OFFICE OF THE REIGISTRAR
MANIPUR TECHNICAL UNIVERSITY, IMPHAL

(A University established under the Manipur Technical University Act, 2016)
Recognised by UGC under Section 2(f) and Section 22 of UGC Act, 1956
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INVITATION LETTER

Package Code: TEQIP-III/2019/MN/mtui/47 **Current Date: 18-Jun-2019**

Package Name: Electronics Design Lab **Method: Shopping Goods**

To,

Sub: INVITATION LETTER FOR Electronics Design Lab

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Item Name	Quantity	Place of Delivery	Installation Requirement (if any)
1	PCB Prototyping Machine	1	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
2	Temperature Controlled Soldering Station	5	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
3	Benchtop Multimeters	5	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
4	3Mhz Function Generator	5	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
5	Digital storage Oscilloscopes	5	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
6	Arduino Lab	20	Manipur Technical University, Govt.	

			Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
7	Arduino Mega	20	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
8	Arduino mini	20	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
9	Arduino NANO	20	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
10	Bread Boards	50	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
11	Wire cutter	15	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
12	Crocodile Clip 1	100	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
13	Connecting wire	5	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
14	Soldering Iron	5	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
15	De - soldering Machine	5	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
16	Magnifying Glass 2"	10	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
17	Screw Driver Set	10	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
18	IC 1	1000	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	

19	IC 2	1000	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
20	Transistor 1	800	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
21	Diodes	200	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
22	Resistor	400	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
23	LED red white yellow	200	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
24	IC 1	200	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
25	Transistor 1	400	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
26	Transistor 2	600	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
27	Buzzer	10	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
28	Capacitor	1200	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
29	UJT 1	20	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
30	Variable resistor	50	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
31	Raspberry PI-3	10	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	

32	Potentiometer 1	15	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
33	Sensors	15	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
34	Soldering Paste	10	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
35	Display Board	15	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
36	Switches miscellaneous parts	15	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
37	IC 1	100	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
38	IC 2	100	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
39	Relay Module	200	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
40	MOSFET I.C	100	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
41	IOT Lab	1	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	
42	Soldering station	1	Manipur Technical University, Govt. Polytechnic Campus, Takyelpat, Imphal West, Manipur-795004	

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme [TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. Quotation

3.1 The contract shall be for the full quantity as described above.

3.2 Corrections, if any, shall be made by crossing out, initialling, dating and re writing.

3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit Price.

3.4 Applicable taxes shall be quoted separately for all items.

3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

3.6 The Prices should be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.

5. Quotation shall remain valid for a period not less than **43** days after the last date of quotation submission.

6. Evaluation of Quotations: The Purchaser will evaluate and compare the quotations determined to be Substantially responsive i.e. which

6.1 are properly signed; and

6.2 Confirm to the terms and conditions, and specifications.

6.3 All required/derived documents contained in the Tender notice shall be submitted.

7. The Quotations would be evaluated for all items together.

8. Award of contract: The Purchaser will award the contract to the bidder whose quotation has been determined to be fulfilling all Technical Specification as desired by the University and who has offered the lowest evaluated quotation price.

8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of Contract.

8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be Incorporated in the purchase order.

9. Payment shall be made by e-transfer through PFMS.

10. **Satisfactory Delivery & Installation - 10% of total cost**
Satisfactory Acceptance - 90% of total cost

11. All supplied items are under warranty of **12** months from the date of successful acceptance of items and AMC/Others**.**

12. You are requested to provide your offer latest by **16:30** hours on **12-Jul-2019.**

13. Detailed specifications of the items are at Annexure I.

14. **Training:** Training/Demonstration must be done for each item.

15. **Testing/Installation:** Testing/Installation must be executed in presence of a faculty of concerned department of Manipur Technical University and duly certified by the Faculty.

16. Information brochures/ Product catalogue must be accompanied with the quotation clearly indicating the model quoted for.

17. The bidder should have provided similar nature of services to IITs/NITs/Govt. Departments/Semi Govt. Departments/PSU/Educational Institutions of National Importance etc. during last 3(three) years ending the last day of March 2019. Duly certified copies of such services are to be enclosed.

