INVITATION FOR QUOTATIONS FOR SUPPLY OF GOODS UNDER NATIONAL SHOPPING PROCEDURES

To

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Dear Sirs,

Sub: INVITATION FOR QUOTATIONS FOR SUPPLY OF "**Instrumentation for Robotic technology lab: Camera, manipulator, motors, drives, power supplies, hetic devices and prototype tools etc., Robotic Arm Trainer, Raspberry Pi Learning Kit, Development Platform, Self learning robot kits**"

1. You are invited to submit your most competitive quotation for the following goods:-

Brief Description of the Goods	**Specifications***	**Qty.**	**Delivery Period**	**Place of Delivery**	**Installation Requirement if any**
Instrumentation for Robotic technology lab : Camera, manipulator, motors, drives, power supplies, hetic devices and prototype tools etc., Robotic Arm Trainer, Raspberry Pi Learning Kit, Development Platform, Self learning robot kits	**1. Development Platform /Self Learning Robot Kits** **Minimum Technical Specification:** • Arduino Uno or compatible microprocessor and microcontroller Hardware development board with memory and 10 ports • Arduino Nano, • Raspberry Pi 3 Model B with casing, • HDMI-VGA Cable, • Micro SDD Card, • SD Card Reader • Raspberry Pi Charger , • Node MCU ESP8266 CP2102 NodeMCU LUA ESP-12E WIFI Serial Wireless Module , Built-in Micro-USB, with flash and reset switches, easy to program ,Full I/O port and Wireless 802.11 supported, direct download no need to reset ,Arduino compatible, works great with the latest Arduino IDE/Mongoose IoT/Micropython Power Suppply-3.3v-5v • Sim 800L GPRS transfer board micro sim	15	15/03/2019	CAET, JAU, Junagadh	

	GSM Core TTL port modue for Arduino • GY- NE06MV2 New GPS Module • Bluetooth module • Battery Bank 10000 mAh with two ports(2.0 Amps and 2.0 Amps)with quick charging cable and manual. And LED torch.				
	2. Necessary components For Development Platform **Minimum Technical Specification:** • Breadboards and Mini Breadboards Solderless 400 pin breadboard), • General Purpose Solderable Board FR2 A Grade Material (140*90mm) (6"x4") FR2 A Grade Material (80*55mm) (3"x2") with female berg strip 40 pin ,Male Berg Strip 40 pins) • Battery , • Linear Voltage Regulator (7805 / 7812 /7809), • Piezoelectric Plate (Normal Copper Based 4cm diameter approx), • 7 Segment LED display (LED four digit display module w/clock point/4 pin Dupont Line for Arduino (20cm)), • Laser Diode (650NM 6mm 5V DC 5MW mini lase dot diode module) , • LDR Module(Photo sensitive lDR light sensor module), • Active Buzzer(Small & Big 5V), • Motor driver (L293 D), • Battery clip with DC jack, • 555 Timer IC, • Vibrating motor, • Hook ups wire , • Diode 1-1N4007 IN4007 4007 Mic 1A 1000V DO-41 Rectifier Diode 2-1N4148 1n4148 switching diode Standard 75V 150mA Through Hole DO-35	30 Each	15/03/2019	CAET, JAU, Junagadh	
	3. Special Sensors Package **Minimum Technical Specification:** • **Sound playback sensor module** Features:- 1.An easy to use 10 seconds of voice recording 2.high-quality, natural voice restored 3.can be used as propaganda module 4.with looping, jog playback, single-pass play function 5.available single-chip control 6.this module can directly drive a small speaker 8 ohm 0.5W	05 Each	15/03/2019	CAET, JAU, Junagadh	

