 to 700 kg) e.g. ± 1 , 5, 30, 50, 100, 250, 500 kg etc. At least one load cell should be provided with equipment in a mentioned range of load cell capacity.
2. Speed: ± 0.01 to 25 mm/sec
3. Operating modes: Tension or Compression (measurement of force and distance)
4. Display: inbuilt or separate display system etc.
5. Positional range setting/travelling length/aperture: ± 0.1 - 600 mm at ± 0.01 mm to 0.005 resolutions.
Force required for filtering samples: 7500 to 12000 samples/second (optional).
6. Library with wide range of programme (e.g. application reports, guidance on test etc.).
Provision to write a macro (optional)
7. Data input and output ports for data transfer (USB/RS232/Wifi/SD cards etc.)
8. Operating temperature range: ± 0 to 40°C
9. Dimensions size: approximate 975 mm x 550 mm x 445 mm (Optional)
10. Weight: ≥ 15 kg
11. Power supply: Standard power supply
12. Data logger with suitable software package for data analysis
13. Warranty: two years

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Item No 4: Chemical Fume Hood**Specification:**

1. Chemical fume hood nominal size: 5ft/1.5 m
2. External dimension [WxDxH (inch)]: 50-70" X 30-40" X 50-75"
3. Internal work area [WxDxH (inch)]: 50-60" X 25-30"X 45-55"
4. Maximum sash opening 25-30".
5. Face velocity: 0.4-0.5 m/s (80-100 fpm) at full sash opening.
6. Static pressure required: Sash opening 15-20", exhausts should be 500-600 CFM at 0.10-0.15" static pressure, while with sash opening 25-30" high, exhausts 900-1000 CFM at 0.30-0.50" static pressure.
7. Exhaust outlet diameter: 10-20"
8. Number of exhaust collar: one
9. Exhaust ducting work and connection accessories should also be quoted.
10. Construction:
 - 10.1. Internal chamber should be constructed from stainless steel of 304 grades.
 - 10.2. Hood lighting system should be fluorescent or LED light.
11. Electrical socket outlets: Two: 5/8 and 15 Amp
12. Electrical: 220-240 V, AC, 50-60 Hz.
13. Certification: ASHRAE/EN14175-3 standards/ cUL/ EFI/ CE/UL certified. Certification should be specific for quoted mode. Generalized certification for range of products will not be accepted.
14. Hood should have factory fitted valve and hose with wall mounted outlet for gas inlet, a vacuum inlet, water inlet, and nitrogen.
15. **Base cabinetry, 5 ft/1.5 m, for additional storage:** -
Base cabinetry should be partitioned into vertical cabinets.
16. Warranty: Two years after installation.

All vendors are requested to attach original detail technical literature/ catalogue in support of the mentioned specifications & highlight the above features.

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Item Name: Hot Air Oven**Specifications:**

The recommended hot air oven system should be used for drying of soils, gravels and plant samples. It should be portable equipped with wheels and minimum of two lockers.

Sl. No	Specifications	Requirements
1	Temperature	Above 5 degree Celsius up to 250 degree Celsius Provision of emergency to off instruments
2	Temperature accuracy	± 2 degree Celsius
3	Temperature uniformity	± 1 degree Celsius
4	Temperature Controlling system	Sensor based monitoring systems with provisions of fan and minimum two ventilators
5	Temperature display	Equipped with LED system With provision of manual setting of temperature and display Provision of alarm system for programme completion
6	Safety advices	Over temperature protection Electric leakage breaker
7	Capacity	– At least 700 litres with four trays of adjustable / removable sample holder –Should have the sample capacity of 150-190 kg
8	Exterior and Interior Chamber	–MS powder coated –Width 650-700 mm × Depth 605-650 × Height 910-950 mm –The interior chamber size stand be of 605 to 640 mm Width × 605-630mm Depth × 900-930 mm Height such way that the wall thickness between interior and exterior chamber will be around 3-6cm. –It should effectively insulate the hot condition of the oven.
9	Insulation	Mineral Wool or any kind of materials for efficient insulation of heat in the oven such way that temperature accuracy and uniformity should be maintained
10	Doors	Doors with rubber gasket and lockable systems
11	Shelves	Minimum of 4 shelves
12	Air Circulation	Forced air circulation with sensor to maintain the set temperature in the oven
13	Power supply	220 Volts
14	Warranty Period	Minimum 2 years

