



TENDER DOCUMENTS

Computer Engg Lab Consumable Items

NUTECH / SCM / Comp Lab Cons Items (PSDP) 2020 / TD-

124

NATIONAL UNIVERSITY OF TECHNOLOGY

National University of Technology (NUTECH)
NUTECH / SCM / Mech Lab Cons Items (PSDP) 2020 / TD-122,
NUTECH / SCM / EE Lab Cons Items (PSDP) 2020 / TD-123 &
NUTECH / SCM / Comp Lab Cons Items (PSDP) 2020 / TD-124

1. Separate sealed bids are invited for tenders from Government / FBR Registered firms for the procurement against above mentioned tenders on FOR Basis.
2. Tender documents containing terms, conditions and detailed compliance of items (including draft contract) can be downloaded from NUTECH website "<https://nutech.edu.pk/downloads/procurement/scm-tenders/>" w.e.f **13 March 2020**.
3. Quotations shall be submitted as per requirement of the tender documents.
4. Bidders will be required to submit Bank Draft/ CDR equal to 5% of quoted value as Bid Bond in favor of National University of Technology (NUTECH).
5. **Submit Rs 1500/- as Tender fee in favor of NUTECH HBL Account (NUTECH Tendering and Contracts, 5037-7000210755). Please attach bank receipt with technical offer. Offers will not be entertained without payment of processing fee.**
6. Details for submission & opening of bids for each tender are as under:-

Ser	Description	Submission	Tender Opening	Completion Days
a.	Mech Lab TD-122	1030 hrs on 31 Mar 20	1100 hrs on 31 Mar 20	30 Days
b.	EE Lab TD-123	1130 hrs on 31 Mar 20	1200 hrs on 31 Mar 20	90 Days
c.	Comp Lab TD-124	1430 hrs on 31 Mar 20	1500 hrs on 31 Mar 20	30 Days

Deputy Director (Supply Chain Management)

NATIONAL UNIVERSITY OF TECHNOLOGY, UPRoad, I-12 ISLAMABAD

Tel: 0092-51-5476768, Ext: 227

NATIONAL UNIVERSITY OF TECHNOLOGY
SUPPLY CHAIN MANAGEMENT
INVITATION TO TENDER

Tender submission time: 1430 hours, 31 March 2020

1. NUTECH desires to procure the list of item(s) / Store(s) on **FOR basis**. as per **Annexure-A**. 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. **Conditions Governing Contracts**. 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 Lab Equipment.

3. **Delivery of Tender**. The offer is to be submitted as under:-

- a. **Technical Offer**. Technical Offer should contain only Annexure-A, Annexure-A-1 & 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 ie literature/brochures) without mentioning the financial aspect of the offer in DUPLICATE 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. **Commercial Offer.** 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 UNIVERSITY OF TECHNOLOGY (NUTECH)
I J P ROAD, I-12, ISLAMABAD
Tel: 0092-51-5476768, Ext: 227

4. **Date and Time for Receipt of Tender.** Sealed bids with detailed specifications should reach SCM office latest by **1430 hours on 31 March 2020**. 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 be intimated later. Only legitimate / registered representatives of firm will be allowed to attend tender opening.

6. **Validity of Offer.** The validity period of quotations must be indicated and should be 90 days from the date of opening of financial offer.

7. **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, A-1, 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.~~

8. **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.
- 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.~~

- i. Offers (Commercial / technical) containing non-initialled / 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.
9. **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.
10. **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.
11. **Terms of Payment/ LC Charges**
- a. ~~In FOB cases (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.~~
 - b. **In FOR cases** 50% advance payment will be made to the Seller on provision of unconditional Bank Guarantee/ CDR/ DD/ Pay order. 50% payment will made to the Seller after receipt and confirming the correctness of ordered specifications, installation, commissioning OR as the case may be.

12. **Bank Guarantee (BG)**. In case where equipment is backed by warranty, the BG submitted equal to 05% of FOB/FOR/CPT etc value shall remain valid for up to 60 days beyond completion of warranty period.
13. **Taxes/ Duties/ Custom clearance** All taxes /duties /import Licenses Fee as applicable under government laws in Pakistan as well as country of supplier shall be on firm **(in FOR Case)**. NUTECH will provide applicable exemption certificates and documents **(In FOB Cases only)**.
14. **Insurance:-** Insurance will be NUTECH's responsibility through NIGL **(in FOB Cases)**.
15. **Freight charges /Misc charges:** 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 firm's responsibility and all associated costs will be part of quotation as well.
16. **Warranty.** All goods /store offered would be brand new, from current year of production and will be governed as per warranty clause. The warranty period may be covered by BG as depending on the value /criticality of the tender equipment.
17. **Delivery Schedule.** Store will be delivered within 30 days from contract signing date.
18. **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 or the occurrence of unforeseen events, the period shall be reasonably extended.
19. **Subletting** 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.
20. **Arbitration.** The dispute shall referred for adjudication to a board comprising of Pro-Rector NUTECH as Chairman and two arbitrators, one to be nominated by each party. The arbitration proceeding shall be held in Pakistan under Pakistan Law. The venue of arbitration shall be the place from which the contract is issued or such other place as the purchaser at his discretion may determine. Arbitration award so given will be firm and final.

21. **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.
22. **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).
23. **Technical Specification:** 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.
24. **Inspection /Testing of Store:** 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.
25. **Requirement of Samples.** ~~The requirement of tender sample will be included in the case if required for evaluation by technical authorities'. Beside this advance sample if required will be also made part of the IT as well as the contract.~~
26. **Change In Specification / Mfr / Model.** No alternation marked/brand and quality of store will be entertained after the tender have been opened.
27. **Checking of Store at Consignee 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. Consignee's report on checking of the stores will be binding on the supplier in such cases.

28. **Packing /Marking.** 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

29. **Original Performa Invoice:** 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 (in 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.

30. **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.

- 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 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 NOT be subjected to arbitration.
- f. NUTECH reserves the right to cancel the Contract without assigning any reason whatsoever during its 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 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 with NUTECH may not be considered for award of this tender.

