ড:শুভেন্দুবন্দ্যোপাধ্যায়
নিয়ামক(ভারপ্রাপ্ত)
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## Tender No:  UBKV/Est. (T& P-02) /43/2018-19 Dated: 13/02/2019

## NOTICE INVITING TENDER (NIT)

Sealed tenders are invited under Two Bid System viz, Part-I Technical Bid and Part II Financial Bid from the intending reputed, bonafied and experienced Manufacturers / Exclusive Dealers / Authorized Dealer for supplying Equipment/ Instruments, furniture and computer with peripheralsas per following specification.

a.    **List of Equipment/ Instrument with specification:**

| Sl No. | Name of Department | Name of Item | Specifications | Preferred Make/Model |
|---|---|---|---|---|
| 1 | Agronomy | Hot Plate (2 feet x 3 Feet) | • **Top Plate Dimension : 2 ′ x 3 ′**<br>• **Top Plate Material    : SS Top**<br>• **Temp Range         : 150-500ºC**<br>• **Max Load           :upto 10 Kg**<br>• **Power Requirement  : 240VAC-50Hz**<br>• **Warranty           : 2 Years(Mandatory)[Otherwise tender will be cancelled]** | Any Good Make with ISO 9001: 2008 certification |
| 2 |  | **Hot Plate SS Body with SS Top (18″x 24″)** | • **Top Plate Dimension : 18″ x 24″x 6″**<br>• **Top Plate Material    : Stainless Steel**<br>• **Temp Range         : 150-500ºC**<br>• **Max Load           :upto 10 Kg**<br>• **Power Requirement  : 240VAC-50Hz**<br>• **Warranty            : 2 Years(Mandatory)[Otherwise tender will be cancelled]** | Any Good Make with ISO 9001: 2008 certification |
| 3 |  | Rotary Shaker | **Continuous Duty Rotary Shaker:**<br><br>• Type  :  Variable orbital rotary motion<br>• The shaker built on a iron-angle chassis resting on vibration absorbing rubber feet.<br>• Cabinet shall be made of M.S. sheet (18 SWG) coated with epoxy paint finish.<br>• Dynamically balanced mechanism comprising of triple eccentric –shaft drive with H.T springs on four corner for counter balancing of uniform vibration free rotation with load.<br>• Orbital shaking mechanism is built through a triple eccentric drive continuous duty<br>• Powerful ball bearing 'DC'-drive 2HP PMDC-Motor, belt driven rotating platform with rotor on nine ball bearing in a circular orbit for very smooth movement.<br>• Stepless and adjustable auto-speed regulator from: 50-200 r.p.m with proximity circuit for counting r.p.m shall be provided.<br>• Heavy guage Stainless sheet (304) Shaking tray fitted with S.S. (304) lotus type clamps For holding conical flasks of 200-1000 ml.<br>• Size of each tray: 60 X 60 cm (made of S.S. 304)<br>• Power requirement: Single phase 220/230 Volts, AC mains.<br>• **Warranty : Minimum of 2 Years (Mandatory)[Otherwise tender will be cancelled]** | Any Good Make with ISO 9001: 2008 certification |

| 4 | | Digestion Chamber (Hooded, Stainless steel make) | 3'x5'x3' with Exhaust fan, Sound proof, Acid Fume neutraliser facility with Glass Anti-chamber | Any Good Make with ISO 9001: 2008 certification |
|---|---|---|---|---|
| 5 | | Digestion Chamber (Hooded, Stainless steel make) | 3'x2.5'x2' with Exhaust fan, Sound proof, Acid Fume neutraliser facility with Glass Anti-chamber | Any Good Make with ISO 9001: 2008 certification |
| 6 | | Flame Photometer | **Microcontroller Based Flame Photometer with Compressor**<br>Flame Photometer with Na, K & Ca filters, set of 5 glass beaker, capillary tube, drain pipe, RS-232cable, Compressor.<br><br>• **Range** : Na: 0.1 - 100 ppm ; Up to 250 meq/L, 1:100 dil<br>  ▪ K: 0.1 - 100 ppm ; Up to 250 meq/L, 1:100 dil<br>  ▪ Ca: 15-100ppm; Up to 250 meq/L, 1:100 dil<br>• **Sensitivity** : Na: 0.5 ppm, K: 0.5 ppm, Ca: 15 ppm<br>• **Resolution** : 0.1 ppm/meq<br>• **Reproducibility** :±2% FS &± 2 digit<br>• **Minimum Sample** :3 ml/Element<br>• **Curve fit accuracy** :± 2% FS<br>• **Averaging** : 2 to 15 Sec<br>• **Display** : 128 x 64 graphical LCD display<br>• **Storage** :upto 700 results<br>• **Flame System** : LPG and dry oil free air<br>• **Detector** : Silicon photodiode<br>• **Calibration** :Up to 5-point calibration with curve fitting software<br>• **Gas Control** : Fully adjustable<br>• **Ignition System** : Auto Ignition<br>• **Atomizer** : Axial flow type<br>• **Interface** :RS-232 & PC Software<br>• **Power** : 230 V, 50Hz<br><br>➢ **Compressor Unit :**<br>• **Features** :Fitted with Air Filter & Regulator<br>• **Air Supply** :Oil free compressor unit with pressure regulator<br>• **Combustion Gas LPG:** Controlled by precision regulator<br>• **Power :** 230 V, 50Hz<br>• **Warranty :**Minimum of 2 Years (Mandatory)[Otherwise tender will be cancelled] | Preferred Make/Model :Systronics 128+126 /Equivalent |
| 7 | | Hot Air Oven | • **Size** :3' X 5' X 3'<br>• **Temperature Range** : 50° C to 250° C<br>• **Accuracy** :± 1°C.<br>• **Temperature control** :Digital Temp. Indicator Cum controller with PT-100 Sensor .<br>• **Power Requirement** :230 volts, 50 Hz, Single phase<br><br>• **Construction** :<br>  ❖ The unit is double walled construction,<br>  ❖ Inner chamber is made (304 Quality) 24 gauge Stainless Steel Sheet with highly polished.<br>  ❖ Outer Chamber is made of mild steel sheet with epoxy paint<br>  ❖ Thick glass wool insulation<br>  ❖ 3 nos Stainless steel perforated Trays<br>  ❖ Fitted with control panel main | Any Good Make with ISO 9001: 2008 certification |

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| | | | indicating neon lamp, load neon lamp, 3 Heat Rotary switch for low/medium/ high Temp.<br>• **Warranty :2 years (Mandatory) [Otherwise tender will be cancelled]** | |
| 8 | | **Infrared Thermometer with Inbuilt Display** | • **Calibration Uncertainty :** ± 0.3 C, when target and detector temperature are within 20 C **(-20 to 65 C)**<br>• **Calibration Uncertainty :**± 0.5 C, when target and detector temperature are different by more than 20 C **(-40 to 80 C)**<br>• **Measurement Repeatability :**± 0.1 C<br>• **Stability (Long-term Drift):** less than 2 % change in slope per year when germanium filter is maintained in a clean condition<br>• **Response Time :** 0.2s<br>• **Field of View :** 22° half angle<br>• **Spectral Range :**8 to 14 µm; atmospheric window<br>• **Operating Environment:** 0 to 50 C, < 90 % non-condensing relative humidity<br>• **Warranty : 2 Years(Mandatory)** | **Apogee MI200 Series / Equivalent** |
| 9 | | **Round Brass Mesh Sieve** | **2mm** | **Any Good Make** |
| 10 | | **Brass Soil Thermometer** | **15 cm** | **Any Good Make** |
| 11 | | **Brass Soil Thermometer** | **20cm** | **Any Good Make** |
| 12 | | **Handheld Green Seeker with Inbuilt Display** | • Display Screen : LCD<br>• Range:0.00-0.99<br>• Battery :3.7VDC nominal, 1130 mAh<br>• Charging Time : 5 hour (full charge)<br>• Material :Xenoy plastic<br>• Rating : IP54<br>• Emission Wavelength : Red: 660 nm, ~25 nm FWHM<br> ▪ NIR: 780 nm, ~25 nm FWHM<br>• Field of View : 10" at 24″, 20" at 48″<br>• Height Range :24" - 48"<br>• Remote trigger switch port :2.5 mm stereo phone jack<br>• Supplied complete with : Sensor battery ,Wrist strap,AC charger , USB-to-microUSB cable, Carrying pouch ,Quick Reference Card, Fertilizer Estimation Chart<br>• **Warranty : 2 Years (Mandatory)** | **Trimble Handheld Crop Sensor /Equivalent** |
| 13 | | **Square Cuvettes** | **Suitable for Visible Spectrophotometer Cecil 1011** | |
| 14 | | **Hulling Machine (Rubber)** | **RICE SHELLER**<br>• Capacity : 40-50kg/hr<br>• Shelling Mechanism : Comprises of two rubber roller<br>• Rubber roller : 100mm x 35mm (approx)<br>• Husk Collector : To collect husk from each sample for further analysis<br>• Operating Voltage : 220V, 50Hz, A.C.<br>• Motor : 0.25 HP Single Phases (180W)<br>• Size : 700 (L) x 330 (W) x 817 (H) mm (approx.)<br>• Weight : 41 Kg (approx.)<br>• **Warranty : 2 Years** | **Indosaw/Ag rosaw / Equivalent** |
| 15 | | **Mortar and Pestle** | | **Any Good Make** |
| 16 | | **Rice Testing Mill (Rice Polisher) With timer** | • Capacity : 100 g/batch<br>• Operating Voltage : 220V, 50Hz AC<br>• Bran Collector : to collect bran for each sample for further analysis<br>• Size : 590 x 340 x 370 mm (approx.)<br>• Weight : 48 Kg | **Indosaw /Agrosaw / Equivalent** |

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| | | | • Motor : ½ HP<br>• Mesh Size of abrasive roller : 30 no.<br>• Roll speed range : 650 – 1750rpm<br>• **Warranty : 2 Years** | |
| 17 | | **Groundnut Decorticator** | | **Any Good Make** |
| 18 | | **Weighing Balance 1000 - 5000 g (plastic made)** | • Analog Dial<br>• Capacity up to 5 kg and readability standard<br>• Pan size: standard | **Any Good Make** |
| 19 | | **Bench Top pH Meter** | **Type** : Bench Top<br><br>**pH Range** : <br>  • Range -1.99 to 16.00<br>  • Resolution 0.01 pH<br>  • Accuracy ±0.002<br>  • Cal. Points Up to 5 points<br><br>**ORP Range** : <br>  • Range ±1999 mV<br>  • Rel. mV Range ±1999 mV<br>  • Resolution 0.1 mV (±199.9 mV) / 1 mV (beyond)<br>  • Accuracy ±0.2 mV (±199.9 mV) / ±2 mV (beyond)<br><br>**Temperature Range** : <br>  • Range 0.0 to 100.0 ºC / 32.0 to 212.0 ºF<br>  • Resolution 0.1 ºC / 0.1 ºF<br>  • Accuracy ±0.5 ºC / ±0.9 ºF<br>  • Compensation Automatic or Manual (0 to 100 ºC / 32 to 212.0 ºF<br><br>**Memory** : Minimum 100 Data sets<br><br>**Power Requirements** : 9-12 V DC adapter, 3.0-3.5 A (100/240 VAC, SMPS)<br><br>**Supplied complete with** : pH Meter with pH Electrode, ATC Probe , IntegralElectrode, User Manual, Power adapter and set of 3 buffers<br><br>**Warranty** : 2 Years | **Eutech Cyber scan pH 700(ECPH 70042S) /Metler Toledo FP-20** |
| 20 | | **Bench Top Conductivity Meter** | **EC range** : 0.00 µS/cm to 200 mS/cm<br><br>**TDS range** : 0.00 to 50 mg/L<br>**Temperature** : 0 to 100◦C<br>**Resolution** : <br>  • EC- 0.01 / 0.1 / 1 µS ; 0.01 / 0.1 mS ,<br>  • TDS- 0.01 / 0.1 / 1 ppm ; 0.01 / 0.1 ppt<br>**Accuracy @ 25°C** : <br>  • ±1% of EC reading ± (0.05 µS/cm)<br>  • ±1% of TDS reading ± (0.03 mg/L)<br><br>**Warranty** : 2 Years | **EutechCyber scan Cond 700 ( ECCON70043S) / Metler Toledo FP30** |
| 21 | | **Kjeldahl Digestion tube(250ml)** | Suitable for Pelican KelplusDigestors | **Kelplus/Equivalent** |
| 22 | | **Root Analyzer** | Root Scanner System should be based on research grade and worldwide accepted to analyze washed roots.<br><br>System should have following specifications: | **Regent WinRhizo STD4800Basic** |