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Item No 6: LC-MS**Specification:**

State of art LC MS/MS (s) system(s) for routine and comprehensive work flows for ultimate qualitative and quantitative applications with Front end HPLC is required- ***Bidder should give compliance statement point wise showing/highlighting items part no/serial number as quoted in their quotation for comprehensive technical comparison. Proof of compliance should be mentioned point wise in the catalogue/specification sheet.***

If vendor wishes to quote more than one mass analyzers to comply with the tender specifications then it must be quoted with front end as well.

1	APPLICATIONS	Rapidly screen samples for a large number of compounds Confidently detect and identities of unanticipated compounds that may not be on a pre-defined target list. The system should use for the analysis of Protein, Metabolites and Small molecule identification and characterization. Suitable columns for above application should be provided with at least one column each.
2	MASS ANALYZER	High resolution mass analyzer Quadruples Time of Flight system with Mass range up to 20000 m/z or above
3	INTERFACE	Simple interface for maintaining cleanliness of ion optics and capable of handling large batches of complex samples. It should have a low maintenance interface which should not require frequent cleaning. This should have advanced innovative technology that delivers a sensitivity and detection limit with High Mass Accuracy and High Resolution
4	ACQUISITION RATE	25 Spectra per second in MS and 25-50 Spectra per MS/MS mode or better
5	RESOLUTION	20,000 (FWHM) or above
6	MASS ACCURACY	Minimum 2 ppm in both mode
7	MASS ACCURACY STABILITY	Mass accuracy stability with varying ambient temperature must be specified
8	SENSITIVITY IN ESI	High sensitivity for qualitative and quantitative analysis. Supplied system should have pg level of sensitivity when the Reserpine standard injected on column.
9	POLARITY SWITCHING	A fully protected air cooled vacuum system using turbo molecular pumps and rotary pumps. Vacuum read backs and automated vent system.
10	DYANAMIC RANGE	At least Four or above orders of dynamic range.
11	ION SOURCE	Choice of 2 Separate ionization sources to cover all areas of applications at higher flow rate of HPLC. 1. ESI Source 2. APCI Source The above ion sources should be easily inter-changeable by the user himself.
12	HPLC SYSTEM	The HPLC system with the following features & functions should be supplied:

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		<ol style="list-style-type: none"> 1. Binary or Quarternary Pump with vacuum degasser. The pump must contain all the necessary accessories as solvent cabinet, solvent bottles, tubing, filters, connections etc. 2. Pressure operating range: 1000 bar or above 3. Flow Rate Range: - From 0.001 to 5.0 ml/min, in 0.001 ml/ min increments 4. Flow Precision:< 0.07 % RSD Flow rate accuracy: - $\pm 1\%$ 5. Autosampler should have Sample capacity of minimum 105 or more vials 6. Should have Injection volume of 0.1–100 μL in 0.1 μL increments. 7. Sample Cooler with temperature range of 4°C to 40°C.
13	COMPUTER PLATFORM	A compatible standard branded PC and Printer along with all necessary hardware and operating software required to operate all the specified equipment with one TB hard disk.
14	OPERATING SOFTWARE	<p>Operating Software and Compounds Database</p> <ul style="list-style-type: none"> ✓ Automated calibration ✓ Automated MS to MS/MS ✓ Software with effective data mining tool ✓ Software should have accurate mass database and libraries ✓ Software for empirical formula calculation. ✓ Confirm contaminants using accurate mass databases and libraries ✓ Implement high-quality methods quickly which include on-site support ✓ Selectively remove interferences with sample preparation products ✓ Increase speed, resolution, and sensitivity by using HPLC columns. ✓ Qualitative, Quantative and Acquisition software ✓ Software for protein analysis like deconvolution, PTM, PMF etc ✓ Software for Metabolomics application with database and libraries ✓ Software for structure correlator. ✓ Software for Pesticide analysis.
15	GAS GENERATOR WITH BUILT IN AIR COMPRESSOR	<p>A suitable gas generator capable of providing all the gases at the required purity, pressure and flow rate for the Mass Spectrometer must be quoted. The compressor should be noise-free. All the required accessories such as arrangement for gas supply through gas generator, compressor, and any other essential item for operation of the instrument should be supplied along with the instrument.</p> <p>-A 15 KV power back should be supplied with the system to ensure power supply at least 2 hrs in case of power cut.</p>
16	CALIBRANT DELIVERY SYSTEM	Built-in calibrant delivery system for automated introduction of simultaneous reference masses enables achievement of very low mass accuracy without manual adjustments.
17	MASS ACCURACY STABILITY	Mass Accuracy temperature stability of 1 ppm for temperature variation of 15 to 35 °C
18	AFTER SALES SUPPORT	Suppliers must have any active support in Baramati, Maharashtra and avoid instrument down time.
19	WARRANTY	Onsite warranty: The complete instrument and accessories excluding consumable items should be under warranty period for