Deputy Director
Supply Chain Management Office

Annex-ATechnical SpecificationsNUTECH / SCM / Comp Lab Cons Items (PSDP) 2020 / TD-124

Ser	Items	Description	Country of Origin	A/U	Qty Req	Bidder Compliance		Tech Scrutiny to be done by user	
						Yes	No	Accepted	Rejected
								Reason of Rejection	
1	Resistor Kit - 1/2 Watt (With Boxes)	Values include: 1Ω, 1.2Ω, 1.5Ω, 1.8Ω, 2Ω, 2.2Ω,2.4Ω,2.7Ω,3Ω,3.3Ω,3.6Ω,3.9Ω,4.3Ω,4.7Ω,5.1Ω,5.6Ω,6.2Ω,6.8Ω,7.5Ω,8.2Ω,9.1Ω,10Ω,12Ω,15Ω,18Ω,20Ω,22Ω,24Ω,27Ω,30Ω,33Ω,36Ω,39Ω,43Ω,47Ω,51Ω,56Ω,62Ω,68Ω,75Ω,82Ω,91Ω,100Ω,120Ω,150Ω,180Ω,200Ω,220Ω,240Ω,270Ω,300Ω,330Ω,360Ω,390Ω,430Ω,470Ω,510Ω,560Ω,620Ω,680Ω,750Ω,820Ω,910Ω 1KΩ,1.2KΩ,1.5KΩ,1.8KΩ,2KΩ,2.2KΩ,2.4KΩ,2.7KΩ,3KΩ,3.3KΩ,3.6KΩ,3.9KΩ,4.3KΩ,4.7KΩ,5.1KΩ,5.6KΩ,6.2KΩ,6.8KΩ,7.5KΩ,8.2KΩ,9.1KΩ,10KΩ,12KΩ,15KΩ,18KΩ,20KΩ,22KΩ,24KΩ,27KΩ,30KΩ,33KΩ,36KΩ,39KΩ,43KΩ,47KΩ,51KΩ,56KΩ,62KΩ,68KΩ,75KΩ,82KΩ,91KΩ,100KΩ,120KΩ,150KΩ,180KΩ,200KΩ,220KΩ,240KΩ,270KΩ,300KΩ,330KΩ,360KΩ,390KΩ,430KΩ,470KΩ,510KΩ,560KΩ,620KΩ,680KΩ,750KΩ,820KΩ,910KΩ 1MΩ,1.5MΩ,2MΩ,3MΩ	Any	No	40 each				
2	Capacitor Kit	Ceramic Capacitors Kit 10% : 2pF, 3pF, 5pF, 10pF, 15p, 22pF, 30pF, 33pF, 47pF, 56pF, 75pF, 82pF, 100pF, 150pF, 220pF, 330pF, 470pF, 680pF, 1nF, 1.5nF, 2.2nF, 3.3nF, 4.7nF, 6.8nF, 10nF, 15nF, 22nF, 47nF, 68nF, 0.1uF Aluminum Electrolytic 20%(Through hole): 2.2uF(50 V), 10uF(50 V), 47uF(50 V), 470uF (50 V) 4.7uF, (50 V) 6.7uF (50 V) 0.1uF (50 V), 0.22uF (50 V),0.47uF (50 V),1uF (50 V),2.2uF	Any	No	40 each				

		(50 V),3.3uF (50 V),4.7uF (50 V),10uF (25 V),22uF (25 V),33uF (16 V),47uF (16 V),47uF (35 V),100uF (35 V),100uF (35V), 220uF (35 V), 470uF (35V), 1000uF (35 V),						
3	Inductor Kit	Values include (1/2w): "1uH,2.2uH,3.3uH,4.7uH,6.8uH,10uH,15uH, 22uH,33uH,47uH,68uH,100uH,150uH,220uH,330uH,470uH,680uH, 1mH,2.2mH,3.3mH,4.7mH,10mH, , 1H"	Any	No	40 each			
4	ICs	74LS00, 74LS01, 74LS02, 74LS03, 74LS04, 74LS05, 74LS07, 74LS08, 74LS09, 74LS10, 74LS11, 74LS12, 74LS13, 74LS14, 74LS15, 74LS17, 74LS20, 74LS25, 74LS26, 74LS27, 74LS28, 74LS30, 74LS31, 74LS32, 74LS33, 74LS41, 74LS42, 74LS43, 74LS44, 74LS45, 74LS46, 74LS47, 74LS49, 74LS50, 74LS53, 74LS56, 74LS57, 74LS63, 74L68, 74LS67, 74LS68, 74L69, 74LS69, 74LS70, 74L71, 74H71, 74LS73, 74LS74, 74LS75, 74LS76, 74LS80, 74LS82, 74LS83, 74LS85, 74LS86, 74LS90, 74LS91, 74LS92, 74LS93, 74LS95, 74LS96, 74LS107, 74LS112, 74LS122, 74LS123, 74LS124, 74LS126, 74LS133, 74LS135, 74LS137, 74LS138, 74LS139, 74LS143, 74LS145, 74LS146, 74LS147, 74LS148, 74LS149, 74LS150, 74LS151, 74LS152, 74LS153, 74LS157, 74LS155, 74LS160, 74LS161, 74LS163, 74LS169, 74LS175, 74LS180, 74LS181, 74LS183, 74LS184, 74LS191, 74LS193, 74LS194, 74LS195, 74LS244, 74LS245, 74LS266, 74LS250, 74LS257, 74LS259, 74LS373, 74LS374, 74LS377, 74LS283, 74LS393, 74LS399, 74LS348, 74LS373, 74LS670, NE555, LM556, 4077, 4511, TL7905, MC1408, 74LS163A, 74LS393, MCM6264, ADV7125 triple 8-bit video DAC, 4001, ADC0808, DAC0808, 2114, LM 741, LM339, 28F128J3A, ADV7125, ADV7185, ADV7194, CY7C1370C, HCMS-2973, IDTQS3125, IDTQS34XVH245, LM4550, MAX3222, XCCACE, AD775, LM386, MC6847, AY 1015D, AM25S557, AM25S558, AM29C509DC, 6850, 6N138, 28F256A, Am28F010, Am28F020, Am28F512, 6116-3, 6264-15, 62256-12, 22V10 PAL, 16V8 PAL, 20V8 PAL, MAXIM 233, Am29C517APC, 54ACT/74ACT715, GS4981, CD22204, AD8402/3, CY7C374i, FLEX10K, P9931	Any	No	30 each			
5	Microcontroller	MCS 51, AT28C64, 89C51, 89C2051, PIC16c54, PIC16c57, PIC16F84, PIC16C71, PIC16F877, PIC12C508	Any	No	20 each			
6	Jumper wire Roll	100m roll Red and White	Any	meter	2 Rolls			

