

TENDER DOCUMENTS

Lab Equipment's (EU Projects)

NUTECH / SCM /Lab Eqpt (EU Project) 24-25 / TD-335

NATIONAL UNIVERSITY OF TECHNOLOGY, IJP ROAD, I-12, ISLAMABAD

TENDER NOTICE

National University of Technology (NUTECH)

NUTECH / SCM /Lab Egpt (EU Projects) 24-25 / TD-335

- 1. Sealed bids are invited from Government / FBR Registered Firms for the procurement of **EU Projects** on **FOR Basis**. Tender documents (& draft contract) can be downloaded from NUTECH

 Website "https://nutech.edu.pk/downloads/procurement/scm-tenders/ w.e.f **31 Oct 2024** and
 quotations shall be submitted as per requirement.
- 2. Bidders will be required to submit **Bank Draft/CDR/BC/PO/SDR** equal to 5% of quoted value as Bid Bond in favor of National University of Technology (NUTECH).
- 3. Detail of bids and submission of tender is provided below: -

Sr.	Description	Bank Account Details	Processing Fee	Submission	Tender Opening	Completion Days
a.	Lab Equipment's (EU Projects)	HBL, Tendering and Contracts, A/C # 5037-7000210755	Rs 3,000/-	1030 hrs on 06 Dec 2024	1100 hrs on 06 Dec 2024	15 days

Tender fee in shape of CDR/PO/BC/SDR etc. will be acceptable. Only deposit receipt shall be considered. Note:- Please attach bank receipt with Technical offer.

Offer will not be entertained without payment of processing fee.

Supply Chain Management

Tel: 0092-51-5476768, Ext: 278

Email Add: scm.office@nutech.edu.pk

NATIONAL UNIVERSITY OF TECHNOLOGY, IJP ROAD, I-12, ISLAMABAD

Compliance – Check List

Offer must be quoted and arranged in accordance with below mentioned sequence.

Non- compliance & non-provision of following documents may lead to disqualification.

	Required Particulars	Documents	Attached	
Sr.	rtoquirou i unitodiaio	Yes / No	Page #	
1.	Tender Fee Original Receipt (Rs 3,000/-)			
2.	Technical & Financial Offer separately			
3.	3. NTN/GST Registration			
4.	4. All Annexures & Special Conditions Compliance Note: All annexures must be as per given format.			
5.	OEM Registration / Authorization Certificate (if applicable)			
6.	OEM Details (if applicable)			
7.	Copy of Earnest Money (prices hidden)			
8.	Proforma Invoice (if applicable) (prices hidden)			
9.	OEM / Equipment brochures & details			
10.	Non-Blacklisting Certificate			
11.	Firm's Complete details (address, contacts & email)			

INVITATION TO TENDER

Tender submission time: 1030 hrs on 06 Dec 2024

- 1. NUTECH desires to procure the list of item(s) / Store(s) on <u>FOR Basis</u> as per <u>Annexure-A</u>. Interested bidders are requested to send their bids through courier or deliver at NUTECH under "Single Stage Two Envelopes" (two envelopes placed together in third envelope), marked clearly as "Technical Offer" and "Commercial Offer" respectively to the undersigned, latest by or before above mentioned due date.
- 2. <u>Conditions Governing Contracts.</u> The contract made as result of this IT will be in accordance with the draft contract published on NUTECH University website and other special conditions (Mentioned in this document) that may be added to given contract for the supply of equipment.
- 3. **Delivery of Tender.** The offer is to be submitted as under:
 - a. <u>Technical Offer.</u> Technical Offer should contain only Annexure-A, Annexure-Annexure B duly filled in (supported with relevant technical literature / details / catalogues etc) and receipt of tender processing fee. Copy of bid bond WITHOUT MENTIONING PRICE should be attached with technical offer.

Only relevant technical details

i.e literature/brochures) without mentioning the financial aspect of the offer should be enclosed in an envelope. In technical proposal, all items must have the brand names, model number, manufacturer's name, country of origin, manufacturer's warranty including parts with complete specs and brochures. Re-conditioned and re-furbished equipment shall not be acceptable. Following information will be clearly marked on the envelope:

- (1) Technical Offer
- (2) Original Performa Invoice (without price)
- (3) Tender number
- (4) Date/ time of opening
- b. <u>Commercial Offer.</u> Commercial Offer will contain Annexure-C and bid bond

(Dully mentioned and placed in separate envelope. The offer indicating the quoted price FE/Local Currency (in Local Currency for FOR cases & in FE for FOB cases) in figures as well as in words would be enclosed in an envelope. Following information will be clearly marked on the envelope;

- (1) Commercial Offer
- (2) Original Performa invoice with price
- (3) Tender number
- c. Both the envelopes i.e. commercial offer and technical offer would be enclosed in yet another properly sealed envelope that will be marked with address of this office only. There should be clear indication that this envelope contains tender documents.
- d. The tender duly sealed will be addressed to the following:-

Deputy Director (Supply Chain Management Office)

NATIONAL UNIVERSITYOF TECHNOLOGY (NUTECH) IJ P ROAD, I-12, ISLAMABAD Tel: 0092-51-5476768, Ext: 278

- 4. <u>Date and Time for Receipt of Tender.</u> Sealed bids with detailed specifications should reach SCM office latest by 1030 hours on 06 Dec 2024. Delay occurring in post shall not be accepted. Tenders received after the appointed / fixed time will NOT be entertained. The appointed time will, however, fall on next working day in case of closed / forced holiday.
- 5. **Tender Opening.** The offers shall be opened **30 minutes** after submission time.

Commercial offers will be opened at later stage if Technical Offer is found acceptable on examination by technical authorities. Date and time for opening of commercial offer shall intimate later. Only legitimate / registered representatives of firm will be allowed to attend tender opening.

- 6. <u>Validity of Offer.</u> The validity period of quotations must be indicated and should be 90 days from the date of opening of financial offer.
- 7. <u>Withdrawal of offer</u> If the firm withdraws its offer within validity period the competent authority may place such firm under embargo for a period, which may be extended up to one year. Moreover, the Earnest Money of the firm will be confiscated.
- 8. **Documents.** Following information / copy of documents must be provided / attached with offer:-

a. A copy of letter showing firm"s financial capability.