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| | | | ➢ Roots measured automatically after extraction from soil and washed<br>➢ Before Analysis, the roots are digitised with a scanner<br>➢ **Scanner should have special lighting system to avoid shadows**<br>➢ System should be permanently calibrated to increase the measurement precision<br>➢ System should be able to analyse overlapped root and filtering out the debris based on area, shape.<br>➢ Analysis roots using desktop scanner, suitable for image acquisition of macroscopic objects like roots<br>➢ Scanner : 22 x 30 cm for Standard Area<br>➢ Accessories : For Root positioning & scanning.<br><br>➢ **Measured Parameters**<br>Root Morphology i.e. Total Length, Average diameter, Total area, volume, number of tips, forks & crossings<br><br>➢ Bidder should enclose >5 copy of successful installations with user contact details<br>➢ Bidder should enclose >5 copy of International Publication of quoted model<br>➢ **Warranty : 2 Years** | |
| 23 | | **Trays for growing paddy seedling** | **Plastic Make : Size 1.5′ x 1.5′** | |
| 24 | | **Tube Auger** | **Iron Make** | **Any Good Make** |
| 25 | | **Tensiometer 24″** | **Standard Tensiometer with ceramic porous cup** | **Any Good Make** |
| 26 | **Animal Science** | **Automatic Soxhlet Equipment** | Automatic Soxhlet Equipment (for analysis of feed, fodder, biomaterials etc., complete set of 2 (two) place programmable PC, compatible solvent extraction unit with data logger and display including essential accessories with installation, demonstration and commissioning etc and additional 4 (four) glass condensers and eight (8) oil flasks | **Pelican SOCS PLUS /Equivalent** |
| 27 | | **Automatic FiberAnalyzer Equipment** | Automatic FiberAnalyzer Equipment (for analysis of feed, fodder, biomaterials etc., complete set of automatic PC compatible 2 (two) place Fiber Estimation System with data logger and display including essential accessories with installation, demonstration and commissioning etc and additional 4 (four) glass condensers and eight (8) additional glass wares. | **Pelican FIBRA PLUS /Equivalent** |
| 28 | | **Automatic Digestion Equipment along with Acid Neutralization Unit** | Automatic Digestion Equipment(for analysis of feed, fodder, biomaterials etc. samples), 4 (four) places for 250 ml capacity, digestion system o with essential accessories including installation, demonstration and commissioning etc<br>**Digestor**<br>• Twenty Place 250 ml capacity PC Compatible Block Digestion System with digital display.<br>• Aluminium Block with Casted Aluminium Alloy Heaters ,<br>• RS 232 interface for PC/Laptop Connectivity,<br>• Integrated autosequencing time/temperature domain of 2 programs and 8 sequencing steps,<br>• Auto over temperature protection, Auto Sensor break protection, Auto Error Indication,<br>• Inbuilt software program for micronutrient, macro nutrient, trace element, diacid and triacid.<br>• All essential accessories like Digestion Tubes 250 ml - 20 Nos, SS Insert Rack, Exhaust Manifold, Suction assembly for safe removal of acid fumes,<br>• Additional one set tubes & Insert Rack, ISO 9001: 2008 Certified.<br>• Electrical Requirement: 230 V, 50 Hz AC Mains.<br>• Additional 20 (twenty) numbers of 250 ml digestion tubes<br>**Acid Neutralizer :**<br>• Four Stage Fully Automatic Microprocessor based acid neutralization scrubber with digital display integrated online with motherboard of digestion system with inbuilt pump for water recirculation<br>• Should automatically start on operation of digestion system, | **Pelican KEL PLUS /Equivalent** |

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| | | | Should automatically stops on completion of digestion cycle with a delay time of 5 minutes to remove residual fumes. <br>• Auto waste disposal & auto drain of tank water after pre programmable consecutive operations, Incorporates indication of drain cycles, low level indication and high level indication, <br>• Auto fill error in case of absence of inlet water in tank and the system automatically switches off with alarm. <br>• Inbuilt auto error diagnostic and safety features. Electrical Requirement: 230v/50Hz AC Mains. <br>• **Warranty : 2 Years (Mandatory)** | |
| 29 | | **Automatic Distillation System** | Automatic Distillation System (for analysis of feed, fodder, biomaterials etc. samples), complete set with essential accessories including installation, demonstration and commissioning etc <br>• Autosequencing Microprocessor based PC Compatible Distillation with in-built software <br>• Fully Automatic sequencing with auto Intelligent run of programmable steps, <br>• Automatic Dilution, Automatic Alkali Addition, Automatic Steam Processing, Process over indication with alarm with delay time feature, Automatic titration connectivity feature for future upgradation, <br>• Two line alpha numeric digital LCD display, <br>• RS 232 interface for connectivity to PC, <br>• Tube insert error indication, Auto door open warning indication, Auto deactivation of System on error diagnosis, Adjustable steam power, Automatic Reagent level sensor with alarm, <br>• Auto online water saving mechanism, Stainless steel non corrosive steam Generator, <br>• Fully Automatic water level monitoring with centrifugal refilling pump &Perilstatic pump for reagents addition, <br>• ISO 9001: 2008 Certified. Electrical Requirement – 220 - 230V/50Hz. <br>• Warranty : 2 Years (Mandatory) | **Pelican KEL PLUS /Equivalent** |
| 30 | | **Urine Analyzer** | • Bench-top portable Digital Urine Analyzer. <br>• **System:** Semi-automated Urine strip analyzer <br>• **Type:** Reflectance photometer <br>• **Measuring System:** Wavelengths – 470, 540, 650 nm <br>• **Memory:** 400 results <br>• **Throughput:** 60 tests/hr in Normal Mode & 240 testes/hr in Smart mode <br>• **User interface:**Color TFT LCD display <br>• **Printer:** Built-in Thermal Printer <br>• **Certificates:** CE <br>• **Physical Dimensions:** 230 X 127 x 110 mm <br>• **Weight:** 0.8 Kg <br>• **Test Strips:**DekaPHAN Laura &MicroalbuPHAN Laura <br>• **Parameters:** Specific Gravity, Leucocytes, Nitrite, pH, Protein, Glucose, Ketone, Urobilinogen, Bilirubin, Blood &Microalbumin, Creatinine <br>• **Optical QC:** Grey QC strip <br>• **System Interface:** Communication via RS232 & USB port <br>• **Host Protocol:**Uni-directional <br>• **Sample Identification:** Sample ID via keyboard entry, barcode reader <br>• **Power source:** AC 90-230V/50-60 Hz <br>• **Power consumption:** 20 W max./1 W standby <br>• Onsite warranty for 2 year on damaged parts. <br>• Additional reagent strip 100pc x 2cont. | **TransasiaLa ura SMART / Equivalent** |
| 31 | | **Salinity meter** | Salt6+ Salinity Meter with Electrode ECCONSEN91B & Salinity Carrying Kit Set <br><br>Warranty : 2 Years | **Eutech Product Code : ECSALT603 PLUSK , Cat No. 8003007** |

| 32 | Fishery Unit | Portable Colorimeterete for Aquaculture water Analysis | | HACH /Octopus Inc/Merck /equivalent |
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| Operate Mode | Absorbance. Concentration |
|---|---|
| Precision | =3% |
| Lamp | Light emitting diode (LED) |
| Calibration Mode | Support |
| Power Supply | 4AA alkaline batteries |
| Operating Conditions | 0 to 50 °C; 0 to 90% relative humidity (n |
| Storage Conditions | - 25 to 50 °C (instrument) |
| Dimensions (W*L*H*) | 265mm x 121mm x 75mm |
| Weight | 630g |
| Certificate | CE |

| Parameter | Range | Resolution | Pr |
|---|---|---|---|
| pH value | 6.5-8.5ppm | 0.1ppm | =3%±0 |
| Free chlorine | 0.01-5.00ppm | 0.01ppm | =3%±0 |
| Dissolved oxygen | 0.2-15.0ppm | 0.1ppm | =3%±0 |
| Ammonia nitrogen | 0.02-6.00ppm | 0.01ppm | =3%±0 |
| Sulfide | 0.02-1.00ppm | 0.01ppm | =3%±0 |
| Total alkalinity | 10~200ppm | 10mg/L | =3%±1 |
| Calcium hardness (H) | 5~400ppm | 1mg/L | =3%±1 |
| Magnesium hardness(H) | 10~400ppm | 1mg/L | =3%±1 |
| Total hardess (H) | 5~400ppm | 1mg/L | =3%±1 |
| Phosphate | 0.03~4.00ppm | 0.01mg/L | =3%±0 |
| Nitrate nitrogen | 0.5-15.0mg/L | 0.1mg/L | =3%±0 |
| Nitrite | 0.003-0.500ppm | 0.001ppm | =3%±0 |

**Warranty : 2 Years(Mandatory)**
**Supplied complete with 100 nos Test Kits of each above parameter, carrying care, 4 nos AA Alkaline Batteries**

| 34 | | Thermometer for tank | **AUTIDEFY LCD Digital Aquarium Thermometer Fish Tank Water Terrarium Temperature** | AUTIDEFY /Equivalent |
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- Submerge probe into fish tank to measure water temperature (Submerge probe only, do not submerge thermometer in water)
- Digital °C /° F thermometer; Temperature range -50°c ~ + 70°c,Operating temperature -10°c ~ +50°c
- Easy to apply suction cup and easy to read LCD screen; Temperature readings to within 0.1 degree
- Powered by one LR44 button cell (included)
- Package Contents: 3 x Battery; 3 x Digital Thermometer;3 x Probe

| 35 | | Dissolved Oxygen meter | | Lutron DO5510 /Equivalent |
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| SPECIFICATIONS | | | | |
|---|---|---|---|---|
| Circuit | Custom one-chip of microprocessor LSI circuit. | Operating Temperature | 0 to 50 °C (32 to 122 °F | |
| Display | Dual function meter's display, 13 mm(0.5"). Super large LCD display with contrast adjustment for best viewing angle. | Operating Humidity | Max. 80% RH. | |
| | | Sample Time | Approx. 0.4 sec. | |
| Measurement & Range | Dissolved Oxygen | 0 to 20.0 mg/L(liter). | Power Supply | 006P DC 9V battery(Hea |
| | Oxygen in Air | 0 to 100.0 %. | Power Current | Approx. DC 6.6 mA. |
| | Temperature | 0 to 50 °C. | Weight | 335 g/0.74 LB (batterie |
| Resolution | Dissolved Oxygen | 0.1 mg/L. | Size | Main instrument: |
| | Oxygen in Air | 0.1 % O2 . | | 180 x 72 x 32 mm(7.1 x |
| | Temperature | 0.1 . | | Oxygen probe : |
| Accuracy (23 5 ) | Dissolved Oxygen | 0.4 mg/L. | | 190 mm x 28 mm Dia. ( |
| | Oxygen in Air | 0.7% O2. | Accessories included | Oxygen probe( OXPB-11 |
| | Temperature | 0.8 °C /1.5 °F. | | Carrying case................ |
| Sensor Structure | The polarographic type oxygen probe with an incorporated temperature sensor. | | Operation manual.......... |
| Probe Compensation & Adj. | Temperature | 0 to 50 °C, Automatic | | Spare Probe head with D OXHD-04...................... |
| | Salt | 0 to 39 % Salt | | Probe-filling Electrolyte OXEL-03...................... |
| | Height(M. T.) | 0 to 3900 meter | Optional Accessories | * Oxygen probe............ |
| Memory Recall | Records Maximum, Minimum and Average readings with RECALL. | | * Spare Probe head with ............................. |
| Power off | Auto power off saves battery life, or manual off by push button. | | * Probe-filling Electrolyte * RS232 cable.............. |
| Over input indication | Indication of "- - - -". | | * USB cable................. * Data Acquisition softw |
| Data Output | RS 232 PC serial interface. | | ............................... |

| 36 | | Rotary Microtome | <ul><li>Range of Section thickness 1 µm to 50 µm in steps of 1 µm</li><li>Front Located Feed Indicator & micron setting Knob Robust & advanced ratchet gear cam drive system for accurate feed</li><li>All locks & adjustments are readily accessible for fast & safe operation</li><li>Independent feed mechanism with safety locking device to lock the hand wheel</li><li>Microtome knife of special tool steel -120mm with handle in box.</li></ul> | **LABOVISION Magnacut/Equivalent** |
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| 36 | | **Single Beam Visible Sectrophotometer** | <ul><li>Spectrophotometers should be supplied with Bi-directional RS232 interface, mains cable, instruction manual, short form operating instructions and 10mm cell holder.</li><li>Lithrowmonochromator with 1200 lines/ mm holographic grating, coated optics.</li><li>Wavelength range : 325-1000nm ,</li><li>Wavelength Accuracy :< 1nm</li><li>Large Seven Segment bright LED for readouts.</li><li>Photometric Range : –0.3 –3A, 0 –200%T, 0 – 9999C</li><li>Photometric Accuracy : 0.005A or 1% whichever is greater</li><li>Photometric Noise : less than ±0.0002A at 500nm</li><li>Wavelength Precision: 0.1nm,  Bandwidth : 8nm</li><li>Stray light :better than  0.05%,</li><li>Stability : ± 0.001A/hr</li><li>Automatic Peak Seek, Automatic Self test and Calibration</li><li>4 position cell manual changer with 4 x 10mm Cell Holder</li><li>10 mm Path length Quartz Cuvette</li><li>Warranty : 2 Years</li></ul> | **Perkin Elmer- Lambda 325 / Cecil-CE 1011/ Equivalent** |
| 38 | | **Submersible pump** | 5 HP | **CG/Equivalent** |
| 39 | | **Aquaguard along with Iron Guard** | For drinking and aquarium water | **Aquaguard/ Equivalent** |
| 40 | | **Stand fan** | | **Havells /CG/Equivalent** |
| 41 | | **ELISA Reader** | <ul><li>Wavelength range                          : 400–750 nm</li><li>Photometric range                        : 0.0–3.5 OD</li><li>Linearity                          : ≤1.0%  from  0.0–2.0  OD; ≤2.0% from 0.0–3.0 OD</li><li>Accuracy                        : ±1.0% or 0.010 from 0.000–3.000 OD at 490 nm</li><li>Precision                          : 1.0% or 0.005 OD from 0.0–2.0 OD;</li></ul> 1.5% from 2.0–3.0 OD <ul><li>Resolution                          : 0.001 OD</li><li>Filter wheel capacity        :  8 Wheel with 6 preinstalled filters with 415, 450, 490, 595, 655, and 750 nm</li><li>Plate shaking                  : 3 speeds: low, mid, high; duration: 0–999 sec</li><li>Read time                  : 6 sec at single wavelength,10 sec at dual wavelengths</li><li>Data output                        : Onboard graphical thermal printer and USB2 interface with PC or Mac data stations</li><li>Data storage                          : Calendar/clock function; 64 assay Protocols</li><li>Flexible configurations with ability to read flat-, U-, or V-bottom microplates or 8- or 12-well strip plates</li><li>Automatic calibration before each reading</li><li>Variable-speed plate-shaking capability</li><li>Easy-access 8-position filter wheel with 6 standard filters</li><li>USB2 port for external computer control</li><li>Data and protocol presentation on LCD display</li><li>Onboard data storage of protocols, standard curves, and graphs</li><li>Self-diagnostic capabilities to detect lamp burnout at startup</li></ul> | **Bio-Rad/ Thermo/ Equivalent** |

