TENDER DOCUMENTS
REQUEST FOR PROPOSAL (RFP)
technical for
supply of laboratory equipment for the

FACULTY OF C&P SCIENCES

May, 2016

This RFP Form issued to M/s _______________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

(Tender Fee Rs. 5,000/= non-refundable)

| Last date for Issuance of tender documents: | --------- | 30th May, 2016 |
| Last date for submission of tender documents: | --------- | 31st May, 2016 till 1:00 pm |
| Date for opening of Technical Bid: | --------- | 31st May, 2016 till 1:30 pm |

OFFICE OF THE PROJECT DIRECTOR
C&P SCIENCES PROJECT
Lasbela University of Agriculture, Water and Marine Sciences (LUAWMS)
Uthal Balochistan
Tel. No.: 0853-610907
### Procurement of Lab Equipment Crop & Plant Sciences

#### Technical Proposal

**Horticulture Teaching Lab**

<table>
<thead>
<tr>
<th>SN</th>
<th>Equipment/ Specifications</th>
<th>Complete Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Fiber Glass Fume Hood: External Dimension: 1200x875x1500 mm, Working Zone: 1120x680x1200, Recommended Maximum Exhaust: Required Fume Hood, Required Minimum Exhaust: Required Fume Hood, Main Body: Phenolic Resin Laminates, Air foil: Stainless Steel Grade 304</td>
<td>FIBER GLASS FUME HOOD. Recommended Maximum Exhaust and with compatible stabilizer. By Pass air flow, standard vertical, rising front sash with fluorescent light 30 W. Complete standard unit with base cabinet.</td>
</tr>
<tr>
<td>9</td>
<td>Field Equipment/Machinery: Cutters, Pruning Scissors, Sprayers, budding knives</td>
<td>LS</td>
</tr>
<tr>
<td>10</td>
<td>Other Inputs: Forceps, Spatula, Parafilms, Aluminium Foils, Sand Lamps</td>
<td>LS</td>
</tr>
</tbody>
</table>

### Plant Breeding and Genetics

**Analytical balance: Digital LCD Display operated on 220 V**

<table>
<thead>
<tr>
<th>SN</th>
<th>Equipment/ Specifications</th>
<th>Complete Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Details</td>
<td></td>
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<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>2 Electronic field balances</td>
<td>Top loading with 6000g capacity, Sensitivity: 0.1 g. Digital LCD Display operated on 220 V</td>
<td></td>
</tr>
<tr>
<td>3 Plant Sample Grinder</td>
<td>Continuously operating universal grinder, powerful drive easy to clean working surface made of stainless steel, speed range: 3000-6000 rpm, all materials in contact with medium stainless steel made, with overload protection feature fitted with impact grinding head for crushing brittle had materials such as minerals, building materials, dry and brittle plants and soil samples up to hardness Mohs 6, circumferential speed 31.4 m/s, complete unit of sieves 1.00 to 2.00 mm.</td>
<td></td>
</tr>
<tr>
<td>4 Electric oven</td>
<td>Temperature range: 5 °C above ambient 220 °C, temperature control accuracy: ± 1.0 °C, digital temperature set up and display, inner capacity: 108 L or higher, Number of Shelves: 2-perforated stainless steel, Built in programmed timer.</td>
<td></td>
</tr>
<tr>
<td>7 Hot Plate</td>
<td>Automatic reversal, Speed up to 1200 rpm, Stirring capacity of 15 Liter, Maximum temperature of 370 °C, Operated on 220 V</td>
<td></td>
</tr>
<tr>
<td>8 Electrophoresis Apparatus</td>
<td>Vertical Gel Electrophoresis Apparatus able to make and run two gels simultaneously. Maximum gel size 8x11 cm, gel thickness 1.0 mm, minimum buffer volume external 500 ml, gel tank dimensions: 20x13x16.5 cm, injection moulded unit, compact design, complete unit includes: Electrophoresis tank, casting module, glass plates, gel plates, alignment cord, glass plate separator and instruction manual. With Electrophoresis Power Supply, Digital Voltage Range: 10-300 V in 0.1 V step, touch panel, status alarm, 04 parallel output</td>
<td></td>
</tr>
<tr>
<td>9 Slides, Spatula, Scissors</td>
<td>Digital Camera: Digital Camera WITH EXTRA MICRO-LENS</td>
<td></td>
</tr>
<tr>
<td>10 Electronic Camera</td>
<td>Digital Camera WITH EXTRA MICRO-LENS</td>
<td></td>
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</tbody>
</table>

