



*Sher-e-Kashmir*  
**University of Agricultural Sciences & Technology of Jammu**  
**Central Purchase Committee, Chatha, Jammu (J&K)- 180009**

**NIT No: AU/CPC/2018-19/01**

**Date: 01-10-2018**

**Notice Inviting e-Tender**

On behalf of the Vice-Chancellor, SKUAST-Jammu, online tenders are hereby invited from the manufacturers, reputed and authorized distributors/ dealers/suppliers for purchase and installation of Machinery and Lab. Equipments.

Date of submission of tender: 03-10-2018 to 30-10-2018 upto 2.00 PM  
Date of opening tenders: 01-11-2018 at 3:30 PM

For detailed information, please visit university website [www.skuast.org](http://www.skuast.org) and [www.jktenders.gov.in](http://www.jktenders.gov.in)

Sd/  
**Member Secy. (Equipments)**  
**Central Purchase Committee**

No: AU/ CPC/2018-19/279-281  
Date: 01-10-2018

Copy to:

1. Chairman CPC, SKUAST-J, Main Campus Chatha
2. SVC for timely Publishing of NIT in one national daily and two local dailies for wide publicity.
3. Incharge Data Centre for uploading on University Website



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For detailed information, please visit university website [www.skuast.org](http://www.skuast.org) and [www.jktenders.gov.in](http://www.jktenders.gov.in)

**Pre-eligibility Conditions:**

The Pre-eligibility Bid should be submitted in separate sealed envelope duly superscribed as **Pre-eligibility bid** which should contain the following documents:

- i. Copy of GST certificate.
- ii. The copy of the relevant ISO/ BIS certificates.
- iii. Copy of PAN/GST Card of the firm/ Authorized Dealership.
- iv. Copy of Registration of Firm
- v. Undertaking of not being blacklisted by any Govt. Agency/ department.
- vi. List of clients presently being served (Agricultural Universities/ Educational Institutes/National Institutes/others separately in the last three years) with Contact name & address with mobile no.
- vii. Certificate for successful completion of similar nature of work at any other organization.
- viii. Bank Details on letter head along with cancelled cheque.
- ix. Offers should be accompanied by a DD of Rs.1000/- (non-refundable) in favour of "Comptroller, SKUAST-Jammu" payable at Jammu towards the Tender fee.
- x. Offers should be accompanied by a CDR/FDR as specified against each Item (refundable) pledged in favour of "Comptroller, SKUAST-Jammu" towards Earnest Money Deposit.

**Terms & Conditions**

1. The tenders shall only be entertained on the prescribed form of the University. The tender shall be liable to be rejected if it contains mutilation, overwriting and corrections without due attestation by the tenderer.
2. No tender without earnest money in the shape of CDR shall be entertained. The CDR of unsuccessful tenderers shall be released within one month after the purchase process is finalized.
3. Conditional tenders shall be rejected out rightly.

4. The hard copies of the pre-eligibility documents must reach in the office of the Member Secretary (Equipments), Central Purchase Committee, School of Biotechnology, SKUAST-Jammu, Main Campus, Chatha, Jammu-180009 not later than the specified date and time as stipulated in the NIT.
5. The envelop in which pre-eligibility documents are submitted must be superscribed as "Procurement of Laboratory Equipments with Item No. and name of the item(s) for which tenders have been submitted".
6. The successful tenderer shall enter into sale agreement on affidavit worth Rs. 100/- as per the terms and conditions given in Annexure-III
7. 100% payment shall be made on installation and commissioning of the equipment. However, the tenderer shall have to furnish a performance bank guarantee equivalent to 5% of the total cost of the equipment(s).
8. The quality of the Laboratory Equipment should conform to the highest standards as per relevant BIS/ISO specifications.
6. Tenderers must state categorically whether or not their offer is exact to tendered specifications and indicate deviations, if any, failing which their offer will be ignored.
7. Tenderers shall enumerate the operational experience in similar environment of the equipment offered along with the names, addresses and other references of user's installations.
8. Late, delayed and incomplete tenders and amendments and additions to the tender after opening of the same will not be accepted.
9. The Tenderers should include in their tender, provision for tools and initial stock of maintenance spares as are essential for proper operation and will ensure maintenance of the equipment/ spares for a minimum period of 15 years. Full particulars of the spare parts should be provided separately.
10. The successful tenderer shall be responsible for erection and installation of the equipment at destination sites and for making it fully operational.
11. The tenderers must provide complete details of space and all infrastructural needs of the equipment which SKUAST-J should arrange before the arrival of the equipment in SKUAST-J to ensure its early installation and smooth operation thereafter.
12. The tenderer shall be fully responsible for the manufacturer's warranty in respect of proper design, quality and workmanship of the equipment (s) accessories etc. covered by the tender for a period of atleast 12 months from the date of satisfactory installation/commissioning of the system. The provision for extended warranty with terms and conditions thereof, if any, may also be specifically mentioned.
13. The tenderers shall make provision for imparting training to our scientists/ maintenance staff on operation and use of Laboratory Equipments, its accessories and trouble shooting repair and maintenance. Cost, if any, of such training and the details regarding the course covered and its duration should be specified.

14. The tenderer should enclose a certificate with the tender stating that
  - i) The equipment is of the latest technology.
  - ii) The equipment may be upgraded as and when required by SKUAST-J and
  - iii) The equipment shall be promptly and properly serviced by them whenever desired and such service will remain available to SKUAST-J for 15 years from the date of its installation.
15. Prices should be quoted in the Format as per Annexure – II and must be inclusive of transit insurance, freight, installation and commissioning at destination sites. Discount, if any, should be shown separately. Additional charges on account of Excise Duty, GST, Entry Tax or any other charge / levy must be specifically quoted.
16. The offer should be valid for a period of 180 days from the specified date of opening of the tenders.
17. The tenderers and their authorized representatives are at liberty to be present at the time of opening of the tenders.
18. The competent authority of SKUAST-J does not bind itself/himself to accept the lowest or any tender & reserve the right of accepting the whole or any part of the tender or portion of the quantity offered and the bidders shall supply the same at the rate quoted.
19. The equipment to be supplied shall not pass to the SKUAST-J unless and until the equipment has been delivered, installed / commissioned and accepted, in accordance with the conditions of the contract and to the entire satisfaction of the competent authority of SKUAST-J.
20. The University shall not be responsible for any theft or loss sustained by the tenderer during the period of commissioning/installation. In the event of injury or mishap or illness to any of his worker, the University will not be responsible for any compensation.
21. The tenderer shall be fully responsible for any damage to the University property/ furniture, if any provided to them by the University.
22. The competent authority i.e., Vice-Chancellor, SKUAST - Jammu reserves the right to revise or alter the specifications of the equipment before the acceptance of the tender.
23. All questions, disputes, or difference arising under and out of, in connection with the contract shall be subject to the Courts at Jammu (J&K).

Sd/

**Member Secretary (Equipments)**  
**Central Purchase Committee**

No: AU/ CPC/2018-19/

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## Sale Agreement

**SALE PURCHASE AGREEMENT**

This agreement has been executed on ..... day of ....., 20-- between M/S \_\_\_\_\_ (hereinafter called the 'Supplier') which expression shall, unless excluded by or repugnant to the context, be deemed to include his executors, representatives, administrators, successors and assigns of the **One Part** and the Vice-Chancellor of Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu (hereinafter called SKUAST-Jammu) which expression shall unless excluded by or repugnant to the context be deemed to include his successors in office and assigns of the **Other Part**.

WHEREAS SKUAST-Jammu intends to purchase ----- for the -----, SKUAST-Jammu for the year 2018.

WHEREAS the Supplier has agreed to supply the ----- required by SKUAST-Jammu ;

WHEREAS SKUAST-Jammu has placed the order for the supply of ----- with the Supplier / Agent vide No.----- dated .....for placing the direct order with the Foreign Publishers on behalf of SKAUST-Jammu and the Supplier has submitted his willingness in writing for accepting the job of supplying these CD Data Bases;

NOW this agreement witness as follows:

1. The Supplier will make payment form their own source on our behalf for the ----- ordered with them. Afterwards they will raise their bills alongwith the proof of Bank remittance for the amount of the title paid alongwith the proof of exchange rates prevailing on the date of remittance of the subscription amounts to the publishers concerned alone will be accepted against production of bank memo for verification of conversion rates charged in the invoices. The bills of the Supplier will be processed immediately on its receipt.
2. The Supplier shall provide security deposit if any of the total value of order in the shape of Fixed Deposit for a period of 1 year duly lien marked in favour of Comptroller, SKAUST-Jammu.
3. The Supplier shall provide discount if any on the total value of order for supply of equipment which will be deducted from the bill amount itself.
4. Issues of equipment so ordered shall be delivered at SKUAST-J main Campus Chatha District, Jammu (J&K) which will be subject to verification of correctness of supplies to the order placed.
5. Installation, commissioning and demonstration of the equipment has to be done by the Supplier without charging any additional charges.