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| | | | • Motorized door for plate loading<br><br>**Software specification:**<br>• Microplate Manager for High-Throughput Analysis and Reporting<br>• Running of 12 separate assays on the same plate<br>• Optional automatic printing upon completion of measurement<br>• Multiple-plate processing with automated data export<br>• Custom reporting function that provides one-button screening for predefined assays, such as for TSE Comprehensive Curve-Fit Analyses<br>• • Linear, quadratic, cubic, Log-Log, Zero-Intercept Linear, Semi-Log, Logit Log, Point to Point or logistic (4-parameter, 5-parameter) fit types<br>• Linear or logarithmic automatic axis scaling<br>• External standard curves for multiple plates<br>• Curve-fit graph overlay for comparison<br>• Performance verification parameters include:Accuracy, Precision, Linearity<br>• Spectral blocking<br>• Complex Kinetic Analyses<br>• Choice of number of calculation points for Vmax<br>• Simple velocity calculation<br>• Negative or positive slope calculation<br>• Absorbance limit selection<br>• Kinetic correlation coefficient display and calculation for fit (r value)<br>• Real-time data acquisition display and ability to zoom in on a well<br>• Automatic scaling and real-time monitoring<br>• **Warranty : 2 Years** | |
| 42 | | Incubator Shaker | • Volume/Size : 285Lit/ 20''x20''x24''<br>• Shaking Tray : 18'' x 18 ''<br>• No. &Vol of Flask : 15 nos 250 ml<br>• Shelves : 2 nos<br>• Temp Range : Ambient to 90C<br>• Controller : PID<br>• Shaking Speed : 20-250 RPM<br>• Material : Inner Chamber with SS304<br>    • Outer body with MS –powder coated<br>    • Door-Inner Glass Door & Outer Glass View Door<br>• Features : Auto Variac Control , RPM Counter, Digital Timer, Fluorescent Lights<br>• Power : 220/230V , Single Phase AC , 4KW<br>• **Warranty : 2 Years (Mandetory, Otherwise bid will be cancelled )**<br>** Supply complete with suitable voltage stabilizer | **Any Good Make with with ISO 9001: 2008 certification** |
| 43 | | **Ultrasonicator** | • Tank Volume (litres) : 12 L<br>• Ultrasonic Wattage : 200 W<br>• Ultrasonic Frequency : 40 ± 3 KHz<br>• Tank Dimension (Taper) : 300x240x200 LxWxH (mm) (Approx)<br>• Outer Dimension : 325x265x340 LxWxH (mm) (Approx)<br>• Heating : Ambient to 80°C Digitally Controlled (Dual Display )<br>• Digital Timer : 5 to 60 Minutes<br>• Tank Drain : Ball Valve<br>• Inner Tank Material : Stainless Steel<br>• Outer Housing Material : Stainless Steel<br>• Power Supply : 220 Volt, Ac 50 Hz, Single Phase<br>• **Warranty : 2 years(Mandatory, Otherwise bid will be cancelled )** | **Any Good Make with with ISO 9001: 2008 certification** |
| 44 | | **Benchtop** | • Double wall construction | **Any Good** |

| | | Chiller | • Inner chamber : Stainless Steel<br>• Outer body : CRC sheet duly painted.<br>• Fitted with Hermitically sealed compressor<br>• Circulation system is applied by a circulation pump is capable to recirculation the bath liquid to other apparatus.<br>• Control Panel is provided with the unit consisting of indicating lamp, plug and cable suitable 220/230 volt single phase A.C. main.<br>• Inner Chamber : Stainless Steel<br>• Temperature Control : Digital Temp. Indicator cum Controller.<br>• Temp. Range : 0 to 10 deg.C<br>• Tank capacity- : 10 lit.<br>• **Warranty: 2 years(Mandatory, Otherwise bid will be cancelled )** | **Make with with ISO 9001: 2008 certification** |
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| 45 | Soil Science and Agril. Chemistry | Flame Photometer | **Microcontroller Based Flame Photometer with Compressor**<br>Flame Photometer with Na, K & Ca filters, set of 5 glass beaker, capillary tube, drain pipe, RS-232cable, Compressor.<br><br>• **Range** : Na: 0.1 - 100 ppm ; Up to 250 meq/L, 1:100 dil<br>    ▪ K: 0.1 - 100 ppm ; Up to 250 meq/L, 1:100 dil<br>    ▪ Ca: 15-100ppm; Up to 250 meq/L, 1:100 dil<br>• **Sensitivity** : Na: 0.5 ppm, K: 0.5 ppm, Ca: 15 ppm<br>• **Resolution** : 0.1 ppm/meq<br>• **Reproducibility** :$\pm$2% FS &$\pm$ 2 digit<br>• **Minimum Sample** :3 ml/Element<br>• **Curve fit accuracy** :$\pm$ 2% FS<br>• **Averaging** : 2 to 15 Sec<br>• **Display** : 128 x 64 graphical LCD display<br>• **Storage** :upto 700 results<br>• **Flame System** : LPG and dry oil free air<br>• **Detector** : Silicon photodiode<br>• **Calibration** :Up to 5-point calibration with curve fitting software<br>• **Gas Control** : Fully adjustable<br>• **Ignition System** : Auto Ignition<br>• **Atomizer** : Axial flow type<br>• **Interface** :RS-232 & PC Software<br>• **Power** : 230 V, 50Hz<br><br>➢ **Compressor Unit :**<br>• **Features** :Fitted with Air Filter & Regulator<br>• **Air Supply** :Oil free compressor unit with pressure regulator<br>• **Combustion Gas LPG:** Controlled by precision regulator<br>• **Power :** 230 V, 50Hz<br>• **Warranty :Minimum of 2 Years (Mandatory)[Otherwise tender will be cancelled]** | **Preferred Make/Model :Systronics 128+126 /Equivalent** |
| 46 | | Shaker incubator | • Volume/Size : 285Lit/ 20''x20''x24''<br>• Shaking Tray : 18'' x 18 ''<br>• No. &Vol of Flask : 15 nos 250 ml<br>• Shelves : 2 nos<br>• Temp Range : Ambient to 90C<br>• Controller : PID<br>• Shaking Speed : 20-250 RPM<br>• Material : Inner Chamber with SS304<br>Outer body with MS –powder coated<br>Door-Inner Glass Door & Outer Glass View Door<br>• Features : Auto Variac Control , RPM Counter, Digital Timer, Fluorescent Lights<br>• Power : 220/230V , Single Phase AC , 4KW<br>• **Warranty :Minimum of 2 Years (Mandatory)[Otherwise tender will be cancelled]** | **Any Good Make with with ISO 9001: 2008 certification** |

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| | | | • ** Supply complete with suitable voltage stabilizer | |
| 47 | | Horizontal and rotary shakers | • Heavy duty mechanical horizontal & Rotary shaker<br>• Angle iron construction and Mild Steel Tray with size of 36" x 18" x 4"<br>• Epoxy paint<br>• Fly nut, steel rod with rubber tube lining to accommodate different sizes of flask<br>• Auto-Variac controlled Shaking Motion<br>• Speed Range : 50-150 r.p.m<br>• Power Requirement :220 Volts Single Phase A.C<br>• **Warranty : Minimum of 2 Years (Mandatory)[Otherwise tender will be cancelled]** | **Any Good Make with with ISO 9001: 2008 certification** |
| 48 | | **Soil Tensiometer** | Measuring Unit : kPa (Kilo Pascal)<br>Range : 0-100 kPa<br>Accuracy : ± 1%<br>Display : 2 Line 28 Character LCD which displays Date, Time, Tube Number and Moisture reading in kPa<br><br>Memory : 1 GB<br>Response Time : Less than 10 seconds<br><br>Stabilization Time : 3 seconds approximately from power-up<br><br>Battery : 9 Volt Alkaline<br><br>Software : Windows Graphical User Interface GUI) to download.CSV data file for importing to Excel.<br><br>**Complete with:**<br><br>➢ SSTOPPER Replacement Stoppers 50/pk – 1 Pkt.<br><br>➢ SSTN Replacement Gauge Needle 100/pk - 1 Pkt.<br><br>➢ SSTAUGER Auger for Tube installation – 1 No.<br><br><br>To be supplied with tensiometer tubes, size : 30, 45, and 60 cm 5 no each | **TK Systems SST102G Meter with Logger** |
| 49 | | **Soil Compaction Meter/ Penetrometer** | • Takes penetration/compaction readings to a depth upto 45 cm<br>• Should have depth sensor with 2.5 cm increments<br>• Penetration resistance measured by internal load cell<br>• Option to connect GPS device<br>• Equipped with internal data logger and RS-232 port<br><br>**Specifications:**<br>Measurement Units : Cone Index (PSI or kPa)<br><br>Resolution : 2.5 cm, 5 PSI<br>Accuracy : ± 1.25 cm Depth, ±15 PSI Pressure<br>Range : 0 to 45 cm, 0 to 1,000 PSI<br>Battery : Field Replaceable 4 AAA alkaline b<br>Data Logger/Memory : More than 500 datas | **Spectrum SC900/Equiv alent** |
| 50 | **Genetics and Plant Breeding** | **Plant Growth Chamber** | ▪ Pre-fabricated double-walled chamber with 75mm thick insulation with puff between interior.<br>▪ Inner chamber is made up of S.S. And outer MS duly spray painted.<br>▪ Double walled door and full view inner Plexiglas door.<br>▪ Forced air circulation for maintaining temperature uniformly.<br>▪ provided Photosynthesis Active Radiation Lamp (PAR) Controlled By Photoperiodic Timer<br>▪ **Temperature range** : 5°C to 45°C±1°C<br>▪ **Humidity range** : up to 90% RH ±3% RH<br><br>▪ Microprocessor controller with LED display and Sensor failure | **Any good make (Indigenous)** |