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		a period of 3 year from the date of installation.
20	SINGLE POINT OF CONTROL	Instrument should have a single point of control for both the MS and the HPLC.

Note: Operation and Service manuals (in English) should be provided and also vendor should provide us a list of installations in India

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Item No 7: Soil Sampler**Specification:**

Screw or worm auger (Required 2 no) having 15-20 cm soil bit, at list 100 cm length and 1.27-1.91 cm diameter steel road with tee coupling handle at top having 30 cm length and 2.54- 3.18 cm diameter steel road / wood
Tube auger (Required 2 no) having 1.27-2.54 cm inner diameter and 60-100 cm length with tee coupling handle at top having 30 cm length and 2.54 cm diameter steel road / wood
Soil sampling trier (Required 2 no) having 1.27-2.54 cm inner diameter and 60-100 cm length with tee coupling handle at top having 30 cm length and 2.54- 3.18 cm diameter steel road / wood
500 number of aluminium box having 50-80 mm x 25-50 mm (diameter*height) size for oven drying of soil samples
All required accessories

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Item No 8: Tractor 55 Hp

Specification:

- Tractor 55HP:
- Engine- 55HP, 3-cylinder min.
- Cooling system- Coolant cooled, Turbo charged. Clutch- Dual/double clutch.
- Power steering.
- Brakes- Oil immersed disc brakes,
- PTO RPM 540min.
- Accessories- Ballast weight, canopy with holder, Draw bar, Wagon hitch and hoe hook.

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Item No 9: Biosafety Cabinet**Specification:**

1. Cabinet should be class II type A2.
2. Front Glass Opening: 7 - 10 inch.
3. Internal Dimensions (W x H x D): 4 ft x 2.5 ft x 2 ft approx.
4. Filter: MPPS >99.99%, H14 HEPA EN 1822.
5. Certifications/Compliance: CE listed, NSF/ANSI 49 certified for Class II, Type A2 conditions.
6. Noise should not exceed 65 dBA.
7. Interior and Work tray: made of single piece stainless steel.
8. Front: Ergonomically sloped with UV absorbing/UV protective glass.
9. Provision of service valves for gas and air.
10. Cabinet to be provided with stand and detachable arms rest.
11. UV lamp: factory installed with programmable UV light.
12. Visual and audible alarm for indicating improper front window working position, and airflow restrictions.
13. Provision of interior lighting and at least one 230V plugs/receptacles on interior side.
14. Provision of pressure sensors to detect changes in inflow/exhaust or down flow with alarm signals.
15. Electric supply: 230V/ 50-60 Hz.
16. Warranty 2 years from the date of installation.
17. Branded 2 KVA online UPS capable of providing for providing power back-up to biosafety cabinet to be supplied.

Vendors are requested to attach original technical literature/catalogue in support of the mentioned specifications and highlight the above features.