- b. NTN/GST number be mentioned on the offer and copy of registration Certificate issued by Sales Tax Department, attached.
- c. Foreign supplier to provide its Registration Number issued by respective Department of Commerce authorizing export of subject stores (in FOB cases).
- d. Annexes A, B and C and special conditions must be signed and stamped. ATTACH ONLY RELEVANT DOCUMENTS.
- e. Complete all Annexes as per given format. Do not use your format or letter head. Offer may be rejected if given format is not followed.
- f. OEM/principal agency agreement must be provided.
- 9. **Disqualification.** Offers are liable to be rejected if:
 - a. Validity of offer is not quoted as required in IT documents.
 - b. Any deviation from the General/ Special / Technical Instructions.
 - c. Offers are found conditional or incomplete in any respect.
 - d. Copy of EM/Bid Bond & Tender processing fee (with tech offer) and original EM/Bid Bond (with fin offer) are NOT attached.
 - e. Multiple rates/items are quoted against one item. Deleted
 - f. Manufacturer's relevant brochures and technical details on major equipment assemblies are not attached in support of specifications.
 - g. Offer received later than appointed / fixed date and time.
 - h. Subject to restriction of export license.
 - Offers (Commercial / technical) containing non-initialed / unauthenticated amendments / corrections / overwriting. If the validity of the agency agreement has expired. The commercial offer against FOB / CIF / C&F tender quoted in local currency.
 - j. If the offer is found to be based on cartel action in connivance with other sources/participants of the tender.
- 10. Earnest Money / Bid Bond. Commercial Offer must be accompanied with a Bid Bond (CDR/Pay Order/Bank Draft) in agreement of faithful compliance of the conditions of Contract. This amount will be equivalent to 5% of the total quoted value. The Bid Bond amount submitted by the successful bidder will however be refunded on effective termination of Contract. (The Bid Bond will be forfeited in case of default by the bidder from his commitments made through his offer). Submission of Bid Bond is mandatory; otherwise your offer will be rejected. Bid Bond will be used as performance guarantee till the delivery of stores, otherwise separate performance guarantee valued at 5% of contract will be submitted by successful firm till stores are delivered and inspected.

11. Return of Earnest Money/Bid Bond.

- a. Bid Bond to the unsuccessful bidders will be returned on finalization of the lowest evaluated bidder.
- b. Bid Bond of the successful bidder/bidders will be returned on submission of Bank Guarantee/Bid bond against warranty period OR Bid bond retained for the warranty period as the case may be.

12. Terms of Payment/ LC Charges

In FOB cases

a. All categories payment will be made through letter of credit (LC). LC opening charges in Pakistan are to be borne by NUTECH. Payment will be made through irrevocable LC in favour of Manufacturer.

In FOR cases

- b. 20% advance payment will be made to the Seller on provision of unconditional Bank Guarantee/ CDR/ DD/ Pay order. Advance BG/CDR/DD/Pay order will be submitted at the time of signing the contract.
- c. 80% payment will made to the Seller after receipt and confirming the correctness of ordered specifications, installation, commissioning.
- 13. <u>Taxes/ Duties/ Custom clearance</u> All taxes /duties /import Licenses Fee as applicable under government laws in Pakistan as well as country of supplier shall be on Seller (in FOR Case). NUTECH will provide applicable exemption certificates and documents (In FOB Cases only).
- 14. <u>Insurance:</u> Insurance will be Seller's Responsibility (in FOR Cases) and NUTECH's responsibility through NICL (in FOB Cases).
- 15. <u>Freight charges /Misc charges:</u> All charges such as packing, forwarding, local freight, loading and unloading, installation and commissioning, custom clearance, orientations, on job training or

- any other will be part of quoted price. Delivery till NUTECH will be seller's responsibility and all associated costs will be part of quotation as well.
- 16. **Delivery Schedule.** Store will be delivered within 30 Days from contract signing date.
- 17. **Force Majeure.** If non-compliance with the period of delivery or services can be proved to be due to Force Majeure, such as but not limited to mobilization, war, riot, strike, lockout, pandemics/epidemics or the occurrence of unforeseen events, the period shall be reasonably extended.
- 18. <u>Subletting</u> Suppliers are not allowed to sublet wholly or part of the contract to any other firm /company without prior permission by NUTECH. Firm found in breach of the clause will be dealt with as per purchaser's right and discretion.
- 19. **Arbitration.** Will be as under:-
 - "All Claims ,disputes ,controversies, differences arising out of or in connection with this contract ,including any question regarding its existence, validity, interpretation performance, breach or termination ,shall be referred to and shall finally be solved by binding arbitration. An Arbitration Committee Shall be constituted comprising Rector NUTECH and two Arbitration to be nominated on mutual agreement by each party. The venue of the Arbitration shall be the place of issuance of this contract or as Rector NUTECH may determine. In case of any difference, the clauses of Arbitration Act 1940, Rules and Regulation made thereof for time being enforce shall prevail. The award shall be final and binding on both parties.
 - a. Provided that written record of any such arbitration and its award shall be arranged properly.