7	Diode Kit	"1N4148 (300 mA, 1A) , 1N4007 (300 mA, 1A), 1N5819 (300 mA, 1A) , 1N5399 (300 mA, 1A), FR107 (300 mA, 1A) , FR207 (300 mA, 1A) , 1N5408 (300 mA, 1A), 1N5822 (300 mA, 1A) DB3 DIAC Bidirectional Trigger Diode DO-35 (DO-204AH) DB-3 Axial Silicon Diodes DB 3,"	Any	No	40 each			
8	Zener Diode (1W)	1.5V (1W), 3V(1W), 3.3V(1W), 3.6V(1W), 5.1V(1W), 5.6V(1W), 6V(1W), 7.5V(1W), 9V(1W), 10V(1W), 12V(1W), 13V(1W), 15V(1W), 16V(1W), 18V,(1W) 20V(1W)	Any	No	30 each			
9	Voltage Regulator IC Kit	LM317, L7805, L7806, L7808, L7809, L7810, L7812, L7815, L7818, L7824, LM320N, LM237, LM337, LM7905, LM7912,	Any	No	20 each			
10	Transistors	TR 2N3904, 2N3906 TR, TR 2N4401, BC337, 2N3904, 2N3906, BC107, 2N2222A, BF 245, 2N3823, 2N3904, 2N4401, 2N2222, BC327, BC337, BC517, BC547, BC548, BC549, BC550, BC556, BC557, BC558, 2N7000,	Any	No	30 Pcs each			
11	Solder cleaning sponge	Soldering Sponge	Any	No	30			
12	Cleaning Swabs Kit	"The kit includes the following products: 1 x QbE® Cleaning Platform (200 sheets) 1 x Electro-Wash® PX Precision Fibre Optic Cleaner 1 x 2.5 mm Foam Fibre Optic Swabs (50 swabs) 1 x V-Groove and Ferrule Cleaning Swabs (50 swabs) 1 x Fusion Splice Mirror Cleaning Swabs (15 swabs) 1 x rugged bag with karabiner attachment 1 x instructions	Any	No	1			
13	Temperature Sensor	LM35 Temperature Sensor	Any	No	20			
14	Operational Amplifier	LM4558, LM741, NJM4560, LM324, LM339, LM358, CA 3130, CA 3140 , TL071, TL082, LM 311, IC 747, MC 1458,	Any	No	40 each			
15	IC Base	8 Pin 14 Pin 16 Pin 20 Pin 24 Pin	Any	No	20 each			

		28 Pin 32 Pin 40 Pin						
16	Acrylic Sheet	20x20 inches Acrylic Sheet (Transparent)	Any	No	20			
17	TOTEM	975 building pieces. Beams and boards – one size. Include informative assembly guide book. All Tools for shaping Beams, Boards and Strip Brackets. Small parts should be provide in a compartment box.	Any	No	5			
18	SOLDERING PASTE	SOLDERING SOLDER PASTE - FLUX YELLOW	Any	No	10			
19	Transformer	220v to (12v- 20V) 2A	Any	No	5			
20	Feric Chloride	FeCl3	Any	Kg	4 Kg			
21	PCb Development Tray	3 Feet lenght*1 feet width	Any	No	5			
22	Relay Module	LDR Photoswitch Photoresistor 12V Relay Module 5VSingle Channel Relay Module ESP8266 ESP-01 Relay Module for Arduino IOT	Any	No	10 , 20, 10 respec tively			
23	Vero Board	Veroboard Large (4" X 10") Separate Dots	Any	No	15			
24	Breadboard	830 Point Solderless Breadboard	Any	No	15			
25	PCB Thermal Transfer Paper A4 size	PCB Thermal Transfer Paper A4 size	Any	No	50			
26	PCB Board	PCB 12x12-inch-size-copper clad Board	Any	No	50			
27	Tape	Fiber Tape Transparent	Any	No	10			
28	ANTENNA	GPS ACTIVE ANTENNA (for indoor Use)	Any	No	5			
29	Heat Shrink Tube Box	Color: Black/Red/Yellow/Green Quantity: 180pcs Specifications:8 Material: Polyolefin Flammability: Flame Retardant Cutting method: Scissors or sharp knife Manufacture specification: ISO9001 Package Includes: Quantity x Supplied internal diameter x Single length 60pcs X 1.5 X 30mm	Any	No	1			

		(Red*15pcs;Black*15pcs;Yellow*15pcs;Green*15pcs) 40pcs X 2.5 X 30mm (Red*10pcs;Black*10pcs;Yellow*10pcs;Green*10pcs) 20pcs X 3.0 X 60mm (Red*5pcs;Black*5pcs;Yellow*5pcs;Green*5pcs) 16pcs X 4.0 X 60mm (Red*4pcs;Black*4pcs;Yellow*4pcs;Green*4pcs) 12pcs X 5.0 X 60mm (Red*3pcs;Black*3pcs;Yellow*3pcs;Green*3pcs) 8pcs X 6.0 X 60mm (Red*2pcs;Black*2pcs;Yellow*2pcs;Green*2pcs) 12pcs X 8.0 X 65mm (Red*3pcs;Black*3pcs;Yellow*3pcs;Green*3pcs) 12pcs X 10.0 X 100mm (Red*3pcs;Black*3pcs;Yellow*3pcs;Green*3pcs)						
30	IR Sensor	IR Infrared Obstacle Avoidance Sensor	Any	No	20			
31	Battery Capacity Checker	5 in 1 LCD Battery Capacity Checker	Any	No	5			
32	Hex KeyPad	16-button keypad 8-pin access to 4x4 matrix Cable: 0.78 x 3.5 in (2.0 x 8.8 cm) Maximum Rating: 24 VDC, 30mA	Any	No	20			
33	Accelerometer	GY-291 ADXL345 3 AXIS Accelerometer Module (Digital Output)	Any	No	5			
34	Vibration Sensor	Vibration Sensor Module - SW-420	Any	No	20			
35	Rubber Gloves	large sized rubber gloves white Protects hands from cleaning product chemicals, hot water temperatures, mold, mildew, bacteria, and more Durable rubber construction is waterproof and tear-resistant Soft, non-restrictive lining keeps hands comfortable and helps prevent bacteria build-up between uses Textured palm and finger tips for a non-slip grip Can be reused many times	Any	No	20 pairs			
36	Multiplexer IC	CD4053(DIP16), CD4053B(DIP16), CD4053BE (DIP16), MAX336/337, DG406 (DIP-28)	Any		10 each			
37	Switch	On/Off Switch	Any	No	40			

