



Purchase & Store Section

Liaquat University

Of Medical & Health Sciences, Jamshoro

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Phone No. 022-9213350

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Issued to:

P.O. No. _____

Dated: _____

Rs. 3,000/= (Rupees Three Thousand only)

Subject: Tender for Purchase & Supply of Lab Equipments, Computers, UPS, Furniture & Fixture for Institute of Biomedical Engineering & Technology, LUMHS Jamshoro

Terms & Conditions/instructions to Bidders

1. Latest Income Tax Certificate (NTN).
2. Valid GST Registration Certificate.
3. Detailed Portfolio of Company.
4. Certified copy of Authorized Dealership Certificate.
5. Minimum 03 Years Experience
6. Last 3 Years audit report.
7. Minimum Turnover 02 Million

Tenders are invited under sealed cover from authorized Firms/Dealers registered with GST, Income Tax for Purchase & Supply of Lab Equipments, Computers, UPS, Furniture & Fixture for Institute of Biomedical Engineering & Technology, LUMHS Jamshoro

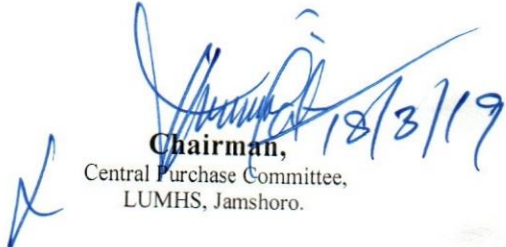
- a. Data sheet containing information about the assignment is given on page No 03 to 23
- b. Prescribed tender Proforma along with terms & conditions which can be downloaded from SPPRA website i.e. www.pprasinidh.gov.pk / LUMHS website i.e. www.lumhs.edu.pk on payment of Rs. 3,000/= (Rupees Three Thousand only), in the shape of Pay Order / D.D (Non-refundable) in favor of Vice-Chancellor, Liaquat University of Medical & Health Sciences, Jamshoro (Separate for each category) attached with technical tender Proposal form within Due Date along with following documents.
- c. Payment will be made on availability of funds, if delayed due to any reason no extra interest / mark-up will be accepted / paid.
- d. Tender can be downloaded / purchased from Purchase & Store Section, LUMHS, Jamshoro from Tuesday 19th March 2019 to Wednesday 10th April 2019 during Office hours.

- e. The Tender should be dropped in the tender box on Thursday 11th April 2019 on 11 am, Proposals of the bids shall be opened publicly on same day in the presence of bidders or their nominated representative, who wish to attend 11.30 am at office of the Chairman, Central Purchase Committee LUMHS Jamshoro.
- f. Method of Procurement used:
- g. The bidding shall be on single stage two envelope procedure, 1st envelope should contain Technical Proposals DD/Pay order Rs. 3,000/= (Rupees Three Thousand only) in favor of Vice Chancellor LUMHS (Non Refundable) & be clearly marked as technical proposals.
- h. Second envelope should contain Financial Proposals (rates) each Category in Pak rupees/C&F basis along with the Bid Money/Earnest 5% of quoted rates in the shape of pay order/demand draft in favor of Vice Chancellor LUMHS (refundable to un-successful bidders) the envelope be clearly marked as financial proposals.
- i. Both envelopes should be sealed separately and placed in the third envelope. The name of the bidder be clearly marked on all envelopes.
- j. The firms should provide Catalogues, Broachers/ samples required papers of the required Equipment/ Items with Technical Tender Bid and also give the details of technical staff; workshop and previous experience (certificate of at least 3 years experience).
- k. The supplier will have to produce evidence in respect of their registration with income Tax, Sales Tax Department.
- l. Income tax / GST deductible as per Government Rules applicable.
- m. The currency in which tender price is to be assessed and computed is Pak Rupees.
- n. Government notified black listed firms / suppliers shall not be entertained. All terms and conditions of bids will be accepted by representative of firm.
- o. The Central Purchase Committee may cancel / delete any item as per SPPRA Rules. Tender who do not fulfill the terms and conditions will not be entertained. The procuring agency may reject all or any bid subject to the relevant provisions of SPPRA Rules.

Abide my self of the terms and Condition

Name of Firms & Signature

With Stamp


Chairman,
Central Purchase Committee,
LUMHS, Jamshoro.

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name of Items	Quantity	@ rate	T. Amount
Applied Physics Lab				
01	Lenz's Law Demonstrator - Drop a mass through the 1.5-meter tube. It takes about half a second to drop. Lenz's Tube - Magnetic Mass - Non Magnetic Mass - With computer interface - With complete accessories rod, stand, clamps etc UK / USA / JAPAN / EU	05 Nos.		
02	Van de Graff Generator - Power Supply - Lucite Column - Plume - Discharge Spheres - Electric Whirl UK / USA / JAPAN / EU	05 Nos.		
03	Polarization Analyzer - Polarizers - Rotary Motion Sensor - Light Sensor - Optics System - Laser - With Computer interface - With complete accessories UK / USA / JAPAN / EU	05 Nos.		
04	Coulomb's Law - Power Supply - Electrometer - Faraday Ice Pail - Charge Producers and Proof Plane - With Computer interface - With complete accessories UK / USA / JAPAN / EU	05 Nos.		
05	Faraday's Law of Induction - Induction Wand <u>Variable Gap Magnet</u> <u>Unshrouded Voltage Sensor</u> <u>2-Axis Magnetic Field Sensor</u> <u>Rotary Motion Sensor</u> - With Computer interface - With complete accessories UK / USA / JAPAN / EU			

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name of Items	Quantity	@ rate	T. Amount
06	Thermal Conductivity Apparatus • Insulating pads • Steam chamber • Ice molds • Materials Samples • Steam generator • Instruction manual and experiment guide • With complete accessories UK / USA / JAPAN / EU	05 Nos.		
07	Human Eye Model Specifications • Adjustable Focal Length Lens • Set of Lenses • Retina Screen • Pupil Aperture • Foam Lens Holder • Human Eye Model Without Lens • Experiment Manual • With complete accessories UK / USA / JAPAN / EU	05 Nos.		
08	Interference and Diffraction of light Apparatus • Optical Track • <u>Precision Slits</u> • <u>Laser</u> • <u>Aperture Bracket</u> • <u>Linear Translator</u> • <u>High Sensitivity Light Sensor</u> • <u>Rotary Motion Sensor</u> • Experiment Manual • With Computer interface • With complete accessories UK / USA / JAPAN / EU	04 Nos.		
09	Universal interface (Pasco) Interface with the following built in features: • High speed-analog inputs • Digital inputs (Photogates and other timing devices) • Digital Inputs • USB connection • Power Supply • Function Generator UK / USA / JAPAN / EU	04 Nos.		
10	Hook's Law • Cart Launcher • 1.2 m Track With Carts • Force Sensor Track Bracket • Elastic Bumper • Spring Kit • Motion Sensor • High Resolution Force Sensor • Experiment Manual • With Computer interface • With complete accessories UK / USA / JAPAN / EU	05 Nos.		

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name of Items	Quantity	@ rate	T. Amount
11	Projectile Motion • Mini Launcher • Time-of-Flight Accessory • Photogate • Phone Jack Extender Cable • Large C Clamp (6 Pack) • Plumb Bobs (10 Pack) • 30 Meter Measuring Tape • Experiment Manual • With Computer interface • With complete accessories UK / USA / JAPAN / EU	05 Nos.		
12	Basic Optics System Specifications • 1.2mOpticsTrack • Basic Optics Light Source • Basic Optics Geometric Lens Set • Accessory Lens Set • Concave/Convex Mirror • Adjustable Lens Holder • Ray Optics Kit • Ray Table • Viewing Screen • Ground Glass Lenses • Lens Assortment • Geometric Lens Set • Experiment Manual • With complete accessories UK / USA / JAPAN / EU	05 Nos.		
13	Ideal Gas Law Apparatus • Ideal Gas Law Apparatus • Pressure and Temperature Sensor • Experiment Manual • With Computer interface • With complete accessories UK / USA / JAPAN / EU	02 Nos.		
Electrical / Electronic Lab				
14	Transistor/diode tester and curve tracer. Specifications The system built in display for curve tracer. The system must be able to check and identify the pin and type of diode and transistors and trace the curve of all Major types of diode and transistors. KOREA /TAIWAN OR BETTER	08 Nos.		
15	Low Voltage AC/DC Power Supply Output Voltage: 0 to 30 V DC or above Current: From 0 to 12 V, 10 A m linearly decreasing voltage setting Meter: Digital display (volts/amps) A C – Output Voltage: 0 to 24 V AC or above, continuously adjustable; Current: 0 to 6: Digital display (volts/amps); Power Source: AC 115/230 VAC, 50/60 Hz, Power Use: 320 OR above. KOREA /TAIWAN OR BETTER	07 Nos.		

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name of Items	Quantity	@ rate	T. Amount
16	AC Power meter (bench type) Specifications: Power Meter is equipped with a 16-bit CPU microprocessor Multifunction of full-digitized measurement, calibration and output. Accurately measure the distortion signal of waveform. Except for its essential measurement on AC voltage, AC current, AC power, Power factor, and Frequency, the power meter also provides additional features ratio setting, display value holding, the value of maximum and minimum Holding, range selecting, auto-ranging etc. KOREA /TAIWAN OR BETTER	05 Nos.		
17	DC Power Supply Specifications: 4 Channel Linear DC Power Supply, DC Voltage Range: 0 ~ 30V DC Current Range: 0 ~ 3A or above Max. Power Range: 200W Linear / Switching Mode: KOREA /TAIWAN OR BETTER	07 Nos.		
18	Analog Oscilloscope Specifications: 300MHz Bandwidth or above, 4 Input Channels. KOREA /TAIWAN OR BETTER	05 Nos.		
19	Handheld oscilloscope Specifications: 100/200Mhz or above with built in multimeter etc. KOREA /TAIWAN OR BETTER	04 Nos.		
20	Function Generator Specifications: 0.5Hz to 5/12/25 MHz with in 0.1Hz Resolution Sine, Square, Triangular, Noise and Arbitrary Waveform 20MSa/s Sampling Rate, 10 bit Vertical Resolution and 4k Point Memory for Arbitrary Waveform 1% ~ 99% adjustable duty cycle for Square Waveform Waveform Parameter Setting Through Numeric Keypad Entry & Knob Selection, Amplitude, DC Offset and Other Key Setting Information Shown on the 3.5" LCD Screen Simultaneously AM/FM/FSK Modulation, Sweep, and Frequency Counter Functions, USB Device Interface for Remote Control and Waveform Editing KOREA /TAIWAN OR BETTER	05 Nos.		
21	EME Electrical Machines Advance Unit without Motors Edibon Mandatory require advance controller for previously available equipment. UK / USA / JAPAN / EU	01 No.		