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| | | | alarm | |
| | | | - Power cords and ground plugs to operate on 220 V/440 V single or three phases. Power sockets on the panel (115/1/60-9 Amps for standard). | |
| | | | - **Capacity**: 280 L (10 cft) | |
| | | | - **Warranty**: Mandatory 2 years | |
| 51 | | BOD Incubator Shaker Combined High & Low Temperature | - Incubator Shaker should have Powerful triple eccentric drive mechanism with PID microprocessor controller, large easy-to-read LCD display, non-volatile memory function, Alarms programmed to warn of set point deviations | Imported(JS Research Korea/Jeotech Korea /Equivalent) or Branded Indigenous (Rivotech/Equivalent) with ISO 9001: 2008 certification |
| | | | - Temperature: +5°C to 60°C ±1°C | |
| | | | - Timer: 1 minute to 250 hours | |
| | | | - Shaking speed: 30-600 rpm ±1 rpm | |
| | | | - System should have Mirror-finished stainless steel interior; | |
| | | | - System should be provided with 50ml x 4, 100ml x 4, 250ml x 3, 500 ml x3; Maximum capacity should be 1000ml x 5; | |
| | | | - Platform Size should be 340 x 370mm | |
| | | | - System power consumption should be 540W | |
| | | | - System should operate at 220-230V 50/60Hz | |
| | | | - System should be CE, ISO certified. | |
| | | | - **Warranty**: Mandatory 2 years | |
| | | | <u>Accessories for above:</u><br>**Automatic Relay Type Voltage Stabilizer, Digital Display With Low & High Voltage Auto Cut Out Device And Copper Coiled Transformer: (Instead Aluminium Coated Transformer):**<br>Capacity :5 KVA<br>Input Voltage : 160 To 270 Volts + 10%<br>Output Voltage :220/230 V, Ac | |
| 52 | | Laminar Air Flow(All Stainless Steel body) | - **Laminar Air Flow (All Stainless Steel body)** | KlenzaidsKlenzFlow™ or Microflow |
| | | | - **Type** : Horizontal | |
| | | | - **Working Space** : 3'x2'x2' | |
| | | | - **Motor** : ¼ HP, 1440 R.P.M , 230V (blower assemblies in generic execution) | |
| | | | - **Material** : Exterior & Interior: 304 grade Stainless Steel Sheet<br>Work table - 304 Quality Stainless Steel Sheet<br>Side cover - 6mm thick glass<br>Front Shutter: Acrylic Sheet | |
| | | | - **Lights** : Fluorescent & UV Tubes | |
| | | | - **HEPA Filter Area :** 36''x 24'' | |
| | | | - **Bio-clean Workspace:** 35" x 24" x 23" | |
| | | | - **Air cleanliness:** ISO Class 5 (ISO 14644-1:1999 E) | |
| | | | - **Air Velocities :**0.45 ±0.05 mps | |
| | | | - **Supplied With:** HEPA FILTER( Separation less Mini pleat Anti-microbial HEPA Filter of EU 13 grade with an efficiency of 99.999% on mono disperse, down to 0.3 Microns), PRE-FILTER ( Up to 5 Microns), UV Tube, Tube Light, Blower motor , Gas Cock , Stainless Steel Top , Glass both side and Transparent Acrylic Front Shutter | |
| | | | - **Warranty:** Mandatory 2 years | |
| 53 | | Sequential AC Timer | - **Technical Specification:** Timer's powered output operates two air conditioners up to 2 ton each (will arrange one more phase for 2 ton A/C), alternately. Minimum ON/OFF cycle 30 min. | Any Good Make |
| | | | - **Input:** 110/220 VAC, Phase single. | |
| | | | - **Ambient**: 5° - 45°C, RH up to 85% normally. Size 10 × 30 × 15 cm. Wt. 1Kg | |
| | | | - **Warranty**: Mandatory 1 year | |
| 54 | | Light Timer Controller | - 15 minutes adjustable time-setting slot. | Any Good Make |
| | | | - Total circuit mounted in a box made of CRCA sheet with powder coating | |

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| | | | ▪ The timer is provided with switches, indicating lamps, timer unit, input and output terminal points.<br>▪ Power load: 3KW<br>▪ **Warranty**: Mandatory 1 year | |
| 55 | | **Autoclave (Imported 80 L) (1 no.)** | ▪ Microprocessor manual set digital PID controller and **Capacity**: 80L<br>▪ **Exterior**: Heavy duty Epoxy resien powder coated steel; **Interior**: SS 304<br>▪ Heater: 3-5 kW<br>▪ Temperature: 110$^\circ$C-135$^\circ$C<br>▪ Sterilization timer: 0-99 min<br>▪ Working pressure: 2.0 kg/cm$^2$ at 132$^\circ$C<br>▪ Safety: Over temperature, over pressure, over current protector: safety release valve<br>▪ Basket: 2EA of SS wire baskets<br>▪ Power input: 220V; 50Hz<br>▪ **Warranty**: Mandatory 2 years | LabTech |
| 56 | | **Hot Air Oven** | ▪ Operating temperature range: 50 to 200$^\circ$C<br>▪ Double walled chamber with Inner wall made of stainless steel SS grade and powder coated outer surface<br>▪ Inner chamber size of 45″×45″×45″ with 3 stainless steel trays with holes.<br>▪ Three heating elements on three sides of the equipment for uniform temperature on all shelves.<br>▪ Variable microprocessor based digital temperature controller with digital display and thermometer should be provided separate<br>▪ Operational inputs: 220-230V; 50/60Hz<br>**Warranty:** Mandatory 2 years | **Any Good Make with ISO 9001: 2008 certification** |
| 57 | | **Bench Top pH Meter** | ▪ Highly precision pH meter for continuous reading of pH (0-14 ±0.01)<br>▪ Solution Temperature: 0 to 100$^0$ C<br>▪ Ambient Temperature: -40 to 70$^0$ C<br>▪ Digital LED display<br>▪ Detachable electrode with replacement facility<br>▪ **Warranty:** Mandatory 1 years including electrode | **Eutech or Hanna** |
| 58 | | **Analytical Balance : 0.1mg-220gms** | ▪ Motorized internal calibration<br>▪ LCD segment backlight display<br>▪ Capacity up to 220g and readability up to 0.01 mg<br>▪ Operating temperature : ±5°C - 40°C<br>▪ Repeatability : ±0.01 mg<br>▪ Linearity: ±0.01m g<br>▪ Setting Time: about 2s<br>▪ Sensitivity Accuracy: 2.0x10$^{-6}$<br>▪ Pan size: 100 mm<br>▪ **Warranty:** Mandatory 2 years | **Mettler or Satorius** |
| 59 | | **Non-refrigerated Table Top Centrifuge** | ▪ High speed up to 15,000 rpm/23,000 rcf<br>▪ Fully Programmable, Single-knob control with LCD-display.<br>▪ Efficient cooling system, pre-selection from 0$^0$C-40$^0$C<br>▪ Maintenance-free brushless drive motor<br>▪ Magnetic rotor identification prevents over speeding rotors<br>▪ Motorized (Soft close) lid lock system.<br>▪ Angle rotor: 24 x 1.5/2.0 ml and 6 x 5.0 ml<br>▪ **Warranty:** Mandatory 2 years | **Remi /Equivalent** |

| 60 | | Water Bath | <ul><li>Microprocessor Controller</li><li>warning & Safety Functions</li><li>External Circulation Large LED Display</li><li>Temperature: 0 - 100 °C ± 0.2°C</li><li>Temperature control: PID</li><li>Bath capacity: 5-8 litre</li><li>Heater capacity: 2000W</li><li>**Warranty:** Mandatory 2 years</li></ul> | **Any Good Make with ISO 9001: 2008 certification** |
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| 61 | | PCR Machine | <ul><li>Thermo block, 96 × 0.2 ml tubes, 60 × 0.5 ml PCR Tube, or 96-well PCR plate with three independent temperature zone</li><li>Heating rate: 2-4 °C/s; Cooling rate: 2-3 °C/s</li><li>Lid Temperature range: 37 - 110 °C</li><li>Block Temperature Accuracy: ± 0.2°C</li><li>System with RS-232/ Ethernet interface, control panel, data storage card, lid with an effective evaporation prevention control, self-functionality test, etc.</li><li>Power: 220-230 V, 50-60 Hz.</li><li>Compatible accessories and consumables complete with the system</li><li>On-line UPS (1KVA) for at least 2 hrs backup</li><li>**Warranty:** Mandatory 2 years</li></ul> | **Thermo Fisher or Bio Rad or Eppendorf** |
| 62 | | **Dual Mini Vertical SDS PAGE Unit + Power Pack** | <ul><li>10-well, 1.0 mm thickness; 4-gel system including 5 combs, 5sets of glass plates, 2 casting stands, 4 casting frames, sample loading guide, electrode assembly, companion running module, tank, lid with power cables, mini cell buffer dam.</li><li>PowerPac HV power supply: 100-240 V</li><li>**Warranty:** Mandatory 1 year</li></ul> | **Bio-Rad** |
| 63 | | **Horizontal Electrophoresis Unit with power supply** | <ul><li>Standard Submarine Gel Unit (15 x 15 cm) including: Buffer Chamber Assembly, 16 well (1mm) combs–2 numbers, Safety Lid, Colored Loading Strips High Voltage Leads, Buffer Recirculation Ports–2 numbers, Running Tray w/Casting Gates</li><li>Additional comb: 25 well (1mm) and 16 well (1mm)</li><li>Imported and branded power supply: 10-300V; 4-500mM; 90W</li><li>**Warranty:** Mandatory 1 years</li></ul> | **Hoefer** |
| 64 | | **Hot Plate Magnetic Stirrer** | <ul><li>Top Plate Dimension : 18cm x 18cm</li><li>Top Plate Material   : Ceramic Top</li><li>RPM                 : 100-1000rpm</li><li>Max Capacity      : 5L</li><li>Temp Range       : 150-500°C</li><li>Max Load           :upto 11 Kg</li><li>Power Requirement : 240VAC-50Hz-4.7A-1115W</li><li>**Warranty            : 2 Years(Mandatory)[Otherwise tender will be cancelled]**</li></ul> | **Tarson SPINOT 6030 /Equivalent** |
| 65 | | **Vortex Mixer** | <ul><li>Powerful motor for INSTANT vortexing</li><li>Continuous or "touch" operation</li><li>Q-Drive™ dynamic balancing system</li><li>Variable speed from 200 to 3200 rpm</li><li>Temperature: 5-50°C</li></ul> **Warranty**: Mandatory 1 year | **Any good make** |
| 66 | | **Slide Callipers** | <ul><li>Resolution: 0.01mm or .0005"/0.01mm</li><li>Repeatability: 0.01mm / .0005"</li><li>Display: LCD</li><li>Length standard: ABSOLUTE electromagnetic induction linear encoder Max. response speed: Unlimited</li><li>Battery: Solar battery</li><li>**Warranty**: Mandatory 1 year</li></ul> **Preferred Make/Model:** | **Mitutoyo/Equivalent** |
| 67 | | **Rice polisher** | <ul><li>Motor: 400W</li></ul> | **Any good** |

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| | | (mini) | ▪ Speed 750-1450 rpm<br>▪ Constructed from high grade cast iron and steel.<br>▪ Accessories: Spanner, Cleaning brush<br>▪ **Warranty**: Mandatory 1 year | **make** |
| 68 | | **Rice DE husker (mini)** | ▪ Capacity on paddy will be 50kg/hr.<br>▪ Size of the rubber roll: 35(W)×100mm(D)<br>▪ Motor: 400W<br>▪ Accessories: Spanner, nylon brush, Rubber roll<br>▪ **Warranty**: Mandatory 1 year | **Any good make** |
| 69 | | **Analytical Balance : 0.1mg-220gms** | • **Maximum Capacity** :220gms<br>• **Readability** :0.001 gm<br>• **Repeatability (Test Weight)** :0.001 gm<br>• **Adjustment** :Internal<br>• **Weighing Pan Diameter** :90mm<br>• **Interfaces** :RS-232<br>• **Housing** :Die-cast aluminium, plastic ABS , Glass Wind Shield<br>• **Linearity** :± 0.002gm<br>• **Temperature accuracy (±)** :3 ppm/°C<br>• **Resolution** :0.1 mg<br>• **Warranty : 2 years (Mandatory)** | **Metler Toledo ME204 /Equivalent** |
| 70 | | **Stereo Zoom microscope with camera and compatible accessories** | • **VIEWING HEAD** :35 degree inclined trinocular head; binocular: trinocular=50: 50; interpupillary distance 50-76mm; fixed eyepiece tube with lock screw. Trinocular Head with Trino Port for attach Microscopic Camera.<br>• **EYEPIECES** : High eye-point wide field plan eyepiece PL 10x/23mm, diopter adjustable. Focusable front lens, Provision to mount micrometric graticules.<br>• **ZOOM RANGE** : Zoom range: 0.8x-10x, zoom ratio: 12.5 : 1; built-in aperture diaphragm; click stop for 0.8x, 1x, 1.5x, 2x, 3x, 4x, 5x, 6x, 8x, 10x.<br>• **MAIN OBJECTIVE**: 1x Standard Objective with Working Distance 90mm.<br>• **BODY** : Coarse and fine coaxial focus system, integrated body with focus holder, coarse range: 50mm, fine precision 0.002mm.<br>• **BASE** : Plan base with transmitted illumination (work with external 5W LED fiber); built-in 360 degree rotatable mirror.<br>• **ILLUMINATION**: 5W LED light box (size: 270 x 100 x 130mm) with single fiber (500mm), color temperature 5000-5500K; operating voltage 100-240VAC/50-60Hz, output 12V for Transmitted Spot.<br>• 5.5 Mega Pixel DGI 530 HDMI Camera image on HDMI mode. USB ouputoptional, can connect with PC and use software. 60fps at 1080P, fast framerate, Also support HDR. Support SD Memory card, Max 32 GB. Camera Sensor : ½.86 inch Full HD CMOS. Resolution : 2592 X 1944(8 Bit) Pixel Size : 2.8 x 2.8μm. Output : HDMI, USB, SD Card. DIGICAM live preview, measurement with scale bar and live measure image capture software.<br>• **Warranty : 2 Years (Mandatory)** | **Dewinter 'Zoomstar-Vi' Parallel Beam TrinocularStereozoom Microscope With 'Dgi-530 Hdmi' Hd Resolution Camera Attachment / Equivalent** |
| 71 | | **DSLR Camera** | 24.3 Mega Pixel camera with D-ZOOM KIT: AF-P DX NIKKOR 18-55mm f/ 3.5-5.6G VR + AF-P DX<br>NIKKON 70-300mm f/4.5-6.3G ED VR)#<br>Supplied complete with Carrying case & 16 GB SD Card<br>Warranty : 2 Years (Mandatory) | **Nikon D 5600 with 18-55 mm + 70-300 mm lens or Equivalent** |
| 72 | | **BOD Incubator** | **BOD Incubator** (*Combined Low & High Temperature*)<br><br>• **Construction** :*Double-walled* with adequate Polyurethane foam insulation.<br>• **Inner Chamber:** 24 SWG *Stainless Steel (316 Grade) non magnet* polished with different shelf positions. Provide castor wheel (Heavy types).<br>• **Outer Walls:***CRC Steel Sheet*,18 SWG scraped and treated wi | **Imported(J S Research Korea/ Jeotech Korea /Equivalent) or Branded Indigenous( Rivotech/Eq** |