**Soil and Environmental Sciences Teaching Lab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pH Meter</td>
<td>Digital Bench Model Microprocessor Controlled with parallel temperature indication, pH range: -2.000 to +19.999, pH resolution: 0.005/0.01, MV range: -999.9 to +999.9 mv, Accuracy: ± 0.3 mv with ATC probe, Temperature range: -5 to +105 °C</td>
</tr>
<tr>
<td>2 Vacuum Desiccators</td>
<td>With tubulature Lid stopcock with PYFE, Spindle clear Borosilicate Glass, Capacity 250 mm</td>
</tr>
<tr>
<td>3 Hot Plate</td>
<td>Automatic reversal, Speed up to 1200 rpm, Stirring capacity of 15 Liter, Maximum temperature of 370 °C, Operated on 220 V</td>
</tr>
<tr>
<td>5 Standard Hydrometer Apparatus</td>
<td>For soil textural analysis consisting of Hydrometer, Plungers etc</td>
</tr>
<tr>
<td>6 Electronic field balances</td>
<td>Top loading with 6000g capacity, Sensitivity: 0.1 g. Digital LCD Display operated on 220 V</td>
</tr>
<tr>
<td>7 Water bath</td>
<td>MEMMERT Digital precision thermostatically controlled up to 100 °C, Interior and Housing is made of stainless steel series, WB operated on 220 V</td>
</tr>
</tbody>
</table>
### Soil Sampling set:
- Consisting of following items: Elderman auger (10 cm dia), Root auger (8 cm dia), Sampling tube (3.8 cm dia) with adapter for connection with extension rod, Core Cutter (10 cm inside dia) with driving dolly and hammer

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### Plant Pathology Teaching Lab

1. **Fiber Glass Fume Hood:**
   - **External Dimension:** 1200x875x1500 mm, Working Zone: 1120x680x1200, Recommended Maximum Exhaust: Required Fume Hood, Required Minimum Exhaust: Required Fume Hood, Main Body: Phenolic Resin Laminates, Air foil: Stainless Steel Grade 304
   - **Fiber Glass Fume Hood:** With compatible stabilizer 4 feet wide, constant volume, Bypass air flow, standard vertical, rising front sash with fluorescent light 30 W. Complete standard unit with base cabinet.

2. **Water bath:**
   - **MEMMERT Digital precision thermostatically controlled up to 100 °C, Interior and Housing is made of stainless steel series, WB operated on 220 V
   - **Cirulating Water bath DSB-500D. Tank Capacity:** 10 Liters
   - **Temperature Control:** PID Programmable Control
   - **Temperature Readout:** LED Digital Display
   - **Temperature Sensor:** 100Ω Platinum RTD
   - **Working Temperature:** Ambient +5°C to 100°C
   - **Stability:** ± 0.2 °C
   - **Power Supply:** 220V 50/60Hz

3. **Electronic field balances:**
   - **Top loading with 6000g capacity, Sensitivity:** 0.1 g, Digital LCD Display operated on 220 V

4. **Cooler incubator:**
   - **Digital Microprocessor Control with Programmable, Electronic Thermostat, Temperature range:** -10 to +50 °C with three shelves, Interior Finish: Stainless steel, Cooling and Heating System Forced Circulation
   - **Laboratory refrigerated incubator designed to operate on controlled temperature at below or above. Capacity:** 250 litres.
   - **Temperature:** -10 °C to 70 °C
   - **Accuracy / Uniformity:** ± 0.2 °C / ± 1 °C
   - **Temperature control:** Microprocessor PID control
   - **Timer:** 99 hour 59 minutes
   - **Safety Devices:** Over temperature set Point alarm + shutoff.
   - **Material inner / outer:** Stainless steel inner / Powder coated exterior.
   - **Power Supply:** 220V 50/60Hz
   - **Ambient temperature such as for vaccine storage, drug stability test, studies for tissue culture and incubation, BOD and COD determination. These units provide uniform and continuous operation.
   - **Microprocessor digital PID controller with LED display. Inner glass window lets you view samples without disturbing internal temperature. Easy to read digital display. Over temperature automatic shutoff device. Leakage breaker with over current protection. Stainless steel inner with powder coated outer casing. Compressor is protected from accidental overload by relay.