	Power supply :3-5V, which can be accessed pin power; Audio recording control mode: the key to control or microcontroller, IO has drawn the line of control; Buttons control audio recording method of operation: REC button: record button, you can press and hold the recording, release the button to stop recording; RLAYE key: trigger mode playback, press will play this whole speech; PLAYL key: jog mode playback, press and hold until playback, release to stop playback; RPL Jumper: loop mode control, loop playback; FT Jumper: direct control, microphone voice through the speaker can playback • **IR sensors, Obstacle Avoider sensor** Digital Infrared Sensor(IR transmitter & Phodo diode as receiver) with LM35 comparator IC.Three pins with one Vcc,one GND,one OUT. Power Supply:5V • **MQ Series (MQ - 135 Air quality sensor, MQ- 2 Smoke detection,MQ-7 High Sensitivity CO carbon mono oxide sensor detector,MQ-3 Alcohol Ethanol Sensor,MQ-4 Methane Natural Gas sensor)** These are a common technology Gas detecting module.Power Supply/Working Voltage:-3.3 to 5vWhen the sensor when flammable gases are present in the environment in which the sensors conductivity with increasing concentration of combustible gas in the air increases. Use a simple circuit to convert the changes in conductivity and output signal that Analog-SmokeLPGCO-Gas-Sensor-MQ21_02corresponds to the concentration of the gas. MQ-2 gas sensor higher sensitivity to liquefied petroleum gas, propane, hydrogen, detection of gas and other combustible vapors are ideal. This sensor can detect a variety of flammable gas, is a low-cost sensors for many applications. • **Soil Moisture sensor** Working Voltage:-3.3-5vDual output mode, analog output more accurate. A fixed bolt hole for easy installation. With power indicator (red) and digital switching output indicator (green). Having LM393 comparator chip, stable. Panel PCB Dimension: 3 * 1.5cm. Soil Probe Dimension: 6 * 2cm. Cable Length: 21cm.				

	• **Touch sensor** With TTP224 4-key touch sensor IC 4-way level indicator working voltage: 2.4~5.5V can set output / input mode output time, fast / low power consumption; dimension: 35 x 29mm • **Metal touch sensor** The module is based on a touch-sensing IC (TTP223B) capacitive touch switch. This Module can be installed in any surface like plastic, glass or non-metallic materials.This sensor doesn't show absolute values (like exact temperature in °C or magnetic field strength in mT). It is a relative measurement: you define an extreme value to a given normal environment situation and a signal will be send if the measurement exceeds the extreme value. Power supply: 2 - 5V • **Rain drop sensor** Comparator output signal clean wave good driving ability, than 15mA Power adjust sensitivity, Rated voltage -3.3V-5V Small Board PCB dimensions: 3.2Cm x 1.4Cm, Power indicator light, the output signal LED indicating lamp Using wide LM393 voltage comparator Output: digital switching output (0 and 1) and AO analogue voltage output, with fixing bolt holes for easy installation • **Water flow sensor** For 1/2 inch pipe Arduino example available at - Working Range – 1-30L/min Working Voltage-3.3v-5v • **Sound Sensor** For sound detection module has two outputs: 1. Ao, analog output, real-time output voltage signal of the microphone 2. Do, when the sound intensity reaches a certain threshold, the output high and low signal module features: 1. There is a mounting screw hole 3mm 2. The use 5v dc power supply 3. With analog output 4. There are threshold level output flip 5. High sensitive microphone and high sensitivity. 6. A power indicator light 7. The comparator output is light digital output : Working Voltage-3.3v to 5v • **IR Sensor arry for line follower** Analogue output Pin A0, A1, A2, A3, A4, A5, 1. Range: 2-10 cm, 2. Input supply voltage: 5V DC, 3.9 pin burg male header for easy interface. , 4. Comes with an easy to use analogue output pin, 5.3mm diameter hole for easy mounting.6.5V operated, easy to interface with wide range of microcontroller. Like ARDUINO, AVR, ARM,				

