The delivery of services and supply will be made in 120-days after issuance of Purchase Order (without penalty) and with the prescribed penalty as per following schedule of requirement:

<table>
<thead>
<tr>
<th>MODE OF PENALTY</th>
<th>NO OF DAYS</th>
<th>TOTAL DELIVERY PERIOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Period</td>
<td>120 days</td>
<td>120 days</td>
</tr>
<tr>
<td>With Penalty (written request for extension upto maximum 20-days)</td>
<td>140 days (20 days after 120 days)</td>
<td>140 days (120 + 20)</td>
</tr>
</tbody>
</table>

After expiring of 120-days the LD charges will be imposed as per Notification No. UETT/A&R/S-5(41)/1476, dated 01.01.2016.

“Late Delivery/ Liquidated Damages (LD) thus imposed will not exceed 10% total value of the contract”

Even after imposition of LDs, if the supplier fails to materialize the delivery (material and or services); the Purchaser reserves the right to cancel Purchase order/contract and to forfeit the earnest money (if applicable) after intimating the supplier for such cancellation / forfeiture.

**PRICE SCHEDULE FOR THE GOODS IN C&F/CPT/FOR:**

**Name of Bidder:** ____________________________

**Tender No: SAUG/25/IND/2016**

Purchase of Lab Equipment for Strengthening / Up-Gradation of Labs of Industrial Engineering Department to be completed is tabulated as under:

<table>
<thead>
<tr>
<th>Tender No.</th>
<th>SR. NO.</th>
<th>ITEMS</th>
<th>QTY</th>
<th>Unit Price</th>
<th>Total Cost</th>
<th>Bid Security (2% of the Total Cost)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAUG/25/IND/2016</td>
<td>1</td>
<td>Virtual CNC Milling machine with simulator, Graphic Controller, Virtual Reality software and \ Accessories</td>
<td>01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Virtual Robotic system with VR Simulator, Accessories</td>
<td>01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Virtual Material Handling Storage system with graphics interface and display Machines and immersive Technologies</td>
<td>02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>CAD/ CAPP Integrated Systems with user interface</td>
<td>01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>CIM Modeling Tools IDEFO, IDEF 1X PN Platforms</td>
<td>01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Web-Enabled Manufacturing Software platforms</td>
<td>01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>e-Manufacturing CAD / CAM systems with Network control and Accessories</td>
<td>01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Manufacturing Communication Network experimental bench</td>
<td>01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Electromagnetic Vibration Generation and Measurement System</td>
<td>01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Quantity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Occupational Activity Simulators Ergo Master Plus</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Shipping and handling cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Anthropometric Measuring Systems (Detail of Parts)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harpenden Anthropometry</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bicondylar Caliper</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abdominal Caliper</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Holtain Skinfold Caliper</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harpenden Stadiometer</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sitting Height Table</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Infantometer</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adult Measuring Table</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harpenden Neonatometer</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>HUMANCAD Work Stations</td>
<td>1 Set</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Octave band analyzer kit</td>
<td>1 Set</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>WBGT-Heat stress monitor</td>
<td>1 Set</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Laser interferometer System for machine tool calibration and accuracy assessment</td>
<td>1 set</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Telescopic Ballbar for machine tool calibration and accuracy assessment</td>
<td>1 set</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>3-Component piezoelectric force dynamometer with 3 component charge amplifier</td>
<td>1 set</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Optical precision assembly equipment</td>
<td>1 set</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mechanical precision assembly equipment</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>19</td>
<td>Optical position measurement system</td>
<td>1 set</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Six axis industrial robot with a multiprocessor mobile robot NOMAD with a high speed vision system interconnected with the PLC network.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Temperature, Pressure, Level Controller</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Acoustic emission sensing system consisting of digital wave F 4000 Fracture Wave Detector and software, Digital Wave B 1000 Broadband AE Sensors and Broadband Amplifiers B &amp; K AE sensors, preamplifiers, conditioning amplifiers and pulse rate analyze</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>PLC Trainers</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Shifting/Renovation of Manufacturing Labs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Issued by: (Muhammad Gul Aziz Awan)
Director Procurement

Signature of the Bidder: __________________________________________

Stamp of Bidder: ________________________________________________

Note:

- In case of discrepancy between unit price and total, the unit price shall prevail.

- As per FBR Letter No. C.No.3(2)ST&FE/LP&E/Misc/2014/121940-R dated 03.09.2015 “Only registered suppliers, who are on Active Taxpayers List (ATL) of FBR, are eligible to supply goods/services to Government department.
## SPECIFICATIONS

TENDER NO. (SAUG/25/IND/2016)

PURCHASE OF LAB EQUIPMENT FOR STRENGTHENING / UP-GRADATION OF LABS OF INDUSTRIAL ENGINEERING DEPARTMENT

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Virtual CNC Milling machine with simulator, Graphic Controller, Virtual Reality software and \ Accessories</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Virtual Robotic system with VR Simulator, Accessories</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Virtual Material Handling Storage system with graphics interface and display Machines and immersive Technologies</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>The item will include Virtual Material Handling and storage stand alone software for teaching and research purpose. The software must have the graphical display of material storage and transfer.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>CAD/ CAPP Integrated Systems with user interface</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>This item will include CAD/CAPP integrated stand alone software for teaching and research purpose.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>CIM Modeling Tools IDEF0, IDEF 1X PN Platforms</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>This item will include CIM Modeling Tools IDEF0, IDEF 1X PN Platforms stand alone software for teaching and research purpose</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Web-Enabled Manufacturing Software platforms</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>This item will include Web-Enabled Manufacturing Software.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>e-Manufacturing CAD / CAM systems with Network control and Accessories</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Stand alone software for teaching and research purpose.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Manufacturing Communication Network experimental bench</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Stand alone software for teaching and research purpose.</td>
<td></td>
</tr>
</tbody>
</table>
It will include the following two components

1. Electromagnetic Vibration Generation System
2. Vibration Measurement System

Descriptions are given below

1. Electromagnetic Vibration Generation System

Electrodynamic vibration provides a testing platform for transportation simulation, mechanical shock, mission profile, and Environmental Stress Screening (ESS). With dynamic factors such as displacement, velocity, acceleration, and force, electrodynamic vibration accurately simulates a wide range of conditions that can help improve the quality and reliability of many products. As a closed loop vibration control system, electrodynamic shakers can accurately reproduce real world vibrations on electronic, automotive, aerospace, and military products. Thermotron manufactures all of the elements for a turnkey Vibration Test System including the shaker, amplifier, and control system, as well as splitables, head expanders, and fixturing.

Thermotron’s DSX-Series Shakers perform random, sine-to-shock, sine-on-random, and random-on-random tests. The DSX-Series is available in five different capacities listed below.

### DSX-Series Models

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Force Rating (Lbf/kN)</th>
<th>Avail. Armature Sizes</th>
<th>Max. Velocity (ips/mps)</th>
<th>Shock*</th>
<th>Amplifier (KVA)</th>
<th>Displacement (in/mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSX-2250</td>
<td>2,250 / 10.0</td>
<td>12 in / 30.5 cm</td>
<td>90 / 2.28</td>
<td>Up to 200g</td>
<td>15 KVA</td>
<td>2.5 / 63</td>
</tr>
<tr>
<td>DSX-4000</td>
<td>4,000 / 17.8</td>
<td>16, 24 in / 40.6, 61 cm</td>
<td>70 / 1.78</td>
<td>Up to 130g</td>
<td>15 KVA</td>
<td>2.5-3 / 63-75</td>
</tr>
<tr>
<td>DSX-6650</td>
<td>6,650 / 29.6</td>
<td>16, 24 in / 40.6, 61 cm</td>
<td>90 / 2.28</td>
<td>Up to 200g</td>
<td>30 KVA</td>
<td>2.5-3 / 63-75</td>
</tr>
<tr>
<td>DSX-8000</td>
<td>8,000 / 35.6</td>
<td>16, 24 in / 40.6, 61 cm</td>
<td>100 / 2.54</td>
<td>Up to 200g</td>
<td>45-60 KVA</td>
<td>2.5-3 / 63-75</td>
</tr>
<tr>
<td>DSX-12000</td>
<td>12,000 / 53.4</td>
<td>16, 24 in / 40.6, 61 cm</td>
<td>90 / 2.29</td>
<td>Up to 200g</td>
<td>60 KVA</td>
<td>2.5-3 / 63-75</td>
</tr>
</tbody>
</table>

*Dependent on pulse definition or payload

2. Vibration Measurement System

**Equipment:** VibraScout USB DC Triaxial Vibration Measurement System

The VibraScout Vibration Measurement System consists of a USB triaxial DC response accelerometer, 15-foot 4-pin to USB cable assembly, VibraScout Data Acquisition Software, and VibraScout Windows compatible Post Processor software on CD (no license required).