6. The Supplier will provide all the facilities such as warranty period mentioned in the quotation and other services needed from time to time for the maintenance of the equipment.
7. The Supplier shall be responsible for the job assigned and provide his own man power and no staff will be provided by SKUAST-Jammu.
8. That the Workers deployed by the Supplier shall be well behaved and should obey the orders of University or anybody authorized on his behalf.
9. Staff deployed by the Supplier shall be staff of the Supplier for all purposes and the SKUAST-J shall have no liability on any account. The Supplier shall be liable to comply with requirement of Labour laws applicable and after termination / completion of the work staff shall have no claim against the SKAUST-J for further engagement or regularization.
10. Supplier shall bear the stamp duty, payable on agreement.
11. The Supplier will work under the overall supervision / directions of the SKAUST-Jammu or any other officer who may be specifically authorized in writing in this behalf.
12. The SKUAST-Jammu reserves the right of terminating the Contract by giving one month's notice.
13. All disputes and differences arising out of or in way touching or concerning this agreement (except the decision whereof is otherwise herein before provided for) shall be subject to the jurisdiction of Courts at Jammu.

In witness thereof the parties hereto have signed this agreement ..... day and the year first above written.

**Signature of the approved Supplier  
( with seal)**

**Signature for and on behalf of the  
SKUAST-Jammu**

1.Witness. ....  
Address .....  
.....

1.Witness .....  
Address .....  
.....

Dated .....

Dated .....

2.Witness. ....

2.Witness .....

Address .....

Address .....

.....

.....

Dated .....

Dated .....



*Sher-e-Kashmir*  
University of Agricultural Sciences & Technology of Jammu  
Head Office, Admn. Block Main Campus Chatha,  
Jammu (J&K)- 180009

**TENDER FORM**

Cost of tender document received vide Bank Draft / Cash Receipt No. \_\_\_\_\_

Dated \_\_\_\_\_ for Rs. 1,000/-

**Tender for: - Procurement of Laboratory Equipments**

**Earnest Money** amounting to Rs. \_\_\_\_\_ in the shape of Bank  
CDR / FDR No. \_\_\_\_\_ Dated \_\_\_\_\_ of  
\_\_\_\_\_ Bank enclosed.

To,

**The Comptroller  
SKUAST of Jammu  
Chatha, Jammu.**

I/We \_\_\_\_\_ S/o.Sh. \_\_\_\_\_

R/o \_\_\_\_\_ Prop.M/s \_\_\_\_\_

\_\_\_\_\_ hereby tender for Fabrication of Polyhouses at SKUAST-Jammu  
Main Campus Chatha and declare as under : -

1. That I/We have sufficient experience for supply of laboratory equipments etc .
2. That I/We have carefully gone through the terms and conditions of the NIT and bind myself/ourselves to adhere to the quality and quantity parameters and rates.
3. That the rates quoted in the enclosed tender form have been written by me / us under my/our personal supervision and are firm.
4. That I/We shall be bound by the SKUAST of Jammu's instructions regarding quality and quantity of materials and other condiments.
5. That the revenue stamps worth Rs. 5/- have been affixed by me/us.
6. The rates quoted for each Laboratory Equipment are given as per Annexure-I

**Name and address of the tenderer**

## Annexure-II

### FORMAT FOR QUOTING OF PRICES TO Laboratory EQUIPMENTS

NAME OF THE EQUIPMENT \_\_\_\_\_

S.No.	Specification as per NIT	Specification of Quoting Firm	Name of the Firms with complete address/ Ph. No. Fax, etc	Unit Price (Rs. /€ /£/\$)	Terms & Conditions
		Deviation if any between the Specification as per NIT and Specification of		(a) cost of total unit _____ (b) Taxes _____ (c) Carrying forwarding, air freight, insurance, transportation charges, etc (item wise) _____ (d) Training cost (if any) _____  e) State Entry Tax if applicable _____  <b>Total Cost at Jammu</b> _____	FOR  Mode of payment  Delivery period  Warranty



		<b>Quoting Firm</b> <hr/> <hr/> <hr/>			
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The prices to be quoted should be equipment wise and separate page should be used for every equipment.

**Signature of the tenderer  
(With Company Seal)**

## List of Equipments/Instruments

Item No.	Name of the Equipment/Instrument	Detailed Specifications	Qty.	Budgetary Provision (Rs.)	EMD (Rs.)
01	Micro Controlled Double beam UV Spectrophotometer	Micro Controlled Double beam UV Spectrophotometer- 200-1100nm wavelength, band width of 2 nm and scanning speed of Fast/Medium/ Slow, Tungsten Halogen and Deuterium lamp and photodiode detector(2Nos.), LCD display, USB and Printer port, 5 cuvette sample holder	01	330000.00	6600.00
02	Student Microscope	<ul style="list-style-type: none"> <li>• Quadruple revolving nose piece</li> <li>• Detachable mechanical stage with monocular head and hard coated prisms</li> <li>• Having 6v-20w halogen lamp.</li> <li>• Wooden box with following optics: Eye pieces: WF10 x and H 5x Objectives: 4x, 10x, 40x, 100x</li> </ul>	10	250000.00	5000.00
03	Micro Mist Fog Associate	<ul style="list-style-type: none"> <li>• Automized nozzles</li> <li>• Leakage prevention device</li> <li>• Temperature controller &amp; cycle timer</li> </ul>	01	250000.00	5000.00
04	Laminar Flow Horizontal	<ul style="list-style-type: none"> <li>• Stainless steel main body, side body of acrylic sheet</li> <li>• Internal work area up to 600x500x600 mm (L x D x H)</li> <li>• Average flow velocity : 0.3-0.6 m/s (adjustable)</li> <li>• With HEPA filters</li> <li>• Filter efficiency at particle size of 0.1 to 0.3<math>\mu</math>m : 99.99%</li> <li>• Illumination (Lux) : 1500 lux</li> <li>• Operating at 230 V</li> <li>• Factory installed UV light.</li> </ul>	01	110000.00	2200.00
05	Chlorophyll content meter	<ul style="list-style-type: none"> <li>• Optical density difference at two wavelengths: 650 nm and 940 nm</li> <li>• Non-invasive, non-destructive measurement</li> <li>• Trend graph stores and displays up to 30 measurements</li> <li>• Water proof design</li> <li>• Light Source: 2 LEDs</li> <li>• Receptor: Silicon Photodiode</li> <li>• Power Source: 2 AA alkaline batteries (1.5V)</li> </ul>	01	150000.00	3000.00