	PIC, MSP430 Analogue output. Output Voltage 0v to 5v • **Humidity sensor** Operating Range:20-95% Rh temp: 0-60 celcius power supply 1.5v AC (maxsine) operating frequency:500hz - 2khz) • **Ultrasonic sensor module HC-SR-04 or compatible** Power supply Quiescent Current working working current effectual angle ranging distance resolution working angle and dimension • **Pulse rate heart sensor ,** Pulse Rate sensor Finger Basedwore on finger or earlobe working volatge 3-5V • **Flex Sensor 2.2 inch** • **Force Pressure Sensor** Force sensitive resistor with a square 1.75*1.5" sensing area • **Color recognition sensor** TCS3200 colour recognition sensor • **LIDAR-Lite v3 sensor** o Dimensions: 20 x 48 x 40 mm (0.8 x 1.9 x 1.6 inches) o Range: 0-40m Laser Emitter o Accuracy: +/- 2.5cm at distances greater than 1m o Power: 4.75–5V DC; 6V Max o Current Consumption: 105mA idle; 130mA continuous o Rep Rate: 1–500Hz o Laser Wave Length/Peak Power: 905nm/1.3 watts o Beam Divergence: 4m Radian x 2m Radian o Optical Aperture: 12.5mm o Interface: I2C or PWM				
	4. Connectors & Indicators **Minimum Technical Specification:** Alligator connectors, • RGB LEDs, • LEDs (RED,Green,Blue Regular 5mm 3-5Volt) , • Push button switch (Tactile switch micro type) , • Nut & Bolts , • Motor Shaft	100 Each	15/03/2019	CAET, JAU, Junagadh	
	5. Mechanical tool set **Minimum Technical Specification:** • 150mm junior hacksaw , • Mini 254 mm Hacksaw, • Ball Pein Hammer, • Steel Shaft Claw hammer,	01 Each	15/03/2019	CAET, JAU, Junagadh	

	• 10 piece ring imperial Allen Hex Key, • 30 peiece rateching scre driver set, • table top vice fitted to the table, • 6 piece precision screw driver set, • Adjustable universal multi wrench spanner, • Wire stripper cutter plier with spring - 26*6*20cms , • Rubber air pump cleaner dust blower, • Drill bit set, • Flexible cutting mat(A/3 size with marked pattern and grids)18'*12"), Cordless Drill,Peg board, • Soldering helping hand, • Drill Station, • 12 Pc Combination Spanner Set, • 2 channel Relay • Propeller Quadcopter Pair				
	6. Necessary supporting items **Minimum Technical Specification:** • Bulbholder, • Electric Wire (25 meters), • USB to DC Jack, • Sand Paper (1Box consisting 10 Nos), • Cable Tie pack, • Glue Sticks	10 Each	15/03/2019	CAET, JAU, Junagadh	
	7. Robotic Arm Trainer/Prototyping Tool with Necessary supporting items **Minimum Technical Specification:** Programmable articulated 4 axis robot with necessary attachment & supporting automation components as a integration. **Robotic Arm** (Axis : 4 , Reach 320mm, Payload 500gm ,Repeatability 0.2mm) Communication USB/WiFi/ Bluetooth ,USB Cable, Power Adaptor, joystick control , USB data transfer facility **3D Printing Kitintegrated with robotics arm**: Extruder with Motor,Nozzle, 200oC,Filament: PLA, 200gms0.75mm dia.Glass 200mm x200mm ,Kraft Liner Paper 20gx 5 ,Maximum Print size 150mmx150mmx150mm. **Necessary automation integration components** : Pen Holder 10mm dia,Vacuum Suction Cup20mm, -35Kpa,2Jaw Gripper (27.5mm stroke, 8Nforce, Pneumatic),suitable air pump(Vacuum generator and Compressor)	04 Each	15/03/2019	CAET, JAU, Junagadh	Necessary software for robots programming, 3D printing should be part of supply. tool kits , calibration paper with profile base .Training & hands on students & staff for 2 days should include in package .

