TENDER NOTICE

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD (IIUI) invites sealed bids from the Original Manufacturer / Authorized Distributors / Suppliers *(with valid authorization / distribution certificate)* registered with Income Tax and Sales Tax Departments and who are on **Active Taxpayers List** (ATL) of the Federal Board of Revenue for the Purchase of Lab Equipment under its approved PC-I titled: ***"Expansion and Upgradation of International Islamic University Islamabad"*** for the following Lab/Centers:

Sr. No.	Title	Tender Submission Date & Time *(On **OR** Before)*	Tender Opening Date & Time
1.	Procurement of Lab Equipments for "Centre for Advanced Electronics & Photovoltaic Engineering (CAEPE)"	August 16, 2018 10:30 A.M	August 16, 2018 11:00 A.M
2.	Procurement of Lab Equipments for "Department of Civil Engineering, (DCE), FET"		
3.	Procurement of Lab Equipments for "SA-Centre for Interdisciplinary Research in Basis Sciences (SA-CIRBS)"		

02. Biding Documents, containing detailed Terms & Conditions etc. are available at P&S Section, Room No. 213, 2nd Floor, Admin Block, Sector H-10, New Campus, International Islamic University Islamabad. Bidding documents can also be downloaded from www.iiu.edu.pk and www.ppra.org.pk Price of the bidding documents is **Rs. 1,000/-** (Non-refundable) **(For Each Tender Separately)** in shape of Pay Order/Call Deposit/Bank Draft in favor of IIUI.

03. The bids, prepared in accordance with the instruction in the bidding documents, must reach **on** OR **before** the above date & time at the following address:

Mr. Javaid Rabbani
Dy. Director (P&S)
Room No. 213, 2nd Floor, Admin Block
New Campus, Sector H-10
International Islamic University Islamabad.
Tel: 051-9019255

04. Bids will be opened by the ***Bid Opening Committee*** as per above schedule/date & time in the **COUNCIL HALL**, Admin Block, Sector H-10, New Campus, International Islamic University Islamabad in the presence of bidders/their representative(s) who may like to attend the bid opening.

05. International Islamic University Islamabad reserves the right to accept or reject any/all bid(s) in terms of Section-33 of Public Procurement Rules 2004.

AamirIshtiaq
Director (P&D)
International Islamic University Islamabad.
Tel: 051-9019241

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD

Purchase & Store Section, Admin Block, New Campus, Sector H-10, Islamabad.
Tel: 051-9019255 Fax: 051-9258073

Tender No. IIUI-_____

Sub: TENDER DOCUMENT "**CENTRE FOR ADVANCED ELECTRONICS & PHOTOVOLTAIC ENGINEERING (CAEPE)**"

"TERMS AND CONDITIONS"

[All pages (BoQs & Terms & Conditions) are mandatory to be signed / stamped, failing which the bid may lead to rejection]

1. Any addition, deletion or modification of any clause of the procurement terms & conditions of International Islamic University Islamabad (IIUI) by any vendor will not be acceptable and may lead to rejection of the bid.

2. Original Manufacturer / Authorized Distributors / Suppliers *(with valid authorization / distribution certificate)* registered with Income Tax, Sales Tax Department and who are on Active Taxpayers List (ATL) of FBR, are eligible to participate in tender.

3. Documents along with Pay Order / Demand Draft / Cash Receipt issued by Finance Department of IIUI amounting to Rs. 1,000/- as a tender document fee (Non-Refundable) shall be submitted in favor of International Islamic University, Islamabad, to the address given below. *(See No. 13)*

4. The exact completion/delivery time from the date of the purchase / work order will be 120 days. The handing over / completion time is of critical importance.

5. The bid proposal(s) should be inclusive of:
   i. All FREIGHT and PACKAGING CHARGES (Items deliverable at Islamabad Airport/Dry Port on "CPT/CFR Basis as per BoQs Format)
   ii. All Taxes, if prices are quoted on "FOR Basis" as per BoQs Format (Items deliverable (Free of Cost) to International Islamic University, New Campus, Sector H-10 Islamabad)

6. **The Payment Terms will be**:
   i. For the CPT/CFR quoted items; payment will be made through irrevocable L.C (90:10 Model) in favor of Manufacturer. Where, 90% under the said model will be released upon receipt of shipment and delivery documents. Remaining 10% will be made / released after successful inspection of the equipment at International Islamic University Islamabad.
   ii. For the FOR quoted items; 100% payment will be made after supply and successful inspection of the ordered equipment(s) at International Islamic University Islamabad.

7. For the CPT/CFR quoted items; shipment(s) will be cleared by the International Islamic University, Islamabad from Custom Authorities.

8. After opening of bids, International Islamic University Islamabad will examine the bids for completeness as per tender document's Terms & Conditions AND Technical Specifications, (As per BoQ)

9. Purchase order (s) will be awarded to the lowest evaluated OR technically recommended bidder (s) on the basis of item wise / subtotal wise / grand total wise according to the nature of BoQs/Compatibility requirements.

10. Procedure of open competitive bidding shall be:Single Stage One Envelope procedure

11. Bidders cannot challenge the finding(s) of the Evaluation Committee or ask for reason of disqualification.

12. The bid should be submitted in a sealed envelope up to the specified deadlines for the items for "**Centre for Advanced Electronics & Photovoltaic Engineering (CAEPE**)" (**i-e August 16, 2018**) on or before 10:30 a.m and will be opened on the same date at **11:00 a.m**in the presence of available bidders or their representatives who may like to attend the bid opening

13. The envelope should be marked as under;

Mr. Javaid Rabbani
Dy. Director (P&S)
Room No. 213, 2nd Floor, Admin Block, New Campus, Sector H-10
International Islamic University Islamabad.
Tel: 051-9019255

14. The envelope shall also bear the word **"CONFIDENTIAL"** and following identification quotation for:**"Centre for Advanced Electronics & Photovoltaic Engineering (CAEPE)"**

15. The bid form (BoQs) must be duly filled in, stamped and signed by the authorized representative of the bidder.

16. If the vendor fails to deliver the goods / services to International Islamic University, Islamabad in time then the penalty will be charged as under: -

    a. 02% per month of the total Purchase Order value;
    b. If the vendor fails to deliver the goods / services during the extended period *(if allowed)*then the purchase / work order may be cancelled and Earnest money may be forfeited.

17. If the delivered goods / services are not according to the required quality standards / specifications, the same shall be liable to be rejected after inspection. The bidder/vendor will be required to REPLACE as per requirements mentioned in our BoQs at no cost to the IIUI, otherwise the purchase / work order will be cancelled after due date with confiscation of earnest money AND bidder will bear all cost and expenses thereof.

18. All prices should be quoted on **CPT/CFR Islamabad Basis** or **FOR (IIUI) Basis** or Both.
19. All prices should be valid for at least 120 days. Withdrawal or any modification of the original offer within the validity period shall entitle IIUI to forfeit the earnest money in favor of the IIUI and / or put a ban on such vendor for participation in IIUI tenders / works.

20. It is the sole responsibility of the agent / supplier / manufacturer / vendor to comply with the applicable laws, be national or international.

21. In case of any dispute, decision of the President, IIUI will be final and binding upon the parties.

22. The IIUI reserves the right to modify the quantities of goods / services at any time before the award of purchase / work order.

23. Earnest Money:
    The bidder is required to furnish in form of "Pay Order/Demand Draft" equivalent to **2%** of the total Bid price (in PKR) as Earnest Money in favor of "International Islamic University Islamabad". Any bid not accompanied by the Earnest Money shall be rejected without any right of appeal.
24. Retention Money:
    An amount equal to 10% (in PKR) of the total value of the Purchase Order/Contract Price shall be retained by the International Islamic University, Islamabad for the Warranty Period (Refer to Clause 4 of Special Conditions) as follows:

    - The successful bidder(s) for the CPT/CFR items shall have to be required to submit a "Pay Order/Demand Draft" equal to 10% of the total value of Purchase Order from a Scheduled Bank of Pakistan within 10 days after supply of ordered item(s) for the warranty period.

    - 10% of the total value of the Purchase Order will be withheld by the IIUI from the payment of successful bidders, on FOR Basis supplied items, for the warranty period.

25. The bidder is also required to furnish Company Profile, Client List and Detail of similar Projects/Works along with the proposal.

26. International Islamic University Islamabad reserves the rights to accept or reject the bid/s, if;

    - Received without earnest money.
    - Received later than the date and time fixed for tender submission.
    - The tender is unsigned/ unstamped.
    - The offer is ambiguous.
    - The offer is conditional.
    - Offer is made by the unauthorized agent/ supplier of the original equipment manufacturer.
    - The offer is from a firm, which is black listed by any Govt. Office.
    - The offer is received by telephone/telex/fax/telegram.
    - Any unsigned / ambiguous erasing, cutting / overwriting etc. is made.
    - Received without Company Profile, Client List and Detail of similar Projects/Works with evidence.
    - Without Guarantee / Warrantee of the quoted equipment(s). *(Minimum **twelve (12) months** after the Goods, or any portion thereof as the case may be, have been delivered to and accepted*

27. The bidder should furnish a **CERTIFICATE**on judicial STAMP PAPER worth Rs. 100 as worded below in token of acceptance of all the terms and conditions of the tender. Otherwise the tender will not be considered under any circumstances.

I / We

- Company / Vendor Name:_____
- Postal Address:_____
- Tel. No: _____ Mob No. _____
- NTN# : _____GST#: _____

The undersigned certify that the terms and conditions as contained in this document, viz "***Terms and Conditions***" are accepted unconditionally and in the event of selection of my/our bid/s; the agreement will be entered into, in the prescribed format attached as **Annex-I**. The Special Conditions that are attached as part of proposed agreement at **Annex-II**are also accepted unconditionally.