| | | | corrosive primer and finished with powder coating.<br>• **Outer Door:** The outer door shall be double walled duly insula provided with magnetic strip gasket with proper sealing and device.<br>• **Inner Door:** An *Acrylic/ Glass* door is provided.<br>• **Forced Air Circulation:** Provided by a *multi-vane blower* aluminium having brass shaft.<br>• **Non *CFC* Refrigerator System:** Done by a *hermetically* sealed ir make refrigerator compressor with balance condensing unit.<br>• **Heating System:** Provided by a pair of replaceable type sealed air made of *nickel-chromium resistance wire*.<br>• **Temperature Controller:** Precisely done by a fully automatic processor based *PID (dual setting)Digital* temperature indicator cum cont conjunction with *PT-100* sensor and heavy duty low voltage el delay\relay system. Illumination system with timer setting facility shall be provided.<br>• Should be fitted with Castor wheel .<br>• Warranty : Minimum of 2 Years (Mandatory)[Otherwise tender will be cancelled]<br><br>**Technical Specification:-**<br>Temperature Range : $0^0C$ to $60^0C \pm 0.5$ °C<br>Capacity : 6cft. /170Ltrs<br>No. of Trays :*2/3 Numbers* heavy punch type perforated *S.S* trays *(316 grade)*, 22 SWG.<br>Safety Device : A built in delay relay system is provided in the control circuit to safe guard the refrigeration compressor against abrupt starting due to power failure.<br>Operable on :*220/230 Volts*, Single phase, 50 Cycles, AC Mains.<br>**Volume capacity** : **6 cft. /170Ltrs /50cm x 50 cm x 70 cm**<br><br>**Accessories for above:**<br><br>*Automatic Relay Type Voltage Stabilizer, Digital Display With Low Voltage Auto Cut Out Device And Copper Coiled Transformer: (Ins Aluminium Coated Transformer):*<br>Capacity : 4 Kva<br>Input Voltage : 160 To 270 Volts $\pm$ 10%<br>Output Voltage : 220/230 V, Ac<br>**Warranty : 2 Years (Mandatory)** | uivalent)<br>with ISO<br>9001: 2008<br>certification<br>( No Local<br>Make will<br>be<br>entertained) |
| 73 | | Autoclave and accessories | • Type : Vertical<br>• Inner boiling chamber size : 18" Dia. X 24" Depth /95 Ltrs (Approx)<br>• Material : Boiling chamber - 16 gauge Stainless Steel Sheet 304 Quality<br>    • Outer body – 24 gauge Stainless Steel Sheet 304 quality<br>    • Busket- Perforated Stainless Steel 304 quality<br>• Features : Digital Temperature Controller cum Timer, Safety Alarm, Pressure gauge, Safety Valve , Steam release Cock, water level indicator , ISI Mark Industrial heater<br>• Power Requirement : 220/230 Volts, single phase, AC mains,4 KW Load<br>• **Warranty : 2 Years(Mandatory)[Otherwise tender will be cancelled]** | **Any Good Make with with ISO 9001: 2008 certification** |
| 74 | | Deep freezer (-20C) | -20°C Upright Solid Door Freezer<br>• **Capacity** :340-400Liters<br>• **Temp Range** :- 17°C to -24°C<br>• **No. Of Shelves /Baskets :**8 -10<br>• **No Of Doors** :1 | CelfrostBFS 345S / Thermo F400-SAEV-TSC or |

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| | | | • **Power Load** :140 Watt<br>• **Defrost Type** : Automatic<br>• **Energy Consumption :** 10.1 kWh/day<br>• Microprocessor control and monitoring system<br>• **Warranty : Minimum of 2 Years (Mandatory)[Otherwise tender will be cancelled]**<br><br>** Supply complete with suitable voltage stabilizer | **Equivalent** |
| 75 | | Hot Air Oven | • **Size** :24'' X 24'' X 36'' / 340 Ltrs (Approx)<br>• **Temperature Range** : 50º C to 250º C<br>• **Accuracy** :± 1ºC.<br>• **Temperature control** :Digital Temp. Indicator Cum controller with PT-100 Sensor .<br>• **Power Requirement** :230 volts, 50 Hz, Single phase<br><br>• **Construction** :<br>  ❖ 1 No Air Circulation Fan<br>  ❖ The unit is double walled construction,<br>  ❖ Inner chamber is made (304 Quality) 24 gauge Stainless Steel Sheet with highly polished.<br>  ❖ Outer Chamber is made of mild steel sheet with epoxy paint<br>  ❖ Thick glass wool insulation<br>  ❖ 3 nos Stainless steel perforated Trays<br>  ❖ Fitted with control panel main indicating neon lamp, load neon lamp, 3 Heat Rotary switch for low/medium/ high Temp.<br>• **Warranty** :2 years (Mandatory) [Otherwise tender will be cancelled] | **Any Good Make with with ISO 9001: 2008 certification** |
| 76 | | **Slide warmer, Berlese Funnel, Slide Box, Different insect traps** | **Kindly Provide Specification** | |
| 77 | | **Analytical Balance : 0.1mg-220gms** | • **Maximum Capacity** :220gms<br>• **Readability** :0.001 gm<br>• **Repeatability (Test Weight)** :0.001 gm<br>• **Adjustment** :Internal<br>• **Weighing Pan Diameter** :90mm<br>• **Interfaces** :RS-232<br>• **Housing** :Die-cast aluminium, plastic ABS , Glass Wind Shield<br>• **Linearity** :± 0.002gm<br>• **Temperature accuracy (±)** :3 ppm/°C<br>• **Resolution** :0.1 mg<br>• **Warranty** : 2 years (Mandatory) | **Metler Toledo ME204 /Equivalent** |
| 78 | **Agril Entomology** | **Digital Top Loading Precision Balance** | • **Maximum Capacity** :2200gms<br>• **Readability** :0.01 gm<br>• **Repeatability (Test Weight)** :0.01 gm<br>• **Adjustment** :Motorized Internal Calibration<br>• **Weighing Pan Size** :198mm x 205mm Approx<br>• **Interfaces** :RS-232<br>• **Display** :LCD<br>• **Linearity** :± 0.02gm<br>• **Power Supply** :AC Adaptor<br>• **Warranty** : 2 years (Mandatory) | **ACZET CY2202C / Equivalent** |
| 79 | | **Digital Top loading Balance** | • **Maximum Capacity** :30KG<br>• **Readability** :0.5 gm<br>• **Repeatability (Test Weight)** :0.5 gm<br>• **Adjustment** :External Calibration<br>• **Weighing Pan Size** :9.0"x11.8" Approx<br>• **Interfaces** :RS-232 | **ACZET CZ 30H / Equivalent** |

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| | | | • **Display** :LCD display with auto LED Backlite<br>• **Linearity** :± 0.02gm<br>• **Unit of Measure** :gm, kg, ounce, lb<br>• **Power Supply** :AC Adapter 9V/ 500 mA<br>• **Warranty : 2 years (Mandatory)** | |
| 80 | **Plant Pathology** | **Single Distillation unit** | • **Distilled Water Output** : 4.0 Ltr/ Hr<br>• **Cooling water consumption** :2Ltrs/Hr<br>• **Power Requirement** : 230-250Volts, Single Phase 3.5 Kw Quartz Heaters<br>• **Biological Activity** :Pyrogen Free<br>• **pH Range** : 6.9-7.0<br>• **Conductivity (S/cm)** :$3 \times 10^{-6}$<br>• **Distillate Temperature** : 65-75∘ C<br>• **Warranty** : 2 Years (Mandatory)<br>Supply complete with accessories & Power supply and Water Softener as optional | **Borosil - 3361/4.0L /Riviera/ Equivalent** |
| 81 | | **LCD projector with Projector Screen** | • Technology : 3LCD or Equivalent<br>• Brightness : 3200 ANSI LUMENS<br>• Contrast Ratio : 20000:1 or Equivalent<br>• Resolution : XGA (1024 x 768 dots ) 4:3 display resolution<br>• Projection Lens Zoom/Autofocus :Approx 1.2x Manual Zoom/Manual Focus<br><br>• Throw Ratio : 1.47:1 to 1.77:1<br>• Audio : Built-in 16W speaker (mono)<br>• Ports : HDMI &amp; VGA<br>• Functionality : Remote Control<br>• Lamp Type : 225W type Ultra high pressure mercury lamp<br>• Lamp Life : 10000 Hrs or more<br>• Power Requirement : AC 100 V to 240 V, 3.4 A to 1.5 A, 50 Hz / 60 Hz<br>• Warranty : 3 Years or More<br>• Supply Complete with Remote Control , VGA Cable, HDMI Cable, Power Cable, , Manual , Wall Hanging Assembly , Carrying Case etc<br><br>• Projector Screen Tripod type projector screen of size 6'(W) x 4'(H) | **Sony VPL-EX 430/435 or Equivalent of EPSON/Sharp/Hitachi** |
| 82 | | **Autoclave and accessories** | • Type : Vertical<br>• Inner boiling chamber size : 18" Dia. X 24" Depth /95 Ltrs (Approx)<br>• Material : Boiling chamber - 16 gauge Stainless Steel Sheet 304 Quality<br>• Outer body – 24 gauge Stainless Steel Sheet 304 quality<br>• Busket- Perforated Stainless Steel 304 quality<br>Features : Digital Temperature Controller cum Timer, Safety Alarm, Pressure gauge, Safety Valve , Steam release Cock, ISI Mark Industrial heater, Automatic pressure control switch, Water level indicator (gauge glass), Low water level cut out device<br>• Power Requirement : 220/230 Volts, single phase, AC mains,4 KW Load<br>• **Warranty : 2 Years(Mandatory)[Otherwise tender will be cancelled]** | **Any Good Make with with ISO 9001: 2008 certification** |
| 83 | | **Hot Air Oven** | • **Size** :24'' X 24'' X 24'' / 225 Ltrs (Approx)<br>• **Temperature Range** :Ambient to 250º C<br>• **Accuracy** :± 1ºC.<br>• **Temperature control** :Digital Temp. Indicator Cum controller with PT-100 Sensor .<br>• **Power Requirement** :230 volts, 50 Hz, Single phase<br><br>• **Construction** :<br>❖ 1 No Air Circulation Fan<br>❖ The unit is double walled | **Any Good Make with with ISO 9001: 2008 certification** |

| | | | construction, | |
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| | | | ❖ Inner chamber is made (304 Quality) 24 gauge Stainless Steel Sheet with highly polished.<br>❖ Outer Chamber is made of mild steel sheet with epoxy paint<br>❖ Thick glass wool insulation<br>❖ 3 nos Stainless steel perforated Trays<br>❖ Fitted with control panel main indicating neon lamp, load neon lamp, 3 Heat Rotary switch for low/medium/ high Temp.<br>• **Warranty :2 years (Mandatory) [Otherwise tender will be cancelled]** | |
| 84 | | BOD Incubator | • **Capacity** :90cm x 60cm x 60 cm /12 Cft/340Ltrs<br>• **Temperature Range** :0°C , to 60°C ± 0.5ºC<br>• **Temp. Control** :Microprocessor Based PID Controller<br>• **No. of Tray** :3nos.Trays<br>• **Power Requirement** : 230 volts, 50 Hz, Single phase<br>• **Construction :**<br>    ❖ Triple walled construction<br>    ❖ Inner Chamber with Stainless Steel (304) 22 gauge<br>    ❖ Outer wall with CRC Sheet 22 gauge with epoxy powder coated paint<br>    ❖ Glass wool Insulation<br>    ❖ Trays are with 3/4 Perforated Ball punching (304)Stainless Steel<br>    ❖ Double door system ; Inner door is made of Glass & outer door with insulated double walled sheet<br>    ❖ Heating System made of Nickel-Chromium Resistance Wire<br>    ❖ Control panel consisting of switches, indicating lamps, digital controller, speed controller etc<br>    ❖ Temperature Indicator Cum Controller with PT-100 Sensor<br>    ❖ Hermetically sealed compressor with relay and cooling coil<br>    ❖ Illumination system with fluorescent tubes and 24 hrs adjustable timer for day/night cycle<br>    ❖ Supply complete with suitable voltage stabilizer (IP:130-280V, OP:220V)<br>• **Warranty :2 years (Mandatory) [Otherwise tender will be cancelled]**<br>    ❖ | **Any Good Make with with ISO 9001: 2008 certification** |
| 85 | | Refrigerator | • **Capacity** : 185-195 Liters<br>• **Door type** : Single Door<br>• **Defrosting System:** Frost Free<br>• **Cooling Technology:** Stay Cool<br>• **Star Rating** : 3 Star<br>• **Features** :Anti-B Technology, Cool Shower Technology, Easy store and serve bins, Intelligent Operations, Low Starting Voltage, Quick Freeze, Soft Freeze Technology<br>• **Warranty** : 1 year<br>• **Colour** : Silver/Black/Cherry Red | **Whirlpool 200 IM Powercool Roy /Samsung RR20N182X R8/Equivale nt** |
| 86 | | Centrifuge (3000 rpm) | Cole- Parmer 6 place variable speed, 3000-4000rpm, 220V,WW-83058-42; Max RCF: 1830 x g | |
| 87 | | Deep Freezer | Energy Consumption (kWh/yr):530; Cooling Technology Freezer Static, 460 lit; 141 cm × 84.5 cm × 74 cm, with handel and door lock, -20⁰C to -40°C, indicator lights | **HAIER, HCF-460HTQ/Eq uivalent** |