		<ul style="list-style-type: none"> <li>• Repeatability: Within <math>\pm 0.3</math> SPAD unit</li> <li>• Includes hard carrying case and batteries</li> </ul>			
06	Refrigerated Centrifuge (30,000 rpm)	<ul style="list-style-type: none"> <li>• Table top / Bench top</li> <li>• Stores up to 20 routine programs</li> <li>• Maximum speed: 500 to 16000 rpm or more</li> <li>• Temperature range: <math>-5^{\circ}\text{C}</math> to <math>40^{\circ}\text{C}</math></li> <li>• Fixed angle metallic auto cleavable rotor of capacity <ul style="list-style-type: none"> <li>(i) 24 x 1.5ml/2ml</li> <li>(ii) 6x50ml</li> <li>(iii) 6x15 or 12x15 ml</li> </ul> </li> <li>• Automatic over speed and imbalance detection</li> <li>• Microprocessor based</li> </ul>	01	1200000.00	24000.00
07	Electronic Analytical Balance (0.1 mg sensitivity)	<ul style="list-style-type: none"> <li>• Capacity 210 gm</li> <li>• Least count 0.0001 gm (0.1 mg)</li> </ul>	01	450000.00	9000.00
08	UV-Visible Double Beam Spectrophotometer	<p>Specifications:</p> <ul style="list-style-type: none"> <li>• Wavelength range 190 nm to 1000 nm</li> <li>• Spectral band width 1.0 nm</li> <li>• Wavelength accuracy <math>\pm 0.3</math> nm</li> <li>• Wavelength reproducibility <math>\pm 0.1</math> nm</li> <li>• Photometric mode Absorbance, %T, Concentration</li> <li>• Variable wavelength scan</li> <li>• Photometric accuracy <math>\pm 0.002</math> Abs at 0.5 Abs</li> <li>• Photometric range -4 to +4 Abs</li> <li>• Storage of measurement data</li> <li>• LED display</li> <li>• Pair of Quartz Cuvettes</li> <li>• 1KVA online UPS with 30 min backup</li> </ul>	01	650000.00	13000.00
09	Freeze Drier (Lyophilizer)	<ul style="list-style-type: none"> <li>• Microprocessor Controlled Laboratory scale freeze dryer with vacuum pump and facility for lyophilizing the products in vials and ampoules, sealing under vacuum.</li> <li>• Ice condenser performance: Capable of removing at least 1 lit of water in 24 h and holding at least 2 lit or more of ice before defrosting.</li> <li>• Total ice condenser capacity: 2 liters or more</li> <li>• Condenser temperature: <math>-75^{\circ}\text{C}</math> to <math>-85^{\circ}\text{C}</math></li> <li>• Refrigeration : 2x1/3Hp CFC</li> </ul>	01	700000.00	14000.00

		<ul style="list-style-type: none"> <li>• LC display of system operation and set parameters, viz., ice condenser temp, vaccum time set</li> <li>• Automatic defrosting function.</li> <li>• Ice condensation chamber with high quality stainless steel inner condenser coils and drain valve.</li> <li>• Drying Chamber made of Stainless Steel with at least 12 ports for use of ampoule.</li> <li>• Comprising base plate/adaptor plate, three shelves, and distributors for ampoules/vials. Freeze drying ampoules and vials of 2 to 5 ml capacity (200 Nos must be supplied with the system)</li> <li>• System should have provision to start pump after condenser temp reaches - 40<sup>0</sup>C for safety</li> <li>• Vacuum Pump: High quality corrosion resistant, direct driven, double stage vacuum pump with gas ballast facility and safety valve capable of displacing at least 150 lits air per min for better performance. Pump should include exhaust filter, oil mist and odor filter elements with a spare set. Ultimate Pressure should be at least 2x10<sup>- 3</sup> mbar.</li> <li>• Compact bench top design with small foot print. A trolley with wheels to keep the lyophilizer unit, vacuum pump and accessories.</li> <li>• Complete sealing device for vials and ampoules.</li> <li>• Electricity requirement: 220-240V, 50Hz.</li> <li>• Servo voltage stabilizer compatible with the system.</li> </ul>			
10	UV Spectrophotometer	<ul style="list-style-type: none"> <li>• System should be flexible to handle micro volume, disposable and/or standard cuvettes and should be supplied with quartz cuvette and 200 nos. disposable cuvettes. Cuvette shaft should accommodate conventional quartz cuvette (UV range); Glass / plastic cuvettes (visible range).</li> <li>• Data transfer and analysis should be possible without any additional software.</li> <li>• System should have pre-programmed quantification methods. <ul style="list-style-type: none"> <li>• Measuring principle: Absorption single-beam photometer with reference beam</li> <li>• Minimum Wavelength range : 200 –800 nm</li> <li>• Light source: Xenon flash lamp</li> <li>• Measuring results (&gt; 1 ,000) can be saved directly on the device</li> <li>• &gt;100 method programs in memory</li> <li>• Spectral band width: ~4 nm</li> <li>• Photometric measuring range: 0 A to 3.0 A</li> <li>• Random error: ± 0.5 %</li> <li>• Systematic error: ± 1 %</li> </ul> </li> </ul>	01	450000.00	9000.00

		<ul style="list-style-type: none"> <li>• Light beam height: 8.5 mm</li> <li>• USB Port: 2-4 USB ports for data storage/Transfer, connectivity to PC, Printer etc</li> <li>• System should be supplied with branded Compatible UPS with at least half hour battery backup.</li> <li>• Should have European CE certificate</li> <li>• Warranty: 2-3 years after installation</li> </ul>			
11	Leaf Area Meter (Systronix)	<ul style="list-style-type: none"> <li>➤ Conveyer belt for continuous use</li> <li>➤ Adjustable press rollers so you can measure thick leaves, up to 2.5 mm</li> <li>➤ Resolution of 0.1 mm<sup>2</sup> or 1 mm<sup>2</sup></li> <li>➤ Sample size for recording leaf area: <ul style="list-style-type: none"> <li>• Leaf Width: 2 mm to 25.0 cm</li> <li>• Leaf Thickness: Up to 2 cm and can be extendable</li> <li>• Leaf Length: Up to 3 m or more</li> </ul> </li> <li>➤ USB connection along with PC software to transfer data files and to record measurements directly to a computer</li> <li>➤ Size: 20-25 cm H × 50-60 cm W × 70-75 cm L</li> </ul>	01	<b>700000.00</b>	14000.00
12	Computers with UPS	<ul style="list-style-type: none"> <li>-Desktop Computer with InTel Core I3 Processor, 4 GB RAM, 1 TB Hard disk, USB Keyboard and Mouse, 19" TFT display</li> <li>-Double battery UPS</li> <li>-Preloaded Win8</li> </ul>	04	200000.00	4000.00
13	BOD Incubator	<p>BOD</p> <p>Size: 6 CUFT</p> <p>With Microprocessor</p> <p>Based indicator cum controller</p> <p>Range: 5-55C</p> <p>Including Accessories</p> <p>Shelves</p> <p>Catalogue enclosed</p> <p>For detailed specification</p> <p>Internal Volume (Litres)-200</p> <p>No. of Tray-02</p> <p>Dimension(WxBxH)mm (Internal)</p> <p>660x665x450</p> <p>External dimension (WxDxH)mm</p>	01	1 125000.00	2500.00

		<p>800x1095x1020 Recommended Voltage Stabilizer VS-02 Temp. Range-50C to 600C±0.50C</p> <p>Computer HP Desktop all in one i-3 4GB RAM 1TB HD win-10 HP Laserjet Printer 1020 Plus</p> <p>Online UPS 10 KVA online UPS with two hour battery back up (65 AH/12V)</p>		4 1 16	
14.	Water Purification System	<p>Water Purification System capable of producing type I (18.2 Mega ohm Resistivity) and Type III with Pretreatment cartridge, Reverse Osmosis, polishing cartridge and 0.22micron final filter. The system is capable of feed water acceptance up to 2000 micro Siemens conductivity, Fouling Index (SDI) &lt; 12, Total Chlorine &lt; 3 ppm.</p> <p>Prefiltration      * 1 Stage pretreatment system                          * 5 micron wrapped type depth filter</p> <p>Purification           * Pretreatment cartridge with anti scaling compound                                  activated carbon                          * Pump with unique temperature feedback mechanism.                          * High flux Thin film composite polyamide RO membrane with 94- 99% rejection.                          * Permeate divert valve which will divert low quality product water to the drain.                          * Coaxial resistivity cell with a flow through design and a cell constant of 0.01cm<sup>-1</sup>                          * Display both compensated and non-compensated temperature accurate within ±0.1°C.                          * Type III Water flow rate @ 3 Liters /hr.                          * Single cartridge will produce (Type 1 + Type 3 Water) Pure and Ultra-pure Water.</p> <p>Storage               * An inbuilt reservoir with 6.5 liter capacity.</p> <p>Polishing              * Two stage Polishing cartridge with mixed bed ion exchange resin and activated carbon.                          * Co axial resistivity cell to measure the resistivity of the final product water.                          * Final product water is dispensed from 0.22 Micron final</p>	01	500000.00	10000.00