 An award of such arbitration may be confirmed in a court of competent jurisdiction at Islamabad.
 - b. Provided further that incase of any other question /dispute not covered under this clause, the decision of Rector NUTECH shall be final."
- 20. Redress Of Grievance. In case of dispute, case shall be reviewed by NUTECH Redress of grievance committee and decision of NUTECH shall be final and binding on both parties.
- 21. Export License/Permit /End User Cert. It shall be the responsibility of the Supplier to obtain from the Government concerned all permits and export licenses, etc required to enable each consignment to be shipped immediately as per the delivery schedule. In case the supplier fails to arrange export license within 30 days of signing the contract the purchaser reserves the right to cancel the contract on the risk and expense of the supplier without prior notice. The purchaser will provide End User Certificate for acquisition of export license to the supplier (format to be provided by the supplier for respective country within 10 day of signing of the contract).
- 22. <u>Technical Specification:</u> The supplier will provide OEM certificate, quality certificate /inspection document to the purchaser confirming the quality of the product being supplied under this contract Store must bear the manufacturer's identification marking /monogram.
- 23. <u>Inspection /Testing of Store</u>: Inspection testing will be carried out at NUTECH by the concerned inspection team as detailed by the respective department in accordance with the laid down Acceptance Criteria. (Acceptance Test Procedure (ATPs)/Drawing /Test standard and specification). The supplier will provide ATPs with technical offer. Mutually agreed/approved ATPs will form part of contract to govern the inspection of store subsequently.
 - 24. <u>Change In Specification /Mfr /Model.</u> No alternation marked/brand and quality of store will be entertained after the tender have been opened.
 - 26. Checking of Store at Consignee/User End. All stores will be checked at Consignee's end in the presence of the supplier's representative. If for some reason, the supplier decides not to nominate his representative for such checking, an advance written notice to this effect will be given by the supplier to the consignee prior to immediately on shipment of store. In such an event the supplier will clearly undertake that decision of consignee with regard to quantities and description of consignment will be taken as final and discrepancy found will be accordingly made up by supplier. In all other cases the consignee will inform the supplier about arrival of consignment immediately on receipt of store through registered email/letter and telephone. If no response from the supplier is received within 15 days from initiation letter the consignee will have the right to proceed with the checking without supplier's representative. User/Consignee's report on checking of the stores will be binding on the seller in such cases.
 - 27. <u>Packing /Marking.</u> The supplier shall be responsible for proper packing of the Store in standard export packing worthy of transportation by sea /air /road rail so as to ensure their content being free from lose or damages due to faulty packing on arrival at the ultimate destination. Packing of

stores will be done at the expenses of the supplier. All packing cases, containers and other packing material shall become the property of the NUTECH on receipt. Any loss occurred /demurrage paid due to wrong marking will be made good by the supplier.

- 28. <u>Original Performa Invoice</u>: Original Performa invoice must have following components incorporated:
 - a. HS Code
 - b. Incoterm
 - c. Payment Terms
 - d. Origin of good
 - e. Port of shipment
 - f. Address of OEM
 - g. Seller acceptance (on Performa Invoice)
 - h. Invoice Date
 - i. Latest date of shipment
 - j. Seller complete bank detail

Note: Performa Invoice in the name of NUTECH in case of FOB cases & in the name of local partner in case of FOR cases.

- 29. **General Instructions:** Following must be noted:
 - a. The firm should provide point to point acceptance of each clause of IT and special instructions attached with IT.
 - b. Firm will render a certificate with technical offer that firm is neither defaulter nor blacklisted by any Government / semi Government organization directly or indirectly. (On Judicial Paper)
 - c. Rates should be quoted on Free Delivery basis at NUTECH Islamabad.
 - d. The stipulated delivery period should be strictly adhered to. Any anticipated delay that is beyond the control of Seller will be informed (in writing) well in advance of the expiry of the due date of the activity along with reasons thereof, requesting for the grant of extension in delivery period. If the Seller fails to do so, or the Buyer is not convinced with the rationale provided by the Seller, Liquidated Damages up to/at 2% per month or part thereof, will be imposed. However, the maximum limit of the Liquidated Damages will not exceed 10% of the delayed store value.
 - e. If even after applicability of 10% LD, the Seller fails to deliver the required stores, the Buyer will be at liberty to Cancel the contract, and /or procure the of stores from an alternate source, on the Seller's "Risk & Cost/Expense". In that case, the Seller will be bound to make payment to the new source through NUTECH. The purchaser's decision under this clause shall currency / execution / after placement, if the firm is found to be involved in any dubious activity, litigation, lacking to meet contractual obligations with the purchaser or is blacklisted with any other Public procurement agency. No claims / loss /damage of whatsoever nature shall be entertained and NUTECH's NOT be subjected to arbitration.
 - f. NUTECH reserves the right to cancel the Contract without assigning any reason whatsoever during its decision in this regard will be final / binding on the Seller.
 - g. An appropriate amount may be paid for mobilization against Bank Guarantee/CDR/Demand Draft/Pay Order.
 - h. Firms with previous pending/outstanding projects/business and unsatisfactory performance with NUTECH may not be considered for award of any further business.
 - i. Lowest evaluated bidders must send their authorized representatives (with authorization letter) for signing of the contract within three days of sharing of the draft contract.
 - j. For technical opening firm will send a representative who has knowledge about the quoted items otherwise representative will not be allowed to sit in tender opening.
 - Stamp duty for Contract will be taken as per Section 22-A of Stamp Act 1899 Pakistan.
 Business will be awarded on Package Deal.
- 30. Warranty 2 Years Warranty will be required from the successful bidders from the date of commissioning.

Annex-A

Technical Specification

Sr.	Items	Description	Country of Origin	A/U	Qty	OEM Auth	Bidder Comp	
Sr. 01	Items Multispectral Drone (Extended Range)	 Max speed: 31 mph (50kph) (p-mode); 36 mph (50 kph) (A-mode) Max Ascent Speed: 6 m/s (automatic flight); 5 m/s (manual control) Max Descent Speed: 3 m/s Max Flight Time: Approx. 27 minutes Operating Temperature: 0° to 40° C (32° to 104° F) Operating Frequency: 5.725 GHz to 5.850 GHz (Other countries/regions) [1] Mapping Functions: round Sample Distance (GSD) (H/18.9) cm/pixel, H indicates the aircraft altitude relative to the area mapped (unit: m) Transmission Power (EIRP): 2.4 GHz: < 20 dBm (CE / MIC / KCC), 5.8 GHz: < 26 dBm (FCC / SRRC / NCC) Single-Frequency High-Sensitivity GNSS: GPS + BeiDou + Galileo[2] (Asia); GPS + GLONASS + Galileo[2] (other regions) Controllable Range: Tilt: -90° to +30° Camera: Sensors: Six 1/2.9" CMOS, including one RGB sensor for visible light imaging and five monochrome sensors for multispectral imaging. 			Qty 01	OEM Auth		
		 Max Image Size: 1600×1300 (4:3.25) Lenses FO (Field of View): 62.7° Focal Length: 5.74 mm (35 mm format equivalent: 40 mm), autofocus set at ∞ Aperture: f/2.2 Remote Controller, Mobile Device Holder along with 8" Tablet for Display Built-in Battery: 6000 mAh LiPo 2S Intelligent Flight Battery (PH4-5870mAh-15.2V, Intelligent Flight Battery Charging Hub (PHANTOM 4 CHARGING HUB): 17.4 V, AC Power Adapter (PH4C160):17.4 V 						
		Battery Type: LiPo 4S						

