Faculty of Architecture, Dr. A.P.J Abdul Kalam Technical University, Lucknow

BOQ for Environmental Lab

S.No	Description of the Product	Quantity	Unit	Rate	Amount
1	Digital Water and Soil Analysis Kit 7 Parameter	2	Nos	₹ 25,000	₹ 50,000
2	Thermohygrometer set	1	Nos	₹ 40,500	₹ 40,500
3	Two Slab Guarded Hot Plate Apparatus	1	Nos	₹ 450,000	₹ 450,000
				Total	₹ 540,500

Digital Water and Soil Analysis Kit

Preferred: Manti Lab MT-131 Digital Water and Soil Analysis Kit 7 Parameter - MT-131
Features:-
- It is Used For measuring the pH, Temp, TDS , mv(ORP) , Conductivity.
- Pre Adjustable Cell Constant For Conductivity and TDS Range.
-Manual calibrations for mV(ORP).
-3 & frac12; Digits LCD Display.

Specification: -

Parameter: pH / Conductivity / TDS / DO Salinity / Temperature Measurement / Turbidity / Salinity
Display: 3½ Digits LCD Display
Ph Resolution: 0.01 pH
Ph Accuracy: ±0.01 pH ± 1 Digits
Temperature Compensation: 0° to 100°C
Conductivity Range : 0-20ms
Conductivity Resolution: 10 µS (0.01 mS)
Conductivity Accuracy: ± 0.5% FS ± 1Digit
TDS Range: 0-20 ppt
TDS Resolution: 0.01 pH
TDS Accuracy: ± 0.5% FS ± 1 Digit
DO Range : 0-20 ppm
DO Resolution: 0.1 ppt
DO Accuracy: 0.1 ppm ± 1Digit
DO Senser: Gold / Silver Amperometric
Power: Inbuilt Chargeable Battery 230 V ± 10% AC , 50 Hz
Turbidity Range: 0-1000 NTU
Turbidity Resolution: 1 NTU
Turbidity Accuracy: ±3 % ± 1 Digits
Salinity Range: 0-50 ppt
Salinity Resolution: 0.1 ppt
Salinity Accuracy: ±0.5% F.S ± 1 Digits
Ph Range: 0 - 14 pH

- Warranty: 2 years' minimum

Thermohygrometer set

Preferred: testo 635-2 U-value promo set

In order to evaluate the heat insulation capability of a component (walls, windows), you need to know the heat transfer coefficient, or "U-value" (previously "K-value"). The U-value is the most important value for proving the heat loss of a building.

With the testo 635-2 thermohygrometer, you have everything you need to start calculating the U-value

The testo 635-2 U-value set is designed to make calculating the U-value easier than ever. As well as the testo 635-2 thermohygrometer, you also get the special temperature probe for determining the U-value as well as temperature measurement equipment, with transmission of the readings via radio.
You can therefore carry out all necessary temperature measurements simultaneously, both indoors and outdoors: ambient air temperature, wall temperature inside, outside temperature via wireless transmission. The testo 635-2 thermohygrometer then calculates the U-value automatically and indicates this on the display. Thanks to the integrated reading memory, you can store the measurement data in the instrument and subsequently evaluate it on the PC using the software.
You can easily stow all the equipment away in the case supplied or transport it to the measuring location.

Further advantages of the thermohygrometer

The testo 635-2 thermohygrometer is suitable for measuring temperature, humidity, material equilibrium moisture content and for measuring the pressure dew point in compressed air systems.
Moisture progressions can be recorded and analyzed or displayed in graph/table format. Thanks to wireless measurement data transmission via radio, up to 3 temperature or humidity probes can be displayed in the measuring instrument. Selectable user profiles make for intuitive operation.
The material moisture can be displayed directly using the appropriate (optional) probe. Characteristic curves for various materials can be stored in the PC software and transmitted to the thermohygrometer. To analyze moisture in ceilings and walls, the measuring instrument directly displays the dew point distance between ambient air and wall surface. Precision probes up to -60°C tpd are optionally available for checking the pressure dew point in compressed air systems.