		<p>filter to produce bacteria free water * Colorful graphical display to show the water parameters like resistivity, temperature &amp; alarms.</p> <p>Product water specifications (Type III) Deionized water: Ionic Rejection..... &gt; 94% Organic Rejection..... &gt; 99% Flow rate ..... 3 Liters /hr</p> <p>Product Water specifications ( Type I ) Ultra pure Water : Resistivity..... 18.2 Mega Ohms TOC .....&lt; 5-10 ppb Bacteria.....&lt; 1 cfu /ml. Particulate..... &lt; 1 /ml. Endotoxin.....&lt; 0.001EU/ml RNase.....&lt; 0.03ng/ml DNase.....&lt; 4pg/µl Flow rate ..... &gt; 0.5 Liters / min.</p>			
15	Desktop All- in-One with Printers	Desktop All-in-One , i3 processor, 4 GB RAM, 1 TB hard disk, Win10 HP Laserjet Printer	04	<b>200000.00</b>	4000.00
16	Single Plot Wheat Thresher with Electric Motor	<p><b>a. Thresher</b> Threshing cylinder size 12½” Ø 20” long both side cross float 1” Total length 22”. Peg cheisel type crossing round peg. Chasis made from 3” x 1½” channel, frame made 50 x 50 x 6mm angle iron, tyre &amp; tube 600 x 19 standard, axle 48mm square. <b>Power drive</b> with air cooled diesel engine 6 H.P make standard <b><i>It is propriety items of Rajiv Farm, Machinery, Hisar as this special type of thresher is only used by Plant Breeding Division of SAU’s to maintain Genetic purity of seed</i></b></p>	01	<b>250000.00</b>	5000.00
17	Thermo Cycler	Block: Universal, Sample capacity: 96 x0.2 ml or 77 x0.5 ml or 1x96 well PCR plate, Temperature capacity:4-99 <sup>0</sup> C , Accuracy:±0.2 <sup>0</sup> C, block ramp speed: 3)C/s (heat: 2 <sup>0</sup> C/s(cooling), Auto restart after failure, Price should include onsite warranty for 3 years	01	<b>350000.00</b>	7000.00
18	Air Conditioner Split 2 tons with Transformer	2.0 Ton split AC with copper condenser and suitable 5.0 KV transformer with copper winding delay start	02	120000.00	2400.00
19	5KVA online UPS	Wave: Pure sinewave with automatic battery charging with UPS off mode, Type: Single phase online UPS, Input:240±20%VAC, 50±5%, Single phase three wire(Phase Neutral ground); Output: 5 KVA, 230V±10%VAC, 50±5%Hz; Voltage Regulation ≤ ±2%; Overload cap.: 110% for ≤10 minutes, THDI: ≤ 5% on full load with charge mode, Batteries shall be sealed maintenance SMS or VRLA type, Backup not less 4 hrs at Full load with functional test certified & usual manual	01	150000.00	3000.00
20	Spectrophotometer	<ul style="list-style-type: none"> <li>System should be flexible to handle micro volume, disposable and/or standard cuvettes and should be supplied with quartz cuvette and 200 nos. disposable</li> </ul>	01	460000.00	9200.00

		<p>cuvettes. Cuvette shaft should accommodate conventional quartz cuvette (UV range); Glass / plastic cuvettes (visible range).</p> <ul style="list-style-type: none"> <li>• Data transfer and analysis should be possible without any additional software.</li> <li>• System should have pre-programmed quantification methods.</li> <li>• Measuring principle: Absorption single-beam photometer with reference beam</li> <li>• Minimum Wavelength range : 200 –800 nm</li> <li>• Light source: Xenon flash lamp</li> <li>• Measuring results (&gt; 1 ,000) can be saved directly on the device</li> <li>• &gt;1 00 method programs in memory</li> <li>• Spectral band width: ~4 nm</li> <li>• Photometric measuring range: 0 A to 3.0 A</li> <li>• Random error: ± 0.5 %</li> <li>• Systematic error: ± 1 %</li> <li>• Light beam height: 8.5 mm</li> <li>• USB Port: 2-4 USB ports for data storage/Transfer, connectivity to PC, Printer etc</li> <li>• System should be supplied with branded Compatible UPS with at least half hour battery backup.</li> <li>• Should have European CE certificate</li> <li>• Warranty: Three years after installation</li> </ul>																																																											
21	Spectrophotometer	<table border="0"> <thead> <tr> <th colspan="2">S.no</th> <th colspan="2">Specification</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td>Optical Design</td> <td></td> <td>Dual beam</td> </tr> <tr> <td>3.</td> <td>Spectral Band width</td> <td></td> <td>2 nm</td> </tr> <tr> <td>4.</td> <td>Light Source Typical Lifetime</td> <td></td> <td>Xenon Flash Lamp (&gt;5 years typical, 3 years guaranteed)</td> </tr> <tr> <td></td> <td>Detector</td> <td></td> <td>Dual Silicon Photodiodes</td> </tr> <tr> <td></td> <td>Wavelength</td> <td>Range</td> <td>190–1100 nm</td> </tr> <tr> <td></td> <td></td> <td>Accuracy</td> <td>±0.5 nm</td> </tr> <tr> <td></td> <td></td> <td>Repeatability</td> <td>&lt;±0.2 nm</td> </tr> <tr> <td></td> <td></td> <td>Scan Speed</td> <td>Slow, medium and fast (up to 1600 nm/min)</td> </tr> <tr> <td></td> <td></td> <td>Data Resolution</td> <td>0.2 nm, 0.5 nm, 1 nm, 2 nm, 5 nm</td> </tr> <tr> <td></td> <td>Photometric</td> <td>Range</td> <td>-2A to +3.5A</td> </tr> <tr> <td></td> <td></td> <td>Display</td> <td>-3A to +5A</td> </tr> <tr> <td></td> <td></td> <td>Accuracy</td> <td>±0.002A at 0.5A</td> </tr> </tbody> </table>	S.no		Specification		1.				2.	Optical Design		Dual beam	3.	Spectral Band width		2 nm	4.	Light Source Typical Lifetime		Xenon Flash Lamp (>5 years typical, 3 years guaranteed)		Detector		Dual Silicon Photodiodes		Wavelength	Range	190–1100 nm			Accuracy	±0.5 nm			Repeatability	<±0.2 nm			Scan Speed	Slow, medium and fast (up to 1600 nm/min)			Data Resolution	0.2 nm, 0.5 nm, 1 nm, 2 nm, 5 nm		Photometric	Range	-2A to +3.5A			Display	-3A to +5A			Accuracy	±0.002A at 0.5A	01	<b>383500.00</b>	7670.00
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		<p>Repeatability<sup>1</sup> Noise<sup>2</sup></p> <p>Drift<sup>3</sup> Stray Light</p> <p>Baseline Flatness Display</p> <p>Keypad Sample Compartment</p> <p>Printer</p>	<p>±0.004A at 1.0A ±0.008A at 2.0A ±0.001A at 1A ≤0.00020A at 0A at 260 and 500 nm ≤0.00030A at 1A at 260 and 500 nm ≤0.00040A at 2A at 260 and 500 nm &lt;0.0005A/Hr &lt;1.0%T 198 nm (KCl) , &lt;0.05%T at 220 nm (NaI), &lt;0.03%T at 340 nm (NaNO2) ±0.002A 7-inch color touchscreen, fixed, high definition, 800 x 1280 pixels Touchscreen Accessible from top, front or side Able to accommodate cells up to 100 mm pathlength Available accessory for test-tubes up to 25 mm diameter and 150 mm height Removable, washable sample compartment liner with magnetic placement and hold-down Snap on printer available</p>			
22	Fluoride and Iodine Ion Electrode	Description	pH/ISE/ mV/ORP/Temperature benchtop meter kit with fluoride electrode and solutions, Iodide electrode and solutions, Glass- body pH electrode, ATC probe, stirrer probe and stand	01	480260.00	9605.20

