



Support to Development of Kaliakoir (and other Hi-Tech Park) Project
Bangladesh Hi-Tech Park Authority
Information & Communication Technology Division
ICT Tower (Level-10), Agargaon, Shere Bangla Nagar, Dhaka.
www.bhtpa.gov.bd

Memo No. : 56.02.0000.009.34.203.16- ৯৯৯

Date: 08/11/2016

Addendum

The following modifications are made in the tender document of Installation of Robotic Lab at CUET, Chittagong {BHTP-1003(3)} and Installation of Advance Computing Lab at PSTU, Patuakhali {BHTP-1003(4)} called vide this office memo no- .56.02.0000.009.34.203.16-953, Dated: 18.10.2016.

Sl. No.	Tender Document clause no & Page no	Existing Text	Modified Text
1.	Section 7. Technical Specifications, Page no. 113-131 of Installation of Robotic Lab at CUET, Chittagong {BHTP-1003(3)}	Section 7. Technical Specifications	The whole technical Specifications will be replaced by new specifications attached with this letter.
2.	Installation of Advance Computing Lab at PSTU, Patuakhali {BHTP-1003(4)}	Section 7. Technical Specifications	The whole technical Specifications will be replaced by new specifications attached with this letter.


(A.N.M. Safiqul Islam) 8/11/2016
Project Director

Section 7: Technical Specifications

Specifications for Installation of Robotic Lab at CUET, Chittagong {BHTP-1003(3)}

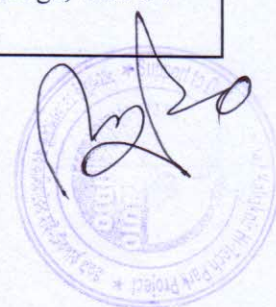
Sl. No.	Description of Item	Specification
1	2	3
1	PTU-D46-17	<p>Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Accessories: -PT-PS-INT30V AC/DC international power supply 100-240VAC, 47-63Hz, 30VDC, 24W, IEC receptacle -PT-EIO-TRACKBL Serial trackball for use with EIO option (MS mouse compatible) -PT-CABLE-UPG-14 : 14 ft. controller cable - PT-CABLE-UPG-28: 28 ft. controller cable -CABLE-CE-3 3 ft. controller cable for PTU-D46 models -PTU-D46-NET-SK PTU Network Cable Starter Kit for PTU-D46 models - PTU-D46-NET AU PTU Network Additional Unit Kit for PTU-D46 models Software PTU-CPI C Language Programmer's Interface for PTU-D46 models Rated payload: 6lbs (2.72kg); Maximum unloaded speed (@30VDC): 3000/sec; Resolution: 3.086 arc minutes (0.051428°); Input Voltage: 8-30VDC, unregulated; Directed Perception Inc. USA</p>
2	Logicool Qcam Orbit AF QCAM-200RX or equivalent	<p>Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder USB Video capture: 2MP, Frame rate: 30 fps Size (WxDxH): 84 x 84 x 110 mm (camera body) Cable length: 180 cm</p>
3	Logitech 720p Webcam C905 or equivalent	<p>Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder USB 2 MP</p>
4	Scanning Laser Range Finder (URG-04LX-UG01)	<p>Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Supply voltage 5V DC (Supplied from USB), 500mA; Distance: 4m; Field of view: 240°; Scan time: 100 msec/scan; Resolution: 1mm; Interface: USB</p>
5	Scanning range finder URG-04LX	<p>Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Supply voltage 5V DC (Supplied from USB), 500mA; Measuring area: 60 to 4095mm; Field of view: 240°; Scan time: 100 msec/scan; Resolution: 0.360; Interface: USB</p>



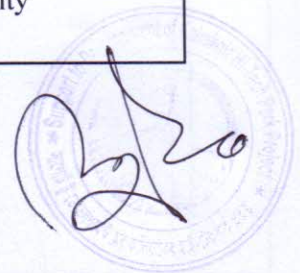
Sl. No.	Description of Item	Specification
1	2	3
6	Scanning Laser Range Finder UTM-30LX	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Supply voltage: 12 V DC, 1 A, Measuring area: 0.1 to 30 m (max 60 m); Field of view: 270°; Scan time: 25 msec/scan; Resolution: 0.250; Interface: USB</p>
7	VS-C42U-300-TK Omni directional Camera	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Imaging Device: 1/2" colors CMOS;</p> <p>Interface: USB2.0;</p> <p>Imaging System: RGB24 (24bitRGB);</p> <p>Dimension: 37(W) x 32(H) x 54(D);</p> <p>Color Filter: primary colors RGB;</p> <p>Sensitivity: Over 1.0V/Lux-sec;</p> <p>Size: 74 of diameter x 242H;</p> <p>Usb power below 100mA;</p> <p>Number of Pixels: 2048 (H) x 1536 (V);</p> <p>Resolution/Frame rate: 2048 x 1536 (6fps) - 640 x 480 (20fps);</p> <p>Image Size (mm): 6.59 (H) x 4.90 (V);</p> <p>Pixel Size (µm) 3.18 (H) x 3.18 (V)</p>
8	Digital Camera	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Canon or equivalent:</p> <p>Ø A 16MP High-Sensitivity CMOS sensor and DIGIC 4+ image processor pair to form the HS SYSTEM,</p> <p>Ø Sensitivity to ISO 3200, and a high speed burst rate of 10 fps.</p> <p>Ø A 50x zoom lens provides a 24-1200mm equivalent focal length range,</p> <p>Ø Beyond shooting capabilities, the SX530 HS is also wirelessly adept, with the ability to transfer imagery directly to mobile devices via Wi-Fi, connect using NFC, and remotely control the camera from linked smartphones or tablets.</p> <p>Technical Details:</p> <p>Digital Zoom:4x</p> <p>External Memory Included: 16GB SD</p> <p>Item Dimensions:3.2 x 3.6 x 4.7 inches</p> <p>Item Weight:0.98 pounds Minimum</p> <p>Aperture: 3.4 Optical Sensor Resolution:16 MP</p> <p>Optical Zoom:50xPhoto Sensor</p> <p>Technology: CMOS</p> <p>Viewfinder Type: fixed LCD</p> <p>Camera Bag - Polyester</p>