		Max Charging Power: 160 W					
		Use environment: Indoor/Outdoor					
		Ideal Range: .6 m to 6 m					
		Image sensor technology: Global Shutter					
		Inertial measurement unit: Bosch BMI055					
		 RGB frame resolution: Up to 1280 × 800 					
		• RGB sensor FOV (H × V): 90 × 65°					
		RGB frame rate: 30 fps					
		RGB sensor resolution: 1 MP					
		RGB sensor technology: Global Shutter					
00	Intel RealSense Depth	Vision Processor Board: Intel RealSense Vision Processor D4	A - ' - /F /LIO A	N1	0.4	Vac	
02	Camera	Form factor: Camera Peripheral	Asia/Europe/USA	Nos	01	Yes	
		 Connectors: USB-C* 3.1 Gen 1* 					
		Depth technology: Stereoscopic					
		 Depth Field of View (FOV): 87° × 58° 					
		 Minimum Depth Distance (Min-Z) at Max Resolution: ~52 cm 					
		 Depth output resolution: Up to 1280 × 720 					
		Depth frame rate: Up to 90 fps					
		Depth Accuracy: (2% at 4 m					
		 Mounting Mechanism: One 1/4-20 UNC thread mounting point, Two 					
		M4 thread mounting points Tripod					
		Operating Voltage 3.3V-5V					
		 Module Dual Output model, a simple digital output, analog output 					
		more accurate.					
		With fixed bolt hole for easy installation					
		Small PCB board size: 3cm * 1.6cm					
03	Soil moisture Sensor	Power Indicator (red) and the digital switch output Indicator (green)	Asia/Europe/USA	Nos	02	Yes	
		 Using LM393 Comparator Chip, Stable 	·				
		VCC external 3.3V-5V					
		GND GND External					
		 DO small board digital output interfaces (0 and 1) 					
		AO small board analog output interface					

04	Soil Testing Kits	This soil test chemical kit allows for 10/25 tests for each of the following key soil parameters; Nitrogen, pH, Phosphorus, and Potassium.	Asia/Europe/USA	Nos	02	Yes	
05	Wildlife Camera Traps	 Night Vision Flash: No-Glow 4 LED / 80' Range Resolution: 30MP PIR Sensor: Low / Medium / High /Auto Wireless Connectivity: No Display: Color LCD Stamps: Date / Time / Temp / Moon GPS Geotag: Yes Power Supply: AA (6) Solar Compatible: Yes Video Resolution: 1920x1080 60FPS Video Length: Up to 60 Seconds Storage Capacity: 32 GB Field Scan 2X: Yes Records Audio: Yes Hybrid Capture: Yes Product Type: Trail Cameras Collection: Core Interest: Hunting / Security 	Asia/Europe/USA	Nos	01	Yes	
06	 For keeping botanical specimens securely placed in herbarium sheets Cabinet frame of 19 mm plyboard finished with laminated sheet. Hinged MDF baton to collectively lock the drawers. 		Asia/Europe/USA	Nos	01	Yes	

07	Herbarium Sheets (one pack)	Herbarium Sheets for preservation of botanical specimen	Asia/Europe/USA	Nos	01 Pack	Yes	
08	Radio Telemetry Kit	 Small size and lightweight CP2102 high-quality USB to TTL chips Device Alternatively versions are 433MHZ or 915MHZ Supports MWC / APM / PX4 / Pixhawk other open-source flight control The sensitivity of the Receiver is -118 dBm MAVLink Framework Agreement Open-Source Firmware Frequency-hopping spread spectrum (FHSS) 2-way full-duplex communication adaptive TDM Up to 25% can be corrected bit errors Si1000 and Si4432 wireless microcontroller modules. 	Asia/Europe/USA	Nos	02	Yes	
9	Noise Sensor	 Power supply: 10~30V DC Working temperature: -20°C~+60°C, 0%RH~95%RH (non-condensing) Measuring range: 30dB~120dB Noise accuracy: ±0.5dB (at reference pitch, 94dB@1kHz) Resolution: 0.1dB Frequency range: 20Hz~12.5kHz Response time: ≤3s Stability: less than 2% in the life cycle Output mode: RS485/4-20mA/0-5V/0-10V Warranty: 2 years 	Asia/Europe/USA	Nos	02	Yes	
10	Air Quality Sensors	 The operating voltage: +5V, measures and detects NH3, alcohol, NOx, Benzene, CO2, smoke, etc. range of analog output voltage: 0V-5V, Range of digital output voltage: 0V-5V (TTL logic). Heating voltage: 5V±10.1. Heater resistance: 33ohms ±5%. Heating consumption: <800mW. Operating temperature; -10 °C to -45 C. Storage temperature: -20 °C to 75 °C. Related humidity: <95%Rh. Concentration slope rate: ≤0.65 sensor. 	Asia/Europe/USA	Nos	05		

11	Carbon Monoxide (CO) sensor	 Operating voltage: DC 5 V. IC driver: LM 393. Size: 11 x 33 x 20 mm. Range: 10 to 1000 ppm. Characteristic gas: 100 ppm CO. Sensitive resistance: 2 to 20 10kohm 10kohm at 100ppm CO. Sensitivity: ≥ 3%. Return time: ≤ 30 s. Heating resistance: ± 310hm 30hm. Heating current: ≤ 180 mA. Reaction time: ≤ 1 s. Heating voltage: 5.0V ± 2V / 1.5 ± 1V. Heating power: approx. 350 mW. Ambient temperature: -20 ° C to +50 ° C. Humidity: ≤ 95% RH. Oxygen content: 21%. The analog output voltage, the higher the concentration the higher the voltage. The carbon monoxide detection with better sensitivity. There are four screw holes for easy positioning; Product Dimensions: 32 x 20 x 22 mm (LxWxH) With a long service life and reliable stability Rapid response and recovery characteristics 	Asia/Europe/USA	Nos	02	Yes	
12	Dust Sensor	 Grove-compatible interface (extra wire with connector) Supply voltage range: 5V Minimum detect particle: 1um PWM output Dimensions: 59(W)x45(H)x22(D) [mm] 	Asia/Europe/USA	Nos	02	Yes	