_____
Sign & Stamp

Note:

1. Please quote the rates on our BoQs and clearly mention the quoted Make / Model / Country of Origin, otherwise your bid / items may lead to rejection.
2. PRICES quoted in different currencies on CPT/CFR basis will be evaluated after converting them into PKR (local currency) at the EXCHANGE RATE prevailing at the State Bank of Pakistan / Open Market on the date of Opening of Bid(s)
3. In Addition to filling of the attached BoQs, supporting literature of the quoted model must be attached for verification & technical evaluation of the required specification by the bid evaluation committee. In case of any clash found between the quoted model and the literature model, the item/bid may be rejected.
4. Terms & Conditions and BoQs should be attached with the proposal (Technical & Financial Bids), otherwise your tender/bid(s) may be rejected.
5. Please also attach the Certificate supporting being Active Taxpayer as per requirement of FBR.

BoQs for the Supply of Lab Equipment for"Centre for Advanced Electronics &Photovoltaic Engineering (CAEPE)"

S. No	Equipment Name	BoQs/Specifications	Qty.	Make/Model & Country of Origin	CPT/CFR Price		FOR Price	
					Unit Price	Total Price	Unit Price	Total Price
1	**X-Ray Diffraction System**	With optional Fluorescent attachment; Sources Cu or others; Diffraction Method (Powder in general or better options for Fluorescent attachment); Source Beam Optics to reduce angular divergence in the incident beam; X-Ray Tube: Target (Cu and others such as Co, Cr, Fe, Mo. Ag, W etc.); Focus (~1 x 10mm2 or ~0.4 x 14mm2); X-Ray Generator, Voltage (≥10-50kV); Max. Output Power (3kW); Current (≥2-60mA) Goniometer: Working Mode (step scanning, continuous and segmentation scanning); Structure (θs-θd linked, θ-2θ individual); Min. addressable increment (close to 0.0001°); 2-Theta repeatability (close to 0.0005°); Scan range (Approximately ~35°~170° or in close accordance with the Goniometer Structure and Accessories provided) Recording Unit: Detector mode (PC or SC, fluorescence with SDD); Approximate Spectrum Resolution (≤20% (PC) or ≤50% (SC) ≤12% (SDD) General Inclusion: Alarm mode and Safety protection; appropriate database/analysis & calculation softwares; appropriate data processing hardware; Chiller with appropriate electrical accessories (transformer for instance; if required), Installation & Training. Options to quote: X-Ray Crystal orientation device/measurement set-up (preferably desktop or additional feature within the XRD system); X-Ray Tubes for additional targets.	**1**					

Note: All the items should be of the same Brand/Model/Specs or their Equivalent

For technical queries please contact withDr. Ahmad Shuja Syed, Inchagre (CAEPE) during office timings (08:00 AM-03:30 PM) on phone # 051-9019453.

CONTRACT / AGREEMENT

THIS CONTRACT/ AGREEMENT is made on the _____**, 201___**

BETWEEN

INTERNATIONAL ISLAMIC UNIVERSITY, ISLAMABAD, a Public Sector University of the Government of Pakistan incorporated under the laws of Islamic Republic of Pakistan and having its principal place at Sector H-10 Islamabad (hereinafter called "the Purchaser"),

AND

M/s _____ incorporated under the laws of Pakistan and having its principal place of business at _____, Pakistan (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for Procurement of Lab Equipment for "**Centre for Advanced Electronics &Photovoltaic Engineering (CAEPE)**"and has accepted a bid/quotation No. _____ dated: _____ submitted by the Supplier for the supply of following item(s) against total **CPT/CFR/FOR Price** _____ (_____) hereinafter called "the Contract Price" and the Purchaser agrees to pay the Supplier/Manufacturer the Contract Price or such other sum(s) as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Sr. No.	**Item Name**	**Specifications**	**Qty.**	**Make/Model/**Country of Origin	**Unit Price**	**Total Price**
				TOTAL		

The Purchaser and the Supplier agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement:
   - ***(a)*** The Tender Document"Terms & Conditions"
   - ***(b)*** BoQ
   - ***(c)*** The Certificate *(As referred at # 27 of Tender Document)*
   - ***(d)*** The Purchase Order
   - ***(e)*** The Special Conditions

3. In consideration of the payments to be made by the Purchaser to the Supplier/Manufacturer as indicated in this Agreement, the Supplier hereby covenants with the Purchaser to execute the Goods and Related Services and to remedy defects therein in conformity in all respects with the provisions of the Contract/Purchase Order.

4. The Purchaser hereby covenants to pay the Supplier/Manufacturer in consideration of the supply of the Goods and Related Services therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract/Purchase Order.

Agreement to be executed in accordance with the laws of Islamic Republic of Pakistan on the day, month and year indicated above.

Signed by:	**Signed by:**
_____	_____
For and on behalf of the Purchaser	for and on behalf the Supplier
In the presence of:	**in the presence of:**
Witness,	Witness
Signature: _____	Signature: _____
Name: _____	Name: _____
Address: _____	Address: _____
Date: _____	Date: _____

SPECIAL CONDITIONS

1. Specifications and Standards:
   1.1 The Supplier shall ensure that the Goods and Related Services comply with the technical requirements.
   1.2 The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
2. Packing and Documents:
   2.1 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, during transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods final destination and the absence of heavy handling facilities at all points in transit.
   2.2 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 Purchase Order, including requirements, if any and in any other instructions ordered by the Purchaser.
3. Transportation:
   3.1 Unless otherwise specified, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.
4. Warranty:
   4.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise by the Purchaser.
   4.2 Unless otherwise specified in these conditions, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in these conditions or for eighteen (18) months after the date of shipment, from the port, or place of loading in the country of origin, whichever period concluded earlier.
   4.3 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
   4.4 Upon receipt of such notice, the Supplier shall, within the 30 days expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser (IIUI)
5. **The Payment Terms will be**:

   5.1 For the CPT/CFR quoted items; payment will be made through irrevocable L.C (90:10 Model) in favor of Manufacturer. Where, 90% in this model will be released upon receipt of shipment and delivery documents. Remaining 10% will be made / released after successful inspection of the equipment at International Islamic University Islamabad.

   5.2 For the FOR quoted items; 100% payment will be made after supply and successful inspection of the ordered equipment(s) at International Islamic University Islamabad after deduction of 10% retention money as per “Terms & Condition”.

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD

Purchase & Store Section, Admin Block, New Campus, Sector H-10, Islamabad.
Tel: 051-9019255 Fax: 051-9258073

Tender No. IIUI-_____

Sub: TENDER DOCUMENT"DEPARTMENT OF CIVIL ENGINEERING (FET)"

"TERMS AND CONDITIONS"

[All pages (BoQs & Terms & Conditions) are mandatory to be signed / stamped, failing which the bid may lead to rejection]

1. Any addition, deletion or modification of any clause of the procurement terms & conditions of International Islamic University Islamabad (IIUI) by any vendor will not be acceptable and may lead to rejection of the bid.

2. Original Manufacturer / Authorized Distributors / Suppliers *(with valid authorization / distribution certificate)* registered with Income Tax, Sales Tax Department and who are on Active Taxpayers List (ATL) of FBR, are eligible to participate in tender.

3. Documents along with Pay Order / Demand Draft / Cash Receipt issued by Finance Department of IIUI amounting to Rs. 1,000/- as a tender document fee (Non-Refundable) shall be submitted in favor of International Islamic University, Islamabad, to the address given below. *(See No. 13)*

4. The exact completion/delivery time from the date of the purchase / work order will be 120 days. The handing over / completion time is of critical importance.

5. The bid proposal(s) should be inclusive of:
   i. All FREIGHT and PACKAGING CHARGES (Items deliverable at Islamabad Airport/Dry Port on "CPT/CFR Basis as per BoQs Format)
   ii. All Taxes, if prices are quoted on "FOR Basis" as per BoQs Format (Items deliverable (Free of Cost) to International Islamic University, New Campus, Sector H-10 Islamabad)

6. **The Payment Terms will be**:
   i. For the CPT/CFR quoted items; payment will be made through irrevocable L.C (90:10 Model) in favor of Manufacturer. Where, 90% under the said model will be released upon receipt of shipment and delivery documents. Remaining 10% will be made / released after successful inspection of the equipment at International Islamic University Islamabad.
   ii. For the FOR quoted items; 100% payment will be made after supply and successful inspection of the ordered equipment(s) at International Islamic University Islamabad.

7. For the CPT/CFR quoted items; shipment(s) will be cleared by the International Islamic University, Islamabad from Custom Authorities.

8. After opening of bids, International Islamic University Islamabad will examine the bids for completeness as per tender document's Terms & Conditions AND Technical Specifications, (As per BoQ)

9. Purchase order (s) will be awarded to the lowest evaluated OR technically recommended bidder (s) on the basis of item wise / subtotal wise / grand total wise according to the nature of BoQs/Compatibility requirements.

10. Procedure of open competitive bidding shall be:Single Stage One Envelope procedure

11. Bidders cannot challenge the finding(s) of the Evaluation Committee or ask for reason of disqualification.

12. The bid should be submitted in a sealed envelope up to the specified deadlines for the items for "DEPARTMENT OF CIVIL ENGINEERING (FET)" (**i-e August 16, 2018**) on or before 10:30 a.m and will be opened on the same date at **11:00 a.m** in the presence of available bidders or their representatives who may like to attend the bid opening

13. The envelope should be marked as under;

Mr. Javaid Rabbani
Dy. Director (P&S)
Room No. 213, 2nd Floor, Admin Block, New Campus, Sector H-10
International Islamic University Islamabad.
Tel: 051-9019255

14. The envelope shall also bear the word **"CONFIDENTIAL"** and following identification quotation for: "DEPARTMENT OF CIVIL ENGINEERING (FET)"

15. The bid form (BoQs) must be duly filled in, stamped and signed by the authorized representative of the bidder.

16. If the vendor fails to deliver the goods / services to International Islamic University, Islamabad in time then the penalty will be charged as under: -

    a. 02% per month of the total Purchase Order value;
    b. If the vendor fails to deliver the goods / services during the extended period *(if allowed)*then the purchase / work order may be cancelled and Earnest money may be forfeited.

17. If the delivered goods / services are not according to the required quality standards / specifications, the same shall be liable to be rejected after inspection. The bidder/vendor will be required to REPLACE as per requirements mentioned in our BoQs at no cost to the IIUI, otherwise the purchase / work order will be cancelled after due date with confiscation of earnest money AND bidder will bear all cost and expenses thereof.