18. Tender/Quotations are to be submitted in TWO PARTS i.e. (a) Technical Bid and (b) Price Bid, in two separate properly sealed covers; and both these covers will have to be again put in to a single sealed cover. Also, the full address of the firm submitting the tender/quotation must appear distinctly with PIN on both the inner sealed covers, indicating also TECHNICAL BID/ PRICE BID as may be applicable.

19. The outer most cover shall be super scribed as:

"QUOTATION FOR SUPPLY & INSTALLATION OF ……

…….…….. ……

FOR……..…….. MANIPUR TECHNICAL UNIVERSITY.

VIDE TENDER REF NO:- ……., DATED…….……..……..

[The bid will summarily be rejected & returned to the bidder if the sealed envelope containing the quotation is not super scribed as above].

20. Sealed quotation to be submitted/ delivered at the address mentioned below:

21. No Part Delivery: Part shipment for any items will not be allowed and any Optional item quoted by the supplier will not be entertained.

22. The bidding agency should be a reputed firm and having all necessary certificates, viz. GST registration certificate, PAN, Registration, Sale Tax clearance Certificate, Authorized Dealership/Distributorship certificate, etc. The photocopies of all the certificates should be attached with the tender.

23. The firm should be an original equipment manufacturer (OEM) in the business of manufacture or supply of equipment for minimum 3-5 years. The firm should submit audited financial statements for latest three financial years in support of this claim.

24. The items being quoted should be of Original Manufacturer and no non-standard item should be quoted. All detailed specifications with make & model no. of the items accompanied by proper leaflets should be clearly mentioned and attached with the offer.

25. The rate quoted must be both in words and figures inclusive of all charges i.e. packing, forwarding, octroi, surcharge, insurance, installation, demonstration and other charges if any.

26. Manufacturer's/Company's name, it's trademark should be mentioned in the tender and illustrative leaflets giving technical particulars, etc. should be attached in the tender.

27. Each bidder should clearly specify that the bidder agrees to abide by the conditions of this tender document on their printed letter head duly sealed & signed by an authorized person.

28. The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during

transit and open storage. Packing case size and weights shall have to be taken into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit. **Manipur Technical University will not take responsibility and accept any damaged goods during transit.**

29. Contact details of the person for all post sales/installation maintenance support should clearly be given with Name & Designation, Phone No., Mobile No. and E-mail address.