The accelerometer model features power from a PC bus, and as a result no additional external power supply is required. The software package supplied with each system allows for real time, three directional acceleration acquisition (including Static Inclination) along with real-time temperature monitoring. The standard USB protocol handles all the sensor communications with the PC and provides the following information: storage of acceleration
and temperature data; real-time scrolling plots of acceleration data with display of min, max and mean; real-time logging of data to delimited file for importing into Excel; both auto and smart triggering modes; digital filters to improve signal/noise ratio; real-time data compression to Fast Fourier Transform (FFT); and many more.

Offered with a 16g range, the variable capacitance (VC) accelerometer combines an integrated VC chip in a hermetically sealed titanium housing weighing 17 grams, and is offered with a low-end frequency response down to DC (0 Hz) and an upper frequency range of 1,100 Hz. Units are rugged to 10,000g shock and operate from +3.8 to +6.0 VDC power.

The VibraScout Post Processor software is designed to provide a user with the tools to apply non-linear interpolation to resample raw data that is recorded with VibraScout software at higher frequencies improve signal resolution. Data is valid only up to 1.1 kHz after applying the post processing. This mathematical interpolation is performed using the Whittaker-Shannon interpolation technique to reproduce the recorded real signals with proper amplitude.

Features of the VibraScout Post Processor software include: plot recorded data from the software; zoom and select a specific timeframe of recorded data for post processing; reproduce interpolated oversampled data to provide better resolution of vibration signals; multiple file types to export to including ASCII, time history .JPG files, TDMS binary files of time history data readable in Microsoft Excel, PSD and FFT plots in Joint Photographic file format; and display of recorded average temperature.

The VibraScout USB Vibration Measurement System was designed for a variety of low-to-medium frequency vibration applications where portability is critical including quick, easy in-field data collection; Noise, Vibration and Harshness (NVH); static angular measurements; ride quality; vibration measurement and diagnosis of rotating machinery; and simplified field data testing.

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Occupational Activity Simulators Ergo Master Plus Shipping and handling cost</td>
<td>1</td>
</tr>
</tbody>
</table>
**PrimusRS - The Ultimate Physical Therapy Equipment.** The BTE PrimusRS is the most versatile and functional smart physical therapy equipment for multi-joint testing, orthopedic rehab, neuromuscular reeducation, and advanced musculoskeletal athletic training of the upper & lower extremities and the core. Evaluate, rehab, and track progress with Isotonic, Isometric, Isokinetic, & CPM resistance modes. PrimusRS physical therapy equipment is the premier choice for evidence-based physiotherapy, physical therapy, occupational therapy, and sports medicine. The BTE PrimusRS is also used by elite athletic trainers and strength coaches for objective, data-driven testing and training of athletes.

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Anthropometric Measuring Systems (Detail of Parts)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harpenden Anthropometry</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Bicondylar Caliper</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Abdominal Caliper</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Holtain Skinfold Caliper</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Harpenden Stadiometer</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sitting Height Table</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Infantometer</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Adult Measuring Table</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Harpenden Neonatometer</td>
<td>1</td>
</tr>
</tbody>
</table>

**Anthropometric Measuring Systems**

Anthropometric Measuring Systems include the following parts

**Harpenden Anthropometer**

Harpenden anthropometer gives a direct reading, to the nearest millimetre, over a range of 50 mm to 570 mm (See Figure). It is constructed mainly of light alloy. Its sliding member operates via miniature ball-bearing rollers in order to ensure a movement which is free yet without cross-play. It would also include a carrying case, complete with straight and recurved branches, a spare counter and beam extensions for the measuring of heights of up to two metres. Weight in case: 2.8 kg approx.

![Figure: Harpenden Anthropometer](image)

**Bicondylar Caliper**

Measuring range: 0mm to 140mm
Abdominal Caliper

This caliper makes a direct reading of the distance between the subject's back and the front of the subject's abdomen. The inbuilt spirit level (which ensures a vertical measurement is taken) helps to give estimates of intra observer precision which produced a mean of absolute deviation of 0.4cm, coefficient of variation of 2.5% and an intraclass correlation coefficient of 95.8.

Holtain Skinfold caliper

Holtain Skinfold caliper has been designed for the accurate measurement of sub-cutaneous tissue, and it incorporates the recommended principles for standard usage in such measurements.

DETAILS
Measuring range: 0 mm to 48 mm.
Pressure between Anvils (constant): 10 gms/sq. mm.
Nett weight: 0.4 kg
Dial Graduation: 0.2 mm.

Harpenden Stadiometer

The main frame of this instrument is rigidly made of light alloy angle and provided with adjustable wall brackets for mounting purposes. The Stadiometer head-block operates via miniature ball-bearing rollers in order to ensure a movement which is free yet without cross-play. The Stadiometer has a high speed Veeder-Root counter
Weight: 12.7 kg approx.
Sitting Height Table

The Harpenden Sitting Height Table has ball-bearing mounted, counter-balanced head block, giving accurate and direct readings from 320 mm to 1090 mm. In addition it has a secondary carriage, fitted with an anti-reverse carriage lock, in order to compensate for upper leg variations: and an adjustable foot-rest in order to compensate for lower leg variations.

Specification

This instrument is constructed mainly of light alloy on rigid tubular steel legs fitted with adjustable feet. All metal parts have a silver/grey hammer finish.
Weight: 24kg
**Infantometer**
The Infantometer counter recording instrument designed for post-neonate growth studies. Its freely moving, ball-bearing mounted, carriage is operated via a constant pressure lever, which automatically locks the carriage at the correct measuring point.
Measuring range: 300 mm to 940 mm
Weight: 6.75kg

![Infantometer](image1)

**Adult Measuring Table**
This counter recording instrument has the potential for speedy and error-free direct readings, to the nearest millimetre, over a range of 300 mm to 2100mm. Its sliding member operates via ball-bearing rollers in order to ensure a movement which is free yet without cross-play.
Weight: 29.5kg

![Adult Measuring Table](image2)

**Harpenden Neonatometer**
The ball-bearing mounted carriage has an extremely free movement and is operated via a constant pressure lever, which automatically locks the carriage at the correct measuring point. This mechanism ensures reproducibility of measurement and effectively eliminates variation due to differing operator techniques.
The Neonatometer will include two lengths: long, for normal neonates and short, which will fit in most incubators, for prematures.
Measuring range: Long, 188 mm to 750 mm. Short, 180 mm to 600 mm

![Harpenden Neonatometer](image3)
<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>HUMANCAD Work Stations</td>
<td>1 Set</td>
</tr>
</tbody>
</table>

One set will include HumanCAD 3 solution.

HumanCAD’s ergonomic evaluation tools provide data on potential injury risk and postural analysis. Other human factor tools aid in the determination of reach, vision, comfort and fit requirements.

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Octave band analyzer kit</td>
<td>1 Set</td>
</tr>
</tbody>
</table>

**CESVA SC260 Integrating-averaging sound level meter and spectrum analyser**

The SC260 is a user-friendly, class 2 integrating sound level meter. It can be used as either a sound level meter or as a real time spectrum analyser in one-third octave bands and octave bands, with class 2 filters.

The SC260 measures all functions simultaneously, with all frequency weightings. Among these are all the functions necessary to calculate the basic indices for the acoustic evaluation of most countries in the world: S, F and I functions, equivalent continuous levels, percentiles, impulsiveness indices, peak levels, sound exposure levels, short functions, etc.

The free memory space can be also configured as a circular memory. This feature along with the possibility of downloading data simultaneously to its storage, converts the SC260 into the perfect platform for permanent acoustic monitoring. The microphone is detachable. It can therefore be uncoupled and moved away from the SC260 by means of an extension cable (CNRITV). The instrument can be complemented with an outdoor kit for making measurements in the open air.

**Applications for SC260**

- Sound Insulation measurements
- Environmental measurements
- Sound power measurements (machinery)
- Sound and Video installation

**Supplied accessories**

- FNS-020: Case
- PVM-05: Wind screen
- SFT030: Cesva Capture Studio software
- CN1US: USB cable with mini-USB connector

**Product Highlights**

- Class 2 sound level meter
- Real time spectrum analyser in octave bands and one-third octave bands
- Measures all parameters simultaneously with frequency weightings A, C and Z
- One single range

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>WBGT-Heat stress monitor</td>
<td>1 Set</td>
</tr>
</tbody>
</table>

**WBGT-Heat stress monitor**

SATO WBGT Heat Stress Monitor Model SK-150GT including Tripod (Please quote with Tripod)
Model SK-150GT

The SK-150GT is a handy type instrument that can measure temperature, humidity and globe temperature to approximate the Wet Bulb Globe Temperature (WBGT) index. This can be used as a guide for preventing heat related illness and estimating heat stress of working and activity related environments.