18. All prices should be quoted on **CPT/CFR Islamabad Basis** or **FOR (IIUI) Basis** or Both.
19. All prices should be valid for at least 120 days. Withdrawal or any modification of the original offer within the validity period shall entitle IIUI to forfeit the earnest money in favor of the IIUI and / or put a ban on such vendor for participation in IIUI tenders / works.

20. It is the sole responsibility of the agent / supplier / manufacturer / vendor to comply with the applicable laws, be national or international.

21. In case of any dispute, decision of the President, IIUI will be final and binding upon the parties.

22. The IIUI reserves the right to modify the quantities of goods / services at any time before the award of purchase / work order.

23. Earnest Money:
The bidder is required to furnish in form of "Pay Order/Demand Draft" equivalent to **2%** of the total Bid price (in PKR) as Earnest Money in favor of "International Islamic University Islamabad". Any bid not accompanied by the Earnest Money shall be rejected without any right of appeal.

24. Retention Money:
An amount equal to 10% (in PKR) of the total value of the Purchase Order/Contract Price shall be retained by the International Islamic University, Islamabad for the Warranty Period (Refer to Clause 4 of Special Conditions) as follows:

- The successful bidder(s) for the CPT/CFR items shall have to be required to submit a "Pay Order/Demand Draft" equal to 10% of the total value of Purchase Order from a Scheduled Bank of Pakistan within 10 days after supply of ordered item(s) for the warranty period.

- 10% of the total value of the Purchase Order will be withheld by the IIUI from the payment of successful bidders, on FOR Basis supplied items, for the warranty period.

25. The bidder is also required to furnish Company Profile, Client List and Detail of similar Projects/Works along with the proposal.

26. International Islamic University Islamabad reserves the rights to accept or reject the bid/s, if;

- Received without earnest money.
- Received later than the date and time fixed for tender submission.
- The tender is unsigned/ unstamped.
- The offer is ambiguous.
- The offer is conditional.
- Offer is made by the unauthorized agent/ supplier of the original equipment manufacturer.
- The offer is from a firm, which is black listed by any Govt. Office.
- The offer is received by telephone/telex/fax/telegram.
- Any unsigned / ambiguous erasing, cutting / overwriting etc. is made.
- Received without Company Profile, Client List and Detail of similar Projects/Works with evidence.
- Without Guarantee / Warrantee of the quoted equipment(s). *(Minimum **twelve (12) months** after the Goods, or any portion thereof as the case may be, have been delivered to and accepted*

27. The bidder should furnish a **CERTIFICATE**on judicial STAMP PAPER worth Rs. 100 as worded below in token of acceptance of all the terms and conditions of the tender. Otherwise the tender will not be considered under any circumstances.
I / We

- **Company / Vendor Name:**_____
- **Postal Address:**_____
- **Tel. No:** _____ **Mob No.** _____
- **NTN# :** _____**GST#:** _____

The undersigned certify that the terms and conditions as contained in this document, viz "***Terms and Conditions***" are accepted unconditionally and in the event of selection of my/our bid/s; the agreement will be entered into, in the prescribed format attached as **Annex-I**. The Special Conditions that are attached as part of proposed agreement at **Annex-II**are also accepted unconditionally.

_____
Sign & Stamp

Note:

1. Please quote the rates on our BoQs and clearly mention the quoted Make / Model / Country of Origin, otherwise your bid / items may lead to rejection.
2. PRICES quoted in different currencies on CPT/CFR basis will be evaluated after converting them into PKR (local currency) at the EXCHANGE RATE prevailing at the State Bank of Pakistan / Open Market on the date of Opening of Bid(s)
3. In Addition to filling of the attached BoQs, supporting literature of the quoted model must be attached for verification & technical evaluation of the required specification by the bid evaluation committee. In case of any clash found between the quoted model and the literature model, the item/bid may be rejected.
4. Terms & Conditions and BoQs should be attached with the proposal (Technical & Financial Bids), otherwise your tender/bid(s) may be rejected.
5. Please also attach the Certificate supporting being Active Taxpayer as per requirement of FBR.

BoQs for the Supply of Lab Equipment for "DEPARTMENT OF CIVIL ENGINEERING (FET)"

S. No	Equipment Name	BoQs/Specifications	Qty.	Make/ Model &Country of Origin	FOR Price (PKR)		CPT/CFR Price	
					Unit Price	Total Price	Unit Price	Total Price
1	**Planimeter**	• Accuracy: ≤±0.2% • Top-bottom: max. 328mm • Left-right: 30m from moving side • Size: 21*37.5*7cm • Continuous working: 30 hours • Measurement functions: area, sum, average value. • Measuring by 6-digit pulse count enables to measure 100 times larger accumulative area. • Capacity to calculate Cumulative and Average Value Measurement.	**5**					
2	**Digital Vernier Caliper**	• Lightweight Vernier caliper with 0.001"/0.03mm accuracy, made of oxide coated aluminum with double inner prismatic guide ways for optimal guidance and sliding characteristics • Stainless steel jaws, hardened and finely ground with knife edge top jaws • High contrast white numbering on black anodized frame • Inch and metric graduations • Fitted case	**10**					
3	**Centrifugal Pump Test Rig**	This is a self-contained unit for studying the series and parallel pump characteristics. **Specifications:** • Pump Motor with constant rpm.	**1**					

		• Maximum flow rate: 150 lpm. • Maximum head: 30 m water. • The unit consists of two sets of centrifugal pump and motor, a storage tank, and measuring instruments. • Speed control is by two advanced inverters. • By manipulating flow control valves, each pump can be operated individually or both pump connected in series or parallel. The unit is on wheels. **Measuring instruments:** • **Flow rate**Water meter and stop watch • **Pressures** Pressure gauges at pump suction and discharge • **Pump speed and input power**: Advanced inverters 220 V 1 Ph 50 Hz						
4	**Reciprocating Pump**	• The unit must consist of an industrial reciprocating pump driven by a reduction gear and motor, a PVC storage tank, sensors. • The unit is on a steel base. • Max Flow Rate: 0.3-10000 LPH • Pressure: Min 100 Bar to Max 200 Bar • Frequency: 50 Hz	**1**					
5	**Pipe friction Test Apparatus**	• The unit should consist of a pump, a storage tank and a water proof panel on which all friction loss components are arranged. • The loss is measured by differential pressure using manometers. • Pressure tapping is by small valves with quick connection. • All pressure taps are connected by flexible hoses to a set of specially arranged manifolds such that differential pressure across any component can be measured simply by opening valves without removing the hoses. • Friction loss components: • Other components: Tee section, sudden expansion and sudden contraction • Flow meter/Water meter and a stop watch. • Water manometer with a hand air pump: 2 tubes. • Mercury manometer: 2 tubes. • Workable Power supply	**1**					

6	**Centrifugal Pump**	• Pump Motor with constant rpm. • Maximum flow rate (0.3-10000 LPH) • Speed control: Advanced inverter. • High precision pressure gauge/electronic pressure sensors at pump suction and discharge. • Flow meter/water meter and a stop watch. • Pump speed and input power: Advanced inverter. • Self-contained bench top unit for studying the centrifugal pump flow rate vs head at a various speed. • The unit should consist of a storage tank and a centrifugal pump with motor on a steel base, and measuring instruments.	**1**					
7	**Computer Control Flow Channel**	• The apparatus consists of a floor-standing 2.5-metre flow channel fabricated from transparent acrylic and anodized aluminium, together with various gates, weirs and blocks, enabling the phenomenon of flow channels to be easily demonstrated and studied. **Working section:** • 2500 mm long x 120 mm high x 53 mm wide	**1**					
8	**Water Hammer Test Apparatus**	• A freestanding unit designed to demonstrate the phenomena of pipe surge and water hammer when connected to a Hydraulics Bench. • Includes two separate stainless-steel test pipes, both 3m long, constant head tank, slow acting valve, fast acting valve etc. • A transparent surge shaft with scale allows transient water levels to be observed and timed Electronic sensors used to measure pressure transients at two locations in the water hammer test pipe, one adjacent to fast acting valve and one-half way along the test pipe. • Straight metal pipes used, rather than a coiled arrangement, to minimize distortion to the pressure profile.	**1**					
9	**Particle Image Velocity PIV Apparatus**	The (Acoustic Doppler Velocimeter) is the most significant breakthrough in 3-axis (3D) current meter technology • Three-axis velocity measurement • Sensor mounted on a 25cm stem • High sampling rates — up to 50 Hz • Small sampling volume — less than 0.1 cm3 • High accuracy: 1% of measured range	**1**					

		• Large velocity range: 1 mm/s to 2.5 m/s • Excellent low-flow performance • No recalibration needed						
10	**Current Meter**	It is widely used for measurements of the flow velocity and high flow velocity in river, lakes, reservoirs, pressure conduits and spillway of hydropower stations • Measuring Range: 0.04-10.0m/s • Measuring Range: 0.015-3.5m/s • Water Depth: 0.05-3m	**3**					
11	**Simulation Software**	• **ANSYS, FLUENT 12, GAMBIT 6.3**	**1**					
12	**Resistivity Meter**	• PQWT-TC300 geoelectrical mapping upto300m depth to detect underground water • On the boot screen, the instrument will show 6 options: Single Frequency, Three Frequency, Profile Survey, File Explorer, Setting and Service. • Colorful geo electrical mapping 300M deep underground water detector • 300m resistivity mapping-with-one-button water detection • Automatic Form curve graph and profile map from date. • The data will be saved automatically after the shutdown. • Adopt latest noise detecting element, sounds clear.	**2**					
13	**Hydraulic Jump Apparatus**	• A floor-standing flow channel for use with a hydraulics bench • Working section 77mm wide, 150mm high and 1100mm long • Can be configured to demonstrate flow in open channels and closed conduits • Clear acrylic sides for good visibility of flow patterns created • Stilling arrangement at inlet to promote smooth flow into the working section	**1**					
14	**Direct Shear Machine**	• Shear device, shear box, tri-axial compression chamber • Porous inserts, loading devices, info indicator • Shear force measurement device, sample extruder • Specimen size measurement devices • Maximum shear force: 3000 N-5000 N • Maximum vertical load: 300N-500 N	**1**					