Sl. No.	Description of Item	Specification
1	2	3
9	Full HD Video Camera	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Digital Video Cameras</p> <p>Camera Type: Full High Definition (FHD)</p> <p>Brand: Sony or equivalent</p> <p>Colour: Black</p> <p>Shooting Modes:9</p> <p>Menu Languages:English, French, Portuguese, Spanish</p> <p>Camera Resolution:10MP</p> <p>Stabilisation:Yes</p> <p>Optical Zoom: 10 x</p> <p>Digital Zoom: 120 x</p> <p>Shutter Speed(sec): 1/10000</p> <p>Display Type: LCD, LCD Touch Screen</p> <p>Connectivity: Ethernet, HDMI, USB 2.0, Wireless</p> <p>Flash Modes: 3</p> <p>Image Sizes (pixels): 1280 x 720, 1920 x 1080, 3840 x 2160</p> <p>Still Image Format: JPEG</p> <p>Video Size: HD 1920 x 1080</p> <p>Video Format: AVCHD, MPEG-4</p> <p>Media Type: Memory Stick PRO Duo, Memory Stick PRO-HG Duo, SD, SDHC, SDXC</p> <p>Video Output: Composite Video, HDMI, NTSC</p> <p>Supported Operating System: Mac OS, Mac OS X, Windows 7, Windows 8, Windows Vista, Windows XP</p> <p>Product Width (cm): 15.5</p> <p>Product Depth (cm): 7.1</p> <p>Product Height (cm): 7.85</p>
10	3M MPro150 Pocket Projector with accessories	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Input: DC- in, VGA-AV; Compitable resolution: VGA, SVGA, XGA, WXGA;</p> <p>Projection distance: 171-1067 mm; Vertical scan rate: 60 Hz; 2GB standard interchangeable micro SD card and 1 GB of memory built-in; 120 minutes battery life</p>
11	Kinect for Xbox 360	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Viewing angle: 43° vertical by 57° horizontal field of view; Vertical tilt range: ±27°; Frame rate (depth and color stream): 30 fps;</p> <p>Audio format: 16-kHz, 24-bit mono pulse code modulation (PCM); Accelerometer characteristics; A 2G/4G/8G accelerometer configured for the 2G range, with a 1° accuracy upper limit.</p>



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1	2	3
12	NAO H25 Next Gen Robot (Humanoid robot)	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Height 50-75 cm</p> <p>Weight 4.0-5.5 kg</p> <p>Power supply: lithium battery providing 45-60 Wh Autonomy 85-100 minutes (active use)</p> <p>Degrees of freedom 25</p> <p>CPU Intel Atom @ 1.6 GHz or high</p> <p>Built-in OS Linux-based Compatible OS Windows, Mac OS, Linux</p> <p>Programming languages C++, Python, Java, MATLAB, Urbi, C, .Net</p> <p>Sensors Minimum Two HD cameras, Minimum four microphones, Minimum one sonar rangefinder, Minimum two infrared emitters and receivers, necessary inertial board, Min nine tactile sensors, Min eight pressure sensors,</p> <p>Connectivity Ethernet, Wi-Fi</p>
13	3.3V power Supply Module	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Input Voltage : DC 6.5-12V; Output Voltage : DC 3.3V 5V</p> <p>Output Current : 700mA(Max);</p> <p>Total Size : 51 x 32 x 19mm/ 2" x 1.3" x 0.75" (L*W*H)</p> <p>Material : Plastic, Electronic Part;</p> <p>Net Weight : 13g</p>
14	Electrician Tool Set	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Klein Tools 80028 28-Piece</p>
15	Temperature sensor	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Voltage Input: 2.7 V to 5.5 VDC</p> <p>10 mV/°C scale factor ±2°C accuracy over temperature ±0.5°C linearity</p> <p>Operating Range: -40°C to +125°C</p>



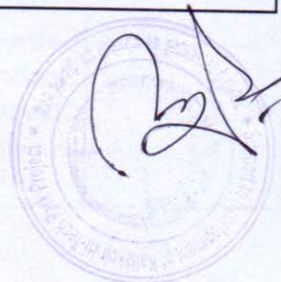
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16	Raspberry Pi 3	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Processor Chipset: Broadcom BCM2837</p> <p>64 Bit Quad Core Processor powered Single Board Computer running at 1.2GHz</p> <p>Processor Speed: QUAD Core @1.2 GHz</p> <p>RAM: 1GB SDRAM @ 400 MHz</p> <p>Storage: MicroSD</p> <p>USB 2.0: 4x USB Ports</p> <p>Max Power Draw/voltage: 2.5A @ 5V</p> <p>GPIO: 40 pin</p> <p>Ethernet Port: Yes</p> <p>WiFi: Built in</p> <p>Bluetooth LE: Built in</p>
17	Raspberry Pi 3 and MathWorks Learn to Program Pack Starter Kit	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Quad Core 1.2GHz Broadcom BCM2837 64 bit CPU 1GB RAM BCM43438 WiFi and Bluetooth Low Energy (BLE) on board 40-pin Extended GPIO</p> <p>4x USB 2 ports 4 Pole stereo output and composite video port Full size HDMI CSI camera port for connecting a Raspberry Pi camera DSI display port for connecting a Raspberry Pi touchscreen display Micro SD port for loading your operating system and storing data</p>
18	Distance sensor	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>operating voltage: 2.7 V to 6.2 V; average current consumption: 5 mA (typical); distance measuring range for GP2Y0D810Z0F: 2 cm to 10 cm (0.8" to 4");</p> <p>output type: digital voltage steady state;</p> <p>response time: 2.56 ms typical (3.77 ms max); module size: 21.6 x 8.9 x 10.4 mm (0.85" x 0.35" x 0.41")</p>
19	PIR Motion sensor	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Red wire is power (5 to 12V). Brown (or White) wire is GND. Black wire is open collector Alarm</p>
20	Jumper Wire male to male	6"
21	Jumper Wire male to female	6"