	8. Application with articulated robot **Minimum Technical Specification:** **Laser Engraving:** Working Range: X130 *Y130mm, Laser Power: 0.5W, Supported Materials: wood, paper products, some plastics, leather, etc. **CNC Carving:** Spindle idle Speed:12000rpm Max , Clamping Range of CNC Chuck: 0~4mm, Size of Standard CNC Bit:3.175mm * 0.3mm *30° flat bottom sharp cutter, Supported Materials : wood, plastics, PCB boards and most non-metallic materials **Conveyor:** Motorized Conveyor should have built in IR Sensor, Color Sensor & Camera Lens, and Industrial Auxiliary Light Source with Wooden Blocks &Calibration Board. Conveyor Belt with Payload 500gm, Effective Delivering Distance 600mm, Maximum Speed 100mm/s , Maximum Acceleration 1000MM/sec Sq, Dimension 700 mm × 215 mm × 60 mm , distance measuring sensors (20-150mm),with built-in color sensors operated on 3-5.5v , should detect non glowing object	01 Each	15/03/2019	CAET, JAU, Junagadh	
	9. Nature inspired robots **Minimum Technical Specification:** The idea of building machines that emulate features of animals that we see around us. Students should able to design in bio-inspired engineering robots (Fish, Elephant trunk, Chameleon). Nature robot kit's component set should include Transparent corpus (length: 200 mm, diameter 75 mm) ,3 nos digital servos with 30 Ncm torque, 1 waterproof servo with 30 Ncm torque programming based on microcontroller ESP 32 with 32 bit Arduino compatible CPU and WLAN access point, pin shield for microcontroller, 3 fin rays (1 large, 2 small along with necessary Components : Scissor ,Paper Charts ,Balloons, Flexible distance keepers (e.g. Painting rollers), Cable ties	01 Each	15/03/2019	CAET, JAU, Junagadh	
	10. Industrial Grade 3D Printer **Minimum Technical Specification:** Base + Main control Board , 250g PLA , Heated bed filament , 4 identical linear Actuators, Goggles, LCD touch pad, USB 2.0 cable, CNC platform andFixture12V power adapter Cables, Protective shield Printing Speed10~80mm/s , Forming Size :X130*Y130*Z130mm, Applicable Materials: PLA, ABS , PC , FLEX , Layer Resolution 0.05~0.3 mm, Nozzle Temperature: 190~260°C	01 Each	15/03/2019	CAET, JAU, Junagadh	

	11. IoT Board set **Minimum Technical Specification:** Set should consist of basic development platform to design the IOT various cases. Arduino Mega2560, FTDI Board. All board with suitable power adaptor	05 Each	15/03/2019	CAET, JAU, Junagadh	Software & Language , OS Should be a part of supply Embedded C, Python Language, Node JS, JAVA basic, Arduino IDE, Linux OS, IBM , Cloud Services, AWS Cloud Services (Charge as per uses), HTTP Communication Installation & Training to staff & students for 3 days on site twice in a year
	12. Special IOT Board set **Minimum Technical Specification:** Set should consist of specialize development platform to design the IOT various cases like Arduino MKR WAN 1300 (LoRa connectivity), Linkit One (GPS, GSM, GPRS, WiFi, and Bluetooth.), FLORA - Wearable electronic platform: Arduino-compatible - v3 , Intel Edition Breakout Board All board with suitable power adaptor.	03 Each	15/03/2019	CAET, JAU, Junagadh	
	13. IoT Sensor Module kits **Minimum Technical Specification:** Sensors set consist of various sensors which will be suitable to connect with above suitable basic & specialize development platform. LDR, IR Sensor ,MQ-5 Smoke Detector Sensor, Puls Sensor, Heartbeat Detector sensor, Carbon Monoxide Sensor MQ-7,Current Sensor - ACS712 -5 AMPS, Voltage sensor-230AC, Sound Sensor, Vibration Sensor, Flex Sensor, Alcohol Detector Sensor MQ-303A, MQ-2 Gas, Bio Metric Sensor,DHT-11 Sensor,HCSR-04 Sensor- Ultrasonic Sensor,ADX-335,PIR Sensor, Triple Axis Magnetometer R Breakout-HMC5883L, Flam Sensor, 10 DOF,TSOP 1738,Metal Detector, Force Sensor	05 Each	15/03/2019	CAET, JAU, Junagadh	
	14. IoT Camera a. CMOS IR Camera Module- 728X488 for Raspberry pi module b. Pixy-2 Camera Module • Image sensor: Aptina MT9M114, 1296×976 resolution with integrated image flow processor • Processor: NXP LPC4330, 204 MHz, dual core • Lens field-of-view: 60 degrees horizontal, 40 degrees vertical • Power consumption: 140 mA typical • Power input: USB input (5V) or unregulated input (6V to 10V) • RAM: 264K bytes • Flash: 2M bytes • Available data outputs: UART serial, SPI, I2C, USB, digital, analog • Integrated light source, approximately 20 lumens	a. 03 Each b. 03 each	15/03/2019	CAET, JAU, Junagadh	