		• Various specimen sizes • Voltage: Compatible to 220 V						
15	**Dynamic Cone Penetrometer**	• Vibrating table • Relative density gauge set • Voltage: Compatible to 220 V **Accessories:** • Pouring devices, Moisture condition mould, Fiber discs.	**1**					
16	**Hydraulic Jack**	• Capacity: 1 Ton	**1**					
17	**Weighing Balance**	• 15 Kg with 0.1 g Least Count with under hook	**1**					
18	**Sieve Sets**	• **Sieve Set 8 inch diameter** (3/4",1/2",3/8",#4,#8,#10,#12,#16,#30,#40,#50,#80,#100,#200, wet washing sieve 4" deep with 75 micron, lid and receiver)	**1**					
19	**Shear Strength Machine**	• 24-Bit Delta-Sigma A/D conversion • 3,200 Channels on 32 lines • 2D and 3D operation • Wide dynamic range • Fully automated system performance tests • Intuitive operation • 3D Operation • Continuous recording • Voltage: Compatible to 220 V **Accessories:** • Complete seismograph pack with Laptop and software, Main cables, 48 geophones, shear wave velocity generator, connecting cables and accessories, extension cables, battery pack with charger.	**1**					
20	**Standard Penetration Test Apparatus**	• Outer diameter of the split spoon sampler = 50.8 mm • Inner diameter of the split spoon sampler = 35 mm • Length of split spoon sampler = 600 mm • Weight of hammer = 63.5 kg • Height of fall of hammer = 760 mm • Tripod assembly should consist of: Tripod stand (steel pipe), Vertical Guide (machined steel), Rope (3/4" x 15 metre), Pipe Wrench, Pulley"	**1**					

21	**Constant Head Permeameter**	• Permeameter Cylinder, bottom porous disc • Manometer outlets, top porous discs • Large funnels, Vibrating tamper • Sliding chamber, vacuum pump • Manometer Tube and Stand • Scoop • Stop Watch Digital • Graduated Cylinder • Pan • Dial Thermometer	**1**					
22	**Triaxial Testing Machine**	• Loading device, axial load measuring device • Tri-axial compression chamber, axial load piston • Pressure control device, specimen base and cap • Deformation indicator, Rubber membrane • Sample extruder, specimen size measurement devices, • Balance • Maximum sample diameter: 75-150mm • Maximum compression force, kN: 50-100 • Maximum tensile force, kN: 2-5 • Voltage: Compatible to 220 V **Accessories:** • Triaxial load frame with complete accessories.	**1**					
23	**Oedometer**	• Maximum vertical force: 15 kN - 30 Kn • Consolidation cells with complete accessories.	**1**					
24	**Universal Extruder**	• 4 inch and 6 inch samples for Marshall, Proctor and C.B.R Moulds • Max load cap.: 20 KN-60 kN • Ram travel: 300- 500 mm	**1**					
25	**C.B.R Test Apparatus**	• C.B.R Mould, spacer disc • Rammer, Scaled weights • Penetration pistons, loading device • Maximum capacity: 25-50 kN • Large memory data storage • Voltage: Compatible to 220 V • Complete accessories to perform tests on samples	**1**					

26	**Gyratory Compactor**	• Load cell fitted directly on the vertical actuator for accurate load measurement and feedback control. • Easy adjustment of the gyratory angle. • User defined axial stress and speed of rotation. • Catch tray to collect expelled liquids using perforated moulds.	**1**					
27	**Aggregate Impact Machine**	This machine should supply complete with Sample Splitters used to divide representative dry samples into the required batch sizes for testing. **Specifications** • With complete test frame assembly • Made from steel protected against corrosion • Fit with a counter to check the number of blows • Maximum particle size of sample splitters (1", 2", 3"), One complete set for each size with 2 spare boxes	**1**					
28	**Los Angeles Machine**	• Los Angeles machine with counter • The cylinder rotates at 31-33 rpm • Set of 12 steel balls • Sieve # 12 (1.7mm) Approximate dimensions: 1000x800x1000 mm	**1**					
29	**Flaky and Elongation Test Apparatus**	• 13in (330mm) pivoting arm. • The positioning of the pivoting arm allows to obtain desired ratio among 1:2, 1:3, 1:4, or 1:5 • Proportional caliper	**10**					
30	**Ring and Ball Apparatus**	• Hot plate with magnetic stirrer with speed control from 0 to 160 rpm • Temperature probe • 2 Steel balls diameter 3/8" • 2 brass rings • 2 brass ball centering guides • 2 Ring holder/assembly • Thermometer (Approximate -2 to +80ºC, 0.2 °C graduations) • Beaker 600 ml	**3**					
31	**Penetrometer Test Apparatus**	Thermostatically controlled digital water bath with cooling system and conditioning vessel provides water at the required temperature 25 °C to perform the penetration test. • Penetrometer with cast iron base and leveling screws. • Steeper motor for penetration depth as low as 0.01 mm.	**5**					

		• Mirror with articulated holders to check surface contact between the needle and the sample. • Holder. Penetrometer needle 2.5 ± 0.05 g. • Sample cups 70 mm diameter x 45 mm height (Pack of 10). • Water bath capacity ranges 05- 15 liters with insulation.						
32	**Ductilometer Apparatus**	• The tank and the external frame are all made from stainless steel • Temperature range at 25±0.2°C and from 4 to 30 ± 0.2°C • Cooling coil, water circulating pump, thermostat approximate (±0.1° or ±0.2° C) • Adjustable speed range from approximate 5 to 100 mm/min • High carriage return speed of approximate 500 mm/min • Electric motor • Maximum Stroke approximate 1500 mm. • Ductility briquette Moulds, (brass made) Quantity 6 No.	**1**					
33	**Cleave Land Open Cup Apparatus**	• Brass cup • Electric furnace with electronic control of heating power • Flame rotating ignition device Glass cup • Insulating plate • Support and clamp for thermometer • Stainless steel frame • Thermometers -6 to +400°C	**5**					
34	**California Bearing Test Machine**	• Motorized loading • Maximum capacity: 50 kN • Test speed: 1.27 mm/min • Voltage: Compatible to 220 V	**1**					
35	**Curing Marshall Specimen**	Used to condition Marshall (60±1°C) and other asphalt specimens in water • Water bath, 56 liters cap. 230 V, 50-60 Hz, 1 ph • supplied with perforated base shelf and internal case	**10**					
36	**Marshall Compactors Automatic**	The apparatus automatically compacts the sample of asphalt. • Automatic control • Marshall impact automatic compactor for 101.6 mm dia. Specimens • Sliding mass weight: 4535 ± 15 g • Free fall height: 457 ± 3 mm	**1**					
37	**Vacuum Picnometer**	Approximate 4-5 liters capacity, made from aluminum with a lid. Suitable for paving mixture samples up to 2 kg, with a maximum aggregate size of 19.1 mm (¾") supplied complete with rate of spread	**1**					

		apparatus use to determining the rate of spread of binder on the surface of the road. 300 mm square metal tray (3 No.). Chain for lifting tray attached to a digital balance.						
38	**Skid Resistant Apparatus**	This test is used for functional performance of skid resistance of roads. • Thermometer 0 to 220°C for surface temperature measurement • Washing bottle, 1 l cap. for surface wetting • Rule for sliding length verification • Mounted rubber slider for site use. Complete with conformity certificate. TRL rubber, 76 mm width. • Mounted rubber slider, 4S rubber, 32 mm • Base plates	**1**					
39	**Triaxial Machine**	Investigation of stress-strain relationships in soil is usually carried out with triaxial tests where undisturbed, remoulded or compacted specimens are subjected to different stress level sand drainage conditions to simulate as closely as possible the different situations that can occur in the subsoil on site and the possible effects of construction, excavations, embankments, landslides, etc. **Specifications** • Maximum sample diameter: 150mm • Minimum testing speed, mm/min: 0.00001 • Maximum testing speed, mm/min: 99.99999 • Maximum compression force, kN: 100 • Maximum tensile force, kN: 5 • Minimum vertical clearance, mm: 390 • Maximum vertical clearance, mm: 1140 • Horizontal clearance, mm: 498 • Platen diameter, mm: 158 • Platen travel, mm: 100 • Dimensions, mm (h x w x d) (approx.):1830 x 750 x 520 • Power, W: 680 • Weight, kg (approx.) : 120	**1**					
40	**Pressure Ageing Vessel**	The Pressure Ageing Vessel (PAV) has been developed to simulate in-service ageing of asphalt binder after 5 to 10 years. The binder is exposed to high pressure and temperature for 20 or 65 hours (selectable up to 99) to simulate the effect of long-term oxidative ageing. • Vacuum Degasing Oven	**1**					

		• PAV with encased band heaters and integral pressures and temperature manageable • RTD measures internal test temperature to 0.1 ±°C. • Pressure is monitored by transducer and controlled to 2.1 ± 0.1 MPa. • Temperature and pressure indicators display both set points and actual values. • Data logging of both temperature and pressure • Bottled compressed air with regulator • Supplied complete with stainless pans • Precision assembled rack to support the pans power card • Freely selectable test temperatures from 8° to 120°C, PID controlled to +/- 0.5°C • Pre-heating functions (limited to 60° C to avoid accidental burns during sample rack positioning) for time optimization • Real time readout of vessel temperature and pressure • Pressure vessel						
41	**Bending Beam Rheometer**	The Bending Beam Rheometer (BBR) test provides a measure of low temperature stiffness and relaxation properties of asphalt binders. The Bending Beam Rheometer (BBR) is engineered to perform flexural tests on asphalt binder and similar specimens per ASTM D6648 and AASHTO T313. • Load Frame: Integral stainless steel frictionless construction • Loading shaft: In-line stainless steel with blunt point • Test Load: Variable test range from 0 to 250 g standard. • System maintains required test load to within ±0.5 g throughout the test cycle • Test Cycle Times: Cycle times for pre-load, recovery, and test load are completely operator- adjustable • Load cell: 400- 500 g (temperature-compensated) • Mechanical: overload • Sample supports: 25 mm (0.98 in.) diameter stainless steel spaced 101.6 mm (4.00 in.) apart • LVDT displacement transducers 6.35 mm (0.25 in.) calibrated range to provide 2 μm resolution throughout testing and verification range • Cooling Unit: Included (non-CFC refrigerant) Recommended Cooling	**1**					