Features
- Alarm: The alarm is triggered when the measured WBGT value reaches the set value.
- HOLD function, MAX/MIN function
- Measuring ambient of WBGT index can be set.
- Auto power-off (in 20 min.)
- Carrying case for damage prevention and storing of the instrument.

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>SK-150GT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range</td>
<td></td>
</tr>
<tr>
<td>Air Temperature (TA)</td>
<td>0.0 to 50.0°C</td>
</tr>
<tr>
<td>Globe Temperature (TG)</td>
<td>0.0 to 80.0°C</td>
</tr>
<tr>
<td>WBGT Index</td>
<td>0.0 to 50.0°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>10.0 to 95.0%rh</td>
</tr>
<tr>
<td>Accuracy</td>
<td></td>
</tr>
<tr>
<td>Air Temperature (TA)</td>
<td>±0.6°C</td>
</tr>
<tr>
<td>Globe Temperature (TG)</td>
<td>±2°C</td>
</tr>
<tr>
<td>WBGT Index</td>
<td>±2°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>±3% rh (20 to 90%rh at20 to 30°C) ±5% rh (other than above)</td>
</tr>
<tr>
<td>Resolution</td>
<td></td>
</tr>
<tr>
<td>Air Temperature (TA)</td>
<td>0.1°C</td>
</tr>
<tr>
<td>Globe Temperature (TG)</td>
<td>0.1°C</td>
</tr>
<tr>
<td>WBGT Index</td>
<td>0.1°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>0.1% rh</td>
</tr>
<tr>
<td>Sampling time</td>
<td>approx. 2 seconds</td>
</tr>
</tbody>
</table>
### WBGT alarm

<table>
<thead>
<tr>
<th>Setting range</th>
<th>20.0 to 49.9 (no cancelation)</th>
</tr>
</thead>
</table>

### Functions

- Change-over switch for WBGT Index of indoor and outdoor
- Auto power-off in approx. 20 min.
- MAX/MIN
- HOLD

### Operation ambient

0 to 50°C, below 95%rh (no condensing)

### Storage ambient

-10 to 50°C (no condensing)

### Power requirement

9VDC Battery 6F22 (006P) x 1

### Battery life

approx. 600 hours in continuous use (without use of alarm)

### Dimensions

- Main Unit: (W) 71 x (H) 27.5 x (D) 30 mm (without globe)
- Globe: Ø 60 mm

### Weight

approx. 240 g (with battery)

### Standard accessories

- 9VDC Battery 6F22 (006P) x 1
- Carrying case

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Laser interferometer System for machine tool calibration and accuracy assessment</td>
<td>1 set</td>
</tr>
</tbody>
</table>

**Laser interferometer System** will consist the following

1. XL-80 laser system with universal shutter and XC-80 compensator
2. Tripod and Stage
3. LaserXL™ software
4. QuickViewXL™ software and
5. XR20-W Rotary Table

**XL-80 laser**

The XL-80 laser produces an extremely stable laser beam with a wavelength that is traceable back to national and international standards.

The laser frequency stability is specified as ±0.05 ppm over 1 year and ±0.02 ppm over 1 hour. Linear measurement accuracy is an assured ±0.5 ppm over the whole environmental range i.e. from 0 ºC - 40 ºC (32 ºF - 104 ºF) and 650 mbar - 1150 mbar. Readings are taken at 50 kHz, with a maximum linear measurement speed of 4 m/s and a linear resolution of 1 nm; even at maximum speed.

With integrated USB there is no requirement for a separate laser-to-PC interface. The laser also features an auxiliary analogue signal output as standard, with quadrature output a factory option. The same socket also accepts a trigger signal input for data capture synchronization.

LED status lights, indicating laser status and signal strength, provide back-up to the software’s ‘on-screen’ indicators. Together with a switchable long range mode (40 m - 80 m) and a warm-up time of less than 6 minutes,
these features make the XL-80 quick and easy to use. An external, switch mode power supply ensures 90 V - 264 V flexibility in input voltage.

The XC-80 compensator
The XC-80 compensator is a key factor in XL system’s measurement accuracy. Featuring ‘intelligent sensors’ that process the readings at source, the compensator very accurately measures air temperature, air pressure and relative humidity.
It then modifies the nominal value of the laser wavelength to give a true value, used in displacement calculations, which virtually eliminates any measurement errors resulting from these variations. This can be done automatically, every 7 seconds, as indicated by LED status lights on the XC-80 unit.
Like the XL-80 laser, the compensator is directly connected to PC via a USB port which, for the XC unit, also supplies power (no separate power supply is required).

2. Tripod and Stage
Tripod and stage are used to adjust the laser’s position relative to the desired measurement axis.
The XL tripod stage allows for precise angular rotation and translation of the XL-80 and is designed to be left attached to the laser unit for easy storage and quick set-up.
A ‘quick fit/release’ mechanism enables rapid and secure fixing to the tripod. For those applications where tripod mounting is not convenient, e.g. for mounting directly on a machine tool table, the stage and laser can also be mounted on most standard magnetic bases, using an optional adapter with M8 thread.
3. **LaserXL™ software**

LaserXL™ software includes modules for linear, angular, rotary axis, flatness, straightness and squareness measurements, as well as dynamic measurement capability. Standard report options conform to many international machine performance checking standards, such as ISO, ASME, VDI, JIS and GB, and include a comprehensive Renishaw analysis. The standard analysis software includes an option to generate compensation values for use in the CNC machine’s controller, significantly improving the machine’s positioning accuracy. The ‘stand alone’ linear error compensation packages include additional capability to read and write to the machine’s controller, enabling existing error compensation parameters to be read and new ones to be uploaded.

4. **QuickViewXL™ software and**

QuickViewXL™ is a simple to use, intuitive software package to capture, review and save dynamic data acquired via the XL-80 laser measurement system. Knowledge of a position sensitive machine’s dynamic characteristics - acceleration, velocity, vibration, settle time, resonance and damping - is critical in many applications. These characteristics will influence operational capabilities such as positional accuracy, repeatability, surface finish, throughput and wear.
QuickViewXL™ provides the ideal tool for R&D, as it enables quick and easy investigation, review and characterization of motion systems. It provides users with the following functionality:

- Live data display in an oscilloscope style format
- Data capture rate of 50 kHz
- Supports measurement with linear, angular or straightness measurement optics
- Three modes of data capture: free running, single shot trigger and multi-shot trigger
- Distance, velocity and acceleration display modes
- Selectable filters of 1, 2, 5, 10, 20, 50 and 100 ms response
- Cursors for measurement of amplitude, time and frequency
- Manual scale, pan and zoom functions allowing ‘close up’ analysis of selected data
- Auto scale option

Captured data can easily be loaded into supporting applications such as MathCAD, Mathematica and Excel for further analysis using CSV file format. It can also be loaded into Renishaw’s LaserXL™ software allowing FFT analysis.

5. XR20-W Rotary Table.
The XR20-W provides for automatic data collection when used with a Renishaw laser and angular optics.
Measurement specifications

### Linear

<table>
<thead>
<tr>
<th>Specification</th>
<th>Metric</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear measurement range</td>
<td>0 m – 80 m</td>
<td>0 in – 3200 in</td>
</tr>
<tr>
<td>Measurement accuracy (with XC-80 compensator)</td>
<td>±0.5 ppm (parts per million)</td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>0.001 µm</td>
<td>0.1 µm</td>
</tr>
</tbody>
</table>

For measurements over 40 m it is recommended to use the long range linear accessory kit.
Performance specifications for linear (above) and other measurement modes are quoted to 96% confidence level (k = 2), and are valid across the full environmental operating range.