		<p>Range (pH) -2.000 to 20.000 pH</p> <p>Accuracy (pH) ±0.002 pH</p> <p>Range (mV) ±2000.0 mV</p> <p>Range (ORP) ±2000.0 mV</p> <p>Accuracy (mV) ±0.05% of reading</p> <p>Range (ISE) 0.0001 to 19900 with selectable units of ppm, Molar, mg/L, %, ppb</p> <p>Accuracy (ISE) ±0.2 mV or ±0.05 % of reading</p> <p>Calibration Points (pH) 1 to 5</p> <p>Calibration Points (ISE) 1 to 5</p> <p>Range (Temperature) -5.0° to 105.0° C</p> <p>Accuracy (Temperature) ± 0.1°C</p> <p>Temperature Selection Manual or automatic with ATC temperature probe</p> <p>Display Type Graphic LCD with backlight</p> <p>Log Function Type Automatic data logging with Auto-Read and Timed measure modes; manual data logging with Continuous measure mode</p> <p>Memory 2000 with date and time stamp</p> <p>Alarm Output High/low limit alarm, calibration due alarm</p> <p>Methods 10 per channel with password protection</p> <p>Inputs BNC (pH, ORP or ion selective electrode), pin-tip (reference electrode), 8 pin MiniDIN (ATC temperature probe), stirrer input (stirrer probe)</p> <p>Outputs USB, RS232</p> <p>Power Supply Universal AC adapter (included)</p> <p>IP Rating IP-54</p> <p>Relative Humidity Range 5 to 85 %, non-condensing</p> <p>Certifications/Compliance CE, TUV 3-1</p> <p>Warranty 3 years meter warranty</p>			
23	Water Bath Ultrasonic	<p>Capacity 2- 3 Liters</p> <p>Frequency 37 kHz</p> <p>Heating + 10 to 80 degree Celsius ±5</p>	01	112100.00	2242.00

		Power consumption total 350 W Ultrasonic peak power max 300-500 W SWEEP mode Present for enhanced cleaning DEGAS mode Present for fast and efficient degassing of liquids. NORMAL mode Dissolving, mixing and dispersing Display time & temperature LED light Drain duct Easy draining of cleaning liquid Warranty 1 Years Accessories Cover and Basket			
24	Monopan weighing balance	Capacity 220 g Minimum Display 0.1 mg Repeatability (Standard Deviation) ≤0.1 mg Linearity ± 0.2 mg Stabilisation Time *1 Approx. 3.0 seconds Operating Temperature and Humidity Limits 5-40°C 20-85% *2 Temperature Coefficient for Sensitivity (10-30°C) ± 2 ppm/°C Pan Size (mm) approx Ø 91 Main Body Dimensions (mm) approx 213 (W) × 356 (D) × 338 (H) Main Body Weight (kg) approx. 6.2 Power Requirement 12V, 1A Internal Calibration  Options Description EP-110 Printer I/O-RS cable Protection Cover STABLO-AP Ionizer USB conversion kit	01	174080.00	3481.60
25	ELISA Reader	I. Wave length 400-750nm II. Photometric methods single or dual wavelenth III. Bandwidth 10nm IV. Photometric range 0.0-3.5OD V. Resolution 0.001OD VI. Light source Tungsten halogen lamp [20W], 3000hr average lifetime VII. Linearity ≤ 1.0 % from 0.0-2.0 OD; ≤ 2.0% from 0.0-3.0 OD VIII. Accuracy ± 1.0% or 0.010 from 0.000-3.000 OD AT 490nm IX. Reproducibility 1.0% or 0.005 OD from 0.0-2.0 OD; 1.5% from 2.0-3.0 OD X. Photodetectors silicon photodiodes; 8 measurement 1 reference XI. Filters 8 position filter disk	01	350000.00	7000.00

		<p>XII. Read time fast mode; 6 sec at single wavelength, 10 sec at dual wavelength, step mode: 15 sec at single wavelength, 25 sec at dual wavelength</p> <p>XIII. Plate shaking 3 speeds: low, med, high; duration: 0-999sec</p> <p>XIV. Plate types: 96 well microplate; maximum plate height : 16mm</p> <p>XV. Warm up time 3 min</p> <p>XVI. Interchannel variation <math>\leq 1.0\%</math> or 0.005 from 0 to 3.0 OD</p> <p>XVII. Stability and drift [at 490nm] <math>\leq 0.010</math> OD at OD= 1 at 490 nm single wavelength</p> <p>XVIII. Data output onboard graphical thermal printer and USB2 interface with PC or Mac data stations</p> <p>XIX. Data storage calendar/clock function; 64 assay protocols</p> <p>XX. Multilanguage support 4 language ROM capacity; LCD indication supported; printout report supported</p> <p>XXI. Dimensions [WxDxH] 34.6x37.7x16.4cm [13.6x14.8x6.5"]</p> <p>XXII. Weight 5.5kg[12lb]</p> <p>3 years comprehensive warranty</p>			
26	Thermomixer	<p>i. Max speed 3000rpm</p> <p>ii. Max temperature control range 100 deg C</p> <p>iii. Min temperature control range 15deg C</p> <p>iv. Temperature setting 1deg-100deg C</p> <p>v. Timer 15 sec- 99 hours, continuous</p> <p>vi. Dimensions 20.6x30.4x13.6cm</p> <p>vii. Weight 6.2-6.5kg</p> <p>viii. Power supply 220-240V, 50-60Hz</p> <p>Three year warranty required</p>	01	300000.00	6000.00
27	Rocker Shaker	<p>i. Temperature : 5-60°C <math>\pm 0.5</math> °C</p> <p>ii. Internal volume :215 litres</p> <p>iii. Platform size: 580-600mm</p> <p>iv. Maximum shaking capacity: 1000mlx4, 500mlx10</p> <p>v. Digital Speed range : 20-250 RPM</p> <p>vi. Shaking amplitude: 25mm</p> <p>vii. Internal dimension: WDXH: 660X765X650mm</p> <p>viii. External dimensions: WDXH: 800X1150X1300mm</p> <p>ix. Temperature control: microprocessor with PT-100 sensor</p> <p>x. Power failure alarm: audio visual alarm</p> <p>xi. Door open alarm: audio alarm in case door open</p> <p>xii. Additional tray for petriplates</p> <p>xiii. LCD display</p> <p>Should have 3 year warranty</p>	01	250000.00	5000.00

28	Vertical gel electrophoresis unit with power pack and electro transfer unit	<p><b>A. Vertical gel electrophoresis</b></p> <ul style="list-style-type: none"> <li>I. 10 well</li> <li>II. 1.0mm thickness; 2 gel system includes 5 combs,5 sets of glass plates, casting stand, 2 casting frames, sample loading guide, electrode assembly, tank, lid with power cables, mini cell buffer dam</li> <li>III. Glass plate size [WxL] short plate 10.1x7.3cm, spacer plate 10.1x8.2cm</li> <li>IV. Gel size [WxL] 8.3x7Temperature : 5-60oC ±0.5 oC</li> <li>V. Internal volume :215 litres</li> <li>VI. Platform size: 580-600mm</li> <li>VII. Maximum shaking capacity: 1000mlx4, 500mlx10</li> <li>VIII. Digital Speed range : 20-250 RPM</li> <li>IX. Shaking amplitude: 25mm</li> <li>X. Internal dimension: WXDXH: 660X765X650mm</li> <li>XI. External dimensions: WXDXH: 800X1150X1300mm</li> <li>XII. Temperature control: microprocessor with PT-100 sensor</li> <li>XIII. Power failure alarm:audio visual alarm</li> <li>XIV. Door open alarm: audio alarm in case door open</li> <li>XV. Additional tray for petriplates</li> <li>XVI. LCD display,3cm</li> <li>XVII. Typical run times for SDS PAGE 35-45min [at 200V constant]</li> <li>XVIII. Dimensions [WxLxH] 12x16x18cm</li> <li>XIX. Weight 1.0kg</li> <li>XX. 3 years comprehensive warranty</li> </ul> <p><b>B. Power pack</b></p> <ul style="list-style-type: none"> <li>I. Output range : 5-250V, 0.01-3.0 A current, 1-300W power</li> <li>II. Type of output[ with automatic crossover]: constant voltage, constant current or constant power</li> <li>III. Timer 1min-99hr,59 min</li> <li>IV. Display: 16 characterx 2 line LCD</li> <li>V. Programmable methods: 1 method up to 3 steps, no storage capacity</li> <li>VI. Safety features: overload/ short –circuit detection; overvoltage protection; no load detector sudden load change detection; ground leak detection</li> <li>VII. Operating conditions : 0-40<sup>0</sup>C, 0-95% humidity</li> <li>VIII. Number of output jacks: 4 sets in pallel</li> <li>IX. Input power [actual]: 90-120 or 198-264VAC,50/60Hz, autoswitching</li> <li>X. Dimensions[ WxDxH ] : 25.0x28.5x8.0 cm</li> <li>XI. Weight : 2.0Kg</li> <li>XII. 3 years comprehensive warranty</li> </ul> <p><b>C. Electrotransfer unit</b></p> <ul style="list-style-type: none"> <li>I. Construction</li> </ul>	01	210000.00	4200.00
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		<ul style="list-style-type: none"> <li>• Electrode module: Molded polysulfone</li> <li>• Gel holder cassettes: Molded polycarbonate</li> <li>• Electrodes: Platinum wire 0.254 mm diameter</li> <li>• Cooling unit: Polyethylene</li> </ul> <p>II. Overall dimensions</p> <ul style="list-style-type: none"> <li>• Trans-Blot cell : 16 (L) x 12 (W) x 18 (H) cm</li> <li>• Gel holder dimensions : 10 x 11 cm</li> <li>• Maximum gel size : 7.5 x 10 cm</li> <li>• 2 gel holder cassettes,</li> <li>• 4 fiber pads, modular electrode assembly, blue</li> <li>• cooling unit</li> </ul> <p>3 years comprehensive warranty</p>			
29	96 Well Gradient Thermal Cycler	<p>Specifications:</p> <ol style="list-style-type: none"> <li>1. The 96 well Gradient thermal cycler should be supplied with Power Cord, Support ring for individual tubes, and Instruction Manual</li> <li>2. Specifications:</li> <li>3. Operational:</li> <li>4. Should have a gradient capacity with Dynamic ramping: <ul style="list-style-type: none"> <li>- Method of heating/cooling- Peltier</li> <li>- Method of temp monitoring- Calculated &amp; Block</li> <li>- Programming: Step-based graphical</li> <li>- Reporting: Exportable run logs, system logs</li> <li>- Instant Incubation: Yes</li> <li>- Memory: 500 typical programs onboard; unlimited with USB flash drive expansion</li> <li>- Communication : 1 USB port</li> <li>- Electrical Approvals : IEC , CE</li> <li>- Display: 5.7" VGA color touch screen</li> <li>- Operating Temp : 15-31 deg C ambient</li> <li>- Alphanumeric LCD Display.</li> </ul> </li> <li>5. Performance: <ul style="list-style-type: none"> <li>- Sample capacity/sample size: 96 wells x 0.2ml (tube strips or 96-well plate)</li> <li>- Temp Range- 4 to 100 deg C</li> <li>- Accuracy- +/- 0.5 deg C</li> <li>- Uniformity- ±0.5°C well-to-well within 30 sec of arrival at target temperature</li> <li>- Oil free Heated lid - Up to 110 deg C</li> <li>- Maximum Ramp Rate - Up to 4.0 deg C / s</li> </ul> </li> </ol>	01	325000.00	6500.00