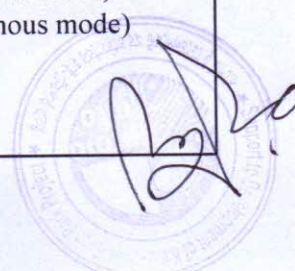
Sl. No.	Description of Item	Specification
1	2	3
22	Jumper Wire female to female	6"
23	Digital Multimeter	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>3 ½ digits manual ranging Data hold and auto power off function</p> <p>DC voltage: Range: 200mV, 2V, 20V, 200V, 600V</p> <p>Best accuracy: $\pm(0.5\%rdg + 1 \text{ digit})$</p> <p>AC voltage: Range: 2V, 20V, 200V, 600V</p> <p>Best accuracy: $\pm(0.8\%rdg + 3 \text{ digits})$</p> <p>DC current: Range: 2mA, 20mA, 200mA, 10A</p> <p>Best accuracy: $\pm(0.8\%rdg + 1 \text{ digit})$</p> <p>AC current: Range: 20mA, 200mA, 10A</p> <p>Best accuracy: $\pm(1.0\%+3)$</p> <p>Capacitance: Range: 2nF, 20nF, 200nF, 2μF, 200μF</p> <p>Best accuracy: $\pm(4.0\%+3)$</p> <p>Resistance: Range: 200Ω ~ 20MΩ 6 ranges</p> <p>Best accuracy: $\pm(1.0\%rdg + 2 \text{ digits})$</p> <p>Diode test: Open circuit 2.8V approx.</p> <p>Continuity beeper: Buzzer sounds if conductance less than 10Ω</p> <p>Temperature: Range: -40°C ~ 1000°C</p> <p>Best accuracy: $\pm(1.0\%rdg + 7 \text{ digits})$</p> <p>Power source: Single 9V battery</p> <p>Standard accessories with printed operation manual</p> <p>Brand & Model: Gwinstek or equivalent</p> <p>Country of Origin & Manufacturing: Taiwan or equivalent</p> <p>Warranty: 1 (One) year with services</p> <p>Manufacturer's Authorization Letter with contact details, ISO Certificate and Catalog should be submitted</p>



Sl. No.	Description of Item	Specification
1	2	3
24	Digital Storage Oscilloscope	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>100 MHz bandwidth, 2 input channels</p> <p>250MSa/s Real-Time and 25GSa/s</p> <p>Equivalent-Time Sampling 4k memory length per channel</p> <p>Peak detect as fast as 10ns Save / Recall of 15 front panel settings & waveforms 5.7" TFT Color Display</p> <p>19 auto measurements and Go/NoGo function</p> <p>Math function - Add, Subtract, FFT USB host and device ports</p> <p>Vertical: Rise time: <3.5ns Approx.</p> <p>Sensitivity: 2mV/div ~ 10V/div (1-2-5 increments)</p> <p>Accuracy: $\pm(3\% \times [\text{Readout}] + 0.1 \text{ div} + 1\text{mV})$</p> <p>Input coupling: AC, DC & GND</p> <p>Trigger: Sources: CH1 , CH2 , Line , EXT</p> <p>Modes: Auto, Normal, Single, TV, Edge, Pulse Width</p> <p>Ext. trigger: Range: $\pm 15\text{V}$</p> <p>Input impedance: $1\text{M}\Omega \pm 2\%$, $\sim 16\text{pF}$</p> <p>Horizontal: Range: 1ns/div ~ 10s/div (1-2.5-5 increments);</p> <p>ROLL : 50ms/div ~ 50s/div</p> <p>Modes: Main, Window, Window Zoom, Roll, X-Y</p> <p>X-Y mode: X-axis input: Channel 1, Y-axis input: Channel 2</p> <p>Cursor and measurement: Voltage measurement, time measurement, cursors measurement and auto counter facility Control panel function: Autoset, save setup and save waveform</p> <p>Power source: 220~230V AC, 50Hz, 1 Phase Standard accessories with printed operation manual</p> <p>Warranty: 1 (One) year with services</p>
25	Servo Motor (90S)	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Motor type: PMDC brushed motor</p> <p>Motor housing (D*F*L): $\Phi 16*25\text{mm}$ (Min)</p> <p>Housing material: SECD-O</p> <p>Shaft (diameter): 1.5mm carbon steel (nickel coating)</p> <p>Way of commutation: precious metal-brush</p> <p>Structure: 2-pole stator and 3 slots</p> <p>Magnet type: NdFeB</p> <p>Rotation: CW/CCW and reversible</p> <p>Weight: 22g (approx.)</p> <p>Rated voltage: 12.0V DC</p> <p>At no load:</p> <p>Speed: 23300rpm (Max)</p> <p>Current: 60mA</p>