13	Gravity - Analog Electrical Conductivity Sensor	 3.0~5.0V wide voltage input Hardware filtered output signal, low jitter AC excitation source, effectively reduces polarization Gravity connector and BNC connector, plug and play, no welding Software library supports two-point calibration and automatically identifies standard buffer solution, integrates temperature compensation algorithm Uniform size and connector, convenient for the design of mechanical structures 	Asia/Europe/USA	Nos	02	Yes	
14	Gravity – Analog Waterproof Capacitive Soil Moisture Sensor	 Supply Voltage: 3.3 ~ 5.5VDC Interface: 2.54-3Pin Output Voltage: 0 ~ 3VDC Cable Length: 1.5m Dimension (L x W): 175 x 30mm / 6.89 x 1.18 inches 	Asia/Europe/USA	Nos	02	Yes	
15	Memory Cards	 Capacity: 128GB Read Speed: up to 100MB/s Write Speed: up to 45-90MB/s Operating Temperature: 0 °C to 70 °C (32 °F to 158 °F) 	Asia/Europe/USA	Nos	05	Yes	
16	Acrylic sheets	 transparent sheet 2mm up to 8mm available Can be used for model-making size A3 	Asia/Europe/USA	Nos	01 Pack	Yes	
17	Maximum Power (Wp): 10Wp Maximum Power Voltage (V): 18.00V Maximum Power Current (A): 0.56A Open Circuit Voltage (V): 21.7V integrated Solar Panel Panel Out of the content of t		Asia/Europe/USA	Nos	05	Yes	

18	USB-C Portable Hard Drive - 6TB	 Capacity: 6TB Storage: HDD Interface Type: 1 × USB-C (USB 3.0 compatible) Max. Speeds: 130 MB/s Drop Resistance: 4ft (1.2 m) 	Asia/Europe/USA	Nos	04	Yes	
19	3.6V 2000mAH LiPo Battery	 Dimensions: 60mm x 36mm x 7mm / 2.4"" x 1.4"" x 0.3"" Weight: 34g Nominal Capacity: 2000mAh ±2% Nominal Voltage: 3.7V Standard Charge Current: ~0.2C / 0.5A Charge Cut-Off Voltage: 4.2V Standard Discharge Current: ~0.2C / 0.5A" 	Asia/Europe/USA	Nos	03	Yes	
20	11.1V 2200mAh Lipo Battery	Material: Li-Polymer Cells: 3S Voltage: 11.1v Capacity: 2200mAh Discharge Rate: 25C Voltage per cell: 3.7V Max voltage per cell: 4.2V Charge Plug: JST-XHR-5P Discharge Plug: EC3 Suggest charge rate: 1	Asia/Europe/USA	Nos	02	Yes	
21	Wiro board	Dimension: 7cm * 6cm	Asia/Europe/USA	Nos	03	Yes	
22	Base Shield V2.0 for Arduino • Dimensions: 69mm x53mm x23mm • Weight: G.W 40g • Battery: Exclude		Asia/Europe/USA	Nos	02		
23	Breadboard	 Dimension (I-w-h) in mm: 170-55-10 Tie points: 830 Weight: 85 grams Temperature range: -20 ~ +80°C Contact resistance: 100 mΩ max. Insulation resistance: 1000MΩ min. 	Asia/Europe/USA	Nos	03		

		Dielectric withstanding voltage: 500V AC per 1 minute.					
24	Battery Balance Charger : operation charge range	 Operation voltage range: DC 11.0 ~ 18.0 Volt or AC 100V ~ 240V 50/60Hz Circuit power: AC to DC adaptor (DC 11.0 ~ 18.0V / 5A) Max. charge power: 80W Max. discharge power: 5W Charge current range: 0.1~5.0A Discharge current range: 0.1~1.0A Current drain for balancing Li-Po: 300mAh/cell 	Asia/Europe/USA	Nos	02		
25	Mobile Server	 Intel Core Ultra 7 155U 12-Core (Up to 4.8 GHz with Intel Turbo Boost Technology) 12 MB L3 cache 32 GB LPDDR5-6400 MHz RAM (onboard) Intel Graphics 1 TB PCIe Gen4 NVMe M.2 SSD 16-inch diagonal, WUXGA (1920 x 1200), multi touch-enabled, IPS, edge-to-edge glass, 	Asia/Europe/USA	Nos	02		
26	USB	• 128 GB	Asia/Europe/USA	Nos	04		

Annex-B

Necessary to Fill Completely

Fill in following essential Parameters: -

1.	Validity of Offer	Days (Should not be less than 90 days)	
2.	Delivery period	Days (After placement of order)	
3.	Country of Origin		
4.	Warranty Period		

General:-

1.	GST Number	Enclose Copy
2.	NTN / CNIC	if exempted, provide valid exemption certificate

Payment Terms (In continuation of IT Document clause 12):-

In FOR Cases
20% advance payment against BG/CDR/Pay Order/DD
Remaining 80% payment after delivery, installation / commissioning /user satisfaction certificate

Details of Foreign Principal Information with account details:-

1.	Name / Title:	_
2.	Address:	

OEM Brand Name:	Firm Name:	Signature:
OEM Focal Person Name:	Firm Focal Person:	Official Seal:
OEM Phone Number for verification:	Firm Phone Number:	Name & CNIC:
OEM Email Id for verification:	Firm Email Id:	Designation:

Annex C

FINANCIAL OFFER

Sr.	Items	Description	Country of Origin	A/U	Qty	Unit Price	Total Price
01	Multispectral Drone (Extended Range)	Max speed: 31 mph (50kph) (p-mode); 36 mph (50 kph) (A-mode) Max Ascent Speed: 6 m/s (automatic flight); 5 m/s (manual control) Max Descent Speed: 3 m/s Max Flight Time: Approx. 27 minutes Operating Temperature: 0° to 40° C (32° to 104° F) Operating Frequency: 5.725 GHz to 5.850 GHz (Other countries/regions) [1] Mapping Functions: round Sample Distance (GSD) (H/18.9) cm/pixel, H indicates the aircraft altitude relative to the area mapped (unit: m) Transmission Power (EIRP): 2.4 GHz: < 20 dBm (CE / MIC / KCC), 5.8 GHz: < 26 dBm (FCC / SRRC / NCC) Single-Frequency High-Sensitivity GNSS: GPS + BeiDou + Galileo[2] (Asia); GPS + GLONASS + Galileo[2] (other regions) Controllable Range: Tilt: -90° to +30° Camera: Sensors: Six 1/2.9" CMOS, including one RGB sensor for visible light imaging and five monochrome sensors for multispectral imaging. Max Image Size: 1600×1300 (4:3.25) Lenses FO (Field of View): 62.7° Focal Length: 5.74 mm (35 mm format equivalent: 40 mm), autofocus set at ∞ Aperture: f/2.2 Remote Controller, Mobile Device Holder along with 8" Tablet for Display Built-in Battery: 6000 mAh LiPo 2S Intelligent Flight Battery (PH4-5870mAh-15.2V, Intelligent Flight Battery Charging Hub (PHANTOM 4 CHARGING HUB): 17.4 V, AC Power Adapter (PH4C160) :17.4 V Battery Type: LiPo 4S Max Charging Power: 160 W	Asia/Europe/USA	Nos	01	(Inc. Tax)	(Inc. Tax)

02	Intel RealSense Depth Camera	 Form factor: Camera Peripheral Connectors: USB-C* 3.1 Gen 1* Depth technology: Stereoscopic Depth Field of View (FOV): 87° × 58° Minimum Depth Distance (Min-Z) at Max Resolution: ~52 cm Depth output resolution: Up to 1280 × 720 Depth frame rate: Up to 90 fps Depth Accuracy: (2% at 4 m 	Asia/Europe/USA	Nos	01	
		 Mounting Mechanism: One 1/4-20 UNC thread mounting point, Two M4 thread mounting points Tripod 				
03	Soil moisture Sensor	 Operating Voltage 3.3V-5V Module Dual Output model, a simple digital output, analog output more accurate. With fixed bolt hole for easy installation 	Asia/Europe/USA	Nos	02	

04	Soil Testing Kits	 This soil test chemical kit allows for 10/25 tests for each of the following key soil parameters; Nitrogen, pH, Phosphorus, and Potassium. 	Asia/Europe/USA	Nos	02	
05	Wildlife Camera Traps	 Night Vision Flash: No-Glow 4 LED / 80' Range Resolution: 30MP PIR Sensor: Low / Medium / High /Auto Wireless Connectivity: No Display: Color LCD Stamps: Date / Time / Temp / Moon GPS Geotag: Yes Power Supply: AA (6) Solar Compatible: Yes Video Resolution: 1920x1080 60FPS Video Length: Up to 60 Seconds Storage Capacity: 32 GB Field Scan 2X: Yes Records Audio: Yes Hybrid Capture: Yes Product Type: Trail Cameras Collection: Core Interest: Hunting / Security 	Asia/Europe/USA	Nos	01	
06	Herbarium Cabinets	 For keeping botanical specimens securely placed in herbarium sheets Cabinet frame of 19 mm plyboard finished with laminated sheet. Hinged MDF baton to collectively lock the drawers. Drawer frame of MDF with plyboard bottom fitted with puller knobs and index card holder. Phosphor bronze clip provided inside the drawer for keeping herbarium sheets in position. Drawers finished in spirit polish. Drawer Size 45cm x 37cm x 8cm. 	Asia/Europe/USA	Nos	01	

07	Herbarium Sheets (one pack)	Herbarium Sheets for preservation of botanical specimen	Asia/Europe/USA	Nos	01 Pack	
08	Radio Telemetry Kit	 Small size and lightweight CP2102 high-quality USB to TTL chips Device Alternatively versions are 433MHZ or 915MHZ Supports MWC / APM / PX4 / Pixhawk other open-source flight control The sensitivity of the Receiver is -118 dBm MAVLink Framework Agreement Open-Source Firmware Frequency-hopping spread spectrum (FHSS) 2-way full-duplex communication adaptive TDM Up to 25% can be corrected bit errors Si1000 and Si4432 wireless microcontroller modules. 	Asia/Europe/USA	Nos	02	
9	Noise Sensor	 Power supply: 10~30V DC Working temperature: -20°C~+60°C, 0%RH~95%RH (non-condensing) Measuring range: 30dB~120dB Noise accuracy: ±0.5dB (at reference pitch, 94dB@1kHz) Resolution: 0.1dB Frequency range: 20Hz~12.5kHz Response time: ≤3s Stability: less than 2% in the life cycle Output mode: RS485/4-20mA/0-5V/0-10V Warranty: 2 years 	Asia/Europe/USA	Nos	02	
10	Air Quality Sensors	 The operating voltage: +5V, measures and detects NH3, alcohol, NOx, Benzene, CO2, smoke, etc. range of analog output voltage: 0V-5V, Range of digital output voltage: 0V-5V (TTL logic). Heating voltage: 5V±10.1. Heater resistance: 33ohms ±5%. Heating consumption: <800mW. Operating temperature; -10 °C to -45 C. Storage temperature: -20 °C to 75 °C. Related humidity: <95%Rh. Concentration slope rate: ≤0.65 sensor. 	Asia/Europe/USA	Nos	05	

11	Carbon Monoxide (CO) sensor	 Operating voltage: DC 5 V. IC driver: LM 393. Size: 11 x 33 x 20 mm. Range: 10 to 1000 ppm. Characteristic gas: 100 ppm CO. Sensitive resistance: 2 to 20 10kohm 10kohm at 100ppm CO. Sensitivity: ≥ 3%. Return time: ≤ 30 s. Heating resistance: ± 31ohm 3ohm. Heating current: ≤ 180 mA. Reaction time: ≤ 1 s. Heating voltage: 5.0V ± 2V / 1.5 ± 1V. Heating power: approx. 350 mW. Ambient temperature: -20 ° C to + 50 ° C. Humidity: ≤ 95% RH. Oxygen content: 21%. The analog output voltage, the higher the concentration the higher the voltage. The carbon monoxide detection with better sensitivity. There are four screw holes for easy positioning; Product Dimensions: 32 x 20 x 22 mm (LxWxH) With a long service life and reliable stability Rapid response and recovery characteristics 	Asia/Europe/USA	Nos	02	
12	Dust Sensor	 Grove-compatible interface (extra wire with connector) Supply voltage range: 5V Minimum detect particle: 1um PWM output Dimensions: 59(W)x45(H)x22(D) [mm] 	Asia/Europe/USA	Nos	02	
13	Gravity - Analog Electrical Conductivity Sensor	 3.0~5.0V wide voltage input Hardware filtered output signal, low jitter AC excitation source, effectively reduces polarization Gravity connector and BNC connector, plug and play, no welding 	Asia/Europe/USA	Nos	02	