		<ul style="list-style-type: none"> <li>- Average Ramp Rate - Up to 2.5 deg C / s</li> <li>- Reaction Volume: 1 to 100 µl</li> </ul> <p>6. License:</p> <ul style="list-style-type: none"> <li>- Licenced PCR : Yes</li> <li>- IVD License: Yes</li> <li>- Thermal Gradient</li> <li>- Gradient capability: Yes</li> <li>- Gradient Accuracy: <math>\pm 0.5^{\circ}\text{C}</math> of programmed temperature</li> <li>- Row uniformity: <math>\pm 0.5^{\circ}\text{C}</math> well-to-well (within row) within 30 sec</li> <li>- Gradient range: 30-100°C</li> <li>- Temperature Differential Range: 1-25°C</li> </ul> <p>7. Faster Optimization</p> <ul style="list-style-type: none"> <li>- Thermal gradient technology should optimize PCR assays in a single run by simultaneously testing eight different temperatures across a range of 25°C.</li> <li>- The system should adjust the cycler ramp rate, ensuring that the incubation times across the eight rows during a gradient step are identical</li> <li>- More Efficient</li> <li>- System should be compatible with reusable sealing mats to help minimize consumption of disposable plastics.</li> <li>- The power save mode automatically shuts off the display when the cycler is idle.</li> <li>- System should have automatic recovery in case of power failure.</li> <li>- 1 kva online ups UPS with 30 minutes back up should be provided.</li> <li>- 1 pack of 120/8 tube strips with caps should be provided.</li> <li>- Warranty- 3 years from the date of installation should be provided.</li> </ul>			
30	Automated Cell Counter	<ol style="list-style-type: none"> <li>1. Automated Cell Counter -Count cells quickly, accurately, and consistently within 30 sec using the built-in auto-focus.</li> <li>2. Should have Autofocus technology and sophisticated image analysis algorithm to eliminate the subjectivity of manual cell counting.</li> <li>3. To be able to Count cell lines, primary cells (from tissue or blood), and stem cells.</li> <li>4. Should have Cell Gates, On-board dilution calculator, USB port, Data storage: approx-100 Counts, Sample volume: 10µl, Cell diameter range: 6-50 microns; Cell concentration range: <math>5 \times 10^4</math> - <math>1 \times 10^7</math> cells/ml.</li> <li>5. Counting chamber depth: 100µm; Optimal cell concentration range, cells/ml- <math>1 \times 10^5</math> to <math>5 \times 10^6</math></li> <li>6. Product should have 2 years warranty.</li> </ol>	01	<b>312000.00</b>	6240.00

31	Bio-safety Cabinet, Class II Type-A2	<ol style="list-style-type: none"> <li>1. Microprocessor controlled Biological Safety Cabinet with single piece Stainless</li> <li>2. Steel 304 work surface and dimension of 4'x 2'x 2'.</li> <li>3. Side &amp; back wall made up of single piece stainless steel 304 with rounded corner for easy cleaning &amp; disinfections procedure.</li> <li>4. Bio-safety Cabinet Class II type A2 i.e with 70% re-circulation and 30% exhaust.</li> <li>5. Front 10° slanted to offer operator comfort while working for long time.</li> <li>6. Frequency controlled drive based dual fan motor system for each separately for laminar flow and exhaust.</li> <li>7. The motor must automatically adjust the airflow speed without the use of damper to ensure continuous safe working conditions.</li> <li>8. 6 mm UV resistant front glass window with adjustable balancer suspension.</li> <li>9. Equipped with anti-explosion, anti-splash power socket, water/media and Gas inlet.</li> <li>10. ULPA/HEPA-14 filter with efficiency more than 99.9995% of 0.12µm / 0.3µm.</li> <li>11. Filter lifespan display function with filter real-time alarm function.</li> <li>12. Display screen should provide information about Air exhaust value, Laminar flow value, real time counter for exhaust &amp; laminar fan , UV elapse hour counter and Filter lifespan.</li> <li>13. Safety alarm for low exhaust, low laminar flow, fault of exhaust fan, fault of laminar flow fan, closing condition of visible window.</li> <li>14. UV interlocking with front window i.e UV light should be closed automatically when front window is open.</li> <li>15. Standard compliance EN 12469 Certified / NSF for Microbiological safety or equivalent, ISO 14664.1 class 3 for air cleanliness or equivalent.</li> <li>16. The manufacturer an ISO 9001 –2000 certified.</li> <li>17. Power supply 220V, 50/60Hz.</li> <li><b>18.</b> Warranty for 2 years.</li> </ol>	01	350000.00	7000.00
32	Ultra-low temperature Freezer (-86 °C), Upright model	<ol style="list-style-type: none"> <li>1. Freezer should be of 550 to 600 Liters capacity</li> <li>2. System should have Programmable operating temperature from –50°C up to –86°C with 1°C increment</li> <li>3. Fully programmable microprocessor controlled with membrane keypad and eye level control panel.</li> <li>4. Construction should be of Polyurethane foam insulation.</li> <li>5. System should be made up of 18 gauge Steel, 1.2 mm thick with powder coated paint to resist scratch and rust and the interior should be Polished</li> </ol>	01	600000.00	12000.00