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26	Servo Motor (91R)	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Operating Voltage : Minimum 4.8V</p> <p>Operating Speed : 0.1sec/60degree (4.8V)</p> <p>Torque : 1.8kg/cm -2.0 kg/cm(4.8V)</p> <p>Dead Band Width : 10usec</p> <p>Temperature Range : 0~+55°C</p> <p>Cable Length : 25-30cm</p> <p>Servo Type : Analog Servo</p> <p>Weight: 25g-35g</p>
27	Camera Tripods	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Photo and video tripod photographic equipment has complete tripod kit, aluminum construction, up to 6.5 lb support, 59" maximum height, head with spring-loaded counter balance, 65mm leveling ball, sliding quick release plate, wo-stage leg design with built-in brace, spiked rubber feet and carrying case.</p>
28	Artificial Intelligence Robot (AIBO)	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Processor: MIPS R7000 @ 576 MHz (Min)</p> <p>RAM: 64MB or higher</p> <p>Flash Memory :4MB or higher</p> <p>Moving Parts Mouth - 1 degree of freedom, Head - 3 degrees of freedom, Leg - 3 degrees of freedom x 4 legs, Ear - 1 degree of freedom x 2, Tail - 2 degrees of freedom Touch Sensors Electric Static Sensor (head, back) Pressure Sensor (chin, paws (4))</p> <p>Camera: CMOS Image Sensor 350,000 pixels</p> <p>Wireless LAN: IEEE 802.11b (Integrated)</p> <p>Range Finders One on head, one on body Display Illume Face capable of over 60 emotional and status modes, consisting of 24 LEDs (white 12, red 4, blue 4, green 4), Ear : 2 (left & right), Head sensor : 2 (white and amber), Head (wireless LAN on/off) : 1(blue), Back sensor : 16 (white 8, red 3, blue 3, orange 2)</p> <p>Microphone :Stereo microphone (one on each side)</p> <p>Speaker: Miniature Speaker, 20.8mm 500 mW</p> <p>Heat Sensor: Yes</p> <p>Acceleration Sensor: Yes</p> <p>Vibration Sensor: Yes</p> <p>Energy Consumption Approx.7W (Standard operation in autonomous mode)</p> <p>Operating Time Approx. 1.5 Hours (Standard operation in autonomous mode)</p> <p>Charging Time: Approx. 2.5 Hours</p> <p>Dimensions: 319 (D) x 180 (W) x 278 (H) mm (Approx)</p>



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29	Desktop Computer	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Processor: 4th generation Intel core i-7, 4790K, 4.0 GHz.</p> <p>RAM: 8 GB (4+4), DDR3, Bus speed 1600 MGH</p> <p>Hard Disk Drive: 500 GB, USB 3 , SATA External, RPM 7200.</p> <p>DVD: Read/ Write, Buffer 2 MB, Read Speed 16X, Form factor 5.25 inch</p> <p>Motherboard: intel B85 chipset, RAM slot 4, RAM Bus 1600:1333, Supported CPU-4th generation core I-7, Intel 1.217V LAN Chipset,</p> <p>Monitor: Diagonal 19", screen resolution 1366:768, response time 5 ms, Brightmess 200 cd/m, contrast ratio: 600:1.</p> <p>Casing Type: Middle tower.</p>
30	Multimedia Projector with ceiling mounted kits And Automatic Projector Screens	<p>Model: Infocus or equivalent, To be mentioned by the bidder</p> <p>Brand: Infocus or equivalent, To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Native resolution: SVGA 800x600,</p> <p>Maximum Resolution : XGA 1024x768,</p> <p>Display Technology : UXGA 1600x1200,</p> <p>Brightness: 2700 ANSI lm,</p> <p>Lamp life : 4000 Hours in eco mode,</p> <p>Maximum Contrast Ratio: 2800:1,</p> <p>Lamp Power : 16.7 millions,</p> <p>Power Consumptions : 4:3,</p> <p>Power Supply : 176 W in Echo Mode.</p> <p>Warranty: 1 (One) year with services</p> <p>Manufacturer's Authorization Letter with contact details, ISO Certificate and Catalog should be submitted</p> <p>Projector Screen: Electric remote projector Screen</p> <p>View area : 70"X70"</p>
31	LAN Switch	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>LinkSys / Cisco:</p> <p>8 Port/16 port 10/100 Managed Switch</p> <p>Switching Capacity: 1.6 Gbps</p>
32	Computer Table	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Major material : Laminated Board</p> <p>Brand: Otobi or equivalent</p> <p>Color : Beech</p> <p>Dimension:750(L)x475(W)x750 (H) mm</p>

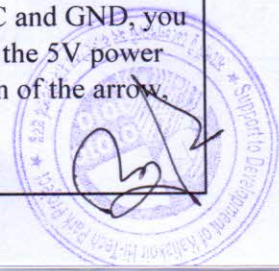


Sl. No.	Description of Item	Specification
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33	Computer Chair	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Swivel Low Back Chair</p> <p>Major material :Mild Steel</p> <p>Brand: Otobi or equivalent</p> <p>Color : Black</p> <p>Dimension: Seat : 420(W)X380(L) mm</p> <p>Back : 360(W)x280(L)mm.</p> <p>Height : Floor to seat -460 and Floor to back</p>
34	Server Rack cabinet	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Full vented top frame with front / rear / side cable entrance, 4 top fan tray with guard low noise, moveable side doors with lock, glass front door with push lock, rear solid door with push lock, panel mount support 1 set, panel mount with unit indication, base frame with provision of cable entrance, 1 set heavy duty castor wheels, 1 set leveling stand, one fixed shelf, 6 way vertical zero U PDU power distribution unit with 13A UKtype sockets, 1 packet M6 cage nuts assembly, exquisite design with precise dimension and craftsmanship, hexagonal reticular high-density vented plate front door and rear door, adjustable feet and heavy duty castors are available at the same time, several lockable cable entry on top cover and bottom panel with adjustable sizes, optional plinth e, imensions 600 x 800 x 1166mm (Min). It should comply with ANSI/EIA RS-310-D, IEC297-2, DIN41494, PART1, DIN41494, PART7, ETSI standard</p>
35	Wireless router	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Cisco or equivalent</p> <p>Four 10/100 Ethernet port and Two 10/100 WAN port, Full IPsec VPN capabilities for up to 50 remote connections, Bandwidth management capabilities for improved quality of service (QoS), Supports up to 50 QuickVPN users</p>
36	SD/MicroSD Memory Card Kit - 64GB SDHC	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Apacer/Transcend or equivalent: Model - SDHC Class3 UHS-II, Type - SDHC Class 3, Capacity (GB) - 64GB, Access Time Read (Mbps) - 285MB/s, Access Time Write (Mbps) - 180MB/s</p>