Delivery Scope

- testo 635-2 thermohygrometer with reading memory, PC software, USB data cable, including calibration protocol and batteries (0563 6352)
- Radio module for measuring instrument, 869.85 MHz FSK (0554 0188)
- Radio handle for plug-in probe heads, including TC adapter (0554 0189)
- Humidity probe head, can be plugged onto radio handle 0554 0189 (0636 9736)
- Temperature probe for determining U-value, threefold sensor for recording wall temperature, including putty (0614 1635)
- Service case for the basic equipment for the thermohygrometer with probes (0516 0035

- Warranty: 2 years' minimum

Two Slab Guarded Hot Plate Apparatus

- EIE - Thermal Conductivity Apparatus is designed to determine Thermal Conductivities of Insulating materials in the form of slabs. The Apparatus consists of main central heater Sandwiched between the Test specimens. Cooling plates are provided on the either side of the specimen. Two identical specimens are clamped between heater and cooling plate. Ring guard heater ensures unidirectional heat flow through specimen.

Product description:

- EIE - thermal conductivity test apparatus by guarded hot plate method is based on the steady-state method and is able to measure 30 cm x 30 cm test samples having thickness ranging from a few millimeters to 10 cm.
- Design concept of apparatus according to Indian Standard (IS : 3346-1966) and applicable ASTM Standard ASTM C177
- External body is manufactured from Mild steel material, which is powder coated in attractive shades
- Specimen to be tested is placed in chamber such that it gets sandwiched between two heat flux sensors as per ASTM C177 guidelines.
- Unit is equipped with 5 Different Thermocouples for temperature measurement on either side of test specimen and guard Heaters (In total 10 Thermocouples).
- Cooling is obtained by in-built mini-chiller system, which provides efficient cooling temperature as per test requirement.
- Chiller system composed of condenser, compressor and cooling coil with CFC free refrigerant.
- Complete panel mounted electrical controls and measurement. All control accessories are within reach.
- Equipped with Digital Temperature Indicator Cum Controller to precisely measure and indicate the temperature values
- Instrument will also be fitted with Thermal Printer to print the test results instantly on site.
- System will also be supplied with 16 channel data logger to log the temperature data of all 10 thermocouples
- Instrument is also supplied with Dedicated Jockey, which facilitates an operator to manually move top plate upward or downward with operation ease
- The complete instruments can also be supplied with dedicated PC Software for to log, modify and analyze the measurement results (Optional – see optional accessories)
- Suitable for industrial applications such as Thermal conductivity measurement of AAC Blocks, Concrete slabs, Dimensional stones, marbles etc.
- Rated Voltage: AC 220V±10% 50Hz
- Power: 2800W
- Temperature Controlling Mode: Digital Display
- Temperature Controlling Point: 24°c, 93.5°c
- Temperature Controlling Precision: ±0.1°c
- Warranty: 2 years' minimum

Faculty of Architecture,Dr.APJ.Abdul Kalam Technical University,
Tagore Marg, Lucknow

TENDER DOCUMENTS FOR BIDDER
LIST GIVEN BELOW

1. Firm's Registration Certificate.
2. Self-attested photocopy of PAN Card.
3. Self-attested photocopy of GSTIN.
4. TAX Clearance Certificate/ITR of last 3 years.
5. 5 Years experience in dealership.

Note:

1. All the documents should be attached according to the sequence listed above and to be kept in A4 size envelope. The envelope must be super-scribed with " Technical-Bid Document"and sealed properly.
2. Documets should be attached with the correction/Overwriting free, duly signed Finacial -Bid to be kept in a separate envelope and sealed properly.

TENDER FEES DETAIL

1.	*Earnest money Deposit* *(In favour of "**Principal, LUCKNOW COLLEGE OF ARCHITECTURE, LUCKNOW** ")*	Amount	INR 1% ESTIMATED COST
		Issuing bank	
		DD/BC Number	
		Date	
2.	***Tender Document fee*** *(In favour of "**Principal, LUCKNOW COLLEGE OF ARCHITECTURE, LUCKNOW** ")*	Amount	INR 500.00 (Not Refundable)
		Issuing bank	
		DD/BC Number	
		Date	

Note: the Demand Draft/Bankers Cheque for EMD, tender Document Cost and Tender Processing Fee have to be submitted to the Principal, Faculty of Architecture, Dr. A.P.J. Abdul Kalam Technical University, Tagore Marg Campus, Lucknow- 226007.

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