		<p>with 304 SS for easy cleaning and to eliminates potential for oxidation.</p> <ol style="list-style-type: none"> <li>6. Inner door should have silicone seal to prevent temperature loss and Outer door should have safe silicone triple point seal</li> <li>7. Freezer should have 4 adjustable shelf's with five separate inner doors.</li> <li>8. Ambient to -85 C pull down timing should be not more than 5.5hrs</li> <li>9. Freezers should have heated air vent and front panel air filter.</li> <li>10. Should have security keyed locks on the outer doors and lids keep out unauthorized users</li> <li>11. Freezer must have battery back-up and Password security lock for unauthorized tampering.</li> <li>12. Freezer must have RS 485 interface data logging port and it must also have on board diagnostic software.</li> <li>13. Audible and visible alarms for temperature, power failure, system failure, battery low etc. and it also have remote alarm port for connection to an auto dialer.</li> <li>14. Freezer must use CFC-FREE, HCFC-FREE non-flammable refrigerants, and refrigeration system must be energy efficient and hermetically sealed two stage cascade refrigeration system.</li> <li>15. Freezer must have ISO 9001 standard quality test requirements and IEC 61010 Electrical safety CE &amp; UL certified.</li> <li>16. Freezer should be European CE Certified.</li> <li>17. Freezer should have a capacity to withhold 40,000 or more vials of 2ml.</li> <li>18. Freezer should be supplied with Factory calibrated certificate and IQ, OQ, PQ should be provided.</li> <li>19. Power Consumption should not more than 15kWh/day.</li> <li>20. Heat Output should not more than 450Watt.</li> <li>21. Freezer should be supplied with 5KVA voltage stabilizer.</li> </ol>			
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	Immunomagnetic Cell Sorter	<ol style="list-style-type: none"> <li>1) Immunomagnetic cell separator and should be gentle to cells.</li> <li>2) Can able to perform Immunomagnetic cell sorting of cells including rare cells population.</li> <li>3) Capable to do positive selection and negative selection of cells.</li> <li>4) Should use particles which should not interfere in any downstream applications (for example – flowcytometry &amp; function studies)</li> <li>5) System is capable to isolate up to <math>0.1</math> to <math>2.5 \times 10^8</math> cells when isolating rare cells per separation.</li> <li>6) Cell Separation System should be column free</li> <li>7) System should capable to release magnetic particles after cell separation.</li> <li>8) Product should supply with minimum 3 years warranty.</li> </ol>	01	165200.00	3000.00
	Online UPS 5KVa	<ol style="list-style-type: none"> <li>1. UPS Capacity = 5KVA Online with Isolation Transform</li> <li>2. Input Voltage range = 160V – 280V AC</li> <li>3. Frequency = 50Hz <math>\pm</math> 0.05Hz</li> <li>4. Output Voltage = 230V <math>\pm</math> 1%</li> <li>5. Waveform = Sine wave</li> <li>6. Battery Bank = 144V/180V DC</li> <li>7. Metering = Digital</li> <li>8. Static Bypass = Available</li> <li>9. Back up Time = 1 hr.</li> </ol>	01	100500.00	2000.00
33	Mobile Seed Processing Plant for Pulses on Turn Kay Basis (1 TPH)	<p><b>1. UNIVERSAL MOISTURE METER : - 1 No.</b></p> <ul style="list-style-type: none"> <li>• Construction : Stainless Steel Body</li> <li>• Test Cup Visible made of stainless steel round in shape.</li> <li>• Seven fluorescent numeric display (FND) for digital display of Moisture reading. The required sample cup and pressure for selected commodity is displayed for reference to the user to use the correct sample cup and correct pressure.</li> <li>• Five Push wheel Switches for selection of commodity, checking and setting Date/Time, setting Depositor name, and review of stored readings along with their Date, Time and other details.</li> <li>• PT 100 Temperature Sensor made of Platinum metal.</li> <li>• Bluetooth connectivity in MM complete with box &amp; accessories tested &amp; proven in the field for various crop seeds.</li> <li>• Weight of Moisture Meter 18 Kg.</li> </ul> <p><b>2. FINE CLEANER CUM GRADER : 1 No</b></p>	01	150000.00	30000.00

		<p><b>Specifications:</b>  Input Capacity : 01 Ton/hr Wheat Basis  Fan Motor : 03 HP.  Sieve Boat Motor : 01 HP.  Sieve Boat Construction: Compressed seasoned laminated wooden sieve deck.  Available travel Length of Screens for seeds : Minimum 440 cm  Top Screen Size : 80 cm x 51.5 cm ( LxB) 1 No.  Middle Screen Size : 60.0 cm x 51.5 cm ( LxB) 3 No.  Bottom Screen Size : 60.0 cm x 51.5 cm ( LxB) 3 No.  Total Area of Screens : 2.2 Sq. M. (Approx)  Deck Oscillations : 300 – 320 RPM  Perforated Screens : CNC punching minimum thickness of screens 1 mm with wooden frame.  Frame MS channel size for Structural Stability : 15 cm x 5 cm x 0.3 cm  Sieve Cleaning System : By Bouncing rubber balls.  No. of Aspirations : 02 Nos. pre &amp; post aspirations  Feed Roller : Rubber coated steel roller dia. 80 mm for Uniform Seed Feeding on screens  Auger : For impurities Outlet.  Bearings : SKF/NTN  Motor Make : Crompton/Siemen  Rubber or soft coating to seeds hopper and all impact points in machine for smooth handling of Pulses seeds.  Supply : 440V, 3 Phase AC.  (a) Air Trunk and Cyclone dust Collector - 01 Set  (b) Additional Sieves - 03 Set</p> <p><b>3. VERTICAL BUCKET ELEVATOR – 2 No.</b>  <b>Specifications:</b>  Capacity : 01 Ton/hr pulses Basis ( as calculated on wheat basis )  Type : Centrifugal Discharge  Bucket Material : Nylon Bucket Size 10 cm * 10 cm  Belt : Rubberized wooven 5 Ply  Speed Reduction : By Gear Box of Suitable Gear reduction ratio  Elevator Motor : HP 0.50 , make Crompton/Siemens  Gear Box : Standard geared box make Elicon/Radicon/ Power  Build  MS sheet : CRCA sheet thickness 1.6 mm and 2.0 mm</p>			
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	<p><b>4. GRAVITY SEPARATOR : 1 No</b></p> <p><b>Salient features:</b></p> <ul style="list-style-type: none"> <li>➤ Rectangular type wooden and steel deck for greater capacity and accuracy, durability and quickly &amp; easily interchangeable type.</li> <li>➤ Fans are dynamically balanced with individually adjustable air control for each fan for precise control of air flow.</li> <li>➤ Variable oscillation speed of deck in wide range with the help of VFD.</li> <li>➤ Variable inclination of deck side wise and length wise.</li> <li>➤ Seed collecting spouts are rubber/soft coated fitted with bag holding clamps.</li> <li>➤ Feeding Hopper with rubber/soft coating for uniform feeding on deck without damage.</li> <li>➤ Air filter windows with fine wire mesh.</li> <li>➤ Overall Machine size : L – 2.05 M    W – 1.36 M    H – 1.30 M</li> <li>➤ Deck size of machine : L – 1.58 M    W – 0.90 M</li> </ul> <p><b>Specifications:</b></p> <p>Capacity : 01 Ton/hr Wheat Basis  No. of fans : 03  Type of deck : Rectangular type,  Electric Motor : 5 HP(Blower), and 1.5 HP (DECK OSCILLATION)  3Ph  50 cycle AC supply, Make Crompton/Siemens</p> <p><b>CRCA sheet for body with min thickness 4 mm for less sound and structural stability.</b></p> <p><b>Alternator</b> : Alternator Make Crompton/Kirloskar to be provided Three Phase AC supply, or P.T.O shaft driven.</p> <p><b>Control Panel</b> : A central electric control panel equipped with main on and off switch, volt meter, change over switch, ammeter, phase indicator, emergency switch, contactors with protective relays and fuses make L &amp; T, Crompton, Siemens, Anchor, ABB . All cables make Polycab and wires Anchor etc.</p> <p><b>Trolley</b> : All above shall be mounted on a four wheel trolley. Tyres make JK/Goodyear/MRF. Trolley fitted with heavy duty screw jacks pivoting front axle, one spare tool box and set of tools for ordinary repair and maintenance.</p> <p><b>5. PLATFORM TYPE WEIGHING SCALE</b></p>			
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		<p><b>Specification:</b> Capacity : 100 Kg. Readability : 10 gm.</p> <p><b>6. HAND OPERATED STITCHING MACHINE</b> Suitable for stitching on all types of paper, cotton, jute and poly bags. <b>Specifications:</b> Type of stitch : Single thread chain stitch Weight : 6 Kg Power Requirement : 0.1 HP, 8000 rpm 220V, 1.3 amps</p> <p><b>7. ENAMELED PLATE</b> <b>Features :</b></p> <ul style="list-style-type: none"> <li>• Flat type</li> <li>• Fully Coated</li> <li>• Raised Rims</li> </ul> <p><b>Specifications :</b> Dia : 30cm Weight : 575 +/- 25gm</p> <p><b>8. SEED SAMPLING TRIER – 75 cm</b> Material of Construction - Brass Smooth Finish Double Tube Length 75cm, outside Dia 1.25 cm, 5 Openings</p>			
34	<b>CCTV surveillance system</b>	<b>CCTV surveillance system for an area of 2 x (70 ft x 20 ft)</b>	01	240000.00	4800.00
		<p><b>1. Imaging device: HD Camera (16 or more cameras)</b></p> <ul style="list-style-type: none"> <li>• 2M CMOS, Full HD (1,920 x 1,080, 30fps) resolution</li> <li>• Day &amp; Night (ICR), Auto (ICR) / Color / B/W, DWDR, SSSNRIV, Motion detection</li> <li>• 0.25Lux@F2.1 (Color), 0Lux@F2.1 (B/W : IR LED on)</li> <li>• Built-in 3.6mm or higher mm fixed lens</li> <li>• IR viewable length 20m, IP66</li> <li>• Easy installation (Plug &amp; play)</li> <li>• Operating Temperature / Humidity: -30°C to +55°C (-22°F ~ +131°F) / 90% RH</li> </ul> <p><b>2. HD Real-time DVR</b></p>			