	15. IoT Communication Module **Minimum Technical Specification:** ESP8266-01, RF Encoder and Decoder, RF Module TX & RX 315 MHz , HC05 Bluetooth Module, FRID with Reader & Tag (EM18 Board with Serial TTL Interfaceing), Arduino UNO Ethernet shield	05 Each	15/03/2019	CAET, JAU, Junagadh	
	16. Special IoT Communication Module Zig-bee Module , LoRA Gateway, LoRA Module , RFID Reader & Tags (IC Card Sessor)	01 Each	15/03/2019	CAET, JAU, Junagadh	
	17. Actuator DC Motor , BO Motor ,SERVO Motor , Stepper motor , L2938 Motor Driver, 4 Chennal Relay Switch , Single Chennal Relay	05 Each	15/03/2019	CAET, JAU, Junagadh	
	18. Accessories Bread Board , USB Cable , Battery cap , HDMI to VGI Cable , SD card Class 10, Wire Stripper, Buzzer	05 Each	15/03/2019	CAET, JAU, Junagadh	
	19. Components Resistor (330 ohm , 770ohm, 1k, 10K,1M) LED (Red, White, Yellow) , Single Stand Wire	50 Each	15/03/2019	CAET, JAU, Junagadh	
	20. Digital Storage Oscilloscope **Minimum Technical Specifications:** • 70MHz DSO with colored display, 1GSa/Sec sampling rate, with USB PC Interface cable and software, with USB device & host • Bandwidth - 70MHz • Channels - 2CH +1EXT • Real time sampling rate - 1GSa/s • Equivalent sampling rate - 50GSa/s • Memory depth - 2Mpts • Vertical sensitivity - 2mv～10v/div • Vertical resolution - 8bit • Trigger source - CH1,CH2,Ext,Ext/5,AC Line • Trigger types - Edge, Pulse, Video, Slope, Alternative • Math operation - (+,－,*,/,FFT) • Digital filter - High pass, Low pass, Band pass, Band stop • Max input voltage ± 400 V (DC+AC Pk-Pk) CATICAT II • Internal storage - 2 groups of reference waveform, 20 groups of setting,20 groups of waveform • External storage - Bitmap save, CSV save, Waveform save, Setting save • Lasting -Turn off,1s,2s,5s,infinite • Interface - USB Host, USB Device,RS-232,Pass/Fail	01	15/03/2019	CAET, JAU, Junagadh	

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Display - 7 inches color TFT-LCD,480*234
Power - AC 100-240V,45Hz-440Hz,50VA Max

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21. DIGITAL MULTIMETER 5.5 DIGITS
<u>Minimum Technical Specifications:</u>

Test Parameter (DCV), (ACV), (DOI), (ACI), (ACI), (W 2 W), (W 4 W). (FREQ), (PERI), (CONT), (DIODE).
Mathematics Calculation mX + b, % dB, dBm, REL
Range Auto, Manual
Display VFD
Trigger Mode INT/ MAN/ EXT
Reading Storage 2 to 1024 sets of reading can be stored, loaded and counted
Type of statistics : MAX. MIN. AVER. STD
Reading Hold To give best stable reading for each of the Test Parameter according to the given accuracy
Limitation Measurement To judge III. IN, LO and display with ALARM for 1 HI/LO
Storage setting 10 setting files can be stored loaded
Calibration Recommended Fluke 5520A with NB 62
Communication Interface GPIB (option), RS 232C. SCPI command programmable

<table>
<tr><th><u>Test</u></th><th><u>Range</u></th><th><u>Resolution</u></th><th><u>Accuracy</u></th><th></th></tr>
<tr><td>DCV -</td><td>100 mV-1000 V</td><td>1 m V</td><td>0.010% + 0.0035%</td><td></td></tr>
<tr><td>DCI -</td><td>10mA-10A</td><td>100 nA</td><td>0.050% + 0.010%</td><td></td></tr>
<tr><td>ACV -</td><td>100 mV-750 V</td><td>1m V</td><td>0.10% + 0.10%</td><td>10 Hz-100 KHz</td></tr>
<tr><td>ACI -</td><td>10 mV-750 V</td><td>100 nA</td><td>0.25% + 0.0.8%</td><td>10 Hz-10 KHz</td></tr>
<tr><td>Ω-</td><td>100 Ω-1000 MΩ</td><td>1 mΩ</td><td>0.030% + 0.005%</td><td>0.7 mA-1mA</td></tr>
<tr><td>Hz-</td><td>5 Hz 1.1 MHz</td><td>10 mHz</td><td>0.005% + 0.002%</td><td>40 mVrms</td></tr>
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22. Programmable DC Power Supply
Minimum Technical Specifications:

DC Output: 0 - 32 V, 3 A
Current Limit : 100 mA - 3 A
Setting Resolution: Voltage: 100 mV

Current : 10 mA

Internal Resistance: 10 m ohm
Stability: 2.5mV at 30V/3A
Recovery Time: ≤ 50 μs

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	• Load Regulation: ± (0.05 % +10 mV) for 0 - 30 V • Line Regulation: ± (0.05 % +10 mV) for 0 - 30 V • Temperature Coefficient: ± (0.05 % + 5 mV / °C) • Ripple & Noise: ≤ 1 mVrms • Display: LCD Screen with backlit for voltage, current and Power • Accuracy: ± (1% +1 digit) • Over Range Indication: Glowing 'Over Current' LED indicate Overload • Interface: USB • Protective modes: Over load, over voltage, over current, over heat and short circuit Protection Programming mode The Programmable Power Supply can be operated through PC, parameters such as V-set, I-set, cursor and output on/off can be set. In programming mode, you can set the output voltage linearly with respect to time in four different ways : • Step mode • Pulse mode • RAMP mode • Pulse width Mode Different types of standard waveforms like RAMP, Pulse, and Square, can be generated with voltage with respect to time defined by the users.				
	23. DDS FUNCTION GENERATOR **Minimum Technical Specification:** • Sine wave output of 5MHz, full frequency range resolution is 1μHz • Square wave/pulse waveform of 5MHz, its rising, falling, and duty cycle time are adjustable • Uses DDS implementation method, with 125M/s sampling rate and 14bits vertical resolution • 6-bit high precision frequency counter that is TTL level compatible • Arbitrary waveform storage of 2048 points, and it can store up to 16 groups of non-volatile digital arbitrary waveforms • Abundant modulation types: AM, FM, PM, ASK, FSK, PSK, PWM • Powerful PC software • 4.3-inch high resolution TFT liquid crystal display • Standard configuration interface: USB	01	15/03/2019	CAET, JAU, Junagadh	

	Device • Supports internal/external modulation and internal/external/manual trigger Supports sweep output • Easy-to-use multifunctional knob and number keyboard • Apply DDS technology, provide double channels output, phase adjustable, output frequency up to 50MHz • 125MSa/s sample rate, 14bit vertical resolution, 16Kpts wave length • 5 types of standard waveforms, built-in 48 types of arbitrary waveforms • Abundant modulation functions, sweep-frequency output, burst output • Built-in high precision frequency counter, frequency up to 200MHz • Standard interfaces: USB Device, USB Host • Seamlessly interconnect with Digital Storage Oscilloscope and support remote command control • Maximum output frequency (Sine Wave) : 25MHz • Output channels: 2 • Sampling rate: 125MSa/s • Wave length: 16Kpts • Frequency resolution: 1μHz • Vertical resolution: 14 bit • Waveform: Sine, Square, Ramp, Pulse, Gaussian white noise, 48 types of built-in function waveforms, **Arb** • Modulation function: AM, DSB-AM, FM, PM, FSK, ASK, PWM, Sweep, Burst • Amplitude: CH1: 2mVpp ~ 10Vpp (50Ω), 4mVpp ~ 20Vpp (high impedance) CH2: 2mVpp ~ 3Vpp (50Ω), 4mVpp ~ 6Vpp (high impedance) • Frequency counter: Frequency range: 100 mHz ~ 200 MHz • Interface: USB Host, USB Device • Optional interface: USB-GPIB adapter • Dimension: 229mm*105mm*281mm				
	24. SMD Soldering & De Soldering Station **Minimum Technical Specification:** Soldering : Power consumption : 60 W Input voltage : 170 to 270 V Temperature range : 180 to 270 V Desoldering : **Power Consumption** : 70 watts Input : 170 to 270 V	01	15/03/2019	CAET, JAU, Junagadh	

	(190 to 290 V AC) Temp range : 180 to 480°C Pump : diaphragm type For SMD Rework Power consumption : 270 W Air pump : diaphragm pump Hot air temperature : 200 to 550°C					

* *Where ISI certification marked goods are available in market, procurement should generally be limited to goods with those or equivalent marking only.*

2. Government of India has received a financing from the International Bank for Reconstruction and Development (IBRD) in various currencies towards the cost of the National Agricultural Higher Education Project (NAHEP) and intends to apply part of the proceeds of this Loan to eligible payments under the contract for which this invitation for quotations is issued.