		• Bath fluid: Non-flammable ethylene glycol mixture.						
42	**Dynamic Shear Rheometer**	The Dynamic Shear Rheometer (DSR) determines linear viscoelastic properties of performance-graded asphalt binders at temperatures from 5°—85°C (41°—185°F). DSR determines Dynamic shear modulus and phase angle properties of binder. • DSR Silicone Rubber Mould Set for 8mm & 25mm Samples are flexible moulds to form specimens with dimensions of 8mm and 25mm when tested. Actual mould dimensions are 9 and 19mm diameter • DSR Viscosity Standard Fluid used for calibration of Dynamic Shear Rheometer. NIST-traceable • Computer System is a Windows® compatible PC to collect, store and report test data • Reference Thermal Detector Probe allows direct in-place calibration of the DSR's built-in resistance temperature detector • 8mm DSR Extra Lower Plate is stationary and holds 8mm specimens in place; extra plates increase sample preparation efficiency • 25mm DSR Extra Lower Plate is stationary and holds 25mm specimens in place; extra plates increase sample preparation efficiency • DSR 8mm Extra Upper Plate oscillates to produce strain on 8mm diameter asphalt samples; extra plates allow for continuous operation and higher productivity • DSR 25mm Extra Upper Plate oscillates to produce strain on 25mm diameter asphalt samples; extra plates allow for continuous operation and higher productivity • One year of software updates	**1**					
43	**Wheel Tracker**	The Wheel Tracker Test is used to determine the rut depth in the asphalt mixtures. **Specifications** • Conforming to EN 12697-22 Small scale device	**1**					

		• Table displacement with adjustable speed by inverter • Motorized vertical adjustment of the loading arm • Wheel with solid rubber tyre 200 mm external dia. • Wheel weight 700 N (900 N available on request) • Suitable for large core specimens and slabs up to 400x300 mm. • Slab thickness from 25 to 100 mm • 25 mm stroke transducer with resolution better than 0.1 mm • Integral temperature controlled cabinet • Test temperature range adjustable from environment to 65°C • Double glazed doors for test monitoring **Hardware** • 16 bit microprocessor. • One CPU card to control both test data visualization, temperature control, database and internal functions management control. • Large permanent memory to store test results. • 10 key membrane touch keyboard. • 240 x 128 pixel graphical display. • RS 232 output for PC connection **Firmware** • Language selection. • Clock/Calendar system. • Fully automatic test control • Test setting menu, complete with descriptive sample parameters. • Calibration menu to set and check temperature, table speed and displacement, and featuring a special function for manual control of the test performance. • Test performance menu with simultaneous display of all the test data (including real time table speed). • Internal database up to 100 tests. Each test can be downloaded to a PC, displayed, printed or deleted. • Download to PC via serial port. • Data processing to EN 12697-22 Small scale device, procedure A and B, and customized test						

		• Windows 7 or 10 compatible software, for printing of test certificates and multiple test processing (mean values). **Safety Features** Automatic stop of climatic chamber and moving table when opening the door						
44	**Laboratory Mixer**	The main function of this machine is to prepare homogenous bituminous mixtures Laboratory samples at strictly controlled temperature in a short time period (few minutes) to avoid any mechanical aggregate degradation for Asphalt mix design. **Specifications** • Asphalt Laboratory Mixer • The mixing capacity ranges up to 20-30 liters. • Mixing speed adjustable ranges from 4 to 50 rpm. • Mixing temperature adjustable up to 260 °C. • Main Frame holding a horizontal stainless steel container • Mixing container material made up of stainless steel with helical mixing shaft and double wall thermally insulated. The container contains an electric heater with probe sensor granting constant and uniform temperature control. • Electro mechanical motion allows easy unloading by motorized tilting system, total rotation ranges from 100 – 150 °C. • Heating power ranges 3000-7500 W • Temperature control with PT 100-150	**1**					
45	**Centrifugal Bitumen Extractor**	Centrifuge extractor is used for determining the percentage of bitumen in bituminous mixtures. **Specifications** • 3000 g capacity centrifuge extractor • Speed control up to 3600 rpm • fast stop bowl rotation • Speed regulator and digital display monitoring the frequency • 200 filter papers, 3000 g Capacity • Calcium Tetra Chloride (20 Litre)	**1**					

		• Sodium Sulphate or Magnesium Sulphate (50 Kg)							
46	**Strain & Stress Controlled Universal Testing Machine**			**1**					

S.No	Specifications	
1	Max Capacity	1000 KN for Compression & Tension
2	Force range	Rangeless
3	Analog indicator (Option)	2000/1000/400/200/100/40 kN
4	Electronic unit	Controller
5	Accuracy	±0.5 %
6	Load measuring range	1 – 100 %
7	Displacement control speed	0.01 to 80 mm/min
8	Loading Speed	1 – 200 % FS/min
9	Resolution	Up to 1/1800.00
10	Tensile test	Maximum tensile space = 900 mm, Grip space for rod specimen = Ø 20 up to Ø 90 mm, Grip for plate specimen = 1 set
11	Compression Test	Maximum space = 750 mm, Compression Plate size = Up to Ø 220 mm
12	Flat sample clamping thickness	Up to 60 mm
13	Transverse / Bending test	Max Support span = 900 mm, Support Diameter x Width = 70 x 200 mm Punch Tip radius = 30, 40 mm punch width = 160 mm
14	Sheared sample diameter	Ø 10 mm
15	Power supply requirement	220 V, 50 Hz

		16 Motor Power: Up to 6 KW **17** External Dimension (Lx Wx H): 1200 x 850 x 2900 mm **18** Operation and Visibility: Touch screen color LCD up to 11” **19** Storage: A USB memory stick connectable to measurement controller with test parameters stored in USB memory provided, tests can be performed without a computer because of USB memory stick. Furthermore, after tests measurement data can be automatically saved in the USB. **20** Computer system: Latest compatible computer system with installed software’s for operation. **(Make /Model:** USA, UK,JAPAN, EUOROPE Or Equivalent**)**						
47	**Stress Controlled Universal Testing Machine**	**Specifications:** • Machine must conform to standards of ASTM A370, EN ISO 6892, 7500-1. • For tensile test it must comply ASTM E290 and for tensile test on steel and steel reinforcing bars standard is ASTM A370. • Environmental and user-friendly machine with improved control performance and easy operational interface. • Provided with semi-auto-tuning function which enables high precision stress and strain control in compliance with ISO 6892-2009 and JIS Z2241 metallic materials tensile testing standards). • For easy operation and visibility an extra-large (10 to 11")	**1**					

color LCD with touch screen facility must be provided.

- A standard key switch must be provided to ensure properly controlled security.
- A USB memory stick connectable to measurement controller with test parameters stored in USB memory provided, tests can be performed without a computer because of USB memory stick. Furthermore, after tests measurement data can be automatically saved in the USB.
- It must have energy efficient hybrid hydraulic unit with reduced power consumption.

Table 1.0 Capacity Details of UTM

Capacity	
Max. Capacity	2000 KN for Compression & Tension
Force range	Rangeless
Analog indicator (Option)	2000/1000/400/200/100/40kN

Table 2.0 Technical Specifications Of UTM

Specifications		
1.Loading Speed (50/60Hz) (mm/min)	Servo Valve Hybrid	40/50 max. 90max
Drive Motor	Servo Valve Hybrid	5.5 Kw 4.4 Kw
2. Tensile Test	Max. grip span (mm)	1100
	Grip space for rod specimens (mm) (Two sets of grip Liners)	Ø 20 to 90, 1 type with liner
	Grip space for plate specimens with additional grip faces (3 Sets of standard grips)	0 to 85, 1 type (90 in width)
3. Compression Test	Max. compression plate span (mm)	950

	Compression Plate size (mm)	Ø220
4. Transverse/ Bending Test	Max. Support span (mm)	900
	Support Diameter x Width (mm)	70 x 200
	Punch Tip radius (mm)	30, 40
	punch width (mm)	160
5. Crosshead elevation speed (50/60 Hz) Approx.		290/350
Drive Motor		1.5 Kw
6. Ram stroke (mm)		300
7. Column Span (mm)		750
8. Effective table dimension (W X D) (mm)		850 x 850
9.Power Supply Capacity (3 phase, 220V, 50Hz/200 to 220V,60Hz)		12 KVA 12 KVA
10. Breaker Capacity (3 phase, 220V, 50Hz/200 to 220V,60Hz)		75 A 75A
11. Testing Machine Size (W X D X H) (mm)		1560×920×3400
Testing Machine	Measurement Controller (mm)	740×1000×1800

Table 3.0. Standard specifications for measurement controller

1	**Loading method**	Computer-controlled electro-hydraulic servo system	
2	**Force measurement**	Method	Cylinder internal pressure measurement with high-precision pressure cell
		Precision standard type	Within ±1.0 % of indicated value (when the force is 1/1 to 1/250 of rated value) (Conforming to JIS

						B7721 Class 1, ISO 7500/1 Class 1, and ASTM E4)*[1]							
				High-precision type (option)		Within ±0.5 % of indicated value (when the force is 1/1 to 1/250 of rated value) (Conforming to JIS B7721 Class 0.5, ISO 7500/1 Class 0.5, and ASTM E4)							
				Magnification		Rangeless							
		3	**Force display**	Operation unit	Digital display	Min. display resolution: 1/200,000 (300 kN/3000 kN: 1/240,000)							
				Analog force indicator	Analog display	Scale plate diameter: 450 mm; Min. scale: 1/1000 (300 kN/3000 kN: 1/600)							
					Digital display	Min. display resolution: 1/200,000 (300 kN/3000 kN: 1/240,000)							
		4	**Stroke measurement display**		Measurement with optical encoder; digital display (resolution: 0.01 mm)								
		5	**Automatic load control**	Method	Fully closed-loop automatic load control								
				Test control functions	Single test control, Cycle test control (triangular wave, trapezoidal wave), Stress test control (metal tensile test control:								
					compliant with ISO 6892-2009/JIS Z2241), Strain test control (metal tensile test control: compliant with ISO 6892-2009),								
					Stroke speed 3-step switching control, Concrete test control (compression, bending, cleavage tests)								
				Range	Ram stroke control	Speed range: 0.1 mm/min to max. loading speed							
						Control range: Ram return point to max. ram stroke							