38	Buttons	3F Keys 12 * 12 * 7.3 Buttons with Rounded Cap (White, green, yellow,black,red)	Any	No	40 each			
39	14 Segement Alphanumeric Display	0.39 inch 6 Digit 14 Segement Alphanumeric LED Tube Display Red common cathode (75)	Any	No	10			
40	Seven Segment Display- Control Cathode	0.56 inch Common Cathod RED & Green Seven Segment Display	Any	No	10 each			
41	LEDs	5mm Crystal red,green, yellow,blue,white LED	Any	No	50 each			
42	LCD Display Module	0.96 Inch 128x64 led Yellow and Blue I2C/Serial LCD Display	Any	No	10			
43	GLUE GUN	HOT MELT GLUE GUN	Any	No	4			
44	DIP Switch	7 Pin Bit DIP Switch 2.54mm Pitch	Any	No	30			
45	Glue Gun Sticks	Glue Gun Sticks 11mm	Any	No	50			
46	Wire Stripper and cutter	8PK-371D Automatic Wire Stripper Crimper Stripping Tool	Any	No	10			
47	Screwdriver Set	31 in 1 - Pocket Precision Screwdriver Set - Multicolour	Any	No	10			
48	Box Component	60 Drawers, 70 Grids clear hard plastic storage box organizer. Grid design in divided box keeps items in compartments from migrating. The single drawer body is transparent, can see objects inside the box. Can hang on the wall and also can put on table.	Any	No	4			
49	Nose Pliers	6 inch Needle Nose Pliers	Any	No	10			
50	Diagonal Pliers	6-inch Diagonal Pliers	Any	No	10			
51	Box For Arduino	Transparent Acrylic Box For Arduino UNO	Any	No	50			
52	SOLDERING IRON	SOLDERING IRON 60W	Any	No	20			
53	SOLDERING IRON STAND	SOLDERING IRON STAND HOLDER METAL	Any	No	20			
54	LED Magnifier	Lighted Magnifier with Bright LED Magnifying Light for Desk Table Craft or Workbench, Magnifying Glass with Light,	Any	No	5			
55	Jumper Wires	20cm male to male, 20cm female to female connector, 20cm male to female (10 Colors set)	Any	cm	40 Sets			

					Male to male, 40 Sets female to female, 40 Sets male to female,			
56	Raspberry Pi 4 4GB	Raspberry Pi 4 Model B 4-GB-RAM (2019)	Any	No	5			
57	Raspberry Pi 4 Touch Screen	5 Inch LCD HDMI Touch Screen Display for Raspberry Pi with Pen	Any	No	5			
58	ARDUINO LCD	ARDUINO LCD 1602 (16x2)KEYPAD SHIELD (BLUE LCD)	Any	No	10			
59	SOLDER PASTE	SOLDERING SOLDER PASTE - FLUX YELLOW 10CC	Any	No	20			
60	Photoresistor	GL5528, GL5528, GL5537, GL5506, GL5516, GL5539, GL5549	Any	No	10 each			
61	Solder Wire	60/40 FUJI Soldering Wire 60%Tin	Any	No	30			
62	Latch hall Switch	US1881 (Latching)	Any	No	10			
63	Sensor	NodeMCU	Any	No	15			
64	Infrared Night Vision	Infrared Night Vision IR 5MP Raspberry Pi NoIR Camera Original	Any	No	5			
65	Beagle Bone	AM3358 1GHz ARM® Cortex-A8 Processor 4GB 8-bit eMMC Onboard Flash 3D Graphics Accelerator NEON Floating-Point Accelerator 2x PRU 32-bit Microcontroller Connectivity: USB Client for power and communications USB Host Ethernet Micro HDMI 2x 46-pin Headers	Any	No	3			

		Software Compatibility: Angstrom Linux, Android, Ubuntu, Cloud9 IDE on Node.js with BoneScript						
66	Volume Type Variable Resistor	10k, 100k, 500k	Any	No	10 each			
67	Digital Variable Resistor IC	Part #: MCP4131-103E/P 10k	Any	No	20			
68	Heart Rate Monitor with Probe	ECG Heart Rate Monitor with Electrode and Prob - AD8232	Any	No	10			
69	alligator probe	alligator probe	Any	No	10			
70	Oscilloscope probe	Oscilloscope probe	Any	No	10			
71	Servo Motor	Hitec HS-422 Servo Motor, 180 degree	Any		10			
72	Stepper Motor	5v Stepper Motor + ULN2003 Driver 28Byj-48	Any	No	10			
73	Arduino Nano Cable	Arduino Nano Cable	Any	No	20			
74	HDMI Cable	Small Size HDMI Cable 5 meter	Any	meter	5			
75	Gyro sensor	Gyro sensor MPU 6050	Any	No	10			
76	Gps module	Gps module GPS Neo 6M	Any	No	10			
77	Crystals	12MHZ Crystals HC-49S	Any	No	40			
78	Optical Fiber Spool SM	Optical Fiber Spool SM	Any	m	200m			
79	Optical Fiber Cable SM	Optical Fiber Cable SM (8 core duct)	Any	metre	100 m			
80	PCB Handheld Drill Machine	Model: LS-100 Material: ABS Plastic	Any	No	5			
81	Iron Press	Material: Metal Non-stick coated plate Powerful 1000 WATT Powerful Press Heavy Weight	Any	No	2			
82	SOLDER PUMP	DESOLDERING SOLDER PUMP VACUUM	Any	No	10			
83	OPTICAL SENSOR	TCRT5000 REFLECTIVE TRANSDUCER OPTICAL SENSOR	Any	No	10			
84	Motion Detector Sensor	HC-SR501 PIR Human Motion Detector Sensor	Any	No	10			
85	Radar Microwave Sensor	Doppler Radar Microwave Sensor RCWL-0516	Any	No	10			