5. **Mushroom lab**

6. **Disease Specimen Boxes:**
   - **Bacterial, Fungal, Viral Diseases**

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### Entomology Teaching Lab

1. **Fiber glass Fume Hood:**
   - **External Dimension:** 1200x875x1500 mm, Working Zone: 1120x680x1200, Recommended Maximum Exhaust: Required Fume Hood, Required Minimum Exhaust: Required Fume Hood, Main Body: Phenolic Resin Laminates, Air foil: Stainless Steel Grade 304
   - **External Dimension:** 1200x875x1500 mm, Working Zone: 1120x680x1200, Recommended Maximum Exhaust: Required Fume Hood, Required Minimum Exhaust: Required Fume Hood, Main Body: Phenolic Resin Laminates, Air foil: Stainless Steel Grade 304

2. **Electronic field balances:**
   - **Top loading with 6000g capacity, Sensitivity:** 0.1 g, Digital LCD Display operated on 220 V

3. **Refrigerator/Freezer combination:**
   - **Temperature:** 2 to 14 °C & -20 to -30 °C, **Capacity:** Refrigerator: 340 L, Freezer: 82 L, **Temperature Control:** Microprocessor controlled, **Temperature Display:** Digital Type, **Exterior:** Acrylic finish baked on Galvanized steel, **Interior:** Acrylic finish baked on Galvanized steel, **Power Voltage:** 220 V
   - **Stability:** ± 0.2 °C
   - **Working Temperature:** Ambient +5°C to 100°C
   - **Temperature Sensor:** 100Ω Platinum RTD
   - **Temperature Readout:** LED Digital Display
   - **Temperature Control:** PID Programmable Control
   - **Power Supply:** 220V 50/60Hz
   - **Including standard accessories stainless steel bake, waste bottle, water plate, drainage hose

4. **Electric oven:**
   - **Temperature range:** 5 °C above ambient to 220 °C, **temperature control accuracy:** ± 1.0 °C, **digital temperature set up and display, inner capacity:** 108 L or higher, **Number of Shelves:** 2-perforated stainless steel, Baked in programmed timer
   - **Capacity:** 55 lbs

5. **Insect collection boxes, insect catching nets, insect killing bottles and insect wing stretch boxes, insect pins etc.**

6. **Lab testing equipments:**
   - **Micro Applicator**
   - **Tower Sprayer**
   - **Tractor Mount Sprayer**
   - **Power mist blower sprayer**
   - **Hand Sprayer**
Agronomy Teaching Lab

1. Soil Sampling set: Consisting of following items: Elderman auger (10 cm dia), Root auger (8 cm dia), Sampling tube (3.8 cm dia) with adapter for connection with extension rod, Core Cutter (10 cm inside dia) with driving dolly and hammer

2. Electric oven: Temperature range: 5 °C above ambient 220 °C, temperature control accuracy: ± 1.0 °C, digital temperature set up and display, inner capacity: 108 L or higher, Number of Shelves: 2-perforated stainless steel, Built in programmed timer.

3. Hand tools: spade, sickles, khurpas, etc.

4. Electronic field balances: Top loading with 6000g capacity, Sensitivity: 0.1 g, Digital LCD Display operated on 220 V

5. Conductivity Meter: Digital Bench Top, Microprocessor Controlled with parallel temperature indication, Conductivity range: 0.00 mS/cm to 500 mS/cm, accuracy ± 0.5, Temperature Range: -5.0 to +99.9 °C

6. Environmental Monitoring System: Wind speed: 0-75 m/s with ± 1%, Wind Direction: 0-358 with ± 2, Air Temperature: 50 to +150 °C with ± 0.1 °C accuracy, Relative Humidity: 0-100% with ± 2 accuracy, Rainfall: 500 mm/hr with ± 0.2 mm/10 min accuracy, Solar Radiation: 0-2000 W/m with ± 3 accuracy, Soil Temperature: -50 to +150 °C with ± 1 accuracy