| 88 | | Single Beam Visible Sectrophotometer | • Spectrophotometers should be supplied with Bi-directional RS232 interface, mains cable, instruction manual, short form operating instructions and 10mm cell holder.<br>• Lithrowmonochromator with 1200 lines/ mm holographic grating, coated optics.<br>• Wavelength range : 325-1000nm ,<br>• Wavelength Accuracy :< 1nm<br>• Large Seven Segment bright LED for readouts.<br>• Photometric Range : –0.3 –3A, 0 –200%T, 0 – 9999C<br>• Photometric Accuracy : 0.005A or 1% whichever is greater<br>• Photometric Noise : less than ±0.0002A at 500nm<br>• Wavelength Precision: 0.1nm,  Bandwidth : 8nm<br>• Stray light :better than  0.05%,<br>• Stability : ± 0.001A/hr<br>• Automatic Peak Seek, Automatic Self test and Calibration<br>• 4 position cell manual changer with 4 x 10mm Cell Holder<br>• 10 mm Path length Quartz Cuvette<br>• Warranty : 2 Years | **Perkin Elmer- Lambda 325 / Cecil-CE 1011/ Equivalent** |
| 89 | | **RO Water purifier** | RO Water Purifier with storage facility,  UV& Iron Guard | **Aquaguard/ Equivalent** |
| 90 | | **Laboratory Tabletop Centrifuge** | • Upto 10000 rpm<br>• Digital Speed Indicator<br>• Stepless speed regulator<br>• 0-60 minutes digital countdown timer<br>• Safety Lid interlock to prevent cover opening during centrifugation<br>• Press Switch for quick acceleration to full speed<br>• with rotor heads ( 8x15ml , 6x50ml  etc)and accessories<br>• **Warranty : 2 years(Mandatory)** | **Remi/ Equivalent** |
| 91 | | **Pressure Chamber/Leaf Water Potential System** | • System should be based on thermocouple hygrometer<br>• System should be able to measure In-situ Leaf/Plant Water Potential<br>• System should have option to instant / continuous monitoring of Leaf water potential.<br>• Measure & calculated parameters : In-Situ Stem Water Potential, Osmotic Potential, Pressure Volume Curves, Measure Stomatal Closure & Cavitation, Permanent Wilting Pressures<br>• System should supply with sensor & logger/meters with all required accessories<br>• Logger/Meter should have memory of more than 500 data sets<br>• **Warranty : 2 years(Mandatory)** | **ICT PSY -1 or equivalent** |
| 92 | | **Data Logging Universal Handy Moisture Testing Machine** | • Handy Moisture Meter<br>• Digital universal moisture meter used to find out the moisture content of food grains, pulses, oil seeds and vegetables seeds etc by principle of Resistance<br>• Grinding Facility to make sample uniform<br>• Auto. Calibration- No thickness Chart.<br>• Range - 3.5 to 40% provided with temperature sensor.<br>•  2 x16 character alphanumeric LCD display.<br>• Recorded data can be transferred to PC.<br>• Body and test cap should be of mild steel.<br>• Data logging with data storage capacity of minimum 200 readings.<br>• **Warranty : 2 years (Mandatory)** | **Any Good Make** |

| 93 | | **Digital Soil Moisture Meter** | Standard tensiometer consists of a plastic tube with a ceramic cup at the bottom end with 15,30,45,60 and 75cm soil depth. Supplied with one Standard Gauge and auger for Tube installation | **Spectrum or any good make** |
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| | | | Measuring Unit : kPa (Kilo Pascal) | |
| | | | Measurement Principle : Time-domain measurement methods | |
| | | | Range : 0-100 kPa | |
| | | | Accuracy : ± 1% | |
| | | | Display : 1 Line 12 Character LCD which displays Moisture reading in kPa | |
| | | | Response Time : Less than 10 seconds | |
| | | | Stabilization Time : 3 seconds approximately from power-up | |
| | | | Battery : 9 Volt Alkaline/4 AAA alkaline batteries | |
| | | | Data Logger : Around 4000 measurements with GPS/DGPS | |
| | | | **Warranty : 2 years (Mandatory)** | |

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| 94 | Seed Science & Technology | Refrigerated Cooling Centrifuge | • High speed up to 30,000rpm/65,000g or above<br>• Rotor Head : 6x50ml, 12x1.5-2.0ml<br>• Fully Programmable, Single-knob control with LCD-display.<br>• Efficient cooling system, pre-selection from $-10^0$C to $+40^0$C<br>• Maintenance-free brushless drive motor<br>• Magnetic rotor identification prevents over speeding rotors<br>• Motorized (Soft close) lid lock system.<br>• 2 Years warranty<br>• Heads: 24x1.5ml-2ml, 48 x 1.5 – 2.0 ml, 6x50ml, 8x50ml, 12x 1.5- 2 ml | **Sigma 3-30K or Harmle Z36HK or HerolabUni cenHR or Equivalent** |
| 95 | | Field Portable Pulse Modulated Chlorophyll Fluorometer | ➢ The instrument should be based on PAM technique, portable and lightweight<br>➢ System should have Blue /Red LED measuring light for longer life<br>➢ LED light source for saturation pulses to avoid heating to leaf surface;<br>➢ Saturation pulse should be up to 5000 $\mu molm^{-2}s^{-1}$ or more<br>➢ Far red light for excitation of Photosystem-I<br>➢ PIN photodiode detector<br>➢ Data memory for more than 20,000 saturation pulse analyses/full trace<br>➢ Touchscreen display (more than 6 x 6 cm)<br>➢ Ports: Ports for fiberoptics, USB cable, external light source, leaf clip, Barcode Scanner and auxiliaries for future attachment<br>➢ Parameters: Ft, Fo, Fm, F, Fo', Fm'. PAR, leaf temperature and relative humidity,Fv/Fm, Y(II), qL, qP, qN, NPQ, Y(NPQ), Y(NO) and ETR (electron transport rate)<br>➢ System should have option for Fitting Routines/curves: Two routines for determination of the cardinal points α, Ik and ETRmax of light curves<br>➢ Standard Leaf Clip should have Leaf Temperature & PAR Sensor with RH sensor<br>➢ Leaf clip with PAR, leaf temperature and relative humidity, permits estimation of electron transport rates driven by natural radiation.<br>➢ Warranty : 2 Years | **Heinz Walz Mini PAM II or equivalent** |
| 96 | | Water Bath Shaker | • Tank :High grade SS tank<br>• Capacity : 5 to 8 litres<br>• Temperature range : Ambient to 99° C<br>• Temperature accuracy : ± 0.2° C<br>• Temperature control : Digital PID control<br>• Timer : 0.1 Hour to 99.9 | **Any Good Make** |

| | | | Hours & continuous | |
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| | | | • Safety protection : User settable and fixed thermal cutout<br>• Display : Digital display of temperature<br>• Alarm : Low level water alarm, safety shut down audible/visual alarm<br>• Operating voltage : 230 ±10VAC, 50 Hz.<br>• Tank design for easy cleaning and draining<br>• Steel holder for tubes (1.5/2 ml, 5ml, 15 ml) and Flasks (50, 100 & 250 ml)<br>• Powder Coating Paint Finished<br>• With Shaking Facility : RPM 50-200<br>• Warranty : 2 years | |
| 97 | | **Photocopier** | • Maximum Copy speed:-20 CPM<br>• Paper size (original/Image):- A3/A3<br>• RAM (MB):- 256 MB<br>• Zoom:- 50 to 200%<br>• Category:- Duplex<br>• Networking: Yes<br>• Supplied complete with suitable voltage Stabilizer (IP-130-280V,OP: 220V)<br>• Warranty : 2 Years | **Canon Digital Photo Copier Machine iR-2520W /Equivalent** |
| 98 | | **A.C.Machine** | **Installation & Commissioning of 1.5 Tr Inverter Air Conditioner with Suitable Voltage Stabilizer**<br><br>**Capacity** : 1.5 Tons<br>**BEE Start Rating** :3 Star<br>**AC Type** :Split<br>**Refrigerant** : R 410A<br>**Compressor** : Dual Rotar Inverter<br>**Filter** : 7 Advance Filter<br>**Cleaning** : Blow Cleaning<br>**Display** : Hidden Display<br>**Condenser Coil** :Copper condenser IDU,ODU and Installation kit<br>**Noise Level Indoor** : ≤ 65 DB<br>**Features** : 5 Sensors, Copper pipe , Anti Dust, Auto Restart, Auto Swing, Easily Removable Panel, Energy Saver, Fresh Air Ventilation, Inner Groove , Memory Function, Remote, Self Dia, Sleep Mode, Timer, Turbo Mode<br>**Remote Control** : Yes<br>**Warranty** : 10 Years on compressor & 4 Years comprehensive warranty<br>**Installation** : Standard Installation<br><br>**Supply complete with suitable voltage stabilizer(130V-300V, upto 12amp Load Capacity, Metal Cabinet, Advanced Time Delay Function & 3 years warranty )** | **Blue Star BS-3CNHW18R BFU with V Guard VWR 400 / Equivalent of Carrier or Daikin or Mitshubushi** |
| 99 | | **LCD Projector with Projector Screen** | • Technology : 3LCD or Equivalent<br>• Brightness : 3200 ANSI LUMENS<br>• Contrast Ratio : 20000:1 or Equivalent<br>• Resolution : XGA (1024 x 768 dots ) 4:3 display resolution<br>• Projection Lens Zoom/Autofocus :Approx 1.2x Manual Zoom/Manual Focus<br>• Throw Ratio : 1.47:1 to 1.77:1<br>• Audio : Built-in 16W speaker (mono)<br>• Ports : HDMI &amp; VGA<br>• Functionality : Remote Control<br>• Lamp Type : 225W type Ultra high pressure mercury lamp<br>• Lamp Life : 10000 Hrs or more<br>• Power Requirement : AC 100 V to 240 V, 3.4 A to 1.5 A, 50 Hz / 60 Hz<br>• Warranty : 3 Years or More<br>• Supply Complete with Remote Control , VGA Cable, HDMI | **Sony VPL-EX 430/435 or Equivalent of EPSON/Sharp/Hitachi** |