86	Glass cube	Sizes: 1.5 Feet height, 2 Feet Length, 5 Inch width Glass Types: Tempered glass Thicknesses (in): 1/2"	Any	No	5			
87	Raspberry Pi 4 Case	Raspberry Pi 4 Metal Case with Cooling Fan and Heatsinks for Raspberry Pi 4 Model B (Black)	Any	No	5			
88	Seven Segment Display- Control Anode	0.56-inch Common Anode RED & Green Seven Segment Display	Any	No	10 each			
89	Variable Resistor	10K, 5K, 100R	Any	No	20 each			
90	Alcohol Swabs	Alcohol Swabs - 70% Isopropyl	Any	No	400			
91	Handheld Digital Multimeter	Measuring Resistance Range: 200/2K/20k/200k/2M/20M/200M ohm DIY Supplies: Electrical Model Number: UT51	Any	No	15			
92	Power Supply Adapter for Arduino (9v 1A)	Input: 100V - 240V AC, 50 - 60 Hz 0.5A Output: 9V DC 1000mA Weight: 121g Plug: US plug	Any	No	20			

Firm Name: _____ Signature: _____ Name: _____ Designation: _____

**Annex B****TECHNICAL OFFER****NUTECH / SCM / Comp Lab Cons Items (PSDP) 2020 / TD-124****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

Ser	In FOB Cases	In FOR Cases
a.	80 % through LC on sight.	50% advance payment against BG/CDR/Pay Order/DD
b.	20% after delivery, installation / commissioning, user satisfaction certificate	50% payment after delivery, installation / commissioning / user satisfaction certificate

Details of Foreign Principal Information with account details)

1. Name / Title: _____
2. Address: _____

OEM Name:	Firm Name:	Signature:
OEM Focal Person:	Firm Focal Person:	Official Seal:
OEM Phone Number:	Firm Phone Number:	Name:
OEM Email Id:	Firm Email Id:	Designation:

Annex C**FINANCIAL OFFER****NUTECH / SCM / Comp Lab Cons Items (PSDP) 2020 / TD-124**

Ser	Item Name/Size	Specification	A/U	Qty Req	Unit Price PKR (Including Tax)	Total Price PKR (Including Tax)
1	Resistor Kit - 1/2 Watt (With Boxes)	Values include: 1Ω, 1.2Ω, 1.5Ω, 1.8Ω, 2Ω, 2.2Ω,2.4Ω,2.7Ω,3Ω,3.3Ω,3.6Ω,3.9Ω,4.3Ω,4.7Ω,5.1Ω,5.6Ω,6.2Ω,6.8Ω,7.5Ω,8.2Ω,9.1Ω,10Ω,12Ω,15Ω, 18Ω,20Ω,22Ω,24Ω,27Ω,30Ω,33Ω,36Ω,39Ω,43Ω,47Ω,51Ω,56Ω,62Ω,68Ω,75Ω,82Ω,91Ω,100Ω,120Ω, 150Ω,180Ω,200Ω,220Ω,240Ω,270Ω,300Ω,330Ω,360Ω,390Ω,430Ω,470Ω,510Ω,560Ω,620Ω,680Ω,7 50Ω,820Ω,910Ω 1KΩ,1.2KΩ,1.5KΩ,1.8KΩ,2KΩ,2.2KΩ,2.4KΩ,2.7KΩ,3KΩ,3.3KΩ,3.6KΩ,3.9KΩ,4.3KΩ,4.7KΩ,5.1KΩ,5.6 KΩ,6.2KΩ,6.8KΩ,7.5KΩ,8.2KΩ,9.1KΩ,10KΩ,12KΩ,15KΩ,18KΩ,20KΩ,22KΩ,24KΩ,27KΩ,30KΩ,33KΩ, 36KΩ,39KΩ,43KΩ,47KΩ,51KΩ,56KΩ,62KΩ,68KΩ,75KΩ,82KΩ,91KΩ,100KΩ,120KΩ,150KΩ,180KΩ,2 00KΩ,220KΩ,240KΩ,270KΩ,300KΩ,330KΩ,360KΩ,390KΩ,430KΩ,470KΩ,510KΩ,560KΩ,620KΩ,680 KΩ,750KΩ,820KΩ,910KΩ 1MΩ,1.5MΩ,2MΩ,3MΩ	No	40 each		
2	Capacitor Kit	Ceramic Capacitors Kit 10% : 2pF, 3pF, 5pF, 10pF, 15p, 22pF, 30pF, 33pF, 47pF, 56pF, 75pF, 82pF, 100pF, 150pF, 220pF, 330pF, 470pF, 680pF, 1nF, 1.5nF, 2.2nF, 3.3nF, 4.7nF, 6.8nF, 10nF, 15nF, 22nF, 47nF, 68nF, 0.1uF Aluminum Electrolytic 20%(Through hole): 2.2uF(50 V), 10uF(50 V), 47uF(50 V), 470uF (50 V) 4.7uF, (50 V) 6.7uF (50 V) 0.1uF (50 V), 0.22uF (50 V),0.47uF (50 V),1uF (50 V),2.2uF (50 V),3.3uF (50 V),4.7uF (50 V),10uF (25 V),22uF (25 V),33uF (16 V),47uF (16 V),47uF (35 V),100uF (35 V),100uF (35V), 220uF (35 V), 470uF (35V), 1000uF (35 V),	No	40 each		
3	Inductor Kit	Values include (1/2w): "1uH,2.2uH,3.3uH,4.7uH,6.8uH,10uH,15uH, 22uH,33uH,47uH,68uH,100uH,150uH,220uH,330uH,470uH,680uH, 1mH,2.2mH,3.3mH,4.7mH,10mH, , 1H"	No	40 each		
4	ICs	74LS00, 74LS01, 74LS02, 74LS03, 74LS04, 74LS05, 74LS07, 74LS08, 74LS09, 74LS10, 74LS11, 74LS12, 74LS13, 74LS14, 74LS15, 74LS17, 74LS20, 74LS25, 74LS26, 74LS27, 74LS28, 74LS30, 74LS31, 74LS32, 74LS33, 74LS41, 74LS42, 74LS43, 74LS44, 74LS45, 74LS46, 74LS47, 74LS49, 74LS50, 74LS53, 74LS56, 74LS57, 74LS63, 74L68, 74LS67, 74LS68, 74L69, 74LS69, 74LS70, 74L71,	No	30 each		