7. pH Meter: Digital Bench Model Microprocessor Controlled with parallel temperature indication, pH range: -2.000 to +19.999, pH resolution: 0.005/0.01, MV range: -999.9 to +999.9 mv, Accuracy: ± 0.3 mv with ATC probe, Temperature range: -5 to +105 °C

Central Laboratory for Research

1. HPLC (High Pressure Liquid Chromatography): Sample Injection Rheodyne Valve S 7725i, UV/UV Detector Model S 3210, Peak simple data software Four Channels with bus modules featuring: manually reinsert chromatograms, auto sampler queue and batch reprocessing, click and drag retention windows, zoom in on specific area of data, print chromatograms in colours, overlay chromatograms, baseline subtraction, multilevel calibration curves, Dynamic Data Exchange (DDE), Data logger mode on any channel, Merge results from multiple channels, data smoothing, Calibration Average, Self Validating Hardware

2. Flame Photometer: Digital Single Channel Display with large accessible work area, manual gas control, Safety Features: Cool chimney, Optical Instant Flame-On Detector, Air Pressure Detector, CE Compliance Sensitivity 0.1 ppm for Na and K, Detection limits for Na and K: 20ppb, Fitted with Na, K and Ca standards, Natural Gas Regulator Kit, Air Compressor with 100% with ± 2 accuracy, Rainfall: 500 mm/hr with ± 0.2

3. NMS: Consists of control unit, RF-generation/Pulse Programmer, Receiver/ADC, CPU, TMIO Transmitter, Magnet Unit, Magnet System, Magnet Temperature Control, Optical sample Detector, Probehead Assembly, Probehead, Data system, Host PC (minimum configuration), Windows XX software, Application pool, System Status Logging and NMS TUB-40
<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Model/Details</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Field Balance</td>
<td>TML AB 3001 V3</td>
<td>Sensitive: 0.1 g, Resolution: 0.0001 g per 1 mg, Calibration: 5 points with memorized standard buffers</td>
</tr>
<tr>
<td>Rotary Evaporator</td>
<td>SCILOGEX USA</td>
<td>Resolution/Accuracy: 0.01 °C / 0.1 °F / ± 0.3 °C (± 0.5 °F), Calibrated: 5 points with memorized standard buffers</td>
</tr>
<tr>
<td>Refrigerator/Freezer Combination</td>
<td>MODEL ISOTHERM SINGAPORE</td>
<td>Capacity: 55 ltrs, Temperature Range: -40°C to -86°C, Defrost: Automatic, Door: Form filled energy saving door</td>
</tr>
<tr>
<td>Water Deionizer</td>
<td>30 L, Water purity: 0.1-1.0 µS/cm, Distilled water complete with four cartridges</td>
<td>Typical water quality: 0.1 to 1 µS/cm, Power Supply: 220V 50/60Hz</td>
</tr>
<tr>
<td>Heavy Duty Electronic Field Balance</td>
<td>Top loading with 60 kg capacity, Graduation: 20 g, Pan Size: 450x600mm, Digital LCD Display operated on 220 V</td>
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</tr>
<tr>
<td>Refrigerator/Freezer Combination</td>
<td>REFRIGERATOR/FREEZER COMBINATION KOREA. Capacity: 315 liter, Temperature Range: -30°C, 3 inner doors</td>
<td></td>
</tr>
<tr>
<td>pH Meter</td>
<td>pH meter. Range: 2 to 16.00 ±0.01, Resolution: 0.01 pH / ±0.01 pF, Memory: 100 data sets, Power Supply: 220V 50/60Hz</td>
<td></td>
</tr>
<tr>
<td>Pressure Membrane Apparatus</td>
<td>PRESSURE MEMBRANE APPARATUS. Complete unit with All Glass Vacuum Filtration Assembly, membrane pack and oil-less pump</td>
<td></td>
</tr>
<tr>
<td>Refrigerated Centrifuge Machine</td>
<td>Digital Microprocessor Control, Speed Range: up to 13500 rpm, Temperature Range: 20 to 45°C, Rotors: Various with capacity of different test tubes, Power Supply: 220V 50/60Hz, USB: Yes</td>
<td></td>
</tr>
<tr>
<td>Climatic Test Chamber</td>
<td>Digital LED Display, Microprocessor Control system: Digital, Power Supply: 220V 50/60Hz, USB: Yes, Interface: Bidirectional Rs 232</td>
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</tr>
</tbody>
</table>