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Item No 10: Inverted Microscope

Specification:

1. Should have standard 4 position manual revolving nosepiece with 20-25 mm field of view.
2. Should include objectives namely 10x, 20x, and 40x.
3. Should have basic stand with Transmitted illuminator of 5- 10W LED source and Fluorescence illuminator of 100-150W Mercury vapor light source.
4. Should have UV protection shield.
5. Fixed stage with XY object guide/knob with universal specimen holders with C-Mount 0.5x - 0.6x.
6. Should have standard manual plain stage.
7. Provide numerical aperture 0.3-0.45 and standard working 70-80mm condenser.
8. Fluorescence filters with four positions filter rail for excitation in Blue, Green and UV spectrum
9. Should have side/back/front port for camera.
10. Should be supplied with scientific digital color, high-resolution, cooled camera (CCD) for fluorescence with 3-5 mega pixel for RGB color filters. Exposure manual or automatic with proper interface
11. Camera and microscope should be from same manufacturer for better integration and live image display on PC.
12. Camera attachments with CMOS sensor, software for micron bar and point to point measurement. Camera should enable live image/movie clips recording directly to memory card.
13. Should be provided with compatible software for attaching microscope to personal computer, software should allow live imaging and movie-clip capture.
14. Warranty: one year from the date of installation.

Vendors are requested to attach original technical literature/ catalogue in support of the mentioned specifications and highlight the above features.

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Item No 11: Microscope

Specification:

1. Zoom stereomicroscope with LED illumination.
2. Zoom ration: 8:1 or better; Magnification: 8× to 60× or more.
3. Should have apochromatic main objective 1× with working distance of 75 mm or more and 10× eyepieces.
4. Microscope should have both incident and transmitted LED illumination and port for camera attachment.
5. Should have ergonomic head with adjustable inclination from 5° to 25°.
6. To be supplied with minimum 5 mega pixel color CCD camera. Camera and microscope should be from same manufacturer for better integration and live image display on PC.
7. Should be provided with compatible software for attaching microscope to personal computer for live image viewing and capturing.
8. Warranty: one year from the date of installation.
9. For data recording All-In-One Computer to be provided with following specifications or better: Processor- i3, 19-21 inch display, 2GB RAM, 500GB disk capacity, 64-bit system, Windows 8 or above OS, Keyboard, Mouse.
10. Branded high quality 2 KVA online UPS to be supplied.

Note: Vendors to provide original technical literature/catalogue for the quoted model in support of the specifications.

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Item No 12: Power tiller with accessories

Specification:

1. Power tiller with 10 to 15 HP 4- stroke, water cooled, direct injection, diesel engine.
2. Equipped with following accessories/attachments:
 - Rotavator
 - Plough
 - Ridger

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Item No 13: Tissue Culture Laboratory (Plant)**Specification:**

Plant Tissue Culture Laboratory development including furniture and related works (as per the layout):

S. No	Product technical details
1	<p>Plant Tissue Culture Laboratory should have following components: Tissue Culture rack room, Aseptic Room, Microscope room, hardening room and Ante room:</p> <p>Aseptic Room: 10 ft x 7 ft</p> <ul style="list-style-type: none"> • ISO Class 100000 or as per aseptic plant tissue culture lab standards of Biosafety. • Epoxy coated (insulated) flooring. • PUF Panelling should be at least 50 mm thick on ceiling roof and all walls. • Electrical socket and switches for 6 amp and 15 amps, 4 numbers each should be provided.
2	<p>Microscope room: 8 ft x 7 ft</p> <p>Epoxy coated (insulated) flooring. PUF Panelling should be at least 50 mm thick on ceiling roof and all walls. Electrical socket and switches for 6 amp and 15 amps, 3 numbers each should be provided</p>
3	<p>Hardening Room: 8 ft x 7 ft</p> <p>Epoxy coated (insulated) flooring. PUF Panelling should be at least 50 mm thick on ceiling roof and all walls. Electrical socket and switches for 6 amp and 15 amps, 3 numbers each should be provided</p>
4	<p>Tissue Culture racks room: 18 ft x 12 ft</p> <ul style="list-style-type: none"> • ISO Class 100000 or as per aseptic plant tissue culture lab standards of Biosafety. • Epoxy coated (insulated) flooring. • PUF Panelling should be at least 50 mm thick on ceiling roof and all walls • Electrical socket and switches for 6 amp and 15 amps, 4 numbers each should be provided
5	<p>Media Preparation room: 20 ft x 12 ft</p> <ul style="list-style-type: none"> • Epoxy coated (insulated) flooring. • There should be L Shaped side benches with granite top. • There should be a wash basin of biosafety standard. • There should be two centre laboratory tables island type, 2400 x 1500 x 900 mm with drawers and leg space and reagent storage and Electrical utilities. • Electrical socket and switches for 6 amp and 15 amps, 6 numbers each should be provided
6	<p>Change Room / Ante Room : 6 ft x 12 ft</p> <ul style="list-style-type: none"> • Epoxy coated (insulated) flooring. • Should have Garment cabinet
7	<p>PUFF DOOR (Single Door) : 6 numbers</p> <ul style="list-style-type: none"> • Door thickness:- 50 mm • Door sheet thickness:- 20 Gauge powder coated. Powder Coated with 7 tank imported process • Frame thickness:- 1 mm powder coated • With Puff Insulation Puff Core 40 kg/m³ • GI Powder Coated • SS 304 Push plate. • Dorma door closer • 'D' type door handle • Stainless steel kick plate • Drop seal • Three side gasket for frame • Stainless steel ball bearing but hinges • Dual side glass (As Required) • Size Approx - (H) 2100 mm X (W) 1000 mm
8	<p>CLEAN ROOM WALL PANELING: In all rooms including partitioning and ceiling (275 sq meter approx.)</p> <ul style="list-style-type: none"> • Double Skin Panel thickness: - 50 mm.