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name of Items	Quantity	@ rate	T. Amount
22	True RMS Handheld multimeter with temperature sensor KOREA /TAIWAN OR BETTER	07 Nos.		
23	Electronic & Electrical Trainer Integrated Lab Equipment Integrated automatic instrument-type practice unit equipped with an oscilloscope, function generator, power supplier and digital multimeter Implement all the instruments for circuit practice into one equipment. Help acquire a clear electronics theory through automation practice (AC signal analysis). Practice GUI (Graphic User Interface) of Touch Screen mode. Carefully selected 50 types or above electric & electronics practice themes. UK / USA / JAPAN / EU	04 Nos.		
24	Optoelectronic training system Specifications: Wide range optoelectronic component like photodiode, phototransistor. Photovoltaic cell (solar cell), infrared, ultraviolet, thermal image etc. UK / USA / JAPAN / EU	04 Nos.		
Biomedical Workshop				
25	Teaching Ultrasound and Grey Scale / Color Doppler with all Phantoms simulator cum analyzer UK / USA / JAPAN / EU	01 No.		
26	Ventilator Tester Kit with Different Simulation of Pathologies with Ckap and Bipap UK / USA / JAPAN / EU	01 No.		

List of Institute of Biomedical Equipment list of Different Labs

S. No	Name of Items	Quantity	@ rate	T. Amount																						
27	Incubator - Radiant Warmer Analyzer INCU II Incubator/Radiant Warmer Analyzer Incubator/Radiant Warmer Analyzer simplifies testing and verifying the performance of baby incubators, transport incubators, and radiant warmers. Airflow • Sound • Humidity • Air and surface temperature in 6 independent points • Optional skin temperature testing <table><tr><td colspan="2">Power</td></tr><tr><td>Power Adapter - Universal voltage</td><td>Input: 100 V to 240 V with adaptors 50 Hz/60 Hz Output: 15V dc, 1.3 A maximum</td></tr><tr><td>Rechargeable lithium-ion battery, internal</td><td>7.4 V, 7800 mAh, 58 Wh 24 hour battery life with 30 second sample rate</td></tr><tr><td colspan="2">Measurements and tests specifications</td></tr><tr><td>Air conduction peripheral temperature sensors for incubator (T1-T5)</td><td>5 sensors Range: 0 °C to 50 °C Accuracy: ±0.05 °C Display resolution: 0.01 °C</td></tr><tr><td>Air convection temperature sensors for radiant warmers, sensors in pucks (black discs)</td><td>5 pucks Range: 0 °C to 50 °C Accuracy: ±0.2 °C Display resolution: 0.01 °C</td></tr><tr><td>Relative humidity</td><td>Range: 0 % to 100 %, Accuracy: ±3 % RH (0 % to 100 %, non-condensing) Display Resolution: 0.1% RH</td></tr><tr><td>Airflow</td><td>C, 50 % RH°Range: 0.2 m/sec to 2.0 m/sec at 35 Accuracy: ±0.1 m/sec Display Resolution: 0.01 m/sec</td></tr><tr><td>Sound Pressure</td><td>30 dB(A) to 100 dB(A) Accuracy: ±5 dB(A) Display resolution: 0.1 dB(A) IEC-61672-1 Class 2 from 31.5Hz to 8kHz</td></tr><tr><td>Surface temperature</td><td>Range: 5 °C to 60 °C Accuracy: ±0.5 °C Display Resolution: 0.05 °C</td></tr><tr><td>Skin temperature probe with reference thermometer</td><td>Range: 0 °C to 50 °C Accuracy: ±0.05 °C Display Resolution: 0.01 °C</td></tr></table> UK / USA / JAPAN / EU	Power		Power Adapter - Universal voltage	Input: 100 V to 240 V with adaptors 50 Hz/60 Hz Output: 15V dc, 1.3 A maximum	Rechargeable lithium-ion battery, internal	7.4 V, 7800 mAh, 58 Wh 24 hour battery life with 30 second sample rate	Measurements and tests specifications		Air conduction peripheral temperature sensors for incubator (T1-T5)	5 sensors Range: 0 °C to 50 °C Accuracy: ±0.05 °C Display resolution: 0.01 °C	Air convection temperature sensors for radiant warmers, sensors in pucks (black discs)	5 pucks Range: 0 °C to 50 °C Accuracy: ±0.2 °C Display resolution: 0.01 °C	Relative humidity	Range: 0 % to 100 %, Accuracy: ±3 % RH (0 % to 100 %, non-condensing) Display Resolution: 0.1% RH	Airflow	C, 50 % RH°Range: 0.2 m/sec to 2.0 m/sec at 35 Accuracy: ±0.1 m/sec Display Resolution: 0.01 m/sec	Sound Pressure	30 dB(A) to 100 dB(A) Accuracy: ±5 dB(A) Display resolution: 0.1 dB(A) IEC-61672-1 Class 2 from 31.5Hz to 8kHz	Surface temperature	Range: 5 °C to 60 °C Accuracy: ±0.5 °C Display Resolution: 0.05 °C	Skin temperature probe with reference thermometer	Range: 0 °C to 50 °C Accuracy: ±0.05 °C Display Resolution: 0.01 °C	01 Nos.		
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S. No.	Name of Items	Quantity	@ rate	T. Amount
28	ProSim 8 Vital Signs Patient Simulator The ProSim 8 tests ECG (including fetal ECG/IUP and arrhythmias), respiration, temperature, IBP/cardiac catheterization, cardiac output, NIBP and SpO2. Wireless PC communication, customized presets, auto-sequences, barcode scanning, onboard memory, direct data capture, printing functions and single-step adjustability maximizes testing productivity; a customized carry case doubles as a mobile work station Specifications: Temperature: Operating: 10 °C to 40 °C (50 °F to 104 °F) Storage: -20 °C to +60 °C (-4 °F to 140 °F) Humidity: 10 % to 90 % non-condensing Parameter Specifications: Non-Invasive Blood Pressure Pressure Units mmHg or kPa Manometer Range 10 mmHg to 400 mmHg (Pressure Meter) Resolution 0.1 mmHg Accuracy $\pm$ (0.5 % reading + 0.5 mmHg) Pressure Source Target pressure range 20 mmHg to 400 mmHg Resolution 1 mmHg NIBP Simulations Pulse 2 mmHg max into 500 ml NIBP system Volume of air moved 1.25 ml max Adult: 60/30 (40), 80/50 (60); 100/65 (77); 120/80 (93); 150/100 (117); and 200/150 (167) and 255/195 (215) Simulations (systolic/diastolic [MAP]) Neonatal: 35/15 (22); 60/30 (40); 80/50 (60); 100/65 (77); 120/80 (93) and 150/100 Pressure variability: systolic and diastolic pressures are variable by 1 mmHg Repeatability Within $\pm$ 2 mmHg (at maximal pulse size independent of device under test) Synchronization: normal Sinus heart rates: 30 BPM to 240 BPM Maximum rate at 1 ml: 240 BPM achievable with pulses up to 1 ml Maximum rate at 1.25 ml: 180 BPM Synchronization: Arrhythmias Premature atrial contraction (PAC), premature ventricular contraction (PVC), atrial fibrillation, and missed beat Leak Test Target pressure 20 to 400 mmHg Elapse time 0:30 to 5:00 minutes: seconds in 30 second steps Leakage rate 0 mmHg/minute to 200 mmHg/minute Pressure Relief Test Range 100 to 400 mmHg Temperature 30 °C to 42.0 °C in 0.5 °C steps Accuracy $\pm$ 0.4 °C Compatibility Yellow Springs, Inc. (YSI) Series 400 and 700 Output Circular DIN 4-Pin Invasive Blood Pressure Channels 2, each independently settable with identical parameters and are individually electrically isolated from all other signals Input/Output Impedance 300 Ω - or $\pm$ 10 % Exciter Input Range 2 to 16 V peak Exciter-Input Frequency Range DC to 5000 Hz Transducer Sensitivity 5(default) or 40 μV/V/mmHg Pressure Accuracy $\pm$ (1 % of setting + 1 mmHg) accuracy guaranteed for dc excitation only Static Pressure -10 to + 300 mmHg in 1 mmHg steps Pressure Units mmHg or Kpa Dynamic Waveforms Types (default pressures Arterial (120/80) Radial artery (120/80) Left ventricle (120/00) Right ventricle (25/00) Pulmonary artery (25/10) Pulmonary-artery wedge (10/2) Right atrium (central venous or CVP) (15/10) Pressure variability Systolic and diastolic pressures are independently variable in 1 mmHg steps Swan-Ganz Sequence Right atrium, right ventricular (RV), pulmonary artery (PA), pulmonary artery wedge (PAW) Cardiac Catheterization Chambers Aortic, pulmonary valve, and mitral valve	01 No.		

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name Of Items	Quantity	@ Rate	T. Amount
	Respiration Artifact Arterial, radial artery, and left ventricle 5 % to 10 % multiplication Other 5 mmHg or 10 mmHg BP Output Circular DIN 5-Pin Power-On Default 0 mmHg SpO₂ Test (Optional) % O₂ Range 30 % to 100 % Resolution 1% % O₂ Accuracy With oximeter manufacturer's R-curve Saturation within UUT specific range: $\pm$ (1 count + specified accuracy of the UUT) Saturation outside UUT specific range: monotonic with unspecified accuracy With Fluke Biomedical R-curves 91 % to 100 % $\pm$ (3 counts + specified accuracy of the UUT) 81 % to 90 % $\pm$ (5 counts + specified accuracy of the UUT) 71 % to 80 % $\pm$ (7 counts + specified accuracy of the UUT) Below 7 % monotonic with unspecified accuracy Respirations Rate 0 (OFF), 10 BrPM to 150 BrPM in 1 BrPM steps Waves Normal or ventilated Ratio (Inspiration:expiration) Normal 1:1, 1:2, 1:3, 1:4, 1:5 Ventilated 1:1 Impedance Variations (Ω) 0.00 Ω to 1.00 Ω in 0.05 Ω steps and 1 Ω to 5 Ω in 0.25 Ω steps Accuracy Delta $\pm$ (3 % of setting + 0.05 Ω) Baseline 500 Ω, 1000 Ω (default), 1500 Ω, 2000 Ω, Leads I, II, III Accuracy Baseline $\pm$ 5 % Respiration Lead LA or LL (default) Apnea Selection 12 sec, 22 sec, or 32 seconds (one-time events), or continuous (Apnea ON = respiration OFF) Power-On Default 20 BrPM, delta 1.0 Ω UK / USA / JAPAN / EU	01 No.		
29	Rigid & Flexible Endoscope Tester A simple-to-use, quick check for rigid endoscopes Finally, there is a simple tool for technical and non-technical personnel to perform a quick evaluation of most rigid endoscopes., your staff diagnoses problems during incoming inspections, after complaints, pre- and post-service, and as a routine preventive-maintenance inspection Specifications Outer Diameter of Eyepiece 31.75 mm +0 -0.1 per DIN 58105 End-Cap Inner Diameter No less than 120 mm Optical Design Focal length: 40 mm $\pm$ 3% Refraction: 25 dpt Material: PMMA (Plexiglass) Diameter: 19 mm Focal Point Adjustment Scale 16 cm Maximum Diameter of Rigid Endoscope <10 mm Environmental Operating Temperature: 15 to 40 °C Storage Temperature: -10 to +65 °C Relative Humidity: 95% max UK / USA / JAPAN / EU			

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name Of Items	Quantity	@ Rate	T. Amount
30	Infusion Device Analyzer Flow rate Measurement Technique: Flow is calculated by measuring volume over time Range: 0.5 ml/h to 1000 ml/h Accuracy: 1 % of reading ± 1 LSD for flows of 16 ml/h to 200 ml/h for volumes over 20 ml, otherwise 2 % of reading ± 1 LSD for volumes over 10 ml under laboratory conditions Max Test Duration: 10 hours battery Volume measurement: Technique: Volume measured directly by the measuring module in minimum sample sizes of 60 microliters Range: 0.06 ml to 999 ml Accuracy: 1 % of reading ± 1 LSD for flow rates of 16 ml/h to 200 ml/h for volumes over 20 ml. Otherwise 2 % of reading ± 1 LSD for volumes over 10 ml under laboratory conditions. Max Test Duration: 10 hours battery Pressure Measurement: Technique: Direct measurement of pressure at the inlet port Range: 0 psi to 45 psi or equivalent in mmHg and kPa Accuracy: 1 % of full scale ± 1 LSD under laboratory conditions Max Test Duration: 30 Minutes UK / USA / JAPAN / EU	01 No.		
31	Phototherapy Radiometer The Phototherapy Radiometer is designed for the accurate measurement of light radiation in the blue part of the spectrum from 400-480 nanometers. Features include: • Large LCD • Accurate to ± 5 % of full scale • Spectral range of 429 nm to 473 nm Specifications Spectral range 429 - 473 nm (max. 97% response at 453 nm) Measurement range 0-1999 $\mu\text{W}/\text{cm}^2$ Resolution 1 $\mu\text{W}/\text{cm}^2$ Probe Lens matches the cosine receiving function of human skin Power 9 V battery; an arrow appears on display for battery replacement; 150 continuous hours operation UK / USA / JAPAN / EU	01 No.		

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name Of Items	Quantity	@ Rate	T. Amount
32	Fetal Simulator Fetal Simulator simulates fetal and maternal ECG as well as uterine activity to test and troubleshoot fetal electronic monitors and to train clinical staff. Features include: • Mechanical heart for ultrasound simulation • TOCO simulation (external or IUP) • Ultrasound simulation (including twins) Maternal ECG simulation Fetal ECG Static Rates: 30, 60, 90, 120, 150, 180, 210, and 240 BPM ECG Sensitivity: 50 μV, 100 μV, 200 μV, 0.5 mV, 1 mV, and 2 mV US-1 tracks primary fetal ECG rates. US-2 tracks secondary fetal activity for either independent "normal or "twins simulation, US-2 rate fixed at 140 BPM Fetal Patterns: Note: US-1 fetal ECG track these selections. US-2 is in normal pattern, except during TREND #1 selection. Variability selections (added to fetal ECG) Absent variability, low variability, mild variability, high variability, severe variability, and long-term variability Note: These patterns repeat and toco channel will perform toco wave selected Optional mechanical fetal heart Provides a mechanical interface to the ultrasound transducer; can be connected to either ultrasound channels. This option, due to its power consumption, requires an ac power adapter to be connected. UK / USA / JAPAN / EU	01 No.		
33	Medical ScopeMeter® Portable Oscilloscope Taking the guesswork out of medical imaging testing and troubleshooting, the Medical ScopeMeter® Portable Oscilloscope,. • Connect-and-view automated capture of complex waveforms: simplified connect-and-go for longer time-based measurements • Memory save and recall set-up • Waveform compare for quick and easy pass/fail • Single-button user interface very intuitive and easy to navigate • 3-in-1 multimeter, portable oscilloscope and paperless recorder saves you time and tools Specifications • 2 Channel • Voltage probe set, 10:1, 300 MHz, one set red • Voltage probe set, 10:1, 300 MHz, one set blue • TL175 TwistGuard™ safety-designed test leads set (1 red, 1 black) • External battery charger for BP290 and BP291 • FlukeView Software for Windows • Hard shell protective carrying case • Li-Ion battery pack, 2400 mAh • Medical Accessory Kit UK / USA / JAPAN / EU	01 No.		

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name Of Items	Quantity	@ Rate	T. Amount
34	MaxO2 PLUS AE Oxygen Analyzer The MaxO2 PLUS AE is an oxygen tester analyzer that measures the oxygen concentration in a flow of gas from a medical gas source or through a medical gas-flow device such as a ventilator or anesthesia system, or within an infant incubator. It is handheld and rugged to suit the needs of portable use. The MaxO2 PLUS AE comes equipped with a two-year warranty on both analyzer and sensor. Features include: • One-touch calibration, with reminder • Long battery life (approx. 5,000 hrs) • Impact resistant and drip proof External MAX-250E Oxygen Sensor Specifications Measurement Range: 0 % to 100 % Resolution: 0.1 % Accuracy and Linearity: 1 % of full scale at constant temperature, RH and pressure when calibrated at full scale Total Accuracy: ± 3 % actual oxygen level overfull operating range Response Time: 90 % of final value in approx. 15 sec at 23° C Warm-up Time: None required Power Supply Battery Life: Approx. 5000 hrs with continuous use Low Battery Indication: "BAT icon displayed on LCD Sensor Type: Maxtec® MAX-250E for AE model Expected Sensor Life: > 900,000 O2 % hours minimum, 2 years in typical medical applications Power Requirements: 2, AA alkaline batteries UK / USA / JAPAN / EU	01 No.		
35	Comprehensive tool kit with Weatherproof Toolbox UK / USA / JAPAN / EU	06 Nos.		
36	Gas Flow Analyzer Accurately and reliably conduct in-depth testing of gas flow medical equipment, especially devices requiring ultra-low flow and ultra-low pressure measurements with Gas Flow Analyzer. • Designed to world renowned Molbloc-L calibration specifications ensuring traceability to global regulatory standards • Conduct anesthesia and flow meter tests that rely on high accuracy • Built-in line sensors automatically test humidity, temperature and oxygen while compensating for atmospheric pressure and environmental conditions Perfect for OEMs, clinical benchtop testing, government and field service use Features Battery life hours 8 hrs Charge time in hours 5 hrs, typical Memory internal memory Ultra-low flow ports ± 750 ml/min Ultra-low pressure port 0 to 10 mbar Flow Full range flow channel (includes both low and high flow) Range ± 300 slpm Accuracy (air) 1.7 % or 0.04 slpm	01 No.		

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name Of Items	Quantity	@ Rate	T. Amount
	Ultra-low flow channel Range ± 750 ml/min Accuracy (air) $\pm 1.7\%$ or 0.01 slpm Volume Range ± 100 l Accuracy $\pm 1.75\%$ or 0.02 l Pressure High pressure Range -0.8 to 10 bar Accuracy $\pm 1\%$ or ± 0.007 bar Differential low pressure Range ± 160 mbar Accuracy $\pm 0.5\%$ or ± 0.1 mbar Ultra-low pressure Range 0 to 10 mbar Accuracy $\pm 1\%$ or ± 0.01 mbar Airway pressure Range ± 160 mbar Accuracy $\pm 0.5\%$ or ± 0.1 mbar Barometric pressure Range 550 to 1240 mbar Accuracy $\pm 1\%$ or ± 5 mbar Breath parameters Inspiratory tidal volume range 0 to 60 l Inspiratory tidal volume accuracy $\pm 1.75\%$ or 0.02 l Expiratory tidal volume range 0 to 60 l Expiratory tidal volume accuracy $\pm 1.75\%$ or 0.02 l Minute volume range 0 to 100 l Minute volume accuracy $\pm 1.75\%$ or 0.02 l Breath rate range 1 to 1500 bpm Breath rate accuracy $\pm 1\%$ Inspiratory to expiratory time ratio (I:E) range $1:300$ to $300:1$ Inspiratory to expiratory time ratio (I:E) accuracy $\pm 2\%$ or 0.1 Peak inspiratory pressure (PIP) range ± 160 mbar Peak inspiratory pressure (PIP) accuracy $\pm 0.75\%$ or 0.1 mbar Inspiratory pause pressure range ± 160 mbar Inspiratory pause pressure $\pm 0.75\%$ or 0.1 mbar Mean airway pressure range ± 160 mbar Mean airway pressure accuracy $\pm 0.75\%$ or 0.1 mbar Positive end expiratory pressure (PEEP) range ± 160 mbar Positive end expiratory pressure (PEEP) accuracy $\pm 0.75\%$ or 0.1 mbar Lung compliance range 0 to 1000 ml/mbar Lung compliance accuracy $\pm 3\%$ or 0.1 ml/mbar Inspiratory time range 0 to 60 s Inspiratory time accuracy 0.02 s Inspiratory hold time range 0 to 60 s Inspiratory hold time accuracy 1% or 0.1 s Expiratory time range 0 to 90 s Expiratory time accuracy 0.5% or 0.01 s Expiratory hold time range 0 to 90 s Expiratory hold time accuracy 0.02 s Peak expiratory flow range ± 300 lpm Peak expiratory flow accuracy $\pm 1.7\%$ or 0.04 lpm Peak inspiratory flow range ± 300 lpm UK / USA / JAPAN / EU			

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name Of Items	Quantity	@ Rate	T. Amount
37	ULTRASOUND POWER METER Measurement Range: 0 to 30 Watts Resolution: 50mW (150 mW in grams mode) Frequency Range: 0.5 to 10 MHz Maximum Transducer Size 4 ^{1/2"} (4.5 inches) Measures Pulsed or Continuous Power Selectable Readout in Watts or Grams Automatic Zeroing & Stabilization AC/Mains and Battery Operated Operates on standard 4 x AA Batteries Battery Life over 40 hours with Battery level indicator USB Cable for Connector for UPM-DT-50SP Polyethylene Carrying Case	01 No.		
38	MULTI GAS FLOW ANALYZER Compact and Portable General-Purpose Gas-Flow Analyzer Evaluated Performance for wide variety of Medical Gas-Flow/pressure Devices and measures 16 Ventilator Parameters Bidirectional flow (High and Low-flow ranges), Volume, Vacuum, Pressure and Oxygen Concentration measurements Trending and Statistical Analysis of all measured values Graphical Display Memory for Storing Results VT for Windows PC Software Gas Types: Air, N2, N2O, CO2, O2, N2O Bal O2, N2 Bal O2 Low-Pressure Port , High-Pressure Port , Airway Pressure , High Flow Port Low-Flow Port , Oxygen Measurement: Range: 0 to 100% Accuracy: ±2% full-scale output Resolution: 0.1% O2 Galvanic Fuel Cell Barometric Pressure Measurement Breath Rate, Range 2 BPM to 150 BPM Peak Inspiratory Pressure, Range ±120 cmH2O Inspiratory Pause Pressure, Range ±120 cmH2O Mean Airway Pressure, Range + 80 cmH2O Positive-end Expiratory Pressure (Peep), Range-5 to 40 cmH2O Peak Expiratory Flow, Range 0 to 150 lpm Peak Inspiratory Flow, Range 0 to 150 lpm Temperature, Range 0 to 50 °C Humidity, Range 0 to 100% Other Features: Battery Operated – uses a standard 9V battery Battery time > 7 hours Includes: Accessory Kit , Quick Reference Card , Operators Manual , Getting Started Manual (Soft & Hard copy), High-Flow Sensor , Low-Flow Sensor , High-Pressure Adapter, Male to Female, Low-Pressure Adapter, Oxygen Sensor Cable , T Adapter for Oxygen Sensor , Oxygen Sensor , 9V DC Battery, Serial Communications Cable (RS-232), VT for Windows Software , Soft Carrying Case	01 No.		