3. **Bid Price**

a) The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialing, dating and re writing.

b) All duties, taxes and other levies payable on the raw materials and components shall be included in the total price.

c) Sales tax in connection with the sale shall be shown separately.

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

e) The Prices shall be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.

5. **Validity of Quotation**

Quotation shall remain valid for a period not less than 15 days after the deadline date specified for submission.

6. **Evaluation of Quotations**

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

(a) are properly signed ; and

(b) conform to the terms and conditions, and specifications.

The Quotations would be evaluated separately for each item.

Sales tax in connection with sale of goods shall not be taken into account in evaluation.

7. **Award of contract**

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

7.1 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.

7.2 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.

8. Payment shall be made immediately after delivery of the goods.

9. Normal commercial warranty/ guarantee shall be applicable to the supplied goods.

10. You are requested to provide your offer latest by 17:00 hours on 29/01/2018.

11. General Terms and Conditions listed in Annexure – I must be followed by the bidder.

12. We look forward to receiving your quotations and thank you for your interest in this project.

Quotation must be delivered to the address below latest by 17.00 hours on January 29, 2019, along with a cover-letter and supporting documents in an envelope indicating "**IDP - Quotation for Instrumentation for Robotic Technology Lab"**.

Co-PI (IDP), Principal and Dean
Address: College of Agricultural Engineering and Technology,
Junagadh Agricultural University,
Junagadh – 362001, Gujarat, India
Tel. No.: 02852671018
Fax No.: 02852671018

(Purchaser)

Name: Co-PI (IDP), Principal and Dean
Address: College of Agricultural Engineering and Technology, Junagadh Agricultural University,
Junagadh – 362001, Gujarat, India
Tel. No.: 02852671018
Fax No.: 02852671018

FORMAT OF QUOTATION *

SR. No.	Description Goods	Specifications	Qty.	Unit	Quoted Unit Rate in Rs.	Total Amount	
						In Figures	In Words
	Total						
	Sales Tax						

Gross Total Cost : Rs. .....

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. .....(amount in figures) (Rs. ..... amount in words) within the period specified in the Invitation for Quotations.

We also confirm that the normal commercial warrantee/guarantee of ..... months shall apply to the offered goods.

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

* *Applicable while the bids are being invited for more than one item and would be evaluated for each item separately.*

Annexure I
General Terms and Conditions

01. Junagadh Agricultural University (hereinafter referred to as "JAU"), for its various Departments (hereinafter referred to as "the purchaser") for their requirement of intend to invite for supply and installation of Scientific Instruments/ machineries at JAU, Junagadh.
02. Government of India has received a financing from the International Bank for Reconstruction and Development (IBRD) in various currencies towards the cost of the National Agricultural Higher Education Project (NAHEP) and intends to apply part of the proceeds of this Loan to eligible payments under the contract for which this invitation for quotations is issued.
03. Each bidder shall submit only one quotation.
04. The items subjected to requirements and the same may be purchased or may not be purchased without assigning any reason.
05. The purchase orders placed on any date during the validity of the RFQ at the rate, terms and conditions of the RFQ.
06. At the time of order, If in any case the quoted item is not available in the market, the successful bidder will have to supply higher version/specification of that item in the quoted cost in the same time duration with prior approval of Purchaser.
07. Purchase committee reserves the right to get clarification from the bidder.
08. Successful bidder failing to provide after sales services would be permanently blacklisted.
09. The bidders are encouraged to visit at ordering site before quoting for the assessment of feasibility of the quoted item. However, no any excuses will be acceptable regarding the performance to fulfil the objective of the quoted items.
10. There should be no discrepancy in price quoted under similar period and similar supplies under the territorial jurisdiction of Gujarat state.
11. The World Bank has right to inspect accounts and records of the bidders, suppliers and contractors.
12. In case of dispute, the base of arbitration must be the guideline of procurement recommended by the ICAR-NAHEP will be the final.
13. **Bid Price :**
    a) The contract shall be for the full quantity as described. Corrections, if any, shall be made by crossing out, initiating, dating and rewriting.
    b) All duties, taxes, all freight, packaging and forwarding, transit insurance, installation charges, applicable taxes and other levies payable on the raw materials and components shall be included in the total price.
    c) GST in connection with the sale/service shall be shown separately.
    d) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
    e) The Prices shall be quoted in Indian Rupees only.
14. **Validity of Bid :** Bid shall remain valid for a period not less than 30 days after the deadline date specified for submission.
15. **Documents to be submitted for eligibility :** Your quotations will be considered upon the provision of the following documents duly signed by the authorized representative, failure in providing the requested documents may constitute grounds for disqualification of quotations;
    a) Quotation letter duly signed by the authorized representative -(Mandatory)