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	<ul style="list-style-type: none"> • Both side pre-painted GI of 9002 shade. • Panel Sheet Thickness: - 22 Gauge. • With Puff Insulation Puff Core density 45 kg for side walls and 50 Kg for ceiling. • GI Powder coated with 7 tank imported process coated. • Electric power and utility outlets. • Silicone sealant filled in each joint of panels. • Satisfying M-1 fire Rating (British Standard). • Wall Track System as per standard by bottom adjusting with packing shims and a top with Self tapping screws to hold the panel complete.
9	<p>VIEW PANELS – See Through Double Skin Glass: 04 numbers</p> <ul style="list-style-type: none"> • View Panel Thickness: - 50mm • 4 mm Thickness thick float glass • Frame made of GI Powder Coated • High Density polymer gasket • Sealed with Silicon sealant • View Panel Size:- 1000 X 1000 X 50 mm
10	<p>Window Pass Box: One Number</p> <ul style="list-style-type: none"> • SIZE: INTERNAL – 600 [W] x 600 [D] x 600 [H] mm • MOC: - SS 1.2 mm thick (Matt finished and Leak tight double skin, opposite side openable with transparent glass fixed in both sides) • Door Gasket:-Silicon rubber food grade Gasket <p>Electronics Components:-</p> <ul style="list-style-type: none"> • Interlocking- PLC based device with smart Electromagnetic Lock and programmable timer. • Power Supply 230 V AC Single phase • Panel light for illumination • UV light for sterilization
11	<p>EPOXY FLOORING: Aseptic Room, Hardening Room, Tissue Culture Room, Lab Passage and Microscope Room</p> <ul style="list-style-type: none"> • Self levelling epoxy flooring • Imported VIP blue colour shade • Thickness:- 3 mm • Anti bacterial and fungicidal • Recovering provide seamless surface including base floor levelling
12	<p>Coving Structure: In all rooms and passage</p> <ul style="list-style-type: none"> • Fully flush corner transitions wall-to-ceiling and wall-to-floor connections • Eliminating corners, the radius coving system allows for total clean ability. • Wall-to-wall and wall-to-ceiling junctions trimmed with an extruded coving that features a large 2" to 3" radius
13	<p>AIR SHOWER (Through Entry & Exit): One Number</p> <p>SIZE: EXTERNAL -1900 [W] x 1000 [D] x 2165 [H] mm INTERNAL – 800 [W] x 900 [D] x 2000 [H] mm</p> <p>Air Velocity: - 22-25 m/sec (By U- tube meter)</p> <p>MOC:- MS CRCA POWDER COATED Powder Coated with 7 tank imported process</p> <p>Main Door MS CRCA POWDER COATED Matt Finished with Glass</p> <ul style="list-style-type: none"> • 1.0 mm Thk Without puff 1) 0.3 Micron Hepa Filters (Delivery Filter) : • Size:- 610 x 875 x 150 mm, Qty-06 Nos 2) Pre Filter (Suction filter) : • 10 Micron, HDPE Washable , Qty-06 Nos 3) Standard make Blower Motor: • 3-Phase • 0.75/1 HP Blower Motor Assembly with Rexene Bellow, Qty-05 Nos. each 4) Fluorescent Tube Light: 20 Watts, Size – Qty-01Nos. 5) Nozzle 24-32 Nos. 6) Noise Level: 75 db or lower 7) Door closer - 2 Nos 8) Bottom with grill - 1 number (40 mm depth) 9) PLC based Door inter locking System for smart operation and up gradation facility 10) ISO 9001 Certification