Sl. No.	Description of Item	Specification
1	2	3
37	4-Digit, 7-Segment Display (Green)	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>4-digit 7-segment display - green color, Max forward current of 20mA</p> <p>Also available in red, blue and yellow, RoHS Compliant, The SFE 4-Digit, 7-Segment Display (Green) is a basic green color display. It has a common anode. The display features are one decimal point per digit, and individually controllable apostrophe and colon points. This LED has a forward voltage of 2.1VDC and a max forward current of 20mA. The hardware interface is sixteen (two rows of eight) through-hole pins.</p>
38	7-Segment Serial Display (Red)	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Display numbers, most letters, and a few special characters</p> <p>Color: Red</p> <p>4 digit red alpha-numeric display with TTL, SPI or I2C Serial Interface</p> <p>RoHS Compliant, The SFE 7-Segment Serial Display (Red) are really neat little devices, it's a shame that they can be so cumbersome to control. Well manufacturer solved that problem by making them a little bit "smarter". The 7-Segment Serial Display combines a classic 4-digit 7-segment display and an ATmega328 microcontroller allowing you to control every segment individually using only a few serial lines.</p>
39	IP Camera	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>1/2.5" Progressive Scan CMOS Day and night function with mechanical IR cut filter, Minimum illumination 0.06 lux at F2.8 180°/360° panorama and ePTZ view, Built-in f1.05 mm / F2.8 Megapixel Fisheye lens</p>
40	Laptop	<p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Model - HP Probook 470 G3 or equivalent, Processor - 6th Gen. Intel Core i7 6500U, Processor Clock Speed - 2.50-3.10GHz, CPU Cache - 4MB, Display Size - 17.3", Display Type - LED Display, RAM - 8GB, RAM Type - DDR3L, HDD - 1TB HDD, Graphics Chipset - AMD Radeon R7 M340, Graphics Memory - 2GB, Optical Device - DVD RW, Networking - LAN, WiFi, Bluetooth, Card Reader, HD Webcam, Display Port - HDMI, VGA, Audio Port - Combo, USB Port - 2 x USB3.0, 2 x USB2.0, Battery - 4 Cell Li-ion, Backup Time - Up to 4.5 Hrs., Operating System - preloaded windows 10 with media kit, and Free DOS, Weight - 2.60Kg, Color - Black, Part No - X4K32PA, Warranty - 2 year (Battery, Adapter 1 year)</p>
41	Online UPS (2000VA, Backup 6 hrs)	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>2000VA, Type - Online, Input Voltage (V) 110VAC, Output Voltage (V) - 110V, Frequency (Hz) - 60Hz±0.5%/50Hz±0.5%(Free running), Weight (Kg) - 56/85kg, Warranty - 1 year</p>

Sl. No.	Description of Item	Specification
1	2	3
42	Hokuyo ultrasonic photo sensor HSA-70A or equivalent	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Standard sensing length: 0.5 to 5m(9.99m : stable water surface); Frequency of ultrasonic: 50kHz; Power source: 12 to 24VDC(10 to 28V), 3W(Isolation power); Beam angle: 14°; Measuring precision: ±0.25% full scale or 1cm(Bigger value); Output: 4-20mA current output; Wiring cable: 8 cores(0.3mm ²) cable length 10m, detachable system with water-proof connector
43	16x2 Character LCD (Parallel Interface)	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Minimum logic voltage: 4.5V Maximum logic voltage: 5.5V Typical LED backlight voltage drop: 4.2V Typical LED backlight current Supply current: 2A
44	16x2 Character LCD with LED Backlight (Parallel Interface)	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Minimum logic voltage: 4.5V Maximum logic voltage: 5.5V Typical LED backlight voltage drop: 4.2V Typical LED backlight current Supply current: 2A
45	Mimo UM-760C 7" USB-Driven Touchscreen LCD Monitor	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Display size: 7" Resolution: 1024 x 600 (WSVGA) LCD Brightness: 250cd/m ² Contrast Ratio: 700:01:00 Pixel Pitch: 0.15 (H) x 0.15 (V) Connections: USB Power Consumption: 4W Dimensions: When folded: 7"x 5.25"x 1" (thickness), When Viewing Angle: 75/75/70/75(L/R/U/D) open: 7"x 4.5" (tall) x 5.25" (base)
46	Joy Stick module for sensor	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Breakout module for Playstation2 analog joystick 5 pins on board: VCC, GND, X, Y and Button. Connect the module with 5V power supply with VCC and GND, you can read out the joystick status by X,Y and button pins When using the 5V power supply, the default analog output for X,Y is 2.5V. With the direction of the arrow, the voltage up to 5V, and the opposite direction down to 0V.



Sl. No.	Description of Item	Specification
1	2	3
47	Fire Detection flame Sensor Module	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Detection angle about 60 degrees, it is sensitive to the flame spectrum. Accuracy adjustable Operating voltage 3.3V-5V With a mounting screw hole Power indicator (red) and digital switch output indicator (green)
48	ADXL 345 acceleration module	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Tap/Double Tap Detection Free-Fall Detection, Impact or collision Detection Accident Detection, Material: PCB + brass Features Chipset: ADXL345; Power supply :3~5V (Module has on-board 3.3V regulator) IO Level : 3.3v (requires Level translator if interfaced with 5V IO) Communication methods: IIC/SPI communication protocol; Measuring range: +/- 2g +/-16g; 3-Axis, +/- 2g; +/-4g; +/-8g; +/- 16g Applications: Flying robots, Stability control applications Dimensions: 21 x 16 x 4 mm / 0.83 x 0.63 x 0.16 inch Weight: 1 g / 0.04 oz
49	MQ-2 smoke sensor	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Be sensitive to gas, propane, hydrogen, Simple drive circuit Household gas leak alarm Portable gas detector
50	MQ-2 gas sensor	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Sensitive for LPG, propane, hydrogen, Output voltage boosts along with the concentration of the measured gases increases Fast response and recovery Adjustable sensitivity Signal output indicator
51	MQ-5 Gas sensor	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Sensitive for LPG, natural gas, coal gas Output voltage boosts along with the concentration of the measured gases increases. Fast response and recovery, Adjustable sensitivity, Signal output indicator -Power: 2.5V ~ 5.0V, Dimension: 40.0mm * 21.0mm, Mounting holes size: 2.0mm
52	MQ-7 CO sensor	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Type: Analog <input type="checkbox"/> Detecting Type: Carbonic Oxide(Co) <input type="checkbox"/> Rated Voltage: DC 5V <input type="checkbox"/> Rated Current: 180mA <input type="checkbox"/>