### Angular

<table>
<thead>
<tr>
<th>Specification</th>
<th>Metric</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axial range</td>
<td>0 m - 15 m</td>
<td>0 in - 590 in</td>
</tr>
<tr>
<td>Angular measurement range</td>
<td>±175 mm/m</td>
<td>±10°</td>
</tr>
<tr>
<td>Angular accuracy</td>
<td>±0.2% ± 0.5 ± 0.1 µm/m</td>
<td>±0.2% ± 0.1 ± 0.007° arc sec</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1 µm/m</td>
<td>0.01 arc sec</td>
</tr>
</tbody>
</table>

Where M = measurement distance in metres; F = measurement distance in feet
% = percentage of calculated angle
* With high accuracy angular optics (± 0.6% with standard optics)

### Rotary

<table>
<thead>
<tr>
<th>Specification</th>
<th>Metric</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angular target range</td>
<td>up to 25 revolutions</td>
<td></td>
</tr>
<tr>
<td>Measurement accuracy (zero at 0°)</td>
<td>±5 µm/m</td>
<td>±1 arc sec</td>
</tr>
<tr>
<td>Max axis (-5° axis rotation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotation speed (≥5° axis rotation)</td>
<td>10 rpm</td>
<td></td>
</tr>
<tr>
<td>Bluetooth range</td>
<td>Typically 5 - 10 metres</td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>Any</td>
<td></td>
</tr>
</tbody>
</table>

### Flatness

<table>
<thead>
<tr>
<th>Specification</th>
<th>Metric</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axial range</td>
<td>0 m - 15 m</td>
<td>0 in - 590 in</td>
</tr>
<tr>
<td>Flatness measurement range</td>
<td>±1.5 mm</td>
<td>±0.06 in</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.6% ± 0.02 M² µm</td>
<td>±0.6% ± 0.08 F² µin</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 µm</td>
<td>1 µm</td>
</tr>
<tr>
<td>Foot spacing</td>
<td>50 mm, 100 mm and 150 mm</td>
<td>2 in, 4 in and 6 in (approx)</td>
</tr>
</tbody>
</table>

Where M = length of the diagonal in metres; F = length of the diagonal in feet;
% = percentage of calculated flatness

### Straightness

<table>
<thead>
<tr>
<th>Specification</th>
<th>Metric</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axial range (short range)</td>
<td>0.1 m - 4.0 m</td>
<td>4 in - 160 in</td>
</tr>
<tr>
<td>(long range)</td>
<td>1 m - 30 m</td>
<td>40 in - 1200 in</td>
</tr>
<tr>
<td>Straightness measurement range</td>
<td>±2.5 mm</td>
<td>±0.1 in</td>
</tr>
<tr>
<td>Accuracy (short range)</td>
<td>±0.5% ± 0.5 ± 0.15 M² µm</td>
<td>±0.5% ± 0.15 F² µin</td>
</tr>
<tr>
<td>Accuracy (long range)</td>
<td>±2.5% ± 5 ± 0.015 M² µm</td>
<td>±2.5% ± 0.05 F² µin</td>
</tr>
<tr>
<td>Resolution (short range)</td>
<td>0.01 µm</td>
<td>1 µm</td>
</tr>
<tr>
<td>Resolution (long range)</td>
<td>0.1 µm</td>
<td>10 µm</td>
</tr>
</tbody>
</table>

Where M = measurement distance in metres, F = measurement distance in feet;
% = percentage of displayed value
† subject to environmental conditions

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
</table>
The set will include the following:

1. Ballbar system (Model: QC20-W)
2. Ballbar 20 software

Note: Training is compulsory for this equipment. Please quote with training.
The item includes the following:
1. 3-Component piezoelectric force dynamometer
2. 3 component charge amplifier

The description is as follows:
1. 3-Component piezoelectric force dynamometer

It includes 3-Component System for Measuring Cutting Forces up to 8 kN During Turning

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Type 9129A...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range</td>
<td>Fx, Fy, Fz kN</td>
</tr>
<tr>
<td>max. allowable</td>
<td>Fx, Fy, Fz kN</td>
</tr>
<tr>
<td>Calibrated measuring ranges</td>
<td>Fx, Fy, Fz N</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Fx, Fy, Fz pC/N</td>
</tr>
<tr>
<td>Natural frequency</td>
<td>fx kHz</td>
</tr>
<tr>
<td></td>
<td>fy kHz</td>
</tr>
<tr>
<td></td>
<td>fz kHz</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>°C</td>
</tr>
<tr>
<td>Clamping surface</td>
<td>mm</td>
</tr>
<tr>
<td>LwXxH</td>
<td>mm</td>
</tr>
<tr>
<td>Weight</td>
<td>kg</td>
</tr>
<tr>
<td>Degree of protection IEC/EN 60529</td>
<td></td>
</tr>
<tr>
<td>Connection</td>
<td></td>
</tr>
</tbody>
</table>

www.kistler.com

2. 3 component charge amplifier

The 3 component charge amplifier will be suitable with the 3-Component System for Measuring Cutting Forces up to 8 kN During Turning

Or

Equivalent

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Optical precision assembly equipment</td>
<td>1 set each</td>
</tr>
<tr>
<td></td>
<td>Mechanical precision assembly equipment</td>
<td></td>
</tr>
</tbody>
</table>

The item will include:

1. Optical precision assembly equipment
2. Mechanical precision assembly equipment

1. Optical precision assembly equipment

It will include the item as described in figure.
Note: Training is compulsory for this equipment. Please quote with training.

2. Mechanical precision assembly equipment

It will include the item as described in figure
Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Optical position measurement system</td>
<td>1 set</td>
</tr>
</tbody>
</table>

The K-Scan MMDx is a walk-around scanning solution combining the digital ModelMaker MMDx laser scanner with the portable K-series optical CMM. K-Scan is ideally suited for on-site 3D digitizing tasks requiring minimum setup and fast results. Operating the scanner with a laser stripe width up to 200mm is easy and efficient. The 6m working range of the optical CMM is more than sufficient to take measurements in and around a full vehicle. The dense point clouds that are acquired can be graphically analyzed in Focus software, or in 3rd party packages.
**SpaceProbe**
The ergonomic SpaceProbe is used for traditional touch trigger or analog scanning measurements. Automatic tip detection supports a variety of ball and point probes and extensions.

- Robust, lightweight design
- Ergonomic position of trigger buttons to control measurements
- Sound and LED measurement feedback
- Wireless kit available
- Multiple probe tip extensions for cavity measurement
- Analysis in CMM-Manager or 3rd party tactile measurement software

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Six axis industrial robot with a multiprocessor mobile robot NOMAD with a high speed vision system interconnected with the PLC network.</td>
<td>1</td>
</tr>
</tbody>
</table>

This item will include six axis industrial robot with a multiprocessor mobile robot NOMAD. It will also include high speed vision system interconnected with the PLC network.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Temperature, Pressure, Level Controller</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Acoustic emission sensing system consisting of digital wave F 4000 Fracture Wave Detector and software, Digital Wave B 1000 Broadband AE Sensors and Broadband Amplifiers B &amp; K AE sensors, preamplifiers, conditioning amplifiers and pulse rate analyze</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>PLC Trainers</td>
<td>2</td>
</tr>
</tbody>
</table>
This equipment will include two sets of PLC Trainer (*Siemens or Allan Bradley or Equivalent*) along with the modules from the following:

1. Hydraulics and Pneumatics
2. Electro-Pneumatic System
3. Electro-Mechanical System
4. Bottling Application System
5. Wind Turbine Application System

Note: Training is compulsory for this equipment. Please quote with training.

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Equipment</th>
<th>Quantity (sets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Shifting/Renovation of Manufacturing Labs</td>
<td></td>
</tr>
</tbody>
</table>

The item will include:

1. Fork lift
2. Lever chain hoist (10ton capacity)
3. Foldable Transport Trolley (01 ton capacity)
4. Hydraulic jack trolley type (5 ton capacity)
TENDER BIDS SUBMISSION & OPENING DATE AND TIME

TENDER NO. (SAUG/25/IND/2016)

PURCHASE OF LAB EQUIPMENT FOR STRENGTHENING / UP-GRADATION OF LABS OF INDUSTRIAL ENGINEERING DEPARTMENT

<table>
<thead>
<tr>
<th>Tender No.</th>
<th>Description/Specification</th>
<th>Date of Submission of Tender Documents</th>
<th>Date Opening of Tender</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAUG/25/IND/2016</td>
<td>Purchase Of Lab Equipment For Strengthening / Up-gradation Of Labs Of Industrial Engineering Department</td>
<td>16.03.2016 (Wednesday) at 11:00 am</td>
<td>16.03.2016 (Wednesday) at 11:30 am</td>
</tr>
</tbody>
</table>