					Test force control	Speed range: 0.2 % to 500 % full-scale/min						
						Control range: 0.4 % to 100 % of full-scale force						
					Strain control	Speed range: 0.1 % to 80 %/min						
						Control range: 5 % to 100 % of full-scale elongation						
			6	**Input/output interface**	External analog input: 2 CH; External analog output: 2 CH External digital input: 2 CH (optional); Internal amplifiers possible: 2 ports Analog recorder (optional) output, USB function (for computer) / Host (for USB memory) interface, and Dataletty (optional) output							
			7	**Standard function**	Auto-test force-strain control (with auto-tuning), Test force auto-zero, Test force auto-calibration, Break detecting(break sensitivity, break level, break peak level, and high sensitivity), Auto-return, Arbitrary stroke speed setting,Stroke speed preset, Cycle count, Stress value display, Displacement meter value display, PEAK/BREAK value display,Test condition files (100 files), Japanese/English display, S-Scurve display, Specimen protection,Current speed display, and Manual load control							
			8	**Safety devices**	Overload automatic stop (When the test force value exceeds 102 % of the full-scale value,the loading pump automatically stops.)							
					Software limit detection (automatically stops test upon reaching limit setting value)Control automatic stop (When an excessive control deviation is reached, the test automatically stops.)							
			NOTE:									
			*1 Calibration is required after installation to provide conform1ance.									

		(Make /Model: USA, UK,JAPAN, EUOROPE Or Equivalent**)**						
48	**Electric Hoist Crane**	The crane is used for shifting heavy test samples and testing equipment's within the premises of laboratory. **Specification:** • Capacity up to 3 Tons • Provided with appropriate accessories • Complete assembly • Electrically operated machine **(Make /Model:** USA, UK,JAPAN, EUOROPE Or Equivalent**)**	**1**					
49	**Digital data acquisition system**	The apparatus is used for the measurement of change in length and applied load values and calculating strains and stress values via computer software. **Specification:** • Capacity of 16 to 20 Channels • LVDTS of range 50 to 100 mm • Digital load cells with capacity up to 10 Tons • Provided with compatible software to record and control the data. • Provided with instruction manual **(Make /Model:** USA, UK,JAPAN, EUOROPE Or Equivalent**)**	**1**					
50	**LVDTs**	An LVDT is an electromechanical device used to convert mechanical motion or vibrations, specifically rectilinear motion, into a variable electrical current, voltage or electric signals, and the reverse. **Specification:** • Range (*) ±1.0" (±25mm) • Linearity error (% F.S.) < ±0.5/ ±0.25/ ±0.1 • Length (body) 8.3" (210.82 mm) • Length (shaft centered) 10.8" (274.32 mm) • Total weight 10 oz. • Spring force at X 7.2 oz. • Spring rate 3.0 oz./inch • Inward over-travel 0.12" • Outward over-travel 0.39" • Excitation/supply +5V to +18V DC, 100mA typical	**1**					

		• Output ±2.2V • Output load 2kΩ (minimum) • Output ripple 30mV (peak-to-peak) • Electrical output bandwidth 200Hz (flat) • Output impedance 2Ω • Temperature coefficient (zero) ±0.006% F.S. / °F (typical) • Temperature coefficient (span) ±0.017% F.S. / °F (typical) • Operating temperature range -58°F to +158°F • Cable BDI RC-187 **(Make /Model:** USA, UK,JAPAN, EUOROPE Or Equivalent**)**						

Note: All the items should be of the same Brand/Model/Specs or their Equivalent

For technical queries please contact with Dr. Khan Zeb Jadoon, Chairman (DCE, FET) during office timings (08:00 AM-03:30 PM) on phone # 051-9019484.

CONTRACT / AGREEMENT

THIS CONTRACT/ AGREEMENT is made on the _____**, 201___**

BETWEEN

INTERNATIONAL ISLAMIC UNIVERSITY, ISLAMABAD, a Public Sector University of the Government of Pakistan incorporated under the laws of Islamic Republic of Pakistan and having its principal place at Sector H-10 Islamabad (hereinafter called "the Purchaser"),

AND

M/s _____ incorporated under the laws of Pakistan and having its principal place of business at _____, Pakistan (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for Procurement of Lab Equipment for "DEPARTMENT OF CIVIL ENGINEERING (FET)"and has accepted a bid/quotation No. _____ dated: _____ submitted by the Supplier for the supply of following item(s) against total **CPT/CFR/FOR Price** _____ (_____) hereinafter called "the Contract Price" and the Purchaser agrees to pay the Supplier/Manufacturer the Contract Price or such other sum(s) as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Sr. No.	**Item Name**	**Specifications**	**Qty.**	**Make/Model/**Country of Origin	**Unit Price**	**Total Price**
				TOTAL		

The Purchaser and the Supplier agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement:
   - ***(a)*** The Tender Document" Terms & Conditions"
   - ***(b)*** BoQ
   - ***(c)*** The Certificate *(As referred at # 27 of Tender Document)*
   - ***(d)*** The Purchase Order
   - ***(e)*** The Special Conditions

3. In consideration of the payments to be made by the Purchaser to the Supplier/Manufacturer as indicated in this Agreement, the Supplier hereby covenants with the Purchaser to execute the Goods and Related Services and to remedy defects therein in conformity in all respects with the provisions of the Contract/Purchase Order.

4. The Purchaser hereby covenants to pay the Supplier/Manufacturer in consideration of the supply of the Goods and Related Services therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract/Purchase Order.

Agreement to be executed in accordance with the laws of Islamic Republic of Pakistan on the day, month and year indicated above.

Signed by:	**Signed by:**
_____	_____
For and on behalf of the Purchaser	for and on behalf the Supplier
In the presence of:	**in the presence of:**
Witness,	Witness
Signature: _____	Signature: _____
Name: _____	Name: _____
Address: _____	Address: _____
Date: _____	Date: _____

SPECIAL CONDITIONS

1. Specifications and Standards:
   1.1 The Supplier shall ensure that the Goods and Related Services comply with the technical requirements.
   1.2 The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
2. Packing and Documents:
   2.1 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, during transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods final destination and the absence of heavy handling facilities at all points in transit.
   2.2 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 Purchase Order, including requirements, if any and in any other instructions ordered by the Purchaser.
3. Transportation:
   3.1 Unless otherwise specified, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.
4. Warranty:
   4.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise by the Purchaser.
   4.2 Unless otherwise specified in these conditions, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in these conditions or for eighteen (18) months after the date of shipment, from the port, or place of loading in the country of origin, whichever period concluded earlier.
   4.3 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
   4.4 Upon receipt of such notice, the Supplier shall, within the 30 days expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser (IIUI)
5. **The Payment Terms will be**:

   5.1 For the CPT/CFR quoted items; payment will be made through irrevocable L.C (90:10 Model) in favor of Manufacturer. Where, 90% in this model will be released upon receipt of shipment and delivery documents. Remaining 10% will be made / released after successful inspection of the equipment at International Islamic University Islamabad.

   5.2 For the FOR quoted items; 100% payment will be made after supply and successful inspection of the ordered equipment(s) at International Islamic University Islamabad after deduction of 10% retention money as per “Terms & Condition”.

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD

Purchase & Store Section, Admin Block, New Campus, Sector H-10, Islamabad.
Tel: 051-9019255 Fax: 051-9258073

Tender No. IIUI-_____

Sub: TENDER DOCUMENT"SA-Centre for Interdisciplinary Research in Basis Sciences"

"TERMS AND CONDITIONS"

[All pages (BoQs & Terms & Conditions) are mandatory to be signed / stamped, failing which the bid may lead to rejection]

1. Any addition, deletion or modification of any clause of the procurement terms & conditions of International Islamic University Islamabad (IIUI) by any vendor will not be acceptable and may lead to rejection of the bid.

2. Original Manufacturer / Authorized Distributors / Suppliers *(with valid authorization / distribution certificate)* registered with Income Tax, Sales Tax Department and who are on Active Taxpayers List (ATL) of FBR, are eligible to participate in tender.

3. Documents along with Pay Order / Demand Draft / Cash Receipt issued by Finance Department of IIUI amounting to Rs. 1,000/- as a tender document fee (Non-Refundable) shall be submitted in favor of International Islamic University, Islamabad, to the address given below. *(See No. 13)*

4. The exact completion/delivery time from the date of the purchase / work order will be 120 days. The handing over / completion time is of critical importance.

5. The bid proposal(s) should be inclusive of:
   i. All FREIGHT and PACKAGING CHARGES (Items deliverable at Islamabad Airport/Dry Port on "CPT/CFR Basis as per BoQs Format)
   ii. All Taxes, if prices are quoted on "FOR Basis" as per BoQs Format (Items deliverable (Free of Cost) to International Islamic University, New Campus, Sector H-10 Islamabad)

6. **The Payment Terms will be**:
   i. For the CPT/CFR quoted items; payment will be made through irrevocable L.C (90:10 Model) in favor of Manufacturer. Where, 90% under the said model will be released upon receipt of shipment and delivery documents. Remaining 10% will be made / released after successful inspection of the equipment at International Islamic University Islamabad.
   ii. For the FOR quoted items; 100% payment will be made after supply and successful inspection of the ordered equipment(s) at International Islamic University Islamabad.

7. For the CPT/CFR quoted items; shipment(s) will be cleared by the International Islamic University, Islamabad from Custom Authorities.

8. After opening of bids, International Islamic University Islamabad will examine the bids for completeness as per tender document's Terms & Conditions AND Technical Specifications, (As per BoQ)

9. Purchase order (s) will be awarded to the lowest evaluated OR technically recommended bidder (s) on the basis of item wise / subtotal wise / grand total wise according to the nature of BoQs/Compatibility requirements.