**Specifications for Electronic Field Balance**
- Weighing Capacity: 200 g
- Readability: 0.001 g (1 mg)
- Digital Display: Back-lit LCD display
- Interface: Bidirectional RS 232
- Weighing Pan: 115 mm stainless steel

**Specifications for Rotary Evaporator**
- Direction of Rotation: Reversible
- Temperature Range: RT-180°C
- Heat Control Accuracy: ±1 °C
- Heat Output: 1300 watts
- Lift: Motorized
- Stroke: 150 mm
- Time Setting Range: 1-999 minute
- Motor: DC brushless motor
- Protection Class: acc. To DIN EN60529 IP20
- USB: Yes
- Power Supply: 220V 50/60Hz

**Specifications for Refrigerator/Freezer Combination**
- Defrost: Automatic
- Door: Form filled energy saving door
- Temperature Safety: Audible & Visible alarm
- Power Supply: 220V 50/60Hz

**Specifications for Electric Oven**
- Temperature Set up and Display, Inner Capacity: 108 L or 82 L
- Temperature Control: Microprocessor controlled, Programmable Temperature Range: -180°C
- Heating System: Heater with stainless steel dissipation
- Power Supply: 220V 50/60Hz

**Specifications for pH Meter**
- Resolution/Accuracy: 0.01 pH / ±0.01 pH
- Calibration: 5 points with memorized standard buffers
- Memory: 100 data sets
- Power: 12 V DC adapter, 3.3 A (100/240 VAC, SMPS)

**Specifications for Pressure Membrane Apparatus**
- Resolution/Accuracy: 0.1 ºC / 0.1 ºF / ± 0.3 ºC (± 0.5 ºF)
- Power Supply: 220V 50/60Hz

**Specifications for Refrigerated Centrifuge Machine**
- Weighing Capacity: 200 g
- Display: Back-lit LCD display
- Run-up time: max 15 sec
- Run-down time: max 30 sec
- Imbalance Recognition: automatic
- Power Supply: 220V 50/60Hz

**Specifications for Climatic Test Chamber**
- Volume (L): 150 litres
- Temperature Range: 0 to 100°C (150°C)
- Humidity Uniformity: ±1°C ±5% RH
- Temperature Rising Speed: 0 to 100°C about 20 minutes
- Freezing System: One-dimensional fully sealed air cooling system
- Temperature Stability: ±0.2°C ±2%RH
- Power Supply: 220V 50/60Hz