30. All legal disputes shall be under the jurisdiction of Manipur High Court in the state of Manipur.

31. We look forward to receiving your quotation and thank you for your interest in this project.

(Authorized Signatory)
Name & Designation

Asst. Registrar
Manipur Technical University

Annexure I

Sr. No	Item Name	Specifications
1	PCB Prototyping Machine	PCB Prototyping Machine Specifications: Max Material size and layout area (X x Y x Z) = 229 mm x 305 mm x 5 mm Travel speed diagonal (X x Y) : 100 mm/s Milling spindle : Max .30,000 rpm Drilling speed: 100 holes/Min Tool holder: 3.175 mm Repeatability: + 5 µm Mechanical Resolution: + 0.8 µm Accuracy in fitting hold system: + 20 µm Dimension : 370 mm x 300 mm x 450 mm USB Port : 1 CAM Software Package : - Machine should be supplied with necessary CAM software to accept import format Gerber Standard (RS-274-D), Extended Gerber (RS-274-X), Excellon NC Drill (Version 1 and 2), Sieb& Meier NC Drill, IGES etc. The software should have the Editing functions for Original modification, relocating, duplicating, rotating, mirroring, erasing, extending/ severing lines, line/path extension/ shortening, line path/segment parallel shifting, line path/ object polygon conversion (Fill), curve linking/closing capabilities to check the Design Rule Check which can checks conductor path spacing. - The software should have some Special functions for Routing path generator with breakout tabs. Accessories: 10 x drill underlay material 9"x12", 2 mm (predrilled) 10 x base plate FR4, 9"x12", 0/35 µm, 2 mm (predrilled) 5 x base plate FR4, 9"x12", 35/35 µm (predrilled) 1 x special-tape 3 x PCB cleaner 1 x Tool Set 1/8" shaft with distance rings Including tools with pressed on distance rings: 10 x Universal Cutter 1/8", 36 mm, 0,2 - 0,5 mm (8-20 mil) 2 x Micro Cutter 1/8", 36 mm, 0,1-0,15 mm (4-6mil) 1 x End Mill 1/8", 36 mm, d = 0,80 mm (31mil) 2 x End Mill 1/8", 36 mm, d = 1,00 mm(39mil) 2 x End Mill 1/8", 36 mm, d = 2,00 mm; 25mm shank(79mil) 1 x End Mill 1/8", 38 mm, d = 1,00 mm(39mil) 1 x End Mill 1/8", 38 mm, d = 2,00 mm; 25mm shank (79mil) 2 x Contour Router 1/8", 38 mm, d = 1,00 mm (39mil) 2 x Contour Router 1/8", 38 mm, d = 2,00 mm; 25mm shank (79 mil) 2 x Spiral Drill 1/8", 38mm, d = 0,40mm 2 x Spiral Drill 1/8", 38mm, d = 0,50 mm 2 x Spiral Drill 1/8", 38mm, d = 0,60 mm 2 x Spiral Drill 1/8", 38mm, d = 0,70 mm 2 x Spiral Drill 1/8", 38mm, d = 0,80 mm 2 x Spiral Drill 1/8", 38mm, d = 0,90 mm 2 x Spiral Drill 1/8", 38mm, d = 1,00 mm 1 x Spiral Drill 1/8", 38mm, d = 1,20 mm 1 x Spiral Drill 1/8", 38mm, d = 1,40 mm 2 x Spiral Drill 1/8", 38mm, d = 1,50 mm 1 x Spiral Drill 1/8", 38mm, d = 1,60 mm 1 x Spiral Drill 1/8", 38mm, d = 1,80 mm 2 x Spiral Drill 1/8", 38mm, d = 2,00 mm 2 x Spiral Drill 1/8", 38mm, d = 3,00 mm Vacuum Cleaner – 800W *complete with all filters *automatic switching of the vacuum cleaner *software controlled vacuum *suitable for vacuum table
2	Temperature Controlled Soldering Station	Temperature Controlled Soldering Station Wattage: 80W Temperature range: 150-480 Deg.C Password lock 0C/0F Display Heater fail indication