10. Procedure of open competitive bidding shall be:Single Stage One Envelope procedure

11. Bidders cannot challenge the finding(s) of the Evaluation Committee or ask for reason of disqualification.

12. The bid should be submitted in a sealed envelope up to the specified deadlines for the items for "SA-Centre for Interdisciplinary Research in Basis Sciences"(**i-e August 16, 2018**) on or before 10:30 a.m and will be opened on the same date at **11:00 a.m**in the presence of available bidders or their representatives who may like to attend the bid opening

13. The envelope should be marked as under;

Mr. Javaid Rabbani
Dy. Director (P&S)
Room No. 213, 2nd Floor, Admin Block, New Campus, Sector H-10
International Islamic University Islamabad.
Tel: 051-9019255

14. The envelope shall also bear the word **"CONFIDENTIAL"** and following identification quotation for: "SA-Centre for Interdisciplinary Research in Basis Sciences"

15. The bid form (BoQs) must be duly filled in, stamped and signed by the authorized representative of the bidder.

16. If the vendor fails to deliver the goods / services to International Islamic University, Islamabad in time then the penalty will be charged as under: -

    a. 02% per month of the total Purchase Order value;
    b. If the vendor fails to deliver the goods / services during the extended period *(if allowed)*then the purchase / work order may be cancelled and Earnest money may be forfeited.

17. If the delivered goods / services are not according to the required quality standards / specifications, the same shall be liable to be rejected after inspection. The bidder/vendor will be required to REPLACE as per requirements mentioned in our BoQs at no cost to the IIUI, otherwise the purchase / work order will be cancelled after due date with confiscation of earnest money AND bidder will bear all cost and expenses thereof.

18. All prices should be quoted on **CPT/CFR Islamabad Basis** or **FOR (IIUI) Basis** or Both.
19. All prices should be valid for at least 120 days. Withdrawal or any modification of the original offer within the validity period shall entitle IIUI to forfeit the earnest money in favor of the IIUI and / or put a ban on such vendor for participation in IIUI tenders / works.

20. It is the sole responsibility of the agent / supplier / manufacturer / vendor to comply with the applicable laws, be national or international.

21. In case of any dispute, decision of the President, IIUI will be final and binding upon the parties.

22. The IIUI reserves the right to modify the quantities of goods / services at any time before the award of purchase / work order.

23. Earnest Money:
The bidder is required to furnish in form of "Pay Order/Demand Draft" equivalent to **2%** of the total Bid price (in PKR) as Earnest Money in favor of "International Islamic University Islamabad". Any bid not accompanied by the Earnest Money shall be rejected without any right of appeal.

24. Retention Money:
An amount equal to 10% (in PKR) of the total value of the Purchase Order/Contract Price shall be retained by the International Islamic University, Islamabad for the Warranty Period (Refer to Clause 4 of Special Conditions) as follows:

- The successful bidder(s) for the CPT/CFR items shall have to be required to submit a "Pay Order/Demand Draft" equal to 10% of the total value of Purchase Order from a Scheduled Bank of Pakistan within 10 days after supply of ordered item(s) for the warranty period.

- 10% of the total value of the Purchase Order will be withheld by the IIUI from the payment of successful bidders, on FOR Basis supplied items, for the warranty period.

25. The bidder is also required to furnish Company Profile, Client List and Detail of similar Projects/Works along with the proposal.

26. International Islamic University Islamabad reserves the rights to accept or reject the bid/s, if;

- Received without earnest money.
- Received later than the date and time fixed for tender submission.
- The tender is unsigned/ unstamped.
- The offer is ambiguous.
- The offer is conditional.
- Offer is made by the unauthorized agent/ supplier of the original equipment manufacturer.
- The offer is from a firm, which is black listed by any Govt. Office.
- The offer is received by telephone/telex/fax/telegram.
- Any unsigned / ambiguous erasing, cutting / overwriting etc. is made.
- Received without Company Profile, Client List and Detail of similar Projects/Works with evidence.
- Without Guarantee / Warrantee of the quoted equipment(s). *(Minimum **twelve (12) months** after the Goods, or any portion thereof as the case may be, have been delivered to and accepted.*

27. The bidder should furnish a **CERTIFICATE**on judicial STAMP PAPER worth Rs. 100 as worded below in token of acceptance of all the terms and conditions of the tender. Otherwise the tender will not be considered under any circumstances.
    I / We
    - **Company / Vendor Name:**_____
    - **Postal Address:**_____
    - **Tel. No:** _____ **Mob No.** _____
    - **NTN# :** _____**GST#:** _____

    The undersigned certify that the terms and conditions as contained in this document, viz "***Terms and Conditions***" are accepted unconditionally and in the event of selection of my/our bid/s; the agreement will be entered into, in the prescribed format attached as **Annex-I**. The Special Conditions that are attached as part of proposed agreement at **Annex-II**are also accepted unconditionally.

_____
Sign & Stamp

Note:

1. Please quote the rates on our BoQs and clearly mention the quoted Make / Model / Country of Origin, otherwise your bid / items may lead to rejection.
2. PRICES quoted in different currencies on CPT/CFR basis will be evaluated after converting them into PKR (local currency) at the EXCHANGE RATE prevailing at the State Bank of Pakistan / Open Market on the date of Opening of Bid(s)
3. In Addition to filling of the attached BoQs, supporting literature of the quoted model must be attached for verification & technical evaluation of the required specification by the bid evaluation committee. In case of any clash found between the quoted model and the literature model, the item/bid may be rejected.
4. Terms & Conditions and BoQs should be attached with the proposal (Technical & Financial Bids), otherwise your tender/bid(s) may be rejected.
5. Please also attach the Certificate supporting being Active Taxpayer as per requirement of FBR.

S. No	Equipment Name	BoQs/Specifications	Qty.	Make/ Model &Country of Origin	FOR Price (PKR)		CPT/CFR Price	
					Unit Price	Total Price	Unit Price	Total Price
1	**FTIR-Fourier-Transform Infrared Spectrometer**	➢ Single-beam Fourier-transform infrared spectrometer with fast scan speed, high accuracy and automatic dehumidifier. ➢ Wavelength range: 7800 –350cm-1 ➢ Resolution: 0.5, 1cm-1, 30,000:1 S/N ratio, ➢ Detector: DLATGS detector with temperature control (Optional MCT), ➢ USB 2.0 interface, ➢ Software with a rapid scan, time course, mapping, Quantitation, peak split, 3D processing etc. ➢ Computer (Cori7, 7th Generation with SSD) and printer. ➢ FTIR accessories: sample cells for solid, liquids and gas and ATR, software with up-to-dated library and all major accessories. • Make: Australia, Europe, USA, Japan, UK	**01**					
2	**Quart Crystal Microbalance-D (QCM-D)**	➢ Quartz Crystal Microbalance-D system of 5 MHz to 10 MHz, ➢ fully automated fluid control, ➢ Accessories: Two Flow Cells, complete software suite for instrument control, ➢ Data storage with an All-in-one PC and other major accessories. • Make: Australia, Europe, USA, Korea, Japan, UK	**01**					
3	**High Precision LCR- Meter**	➢ Frequency: 20 Hz to 2.0 MHz, ➢ Test signal level: 0 to 2 Vrms/0 to 20 mArms, 0 to 20 Vrms/0 to 100 mArms[1] ➢ DC bias capability Built-in: 1.5 V, 2 V, ➢ Parameters: 330 ms/380 ms @ 20 Hz to 5.6 ms/88 ms @ 2 MHz. ➢ Accessories; electrical connection cables and GPIB/USD/USB control cables, dielectric test fixture,liquid test fixture,probe kit, ➢ Accessories: All major equipment accessories, Software, data cables, computer with software and printer • Make: Europe, USA, Japan, Korea, UK	**01**					
4	**Potentiostat/ Galvanostat**	➢ 30 V compliance voltage, ±1 A maximum current, up to ±20 A power booster (opt.), ±15 V polarization range, ➢ Potentiostat/Galvanostat Electrochemical Workstation (1 A Current)	**01**					

		➢ Voltametric Techniques (Cyclic Voltammetry, LSV, SWV, Pulse Voltametry) ➢ Chronoapherometry, Chronopotentiometry ➢ Electrochemical Impedance Spectroscopy (10 µHz to 2 MHz) ➢ DC Corrosion techniques ➢ Electrochemical Noise ➢ Electrochemical Energy Techniques (charge/discharge and cycling) ➢ Accessories: Cell Cable Kit, 0.6 m, Universal Dummy Cell, Dr. Bob's Electrochemical Cell Kit, Saturated Calomel Reference Electrode, Glassy Carbon Working Electrode, 3 mm, Pt-wire counter electrode (wire, spiral or plate gauze), Kel-F body, polishing kit with allnecessary items, Computer, Software (for all techniques mentioned), Rotating Electrode RDE (including RRDE, rotation speed controller), Cell Kit for Rotating Electrode Experiments, Glassy Carbon RDE • Make: USA, Japan, Europe, Korea, and Singapore.						
5	**Refrigerated Centrifuge**	➢ Temperature range: -20C - +40C ➢ Timer: 1-99 min ➢ Max Speed: 15000 rpm ➢ Max RCF: 21382 xg ➢ Router: 4x100ml ➢ Accessories: Additional 4x500ml router • Make: USA, Japan, Europe, Korea, and Singapore	**01**					
6	**Homogenizer**	➢ Direct controller ➢ Speed range from 5000-25000 rpm ➢ Speed & Power Control Optimized for a Sample ➢ Designed for Liquid and Tissue Sample, ➢ Steeples, working volume 1 ~ 1000ml ➢ Over Heat Protector, ➢ Dispensing tool 1-50 ml probe, 1-100ml probe ➢ High Efficiency Dispersing Tool made of Stainless steel and PTFE ➢ Complete set with all accessories. • Make: USA, Japan, Europe, Korea, and Singapore	**01**					
7	**Automatic Cell Counter**	➢ Cell counting time: Less than 10 s (manual focusing) ➢ Cell Concentration Range: 5×10^4 - 1×10^7 cells/mL ➢ Cell Diameter Range: 3 - 60 µm (optimal: 8 - 30 µm) ➢ Output Information: Total / Live / Dead cell concentration • Make: Europe, USA, Japan, Korea, UK	**01**					
8	**Real Time PCR**	➢ Sample block: Silver sample block with gold-coating ➢ Block capacity: 96 ➢ Sample size: 10 – 80 µl ➢ Heating: Up to 8 °C/sec (max.) ➢ Cooling: Up to 6 °C/sec (max.) ➢ Adjustable temperature range: 4 °C to 99 °C	**01**					