**Specifications for Water Deionizer**
- Maximum Flow Rate: 30 ltr/hr.
- Typical Water Quality: 0.1 to 1 µS/cm.
- Output Water: 30 to 40 ltrs approx
- Power Supply: 220V 50/60Hz.
<table>
<thead>
<tr>
<th>Water bath</th>
<th>Memmert Digital precision thermostatically controlled up to 100 °C. Interior and Housing is made of stainless steel series, WB operated on 220 V</th>
<th>Circulating water bath Tank Capacity : 10 Liters Temperature Control : PID Programmable Control Temperature Readout : LED Digital Display Temperature Sensor : 0000 Platinum RTD Working Temperature : Ambient +5°C to 100°C Stability : ± 0.2 °C Power Supply : 220V 50/60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Vacuum Desiccator With stubulation Lid stopcock with PYREX, Spindle clear Borosilicate Glass, Capacity 250 mm</td>
<td>VACUUM DESICCATOR</td>
</tr>
<tr>
<td>16</td>
<td>Hot Plate</td>
<td>HOTPLATE WITH MAGNETIC STIRRER, MODEL MS 300 HS MESUNG ELECTRONICS KOREA, Maximum Temperature : Up to 400°C Stirring Speed : 100 – 1650 rpm Stirring Capacity : 00ml – 5 Liters Top Plate : Ceramic Coated Dimensions : 180 x 180 mm (Plate Area) Power Supply : 220V 50/60Hz</td>
</tr>
<tr>
<td>17</td>
<td>Kjeldahl Distillation Apparatus</td>
<td>Kjeldahl distillation and Digestion unit K-360 230V 50/60Hz detection 0.02mg nitrogen,steam output 30 to 100%. Digestion unit Autosampler K-371 200-230V 50/60Hz 120W Kjeldahl Autosampler K-371 200-230V 50/60Hz 120W Kjeldahl</td>
</tr>
<tr>
<td>18</td>
<td>Photosynthesis Apparatus</td>
<td>Vertical Gel Electrophoresis Apparatus able to make and run two gels simultaneously. Maximum gel size 8x11 cm, gel thickness 1.0 mm, minimum buffer volume external 500 ml, gel tank dimensions: 20x13x16.5 cm, injection moulded unit, compact design, complete unit includes: Electrophoresis tank, casting module, glass plates, gel plates, alignment cord, glass plate separator and instruction manual, with Electrophoresis Power Supply, Digital Voltage Range: 10-300 V in 01 V step, touch panel, status alarm, 04 parallel output</td>
</tr>
<tr>
<td>19</td>
<td>Electrophoresis Apparatus</td>
<td>Chamber capacity : 50 Ltrs. Controller : Fully automatic microcomputer control system Stainless steel chamber : Ø 325 x 670 mm Material outer : Steel / w epoxy powder coating Safety : Self-induction interlocking device, over temperature protection device, over pressure protection, safety valve, over current and short circuit protection, cover checking system, electric leakage protection, scald protection, automatic failure inspection system Power Supply : 220V 50/60Hz Including standard accessories stainless steel bakets,waste bottle, water plate, drainage hose</td>
</tr>
<tr>
<td>21</td>
<td>Climatic Test Chamber</td>
<td>Digital Led Display, Microprocessor PID control of Temperature, Lighting and Humidity, Programmable Temperature range: 0-50 °C with lamp off and +10 to –50 °C with lamp on position, Temperature Accuracy: ± 0.3 °C, Lighting: 0-2000 Lux programmable and manual adjustment possible, Humidity control range: 55-90%, Effective capacity : 294 L. CLIMATIC TEST CHAMBER. TECHNICAL SPECIFICATIONS Volume (L) : 150 litres Temperature Range : 0 to 100°C (150°C) Humidity uniformity : ±1% ±5%RH Temperature Rising Speed : 0 to 100°C about 20 minutes Freezing System : One-dimensional fully sealed air cooling system Humidity Range : 20%–90%RH Humidity Stability : ±0.2°C ±2%RH Inner/Outer Materials : Stainless steel SUS # 304 Humidifying System : Surface evaporation, humidifier with stainless steel heating Thermal Material : Heat preserved by rock wool and hardened pu foaming Heating System : Heater with stainless steel dissipation Circulatory System : Convection by fan forced circulatory system Dehumidifying system : freezing dehumidifying system Water Supplying System : Advance water tank, fully automatic water supplying control Safety Devices : Leakage and overload protection device, compressor overload protection device, power off device for over-temperature and over humidity, water insufficient protection device, over temperature protection device for humidifier protection Standard Accessories : Two sets of the adjustable SS plate, vacuum glass window, test hole, lamp inside the operation room Power Supply : 220V 50/60Hz</td>
</tr>
<tr>
<td>22</td>
<td>Portable Photosynthesis Apparatus</td>
<td>Portable Photosynthesis System with Fluorescence measurement, along with the Soil CO2 Flux Chamber, Insect Respiration Kit, Custom Chamber Hardware Package, 6400-1TL, Lighted Whole Arabidopsis Chamber (includes RGB Light Source), Expanded Temperature Control Kit, Extended Warranty, AC Power Supply, and Field Stand Leg Extenders. Portable Photosynthesis Apparatus: CO2 by Infrared gas analyzer, H2O by laser trimmed solid state sensors,CO2 measurement range: 0-2000 ppm, CO2 resolution: 1 ppm, IRGA Chamber, Battery life upto 10 hours</td>
</tr>
<tr>
<td>23</td>
<td>Plant Sample Grinder</td>
<td>Plant Sample Grinder (For RNA and Protein) TissueLyser LT , Compact bead mill, 100–240 V AC, 50–60 Hz; with TissueLyser LT Adaptor, 12-Tube Continuous operating universal grinder, powerful drive easy to clean working surface made of stainless steel, speed range: 3000-6500 rpm, all materials in contact with medium stainless steel made, with overload protection feature fitted with impact grinding head for crushing brittle had materials such as minerals, building materials, dry and brittle plants and soil samples up to hardness Mohs 6, circumferential speed 31.4 m/s, complete unit of sieves 1.0 to 2.0 mm.</td>
</tr>
</tbody>
</table>
Terms and Conditions