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| | | | Cable, Power Cable, , Manual , Wall Hanging Assembly , Carrying Case etc<br><br>• Projector Screen Tripod type projector screen of size 6'(W) x 4'(H) | |
| 100 | | **Digital audio-recording console with dedicated computer system, sound system and other accessories including editing software** | Digital audio-recording console with dedicated computer system, sound system and other accessories including editing software (on turn key basis) I unit | |
| 101 | | **DSLR Camera with accessories** | • **Sensor:** 24.2MP APS-C CMOS 4, 23.5 x 15.6mm<br>• **Image processor:** EXPEED 4<br>• **AF points:** 11-point AF, 1 cross-type<br>• **ISO range:** 100 to 25,600<br>• **Max image size:** 6,000 x 4,000px<br>• **Metering zones:** 420 pixel RGB sensor<br>• **Video:** 1920 x 1080 at 60p, 50p, 30p, 25p, 24p<br>• **Viewfinder:** Optical pentamirror, 95% coverage<br>• **Memory card:** SD/SDHC/SDXC UHS I<br>• **LCD:** 3.0-inch fixed, 921K dots<br>• **Max burst:** 5fps<br>• **Connectivity:** Bluetooth<br>• **Warranty :** 2 years | **NIkkon D 3500 with D-ZOOM KIT: AF-P DX NIKKOR 18-55mm f/3.5-5.6G VR + AF-P DX NIKKOR 70-300mm f/4.5-6.3G ED VR / Equivalent** |
| 102 | **Office of The Dean** | **Installation of CCTV at different point of F/Ag Building** | 12 nos40 Mtr range IR Vandal Proof Bullet Camera , 5 nos 40 Mtr range IR Vandal Proof Dome Camera, 32 Channel DVR, 4TB Surveillance HDD, 32'' LED Monitor, 12 V DC-10Amp SMPS, 2500 Mtr 3+1 100% Copper cable, Installation & Commissioning with Caching , DC Jack, Brush BNC Connector , 4x4 PVC Box, Iron Angels , 6U Rack etc | **Hikvision (DS-2CE56D0T-VPIR3E)+ Hikvision (DS-2CE16D0T-VFIR3E)+DS-7116HGHI-F1/Equivalent of Vista/CPPLUS** |
| 103 | | **Water Purifier cum cooler** | Eureka Forbes-120FSS - Full Stainless steel body water purifier cum cooler with 120 Lit Storage capacity along with iron guard | **Eureka Forbes-120FSS/Equivalent** |
| 104 | | **LCD Projector with Projector Screen** | • Technology    : 3LCD or Equivalent<br>• Brightness    : 3200 ANSI LUMENS<br>• Contrast Ratio : 20000:1 or Equivalent<br>• Resolution     : XGA (1024 x 768 dots ) 4:3 display resolution<br>• Projection Lens Zoom/Autofocus :Approx 1.2x Manual Zoom/Manual Focus<br>• Throw Ratio    : 1.47:1 to 1.77:1<br>• Audio           : Built-in 16W speaker (mono)<br>• Ports            : HDMI &amp; VGA<br>• Functionality   : Remote Control<br>• Lamp Type     : 225W type Ultra high pressure mercury lamp<br>• Lamp Life     : 10000 Hrs or more<br>• Power Requirement : AC 100 V to 240 V, 3.4 A to 1.5 A, 50 Hz / 60 Hz<br>• Warranty        : 3 Years or More<br>• Supply Complete with Remote Control , VGA Cable, HDMI Cable, Power Cable, , Manual , Wall Hanging Assembly , Carrying Case etc | **Sony VPL-EX 430/435 or Equivalent of EPSON/Sharp/Hitachi** |

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| | | | • Projector Screen Tripod type projector screen of size 6'(W) x 4'(H) | |
| 105 | | Photo Copier Machine | • IR **2525** with DADF, Maximum Copy speed:- 25 CPM<br>• Paper size (original/Image):- A3/A3<br>• RAM (MB):- 256 MB<br>• Zoom:- 25% to 400%<br>• Category:- Duplex<br>• Networking: Yes<br>• Supply complete with suitable voltage Stabilizer (IP:-130V-280V;OP:-220V)<br>• Warranty : 3Years | CANON DIGITAL PHOTOCOPIER MACHINE MODEL NO-2525W /Equivalent |
| 106 | | Video Camera along with tripod | • Sensor Type :1 / 5.8 Type (3.1 Mm) Back-Illuminated Exmor R® Cmos Sensor<br>• Effective Pixels (Video): Approx. 2.29 Megapixels (16:9)<br>• Effective Pixels (Still Image): Approx. 2.29 Megapixels (16:9)/Approx. 1.71 Megapixels (4:3)<br>• Image Processor: Bionz X™ Image Processor<br>• Optical Zoom :30x<br>• Clear Image Zoom: 60x<br>• Digital Zoom :350x<br>• Supplied Complete WithCarring Case & 16 Gb Memory Card | SONY(HDR PJ 675) /Equivalent |
| 107 | | Lapel/Tie-Microphone | **Ahuja AWM520 VL with HBM 50** | |
| 108 | | Mobile Tracker | RFID Based Mobile Tracker | **Any Good Make** |
| 109 | | Laser Pointer | **Logitech R400 /R 800 Laser Pointer -**2.4GHz Wireless Presenter with 50-60 feetseffective range&3 years warranty | **Logitech R800/R400** |
| 110 | | Sound System | **LECTERN- AHUJA** | **Ahuja** |
| 111 | | Lawn Mower | | **Any Good Make** |
| 112 | | Road/Corridor Sweeping Machine | • Walk Behind Scrubber Drier– Pro Auto Scrub 45e For Floor Cleaning And Vacuuming along with Scrubbing Brush&Squeezée<br>• Scrubbing Width      : 450mm<br>• Effective suction width    : 780mm<br>• Theoretical area coverage : 1800 m.sq/hr<br>• Working speed,      : up to 4 km/h<br>• Airflow rate      : 29 L/sec<br>• Vacuum Pressure    :1550 mm of H2O<br>• Power Supply      : 230/50 V/Hz<br>• Total Power      : 1050W<br>• Brush Motor      : 550W<br>• Vacuum motor power    : 500W<br>• No. of brushes      : 1nos<br>• Diameter of brush    : 450mm<br>• Brush Speed      : 180rpm<br>• Warranty      : 2 Years | **Eureka Forbes Pro Autoscrub 45E / Equivalent** |
| 113 | | DSLR Camera with accessories | • **Sensor:** 24.2MP APS-C CMOS 4, 23.5 x 15.6mm<br>• **Image processor:** EXPEED 4<br>• **AF points:** 11-point AF, 1 cross-type<br>• **ISO range:** 100 to 25,600<br>• **Max image size:** 6,000 x 4,000px<br>• **Metering zones:**420 pixel RGB sensor<br>• **Video:** 1920 x 1080 at 60p, 50p, 30p, 25p, 24p<br>• **Viewfinder:** Optical pentamirror, 95% coverage<br>• **Memory card:** SD/SDHC/SDXC UHS I<br>• **LCD:** 3.0-inch fixed, 921K dots<br>• **Max burst:** 5fps<br>• **Connectivity:** Bluetooth<br>• **Warranty :** 2 years | **NIkkon D 3500 with D-ZOOM KIT: AF-P DX NIKKOR 18-55mm f/3.5-5.6G VR + AF-P DX NIKKOR 70-300mm f/4.5-6.3G ED VR / Equivalent** |
| 114 | | A.C. Machine | **Installation & Commissioning of 1.5 Tr Inverter Air Conditioner with Suitable Voltage Stabilizer** | **Blue Star BS-3CNHW18R** |

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|---|---|---|---|---|
| | | | **Capacity** : 1.5 Tons<br>**BEE Start Rating** :3 Star<br>**AC Type** :Split<br>**Refrigerant** : R 410A<br>**Compressor** : Dual Rotar Inverter<br>**Filter** : 7 Advance Filter<br>**Cleaning** : Blow Cleaning<br>**Display** : Hidden Display<br>**Condenser Coil** :Copper condenser IDU,ODU and Installation kit<br>**Noise Level Indoor** : ≤ 65 DB<br>**Features** : 5 Sensors, Copper pipe , Anti Dust, Auto Restart, Auto Swing, Easily Removable Panel, Energy Saver, Fresh Air Ventilation, Inner Groove , Memory Function, Remote, Self Dia, Sleep Mode, Timer, Turbo Mode<br>**Remote Control** : Yes<br>**Warranty** : 10 Years on compressor & 4 Years comprehensive warranty<br>**Installation** : Standard Installation<br><br>**Supply complete with suitable voltage stabilizer(130V-300V, upto 12amp Load Capacity, Metal Cabinet, Advanced Time Delay Function & 3 years warranty )** | **BFU with V Guard VWR 400 / Equivalent of Carrier or Daikin or Mitshubushi** |
| 115 | Bio-control Unit | BOD incubator (For Microbial Culture) | **BOD Incubator (*Combined Low & High Temperature*)**<br><br>- **Construction** :*Double-walled* with adequate Polyurethane foar insulation.<br>- **Inner Chamber:** 24 SWG *Stainless Steel (316 Grade) non magnet* polished with different shelf positions. Provide castor wheel (Heavy types).<br>- **Outer Walls:***CRC Steel Sheet*,18 SWG scraped and treated wi corrosive primer and finished with powder coating.<br>- **Outer Door:** The outer door shall be double walled duly insula provided with magnetic strip gasket with proper sealing and device.<br>- **Inner Door:** An *Acrylic/ Glass*door is provided.<br>- **Forced Air Circulation:** Provided by a *multi-vane blower* aluminium having brass shaft.<br>- **Non *CFC*Refrigerator System:** Done by a *hermetically*sealed in make refrigerator compressor with balance condensing unit.<br>- **Heating System:** Provided by a pair of replaceable type sealed air made of *nickel-chromium resistance wire*.<br>- **Temperature Controller:** Precisely done by a fully automatic processor based *PID (dual setting)Digital* temperature indicator cum conti conjunction with *PT-100* sensor and heavy duty low voltage el delay\relay system. Illumination system with timer setting facility shall be provided.<br>- Should be fitted with Castor wheel .<br>- Warranty : Minimum of 2 Years (Mandatory)[Otherwise tender will be cancelled]<br><br><u>**Technical Specification:-**</u><br>Temperature Range : *0⁰C* to *60⁰C* $\pm$ 0.5 ºC<br>Capacity : 10 cft.<br>No. of Trays : *3/4 Numbers* heavy punch type perforated<br>*S.S* trays *(316 grade)*, 22 SWG.<br>Safety Device : A built in delay relay system is provided in the control circuit to safe guard the refrigeration compressor against abrupt starting due to power failure.<br>Operable on :*220/230 Volts*, Single phase, 50 Cycles, AC Mains.<br>Volume capacity : 10 cft | **Imported or Branded Indigenous with ISO 9001: 2008 certification** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Accessories for above: *Automatic Relay Type Voltage Stabilizer, Digital Display With Low Voltage Auto Cut Out Device And Copper Coiled Transformer: (Inst Aluminium Coated Transformer):* Capacity : 4 Kva<br>Input Voltage : 160 To 270 Volts ± 10%<br>Output Voltage : 220/230 V, Ac | | |
| 116 | ELP on Vermicom post | Electronic Balance | • 50 Kg capacity | | | Any Good Make |
| 117 | | Electronic Balance | • 2 Kg. Capacity | | | Any Good Make |
| 118 | CIC | Multi parameter for measuring pH, Conductivity, Ion, ORP and Dissolved Oxygen Bench Top Meters with multi parameters | a | Short description | Professional modular dual-channel instrument for measuring ion concentrations, pH, mV/ORP, rel. mV, conductivity, salinity, TDS, resistivity and conductivity ash. | Mettler Toledo / Seven Excellence™ pH/mV] with ORP Electrode or Seven CompactDuo S213 or Seven Excellence pH Meter, or Equivalent EC Meter Model: Seven Compact Cond. meter with Calibration Buffers. |
| | | | b | electrode | ORP electrode and Soil pH, Chemical pH measure electrode. | |
| | | | c | Cond. resolution | 0.001 µS/cm to 2000 ms/cm, various different units, defined by user. | |
| | | | d | Cond. accuracy | +/- 0.5% | |
| | | | e | pH-range | -2.000 to 20.000 | |
| | | | f | pH-resolution | variable: 0.001 / 0.01 / 0.1 | |
| | | | g | pH-relative accuracy | ± 0.002 | |
| | | | h | mV-range | -2000 to 2000 | |
| | | | i | mV-resolution | variable: 0.1 / 1 | |
| | | | j | mV-relative accuracy | ± 0.1 | |
| | | | k | Temperature range °C | -30.0 to 130.0 | |
| | | | l | Temperature resolution °C | 0.1 | |
| | | | m | Temperature accuracy °C | ± 0.1 | |
| | | | n | TDS range | 0.001 mg/L ... 1000 g/L | |
| | | | o | Resistivity range | 0.01 ... 100.0 MOhm*cm | |
| | | | p | Salinity range | 0.00 ... 80.00 psu, ppt | |
| | | | q | Display | 7 inchcolor TFT display | |
| | | | r | ISFET pH range | 0.000 to 14.000 | |
| | | | s | ISFET pH resolution | variable: 0.001 / 0.01 / 0.1 | |
| | | | t | ISFET pH relative accuracy | ± 0.05 | |
| | | | u | Touch Screen | Capacitive | |
| | | | v | Warranty | 2 Years | |

## b. List of furniture with Specification

| Sl. No. | Items | Specification with Technical details |
|---|---|---|
| 1 | Desk cum Chair | Godrej make-two sitter- scholar |
| 2 | Wooden chair- armed | Made of teak wood |
| 3 | Wooden Chair (without arm) | Made of teak wood |
| 4 | Small stool | Made of teak wood |
| 5 | Cushion Chair | Supreme Ornate |
| 6 | Full secretariat table | Godrej make- 4'6"x2'3" |
| 7 | Almirah-big size | Godrej make -78"x36"x19" |
| 8 | Almirah – small size | Local make – 50"x40"x20" |

| 9 | Desk cum Chair | Godrej make-three sitter- scholar |
|---|---|---|
| 10 | Full Secretariat Table | Godrej make |
| 11 | Half secretariat table | Godrej make |
| 12 | Godrej chair | Godrej |
| 13 | Small table | 3'x2' made of teak wood |
| 14 | Table for Video Conference room | Any good make |
| 15 | Chair for Video Conference room | Any good make |
| 16 | Handy Garden Trolly | Any good make |
| 17 | Heavy duty Folded Trolly | Any good make |
| 18 | Lab Trolly | Any good make |
| 19 | Wheel Barrow Trolly | Any good make |
| 20 | Manual Mobile storage System. | Any good make |
| 21 | Glass fitted Book Shelf | Godrej make 72"x36"x19" |
| 22 | File Cabinet | Godrej make |
| 23 | Round Conference Table | Any good make |
| 24 | Notice Board | Alkosign<br>ASLIB 670x540x1590<br>ASGPB90120<br>NBFC90120 |