Sl. No.	Description of Item	Specification
1	2	3
53	Ultra Sonic sensor	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>The module performance is stable, measure distance accurately. SRF05, SRF02 ultrasonic ranging module and abroad comparable. Module precision, blind spots (2cm) super close, stable ranging success of this product according to market powerful! This module is completely Qian Yung GH- 311 anti-theft module <input type="checkbox"/></p> <p>Voltage: DC5V <input type="checkbox"/></p> <p>Static current: less than 2mA <input type="checkbox"/></p> <p>level output: high-5V <input type="checkbox"/></p> <p>level output: the end of 0V <input type="checkbox"/></p>
54	LCR Meter	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>LCR Testing Parameter: Main Parameter: L / C / R</p> <p>Testing frequency: C: 10 to 500Khz & L: 10 to 360Khz</p> <p>Testing Method: Auto select LC and RC Oscillation</p> <p>Calibration: Power on auto calibrate with internal reference capacitor</p> <p>Testing voltage: ~1.5Vrms</p> <p>Best Tolerance: L: 1% +1 Digit C: 1% +1</p> <p>Digit R: 0.5% +1 Digit</p> <p>LCD update or Testing time (* vary on component value):(e.g. 100mF Capacitor <30s)</p> <p>Zeroing: Open / short circuit</p>
55	UM-1080-OF 10.1" Open Frame 1280x800 LCD Display	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Display size: 10.1"</p> <p>Resolution: 1280x800</p> <p>Brightness: 350cd/m2</p> <p>Contrast Ratio: 800:01:00</p> <p>Response time: 14ms</p> <p>Connections: High Speed USB 2.0</p> <p>Dimensions: 229.5mm x 149.1mm x 11.8mm</p>
56	21.5-inch M21580-OF Open Frame Display	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Display size: 21.5"</p> <p>Resolution: 1920 x 1080 (WSVGA) LCD</p> <p>Brightness: 250cd/m2</p> <p>Contrast Ratio: 1000:01:00</p> <p>Viewing Angle: 170° x 170° viewing angle</p> <p>Connections: DVI, VGA, HDMI (via adapter)</p> <p>Mount: VESA-100mm, Rear Mount</p> <p>Power Consumption: 20W</p>



Sl. No.	Description of Item	Specification
1	2	3
57	15.6-inch M15680-OF Open Frame Display	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Display size: 15.6`` Display Resolution: 1920 x 1080 (WSVGA) LCD Brightness: 300cd/m2 Contrast Ratio: 1000:01:00 Viewing Angle: 170° x 170° viewing angle Connections: DVI, VGA, HDMI (via adapter) Mount: VESA-100mm, Rear Mount Power Consumption: 20W
58	Gear Motor	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Voltage Range: 6V - 12V Current: 0.53A Speed: 60rpm Gear Ratio: 139:1 Output Shaft Diameter: 6mm Torque: 1874.8 oz-in (135 kgf-cm) Gear Material: Metal Motor Type: DC
59	HC-SR04 Ultrasonic Range Finder	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Operation Level: Digital 5V Power supply: 5V DC Ultrasonic Frequency: 40k Hz Resolution: 1 cm Board Size: 2.0 x 4.3 x 1.5cm Weight: 15.00g
60	PDAHP Ipaq 210 Enterprise Handheld	Model: To be mentioned by the bidder Brand: HP or equivalent Country of origin: To be mentioned by the bidder Type: Extension Socket with LED Rated Voltage: 220V Rated Current: 10A~13A
61	Multiple Power Socket	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Type: Extension Socket with LED Rated Voltage: 220V Rated Current: 10A~13A



Sl. No.	Description of Item	Specification
1	2	3
62	Scanner	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Scanner Type: Flatbed <input type="checkbox"/></p> <p>Scan Technology: Charge Coupled Device (CCD) <input type="checkbox"/></p> <p>Scan Preview Mode: Up to 11 sec <input type="checkbox"/></p> <p>Scan Resolution: 4800 x 9600 dpi, 48-bit <input type="checkbox"/></p> <p>Scan size: 8.5 x 11.7 inch <input type="checkbox"/></p> <p>Enlargement Range: 10 ~ 2400% <input type="checkbox"/></p> <p>Control Panel: 4 buttons <input type="checkbox"/></p> <p>Connectivity: USB 2.0 <input type="checkbox"/></p> <p>Compatible OS: Windows 2000/XP/Vista/7/8, Mac <input type="checkbox"/></p> <p>Power source: 220~230V AC, 50Hz, 1 Phase , Warranty: 1 (One) year with services, Authorization Letter with contact details, ISO Certificate and Catalog should be submitted</p>
63	Portable Hdisk	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>A Data/ Twinmos/Western Digital or equivalent, Storage - 2TB, Type - External HDD, Interface - USB 3.0, Color - Black, Others - USB Power HDD</p>
64	Khepera III Robot(including modules)	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>The Khepera III robot should be useable for robotic experiments and demonstrations such as: Navigation, Artificial Intelligence, Multi-Agents System, Control, Collective Behavior, Real-Time Programming, Advanced Electronics Demonstration, etc. dsPic 30F5011 processor at 60 MHz 4KB RAM on dsPIC 66 KB Flash on dsPIC 2 DC motors with encoders (22 pulses per mm of robot motion). Max speed: 0.5 m/s</p> <p>High precision differential drive odometry 8 IR proximity and ambient light sensors with up to 30 cm range. 2 IR ground proximity sensors for line following applications, 5 Ultrasonics sensors range 20 cm to 4 m</p> <p>Always ON 15s to swap battery of 1400 mAh</p> <p>Native Bluetooth and serial port 115 Kbps, RS232 communication</p>
65	Hexacopter (Drone) Storm-Drone-6-GPS-DEVO7 (v1.2)	<p>Model: To be mentioned by the bidder</p> <p>Brand: To be mentioned by the bidder</p> <p>Country of origin: To be mentioned by the bidder</p> <p>Helipal or equivalent</p> <p>Battery Life: Under 30 Minutes</p> <p>Control System: Stand-alone Controller</p> <p>Flight time: between 4 and 10 mins</p> <p>LED Light Strips (4 white, 2 red)</p>