		<ul style="list-style-type: none"> <li>• 16CH 1080p real-time DVR</li> <li>• Upto 480/400(1080p)fps recording time</li> <li>• HDMI / VGA video output</li> <li>• Smart phone support (Android / iOS)</li> <li>• LiveDisplay <ul style="list-style-type: none"> <li>i. Frame Rate NTSC : 480fps / PAL : 400fps</li> <li>ii. Resolution NTSC : 1920 x 1080, 1280 x 720, 960 x 480, 704 x 480</li> <li>iii. PAL : 960 x 576, 704 x 576</li> </ul> </li> <li>• Multi Screen Display 1 / 4 / 7 / 9 / 13 / 16 / 16A / Sequence / PIP</li> <li>• Storage <ul style="list-style-type: none"> <li>a. Internal HDD Up to 8 SATA HDDs</li> <li>b. 8 TB storage capacity</li> <li>c. External (e-SATA Interface) 2 ports</li> <li>d. USB (Backup) USB 2.0, 2 ports (Front 1, Back1)</li> <li>e. File Format (Backup) BU (DVR player), SEC (Include player), AVI</li> </ul> </li> <li>• Interface <ul style="list-style-type: none"> <li>a. Monitors <ul style="list-style-type: none"> <li>i. VGA 1 VGA (1280 x 720, 1280 x 1024, 1920 x 1080)</li> <li>ii. HDMI 1 HDMI (1280 x 720, 1280 x 1024, 1920 x 1080)</li> </ul> </li> <li>b. Alarm <ul style="list-style-type: none"> <li>i. Inputs / Output Terminal 16 inputs (NO/NC) / Terminal 4 relay outputs (NO/NC),Rating : 30V DC / 2A, 250V AC / 0.25A</li> <li>ii. Remote Notification via e-mail</li> </ul> </li> <li>c. Connections <ul style="list-style-type: none"> <li>i. Ethernet 1 RJ-45 10/100/1000 Base-T</li> <li>ii. Serial Interface RS-232/RS-485 (Full duplex) for PTZ, system keyboard</li> <li>iii. USB 2.0, 2 ports</li> <li>iv. Support Mouse, Remote controller</li> </ul> </li> </ul> </li> <li><b>3. Essential Accessories</b> <ul style="list-style-type: none"> <li>• Power supply: 12v 20 Amp-(SMPS)</li> <li>• Wired (full copper) connectivity</li> <li>• UPS 2KVA online</li> <li>• LED display monitor (24 inch) of repute brand</li> <li>• External hard disk (1TB): 02 No.</li> <li>• Branded desktop computer (8GB RAM, 1tb Hard disk) for analysis and editing of videos.</li> </ul> </li> </ul>			
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		<b>4. Warranty:</b> At least 3 year. <b>5. Authentication:</b> CE certification <b>6. Service and support:</b> The Vendor should have a good service and application support back up					
35	High Performance Storage Server with Software –	<b>S. No.</b> 1 2 3 4 5 6 7  8 9 10 11 12 13 14 15 16 17 18 19 20  21 22 23 24 25 26  27	<b>Parameters</b> Software Form Factor Processor Make Max. Number of sockets available on chipset Max. Number of sockets populated with processor Number of core per Processor Processor Configuration  Chipset compatible with CPU PCI Slots (Express Gen 3.0) Type of RAM RAM Size (GB) RAM upgradable upto (GB) DIMM Slots (No.) Type of Hard Disk Drive Hard disk drive Capacity (GB) Hard disk drive Speed (RPM) RAID Controller Cache (MB) RAID Type RAID Controller Ports @12 Gbps Video Controller (support VGA or above resolution) Monitor Keyboard Mouse Bays (min. 2 internal or more hot plug) USB Ports (version 2.0/3.0) Certifications Compliance support by Windows, Red Hat or Novell or Oracle Cluster S/W DVD ROM (or better)	<b>Specifications</b> Windows Tower Intel 2 1 8 Intel Xeon Silver 4110 (2.10GHz/8-core/11MB/85W) C622 6 DDR4 32 756 12 RAID 4000 10K 1024 0 8 Yes 21 Inch LED (DELL) Yes (DELL) Yes (DELL) 8 4 Yes 8x or better	01	480000.00	9600.00

		28	Network Card Supported	1G			
		29	Power Management	Screen blanking, hard disk & system idle mode in power on, set up password, power supply surge protected			
		30	Redundant Power Supply	Yes			
		31	Redundant Fan	Yes			
		32	Total No of Ports	4 x 1 Gbps			
		33	Server scalability to be achieved within the box without adding nodes	Yes			
		34	RoHS Compliance	Yes			
		35	BIS Registration number & its Validity	R-41000698			
		36	Max. power consumption of the system (Watt)	750			
		37	Power Supply	230 V +/-10%, 50 Hz			
		38	On Site OEM Warranty (years)	3			
36	High performance computer Cluster with software	<b>S. No.</b>	<b>Parameters</b>	<b>Specifications</b>	01	450000.00	9000.00
		1	Software	Windows			
		2	Form Factor	Tower			
		3	Processor Make	Intel			
		4	Max. Number of sockets available on chipset	2			
		5	Max. Number of sockets populated with processor	2			
		6	Number of core per Processor	8			
		7	Processor Configuration	Intel Xeon Silver 4110 (2.10GHz/8-core/11MB/85W)			
		8	Chipset compatible with CPU	C622			
		9	PCI Slots (Express Gen 3.0)	6			
		10	Type of RAM	DDR4			
		11	RAM Size (GB)	32			
		12	RAM upgradable upto (GB)	756			
		13	DIMM Slots (No.)	12			
		14	Type of Hard Disk Drive	SSD			
		15	Hard disk drive Capacity (GB)	1000			
		16	Video Controller (support VGA or above resolution)	Yes			
		17	Monitor	21 Inch LED (DELL)			
		18	Keyboard	Yes (DELL)			
		19	Mouse	Yes (DELL)			



		20	Bays (min. 2 internal or more hot plug)	8			
		21	USB Ports (version 2.0/3.0)	4			
		22	Certifications Compliance support by Windows, Red Hat or Novell or Oracle Cluster S/W	Yes			
		23	DVD ROM (or better)	8x or better			
		24	Network Card Supported	1G			
		25	Power Management	Screen blanking, hard disk & system idle mode in power on, set up password, power supply surge protected			
		26	Redundant Power Supply	Yes			
		27	Redundant Fan	Yes			
		28	Total No of Ports	4 x 1 Gbps			
		29	Server scalability to be achieved within the box without adding nodes	Yes			
		30	RoHS Compliance	Yes			
		31	BIS Registration number & its Validity	R-41000698			
		32	Max. power consumption of the system (Watt)	750			
		33	Power Supply	230 V +/-10%, 50 Hz			
		34	On Site OEM Warranty (years)	3			

Sd/  
**Member Secy. (Equipments)**  
**Central Purchase Committee**