Muhammad Gul Aziz Awan)  
Director Procurement
<table>
<thead>
<tr>
<th>S. No.</th>
<th>Item Name and Description</th>
<th>Marks</th>
<th>Maximum Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Past Performance/ Experience of the Bidder (Reg with GST/NTN)</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>1.1</td>
<td>1 - 3 year experience</td>
<td>2</td>
<td>--</td>
</tr>
<tr>
<td>1.2</td>
<td>4 - 8 year experience</td>
<td>4</td>
<td>--</td>
</tr>
<tr>
<td>1.3</td>
<td>9 - 15 year experience</td>
<td>6</td>
<td>--</td>
</tr>
<tr>
<td>1.4</td>
<td>Above 15</td>
<td>10</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>Relevant Experience</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>2.1</td>
<td>1 - 5 year experience</td>
<td>3</td>
<td>--</td>
</tr>
<tr>
<td>2.2</td>
<td>6 - 10 year experience</td>
<td>6</td>
<td>--</td>
</tr>
<tr>
<td>2.3</td>
<td>11 &amp; above year experience</td>
<td>10</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>Financial Position/ Status</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>3.1</td>
<td>Last sales tax paid Form</td>
<td>4</td>
<td>--</td>
</tr>
<tr>
<td>3.2</td>
<td>Bank Certificate (satisfactory)</td>
<td>2</td>
<td>--</td>
</tr>
<tr>
<td>3.3</td>
<td>Statement Worth (Min 2 m)</td>
<td>4</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>Technical Evaluation of quoted items</td>
<td>--</td>
<td>70</td>
</tr>
<tr>
<td>4.1</td>
<td>Specification attached at Annex-A</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Literature in printed shape attached</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>Reliability</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>4.4</td>
<td>Delivery schedule as per need</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4.5</td>
<td>List of clients / where such equipment delivered</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4.6</td>
<td>Satisfactory letter from clients in favor of such equipment</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4.7</td>
<td>Guarantee / Warranty (as the case may be)</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4.8</td>
<td>Provision of training to concerned user/ after sale services</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>4.9</td>
<td>Free Installation (if required) as per requirement</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>--</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Note:** Please submit documents as per above mentioned criteria

(M. Gul Aziz Awan)
Director Procurement
UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA

TENDER NO. SAUG/25/IND/2016

TENDER DOCUMENT
C&F/CPT/FOR BASIS

TENDER FEE NON-REFUNDABLE
Rs. 1000/-

PROCUREMENT CELL
Ph: 051-9047477, Fax: 051-9047478
Email: director.procurement@uettaxila.edu.pk
Web: www.uettaxila.edu.pk
INTRODUCTION:

UET, Taxila having its FTN No. 9011022-6 (hereinafter referred to as the Purchaser) invites sealed bids from eligible bidder(s) under two envelop bidding system (i.e. Technical and Financial Bids in separate envelops) for supply and delivery of goods, materials, equipment and/or services described in the Schedule of Requirement. All the Annexure from “C” to “L” are integral part of the Tender Document and its compliance is mandatory and must be signed and stamped be the vendor/supplier and attached with the relevant proposal, otherwise bids will be rejected.

The Technical Bids will be opened first on the date mentioned in Tender Notice. The financial bids of the only technically qualified bidder(s) will be opened publicly. The Technical Evaluation Report will be published on UET, website before financial bid opening.

1. INSTRUCTIONS TO BIDDER(S):

1.1. The bidder(s) shall bear all cost associated with the preparation and delivery of their bids, and the Purchaser will in no case be responsible or liable for those costs.

1.2. In case of any doubt as to the meaning of any portion of the Specifications or other Terms and Conditions, bidder(s) may seek clarification of the same in writing, but not later than two weeks prior to deadline for submission of bid(s) prescribed by the Purchaser.

1.3. At any time prior to the deadline for submission of bids, a modification in bidding document in the form of an addendum can be issued in response to a clarification requested by a respective bidder(s) or even whenever the Purchaser considers it beneficial to issue such a clarification and/or amendment to all bidder(s). The clarification/amendment issued (in general) shall be placed on the UET website for the intimation to all the prospective bidder(s).

Bidder(s) are required to submit their bid(s), which will bear words “CONFIDENTIAL” and for Tender No. SAUG/25/IND/2016 Purchase of equipment for Strengthening / Up-Gradation of Labs of Industrial Engineering Department, as per Tender Notice.

1.4. The Purchaser will not take any responsibility for collecting the bids from any Agency.

1.5. The Purchaser reserves the right to increase or decrease the quantities or may cancel any or all items shown in the Schedule of Requirement without assigning any reason thereof.

1.6. The Purchaser reserves the right to have the items inspected by its own representative, or by 3rd party at its own cost (if required).
1.7. It must be indicated in the offer that the quotation fully conforms to Technical Specifications and Terms and Conditions of the Tender.

1.8. The Purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all the bids at any time prior to award of Purchase Order without thereby incurring any liability to the affected bidder(s) or any obligation there under. However, UET shall upon request communicate to any bidder(s) who submitted a bid, the grounds for its rejection, but it is not required to justify those grounds.

1.9. Unsolicited advice/clarifications and personal approaches by the bidder(s) at any stage of evaluation are strictly prohibited and shall lead to disqualification.

1.10. In the event that the bidder(s) submits an alternative bid(s) whether in whole or against any of the items, a group or sub-group in addition to its Main Bid, the bids must be marked as "Main Bid" and "Alternative Bid". Alternative bid(s) which do not conform to the specifications, but meet the performance prescribed in, or the objectives of, the specifications may be submitted. However, only the Alternative Bid of the bidder(s) whose Main Bid is the lowest evaluated bid will be considered.

1.11. A bidder, who wishes to have its Alternative Bid(s) considered on an equal basis with all other (Main) Bids, must submit a Bid Bond for each Alternative Bids, an Alternative Bid must be submitted in a sealed envelope clearly marked "Alternative Bid", separate from the Main Bid.

1.12. The bidder(s) are expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required by the Bidding Documents or submission of a bid not substantially responsive to Bidding Documents in all respect will result in the rejection of the bid(s).

1.13. All prospective bidder(s) are advised to read carefully all terms & conditions mentioned in the Tender Documents prior to filling / submission of their quotation.

1.14. Black listing procedure of the Company is attached as Appendix-L. The bidders, contractors, suppliers, agents, consultants, partnership or firms shall be dealt accordingly.

2. **BID PRICES:**

2.1. Firm bid prices shall be quoted in Annexure-B duly filled-in, stamped and signed by authorized representative of Bidder(s). Prices must be quoted as per format of Schedule of Requirement (SOR).

2.2. Bidding Forms and Bid Summery Sheets from Annexure – “C” to “F” and “H” to “K” must also be duly filled-in, stamped and signed by authorized representative of bidder(s).

2.3. Prices must be quoted in C&F/CPT/FOR inclusive of all taxes and duties, indicating unit price and total bid prices. GST must be quoted separately along with copy of GST Certificate. Conditional bid / bid having any price adjustment formula will be rejected.

2.4. Prices must be quoted including all charges like handling, loading, transportation and un-loading, Octroi and Zila Tax etc. for delivery of material at Purchaser’s stores located at **required delivery location**.

2.5. Quoted prices will be valid for 120 days from the opening date of the **Financial**
Bid.

2.6. Technical brochure/literature confirming Size, Brand & Country of Origin of quoted items/material must be attached with the Technical Bid (where deemed necessary).

2.7. Any quotation not confirming to Clause 2.1 to 2.6 shall be rejected without any right of appeal.

2.8. Discount (if any) shall only be entertained on Schedule of Requirement of Bidding Document (Financial Proposal). If the discount is mentioned elsewhere in the bid, the same shall not be entertained.

2.9. Tender submitted without challan form (Tender Fee) & earnest money CDR can be rejected at the time of opening of Tender. Earnest money & challan form will be submitted against each Tender separately.

3. BID SECURITY MONEY:

3.1. The sealed bids complete in all respect must reach in the office of the Director Procurement UET, Taxila along with Bid Security Money 2% in shape of CDR to be attached with financial offer.

3.2. The payment shall be subject to satisfactory inspection report from the concerned evaluation committee and 10% of the total billed amount shall be retained by the University for a Period Not less than six (6) months (after supply).

3.3. Short Bid Security Money or Crossed Cheque as Bid Security Money is not acceptable.

3.4. The Bid Security Money of unsuccessful bidder(s) will be returned after award of Purchase Order to successful bidder(s). The Bid Security Money of successful bidder(s) will be discharged / returned upon bidder(s) furnishing the executing the order/contract (Subject to the satisfactory report without any objection from the end user).

3.5. The Bid Security Money of bidder(s) whose bid is rejected under Clause 2.7 will be returned forthwith.

3.6. The Bid Security Money shall be forfeited:

3.7. If a bidder withdraws its bid during the period of bid validity.

4. SEALING AND MARKING OF BIDS:

4.1. The bidder(s) shall furnish Technical & Financial Bid(s) in two separate sealed envelopes.

4.2. Technical Bids will be opened first.

4.3. Earnest money as mentioned in Press Tender Notice must be enclosed with Financial Bid.

4.4. Only Financial Bid(s) of Technically responsive bidder(s) will be opened publicly.

4.5. Financial Bids of technically non responsive bidder(s) will be returned after award of Local Purchase Order to successful bidder(s).