1. DATE AND TIME OF RECEIPT OF TENDER:

   a. Tender documents duly completed will be received on or before 1:00 pm, 31st May, 2016. The submission and evaluation of bids will be carried out under the “Single Stage Two Envelop Procedure” one envelop will contain the “Technical Proposal” and the second envelop will contain the “Financial Proposal”.
   b. Tender should be addressed to the PROJECT DIRECTOR LASBELA UNIVERSITY OF AGRICULTURE, WATER AND MARINE SCIENCES (LUAWMS) UTHAL Balochistan.
   c. The Technical bids will be opened on the same date/day mentioned above at 1:30 pm in front of LUAWMS Committee and the bidder or bidder’s representative who may choose to attend.
   d. Financial bids of technically qualified firms will be opened in front of LUAWMS Committee. The bidder or bidder’s representative who have written authority from owner.
   e. The financial bids of technically disqualified bidder will be returned un-opened.
   f. Proposal sent to LUAWMS by fax or email will not be accepted.
   g. Contractors / Suppliers are required to sign and stamp each and every page of original tender documents, TECHNICAL AND FINANCIAL photo copies of the tender documents and rate quoted on firm letter’s head and option will not be accepted at all and in such cases tenders will be rejected forthwith.
   h. Any effort by a Bidder to influence LUAWMS, directly or indirectly THROUGH UNFAIR MEANS in LUAWMS’s proposal evaluation, proposal comparison or contract award decision or to meet or discuss with any LUAWMS official unless desired by the LUAWMS may result in the rejection of Bidder’s Proposal and black listing for any future tender of LUAWMS.
   i. All participating recipients of this RFP will be notified in writing by the LUAWMS, regarding any changes made to this RFP for the purpose of clarification.
   j. All responses to this RFP shall become the property of LUAWMS.
   k. LUAWMS will not bear any expense incurred in the preparation of proposals in response to this RFP.

2. COMPANY INFORMATION

   a. Name of Firm: ___________________________________________
   b. Date of Establishment of Business __________________________
   c. (documentary proof of registration etc.): ______________________________
   d. Address: ___________________________________________
   e. Telephone No: ___________________Fax No. ___________________
   f. GST Reg. No: ___________________________________________
   g. National Tax No: ___________________________________________

3. EARNEST MONEY:

   a. Earnest money in the shape of pay order / bank draft in favor of PROJECT DIRECTOR LASBELA UNIVERSITY OF AGRICULTURE, WATER AND MARINE SCIENCES (LUAWMS) UTHAL amounting to 2% of the total bid amount should only be attached with the Financial Proposal (Cheques will not be accepted).
   b. Financial bid not accompanied with earnest money will be rejected forthwith without assigning any reason/right of appeal.
c. Earnest money of successful bidder will be retained till warranty period where as earnest 
money of unsuccessful bidders will be returned on its written request after financial bid opening.
d. After final award, successful contractor(s) will be liable to complete the supply within due 
period as per specification; in case of cancelation of supply order due to default/fails/refuse 
of the supplier, the earnest money shall be forfeited in favor of LUAWMS, Uthal.

5. **PRICES:**
a. The bidder should quote its rates clearly in Pak Rupees in the Financial Proposal 
in both figures and words as per format attached at Annex-B. 
b. The rates quoted shall remain valid from the date of opening of Technical Proposal. 
c. Bid shall be in Pak rupees only and inclusive of all taxes i.e. GST etc. 
d. No transportation/carriage charges will be allowed/paid. 
e. No Conditional bid would be accepted.

6. **PAYMENT PROCEDURE:**
a. No advance/part payment shall be made against the supply of equipment mentioned in this 
tender document. Payment of bill shall be made after complete delivery of the all equipment 
at LUAWMS Campus located at Uthal and issuance of satisfactory/ completion/stock 
verification certificate by the End user / Concerned Faculty. 
b. Payment shall be made after deduction of applicable taxes i.e. Income Tax, GST etc.as per 
government rules.

7. **EQUIPMENT:**
a. The equipment should be new, not used or refurbished. The components of the equipment 
should be assembled by the branded manufacturer. 
b. The equipment should be arranged through the legal channels by providing all duties/taxes 
(if any) levied by the Govt. and towards this end. 
c. Installation with test run on standards and samples should be done by supplier / contractor.