		➢ Temperature uniformity: 55 °C ± 0.15 °C after 15 sec ➢ Temperature control accuracy: ± 0.1 °C ➢ Lid temperature: 30 °C to 110 °C ➢ Programmable span, °C: 1–24 ➢ **Optical Detection:** Excitation: 6 filtered LEDs, Detection: 6 filtered photodiodes, Range of excitation/emission wavelengths, nm: 475-640nm, ➢ Detector: High sensitive PMT (Photo Multiplier Tube) ➢ software and all major accessories • Make: Europe, USA, Japan, Korea, UK						
9	**Microscope with Camera**	➢ Four accessible focus knobs, should have Bright Field and Fluorescence modes. ➢ 10x plano eyepiece, objectives 4x/NA 0.10, 10x/NA 0.25, 40X/NA .65, 60x/NA0.85, 100x/NA 1.25 ➢ Dual cameras: 8M camera for Bright Field imaging, 3.0 M camera for Fluorescence Imaging. ➢ Motorized LED Fluorescence channels ➢ 6-position objective knob ➢ Precision XY stage control ➢ Light fied abbe condenser • Make: Europe, USA, Japan, Korea, UK	**01**					
10	**Gas Chromatograph Mass Spectrometer** **(GC-MS)**	➢ GC Main System with Triple Quadrupole Mass Spectrometer Detector, autosampler, TCD detector, FID detector, Software and Computer (Core i7, 8th generation, SSD, along with LCD and printer) ➢ Oven temperature: Ambient +4 to 450 °C ➢ MS Workstation software should control all GC, autosampler and MS functions ➢ Provided library data bases should be: latest NIST (optional Wiley, Pfleger-Mauer-Weber drug and pesticide library, Rosner Mass Spectral Library of Designer Drugs, Kuhnle Mass Spectral Library of Pharmaceuticals, Agrochemicals, and other custom libraries) ➢ Accessories, syringes, standards, capillary columns (polar and non-polar), packed column, tool kit etc. ➢ Optional accessories, Headspace Sampler, multi-functional automatic gas sampler, Direct Sample Inlet Device, ➢ **Mass Spectrometer:** The specifications should be: **Mode of operation:** EI standard, (CI optional) **Mass Range**: m/z 10 to 1,000 **Detector: L**ong-life high sensitivity electron multiplier detector **Analyzer:**Quadrupole with pre-filter **Mass Stability:** +–0.1 m/z over 24-48 hours **EI Voltage:** 10 – 100 eV **Vacuum Pumps:** oil turbo molecular pump **Ion source temperature:** 50 ˚C – 350 ˚C **Scan Rate:** up to 10,000 amu/sec	**01**					

		• **Make:**Europe, USA, Japan, UK						
11	**ICP-MS (Inductively Coupled Plasma-Mass Spectrometer)**	➢ TQ-ICP-MS (Triple quadrupoleInductively Coupled Plasma Mass Spectrometer) with quantification and detection of more than 80 elements, high sensitivity and low detection limit (ppt) ➢ Auto-sampler (capacity up to 80 samples). ➢ With standards ➢ PC, software with up-to-dated library and printer **Sample Introduction:** **Nebulizer:** Concentric borosilicate glass with 400 µL·min-1 flow rate; PFA **Peristaltic Pump:** Integrated 3-channel. **Spray chamber:** cyclonic, high purity quartz **Torch:** Cassette type Torch mount. **Injector:** Quartz, 2.0 mm **Vacuum System:** **Configuration:** 3-stage system, differential pumping **Vacuum Pumps:** spilt-flow turbo molecular Pump, External backing rotary pump **Pumping Time:** <20min **Plasma Interface:** **Interface:** Triple Cone design. **Cones:** Sampler, Skimmer & Hyper skimmer **Sampler Cone orifice:** 1.1mm **Skimmer Cone orifice:** 0.9mm **RF Generator Frequency:** 27 MHz **RF power range:**400 W to 1600 W **Mass Analyzer:** Abundance Sensitivity in TQ Mode: < 0.05 ppm Three Quadrupoleand Quadrupole Ion Deflector (90°Bend to completely remove ions from photons & neutrals). **Quadrupole Mass Analyzer:** **High Mass Range:** 1- 285amu or better. **Scan Speed:** >4000amu per second. **Mass Stability:**< ± 0.05 amu per day **Dwell time:** 0.1ms **Detector:**Dual Stage Discrete Dynode Electron Multiplier. **Switching Analog to Pulse:** <0.2ms **Dynamic Range:** > 10 orders of magnitude • **Make:** Europe, USA, Japan, UK	**01**					

Note: All the items should be of the same Brand/Model/Specs or their Equivalent

For technical queries please contact with Dr. Abdul Hameed, Incharge SA-CIRBSduring office timings (08:00 AM-03:30 PM) on phone # 051-9019937

CONTRACT / AGREEMENT

THIS CONTRACT/ AGREEMENT is made on the _____**, 201___**

BETWEEN

INTERNATIONAL ISLAMIC UNIVERSITY, ISLAMABAD, a Public Sector University of the Government of Pakistan incorporated under the laws of Islamic Republic of Pakistan and having its principal place at Sector H-10 Islamabad (hereinafter called "the Purchaser"),

AND

M/s _____ incorporated under the laws of Pakistan and having its principal place of business at _____, Pakistan (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for Procurement of Lab Equipment for "SA-Centre for Interdisciplinary Research in Basis Sciences"and has accepted a bid/quotation No. _____ dated: _____ submitted by the Supplier for the supply of following item(s) against total **CPT/CFR/FOR Price** _____ (_____) hereinafter called "the Contract Price" and the Purchaser agrees to pay the Supplier/Manufacturer the Contract Price or such other sum(s) as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Sr. No.	**Item Name**	**Specifications**	**Qty.**	**Make/Model/**Country of Origin	**Unit Price**	**Total Price**
				TOTAL		

The Purchaser and the Supplier agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement:
   - ***(a)*** The Tender Document" Terms & Conditions"
   - ***(b)*** BoQ
   - ***(c)*** The Certificate *(As referred at # 27 of Tender Document)*
   - ***(d)*** The Purchase Order
   - ***(e)*** The Special Conditions

3. In consideration of the payments to be made by the Purchaser to the Supplier/Manufacturer as indicated in this Agreement, the Supplier hereby covenants with the Purchaser to execute the Goods and Related Services and to remedy defects therein in conformity in all respects with the provisions of the Contract/Purchase Order.

4. The Purchaser hereby covenants to pay the Supplier/Manufacturer in consideration of the supply of the Goods and Related Services therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract/Purchase Order.

Agreement to be executed in accordance with the laws of Islamic Republic of Pakistan on the day, month and year indicated above.

Signed by:	**Signed by:**
_____	_____
For and on behalf of the Purchaser	for and on behalf the Supplier
In the presence of:	**in the presence of:**
Witness,	Witness
Signature: _____	Signature: _____
Name: _____	Name: _____
Address: _____	Address: _____
Date: _____	Date: _____

SPECIAL CONDITIONS

1. Specifications and Standards:
   1.1 The Supplier shall ensure that the Goods and Related Services comply with the technical requirements.
   1.2 The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
2. Packing and Documents:
   2.1 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, during transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods final destination and the absence of heavy handling facilities at all points in transit.
   2.2 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 Purchase Order, including requirements, if any and in any other instructions ordered by the Purchaser.
3. Transportation:
   3.1 Unless otherwise specified, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.
4. Warranty:
   4.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise by the Purchaser.
   4.2 Unless otherwise specified in these conditions, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in these conditions or for eighteen (18) months after the date of shipment, from the port, or place of loading in the country of origin, whichever period concluded earlier.
   4.3 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
   4.4 Upon receipt of such notice, the Supplier shall, within the 30 days expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser (IIUI)
5. **The Payment Terms will be**:

   5.1 For the CPT/CFR quoted items; payment will be made through irrevocable L.C (90:10 Model) in favor of Manufacturer. Where, 90% in this model will be released upon receipt of shipment and delivery documents. Remaining 10% will be made / released after successful inspection of the equipment at International Islamic University Islamabad.

   5.2 For the FOR quoted items; 100% payment will be made after supply and successful inspection of the ordered equipment(s) at International Islamic University Islamabad after deduction of 10% retention money as per “Terms & Condition”.

CHECK LIST

Company/Firm Name: _____

Address:_____

Authorized Representative: _____

Contact # _____

Sr. No.	Tender "Terms & Conditions" Compliance	Yes	No	Remarks
1.	Any Addition/Deletion/Modification in Terms & Conditions			
2.	Original Manufacturer / Authorized Distributors / Suppliers *(with valid authorization / distribution certificate)*			
3.	Registered with Income Tax Sale Tax Department			
4.	Active Tax Payeron ATL of FBR / Certificate is attached			
5.	Tender Fee Rs. 1,000/- is attached.			
6.	Completion Time (maximum of 120 Days).			
7.	Freight & Packing Charges Included (CPT/CFR Price)			
8.	Prices are Inclusive of All Taxes (FOR Price)			
9.	Bid/BoQ is Stamped & Signed by Authorized Representative			
10.	Prices are quoted on both CPT/CFR & FOR Basis			
11.	Single Price is quoted.			
12.	Bid Validity is 90 Days.			
13.	**2%** Earnest Money is attached			
14.	Company Profile, Client List and Detail of similar Projects/Works are attached.			

15.	Firm is not Black Listed.			
16.	Any unsigned / ambiguous erasing, cutting / overwriting etc is made			
17.	CERTIFICATE on Judicial Stamp Paper worth Rs. 100			
18.	Rates are on our BoQ			
19.	Supporting Brochures/Technical Literature is attached.			
20.	Guarantee / Warranty of the quoted equipment			

Prepared by: