## MINUTES OF THE PRE-BID MEETING OF ELECTRONICS ENGINEERING TECHNOLOGY TENDER

The aforesaid meeting was held on 20.11.2023 at 11:00 a.m. in the Conference Room of UOT, Nowshera. Following attended the meeting.

- 1. Dr. Shahid Iqbal, Chairman/Member
- 2. Engr. Muhammad Lais, DD (P&D)
- 3. Mr. Mehran Khan, AD (Fin)/Member
- 4. Mr. Tauseef Ahmad, AR (Admin)/Member
- 5. Mr. Abubakar Shinwari, Proc: Officer/Member
- 6. Mr. Momin Shah, External Procurement Expert/Member
- 7. Mr. Irshad Ali, External Procurement Expert/Member
- 8. Dr. Haider Ali, HoD Electronics Engineering Technology
- 9. Dr. Irshad Ullah, HoD Energy Engineering Technology
- 10. Engr. Amad Hamza, Lecturer Electronics Engineering Technology

Representatives of the prospective bidders also attended the meeting as per list attached.

The meeting started with the name of ALLAH. Thereafter, Dr. Shahid Iqbal, Chair of the Procurement Committee welcomed the participants and invited the representatives of prospective bidders to ask queries, if any in the terms and conditions of tender documents or specifications. The details of the queries and their clarifications/recommendations are as under:

S.NO	QUERY	CLARIFICATION/RECOMMENDATIONS
1	Bidders expressed concerns regarding the certification of lab equipment as specified in the bidding documents.	The certificate of ISO 14001 mentioned in the lists of equipment may be treated as removed
2	Modification in specifications of Lab Equipment	The following part of specification of item No.3 of digital logic and FPGA Lab may be treated as deleted: - {Specifications: Display LCD Power Supply: 2 x AA 1.5V Batteries Search Modes: 3.3V/5.0V/AUTO Modes Screen Size: 36 x 10mmProduct Size: 133 x 70 x 25mm / 5.24 x 2.75 x 0.98in Product Weight: 120g / 4.23oz}  Moreover, the specification/details of
		Miscellaneous Equipment mentioned at page 48 to 50 of BSDs may be treated as revised as per listed attached duly corrected by the Technical Committee.
3	Clarification regarding Desktop Computers	The committee clarified that desktop computers may not be quoted as support item unless otherwise explicitly mentioned in the list of specifications.
4	Item-wise prices and evaluation	The committee recommended that, ITB 11.4 (page-14), may be substituted as under: - Prices can be quoted for all the items/equipment or for any particular item/equipment as item-wise. The bid evaluation shall be carried out in item-wise

		manner. Conditional offer will also be considered as non-responsive.
5	Substitution of S No. with Item No mentioned in the list of equipment	The S No mentioned in the heading lines of lists of equipment may be read as "Item No." (Item Number)
6	Extension of Bid Submission Date	The due date for submission and opening of bids may be extended to <b>04/12/2023</b> .

After thorough deliberation, all committee members unanimously agreed that the above recommendations shall be forwarded to the Competent Authority for consideration and approval. Following the approval by the Competent Authority, a corrigendum may be issued in the national dailies for extension in date of submission/opening of bids, and the above changes may be made part of bidding documents and uploaded on the KPPRA/University website and shared with the bidders who have purchased the bidding documents.

## MISCELLANEOUS EQUIPMENT

## Revised list of items and specifications After Pre-Bid Meeting dated 20/11/2023

Item. No	Item	Specification	Quantity
1	Power Monitor	Electric Power Energy Monitor Socket Watt	01
	Meter/ Socket	Meter Analyze.	
		Display Type: LCD	
		Minimum rating: 4500W, 85-265V, 50Hz 16A	
		Measuring active power	
		Monitoring the voltage RMS	
		Monitoring the current RMS	
		Monitoring the value of the current active power	
		Monitoring the power factor 0.1 to 1.0	
		Monitoring the voltage and frequency	
		Recorded the total time consumption.	
		Built-in rechargeable battery for memory	
		conservation	
		Safety: GS, EN 61010-1; CAT II 300 V	
		Manufacturer Compliant with ISO-9001	
2	Green House gas	Portable Unit	01
	analyzer	Display Type: LCD	
		Rechargeable Lithium battery	
		In-built memory	
		Connection compatibility with PC	
		FTIR emissions monitoring system, and typically	
		set up to measure H <sub>2</sub> O, CO <sub>2</sub> , CO, NO, NO <sub>2</sub> , N <sub>2</sub> O,	
		SO <sub>2</sub> , NH <sub>3</sub> , CH <sub>4</sub> , HCl, HF and different VOCs.	
		The system can measure up to multiple gases	
		simultaneously.	
		Range: CH4: 0-100%, C02: 0-50%,	
		H2S: 0-9999ppm, O2: 0-25%, CO: 0-	
		2000ppm, H2:0-2000ppm	
2	Til4 4:-	Manufacturer Compliant with ISO-9001	01
3	Electromagnetic	Unit: mG (Electric Field); μT (Magnetic Field)	01
	Field Radiation	Accuracy: $\pm 5\%$ (50 $\mu$ T to 200 $\mu$ T) $\mu$ T at 50Hz or 60Hz	
	Detector	Minimum Range: Electric: 0~2000mG;	
		Magnetic: 0~200μT	
		Minimum Resolution: 1mG, 0.1μT	
		Alarm Threshold: 40mG, 0.4µT	
		Minimum Temperature: 0~50°C / 32~122°F	
		Display: LCD Display	
		Minimum Test Bandwidth: 30Hz-300Hz	
		Sampling Rate: 0.5 Seconds	
		Test Mode: Bimodule Synchronous Test	
		Minimum Operating Temperature: 0~50°C,	
		Relative Humidity 0~80%	
		Minimum Storage Temperature: -10~50°C,	
		Relative Humidity: 0~70%	
		Manufacturer Compliant with ISO-9001	
4	Insulation Tester	Display Type: LCD	01
•		Automatic discharge of capacitors (capacitive	
		voltage)	
		Automatic detection of circuits with voltage.	
		Test Voltages 250V, 500V, 1000V	
		OHM max.: $4000 \text{ M}\Omega$	
		Insulation Resistance Accuracy ±3.5% rdg.	
		±5 dgt.	
	1	Resistance Accuracy $\pm 1\%$ rdg. $\pm 2$ dgt.	