Sl. No.	Description of Item	Specification
1	2	3
66	SoCKit - the Development Kit for New SoC Device	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder RAM Size: 2GB Program Memory Size: 128MB Program Memory Type: QSPI Flash Main Program Memory Type: Flash USB: 3 Ethernet: 1 Display Interface: VGA Display Type: CRT/LCD Windows: Win XP Number of LEDs: 8 Push Buttons and Switches: 8
67	Virus Software	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Norton/Symantec or equivalent for 40 pc
68	Photocopier	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Warmup Time: Approx. 20 Seconds First Copy Out Time: 3.6 Seconds Black Copy Speed: 45 CPM/ PPM A4 Black Copy Resolution: 600 x 600 dpi, 2400 x 600 dpi with Smoothing Cartridge Yield: Toner ±36,000 Pages/ Toner <input type="checkbox"/> Monthly Duty Cycle: Up to 150,000 Copies <input type="checkbox"/> Paper Size: Max. A3 <input type="checkbox"/> Paper Tray: 1st Drawer 550 Sheets-A5-R to A3, 2nd Drawer 550 Sheets-A5-R to A3, Stack Feed Bypass 100 Sheets-A5-R to A3 <input type="checkbox"/> Zoom: 25% to 400% <input type="checkbox"/> Duplexing: Standard Automatic Duplex Unit, RADF Optional <input type="checkbox"/> Print Features: Resolution 600 × 600 dpi, 2400 × 600 dpi with Smoothing, PDL Interface Standard USB High Speed Option <input type="checkbox"/> Scan Features: Resolution 100/ 150/ 200/ 300/ 400/ 600dpi, Max. Scan Speed Color 43 SPM 300 dpi, B & W 57 SPM 300 dpi, Data Format TIFF, PDF, XPS, JPEG Scan Protocol SMB, FTP, IPX, FTPS Scan Features File, Email, USB, e-Filing Box, TWAIN <input type="checkbox"/> Fax Features: Optional <input type="checkbox"/> Connectivity: Standard Ethernet 10/100Base-T, USB 2.0 Hi-Speed, Optional Wireless LAN IEEE802.11b, g, n <input type="checkbox"/> Dimension: 575 × 586 × 756 mm <input type="checkbox"/> Weight: Approx. 55 Kg <input type="checkbox"/> Other Features: 2 GB RAM, 320 GB Hard Disk

Sl. No.	Description of Item	Specification
1	2	3
69	Router 2800 series, 03	Cisco: C2801-VSEC-CCME/K9 Cisco 2800 Router CCME Security Bundle, 2801 VSEC Bundle w/PVDM2-8,FL-CCME-25,Adv IP Serv,128F/384D
70	Switch 2900 series	Cisco: 48 Port 10/100/1000 + 2 Port Mini GBIC Gigabit Managed Switching Capacity 96.0 Gbps Forwarding Rate 71.4 Mpps
71	On Off Toggle Switch	DPDT Momentary Toggle Switch Product Rated Voltage & Current: AC 250V, 15A AC 125V, 20A Action Type : Momentary Pin Number : 6 Pins, Position : 3 Positions(ON/OFF/ON)
72	LDA Laser type photo sensor	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Light source: Red semiconductor laser 650nm; Max. power: 390 μ W; Detecting distance: 1.5m; Power source: 12 to 24VDC, \pm 10%, Current consumption: 45mA
73	Pioneer P3-DX (Mobile robot)	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Construction Body: 1.6 mm aluminum (powder-coated) Tires: Foam-filled rubber Operation Robot Weight: 9 kg Operating Payload: 17 kg Power Run Time: 8-10 hours w/3 batteries (with no accessories) Charge Time: 12 hours (standard) or 2.4 hrs (optional high capacity charger) Available Power Supplies: 5 V @ 1.5 A switched 12 V @ 2.5 A switched Batteries Supports up to 3 at a time Voltage: 12 V Capacity: 7.2 Ah (each) Chemistry: lead acid Hot-swappable Batteries: Yes User Control Panel MIDI programmable piezo buzzer Main power indicator Battery charge indicator 2 AUX power switches System reset Motor enable pushbutton
74	GPS enabled Sensor	Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Receiver: WAAS enabled. 12 parallel channel GPS receiver continuously tracks and uses up to 12 satellites (up to 11 with PPS active) to compute and update the position Update Rate: Factory set to 1 s between updates. (Programmable from 1 to 900 s.) PPS Output: Hz pulse; 1 μ s accuracy (Width factory set to 100 ms.) Baud Rate: Factory set to 38400 bps. Operating Voltage Range: 8 to 40 Vdc Velocity Accuracy: 0.1 knot RMS steady state Cable Length: 4.57 m (15 ft) GPS Standard Positioning Service (SPS): < 15 m Reacquisition: < 2 s