		74H71, 74LS73, 74LS74, 74LS75, 74LS76, 74LS80, 74LS82, 74LS83, 74LS85, 74LS86, 74LS90, 74LS91, 74LS92, 74LS93, 74LS95, 74LS96, 74LS107, 74LS112, 74LS122, 74LS123, 74LS124, 74LS126, 74LS133, 74LS135, 74LS137, 74LS138, 74LS139, 74LS143, 74LS145, 74LS146, 74LS147, 74LS148, 74LS149, 74LS150, 74LS151, 74LS152, 74LS153, 74LS157, 74LS155, 74LS160, 74LS161, 74LS163, 74LS169, 74LS175, 74LS180, 74LS181, 74LS183, 74LS184, 74LS191, 74LS193, 74LS194, 74LS195, 74LS244, 74LS245, 74LS266, 74LS250, 74LS257, 74LS259, 74LS373, 74LS374, 74LS377, 74LS283, 74LS393, 74LS399, 74LS348, 74LS373, 74LS670, NE555, LM556, 4077, 4511, TL7905, MC1408, 74LS163A, 74LS393, MCM6264, ADV7125 triple 8-bit video DAC, 4001, ADC0808, DAC0808, 2114, LM 741, LM339, 28F128J3A, ADV7125, ADV7185, ADV7194, CY7C1370C, HCMS-2973, IDTQS3125, IDTQS34XVH245, LM4550, MAX3222, XCCACE, AD775, LM386, MC6847, AY 1015D, AM25S557, AM25S558, AM29C509DC, 6850, 6N138, 28F256A, Am28F010, Am28F020, Am28F512, 6116-3, 6264-15, 62256-12, 22V10 PAL, 16V8 PAL, 20V8 PAL, MAXIM 233, Am29C517APC, 54ACT/74ACT715, GS4981, CD22204, AD8402/3, CY7C374i, FLEX10K, P9931				
5	Microcontroller	MCS 51, AT28C64, 89C51, 89C2051, PIC16c54, PIC16c57, PIC16F84, PIC16C71, PIC16F877, PIC12C508	No	20 each		
6	Jumper wire Roll	100m roll Red and White	meter	2 Rolls		
7	Diode Kit	"1N4148 (300 mA, 1A) , 1N4007 (300 mA, 1A), 1N5819 (300 mA, 1A) , 1N5399 (300 mA, 1A), FR107 (300 mA, 1A) , FR207 (300 mA, 1A) , 1N5408 (300 mA, 1A), 1N5822 (300 mA, 1A) DB3 DIAC Bidirectional Trigger Diode DO-35 (DO-204AH) DB-3 Axial Silicon Diodes DB 3,"	No	40 each		
8	Zener Diode (1W)	1.5V (1W), 3V(1W), 3.3V(1W), 3.6V(1W), 5.1V(1W), 5.6V(1W), 6V(1W), 7.5V(1W), 9V(1W), 10V(1W), 12V(1W), 13V(1W), 15V(1W), 16V(1W), 18V,(1W) 20V(1W)	No	30 each		
9	Voltage Regulator IC Kit	LM317, L7805, L7806, L7808, L7809, L7810, L7812, L7815, L7818, L7824, LM320N, LM237, LM337, LM7905, LM7912,	No	20 each		
10	Transistors	TR 2N3904, 2N3906 TR, TR 2N4401, BC337, 2N3904, 2N3906, BC107, 2N2222A, BF 245, 2N3823, 2N3904, 2N4401, 2N2222, BC327, BC337, BC517, BC547, BC548, BC549, BC550, BC556, BC557, BC558, 2N7000,	No	30 Pcs each		
11	Solder cleaning sponge	Soldering Sponge	No	30		
12	Cleaning Swabs Kit	"The kit includes the following products: 1 x QbE® Cleaning Platform (200 sheets) 1 x Electro-Wash® PX Precision Fibre Optic Cleaner	No	1		

		1 x 2.5 mm Foam Fibre Optic Swabs (50 swabs) 1 x V-Groove and Ferrule Cleaning Swabs (50 swabs) 1 x Fusion Splice Mirror Cleaning Swabs (15 swabs) 1 x rugged bag with karabiner attachment 1 x instructions				
13	Temperature Sensor	LM35 Temperature Sensor	No	20		
14	Operational Amplifier	LM4558, LM741, NJM4560, LM324, LM339, LM358, CA 3130, CA 3140 , TL071, TL082, LM 311, IC 747, MC 1458,	No	40 each		
15	IC Base	8 Pin 14 Pin 16 Pin 20 Pin 24 Pin 28 Pin 32 Pin 40 Pin	No	20 each		
16	Acrylic Sheet	20x20 inches Acrylic Sheet (Transparent)	No	20		
17	TOTEM	975 building pieces. Beams and boards – one size. Include informative assembly guide book. All Tools for shaping Beams, Boards and Strip Brackets. Small parts should be provide in a compartment box.	No	5		
18	SOLDERING PASTE	SOLDERING SOLDER PASTE - FLUX YELLOW	No	10		
19	Transformer	220v to (12v- 20V) 2A	No	5		
20	Feric Chloride	FeCl3	Kg	4 Kg		
21	PCB Development Tray	3 Feet lenght*1 feet width	No	5		