List of Institute of Biomedical Equipment list of Different Labs

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39	Ultraviolet A,B,C Tester UK / USA / JAPAN / EU	01 No.																																																																		
40	IR A,B,C Tester UK / USA / JAPAN / EU	01 No.																																																																		
41	Gas Flow Analyzer Accurately and reliably conduct in-depth testing of gas flow medical equipment, especially devices requiring ultra-low flow and ultra-low pressure measurements with Gas Flow Analyzer. - Designed to world renowned Molbloc-L calibration specifications ensuring traceability to global regulatory standards - Conduct anesthesia and flow meter tests that rely on high accuracy - Built-in line sensors automatically test humidity, temperature and oxygen while compensating for atmospheric pressure and environmental conditions - Perfect for OEMs, clinical benchtop testing, government and field service use <table><tr><th colspan="2">Features</th></tr><tr><td>Battery life hours</td><td>8 hrs</td></tr><tr><td>Charge time in hours</td><td>5 hrs, typical</td></tr><tr><td>Memory</td><td>internal memory</td></tr><tr><td>Ultra-low flow ports</td><td>±750 ml/min</td></tr><tr><td>Ultra-low pressure port</td><td>0 to 10 mbar</td></tr><tr><th colspan="2">Flow</th></tr><tr><th colspan="2">Full range flow channel (includes both low and high flow)</th></tr><tr><td>Range</td><td>±300 slpm</td></tr><tr><td>Accuracy (air)</td><td>1.7 % or 0.04 slpm</td></tr><tr><th colspan="2">Ultra-low flow channel</th></tr><tr><td>Range</td><td>±750 ml/min</td></tr><tr><td>Accuracy (air)</td><td>±1.7 % or 0.01 slpm</td></tr><tr><th colspan="2">Volume</th></tr><tr><td>Range</td><td>±100 l</td></tr><tr><td>Accuracy</td><td>±1.75 % or 0.02 l</td></tr><tr><th colspan="2">Pressure</th></tr><tr><th colspan="2">High pressure</th></tr><tr><td>Range</td><td>-0.8 to 10 bar</td></tr><tr><td>Accuracy</td><td>±1 % or ±0.007 bar</td></tr><tr><th colspan="2">Differential low pressure</th></tr><tr><td>Range</td><td>±160 mbar</td></tr><tr><td>Accuracy</td><td>±0.5 % or ±0.1 mbar</td></tr><tr><th colspan="2">Ultra-low pressure</th></tr><tr><td>Range</td><td>0 to 10 mbar</td></tr><tr><td>Accuracy</td><td>±1 % or ±0.01 mbar</td></tr><tr><th colspan="2">Airway pressure</th></tr><tr><td>Range</td><td>±160 mbar</td></tr><tr><td>Accuracy</td><td>±0.5 % or ±0.1 mbar</td></tr><tr><th colspan="2">Barometric pressure</th></tr><tr><td>Range</td><td>550 to 1240 mbar</td></tr><tr><td>Accuracy</td><td>±1 % or ±5 mbar</td></tr></table>	Features		Battery life hours	8 hrs	Charge time in hours	5 hrs, typical	Memory	internal memory	Ultra-low flow ports	±750 ml/min	Ultra-low pressure port	0 to 10 mbar	Flow		Full range flow channel (includes both low and high flow)		Range	±300 slpm	Accuracy (air)	1.7 % or 0.04 slpm	Ultra-low flow channel		Range	±750 ml/min	Accuracy (air)	±1.7 % or 0.01 slpm	Volume		Range	±100 l	Accuracy	±1.75 % or 0.02 l	Pressure		High pressure		Range	-0.8 to 10 bar	Accuracy	±1 % or ±0.007 bar	Differential low pressure		Range	±160 mbar	Accuracy	±0.5 % or ±0.1 mbar	Ultra-low pressure		Range	0 to 10 mbar	Accuracy	±1 % or ±0.01 mbar	Airway pressure		Range	±160 mbar	Accuracy	±0.5 % or ±0.1 mbar	Barometric pressure		Range	550 to 1240 mbar	Accuracy	±1 % or ±5 mbar	01 No.		
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List of Institute of Biomedical Equipment list of Different Labs

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List of Institute of Biomedical Equipment list of Different Labs

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42	Gait analysis is the systematic study of human motion, using the eye and the brain of observers, augmented by instrumentation for measuring body movements, body mechanics, and the activity of the muscles Specifications: - WORKSTATION with HD VIDEO SUPPORT Full desktop computer with 21" screen Pre-installed and testes sw - HIGH-SPEED VIDEO CAMERA: IDS uEye 1600x1200 50-60FPS Color camera USB 3.0 - CAMERA TRIPOD: Adjustable height up to 2.6m - HUMAN 3DMA SOFTWARE - PERMANENT LICENSE Inc. Full-body, Gait analysis, Joint analysis, etc - MOTION CAPTURE CAMERA (240 FPS 1280x1024 GigE FOV 56°) - ACCESORIES BUNDLE 02: 6-cam & Full-body tracking 6x-cam cabling 6x wall-mounts 1x GigE Switch 30-markerset 1x Calibration rod 1x License dongle Adhesive stickers - ACCESORIES: HELEN HAYES GAIT ANALYSIS Custom-made marker extenders set SOFTWARE 3RD-PARTY INTEGRATION W/ CLINICAL 3DMA / ISEN Software plugin No third-party sw BP400600-OP-1K-STT-SYS Single force platform system consisting of BP400600-OP-1K-STT-SYS, 9 meter force platform to amplifier cable, Optima amplifier, force platform mounting hardware and resin kit. SOFTWARE 3RD-PARTY INTEGRATION W/ CLINICAL 3DMA / ISEN Software plugin No third-party sw Trigno Wireless EMG System Trigno Base Station, 8*Trigno EMG + XYZ ACC Sensor- 2*Trigno Sensor Adhesive Interface (pkg. 80), Trigno Power Adapter, USB Cable (5 ft.), Delsys Software DVD (1 EMGworks 4.X Pro License), Open-End AD Cable for Trigno (1m) & User's Guide Trigger Module Package Trigger Module (Bagnoli/Trigno) & Product Guide Goniometer / Dynamotor Pressures Platform SENSOR MEASUREMENTS • 3-axial Gyroscope range ± 2000 deg/s 3- • axial Accelerometer range $\pm 16g$ • 3-axial Magnetometer range $\pm 1300 \mu T$ • Barometric pressure sensor rate 300 to 1100 hPa • Sensors calibrated in temperature Yes • Humidity sensor Yes UK / USA / JAPAN / EU	01 No.		

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S. No.	Name Of Items	Quantity	@ Rate	T. Amount
Biomaterial Lab				
43	Orthopedic Implants Starter Kit • Austin-Moore prosthesis : for fracture of the neck of femur • Baksi's prosthesis: for elbow replacement • Charnley prosthesis: for total hip replacement • Condylar blade plate: for condylar fractures of femur • Ender's nail : for fixing inter-trochanteric fracture • Grosse-Kempf (GK) nail : for tibial or femoral shaft fracture • Harrington rod: for fixation of the spine • Hartshill rectangle: for fixation of the spine • Insall Burstein prosthesis: for total knee replacement • Richard N.W. Wöhnsinterspinous implant and implantation instrument: intended to be implanted between two adjacent dorsal • Kirschner wire : for fixation of small bones • Kuntscher nail : for fracture of the shaft of femur • Luque rod : for fixation of the spine • Moore's pin : for fracture of the neck of femur • Neer's prosthesis : for shoulder replacement • Rush nail : for diaphyseal fractures of long bone • Smith Peterson (SP) nail : for fracture of the neck of femur • Smith Peterson nail with McLaughlin's plate: for inter-trochanteric fracture • Seidel nail: for fracture of the shaft of humerus • Souter's prosthesis : for elbow replacement • Steffee plate : for fixation of the spine • Steinmann pin : for skeletal traction[24] • Swanson prosthesis : for the replacement of joints of the fingers • Talwalkar nail : for fracture of radius and ulna • Thompson prosthesis : for fracture of the neck of femur • Dynamic Hip Screw and Dynamic Condylar Screw • Set of screws, wires, nails and locking. UK / USA / JAPAN / EU	01 No.		
44	Ortho Bones (Implant Technology) and Realistic Features UK / USA / JAPAN / EU	4 Nos.		
45	3D Printer with different 4 materials UK / USA / JAPAN / EU	01 No.		
46	Materials Testing System Material Testing Machine Attachments: • Bending Accessories • Four Point bending • Load Anvil • Photo elastic Accessories • Shear Accessories • Compression Accessories • Test Samples (Flat Coupons (Metals & Plastic), Shear Sample, Photo elastic Beams, Compression samples) • Experiment Manual • With Computer interface • With complete accessories (Clevis Grip , adapters etc.) UK / USA / JAPAN / EU	02 Nos.		

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name Of Items	Quantity	@ Rate	T. Amount
Biomedical Instrumentation Lab				
47	Human Physiology Teaching Kit It features one compact form factor integrated with 12 of the most commonly used instruments in the laboratory, including an oscilloscope, digital multimeter, function generator, variable power supply, and Bode analyzer. You can connect the PC to these various measurements through USB plug-and-play capabilities and build circuits on a detachable protoboard • ECG, Pulse, Heart sounds, Blood pressure, EMG, EEG, Reflexes Response, Skeletal Muscles, Spirometer UK / USA / JAPAN / EU	02 Nos.		
48	Required Add-ons for available unit - XR 4.0 X-ray Fluorescent Screen (09057-26_) Phywe - XR 4.0 X-ray Blood Vessel model of contrast fluid (09058-06) - XRI 4.0 X-ray imaging Set Radio photography set, 09150-88 - XRD 4.0 X-ray dosimetry and radiation damage upgrade set 09170-8 UK / USA / JAPAN / EU	01 each		
49	Transducers and Instrumentation Trainer The Transducers and Instrumentation Trainer shows didactically the function principles of the transducers most used in industry. It is divided into two parts: the lower part, in which all the input and output transducers are found, while in the upper part, the system of signal conditioning and those of instrumentation are found; Input Transducers: Resistance Transducers for applications in angular or linear position; The Wheatstone Bridge circuit; Temperature sensor IC "Integrated Circuit LM 335"; Photovoltaic Cell. Phototransistor. Photodiode PIN. Photoconductive Cell. Linear Variable Differential Transformer LVDT. Extensiometric Transducer; Airflow Sensor. Air pressure Sensor. Humidity sensor, Slotted optoelectronic Sensor. Opto- reflective Sensor. Inductive sensor, Hall effect Sensor. Permanent D.C. magnet tachogenerator, Dynamical microphone. Ultrasonic receiver. Output Transducers: Electrical Resistance, Incandescent Lamp; Applications for the sound output: Buzzing (Buzzer); Mobile coil loudspeaker, Ultrasonic transmitter. Applications of linear or angular motion: D.C. Solenoid; D.C. Relay; Solenoid Valve; Permanent Magnet D.C. Motor. Signal Conditioners: D.C. Amplifiers. A.C. Amplifier; Power Amplifier. Current Amplifier; Buffers; Inverting Amplifier; Differential amplifier; V/F and F/V Converters. V/I and I/V Converters; Full Wave Rectifier; Hysteresis convertible Comparator; Electronic switch. Oscillator 40 kHz; Filter 40 kHz. Time-constant convertible Low Pass Filter; Circuit with Mathematical Operation: Adding amplifier. Integrator with different time constants. Differentiator with different time constants. Instrumentation Amplifier. Circuit SAMPLE & HOLD; Amplifiers with gain control and offset. UK / USA / JAPAN / EU	02 Nos.		