3	Benchtop Multimeters	Benchtop Digital Multimeter 22000-count digital reading primary display, high accuracy, true RMS. Measure: DC voltage, AC voltage, DC current, AC current, resistance, capacitance, frequency, temperature, continuity test, diode test, minimum or maximum and average measurement, relative value measurement and compare measurement. Instrument can communicate with computer through USB interface, through which computer can control, monitor instrument and store the measured data of instrument. Electromagnetic Compatibility: IEC 61326-1, Group 1, Class B
4	3Mhz Function Generator	3Mhz Function Generator Operating Modes : Sine, Square, Triangle, DC,DC offset, TTL Frequency Range : 0.3Hz to 3MHz Technique : Microprocessor based Frequency Accuracy : Up to 3Hz: ± (1% + 3D) 3Hz to 3MHz: ± (5 X10-5 + 1D) Sine Wave Distortion: 0.3Hz :100kHz: Max.0.5%; 0.1MHz: 0.3MHz: Max. 1.5%; 0.3MHz: 3MHz: Max. 3%; Square Wave: Rise & Fall Time: Typ. less than or equals 40ns. Display: Backlit LCD with function, frequency value display,4 digit for Function Generator Output Voltage: 20 mv to 20Vp-p (OC) Attenuation: Max. 60dB; 2 Steps: 20dB ± 0.2dB Each; Variable: 0 to 20dB. Level Flatness (Sine / Triangle): 0.3Hz – 0.3MHz: Max. 0.2dB; 0.3MHz – 3MHz: Max. 0.5dB; Modulation: Internal Sweep or External Frequency Modulation. Supply Voltage: 230 V AC ± 10%,50 Hz
5	Digital storage Oscilloscopes	Digital Storage Oscilloscope Signal bandwidth: 50M Real-time sampling rate: Max. 500 Msa/s Equivalent sampling rate: Max. 50 GSa/s 7.0” TFT LCD Color display 32kpts memory depth Independent vertical scale & position control knobs for each channel. Edge, Pulse Width, Video, Slope, Alternate trigger mode Math functions including Add, Subtract, Multiply, Divide & 1024 point FFT 32 parameters of automatic measurements Digital Filter & Waveform recorder function Advanced cursor modes: Manual,Auto & Track Waveform Intensity & Grid Brightness can be adjusted PASS / FAILdetection, PASS/FAIL output Built-in 50MHz hardware frequency counter Save/recall types: Setups, Waveforms, CSV file, Picture Standard Interface USB Host: Support USB flash driver save/recall function & update firmware, USB Device: Support Pic tBridge compatible printer & support PC remote control, RS232
6	Arduino Lab	Arduino Lab Consisting of: A) Arduino Board Uno Microcontroller : ATmega328 Operating Voltage : 5V Input Voltage (recommended) : 7-12V Input Voltage (limits) : 6-20V Digital I/O Pins : 14 (of which 6 provide PWM output) Analog Input Pins : Flash Memory : 32 KB (ATmega328) of which 0.5 KB used by bootloader SRAM : 2 KB (ATmega328) EEPROM : 1 KB (ATmega328) Clock Speed :16 MHz Add on card should contain 20 pin connector for interfacing Arduino board with All in One general Purpose Board.
7	Arduino Mega	Arduino Mega 2560 : Microcontroller ATmega2560 Operating Voltage:5V Input Voltage (recommended):7-12V Input Voltage (limit):6-20V Digital I/O Pins:54 (of which 15 provide PWM output) Analog Input Pins:16 DC Current per I/O Pin:20 mA DC Current for 3.3V Pin:50 mA Flash Memory:256 KB of which 8 KB used by bootloader SRAM:8 KB

		EEPROM:4 KB Clock Speed:16 MHz LED_BUILTIN:13
8	Arduino mini	Arduino Mini: Microcontroller Atmega328p – 8 BIT AVR controller Operating Voltage : 5V and 3.3V Raw Voltage input: 5V to 12V Maximum current through each I/O pin: 40mA Maximum total current drawn from chip: 200mA Flash Memory: 32KBytes EEPROM: 1KByte Internal RAM: 2Kbytes Clock Frequency: 3.3V --- 8Mhz, 5V --- 16Mhz Operating Temperature: -40ºC to +105ºC
9	Arduino NANO	Arduino Nano: • Microcontroller ATmega328. • Operating Voltage (logic level): 5 V. • Input Voltage (Recommended): 7-12 V. • Input Voltage (limits): 6-20 V. • Digital I/O Pins : 14 (of which 6 provide PWM Output) • Analog Input Pins: 8. • DC Current per I/O Pin: 40 mA. • Flash Memory 32 KB (ATmega328) of which 2 KB used by bootloader.
10	Bread Boards	Bread Boards
11	Wire cutter	Wire cutter
12	Crocodile Clip 1	Crocodile Clip 1
13	Connecting wire	90 mtr roll
14	Soldering Iron	Soldering Iron
15	De - soldering Machine	De-soldering Pump
16	Magnifying Glass 2"	Magnifying Glass 2"
17	Screw Driver Set	Screw Driver Set
18	IC 1	ICs (Packages Through Hole (Quantity-100 each) & Surface Mount (Quantity-100 each)) 7805 7809 7812 L293D Automatic Switch C945
19	IC 2	ICs (Packages Through Hole (Quantity-100 each)& Surface Mount(Quantity-100 each)) 7400 7402 7408 7432 74138
20	Transistor 1	Transistor: (Packages Through Hole (Quantity-100 each)& Surface Mount(Quantity-100 each)) BC-148/548 BC-147/547 BC-157/557 BC-158/558
21	Diodes	Diode(Packages Through Hole (Quantity-100 each)& Surface Mount(Quantity-100 each))
22	Resistor	Resistors ¼ watt(Packages Through Hole (Quantity-300 each)& Surface Mount(Quantity-200 each)) 100 ohm 200 ohm 300 ohm 470 ohm 560 ohm
23	LED red white	LED(Red, Yellow,Green)(Packages Through Hole (Quantity-100 each)&