22	Relay Module	LDR Photoswitch Photoresistor 12V Relay Module 5V Single Channel Relay Module ESP8266 ESP-01 Relay Module for Arduino IOT	No	10, 20, 10 respectively		
23	Vero Board	Veroboard Large (4" X 10") Separate Dots	No	15		
24	Breadboard	830 Point Solderless Breadboard	No	15		
25	PCB Thermal Transfer Paper A4 size	PCB Thermal Transfer Paper A4 size	No	50		
26	PCB Board	PCB 12x12-inch-size-copper clad Board	No	50		
27	Tape	Fiber Tape Transparent	No	10		
28	ANTENNA	GPS ACTIVE ANTENNA (for indoor Use)	No	5		
29	Heat Shrink Tube Box	Color: Black/Red/Yellow/Green Quantity: 180pcs Specifications:8 Material: Polyolefin Flammability: Flame Retardant Cutting method: Scissors or sharp knife Manufacture specification: ISO9001 Package Includes: Quantity x Supplied internal diameter x Single length 60pcs X 1.5 X 30mm (Red*15pcs;Black*15pcs;Yellow*15pcs;Green*15pcs) 40pcs X 2.5 X 30mm (Red*10pcs;Black*10pcs;Yellow*10pcs;Green*10pcs) 20pcs X 3.0 X 60mm (Red*5pcs;Black*5pcs;Yellow*5pcs;Green*5pcs) 16pcs X 4.0 X 60mm (Red*4pcs;Black*4pcs;Yellow*4pcs;Green*4pcs) 12pcs X 5.0 X 60mm (Red*3pcs;Black*3pcs;Yellow*3pcs;Green*3pcs) 8pcs X 6.0 X 60mm (Red*2pcs;Black*2pcs;Yellow*2pcs;Green*2pcs) 12pcs X 8.0 X 65mm (Red*3pcs;Black*3pcs;Yellow*3pcs;Green*3pcs) 12pcs X 10.0 X 100mm (Red*3pcs;Black*3pcs;Yellow*3pcs;Green*3pcs)	No	1		
30	IR Sensor	IR Infrared Obstacle Avoidance Sensor	No	20		

31	Battery Capacity Checker	5 in 1 LCD Battery Capacity Checker	No	5		
32	Hex KeyPad	16-button keypad 8-pin access to 4x4 matrix Cable: 0.78 x 3.5 in (2.0 x 8.8 cm) Maximum Rating: 24 VDC, 30mA	No	20		
33	Accelerometer	GY-291 ADXL345 3 AXIS Accelerometer Module (Digital Output)	No	5		
34	Vibration Sensor	Vibration Sensor Module - SW-420	No	20		
35	Rubber Gloves	large sized rubber gloves white Protects hands from cleaning product chemicals, hot water temperatures, mold, mildew, bacteria, and more Durable rubber construction is waterproof and tear-resistant Soft, non-restrictive lining keeps hands comfortable and helps prevent bacteria build-up between uses Textured palm and finger tips for a non-slip grip Can be reused many times	No	20 pairs		
36	Multiplexer IC	CD4053(DIP16), CD4053B(DIP16), CD4053BE (DIP16), MAX336/337, DG406 (DIP-28)		10 each		
37	Switch	On/Off Switch	No	40		
38	Buttons	3F Keys 12 * 12 * 7.3 Buttons with Rounded Cap (White, green, yellow,black,red)	No	40 each		
39	14 Segment Alphanumeric Display	0.39 inch 6 Digit 14 Segment Alphanumeric LED Tube Display Red common cathode (75)	No	10		
40	Seven Segment Display- Control Cathode	0.56 inch Common Cathod RED & Green Seven Segment Display	No	10 each		
41	LEDs	5mm Crystal red,gree, yellow,blue,white LED	No	50 each		
42	LCD Display Module	0.96 Inch 128x64 Oled Yellow and Blue I2C/Serial LCD Display	No	10		

43	GLUE GUN	HOT MELT GLUE GUN	No	4		
44	DIP Switch	7 Pin Bit DIP Switch 2.54mm Pitch	No	30		
45	Glue Gun Sticks	Glue Gun Sticks 11mm	No	50		
46	Wire Stripper and cutter	8PK-371D Automatic Wire Stripper Crimper Stripping Tool	No	10		
47	Screwdriver Set	31 in 1 - Pocket Precision Screwdriver Set - Multicolour	No	10		
48	Box Component	60 Drawers, 70 Grids clear hard plastic storage box organizer. Grid design in divided box keeps items in compartments from migrating. The single drawer body is transparent, can see objects inside the box. Can hang on the wall and also can put on table.	No	4		
49	Nose Pliers	6 inch Needle Nose Pliers	No	10		
50	Diagonal Pliers	6-inch Diagonal Pliers	No	10		
51	Box For Arduino	Transparent Acrylic Box For Arduino UNO	No	50		
52	SOLDERING IRON	SOLDERING IRON 60W	No	20		
53	SOLDERING IRON STAND	SOLDERING IRON STAND HOLDER METAL	No	20		
54	LED Magnifier	Lighted Magnifier with Bright LED Magnifying Light for Desk Table Craft or Workbench, Magnifying Glass with Light,	No	5		
55	Jumper Wires	20cm male to male, 20cm female to female connector, 20cm male to female (10 Colors set)	cm	40 Sets Male to male, 40 Sets female to female, 40 Sets		

				male to female,		
56	Raspberry Pi 4 4GB	Raspberry Pi 4 Model B 4-GB-RAM (2019)	No	5		
57	Raspberry Pi 4 Touch Screen	5 Inch LCD HDMI Touch Screen Display for Raspberry Pi with Pen	No	5		
58	ARDUINO LCD	ARDUINO LCD 1602 (16x2)KEYPAD SHIELD (BLUE LCD)	No	10		
59	SOLDER PASTE	SOLDERING SOLDER PASTE - FLUX YELLOW 10CC	No	20		
60	Photoresistor	GL5528, GL5528, GL5537, GL5506, GL5516, GL5539, GL5549	No	10 each		
61	Solder Wire	60/40 FUJI Soldering Wire 60%Tin	No	30		
62	Latch hall Switch	US1881 (Latching)	No	10		
63	Sensor	NodeMCU	No	15		
64	Infrared Night Vision	Infrared Night Vision IR 5MP Raspberry Pi NoIR Camera Original	No	5		
65	Beagle Bone	AM3358 1GHz ARM® Cortex-A8 Processor 4GB 8-bit eMMC Onboard Flash 3D Graphics Accelerator NEON Floating-Point Accelerator 2x PRU 32-bit Microcontroller Connectivity: USB Client for power and communications USB Host Ethernet Micro HDMI 2x 46-pin Headers Software Compatibility: Angstrom Linux, Android, Ubuntu, Cloud9 IDE on Node.js with BoneScript	No	3		
66	Volume Type Variable Resistor	10k, 100k, 500k	No	10 each		