8. **DELIVERY PERIOD:**
a. Delivery of items to be made within a due period after issuance of supply order. 
b. Vendor will be responsible for the safe supply of equipment at LUAWMS Uthal Campus. 
   Broken items will not be accepted at all and will be returned back at supplier own 
   transportation cost. 
   Training/display /demonstration with the provision of all items at least one year free warranty 
   along with company warranty card/support.

9. **AUTHORIZED DEALER:**
In case of authorized dealer certificate of dealership or any other proof from the manufacturer is 
required in the name of the authorized dealer of the manufacturer.

10. **WARRANTY:**
a. Vendor will be responsible for the provision of free at least one year warranty /support with 
labour and parts, or manufacturer warranty whichever is greater . Original warranty Card will 
also be provided. 
b. The warranty period will be considered from the date of actual date of delivery of all 
equipment. 
c. LUAWMS will retain 10% Security till the completion of the warranty period and will 
release the amount after satisfactory report from end user.
11. **PENALTY:**
   a. Liquidated damages shall be applicable as under:

<table>
<thead>
<tr>
<th>Delay to Handover as per Specifications</th>
<th>Percentage of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Delay of one week</td>
<td>0.5%</td>
</tr>
<tr>
<td>b) Delay of two weeks</td>
<td>1.0%</td>
</tr>
<tr>
<td>c) Delay of three weeks</td>
<td>2.0%</td>
</tr>
<tr>
<td>d) Delay of four weeks</td>
<td>4.0%</td>
</tr>
<tr>
<td>e) Delay beyond four weeks</td>
<td>2%</td>
</tr>
</tbody>
</table>

   d. After expiry of seven days, supply order shall stand canceled and earnest money 2% will be forfeited.

12. **INTEGRAL PART:**
   Annex-A and Annex-C are part of Technical proposal which may be read/filled carefully, signed and stamped by the bidder and are to be submitted with the technical proposal envelops.
   a. Annex-B is part of Financial proposal which may be read/filled carefully, signed and stamped by the bidder and is to be submitted with the Financial proposal envelops.

13. **DISQUALIFICATIONS:**
   Offers are liable to be rejected if, there is any deviation from the instructions as laid down in the bid document i.e.
   a. Financial bid is submitted without the required earnest money.
   b. Offers are received after specified date and time.
   c. Specification and other requirements are not properly adhered to or different from those given in the tender documents.
   d. GST and NTN certificates are not attached.
   e. Any inferior product / specification / requirement.
   f. In case differ in specification items will be rejected and return back at supplier own transportation charges.

14. **CERTIFICATION:**
   The bidder should provide copies of firm Registration certificate etc.

15. **AFFIDAVIT:**
   Affidavit on *Legal Paper* to the effect that the firm has not been black listed by any government/semi government/autonomous body or company.

16. **RIGHTS RESERVED:**
   LUAWMS reserves the rights to accept/reject/cancel the any tender or all as per PPRA rules or accept the whole or part of tender or increase or decrease the quantity of equipment without assigning any reason there of. Process of tendering etc cannot be challenged in any court of law. After final awarding successful bidder/bidders will be bound to sign the contract agreement on stamp duty pad @ 0.25% of the cost of supply order on the date of acceptance. LUAWMS reserves the right to award the contract as a whole to one bidder or in parts.
## Check List

<table>
<thead>
<tr>
<th>S.No</th>
<th>Documents Required</th>
<th>Yes</th>
<th>No</th>
<th>Page No.</th>
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<tbody>
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</table>

### Mandatory Requirements

1. Registration of FBR
2. GST Registration # and Certificate
3. Manufacturer / Distributors of Scientific /Laboratory Equipments/wholesalers

### General Requirements

1. Financial Strength *(Bank / Financial Statement for last 5 years)*
2. Company Established
3. Location of Offices
4. Successful Implementations in other organization
5. Size of the Projects completed
6. Number of Reference Able implementations
7. Compliance of Product with Functional Requirements of REP
8. Warranty period and Conditions
9. Maintenance and operational Support
10. Max. time required for complete implementation from date of award of contract

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Signature & Seal of Firm