4.6. The bid shall be submitted in a sealed envelope marked as under:
4.7. The envelope shall also bear the word “CONFIDENTIAL” and following identifications:-

TENDER NO. SAUG/25/IND/2016 PURCHASE OF LAB EQUIPMENT FOR STRENGTHENING / UP-GRADATION OF LABS OF INDUSTRIAL ENGINEERING DEPARTMENT.
DON’T OPEN BEFORE (AS PER SCHEDULE MENTIONED IN THE TENDER NOTICE/SOR)
TECHNICAL/FINANCIAL BID(s) (INDICATE ONE ON EACH ENVELOPE)

4.8. If the envelope is not marked, as instructed above, the Purchaser will assume no responsibility for the misplacement or premature opening of bid(s).

5. DEADLINE FOR SUBMISSION OF BIDS:
5.1. The bids must be delivered at the Reception of UET Taxila on or before as per schedule mentioned in Press Tender Notice and the same will be opened accordingly.

6. LATE BIDS:
6.1. Any bid received by the Purchaser after the prescribed deadline for submission of bids mentioned in Press Tender Notice will not be accepted and returned unopened to the bidder(s).

7. BID OPENING:
7.1. The purchaser will open the Technical Bid, in the presence of bidder’s representative(s) who may chose to attend on date, time and location mentioned above.
7.2. The bidder(s) names, bid prices including bid price modification and bid withdrawals, if any, will be announced at the time of financial bid opening.
7.3. The Purchaser will examine the bids to determine whether they are complete, no computational errors have been made, the required sureties have been furnished, documents have been properly signed, and the bids are generally in order.
7.4. Arithmetical errors found will be corrected as follows:
7.4.1. Where there is a discrepancy between amount in figures and word, the amount in word will prevail.
7.4.2. Where there is a discrepancy between the unit price and the total amount derive from the multiplication of the unit price and the quantity, the unit price as quoted will govern, unless there is an obvious gross arithmetical error in unit price, in which event, the extended amount quoted would prevail.
7.4.3. In case the due date of bids opening falls on a holiday, the bids shall be opened on the next working day.
8. **DETERMINATION OF RESPONSIVENESS:**

8.1. After opening of the bids, the purchaser will determine whether each bid is substantially responsive to the requirements of the bidding documents.

8.2. For the purpose of this clause, a substantially responsive bid is one, which conforms to all the terms and conditions of the bidding documents without material deviation. A material deviation is one which means in-consistent with the bidding document, affects in any substantial way the scope, quality or prescribed delivery schedule or which limits in any substantial way, the Purchaser’s right or the bidder’s obligation under the contract.

8.3. A bid determined to be a non-responsive will be rejected by the purchaser and shall not subsequently be made responsive by the bidder(s) by correction of the non-conformity.

8.4. The purchaser may waive any minor deviation non-conformity or irregularity in a bid, which does not constitute a material deviation, provided that the waiver does not prejudice or affect the relative standing order of other bidder(s).

8.5. To assist in determining a bid’s responsiveness the bidder(s) may be asked for a clarification of his bid. The bidder(s) is not permitted, however, to change bid price or substance of his bid.

8.6. The bidder(s) may lodge a written complaint for redressed of their grievances and disputes to Dispute Resolution Committee within fifteen days of the placement of the Technical Evaluation report on the web.

9. **ISSUANCE OF PURCHASE ORDER (PO):**

9.1. The Purchaser will issue Purchase Order to the successful bidder(s) whose bid is determined to be technically responsive and financially lowest evaluated.

10. **PAYMENT:**

10.1 Payment will be made as follows after inspection and acceptance of goods, materials and equipment etc:

   10.1.1 Payment after delivery
   10.1.2 Payment Against Delivery
   10.1.3 Part Delivery Part Payment
   10.1.4 ____% advance payment against Bank Guarantee

11. **DELIVERY SCHEDULE:**

11.1 Delivery of required material against this tender is to be completed as soon as possible from the date of receipt of firm Purchase Order, excluding a grace period of 07 days allowing for postal delivery of Purchase Order.

12. **EXTENSION IN THE DELIVERY PERIOD:**

12.1 Delivery of the goods shall be made by the supplier in accordance with the delivery schedule given in Purchase Order.

12.2 The supplier may claim extension of the time limits as set forth in the Purchase Order in case of:-

12.3 Changes in the specifications of goods, material & equipment by the Purchaser.
12.4 Delay in provision of clarifications regarding material, drawings and services by the Purchaser.

12.5 Force Majeure pursuant to Clause # 15.

12.6 Justified reasons subject to a written request highlighting the same within a period of seven working days prior to expiry of delivery period mentioned in Purchase Order.

12.7 It should be noted that a request for extension in delivery period shall be considered only if the supplier agrees in writing to pay any increase in taxes or any other charges levied by the Government during the extended delivery period. Purchaser shall not bear any additional price increase during the extended period.

12.8 In case of extension in delivery period, the supplier will extend validity of Performance Bond accordingly at his cost.

12.9 If the supplier fails to supply the ordered material for any reason, within stipulated time, the Performance Bond shall be forfeited and material shall be purchased from elsewhere at his risk and cost.

13. LIQUIDATED DAMAGES:

13.1 LD charges will be imposed as per Notification No. UETT/A&R/S-5(41)/1476, dated 01.01.2016.

“Late Delivery/ Liquidated Damages (LD) thus imposed will not exceed 10% total value of the contract”

13.2 Even after imposition of LDs, if the supplier fails to materialize the delivery (material and or services); the Purchaser reserves the right to cancel Purchase order/contract and to forfeit the earnest money (if applicable) after intimating the supplier for such cancellation / forfeiture.

14. FORCE MAJEURE:

14.1 The supplier shall not be liable for penalty for delay in delivery of ordered goods, if, and to the extent delay in delivery or other failure to perform his obligation under the Purchase Order, of being the result of occurrence of Force Majeure i.e. causes such as natural calamities, war, civil disturbance, military action, fire as well as other circumstance proved to the satisfaction of the Purchaser to be beyond the reasonable control of the supplier, which may impede the fulfillment of the obligations under the Purchase Order.

14.2 The supplier shall notify the Purchaser promptly of the occurrence of Force Majeure and submit his case in writing within 07 days of such occurrence.

14.3 If any of the party is prevented to fulfill its assumed obligations by Force Majeure of constant duration of at least one month, the party shall meet for negotiation. If no satisfactory agreement is reached within a period of two months from the Commencement of the Force Majeure conditions, either party shall have the right to cancel the Purchase Order with immediate effect.

15. INSPECTION AND TEST:

15.1 The Purchaser’s representative(s) shall have the right to inspect and/or test the goods to confirm their conformity with respect to specifications mentioned
in the Purchase Order. The representative of Procurement Cell will witness the inspection (where so required).

15.2 Should any inspected or tested goods fail to conform to the specifications the purchaser shall reject them and supplier shall replace the rejected goods. All costs incurred on such replacement shall be entirely born by the supplier.

15.3 Rejected material shall be moved / replaced by the supplier within 07 days from the receipt of letter/fax issued by the Procurement Department. The supplier shall be liable for the storage charges @ 1/2% (half percent) of the cost of rejected material on every day basis, if the same is not removed within seven days.

15.4 Acceptance/rejection of the material by 3rd party (where required) will be final and binding on both the parties.

16. **WARRANTY**:

16.1 The supplier shall warrant that all goods supplied under Purchase Order shall be according to specifications given in Purchase Order and approved drawings/design etc. Any deviation in material, drawing/design (where applicable) will be replaced by the supplier at his cost.

16.2 The Purchaser shall promptly notify the supplier in writing, of any claims arising under this warranty.

16.3 The supplier will invariably provide warranty/guarantee of spare and consumables.

17. **QUALIFICATION OF SELECTED BIDDER(S)S**:

17.1 The Purchaser will determine to its satisfaction whether the bidder(s) selected as having submitted the lowest evaluated, technically responsive bid qualifies to satisfactorily perform the order.

17.2 The determination will take into account the bidder(s) financial, technical & production capabilities, availability of items ordered for. The bidder(s) shall provide necessary documents as proof along with the bid.

17.3 Any affirmative determination will be a pre-requisite for award of the Purchase Order to the bidder(s). A negative determination will result in rejection of the bid.

17.4 The Purchaser reserves the right at the time of award of order to increase or decrease to a reasonable extent in the quantity of goods specified in the Tender Document without any change in price or other terms and conditions.

18. You are encouraged to inform Director Procurement (PC) on the following addresses/contacts, in case where any UET employee ask for any type of favor whether monetary or in kind:-

<table>
<thead>
<tr>
<th>DESIGNATION</th>
<th>ADDRESS</th>
<th>TEL #</th>
<th>FAX #</th>
<th>E. MAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman CPC</td>
<td>Procurement Cell UET, Taxila</td>
<td>051-9047549</td>
<td>051-9047478</td>
<td><a href="mailto:gulistan.raja@uettaxila.edu.pk">gulistan.raja@uettaxila.edu.pk</a></td>
</tr>
<tr>
<td>Director Procurement</td>
<td></td>
<td>051-9047478</td>
<td>051-9047478</td>
<td><a href="mailto:director.procurement@uettaxila.edu.pk">director.procurement@uettaxila.edu.pk</a></td>
</tr>
</tbody>
</table>
BIDDING FORM (TECHNICAL BID)

Procurement Cell,
University of Engineering &
Technology, Taxila

Gentlemen,

1. Having examined the Bidding Documents including the specifications, the receipt of which is hereby acknowledged, we the undersigned offer to supply & deliver «Description» in conformity with drawings, specifications of goods and conditions of Tender Document.

2. We undertake if our bid is accepted, to commence delivery within __________ days (Please specify days) from the date of receipt of your firm Purchase Order.

3. If our bid is accepted, we will provide the Performance Bond equal to 10% of the Purchase Order excluding GST, for due performance of the purchase order.

4. We agree to abide by all the terms & conditions of the tender for the period of 120 days from the opening of financial proposal & it shall remain binding upon us and may be accepted at any time before the expiry of that period or any extension thereof agreed by us.

5. Until a formal Purchase Order is placed, this bid, together with your written acceptance thereof, shall constitute a binding contract between us. We understand that you are not bound to accept the lowest priced or any bid you may receive.

Dated this ________________ day of _______________ 20_____

(Signature)

(In the capacity of)

Duly authorized to sign Bid for and on behalf of ______________________________________

(Signature of Witness)
Name: - __________________________________________
Address: - _______________________________________
________________________________________________

Annexure - D

BIDDING FORM (FINANCIAL BID)

Procurement Cell,
University of Engineering &
Technology, Taxila

Gentlemen,

1. Having examined the Bidding Documents including the specifications, the receipt of
which is hereby acknowledged, we the undersigned offer to supply & deliver «Description»
in conformity with drawings, specifications of goods and conditions of Tender for the sum of
C&F/CPT/FOR (Price).______________________ (Total bid amount in words) (inclusive of
all taxes) or such other sum as may be ascertained in accordance with the said conditions.

2. Until a formal Purchase Order is placed, this bid, together with your written
acceptance thereof, shall constitute a binding contract between us. We understand that you
are not bound to accept the lowest priced or any bid you may receive.

Dated this ____________________ day of ____________ 20_____

(Signature)
(In the capacity of)

Duly authorized to sign Bid for and on behalf of ____________________________

(Signature of Witness)
Name: - ____________________________
Address: - ____________________________
**ANNEXURE – E**

**BID SUMMARY SHEET**

**TENDER NO. SAUG/25/IND/2016 FOR PURCHASE OF LAB EQUIPMENT FOR STRENGTHENING / UP-GRADATION OF LABS OF INDUSTRIAL ENGINEERING DEPARTMENT**

*(TO BE ATTACHED WITH TECHNICAL BID)*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bidder Name</td>
<td>__________________________</td>
</tr>
<tr>
<td></td>
<td>Address, Phone &amp; Fax No E-mail address</td>
</tr>
</tbody>
</table>

2. Manufacturer Name & Country of Origin: __________________________

3. Items Quoted:(give serial no. only): __________________________

4. Price Validity: __________________________

5. Offered Delivery Period: __________________________

6. GST Registration No: __________________________

7. Bidding form (Annexure-C attached with Technical bid: Yes ( ) No ( )

8. Any Deviation: __________________________

Signature

__________________________

Name & Designation__________________________
ANNEXURE – F

BID SUMMARY SHEET

TENDER NO. SAUG/25/IND/2016 FOR PURCHASE OF LAB EQUIPMENT
FOR STRENGTHENING / UP-GRADATION OF LABS OF INDUSTRIAL
ENGINEERING DEPARTMENT

(TO BE ATTACHED WITH FINANCIAL BID)

1. Bidder Name _____________________________________________
   Address, Phone & Fax NO.__________________________________
   E-mail address ___________________________________________

2. Manufacturer Name & _____________________________________________
   Country of Origin:_________________________________________

3. Items Quoted:(give serial no. only): ________________________________

4. Price Validity: _______________________________________________

   Total C&F/CPT/FOR («DeliverTo») Price:
   (Inclusive of all taxes except GST) ___________________________

5. Price:
   (With GST): __________

6. Offered Delivery Period: _______________________________________

7. Payment Terms: _______________________________________________

8. GST Registration No. ___________________________________________

9. Bidding Form (Annexure-C-1 attached with financial bid): Yes  No

10. Any Deviation: _______________________________________________

11. Signature
   ________________________________
   Name &
   Designation__________________________
DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC.
CERTIFICATE

Submitted to UET with the reference to Purchase Order No. ______________ hereby declares its intention not to obtain or induce the procurement of any contract, right, interest, privileges or other obligation or benefit from Government of Pakistan or any administrative subdivision or agency thereof or any corrupt business practice.

Without limiting the generality of the foregoing, the Seller/Supplier represents and warrants that it has fully declared the brokerage, commission, fees etc., paid or payable to anyone and not given or agreed to give and shall not be given or agree to give to anyone within or outside Pakistan either directly or indirectly through any national or juridical person, including its affiliate, agent, associate, broker, consultant, briber, finder’s fee or kickback, whether described as consultant fee or otherwise, with the object of obtaining or including the procurement of a contract right, interest, privilege or other obligation or benefit in whatsoever form from GOP except that privilege or other obligation or benefit in whatsoever form from GOP except that which has been expressly declared pursuant hereto.

The Seller/Supplier certificate that it has made and will make full disclosure of all agreement and arrangements with all persons in respect of or related to the transaction with GOP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

The Seller/Supplier accepts full responsibility and strict liability for making any false declaration not making full disclosure, mis-representing facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right interest. Privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GOP under any law, contract or other instrument, be void able at the option of GOP.

Notwithstanding any rights and remedies exercised by GOP in this regard, the Seller/Supplier agrees to indemnify GOP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GOP in an amount equivalent to ten times the sum of any commission, gratification, bribe, tender’s fee or kickback given by the Seller/Supplier as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GOP.

For & On Behalf of
Seller/
Supplier
(WHERE APPLICABLE, TO BE SUBMITTED ON DEMAND OF UET, TAXILA)

FAIR PRICE CERTIFICATE

WE M/S_____________________________________________ HEREBY CERTIFY THAT PRICES QUOTED BY US AGAINST UET, TAXILA TENDER NO.____________________________________ ARE THE LOWEST AND MOST COMPETITIVE AS GENERALLY APPLICABLE TO ALL OTHER BUYERS AND OR SOLD THROUGH OUR AGENTS AS PER PREVAILING INTERNATIONAL MARKET AS ON THE DATE OF QUOTE AND IF IT IS ESTABLISHED AT ANY STAGE THAT THESE WERE HIGHER WE SHALL BE HELD RESPONSIBLE AND AGREE TO PAY IMMEDIATELY THE DIFFERENTIAL TO UET, TAXILA.

SIGNATURE AND SEAL OF THE
MANUFACTURER/SOLE AGENT/AUTHORIZED DEALER

NOTE: FAIR PRICE CERTIFICATE W ILL BE REQUIRED, IN CASE SINGLE BID IS FOUND TECHNICALLY RESPONSIVE IN THE RESPECTIVE TENDER.
(On official letter-head of the contractor)
To be signed by the Chief Executive of the bidding company or a representative duly authorized by board resolution.

**Integrity and Ethics Undertaking**

We hereby commit and undertake to observe the following principles during our participation in the contract execution:

a) That we will not directly or through any other person or firm, offer, promise or give to any of the employees of UET involved in or relevant to the execution of the contract any gain, pecuniary benefit or facilitation payment in order to obtain in exchange any advantage of any kind whatsoever during the execution of contract or at any stage thereafter.

b) That we did not enter with any bidder into any undisclosed agreement or understanding either formal or informal to restrict competitiveness or to cartelise in the bidding process.

c) That we will ensure that the remuneration of agents *(if engaged)* is appropriate and for legitimate services only.

d) That we will not use subcontracts, purchase orders or consulting agreements as means of channeling payments to employees of UET.

e) That we will not and have not committed any offence under the Pakistan Penal Code, Prevention of Corruption Act or National Accountability Ordinance to achieve any advantage, gain or benefit during the tender process or the execution of contract.

We further understand and acknowledge that any violation or transgression of the above mentioned principles will attract disqualification from doing business with UET and may also result in permanent exclusion from future contact award processes.

We also accept and undertake to respect and uphold UET’s absolute right to resort to and impose such disqualification, debarment or exclusion.

For and on behalf of ____________
Tender No. ____________
Contract No ________________
(On official letter-head of the bidder)
To be signed by the Chief Executive of the bidding company or a representative duly authorized by board resolution.

**Integrity and Ethics Undertaking**

We hereby commit and undertake to observe the following principles during our participation in the tender process and during the contract execution:

a) That we will not directly or through any other person or firm, offer promise or give to any of the employees of UET involved in the tender process or execution of the contract any gain, pecuniary benefit or facilitation payment in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of contract.

b) That we have not and will not enter with other bidders into any undisclosed agreement or understanding either formal or informal to restrict competitiveness or to cartelise in the bidding process.

c) That we will ensure that the remuneration of agents (*if engaged*) is appropriate and for legitimate services only.

d) That we will not use subcontracts, purchase orders or consulting agreements as means of channeling payments to employees of UET.

e) That we will not commit any offence under the Pakistan Penal Code, Prevention of Corruption Act or National Accountability Ordinance to achieve any advantage, gain or benefit during the tender process or the execution of contract.

We further understand and acknowledge that any violation or transgression of the above mentioned principles will attract disqualification from the tender process and may also result in permanent exclusion from future contact award processes.

We also accept and undertake to respect and uphold UET's absolute right to resort to and impose such disqualification, debarment or exclusion.

For and on behalf of __________
Tender No. ________________
ANNEXURE - K

Form 4
Mandatory for participation in Bidding Process

AFFIDAVIT

I, __________________________ S/o ___________________________ aged ____________ years ____________ working as Proprietor/Managing Partner/Director of M/s ________________________________, having its registered office at ________________________________ do hereby solemnly affirm and declare on oath as under:

1. That I am competent to swear this affidavit being proprietor/one or the partners/ Director of M/s ________________________________
2. That M/s ________________________________ is a proprietorship/partnership firm/company is participating in tender process conducted by UET.
3. That I hereby confirm and declare that none of my/our group/sister concern/associate company is participating/ submitting this tender.
4. That I hereby confirm and declare that my/our firm/company M/s ________________________________ and my/our firm/group/company/sister concern / associate company have not been black listed/de-listed any Institutional agencies/Govt. Deptt/ Public Sector Undertaking.
5. That there is no change in the Name & Style, Constitution and Status of the firm, after Pre-qualification.
6. That I further undertake that in case any of the facts contained above and in our application is round other-wise or incorrect or false at any stage, my/our firm/company/ group/sister concerns/ associate companies shall stand debarred from the present and future tenders of the UET.

(Signature of the Proprietor/Managing Partner/Director with Seal)

DEPONENT

Verified at __________________ on __________________ that the contents of paras 1 to 6 of this affidavit are true and correct to best of my knowledge and no part of this is false and nothing material has been concealed or falsely stated therein.

(Signature of the Proprietor/Managing Partner/ Director with Seal)

DEPONENT

(Signature & Seal of Notary)
BLACK LISTING PROCEDURE

1. Blacklisting

Blacklisting means temporarily or permanently, barring an entity or a person against whom proceedings have been initiated including but not limited to bidder, contractor, supplier, agent, consultant, company, partnership or firm; hereinafter referred to as, Respondent from participating in any future procurement of goods and services. The Respondent(s) individually or collectively as a consortium may stand blacklisted if found to have been involved in any or all of the following acts:

a) Undermines or adversely affects the operations of the company through any of the following:
   • Withdrawing a bid during the bid validity period;
   • Failure or refusal to:
     i. sign the Contract;
     ii. accept Purchase Order / Service Order Terms;
     iii. execute work;
     iv. submit 2% Bid Security Money as per tender terms;
     v. make supplies as per specification agreed;
     vi. fulfill contractual obligations as per contract;
     vii. meet purchase order / service order terms and conditions; and/or,
     viii. to remedy underperformance as per contractual obligations.
     ix. Or any other non-compliance of obligations vital for the execution / compliance of the contract.

b) Repeated non-performance.

c) Indulgences in corrupt or fraudulent practices while obtaining or attempting to obtain contracts in the company.

d) Convicted of fraud, corruption, tax evasion or criminal misappropriation by a court of competent forum.

e) Notified blacklisted/debarred/cross debarred by any public sector organization or international agency. In this regards the contractor has to submit a certificate that he or his principal is not declared blacklisted / debarred / cross debarred by any public sector organization or international agency

f) Furnished information that was false and materially inaccurate or submitted forged or fake documents.

2. Debarment of Natural Terms.

The following shall stand disqualified and debarred from participating in UET tenders or contracts pursuant to black listing proceedings:

i. In case of a company; all directors including its Chairman, Chief Executive and Chief Financial Officer.

ii. In case of partnership; all partners
3. **Debarment of Associated Companies or Entities**

   Where a company or an entity has been blacklisted, all its associated or subsidiary undertaking whether by way of common directorship, common management and control, shareholding or direct or indirect control through directors of blacklisted entity etc shall also stand disqualified from participating in UET tenders or contracts.

4. **Central Purchase Committee.**

   a) The Central Purchase Committee on Procurement Rules Enforcement (Committee) with five members. The Chairman of the Committee should be a permanent member of the committee. The Director of Procurement Cell shall act as the Member/Secretary of the Committee.

   b) The Committee shall submit an annual report to the Vice Chancellor for consideration.

   c) The Committee deliberations as a guiding principle should be based upon adequate evidence. Consideration should be given as to how much credible information is available, and its reasonableness in view of surrounding circumstances, and inferences which may be drawn from the existence or absence of affirmed facts. The assessment should include all documents available and presented.

5. **Proceedings for blacklisting**

   a) Director Procurement (Procurement Cell) on his own accord or on receipt of information or a complaint shall refer the matter to the CPC.

   b) The Committee after examining the material placed before it shall determine whether it is necessary and appropriate to initiate formal blacklisting proceedings.

   c) In case the Committee decides to initiate blacklisting proceedings Respondent shall be formally intimated in writing about the nature of complain/matter and initiation of blacklisting proceedings.

   d) The Respondent shall be intimated by giving a seven days notice through courier services, registered post or fax or email and, shall be provided an opportunity of furnishing response either through written representation or personal hearing or both.

   e) In case the Respondent fails to furnish his defence or representation the committee may proceed exparte on the basis of information, record and material available before it provided that two subsequent notices at three working days intervals have been given.

   f) The Committee shall complete its proceedings within 30 days from the date of first notice given pursuant to paragraph (d) above.

   g) The Respondent against whom blacklisting proceedings have been initiated may be represented through:

      i. In case of an individual or sole proprietorship; in person.
ii. In case of a firm or partnership; by the Chief executive or the Managing Partner, duly authorized.

iii. In case of a company; by the Chief Executive or a Director or any officer duly authorized by the Company

6. **Findings & Decisions:**
   a) The Committee after finalizing its proceedings shall record its findings in writing and decide one of the following measures for implementation:
      i. Temporarily debarred, specifying the time period;
      ii. Blacklisted if the Respondent fails to take remedial action within the specified time; or,
      iii. Blacklisted.
   b) The order of the Committee shall be communicated in writing as per Form 3.
   c) The documents, deliberations reduced in writing and all records of proceedings are to be maintained for five years by the Procurement Cell

7. **Appeal**
   a) The Respondent may appeal within three working days of intimation of decision of the Committee to the Vice Chancellor in writing of any irregularity in the decision of the Committee.
   b) If there exists any substance in the appeal the Vice Chancellor after recorded reasons may direct that Committee may review the case by providing opportunity of hearing to the Respondent provided that the review shall be completed within 15 days.
   c) The Committee shall record its findings in writing and refer the same to the Vice Chancellor for appropriate orders.
   d) If the decision at 6(ii) or (iii) materializes then the decision is fit to be publicized and communicated to PPRA, and any other department if deemed necessary, and also hoist on UET website.

(Muhammad Gul Aziz Awan)
Director Procurement