	yellow	Surface Mount(Quantity-100 each))
24	IC 1	ICs(Packages Through Hole (Quantity-100 each)& Surface Mount(Quantity-100 each)) 741 555
25	Transistor 1	NPN transistor(Packages Through Hole (Quantity-100 each)& Surface Mount(Quantity-100 each)) BC 107 BC 547 BC 548
26	Transistor 2	PNP Transistor(Packages Through Hole (Quantity-100 each)& Surface Mount(Quantity-100 each)) BC 558 BC 556
27	Buzzer	Buzzer
28	Capacitor	Capacitor(Packages Through Hole (Quantity-100 each)& Surface Mount(Quantity-100 each)) 0.1uF 10pF 0.01uF 100uF 10uF 1uF
29	UJT 1	UJT(BFW 1011)(Packages Through Hole (Quantity-10 each)& Surface Mount(Quantity-10 each))
30	Variable resistor	Variable Resistor (10 kohm)
31	Raspberry PI-3	Raspberry Pi3 B – Original
32	Potentiometer 1	Stepper motor, DC Motor and Servo motor interface , ADC in put using potentiometer kit Stepper motor specification: Voltage: 1.4-2V Current:1A Resistance: 1.4-2.0ohm Inductance: 1.4-2.6mH Minimum holding torque: 7-15kg/cm DC Motor specification • Standard 130 Type DC motor • Operating Voltage: 4.5V to 9V • Recommended/Rated Voltage: 6V • Current at No load: 70mA (max) • No-load Speed: 9000 rpm • Loaded current: 250mA (approx) • Rated Load: 10g*cm Servo motor specification: • Operating Voltage is +5V typically • Torque: 2.5kg/cm • Operating speed is 0.1s/60° • Gear Type: Plastic • Rotation : 0°-180° • Package includes gear horns and screws ESP8266EX specification: • CPU: Tensilica L106 32-bit processor • Peripheral Interface UART/SDIO/SPI/I2C/I2S/IR Remote Control GPIO/ADC/PWM/LED Light & Button • Operating Voltage 2.5V - 3.6V • Operating Current Average value: 80 mA • Operating Temperature Range –40°C - 125°C • Frequency Range 2.4G - 2.5G (2400M - 2483.5M) • TX Power 802.11 b: +20 dBm 802.11 g: +17 dBm 802.11 n: +14 dBm Rx Sensitivity 802.11 b: –91 dbm (11 Mbps) 802.11 g: –75 dbm (54 Mbps) 802.11 n: –72 dbm (MCS7) Antenna PCB Trace, External, IPEX Connector, Ceramic Chip
33	Sensors	Sensor set Sensor set consisting for accelerometer , gyroscope, Magnetometer, Pressure, Proximity, Temperature, Humidity, Sound, UV, Rain , Ultrasonic, Moisture, Flame, Dust, Alcohol, IR sensor, Light sensor, touch sensor, Color sensor, Heart beat sensor, Water flow sensor, Soil mister sensor, Wifi Module, GSM module, Bluetooth module, GPS module, Xbee module, RTC(DS1307) , Flame Sensor, Vibration sensor, Flex sensor, Magnetic Reed Switch, LM35 temperature sensor, Camera module(Compatible with arduino), Camera module(Compatible