b) Bidder's details with contact no, email, address etc. (Mandatory)
c) Copy of company registration certificate. (Mandatory)
d) Copy of PAN card. (Mandatory)
e) Copy of GST Certificate (Mandatory)
f) Detailed information on the implementation plan (Mandatory)
g) Copies of Income Tax Returns for the last Financial Years having an average annual turnover equivalent to three times of quoted price or more. (Mandatory)
h) Annexure – I (Mandatory)

16. **Evaluation of Bids :**
    a) The Purchaser will evaluate and compare the bids determined to be substantially responsive i.e. which are properly signed and conform to the terms and conditions, and specifications.
    b) The Quotations would be evaluated separately for each item.
    c) GST in connection with sale of goods/services shall not be taken into account in evaluation.
17. **Award of contract**
    a) The lowest price is not the criteria and emphasis would be placed on quality and specifications of the material. The Purchaser will award the contract to the bidder whose bid has been determined to be substantially responsive and who has offered the lowest evaluated bid price.
    b) Notwithstanding the above, the JAU reserves the right to accept or reject any bids and to cancel the quoting process and reject all bids at any time prior to the award of contract.
    c) The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the bid validity period. The terms of the accepted offer shall be incorporated in the purchase order.
18. **Security Deposit:** Successful bidder has to submit 5% of purchase order value as a Security Deposit in the form of a demand draft/ bank guarantee from a Nationalized bank within 10 days preferably having a branch at the Junagadh, which should be valid for a period of 1 year. Bank guarantee in favour of "Junagadh Agricultural University Fund Account", payable at Junagadh from any Nationalized bank and will be informed by purchase office at the time of giving purchase order and provide performance security form.
19. **Refund of Security Deposit:** The amount of security deposit will be refunded after completion of standard warranty period (or warranty period specified in item specification) starting from successful installation of item, after writing a letter to the Office where in instruments/machinery installed.
20. **Forfeiture of Security Deposit:** The security deposit will be forfeited if, successful bidder fails to supply the items within the delivery period and/or supplier fails to comply specifications of instruments and/or supplier fails in successful installation/demonstration of the instruments/ machinery and/or supplier fails to provide satisfactory post sale services and support or fail to replace the defective piece/ service the instruments/ machinery before warranty period.
21. **Warranty:**
    a) Normal commercial warranty/ guarantee shall be applicable from the date of commissioning/installation for respective item.
    b) Further, any complaint shall be attended within a response time of 48 hours on 24X7 basis during warranty period.
22. **Payment:** The payment of item/items will be made after successful supply, commissioning/installation and satisfactory performance of the quoted items as per

the requirement of the ordering party. However, any request regarding the advance or partial payment will not be entertained in any circumstances.

23. **Delivery/Installation:**
    a) Free delivery to the consignee.
    b) Maximum delivery/installation period of specified item is within 15 days from the date of purchase order.
    c) The application for extension of delivery period shall be sent to concern ordering office of Junagadh Agricultural University at least 5 days prior to the expiry of delivery period of each item. The officer in charge, who is placing the order reserve the right to extend period or reject the deal and their decision in the matter, shall be final and binding to all.
24. **Training and Demonstration:** Supplier has to perform on-site live demonstration/ training.
25. **Dispute:** In case of any dispute, final decision of The Procurement Unit, Junagadh Agricultural University, Junagadh – 362 001 will be binding upon all. In case of any dispute arises in respect of this RFQ, a suit in that behalf shall be subject to Junagadh Jurisdiction.
26. All rights are reserved with the University Authority to accept or reject any or all the tenders received without assigning any reasons thereof.