67	Digital Variable Resistor IC	Part #: MCP4131-103E/P 10k	No	20		
68	Heart Rate Monitor with Probe	ECG Heart Rate Monitor with Electrode and Prob - AD8232	No	10		
69	alligator probe	alligator probe	No	10		
70	Oscilloscope probe	Oscilloscope probe	No	10		
71	Servo Motor	Hitec HS-422 Servo Motor, 180 degree		10		
72	Stepper Motor	5v Stepper Motor + ULN2003 Driver 28Byj-48	No	10		
73	Arduino Nano Cable	Arduino Nano Cable	No	20		
74	HDMI Cable	Small Size HDMI Cable 5 meter	met er	5		
75	Gyro sensor	Gyro sensor MPU 6050	No	10		
76	Gps module	Gps module GPS Neo 6M	No	10		
77	Crystals	12MHZ Crystals HC-49S	No	40		
78	Optical Fiber Spool SM	Optical Fiber Spool SM	m	200m		
79	Optical Fiber Cable SM	Optical Fiber Cable SM (8 core duct)	metr e	100 m		
80	PCB Handheld Drill Machine	Model: LS-100 Material: ABS Plastic	No	5		
81	Iron Press	Material: Metal Non-stick coated plate Powerful 1000 WATT Powerful Press Heavy Weight	No	2		
82	SOLDER PUMP	DESOLDERING SOLDER PUMP VACUUM	No	10		

83	OPTICAL SENSOR	TCRT5000 REFLECTIVE TRANSDUCER OPTICAL SENSOR	No	10		
84	Motion Detector Sensor	HC-SR501 PIR Human Motion Detector Sensor	No	10		
85	Radar Microwave Sensor	Doppler Radar Microwave Sensor RCWL-0516	No	10		
86	Glass cube	Sizes: 1.5 Feet height, 2 Feet Length, 5 Inch width Glass Types: Tempered glass Thicknesses (in): 1/2"	No	5		
87	Raspberry Pi 4 Case	Raspberry Pi 4 Metal Case with Cooling Fan and Heatsinks for Raspberry Pi 4 Model B (Black)	No	5		
88	Seven Segment Display- Control Anode	0.56-inch Common Anode RED & Green Seven Segment Display	No	10 each		
89	Variable Resistor	10K, 5K, 100R	No	20 each		
90	Alcohol Swabs	Alcohol Swabs - 70% Isopropyl	No	400		
91	Handheld Digital Multimeter	Measuring Resistance Range: 200/2K/20k/200k/2M/20M/200M ohm DIY Supplies: Electrical Model Number: UT51	No	15		
92	Power Supply Adapter for Arduino (9v 1A)	Input: 100V - 240V AC, 50 - 60 Hz 0.5A Output: 9V DC 1000mA Weight: 121g Plug: US plug	No	20		

Firm Name: _____

Signature: _____

Name: _____

Designation: _____

Tender No _____

Name of the Firm _____

Firm Address _____

Date _____

Telephone No _____

E-Mail _____

To,

DD SCM Office
NUTECH University
I-12, 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 the 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.

BANK GUARANTEE AGAINST
"ADVANCE/PERFORMANCE/WARRANTY GUARANTEE
Which ever is applicable

Guarantee No
Date: _____
Amount: _____
Valid upto: _____

In Favour of:

National University of Technology (NUTECH), IJP Road, I-12, Islamabad.

Subject: **In compliance with terms of Advance/Performance/Warranty**
Guarantee Bank Guarantee

Contract No: _____
dated _____

Dear Sir,

1. Whereas your good-self have entered into Contract No: _____ dated _____ with M/s [Firm Name] Located at [Firm Address], Herein after referred to as our customer and that one of the conditions of the Contract is submission of Bank Guarantee by our customer to your good-self for a sum of [Amount].
2. Incompliance with this stipulation of subj contract, we hereby agree and undertake as under:-
 - a. To pay to you unconditionally on demand and / or without any reference to our Customer an amount not exceeding the sum of [Amount] as would be mentioned in your written Demand Notice.
 - b. To keep this Guarantee in force till [Validity Date].
 - c. That the validity of this Bank guarantee shall be kept two clear year ahead of the original / extended delivery period or the warrantee of the stores which so ever is later in duration on receipt of information from your office. Our liability under this Bank Guarantee shall cease on the closing of banking hours on the last date of validity of this Bank Guarantee. Claim received there after shall not been entertained by us whether you suffer a loss or not. On receipt of payment under this Guarantee, this

documents i.e., Bank Guarantee must be clearly cancelled, discharged and returned to us.

- d. That we shall inform your office regarding termination of the validity of this bank Guarantee on clear month before the actual expiry date of this Bank Guarantee.
- e. That with the consent of our customer you may amend / alter any term / cause of the contractor add / delete any term / clause to / 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.....].
- f. 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.
- g. That this is an unconditional Bank guarantee, which shall be cashed on sight on presentation without any reference to our Customer / Supplier or Vendor.

Signature_____

Name_____

Desig_____

Bank Stamp_____

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

"SELLER'S WARRANTY"

(To be provided on stamp paper)

Contract No: _____

Dated: _____

Validity year from the date of final acceptance of the Stores.

1. 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.
2. 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:
 - a. 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.
3. The Warranty shall remain valid for a period of _____ years from the date of final acceptance of the Stores.

Signature_____

Name_____

Desig_____

Stamp_____

Date_____

CHECK LIST**(This checked list must be attached with your technical offer, duly filled and****Signed by authorized signatory)**

Tender No _____

Date _____

1	Tender Processing Fee	a. Tender processing fee ref no _____ b. Bank _____ c. Amount _____		
2	EM/ Bid Bond	a. EM/ Bid Bond ref no _____ b. Bank _____		
3	Form Annex A, A-1, B and C signed by Authorized Signatory		Yes	No
4	Offering specification of items as per IT		Yes	No
5	Quoted Currency as per IT		Yes	No
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 (Mandatory)		Yes	No
11	Certified that there is no Deviation from IT conditions/ there is deviation from IT condition as per fol details		Yes	No
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