		Voltage Denge 1000V	
		Voltage Range 1000V Voltage Accuracy AC: ±1.2% rdg. ±10 dgt.	
		DC: ±0.8% rdg. ±3 dgt.	
		Continuity Range Beeps $\leq 40\Omega$	
		Test Current $\leq 200 \text{mA}$	
		Safety: TÜV / GS, EN-61010-1; CAT III 1000 V	
		Manufacturer Compliant with ISO-9001	
_	I		01
5	Infrared Thermal	They are widely used for electrical, building	01
	Camera	services and facilities operation and maintenance	
		applications.	
		Fully automatic with built-in intelligence Built-in	
		digital camera	
		Compact size design	
		Display Type: LCD	
		Photo recording	
		Option to export image	
		Centre point temperature measurement	
		Single-button blending of digital and thermal	
		images, to instantly indicate exact location of	
		issue	
		Alarm and time-lapse features	
		Automatic hot and cold spot trackers	
		SmartView reporting software	
		Minimum battery life 8 hours	
		Minimum Temperature range -10 °C to +250 °C	
_		Manufacturer Compliant with ISO-9001	
6	WEATHER	Wireless weather station connect to WIFI, upload	01
	STATION	data to web.	
		PC software to view the weather data, after PC	
		connecting to the same Wi-Fi(support 2.4Ghz Wi-	
		Fi)	
		History Record interval.	
		Time and date, Sunrise and Sunset time, solar	
		radiation, Moon phase.	
		Indoor/outdoor temperature and humidity &	
		Wind chill & wind direction & Rainfall &	
		Pressure measure,	
		Display rain rate, rainfall data in 24 hours, one	
		week, one month, one year, total rain and rainfall	
		event.	
		Wind speed in mph, km/h, m/s.	
		The direction of the wind with 360 degree.	
		Wind chill, dew point and heat index temperature	
		display.	
		Barometric, weather forecast.	
		Light and UV index.	
		RF Frequency: 433 MHz	
		Minimum Temperature range: -40∼+60°C	
		Minimum Humidity range:10% ∼99%	
		Minimum Rain volume: 0 - 9999 mm	
		Minimum Wind speed: 0-50m/s (0~100mph)	
		Wind direction: 0 to 359 degree	
		Light: 0-200k Lux	
		UVI: 0-15	
		Manufacturer Compliant with ISO-9001	
7	Portable Video	Display Type: LCD	01
	Borescope	Minimum resolution 720p,	
		Memory what you see on the screen.	
		Minimum tube length 1 meter	
		8 to 9 mm in diameter,	
		flexible	
		Waterproof (Waterproof grade: IP67).	
	1	Camera Ministry with multiple LED lights can be	
		used in a dark space,	

8	Three-Phase Power Quality and Energy Analyzer	Image Capture in JPEG file format, video Recording in Monitor. Minimum Resolution: Image :640*480 pixels, Video( with Audio) D1 720*480 Pixels(30 fps)8 Zoom In/Out (Max. 5X) Interface: SD card (), USB 1.1, RGB Video out. Battery: minimum working time:4-6 hours Ingress protection: IP 67 Manufacturer Compliant with ISO-9001 Display Type: LCD Measurements of voltage, current, harmonics, power, inrush current and other Graphical display of waveforms and Vector Internal data logger for recording of events connection for data processing	01
		Volt 1-phase (2-wire) and 3-phase (3 - and 4-wire) measurement Vrms (AC + DC) Measurement range: 1 to 1000 V phase to neutral Vpk Measurement range: 1 to 1400 Vpk Voltage Crest Factor (CF) Measurement range: 1.0 > 2.8 Vrms 1/2 Phase angle: 0° 360° Power factor: 0.00 1 Power max.: 20 MW Screen size (TFT): 14 cm .5,6"") V DC max.: 1000V Wat hours max.: 200 GWh A AC max.: 3000 A (Current Clamp) V AC max.: 1000V	
		Measure multiple parameters simultaneously to quickly understand overall power quality health View data as simple digital values or more detailed trend graphs that give you fast insight into changes over time, waveforms, and phasor diagrams  Organize data in tabular format so you can quickly correlate parameters like magnitude, duration, and time to the issues you are experiencing in your facility  Testing Standards: IEC 61000-4-30, 61000-4-15, 61000-4-7, und EN 50160  Safety: EN 61010-1, CAT III 1000 V / CAT IV 600 V; Protection Class: IP51, according IEC60529  Manufacturer Compliant with ISO-9001	