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14	<p>DOMESTIC AIR CURTAIN (3 ft): One number.</p> <p>Specification:-</p> <ul style="list-style-type: none"> • MOC :- MS CRCA Powder Coated • Aluminum Impellers, FRP Blower Casing • Standard MCB Fitting and with required cable • Crompton makes Motor 1/4 HP, 1 Phase, motor, Rubber Bush suspended • Air Velocity :- 12 -13 m/sec
15	<p>PERIPHERAL LIGHTS and fitting: 15 numbers 2'X 1' ft, 18 w</p> <p>PAR Lights and fitting for Hardening Room: 9 numbers Variable intensity of PAR light for plants Intensity of Light should be 800 to 1000 $\mu\text{mole}/\text{m}^2\text{s}^{-1}$ Separate switches for each PAR Light to increase and decrease light intensity</p> <p>Photoperiodic timers:4 Numbers</p>
16	<p>CLEAN ROOM SYSTEM With HVAC for Class 100000-- Aseptic Room, Tissue Culture Rack Room, Hardening Room & Microscope Room: 40 sq meter approx.</p> <p>Filtration System with 0.3 Micron Hepa Filter Capacities. Cooling coil without Condensing door unit (ceiling suspended)</p> <p>Construction:</p> <ul style="list-style-type: none"> • Filter Housing SS 1.2 THK (18 SWG.). • SS Ducting – 24 SWG. With Thermal insulation • Return Air Riser G I Powder Coated 20 SWG sheet with Aluminum Grills. <p>DOUBLE SKIN CASING: For AHUs Outer skin: 0.6 mm (24G) Pre- coated GI Inner Skin: 0.6 mm (24 G) SS Frame work: Non Thermal Break AL profile Thickness of insulated panels: 25 mm Thick, CFC Free PUF injected (Density: 40 kg/ /m3) Material of Drain pan: S.S tray duly insulated with PUFF. Unit Base: GSS</p> <p>FILTERS: Efficiency of Pre-filters: 90% down to 10 micron Efficiency of Fine-filters: 97% down to 3 micron</p> <p>Features:</p> <ul style="list-style-type: none"> • Inside Foam Insulated Filter Housing. • Positive Pressure System to supply 20% Fresh air with in unit. Return Air Riser G I • Powder Coated with 7 tank imported process • LAF Velocity- 0.4 to 0.45 m/sec. 90 fpm. & Minimum 30 air changes per Hours. <p>AHU:-</p> <ul style="list-style-type: none"> • AHU (Air Handling Unit) Ceiling Mounted. • Capacity 2200 CFM with 125mm static pressure Blower with 5 HP Single Phase • Standard Make Motor Qty. 04 Nos. • Cooling Coil, SS Drain Tray • First Stage Filtration HDPE washable 10 Micron in AHU. • Filter section with pre filters of 10μ and 5μ mounted on common Filter frame • Fan section with DIDW centrifugal backward curved fan, motor, Drive set with V belt. • Fine filter section with filters of 5μ. • Manually operated Al Constructed SA damper • G.I. Ducting - 24 SWG In GT sheet, with - 9mm Thickness • Flux Aluminium Foil Insulation. • Air Condensing Unit. AC with Reciprocating Compressor. • Return Air Riser with Aluminium Grills. • Air Velocity near about Hepa Filter 0.45-0.50 msec / 90-110 FPM • UV ductwork sterilizer in HVAC returns. This fully automatic UV modules decrease germ loads on ceiling HEPA filters, minimize contamination of clean rooms.