List of Institute of Biomedical Equipment list of Different Labs

S. No.	Name Of Items	Quantity	@ Rate	T. Amount
50	Educational Ultrasound Apparatus • Phantom • Ultrasonic Echoscope • Ultrasonic Probe • Coupling Gel • Ultrasonic Doppler Apparatus • With Computer interface • With complete accessories UK / USA / JAPAN / EU	03 Nos.		
51	Educational Doppler Apparatus • Phantom • Ultrasonic Probe • Coupling Gel • Ultrasonic Doppler Apparatus • With Computer interface • With complete accessories UK / USA / JAPAN / EU	04 Nos.		
Telemedicine				
52	Compact DAQ Module with sensors to acquire real-time physiological data and LabVIEW software Practical to be performed: • To acquire physiological data from biomedical sensors into VIs. • To apply advance analysis & measurements on acquired signals. • To communicate with VIs across a network using UDP. • To communicate with VIs across a network using TCP/IP protocol. • To observe live data streaming using network streams. • To share data using wireless communication protocols. • To setup a Tele-Monitoring system. To design a Biomedical Data Management System using LabVIEW UK / USA / JAPAN / EU	01 No.		

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S. No.	Name Of Items	Quantity	@ Rate	T. Amount
Biomedical Control System				
53	Base Platform WITH - DC Motor Control Board - Actuators and Motors Add on Board - Servo Control System with Embedded Controller UK / USA / JAPAN / EU	03 Nos.		
Neural Network Equipment List				
54	The Nervous System: Model experimenting illustrating the development of resting potential - To analyze Ionic permeability - Demonstrate artificial cell membrane - To work on ion pump - To regulate diffusion potential UK / USA / JAPAN / EU	03 Nos.		
55	Neurosimulator: Membrane time constant and low-pass filtering (with cobra 4) - Neuro-simulator - Cobra-4 Basic Unit, USB - Neuro-simulator, Power supply 12V/ 2 A - Software Cobra 4 with universal Recorder UK / USA / JAPAN / EU	03 Nos.		
56	Neurosimulator: mode of operation of excitatory synapse (with cobra 4) - Neuro-simulator - Cobra-4 Basic Unit, USB. - Neuro-simulator, Power supply 12V/ 2 A - Software Cobra 4 with universal Recorder UK / USA / JAPAN / EU	03 Nos.		
57	Neurobiology: nerve cell interactions (with cobra 4) - Neurobiology Lab, 230 V - Complex Neural Networks - Nerve cell interactions - Additional Nerve Cell UK / USA / JAPAN / EU	03 Nos.		
Microprocessor and Microcontroller				
58	CanaKit Raspberry Pi3 Complete Starter Kit-32 GB Edition UK / USA / JAPAN / EU	7 Nos.		
59	Arduino Basic Kit UK / USA / JAPAN / EU	7 Nos.		
60	Inter IoT Developer Kit UK / USA / JAPAN / EU	07 Nos.		
61	BeagleBoard-X15 ARM Cortex A-15 UK / USA / JAPAN / EU	07 Nos.		

List of Biomedical Computers and ups required for the Equipment's with are listed and specifications are given below:

S. No.	Name Of Items	Quantity	@ Rate	T. Amount
62	Desktop PC (Intel Core i7 8TH GEN 8GB RAM -1TB SATA HARD DRIVE - INTEL HD GRAPHICS, 19 inch Monitor) or BETTER , - KEYBOARD – MOUSE,	31 Nos.		
63	Desktop PC (Intel Core i7 8th Gen.) or BETTER , 16GB Memory, (NVIDIA Ge Force GTX 1080) or BETTER , 256 GB Solid State Drive + 2TB SATA HARD DRIVE - 19 inch Monitor) or better , KEYBOARD – MOUSE-	02 Nos.		
64	Laptop (17 inch) (Intel Core i7 8th Gen.) or BETTER 16GB Memory, (NVIDIA Ge Force GTX 1080) or BETTER , 256 GB Solid State Drive + 2TB SATA HARD DRIVE	01 No.		
65	Laptop(17 inch) (Intel Core i7 8TH GEN. 8GB RAM -1TB SATA HARD DRIVE - INTEL HD GRAPHICS) or BETTER	02 Nos.		
66	3 in 1Printer, Copier and Scanner : LaserJet, Black and White 25 ppm and above,	05 Nos.		
67	UPS (1 KVA) UK / USA/ JAPAN / EU	33 Nos.		
68	Inverter AC (2 Ton)	08 Nos.		
69	Compressor for Haier 2 Ton AC with Condenser	10 Nos.		
C. Fixtures and Furniture's				
70	Office Table with side table 2.5ft to 4ft	07		
71	Medium Back Revolving Chair as per sample	07		
72	Wooden Almarih for Library 6x4	04		
73	Wooden Almarih 6x4	10		
74	Revolving Stool with low back support as per sample	10		
75	Steel Revolving Stools as per sample	30		
76	Visitors Chairs as per sample	10		

Companys' Basic Evaluation**Criteria for**

Contractor / (s) / Firm / (s) / Distributor / (s) / Supplier / (s) must obtained minimum 70% points in below mentioned eligibility criteria to qualify for Financial Bid Opening without declaration of black listing by relevant council(enclose valid / renewal registration certificate).

Description	Total Marks	Company Name
		Obtained Marks
NTN Certificate	5	
General Sales Tax Registration Certificate (GST)	5	
Company Profile containing Introduction date of establishment, experience (National / International Level) details of supplies to various Institutions / International Level including number of supplied equipments	5	
Professional Experience of Technical Staff as per required / relevant education regarding installation / repairing / service of equipments	5	
Current Financial Position (Bank statements & Audit Reports)	10	
Availability of Service Centre / (s) Provincial and National Level	5	
Certificate of Authorized Equipment Manufactures / Distributors / Suppliers	10	
Sub Total Marks	45	
<u>Equipment Technical Evaluation Criteria</u>		
<u>(Item wise)</u>		
Conformance to the Specification	30	
Similar nature works Experience	25	
Sub Total Marks	55	
Grand Total Marks	100	

Note: The minimum 70 marks are required to qualify for financial opening.



**LIAQUAT UNIVERSITY OF MEDICAL & HEALTHS
SCIENCES JAMSHORO**

**BIDDING DOCUMENTS
FOR**

**Purchase & Supply of Lab Equipments, Computers, UPS, Furniture & Fixture
for Institute of Biomedical Engineering & Technology, LUMHS Jamshoro**

PART ONE(FIXED)

- Instructions to Bidders (ITB)
- General Conditions of Contract (GCC)

Terms and conditions for

**Purchase & Supply of Lab Equipments, Computers, UPS, Furniture & Fixture
for Institute of Biomedical Engineering & Technology, LUMHS Jamshoro**

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Part One - Section I.
Instructions to Bidders

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Instructions to Bidders

A. Introduction

1. Source of Funds

- 1.1 The Procuring agency has received /applied for loan/grant/federal/provincial/local government funds from the source(s) indicated in the bidding data in various currencies towards the cost of the project/schemes specified in the bidding data and it is intended that part of the proceeds of this loan/grant/funds/will be applied to eligible payments under the contract for which these bidding documents are issued.
- 1.2 Payment by the Fund will be made only at the request of the Procuring agency and upon approval by the Government of Sindh and incase of a project will be subject in all respect to the terms and conditions of the agreement. The Project Agreement prohibits a with drawl from the allocated fund account forth purpose of any payment to person so entities, or for any import of goods, if such payment or import, to the knowledge of the Federal Government/ Sindh Government, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Procuring agency shall derive any rights from the Project Agreement or have any claim to the allocated fund proceeds.

2. Eligible Bidders

- 2.1 This Invitation for Bids is open to all suppliers from eligible source as defined in the SPP Rules, 2010 and its Bidding Documents except as provided hereinafter.
- 2.2 The bidder must possess valid authorization from foreign principal / manufacturer and in case of manufacture they should have a documentary proof to the effect that they are the original manufacture of the required goods.
- 2.3 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Procuring agency to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased due under this Invitation for Bids.
- 2.4 Government-owned enterprises in the Province of Sindh may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the Government of Sindh.
- 2.5 Bidders shall not be eligible to bid if they are under a declaration of ineligibility for corrupt and fraudulent practices issued by any government organization in accordance with sub clause of 35 (1) of SPPRA Rules 2010.
- 2.6 Bidder should have minimum ten (10) years experience in supply in Pakistan.
- 2.7 Bidder must have trained person including application to perform including application to perform experiment at sites for minimum five (05) years.
- 2.8 Any offer not received as per terms and conditions of the bidding documents is liable to be ignored. No offer shall be considered if:-
 1. Received from earnest money from any firm.
 2. It is received after the time and date fixed for its receipt.
 3. The tender is unsigned.
 4. the offer is ambiguous
 5. the offer is conditional.
 6. the offer is from a firm blacklisted, suspended or removed from the approved list.
 7. The offer is received by telegram/Fax.
 8. Offer received with shorter validity than required in the tender enquiry.
 9. The offer is for store not conforming to specification indicated in the tender enquiry No counter offer will be accepted.

3. Eligible Goods and Services

3.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries, defined in the SPP Rules, 2010 and its Bidding Documents, and all expenditures made under the contract will be limited to such goods and services.

3.2 For the purpose of this clause (a) the term "Good" includes any goods that are the subject of this limitation for bids and (b) the term services includes related services such as transportation insurance, after sale services spare parts availability etc.

3.3 In case of imported good. Manufacturer and product should be ISO Certified.

4. Cost of Bidding

4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Procuring agency named in the Bid Data Sheet, here in after referred to as "the Procuring agency," will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. The Bidding Documents

The Bidder must quote all none basis for each package specification.

5. Content of Bidding Documents

5.1 The bidding documents include:

- (a) Instructions to Bidders (ITB)
- (b) Bid Data Sheet
- (c) General Conditions of Contract (GCC)
- (d) Special Conditions of Contract (SCC)
- (e) Schedule of Requirements
- (f) Technical Specifications
- (g) Bid Form and Price Schedules
- (h) Bid Security Form
- (i) Contract Form
- (j) Performance Security Form
- (k) Manufacturer's Authorization Form
- (l) Detail of Technical Staff.
- (m) Financial standings/obligation/GST/Income Tax

5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in the

rejection of its bid.