		 Software library supports two-point calibration and automatically identifies standard buffer solution, integrates temperature compensation algorithm Uniform size and connector, convenient for the design of mechanical structures 				
14	Gravity – Analog Waterproof Capacitive Soil Moisture Sensor	 Supply Voltage: 3.3 ~ 5.5VDC Interface: 2.54-3Pin Output Voltage: 0 ~ 3VDC Cable Length: 1.5m Dimension (L x W): 175 x 30mm / 6.89 x 1.18 inches 	Asia/Europe/USA	Nos	02	
15	Memory Cards	 Capacity: 128GB Read Speed: up to 100MB/s Write Speed: up to 45-90MB/s Operating Temperature: 0 °C to 70 °C (32 °F to 158 °F) 	Asia/Europe/USA	Nos	05	
16	Acrylic sheets	 transparent sheet 2mm up to 8mm available Can be used for model-making size A3 	Asia/Europe/USA	Nos	01 Pack	
17	Solar Panel: 10W integrated Solar Panel	 Maximum Power (Wp): 10Wp Maximum Power Voltage (V): 18.00V Maximum Power Current (A): 0.56A Open Circuit Voltage (V): 21.7V Short Circuit Current (A): 0.62A Number of Cells (pcs): 36(4*9) pcs Size of Cell (mm): 26*156mm Size of Module (mm): 350*285*17mm 	Asia/Europe/USA	Nos	05	
18	USB-C Portable Hard Drive - 6TB	Capacity: 6TB Storage: HDD Interface Type: 1 × USB-C (USB 3.0 compatible)	Asia/Europe/USA	Nos	04	

		Max. Speeds: 130 MB/s				
		Drop Resistance: 4ft (1.2 m)				
19	3.6V 2000mAH LiPo Battery	 Dimensions: 60mm x 36mm x 7mm / 2.4"" x 1.4"" x 0.3"" Weight: 34g Nominal Capacity: 2000mAh ±2% Nominal Voltage: 3.7V Standard Charge Current: ~0.2C / 0.5A Charge Cut-Off Voltage: 4.2V Standard Discharge Current: ~0.2C / 0.5A" 	Asia/Europe/USA	Nos	03	
20	11.1V 2200mAh Lipo Battery	Material: Li-Polymer Cells: 3S Voltage: 11.1v Capacity: 2200mAh Discharge Rate: 25C Voltage per cell: 3.7V Max voltage per cell: 4.2V Charge Plug: JST-XHR-5P Discharge Plug: EC3 Suggest charge rate: 1	Asia/Europe/USA	Nos	02	
21	Wiro board	Dimension: 7cm * 6cm	Asia/Europe/USA	Nos	03	
22	Base Shield V2.0 for Arduino			Nos	02	
23	Breadboard	 Dimension (I-w-h) in mm: 170-55-10 Tie points: 830 Weight: 85 grams Temperature range: -20 ~ +80°C Contact resistance: 100 mΩ max. Insulation resistance: 1000MΩ min. Dielectric withstanding voltage: 500V AC per 1 minute. 	Asia/Europe/USA	Nos	03	

24	Battery Balance Charger : operation charge range	 Operation voltage range: DC 11.0 ~ 18.0 Volt or AC 100V ~ 240V 50/60Hz Circuit power: AC to DC adaptor (DC 11.0 ~ 18.0V / 5A) Max. charge power: 80W Max. discharge power: 5W Charge current range: 0.1~5.0A Discharge current range: 0.1~1.0A Current drain for balancing Li-Po: 300mAh/cell 	Asia/Europe/USA	Nos	02	
25	Mobile Server	 Intel Core Ultra 7 155U 12-Core (Up to 4.8 GHz with Intel Turbo Boost Technology) 12 MB L3 cache 32 GB LPDDR5-6400 MHz RAM (onboard) Intel Graphics 1 TB PCIe Gen4 NVMe M.2 SSD 16-inch diagonal, WUXGA (1920 x 1200), multi touch-enabled, IPS, edge-to-edge glass, 	Asia/Europe/USA	Nos	02	
26	USB	• 128 GB	Asia/Europe/USA	Nos	04	

Tender No	
Name of the Firm _	
Firm Address	
Date	
Telephone No	
E-Mail	

To, DD SCM Office NUTECH University I- 2, Main IJP Road, Islamabad.

Dear Sir

- 1. I/ We hereby offer to supply to the NUTECH University the stores detailed in schedule to the tender inquiry or such portion thereof as you may specify in the acceptance of tender at the price offered against the said schedule and further agree that this offer will remain valid up to 90 days after opening of Financial offer and will not be withdrawn or altered in terms of rates quoted and the conditions already stated therein or on before this date. I/ we shall be bound by a communication of acceptance to be dispatched within he prescribed time.
- 2. I/ we have understood the instructions to Tenders and General Conditions Governing Contract available at NUTECH website and have thoroughly examined the specifications / drawing and / or patterns quoted in the schedule here to and am/are fully aware of the nature of the stores required and my/ our offer is to supply stores strictly in accordance with the requirements. Yours Faithfully.

(Signature of Tenderer)
Designation
Date:

Individual signing tender and / or other documents connected with a contract must be signed by principal authorized rep/ OEM rep/ Authorized partner firm rep.