Sl. No.	Description of Item	Specification
1	2	3
75	Barcode scanners	<p>Model: To be mentioned by the bidder Brand: To be mentioned by the bidder Country of origin: To be mentioned by the bidder Barcode Dimension: 1D 2D Connectivity Technology: Wireless Scanning Distance: 33 ft Image Sensor: Imager Barcode Symbology Supported: Reads Standard 1D Stacked 2D and Postal Symbologies Limited OCR Font Reading Depth of Field: 1.20" - 3.50"@5 mil - Code 39 0.50" - 12.70"@13 mil - UPC 0.60" - 16.20"@20 mil - Code 39 0.70" - 5.50"@6.70 mil - PDF417 0.70" - 5.50"@10 mil - DM 0 mil - 10.30"@20 mil - QR 0 mil - 5 mil@5 mil - Resolution ID Code 39 0 mil - 6 mil@6.70 mil - Resolution 2D DM Physical Characteristics Height: 6.3", Width: 2.8", Depth: 4.1" Color: Black Weight (Approximate): 7.50 oz Battery Information Battery Chemistry: Lithium Ion (Li-Ion) Network & Communication Bluetooth: Yes Warranty: Limited Warranty: 3 Year Brand Name: Honeywell or equivalent</p>
76	Printer	<p>Model: To be mentioned by the bidder Brand: HP or equivalent Country of origin: To be mentioned by the bidder Functions - Only Print, Printer Type - Color Laser Printer, Speed PPM (Black) - 18PPM, Speed PPM (Color) - 19PPM, Print Resolution (Pixel) - 600 x 600dpi Interface :Hi-Speed USB2.0, LAN Memory (MB) - 128MB, OS Compatibility: Windows XP, 7, 8. 8.1, Dimensions: (WxHxD) - 392 x 849 x 236.2mm Weight (Kg) - 11.4Kg Consumable - HP 201A, HP 201X (Black, Cyan, Yellow, Magenta) Others - Duplex printing: Manual, Specialty: Duty cycle (monthly, A4): Up to 30,000 pages, Warranty - 1 year</p>

The image shows a handwritten signature in black ink over a circular official stamp. The stamp contains text that is mostly illegible but appears to be an official seal or stamp of an organization. The signature is written in a cursive style.

Section 7. Technical Specifications

B. Installation of Advance Computing Lab at PSTU, Patuakhali {BHTP-1003(4)}

All the items must have 3 Years warranty.

Item No.	Name of Goods or Related Service	Full Technical Specifications and Standards (Note 1)
1.	Desktop Computer	Model - HP ProDesk 490 G3 MT or equivalent Brand PC, Processor - Intel Core i7 6 th Generation or higher 6700 (3.40GHz, Cache 4MB), Chipset - Intel H170 Chipset, RAM - 8GB, RAM Type - DDR4, HDD - 1TB, Monitor - LG/HP/Samsung 19.5 inch, Optical Device - DVD R/W +/-, Graphics - Intel HD (integrated), Audio Chipset - Integrated HD audio, Networking - Realtek, I/O Ports - 1 VGA, 1 RJ-45, 1 serial (optional 2nd), 1 PS/2 keyboard, 1 PS/2 mouse, 1 audio in 1 audio out, 1 microphone in, 1 parallel, 1 Display, 6 USB 3.0, Keyboard - USB Standard, Mouse - USB Standard, OS -Pre-loaded original windows 10 with media kit and Free Dos. Warranty (Year) - 3 Years
2.	Laptop	Model - HP Pavilion 15-AU018TX or equivalent, CPU - 6 th Generation Intel Core i7 6500U, CPU Clock Rate (GHz) -Min 2.5 (4 MB cache), Display Size (Inch) - Min 14.1 inch, Display Type - LED, RAM (GB) - 8, RAM Type - DDR4, HDD - 1TB, Graphics (Chipset) - NVIDIA GeForce 940 MX, Optical Device - DL DVD +/-WR, Network - Integrated 10/100/1000 BASE-T Ethernet LAN, Bluetooth - 802.11b/g/n, WebCam (MP) - Yes, Card Reader - Yes, Backup Time (Hrs.) - 3, Battery (Cell) - 6, Operating System -Pre-loaded original windows 10 with media kit and Free Dos. Warranty (Year) - 3 Years
3.	Smart Board	Brand and model to be mentioned by the bidder, SMART Board® M600 series. Compatible with the SMART U100 and V30 projectors and with Epson PowerLite® 530, 580 and 585W projectors for SMART. Warranty (Year) - 3 Years
4.	Multimedia Projector	Hitachi CP-RX250 or equivalent, 1024 x 768, Elite or equivalent 70" X 70" Projector Screen Warranty (Year) - 3 Years
5.	Printer	Canon LBP 3300 or equivalent Printer Type - Laser Print Resolution (Pixel) - 600 x 600 Weight (Kg) - 11.8 Warranty (Year) - 3 Years



Item No.	Name of Goods or Related Service	Full Technical Specifications and Standards (Note 1)
6.	Photocopier	Canon Color iR ADV C5550i Digital Photocopier or equivalent Color: White Copy Print Speed Black & White: 50 ppm Copy Print Speed Colour: 50 ppm Copying Resolution: 600x600 dpi Print Resolution: 1200x1200 dpi Memory: Standard 4GB RAM+ 250 GB HDD CPU: MC7448 1GHz or higher Interface: USB Magnification Zoom: 25 - 400% Warranty (Year) – 3 Years
7.	Micro-processor Simulation Kit	Brand and model to be mentioned by the bidder, 8086 Microprocessor-18.432 MHz, 16KB powerful software monitor two 27C256 EPROM Three 16-bit programmable timers from 8253 48 programmable I/O lines from two nos. of 8255 Serial interface using 8251, Six different selectable baud rates from 150 to 9600 101 PC type keyboard Warranty (Year) – 3 Years
8.	MySQL Database	Multi-threaded Pluggable Storage-Engine Architecture ANSI SQL Standards, OLTP and Transactions SQL & Non-SQL data access, Auto sharding of data, Java, C++, memcached, HTTP SSL Support, Built-in Data Encryption/Decryption Geo Spatial Support Warranty (Year) – 3 Years
9.	LabVIEW Professional System	Fully integrated graphical system Support for a wide range of measurement hardware, I/O, and buses Custom, event-driven user interfaces Extensive signal processing, analysis Advanced compiler Professional software development , Operating System: Linux or compatible. Warranty (Year) – 3 Years
10.	MATLab software	Classroom version – Standard package including Math, statistics, signal and image processing and optimization toolbox Warranty (Year) – 3 Years
11.	SPSS software	Read/write text, Excel, SAS Descriptive statistics, data prep, and graphing Programmability/extensibility; supports R/Python Linear, non-linear, ordinal, logistic and 2SLS regression Advanced data preparation, decision trees and forecasting Single/multiple missing value imputation (Original)