		with Raspberry Pi3 B and Arm) .
34	Soldering Paste	soldering wax
35	Display Board	Display set includes 8 LED, 16x2 character LCD, 20x4 LCD, 2 digit 7-segment display
36	Switches miscellaneous parts	Switches includes 4 general purpose keys and 2X2 matrix keyboard Workbook with example programs on all the sensors and interfacing units
37	IC 1	IC Opamp (TL 084)(Packages Through Hole (Quantity-50 each)& Surface Mount(Quantity-50 each))
38	IC 2	IC Opamp(LM 324)(Packages Through Hole (Quantity-50 each)& Surface Mount(Quantity-50 each))
39	Relay Module	Relay Module Relay(Packages Through Hole (Quantity-50 each)& Surface Mount(Quantity-50 each)) 6 V single pole 12V single pole
40	MOSFET I.C	MOSFET (2N2646)(Packages Through Hole (Quantity-50 each)& Surface Mount(Quantity-50 each))
41	IOT Lab	IoT Lab consisting of : • Educational Practice Board compatible with ARM Cortex M3 All-in-One GPIO kit for study of interfacing devices like LED, Key, Matrix Keyboard, 7-Segment LED, LCD, Relay, Stepper Motor, DC Motor, EEPROM based on SPI and I2C interface etc. Qty-5 • IoT Gateway (compatible with ARM Cortex M3). Qty-5 • Router (compatible with ARM Cortex M3). Qty-1 • IOT Sensor kit Set (compatible with ARM Cortex M3). Qty-1 • Stepper Motor & DC Motor set (compatible with ARM Cortex M3). Qty-1 • Sensor Interface Board for CortexM3 (compatible with ARM Cortex M3). Qty1 • IDE (Lab License). Qty-5 Specifications Specifications for IOT Lab • Covers basic skills needed for developing IoT application • Complete open end hardware system for easy and real understanding. No BLACKBOX modules!!! • Implementation on industry preferred low power ARM Cortex platform • Lab includes individually programmable nodes, embedded gateway, GPIO interface boards, Router and set of sensors and actuators • A set of sensors includes (1 each sensor for Temperature, Humidity, Reed switch, Touch Key, Vibration, Moisture, Dust, Water, Soil Moisture, Accelerometer, Gyro Meter, Magneto, Pressure, PIR Motion Sensor) for sensing of data and posting it to cloud. • Lab License for IDE tool along with complete source code of practice exercises • Encourage firmware development for sensor interface, protocol implementation and techniques to use cloud services • Workbook featuring basic examples to get started with the target board as well as examples to use internet and communication with cloud and its services, with detailed working procedures
42	Soldering station	SMD Rework Station Soldering: Wattage: 90-100 W Temperature Range: 155-475Deg.C SMD Rework: Wattage: 500- 600W Temperature Range: 100-475 Deg C Air flow capacity: 15.L/Min to40 L/Min Desoldering: Wattage: 100W Temperature range: 300-450 Deg.C

CHECK-LIST (TECHNICAL BID)

SUMMARY OF COMPLIANCE TO REQUIREMENT OF TENDER

Sl. No.	Description of Requirement	Yes / No / NA	Page No.
1.	Copy of Manufacturer/ Authorized Supplier Certificate		
2.	Audited financial statement for the last 3 years		
3.	Copy of the PAN card.		
4.	Copy of GST registration certificate		
5.	Copies of previous work order of similar work with completion certificate		
6.	Declaration certificate		
7.	No Deviation certificate		
8.	Bidder's details		
9.	Technical Specification		
10.	NSIC/SSI/MSME Certificate where applicable		
11.	All the pages of tender document have been signed		
12.	Price bid in separate sealed envelope.		
13.	Complete copy of Quotation in the format given along with the Price Bid.		

(Signature & seal of the contractor)

Place:

Date:

FORMAT FOR QUOTATION SUBMISSION
(In letterhead of the supplier with seal)

Date: _____

To:_____
_____

Sl. No.	Description of goods \ (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex-Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. ———————— (Amount in figures) (Rupees ————————amount in words) within the period specified in the Invitation for Quotations.
We confirm that the normal commercial warranty/ guarantee of ———————— months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.
We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier
Name: _____
Address: _____
Contact No. _____