## c. List of computer with peripherals

| Sl. No. | Item | Specification | | Make model |
|---|---|---|---|---|
| 1. | Desktop Computer | Processor | Intel® 8th Generation i3- 8100 Quad Core CPU with 3.6 GHz speed, 2400 MHz 65W and 6 MB Cache or better | HP Pro G1 Micro Tower Business PC / DELL OptiPlex 5060 |
| | | Chipset | Chipset compatible with the processor / Intel H370 | |
| | | Monitor | 18.5 Inch LED Screen | |
| | | Memory | 4GB DDR 4 RAM - Up to 32GB DDR4-2666 Unbuffered Memory (UDIMM) | |
| | | Hard Disk Drive | 1TBSATA HDD@ 7200 RPM | |
| | | Optical Drive | DVD Writer (quote as optional) | |
| | | Graphics | HD Intel Integrated Graphics | |
| | | Audio | High Definition Integrated Audio with Internal Speaker | |
| | | Ethernet | Integrated 10/100/1000 Ethernet Controller or 802.11ac (1x1) WiFi and Bluetooth® 4.2 Combo | |
| | | Slots | 1 x PCIex16, 1xPCIex1, 1xPCI , SD Card Reader | |
| | | Bays | (2) 3.5" Internal drive bays<br>(1) ODD bay | |
| | | Ports | **Rear I/O**<br>(2) USB 3.1Gen 1 ports, (4) USB 2.0 Ports<br>(1) VGA video port; (1) Display Port/DVI-D/HDMI Port<br>(1) RJ-45 network connector<br>(2) RS-232 serial port(1) Parallel Port 3.5mm audio in/out jacks PS/2 keyboard and mouse ports<br>**Front I/O**<br>(2) 2 nos USB 3.1Gen 1 ports , 3.5mm | |

| | | | headphone/microphone combo jack | |
|---|---|---|---|---|
| | | Form Factor | MT ( Micro Tower) | |
| | | Power Supply | 180- 310W (100V-240V) Active PFC power supply with 90% efficiency or better | |
| | | Keyboard/Mouse | USB Keyboard and Optical Mouse | |
| | | Operating System | Preloaded Genuine Microsoft Windows 10 Pro 64 | |
| | | Diagnostic Tool | BIOS Diagnostics | |
| | | Security | Antivirus for 12 months | |
| | | Warranty | 3 Years | |
| 2. | Laptop | Intel® 7th Generation i3- 7020 CPU ,4 GB DDR 4 RAM, 1TB SATA HDD@ 7200 RPM, AMD Radeon Dedicated Graphics, Original Win 10Pro , 15.6'' LED HD Monitor, DVD RW ODD, 1 year Onsite Warranty with 1 Year ADP with Bag | | HP250G6/ Equivalent of Dell |
| 3. | UPS | APC BX600C-IN 600VA, 230V Back UPS / Cyber Power BU 600E-IN | | APC/Cyber power |
| 4. | Printer cum scanner | HP Black and White LaserJet M 1136 Pro | | HP |
| 5. | Laser Printer | HP Black and White LaserJet 1020 Plus | | HP |
| 6. | Digital laser colour printer | HP Colour Laser jet Pro MFP M177FW | | HP |
| 7. | Scanner | HP 2000 | | HP |
| 8. | Genstat Software | Latest Version | | |
| 9. | XLSTAT Base | Latest Version | | |
| 10. | MATLAB | Latest Version | | |
| 11. | LED Monitor | 18.5" Resolution: 1920x1080 with power cable, VGA cable | | HP/Dell |

➢ **Tender Schedule:**

| • | Date of Publication | : | 13.02.2019 |
|---|---|---|---|
| • | Last date of quotation submission | : | 27.02.2019 |
| • | Opening date of Technical bids | : | 28.02.2019 |
| • | Tender fee | : | Nil |
| • | EMD | : | @2.5% of quoted value by means of demand draft from any nationalized Bank in favour of *Uttar Banga Krishi Viswavidyalaya* |
| • | Details available in   the websites | : | www.ubkv.ac.in |

1. **Submission of bids:**
   Both Technical bid and Financial Bid are to be submitted concurrently duly signed by the Authorized Company personnel. All papers must be submitted in English language.

2. **Time Schedules for the Tender:**
   The Time Schedule for obtaining the Bid Documents, submission of bids and other documents etc. as per the attached list.

3. **Eligibility for Quoting:**
   • Original Equipment Manufacturers (OEM) or Dealers/Distributors/Agents duly authorized by the manufacturers who are able to supply the assured quantities as per requirement & have requisite qualification for meeting the requirements as per this tender are only eligible for quoting.

- Further, vendors who were declared black listed and/or insolvent by any Govt. Concern/any Institutions in the Country for particular item or items are not eligible to participate in the current tender for that item or items.

- The University reserves the right not to accept the rate even from the lowest bidder/supplier.

- The University reserves the right to accept or reject any or all tenders without giving any reason whatsoever.

4. **Annual Turnover Requirements:**

Vender having average annual Turn Over for last three financial years is more than Rs.30 Lakh in India for the year 2015-16, 2016-17 & 2017-18 are eligible to participate in the Tender.

5. <u>Submission of Tenders</u>

**5.1 General process of submission**

All the documents including addendum/ Corrigendum related to the tender uploaded by the Tender Inviting Authority form an integral part of the contract. Tenderers are required to upload all the tender documents along with the other documents, as asked in the tender, through the above website within the stipulated date and time as given in the Tender. Tenders are to be submitted in two envelopes at a time, one is Technical Bid and the other is Financial Bid. The tenderer shall carefully go through the documents and prepare the required documents.

6.1 **Technical details**: (Bidders must submit Technical specification along with Catalogue of the item quoted in **"Technical Details"** Envelope.

6.2 Audited Annual Accounts for last three years **2015-16, 2016-17 & 2017-18** or during the period since formation of the Firm, if it was set up in less than such 3- year period. Bidders whose accounts are not audited must submit 26AS for the above years as available in the official website of the Income Tax Department, Government of India with other documents stated bellow:

| Sl. No. | Category | Sub-Category | Sub-Category Description |
|---|---|---|---|
| 1 | Certificates | Certificates | PAN Card of the Bidder |
| | | | GST Registration Certificate |
| | | | P -Tax Registration Certificate with a copy of last return |
| 2 | Company Details | Company Details 1 | Trade License/Enlistment Certificate |
| | | | Registration with Registrar of Companies |
| | | | Memorandum of Articles for Limited Companies. |
| 3 | Credential | Credential 1 | Copy of the purchase order for supplying Similar nature of items at least for last 2 years in an Institute of Higher Education<br>Brief User List preferably for users in West Bengal in an Institute of Higher Education |
| 4 | Financial Information | Payment Certificate 1 | Income Tax Returns submitted for the Assessment year 2015-16 |
| | | | Income Tax Returns submitted for the Assessment year 2016-17 |

| | | | Income Tax Returns submitted for the Assessment year 2017-18 |
|---|---|---|---|
| | | | GST Return for last 3 months in 2018-19 |
| 5 | Product Catalogue (Coloured) | | |
| 6 | Compliance Statement | | |

### 6.3 Financial Bid

Financial Bid should contain the unit price of items on FOR destination and CIF including applicable taxes. Rate of GST also be quoted. (** All the required/ essential / optional accessories or incidental services should be mentioned in the hard copy of Financial Bid)

## 7. TERMS & CONDITIONS:

### 7.1 Bid Information:

a) The rate quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
b) **Partial Quotation/Incomplete Quotation both for Technical and Commercial aspects may subject to cancellation of tender. However, University Authority will define the Partial Quotation/Incomplete Quotation based on the tender evaluation status.**

**7.2 Evaluation of Quotation**: Firstly, Technical Bid will be evaluated and thereafter Price Bids of technically qualified bidders will be evaluated for selection of vender.

**7.3 Award of Contract**: The purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive both technically and commercially.

**7.4** The vendor should quote and be capable to supply all the necessary items as per Tender. However, the University has the right to procure a part or a whole of the tendered items.

**7.5** University enjoys the discretion to select vendor either in full or in part (item wise) for the betterment for pursuing of tender objectives.

**7.6 Warranty:** The manufacturer should give guarantee/warrantee for a period as specified in the Item details. If the equipment installed at one location is subsequently shifted to another location, the warranty services shall continue to be provided at new location without any additional financial implications. During warranty period, if any defect in the supplied equipment is noticed by the Purchaser, the supplier or his representative shall rectify the defect or replace the defective item free of cost at the Purchaser's site at the earliest possible, latest within a period of 30 days of notification.

**7.7 Adequate support service facility:** The bidder/manufacturer should have adequate service support Centre in Kolkata/ Siliguri for any emergency breakdown/fault offering facility within 48 hours and should be agreeable to provide AMC facility after the warranty period.

**7.8 Bidder must provide Technical Compliance Sheet duly certified by OEM as per the Tender Specification. Any non-compliance will lead to rejection of tender.**

**7.9 Credentials:** Documents of supplying similar items in last two previous years in an Institute of Higher Education must be submitted along with the tender.

**7.10 DSIR Certification:** University possesses the privilege for availing the facility of procuring items at Concessional Customs Duty and without incurring any excise duty as per DSIR certification.

**7.11 GST Exemption Certification:** University possesses the privilege for availing the facility of procuring items at Concessional GST (5%) as per the decisions taken by GST Council.

**7.12** Statutory deduction for GST and other Government taxes in the hand of the payee will be made as per the law in force.

**7.13 Make & Model:** Bidder must mention Make and Model in the Information Sheet as given vide Annexure-I and must send the product details/catalogue/brochure in the **"Technical Details"** folder along with Technical Compliance Sheet for each item component.

**7.14 Time Schedule:** The supply work must be completed within 30-45 days from the date of receipt of the supply order.

**7.15 Validity of offer:** A bidder should spell out in the tender that it shall remain valid for a minimum period of 180 days from the date of opening of the tender and during this period, the bidder shall not be entitled to revoke or cancel its offer.

**7.16 After Sales and Service:**
  i. The name and complete address of the company in India authorized by the manufacturer, to provide after sales service for the equipment should be mentioned. The appointed authorized service provider should be holding a valid certificate from the manufacturer to this effect.
  ii. The manufacturer should give an undertaking that after the warranty period, they shall provide spares and after sale service of the equipment in India for the normal life time of the equipment.

**7.17** University reserves the discretion to issue work/ supply order either in full or phase wise depending upon the requirement and selected vendor will not charge any extra amount for such supply and delivery.

**7.18 Place of delivery:** Dean Faculty of Agriculture, UBKV, Pundibari, Cooch Behar, 736165 and should be quoted on FOR Destination Basis (i.e. Charge of Delivery from International Airport to Destination will be added in the basic quoted price or on CIF /CIP Price )

**7.19 Payment Schedule:** 100% Payment be made after delivery and successful installation of the item.

**7.20 Performance Security:**

Successful bidder should deposit Performance Security money equivalent to the 10% of the order value in the form of DD from any nationalized bank in favour of UBKV payable at Cooch Behar or suitable negotiable instruments as to be decided by the University immediately after issuing purchase order from the University. Such security will be refunded after completion of the warranty period in normal case without any accrued interest. University may forfeit the Security Money (EMD)and performance security money in the event of the following circumstances:

  i. Selected bidder withdraws the bid before expiry of its validity and after receipt of the Purchase Order.
  ii. Selected bidder does not accept the order after issuing the same or fails to enter into a contract within validity period of offer.
  iii. Selected bidder fails to supply the items within the scheduled time as specified in the Purchase Order.
  iv. If before expiry of the warranty period, the supplied items break down or do not function satisfactorily due to the cause related with the item itself or for its installation and not for any reason caused by the University Authority and the supplier denies to take the responsibility to make the supplied items in order.
  v. In case of any false submission /statement by the bidder

vi.   In case of any refusal to abide by terms and conditions or refusal to enter into a written agreement as per prefixed terms and conditions.

**7.21 Quantity Changeability:** Quantity as stated in the tender document may subject to change at the time of issuing purchase order due to the fund crunch or for other valid reasons.

**7.22 Disposal of Disputes:** In case of any dispute, the University's decision will be treated as the final and conclusive. All legal actions are subject to Cooch Behar jurisdiction only.

**7.23 Conditional bid may be liable for rejection.**

**7.24 Discretion of the University:**

i.    University may take decision about non-purchase of the said item even after selection of vendor due to   its fund constraints.

ii.   University reserves the right to relax any clause as stated hereinabove for selection of responsive vender.

iii.  The Tender Selection Committee reserves the right to cancel the N.I.T. due to any unavoidable Circumstances and no claim in this respect will be entertained.

Sd/-

Registrar (Actg.)