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	<ul style="list-style-type: none"> • HVAC unit will be dedicated one to maintain clean room temperature. • Electrical plug points: A set of 20 electrical points (6A, 15A and 30A) must be provided via appropriate feed through. The sources for these points may be from UPS units in the service area or direct lines already present in the room or Faculty platform area. Monitoring and controlling of all electrical plug
17	<p>Fully automatic UV sterilization in room: One number</p> <ul style="list-style-type: none"> • Fully automatic operation mode • Manual operation mode • Continuous sterilization (User programmable) • 7 days of programming with various level of programming cycle • SAFETY - If room door is opened while UV light is already ON in room, it will automatically override UV light control and will turn OFF UV light source to avoid accidental contact with UV light.
18	<p>Water Purification System, quote as an OPTIONAL ITEMS (QUOTE SEPARATELY IN TENDER BID) : One number</p> <ul style="list-style-type: none"> • Capacity 6 LPH • Application : Tissue culture media preparation, Molecular biology work • Input tap water • Output: Type 1 and type 2 water • UV-Oxidation 185/254 nm • TOC value for Type 1 water : 1 to 5 • Resistivity at 25°C, MΩ-cm : 15 to 10 • Conductivity μS/cm : 0.067 – 0.1 • Position on laboratory bench or mount it on the wall. • CE Certification should be specific for quoted model. Generalized CE certificate for range of products will not be accepted.
19	<p>Laminar Air Flow Chamber: One number (Quote as an OPTIONAL ITEMS (QUOTE SEPARATELY IN TENDER BID))</p> <ul style="list-style-type: none"> • Internal work area : 1200±25 x 600±25 x 600±25 mm • Average air flow velocity : 0.45 m/s (90 fpm) at initial set point • ULPA Filter efficiency : >99.999% at particle size between 0.1 to 0.3μm • NSF Certified/CE certified, EN 12469, ISO 14644.1, Class 3. Certification should be specific for quoted model. Generalized CE certificate for range of products will not be accepted. • Class 100 air quality
20	<p>Vertical Autoclave: One number</p> <ul style="list-style-type: none"> • Capacity 100 Liters, Vertical model • Triple walled construction complete made of SS 304, lid made of SS 304 • Water level indicator with stainless steel guard, pressure gauge, steam release valve, spring loaded safety valve, Automatic Pressure Control Switch, automatic low water detection and alarm • The Unit should be fitted with Double safety radial locking system with paddle lifting device • Pressure adjustable from 5 psi to 20 psi with an accuracy of +/- 1 psi, with automatic pressure control switch. • Supply complete with stainless steel basket, cord and plug. • The pressure inside the chamber is variable from 5 psi. to 18 psi.. • Working Temperature : 121° C settable by digital PID temp controller with timer • Hydrostatic Pressure at 35 psi along with certificate., • Should work on 230V AC single phase supply • ISO 9001, ISO 13485 ISO 14001 & CE Certified.
21	<p>Tissue Culture Rack: Two Numbers</p> <ul style="list-style-type: none"> • Total no. of shelves - 5 • No of culture shelves- 4 • Rack made of MS Tubular frame duly powder coated • Distance between shelves to shelves is 16" approx. • Size of each shelf is 108" x 18" • Eight 36-watt flicker free fluorescent light per culture shelf. Total 32 Nos tube lights. • Automatic digital control timer for fluorescent light – 2 per rack