SPECIMEN FOR "ADVANCE PAYMENT BANK GUARANTEE"

Guarantee No:	Date	Amount:	Valid upto:
In Favour of: Nation	nal University of	Technology (NUTECH), IJP Road, I-12, Islamabad
Subject: Advance	Payment Bank	<u>Guarantee</u>	
Contract No:	DATE	:D	
Dear Sir,			

- 1. We [Name of Guarantor] understand that you have entered into contract with M/S [Name of Firm] (hereinafter called Our Client), for provision of [Name of Stores]. And as per the above mentioned Contract, you are liable to pay to Our Client an amount of [Amount of Guarantee] in advance, which shall be released against a Bank Guarantee. 2. Bank & seller firm shall inform your office regarding termination of the validity of this bank Guarantee one clear month before the actual expiry date of this Bank Guarantee.
- 3. Now, we hereby irrevocably undertake to immediately make payment on to your orders, merely upon receipt of your first written notice, an amount not exceeding [Amount of Guarantee] that may be claimed by you at your own discretion without it being necessary for you to prove or even assert to the Bank any default whatsoever of Our Client under the Contract.
- 4. Claims against this Guarantee shall be lodged on us through written request/s on your proper Letter Head. Unless claims are not presented on or before the Validity Date, all rights and benefits under this guarantee shall be forfeited and we shall be released from all claims, demands or liabilities of any kind whatsoever.
- 5. This Guarantee shall remain in force up to the above mentioned Validity Date which can however, be extended upon request of Our Client.

Yours faithfully,

			Page 26 o
"SPECIMEN FO	R BANK GUARANTI	EE AGAINST PERFO	RMANCE/WARRANTY GUARANTEE
Guarantee No:		Amount:	
In Favor of: Nation		logy (NUTECH), IJP Ro	
			uarantee Bank Guarantee
Contract No:		dated	
Dear Sir,			
Name] Loca the Contrac	ated at [Firm Address], He t is submission of Bank G	uarantee by our customer	lated with M/s [Firm r customer and that one of the conditions of o your good-self for a sum of [Amount]. by agree and undertake as under:-
a.	To pay to you unco	onditionally on demand t not exceeding the sur	and / or without any reference to our n of [Amount] as would be mentioned in
b.	To keep this Guaran	tee in force till [Validity [Date].
C.	original / extended doin duration on recei Guarantee shall cea this Bank Guarantee whether you suffer a	elivery period or the war of of information from y se on the closing of bar e. Claim received there a loss or not. On receip	all be kept two clear year ahead of the rantee of the stores which so ever is later your office. Our liability under this Bank aking hours on the last date of validity of after shall not been entertained by us t of payment under this Guarantee, this cancelled, discharged and returned to us.
d.			termination of the validity of this bank expiry date of this Bank Guarantee.
е.		-	hay amend / alter any term / cause of the / from this contract without making any

- reference to us. We do not reserve any right to receive any such amendment / alternation or addition / deletion provided such like actions do not increase our monetary liability under this Bank Guarantee which shall be limited only [Amount].
- That the bank guarantee herein before given shall not be affected by any change in the constitution of the Bank or Customer / Supplier or Vendor.
- That this is an unconditional Bank guarantee, which shall been cashed on sight on presentation without any reference to our Customer / Supplier or Vendor.

Note: No changes in the above given BG format shall be accepted.

"SELLER'S WARRANTY CERTIFICATE"

(To be provided on stamp paper)

____vears from the date of final acceptance of the Stores.

We hereby guarantee that we are the genuine and original Source of provisioning the Stores to our Buyer. We also undertake that nothing in the manufacturing of these Stores has been obtained through unauthorized means.

- 1. We hereby warrant and undertake that the Stores and all the associated spares/ accessories supplied under the terms and conditions of the above Contract, are:
 - brand new, complete in all respects, possessing good quality and standard workmanship; and
 - b. liable for replacement/rectification free of charge, if during the Warranty period the same are found defective before or under normal use or these do not remain within the limits and tolerances stated under the specifications or in any way not in accordance with the terms of this Contract. All expenses incurred in removal, re- provisioning and reinstallation of such defective Stores or their parts shall also be borne by us.
- 2. The Warranty shall remain valid for a period of years from the date of final acceptance of the Stores.
- **Sellers warranty must be provided by the Seller (firm) on Rs 100 stamp paper along with bank guarantee/CDR/Pay Order without changing a word. BG with additional clauses will be rejected.

CHECK LIST

(This checked list must be attached with your technical offer, duly filled and Signed by authorized signatory) Tender No

	Tender No	Date		
1	Tender Processing	a. Tender processing fee ref no		
	Fee	b. Bank		
		C. Amount		
2	EM/ Bid Bond	a. EM/ Bid Bond ref no		
		b. Bank		
3	Form Annex A, B and C sig	ned by Authorized Signatory	Yes	No
4	4 Offering specification of items as per IT		Yes	No
5	5 Quoted Currency as per IT		Yes	No
6	6 Accounting unit/Qty as per IT		Yes	No
7	Delivery Schedule as per IT		Yes	No
8	Country of origin of store			
9	Name of OEM:-			
10	Original Performa invoice (M	Mandatory)	Yes	No
11	Certified that there is no De	viation from IT conditions/ there is deviation from IT condition as per	Yes	No
	fol details			
12	Blacklisting certificate.		Yes	No
13	Verifiable OEM Certificate		Yes	No
14	Warranty Period as per IT		Yes	No
15	ATPs provided		Yes	No

Note: Fill and/or mark Yes/No where required.

Signature of Firm Auth Signatory

Yes√	No	Contract with OEM/Supplier	Yes✓	No
Yes√	No	Offer Req for Package Deal	Yes√	No
		Warranty req and duration 2 years	Yes✓	No
ent to the	procurem	ent office, immediately	1	1
Yes	No√	Essentially Running spare req	Yes	No√
Yes	No√	Req of Cert for test data results	Yes√	No
Local	Foreign	Req of Calibration	Yes✓	No
	Yes√ ent to the Yes Yes	Yes✓ No ent to the procurem Yes No✓ Yes No✓	Yes✓ No Offer Req for Package Deal Warranty req and duration 2 years ent to the procurement office, immediately Yes No✓ Essentially Running spare req Yes No✓ Req of Cert for test data results	Yes✓ No Offer Req for Yes✓ Package Deal Warranty req and duration 2 years ent to the procurement office, immediately Yes No✓ Essentially Running Yes spare req Yes No✓ Req of Cert for test Yes✓ data results