6. Clarification of Bidding Documents

6.1 A Prospective Bidder requiring any clarification of the bidding documents may notify the Procuring agency in writing. The Procuring agency will respond in writing to any request for clarification of the bidding documents which it receives no later than ten (10) working days prior to the dead line for the submission of bids prescribed in the Invitation to Bids. Written copies of the Procuring agency's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all interested bidders that have received the bidding documents.

7. Amendment of Bidding Documents

7.1 At any time prior to the dead line for submission of bids, the Procuring agency, for any reason, whether at its own initiative or in response to a clarification requested by a interested Bidder, may modify the bidding documents by amendment.

7.2 All Prospective bidders that have received the bidding documents shall be notified of the amendment in writing, and will be binding on them.

7.3 In order to allow Prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Procuring agency, at its discretion, may extend the deadline for the submission of bids. Amendment notice to that effect shall be communicated in the same manner as the original invitation to bid.

C. Preparation of Bids

8. Language of Bid

8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring agency shall be written in English. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in english, in which case, for purposes of interpretation of the Bid, the translation shall govern.

9. Documents Comprising the Bid

9.1 The bid prepared by the Bidder shall comprise the following components:

- (a) A Bid Form and a Price Schedule completed in accordance with ITB Clauses 10, 11, and 12;
- (b) Documentary evidence established in accordance with ITB

Clause 13 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted;

(c) documentary evidence established in accordance with ITB Clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services and conform to the bidding documents; and

(d) bid security furnished in accordance with ITB Clause 15.

10. Bid Form

10.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.

11. Bid Prices

11.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the goods it proposes to supply under the contract.

11.2 Form for price schedule is to be filled in very carefully and should be typed. Any alteration / correction must be initiated. Every page is to be signed and stamped at the bottom. Serial number/bid number of the quoted item should be highlighted.

11.3 The bidder should quote the prices of goods according to the technical specification. The specification of goods different from the demand of enquiry, shall straightway be rejected.

11.4 The bidder is required to offer competitive price. All prices must include relevant taxes and duties where applicable. If there is no mention of taxes, the offered / quoted price shall be considered as inclusive of all prevailing taxes/duties. The benefit of exemption from or reduction in the GST or other taxes shall be passed on to the procuring agency.

11.5 Prices offered should be for the entire quantity demanded, partial quantity offers shall straight way be rejected. Conditional offer shall also be considered as non-responsive bidder

11.6 while tendering your quotation, the present trend / inflation in the rate of goods and services in the market should be kept in mind. No request in price due to market fluctuation in the cost of goods and services shall be entered after the bid has been submitted.

12. Bid Currencies

12.1 Prices shall be quoted in Pak Rupees in case of free delivery basis (DDP) delivered duty paid.

12.2 State bank of Pakistan foreign currency selling rate will be considered from the date of opening of financial bid (import cases)

13. Documents Establishing Bidder's

13.1 Pursue an to ITB Clause 9, the Bidder shall furnish, as par to fits bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.

Eligibility and Qualification

- 13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the Procuring agency's satisfaction that the Bidder, at the time of submission of its bid, is from an eligible country as defined under ITB Clause 2.
- 13.3 The documentary evidence of the Bidder's qualifications to Perform the contract if its bid is accepted shall establish to the Procuring agency's satisfaction:
- (a) That, in the case of a Bidder offer into supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' Manufacturer or producer to supply the goods in the Procuring agency's country;
 - (b) That the Bidder has the financial, technical, and production capability necessary to perform the contract;
 - (c) That, in the case of a Bidder not doing business with in the Procuring agency's country, the Bidder is or will be (if awarded the contract) represented by an Agent in that country equipped, and able to carry out the Supplier's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and
 - (d) That the Bidder meets the qualification criteria listed in the Bid Data Sheet.
 - (e) The procuring agency shall disqualify a bidder if it finds at any time that the bid submitted by, him concerning his qualification as supplier was false and materially inaccurate or incomplete.

14. Documents Establishing Goods' Eligibility and Conformity to Bidding Documents

- 14.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding documents of all goods and services which the Bidder proposes to supply under the contract.
- 14.2. The documentary evidence of the eligibility of the goods and services shall consist of a statement in the Price Schedule of the country of origin of the goods and services offered which shall be confirmed by a certificate of origin issued at the time of shipment.
- 14.3 The documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings, and data, and shall consist of:
- (a) A detailed description of the essential technical and

performance characteristics of the goods;

- (b) A list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods for a period to be specified in the Bid Data Sheet, following commencement of the use of the goods by the Procuring agency; and
- (c) An item-by-item commentary on the Procuring agency's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications.

14.4 For purposes of the commentary to be furnished pursuant to ITB Clause 14.3(c) above, the Bidder shall not that standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers designated by the Procuring agency in its Technical Specifications, are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names, and/or catalogue numbers in its bid, provided that it demonstrates to the Procuring agency's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

15. Bid Security

15.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a bid security in the amount specified in the Bid Data Sheet.

15.2 The bid security is required to protect the Procuring agency against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 15.7. The Bid security 5% of quoted rates in the shape of Pay order / demand draft (refundable to unsuccessful bidders) in the name of Vice Chancellor, LUMHS, Jamshoro.

15.3 The bid security shall be in Pak. Rupees and shall be in one of the following forms:

- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring agency's country, in the form provided in the bidding document or any other form acceptable to the Procuring agency and valid for thirty (30) days beyond the validity of the bid; or
- (b) irrevocable encashable on-demand Bank call-deposit.

15.4 Any bid not secured in accordance with ITB Clauses 15.1 and 15.3 will be rejected by the Procuring agency as non-responsive, pursuant to ITB Clause 24.

15.5 Un successful bidders' bid security will be discharged or returned as promptly as possible but not later than thirty(30) days after the expiration of the period of bid validity prescribed by the Procuring agency pursuant to ITB Clause 16.

15.6 The successful Bidder's bid security will be discharged up on the Bidder signing the contract, pursuant to ITB Clause 32, and furnishing the performance security, pursuant to ITB Clause 33.

15.7 The bid security may be forfeited:

(a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or

(b) in the case of a successful Bidder, if the Bidder fails:

(i) to sign the contract in accordance with ITB Clause 32;

or

(ii) to furnish performance security in accordance with ITB Clause 33.

**16. Period of
Validity of
Bids**

16.1 Bid shall remain valid for the period specified in the Bid Data Sheet after the date of bid opening prescribed by the Procuring agency, pursuant to ITB Clause 19. A bid valid for a shorter period shall be rejected by the Procuring Agency as non responsive

16.2 In exceptional circumstances, the Procuring agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security provided under ITB Clause 15 shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid, except as provided in the bidding document.

**17. Format and
Signing of
Bid**

17.1 The Bidder shall prepare an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID," as appropriate. In the event of any discrepancy between them, the original shall govern.

17.2 The original and the copy or copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a

person or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except forum-amended printed literature, shall be initialed by the person or persons signing the bid.

- 17.3 Any interlineations, erasures, or over writing shall be valid only if they are initialed by the person or persons signing the bid.
- 17.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

D. Submission of Bids

18. Sealing and Marking of Bids

- 18.1 The Bidder shall seal the original and each copy of the bidding separate envelopes, duly marking the envelopes as "ORIGINAL" and "COPY." The envelopes shall then be sealed in an outer envelope.
- 18.2 The inner and outer envelopes shall:
- (a) be addressed to the Procuring agency at the address given in the Bid Data Sheet; and
 - (b) bear the Project name indicated in the Bid Data Sheet, the Invitation for Bids (IFB) title and number indicated in the Bid Data Sheet, and a statement: "DONOTOPEN BEFORE," to be completed with the time and the date specified in the Bid Data Sheet, pursuant to ITB Clause 2.2.
- 18.3 The inner envelopes shall also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared "late".
- 18.4 If the outer envelope is not sealed and marked as required by ITB Clause 18.2, the Procuring agency will assume no responsibility for the bid's misplacement or premature opening.

19. Deadline for Submission of Bids

- 19.1 Bids must be received by the Procuring agency at the address specified under ITB Clause 18.2 no later than the time and date specified in the Bid Data Sheet.
- 19.2 The Procuring agency may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents in accordance with ITB Clause 7, in which case all rights and

Obligations of the Procuring agency and bidders previously subject to the dead line will thereafter be subject to the deadline as extended.

20. Late Bids

20.1 Any bid received by the Procuring agency after the deadline for submission of bids prescribed by the Procuring agency pursuant to ITB Clause 19 will be rejected and returned unopened to the Bidder.

21. Modification and Withdrawal of Bids

21.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Procuring agency prior to the dead line prescribed for submission of bids.

21.2 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of ITB Clause 18 by a signed confirmation copy, postmarked not later than the deadline for submission of bids.

21.3 No bid may be modified after the dead line for submission of bids.

21.4 No bid may be withdrawn in the interval between the dead line for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to the ITB Clause 15.7.

E. Opening and Evaluation of Bids

22. Opening of Bids by the Procuring agency

22.1 The Procuring agency will open all bids in the presence of bidders' representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders' representatives who are present shall sign a register evidencing their attendance.

22.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Procuring agency, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the Bidder pursuant to ITB Clause 20.

22.3 Bids (and modifications sent pursuant to ITB Clause 21.2) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. Withdrawn bids will be returned unopened to the bidders.

22.4 The Procuring agency will prepare minutes of the bid opening.

23. Clarification of Bids

23.1 During evaluation of the bids the Procuring agency may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

24. Preliminary Examination

24.1 The Procuring agency will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

24.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Supplier does not accept the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.

24.3 The Procuring agency may waive any minor informality, non conformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.

24.4 Prior to the detailed evaluation, pursuant to ITB Clause 25 the Procuring agency will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from, or objections or reservations to critical provisions, **such as** those concerning Bid Security (ITB Clause 15), Applicable Law (GCC Clause 30), and Taxes and Duties (GCC Clause 32), will be deemed to be a material deviation. The Procuring agency's determination of a bid's responsive assist to be based on the contents of the bid itself without recourse to extrinsic evidence.

25. Evaluation and Comparison of Bids

- 24.5 If a bid is not substantially responsive, it will be rejected by the Procuring agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.
- 25.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 24.
- 25.2 The Procuring agency's evaluation of a bid will be on delivered duty paid (DDP) price inclusive of prevailing duties and will exclude any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 25.3 The Procuring agency's evaluation of a bid will take into account, in addition to the bid price quoted in accordance with ITB Clause 11.2, one or more of the following factors as specified in the Bid Data Sheet, and quantified in ITB Clause 25.4:
- (a) Incidental costs
 - (b) Delivery schedule offered in the bid;
 - (c) Deviations in payment schedule from that specified in the Special Conditions of Contract;
 - (d) The cost of components, mandatory spare parts, and service; (e) the availability Procuring agency of spare parts and after- sales services for the equipment offered in the bid;
 - (f) The projected operation and maintenance costs during the life of the equipment;
 - (g) The performance and productivity of the equipment offered; and / or
 - (h) Other specific criteria indicated in the Bid Data Sheet and/or in the Technical Specifications.
- 25.4 For factors retained in the Bid Data Sheet pursuant to ITB 25.3, one or more of the following quantification methods will be applied, as detailed in the Bid Data Sheet:
- (a) Incidental costs provided by the bidder will be added by Procuring agency to the delivered duty paid (DDP) price at the final destination.
 - (b) Delivery Schedule.
 - (i) – The Procuring agency enquires that the goods under the Invitation for Bids shall be delivered at the time specified in the Schedule of Requirements which will be treated as the base, a delivery “adjustment” will be calculated for bids by applying a percentage, specified in the Bid Data Sheet, of the DDP price for each week of delay beyond the base, and this will be added to the bid price for evaluation. No credit shall be given to early delivery.

Or

- (ii) The goods covered under this invitation are required to be delivered (shipped) within an acceptable range of weeks specified in the Schedule of Requirement. No credit will be given to earlier deliveries, and bids offering delivery beyond this range will be treated as non responsive. Within this acceptable range, an adjustment per week, as specified in the Bid Data Sheet, will be added for evaluation to the bid price of bids offering deliveries later than the earliest delivery period specified in the Schedule of Requirements.

Or

- (iii) The goods covered under this invitation are required to be delivered in partial shipments, as specified in the Schedule of Requirements. Bids offering deliveries earlier or later than the specified deliveries will be adjusted in the evaluation by adding to the bid price
A factor equal to a percentage, specified in the Bid Data Sheet, of DDP price per week of variation from the specified delivery schedule.

(c) *Deviation in payment schedule.*

- (i) Bidders shall state their bid price for the payment schedule outlined in the SCC. Bids will be evaluated on the basis of this base price. Bidders are, however, permitted to state an alternative payment schedule and indicate the reduction in bid price they wish to offer for such alternative payment schedule. The Procuring agency may consider the alternative payment schedule offered by the selected Bidder.

Or

- (ii) The SCC stipulates the payment schedule offered by The Procuring agency. If a bid deviates from the schedule and if such deviation is considered acceptable to the Procuring agency, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared with those stipulated in this invitation, at the rate per annum specified in the Bid Data Sheet.

(d) *Cost of spare parts.*

- (i) The list of items and quantities of major assemblies, components, and selected spare parts, likely to be required during the initial period of operation specified in the Bid Data Sheet, is annexed to the

Technical Specifications. The total cost of these items, at the unit prices quoted in each bid, will be added to the bid price.

Or

- (ii) The Procuring agency will draw up a list of high- usage and high-value items of components and spare parts, along with estimated quantities of usage in the initial period of operation specified in the Bid Data Sheet. The total cost of these items and quantities will be computed from spare parts unit prices submitted by the Bidder and added to the bid price.

Or

- (iii) The Procuring agency will estimate the cost of spare parts usage in the initial period of operation specified in the Bid Data Sheet, based on information furnished by each Bidder, as well as on past experience of the Procuring agency or other procuring agencies in similar situations. Such costs shall be added to the bid price for evaluation.

- (e) *Spare parts and after sales service facilities in the Procuring agency's country.*

The cost to the Procuring agency of establishing the minimum service facilities and parts inventories, as outlined in the Bid Data Sheet or elsewhere in the bidding documents, if quoted separately, shall be added to the bid price.

- (f) *Operating and maintenance costs.*

Since the operating and maintenance costs of the goods under procurement form a major part of the lifecycle cost of the equipment, these costs will be evaluated in accordance with the criteria specified in the Bid Data Sheet or in the Technical Specifications.

- (g) *Performance and productivity of the equipment.*

- (i) Bidders shall state the guaranteed performance or efficiency in response to the Technical Specification. For each drop in the performance or efficiency below then or m of 100, an adjustment for an amount specified in the Bid Data Sheet will be added to the bid price, representing the capitalized cost of additional operating costs over the life of the plant, using the methodology specified in the Bid Data Sheet or in the Technical Specifications.

Or

- (ii) Goods offered shall have a minimum productivity specified under the relevant provision in the Technical Specifications to be considered responsive. Evaluation shall be based on the cost per unit of the actual productivity of goods offered in the bid, and adjustment will be added to the bid price using the methodology specified in the Bid Data Sheet or in the Technical Specifications.
- (h) *Specific additional criteria indicated in the Bid Data Sheet and/or in the Technical Specifications.*

The relevant evaluation method shall be detailed in the Bid Data Sheet and/or in the Technical Specifications.

Alternative

25.4 Merit Point System:

The following merit point system for weighing evaluation Factors Can be applied if none of the evaluation methods listed in 25.4 above has been retained in the Bid Data Sheet. The number of points allocated to each factor shall be specified in the Bid Data Sheet.

[In the Bid Data Sheet, choose from the range of]

Evaluated price of the goods	60 to 90
Cost of common list spare parts	0 to 20
Technical features, and maintenance and operating costs	0 to 20
Availability of service and spare parts	0 to 20
Standardization	0 to 20
Total	100

The bids coring the highest number of points will be deemed to be the lowest evaluated bid.

**26. Contacting the
Procuring
agency**

- 26.1 Subject to ITB Clause 23, no Bidder shall contact the Procuring agency on any matter relating to its bid, from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Procuring agency, it should do so in writing.
- 26.2 Any effort by a Bidder to influence the Procuring agency in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

F. Award of Contract

27. Post-qualification

- 27.1 In the absence of pre qualification, the Procuring agency will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 13.3.
- 27.2 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 13.3, as well as such other information as the Procuring agency deems necessary and appropriate.
- 27.3 An affirmative determination will be a prerequisite for a ward of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring agency will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

28. Award Criteria

- 28.1 Subject to ITB Clause 30, the Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

- 29. Procuring agency's Right to Vary Quantities at Time of Award**
- 29.1 The Procuring agency reserves the right at the time of contract award to increase or decrease, by the percentage indicated in the Bid Data Sheet, the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or terms and conditions.
- 30. Procuring agency's Right to Accept any Bid and to Reject any or All Bids**
- 30.1 The Procuring agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without there by incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Procuring agency's action.
- 31. Notification of Award**
- 31.1 Prior to the expiration of the period of bid validity, the Procuring agency will notify the successful Bidder in writing by registered letter or by cable, to be confirmed in writing by registered letter, that its bid has been accepted.
- 31.2 The notification of award will constitute the formation of the Contract.
- 31.3 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 33, the Procuring agency will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 15.
- 32. Signing of Contract**
- 32.1 At the same time as the Procuring agency notifies the successful Bidder that its bid has been accepted, the Procuring agency will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- 32.2 Within thirty(30) days of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring agency.
- 33 Performance Security**
- 33.1 With in Five (05) days of the receipt of notification of award from the Procuring agency, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring agency.
- 33.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 32 or ITB Clause 33.1 shall constitute sufficient grounds for the annul mentor of the award and for feature of the bid security, in which event the Procuring agency may make the award to the next lowest evaluated Bidder or call for new bids.

**34. Corrupt or
Fraudulent
Practices**

34.1 The Government of Sindh requires that Procuring agency's (including beneficiaries of donor agencies' loans), as well as Bidders/Suppliers/Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the SPPRA, in accordance with the SPP Act, 2010 and Rules made there under:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
 - (ii) "fraudulent practice" means a misrepresentation of acts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring agency, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Procuring agency of the benefits of free and open competition;
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
- (c) will declare a firm ineligible, either in definitely or for a stated period of time, to be awarded a Government- financed contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government-financed contract.

34.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 5.4 and sub-clause 24.1 of the General Conditions of Contract.

Part One - Section II.
General Conditions of Contract

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General Conditions of Contract

1. Definitions

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) "The Contract" means the agreement entered in to between the Procuring agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents in corporate by reference therein.
- (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
- (c) "The Goods" means all of the equipment, machinery, and/or other materials which the Supplier is required to supply to the Procuring agency under the Contract.
- (d) "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
- (e) "GCC" means the General Conditions of Contract contained in this section.
- (f) "SCC" means the Special Conditions of Contract.
- (g) "The Procuring agency" means the organization purchase the Goods, as named in SC SCC.
- (h) "The Procuring agency's country" is the country named in SCC.
- (i) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
- (j) "The Project Site," where applicable, means the place or places named in SCC.
- (k) "Day" means calendar day.

2. Application

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

3. Country of Origin

- 3.1 All Goods and Services supplied under the Contract shall have their origin in the countries and territories eligible under the rules and further elaborated in the SCC.
- 3.2 For purposes of this Clause, "origin" means the place where the Goods were mined, grown, or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 3.3 The origin of Goods and Services is distinct from the nationality of the Supplier.
- 4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the concerned institution.

5. Use of Contract Documents and Information; Inspection and Audit by the Government

- 5.1 The Supplier shall not, without the Procuring agency's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Procuring agency in connection therewith, to any person other than a person employed by the Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The Supplier shall not, without the Procuring agency's prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.
- 5.3 Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Procuring agency and shall be returned (all copies) to the Procuring agency on completion of the Supplier's performance under the Contract if so required by the Procuring agency.

5.4 The Supplier shall permit the Procuring agency to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the procuring agency, if so required.

6. Patent Rights
- 6.1 The Supplier shall indemnify the Procuring agency against all third- party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Procuring agency's country.
7. Performance Security
- 7.1 Within five (05) days of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring agency the performance security in the amount specified in SCC.
- 7.2 The proceeds of the performance security shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 7.3 The performance security shall be denominated in the currency of the Contract acceptable to the Procuring agency and shall be in one of the following forms:
- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring agency's country, in the form provided in the bidding documents or another form acceptable to the Procuring agency; or
 - (b) a cashier's or certified check.
- 7.4 The performance security will be discharged by the Procuring agency and returned to the Supplier not later than sixty (60) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.
8. Inspections and Tests
- 8.1 The Procuring agency or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring agency. SCC and the Technical Specifications shall specify what inspections and tests the Procuring agency requires and where they are to be conducted. The Procuring agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.
- 8.2 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery, and/or at

The Goods' final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring agency.

8.3 Should any inspected or tested Goods fail to conform to the Specifications, the Procuring agency may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring agency.

8.4 The Procuring agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Procuring agency's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Procuring agency or its representative prior to the Goods' shipment from the country of origin.

8.5 Nothing in GCCC clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

9. Packing

9.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the nature of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the Procuring agency.

10. Delivery and Documents

10.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping and/or other documents to be furnished by the Supplier are specified in SCC.

11. Insurance

11.1 The Goods supplied under the Contract shall be delivered duty paid (DDP) under which risk is transferred to the buyer after having been delivered, hence insurance coverage is sellers responsibility.

12. .

12.1 The Supplier is required under the Contact to transport the Goods to a specified place of destination within the Procuring agency's country, transport to such place of destination in the Procuring agency's country, including insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.

13. Incidental Services

13.1 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Procuring agency's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.

13.2 The supplier shall be required to provide the incidental services has specified in SCC and the cost of which should be included in the total bid price.

14. Spare Parts

14.1 As specified in SCC, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- (a) such spare parts as the Procuring agency may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) in the event of termination of production of the spare parts:
 - (i) advance notification to the Procuring agency of the pending termination, in sufficient time to permit the Procuring agency to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the Procuring agency, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

- 15.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
- 15.2 A warranty of Two Years will be provided free of cost including parts repair and replacement however incase of high tech equipment if mentioned in the specification the warranty shall be five years free service and parts at the installation site.
- 15.3 The Procuring agency shall promptly notify the Supplier in writing of any claims arising under this warranty.
- 15.4 Up on receipt of such notice, the Supplier shall, with in the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Procuring agency.
- 15.5 If the Supplier, having been notified, fails to remedy the defect(s)

Within the period specified in SCC, within a reasonable period, the Procuring agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring agency may have against the Supplier under the Contract.

16. Payment

- 16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.
- 16.2 The Supplier's request(s) for payment shall be made to the Procuring agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and by documents submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the Contract.
- 16.3 Payments shall be made promptly by the Procuring agency, but in no case later than sixty (60) days after submission of an invoice or claim by the Supplier.
- 16.4 The currency of payment is Pak Rupees which will be paid after Installation and satisfactory report by inspection committee for duty delivered pay free delivery at the consignee end. In case of import cases pay will be made 100% via establishing LC at sight and receiving shipping doc / bill of lading, inspection, certificate of the manufacturers country of origin, compliance of international standards of quality.

17. Prices

- 17.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid and shall remain the same till expiry of original bids validity period provided the procuring agencies bid validity extension.

18. Change Orders

- 18.1 The Procuring agency may at any time, by a written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract in any one or more of the following:
- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring agency;
 - (b) the method of shipment or packing;
 - (c) the place of delivery; and/or
 - (d) the Services to be provided by the Supplier.
- 18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be

Made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Procuring agency's change order.

**19. Contract
Amendments**

19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

20. Assignment

20.1 The Supplier shall not assign, in whole or in part, its obligations to perform under this Contract, except with the Procuring agency's prior written consent.

21. Subcontracts

21.1 The Supplier shall notify the Procuring agency in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.

21.2 Sub contracts must comply with the provisions of GCC Clause 3.

**22. Delays in the
Supplier's
Performance**

22.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring agency in the Schedule of Requirements.

22.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.

22.3 Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.

23. Liquidated

23.1 Subject to GCC Clause 25, if the Supplier fails to deliver any or

Damages

all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages leveled at the rate of two percent (2%) per month or a fraction thereof subject to a maximum of ten percent (10%) of the P.O / contract price / a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring agency may consider termination of the Contract pursuant to GCC Clause 24.

24. Termination for Default

24.1 The Procuring agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:

- (a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring agency pursuant to GCC Clause 22; or
- (b) if the Supplier fails to perform any other obligation(s) under the Contract.
- (c) if the Supplier, in the judgment of the Procuring agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause:

“Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.

“Fraudulent practice” means a misrepresentation of facts in order to influence a procurement processor the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition.

24.2 In the event the Procuring agency terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Procuring agency may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those

undelivered, and the Supplier shall be liable to the Procuring agency for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

25. Force Majeure

25.1 Notwithstanding the provisions of GCC Clauses 22,23,and24, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

25.2 For purposes of this clause,“ Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Procuring agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

25.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**26. Termination
for Insolvency**

26.1 The Procuring agency may at any time terminate the Contract by giving written notice to the Supplier if the Supplier becomes bank corrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring agency.

**27. Termination
for
Convenience**

27.1 The Procuring agency, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring agency’s convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

27.2 The Goods that are complete and ready for shipment within thirty(30) days after the Supplier’s receipt of notice of termination shall be accepted by the Procuring agency at the

Contract terms and prices. For the remaining Goods, the Procuring agency may elect:

- (a) to have any portion completed and delivered at the Contract terms and prices; and/or
- (b) To cancel their main demand pay to the Supplier an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Supplier.

28. Resolution of Disputes

28.1 The Procuring agency and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

28.2 If, after thirty (30) days from the commencement of such informal negotiations, the Procuring agency and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in SCC. These mechanism may include, but are not restricted to, conciliation mediated by a third party, adjudication in an agreed manner and/or arbitration.

29. Governing Language

29.1 The Contract shall be written in the language specified in SCC. Subject to GCC Clause 30, the version of the Contract written in the specified language shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchange by the parties shall be written in the same language.

30. Applicable Law

30.1 The Contract shall be interpreted in accordance with the laws of the Procuring agency's country, unless otherwise specified in SCC.

31. Notices

31.1 Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party's address specified in SCC.

31.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

32. Taxes and Duties

32.1 Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Procuring agency.

All taxes are applicable as per government .

33. Turnkey basis

- The Purchaser will evaluate and compare bids on turnkey basis design/equipment, installation, commission and training and services. Equipment will purchase on the package basis.
- Equipment must be quoted with all the standard accessories.
- UPS/Power protection for the equipment shall be incorporate in the system or must be quoted separately.

(For complete accessories of equipment each section must complete quoted)

CONTRACT PERFORMANCE BOND

(Bank Guarantee on stamp paper at the rate prescribed by Government of Pakistan)

Guarantee No. _____
Executed on _____
Expiry Date _____

Letter by the Guarantor (Bank) to the Employer (University)

Name of Guarantor (Bank) with Address:

Name of Principal (Contractor) with address:

Penal Sum of Security (Bond), (in words and figures)

Letter of Acceptance No. _____ Dated _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the Tender Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal (Contractor) we, the Guarantor above named, are held and firmly bound unto the Chairman, CPC, LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, Jamshoro, Sindh, acting through the Chairman, Central Purchase Committee LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, Jamshoro {hereinafter called the Employer (University)} in the penal sum of amount stated above for the payment of which sum well and truly to be made to the said Employer (University), we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal (Contractor) has accepted the Employer's (University's) above said Letter of Acceptance

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer (University), with or without notice to the Guarantor, which notice is hereby waived and shall also well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the Contract and of any and all modifications of the said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till the expiry of the guaranty period as per Clause of the Conditions of Contract.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, _____ (the Guarantor), waiving all objections and defenses under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer (University) without delay upon the Employer's (University's) first written demand without cavil or arguments and without requiring the Employer (University) to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's (University's) written declaration that the Principal (Contractor) has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to the Employer's (University's) designated Bank and Account Number.

PROVIDED ALSO THAT the Employer (University) shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling the said obligations, and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer (University) forthwith and without any reference to the Principal (Contractor) or any other person.

IN WITNESS WHEREOF, the above bounden Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body

Guarantor (Bank)

Witness:

1. _____
(Signature)

1. Signature _____

Corporate Seal)

2. Name _____

2. _____
(Signature)

3. Title _____

(Name, Title, Address)

(Corporate Guarantor Seal)

ARTICLES OF AGREEMENT

This Agreement made this _____ day of _____ 2018, by and between the Chairman, CPC, LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, located at Jamshoro, Sindh, including his successors in office and Assignees / Agents, acting through the Chairman, Central Purchase Committee LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, hereinafter called the "**University**", of the one part,

And

_____ of

(name and designation of the authorized person)

_____, located at _____

_____, hereinafter called the "**Contractor**" which expression shall include their successors, legal representatives of the second part.

Whereas the **University** Requires Office Appliance / Furniture / Lab Equipment

at Jamshoro. Whereas the **Contractor** has agreed to supply, install, put into operation and demonstrate the working of the said work valued at Rs.

_____ (amount in figures and words)
in the period of _____ months, subject to the terms and conditions set forth, hereinafter, which have been accepted by the **Contractor**

Now this Agreement witnesses as follows:

1. In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the **Conditions of Contract** hereinafter referred to.
2. The following documents which, for the purpose of identification, have been signed by _____ on behalf of the **Contractor**, and by _____ (name and designation of the authorized person) _____ on behalf of the **University**, all of _____ (name and designation of the authorized person) this shall be deemed to form and be read as a part of this Agreement viz.:
 - a) Articles of Agreement;
 - b) Instructions to Tenderer;
 - c) Conditions of Contract;
 - d) Contractor's Offer including the relevant correspondence prior to signing of this Agreement with all Annexure duly filled in;
 - e) The specifications of the equipment and other related items;
 - f) Bill of Quantity with prices.
3. In consideration of the payment to be made to the Contractor, the **Contractor** hereby **covenants** with the University **to supply**, deliver, install, put into operation and demonstrate the working of the items in conformity in all respects of the Contract.
4. The **University** hereby **covenants to pay** the Contractor in consideration of the supply, delivery, installation, putting into operation and demonstration of the working of the items, the contract price in the manner prescribed by the Contract and approved by the University.

In Witness Whereof the parties have hereunto set their respective hands and seals, the day, month and year first above written.

Vice Chancellor LUMHS

Signature _____

Name: _____

WITNESSES:

University Witness No.1: Signature: _____

Name: _____

Designation: _____

University Witness No.2: Signature: _____

Name: _____

Designation: _____

Contractor

Signature _____

Name: _____

Contractor's Witness No.1: Signature: _____

Name: _____

Designation: _____

Contractor's Witness No.2: Signature: _____

Name: _____

Designation: _____

LUMHS, Jamshoro



- Form – 1. - Application Letter

- Form-2 - General information of FIRM

- Form-3 - list of similar Projects/Procurements

- Form-4 - Details of Technical Staff

- Form-5 - Financial Standings/Obligations/GST/Income Tax.

LUMHS, Jamshoro



Form 1

Letter of Application

Registered Business Name:

Registered Business Address:

Telephone & FAX:

To: Chairman, Central Purchase Committee
 LUMHS, Jamshoro.

Sir,

I/We hereby apply for Procurement Services at LUMHS, Jamshoro as a registered Firm/Individual.

I/We authorize LUMHS or its authorized representatives to conduct any investigation to verify the statements, documents and information submitted and to clarify the financial and technical aspects of this application, from any person, bank, department, agency or firm.

The names and positions of the contact persons at our firm, who may be contacted for further information, if required are as follows:

Abc

LUMHS, Jamshoro



I/We hereby declare that

The statements made and the information provided in the application are complete, true and correct in every detail,

This firm has never been black listed by any Government / Autonomous bodies or private company or corporation and not involved in any litigation, arbitration with any client.

Faithfully

Authorized Representative of applicant

Official seal

Dated

LUMHS, Jamshoro



Form – 2

General information

Name of Company

Type of company

Status of company

Year of incorporation/establishment

Head office address

Telephone Nos

Fax Nos

E-mail address

Branch offices

Telephone No.

E-mail address

Attachments required

Attested copies of registration and ownership certificates of the FIRM

Detailed company profile must include main line of business, response time & after sale support statement, major client list, affiliation with international vendors and available resources for project execution.

Authorized Person

LUMHS, Jamshoro



Form – 3

Details of Similar Nature Projects

S.N	Nature/Name of Project Procurement	Cost of Project	Name & Address of Company	Name & Designation of Contact person	Contact Details of the firm
Projects					

Note: List Down Projects most recently done on top

LUMHS, Jamshoro



Form – 4

Details of Technical Staff

S.No.	Name	Designation	Education	Type of Experience	Years of Experience

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Attach Brief Profiles of Project Managers and other Technical Staff.

**Name/Designation/Signature of
Authorized Person.**