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	<p>Tissue Culture Rack: Two numbers</p> <ul style="list-style-type: none"> • Total no. of shelves - 5 • No of culture shelves- 4 • Rack made of MS Tubular frame duly powder coated • Distance between shelves to shelves is 16" approx. • Size of each shelf is 108" x 24" • Eight 36-watt flicker free fluorescent light per culture shelf. Total 32 nos tube lights. • Automatic digital control timer for fluorescent light – 2 per rack • ISO 9001, ISO 13485 ISO 14001 & CE Certified
22	<p>Upright fluorescence microscope facilitated with phase contrast, Bright field applications and DIC slot, There should be provision to mount camera with suitable adaptor 0.7X</p> <ul style="list-style-type: none"> • Light source: Transmitted pre-centered LED illuminator LED at least 5W illumination with long life of 50,000 hours or better. • Eyepiece: Paired wide-field eyepiece 10X with minimum 22mm. • Objectives: Automated objective turret N Plan/fluorite/Semi Apochromatic objectives 4X/5X, 10Xph, 20Xph, 40Xph, 100x oil objective • Observation tube: Trinocular tube, F.N. 22 or better, three position prism for selection of light path for 100% /50% observation • Revolving nosepiece: Interchangeable six fold revolving motorized nosepiece with DIC/analyzer slot. • Fluorescence filters (Band pass): All filters should be interference based and emission should not overlap with other filters (e.g. DAPI, TRITC, FITC etc.). A source of 100 W mercury or better should be provided. • Condenser: Universal automated condenser with automated switchable condenser top for Bright field and phase applications. • Mechanical stage: Rectangular XY stage with double slide holder suitable for analysis of thick tissue specimen. • Cameras: CCD Peltier cooled dual mode (colour and monochrome) camera with min. 5 MP resolution, 9 fps @ full resolution, FireWire / USB 3.0 Interface along with necessary 0.5x to 0.7x C-mount adaptor should be provided • Software: Imaging system automatically upgraded software that allows quantification of distance between two points and related morphometric measurements and intensity measurements, contrast and other adjustments and multichannel fluorescent merging. Microscope, camera and software should be provided from single manufacturer.
23	<p>Warranty:</p> <p>The supplier shall guarantee satisfactory performances of the unit for the minimum period of 24 months from the date of installation and shall undertake to rectify any defect including replacement of spare parts, resulting from faulty design, poor workmanship, bad materials etc. during the guarantee period free of charge.</p>
	<p>Note:</p> <p>Bidder must have constructed components of Plant Tissue Culture laboratory in research institutions/organization. The bidder should provide user list with complete address and contact details of the user. The firm must submit illustrated technical literature with enough technical details.</p>

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Questionnaire

BIDDERS SHOULD FURNISH SPECIFIC ANSWERS TO ALL THE QUESTIONS GIVEN BELLOW. IN CASE A QUESTION DOES NOT APPLY TO ABIDDER, THE SAME MAY PLEASE NOTE THAT IF THE ANSWERS SO FURNISHED ARE NOT CLEAR AND/OR ARE EVASIVE, THE BID WILL BELIABLE TO BE IGNORED.

1. Bid No..... date for bid opening on

2. Offer is open for acceptance:

3. Brand of goods offered:

4. Name & address of manufacturer:

5. Station of Manufacturer:

6. What is your permanent Income Tax A/C/ N. (PAN No.)

7. Confirm whether you have attached your

Latest/current ITCC or certified photocopy

thereof.

8. Status:

a) Are you currently registered with the Directorate General of supplies & Disposals (DGS&D) for the items(s) quoted? If so, Indicate the date up to which you are registered and whether there is any monetary limit on your registration.

b) Are you a small scale unit currently? Registered with the National Small Industries Corporation (NSIC) under Single Point Registration Scheme for the Items (s) quoted? If so, indicate the date up to which you are registered and whether there is any monetary limit on your registration.

c) If you are not registered either with NSIC or DGS&D, please state whether you are

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ANNEXURE I to Tender Document No.4-6/16-17

currently registered with Directorate of industries of the State Government concerned. If so, indicate the date up to which you are registered and whether there is any monetary limit on your registration.

d) Are you registered under the Indian Companies Act. 1956 or any other Act.? Please attach certified copy (copies) of the Relevant registration certificate (s) in Confirmation to your above answer(s).

9. Please indicate:-

Whether you are:

- i) Manufacture of the goods quoted; or
- ii) Manufacture's authorized agent for those goods.

10. State whether business dealings with you have been Currently banned by any Ministry/Dept. of Central Govt. or any State Govt.

Signature of Witness

Name & address of Witness

Full name, designation &
Address of the person signing above
For and on behalf of M/s

(Name and address of the bidding firm)

Signature of the Bidder
(with firm seal)

Annexure- II

Price Bid

Please submit as per BOQ in the CPP Portal

**Signature of the Bidder
(with firm seal)**