GOVERNMENT ENGINEERING COLLEGE, KOZHIKODE	
NOTICE INVITING E-TENDER	
No.P1/4540/2023	Dated : 20/11/2023
Tender No.	P1/07/2023-24
Subscription	Supply of Prototype developing tools for TBI , of this institution.
Last date and time of receipt of tender	12/12/2023 3 PM On the website (www.etenders.kerala.gov.in)
Date and time of opening of tender	13/12/2023 3 PM
Bid Validity	120 days
Bidding Fee	₹. 700/- + GST 126/-
E.M.D required	₹.3,566/-

Conditions:

Price : Should include all charges and taxes which specifically stated.

Payment : Will be made only after the successful supply, installation of the items as per supply order

Delivery F.O.R : Govt. Engineering College, Kozhikode.

Agreement : Preliminary Agreement in **Kerala Stamp Paper worth ₹.220/-**

(Preliminary Agreement shall be uploaded without fail otherwise bid will not be considered)

Delivery Condition : Within 4 weeks from the Supply Order

Guarantee/Warrantee : (1year) Specified in the specification of items list

Date of opening : In case the proposed date declared as holiday, the tender will be opened on the next working day in the same time.

Special Conditions

- The bidder must furnish name of institutions (under this department and others) in Kerala where the same items were supplied.
- Proforma Report/Original Pamphlet/Warranty Certificate/Preliminary Agreement in **Kerala stamp Paper worth ₹.220/-** are required
- The demonstration of the item/equipment will have to be arranged by the bidder before the evaluation committee during technical evaluation and if any of the items/equipment is not found suitable and/or up-to-the mark by the Committee, the same shall be liable to be rejected.
- The firm must have proven knowledge and expertise in standard system installation, commissioning and providing training.
- The price must be quoted in INR ₹
- After E-tendering the hard copies of all the tender documents except BOQ/Schedule should be submitted to the Principal, Government Engineering College, Kozhikode and cover should be superscribed with the tender id, closing date and opening date of the tender.

NB: The tender procedure will be made as per Rules mentioned in the Revised Store Purchase Manual. The bidders should participate this tender through E-tendering System. Tender cost and EMD should be submitted only through online. For more details contact phone number 0495 2383220

. PRINCIPAL

Approval Valid

Digitally Approved By
Dr.P C Reghu Raj
Date: 20.11.2023
Reason: Approved

APPROXIMATE ESTIMATE OF ITEMS AND JUSTIFICATION			
SlNo	**Description**		Qty
1	Development Board	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 Length 101.52 mm Width 53.3 mm Weight 37 g	3
2	Development Board	Microcontroller: LPC2148 with 512K on chip memory. Crystal for LPC2148: 12Mhz. Crystal for RTC: 32.768KHz. 50 pin Berg header for external interfacing. Operating Supply: 9V DC/AC. 2.4GHz ZigBee (XBee) wireless module adaptor. 512 bytes of I2C external EEPROM. USB Type B Connector.	3
3	Raspberry-Pi 3	Quad Core 1.2GHz Broadcom BCM2837 64bit CPU. 1GB RAM. BCM43438 wireless LAN and Bluetooth Low Energy (BLE) on board. 100 Base Ethernet. 40-pin extended GPIO. 4 USB 2 ports. 4 Pole stereo output and composite video port. Full size HDMI.	5

SINo	Description		Qty
4	Micro SD card (16 GB)	Capacity 16 GB Standard SDA 3.0 Dimensions (L x W x H) 5 x 11 x 1.0mm Weight 0.25g Voltage 2.7~3.6V Performance Seq Read/Write rate up to 50 / 10 (MB/s)** Random Read/Write: 1400 /100 (IOPs)** Certifications FCC, CE, BSMI, VCCI Warranty 5 Years Note **Read/write speed based on internal testing; performance may be lower depending on host device. Speed Class Speed Class: Class 10 Compatibility Smartphone/ Tablet/ Car black box Operating temperature -25°C (-13°F) ~ 85°C (185°F)	3
5	USB Adapter 2A	Adapter type: Switching Input voltage: 100 ... 240 V AC AC input frequency: 50 / 60 Hz Output voltage: 5.0 V DC Output current: 2.0 A Output power: 10.0 W Output: USB-A Color: White Weight: 0.032 kg Dimensions: 69 x 37 x 22 mm Warranty: 2 years	6
6	12 V, 1 Amp SMPS	Input Rating : 110-240V AV 50Hz. Output Rating : 12V DC 1Amp 15Watt Peak Load. Size (LWH) : 40X40X22mm. Working Temperature : 0 to 70 degree celsius. 3 Months Brand warranty excluding physical and liquid damage.	1
7	Zigbee Modules 100m range	Supply voltage: 2.8V to 3.4V; Average current consumption at 3.3V: 50mA; Maximum transfer rate 250 kbps; Frequency: 2.4 GHz; Output 1 mW (+ 0 dBm); Transmission range: 100 m; FCC certificate; 6 input ADC (10-bit) input pins; 8 pin digital IO; 128-bit encryption Local or Wireless Configuration; Accepts the AT or API command set;	6

SINo	Description		Qty
8	Zigbee Modules Adapter	Compatible with all ZigBee modules (Series 1 and Series 2.5, standard and Pro) The built-in 3V3 Voltage regulator Onboard 3V3 <->5V level converter (easy to interface 5V Devices) Status LEDs (RX,TX,RSSI,Power) Zig Bee Pins available at 2.54 mm berg strip USB Powered. Small footprint. All XBee pins are broken out. Reset button.	6
9	Metal-gear Servo Motors	Power: 4.8V - 6V DC max Avg Speed: 60° in 0.20 sec (@ 4.8V), 60° in 0.16 sec (@ 6.0V) Weight: 62.41g.	6
10	ESP8266 Development Board	Processor: L106 32-bit RISC microprocessor core based on the Tensilica Diamond Standard 106Micro running at 80 or 160 MHz. Memory: ... External QSPI flash: up to 16 MiB is supported (512 KiB to 4 MiB typically included) IEEE 802.11 b/g/n Wi-Fi. ... 17 GPIO pins. Serial Peripheral Interface Bus (SPI)	2
11	ESP32 Development Board	Microcontroller: Tensilica 32-bit Single-/Dual-core CPU Xtensa LX6. Operating Voltage: 3.3V. Input Voltage: 7-12V. Digital I/O Pins (DIO): 25. Analog Input Pins (ADC): 6. Analog Outputs Pins (DAC): 2. UARTs: 3. SPIs: 2.	2
12	2-Channel Relay Board (12 volt)	Power supply: 12V. Coil voltage: 12V. Max switching voltage: 250VAC / 30VDC. Max switching current: 10A. logic: 5V.	2
13	2-Channel Relay Board (5 volt)	Supply voltage – 3.75V to 6V Trigger current – 5mA Current when relay is active - ~70mA (single), ~140mA (both) Relay maximum contact voltage – 250VAC, 30VDC Relay maximum current – 10A	2

SINo	Description		Qty
14	L298N Motor Driver Module	Driver Model: L298N 2A Driver Chip: Double H Bridge L298N Motor Supply Voltage (Maximum): 46V Motor Supply Current (Maximum): 2A Logic Voltage: 5V Driver Voltage: 5-35V Driver Current:2A Logical Current:0-36mA Maximum Power (W): 25W Current Sense for each motor Heatsink for better performance Power-On LED indicator	4
15	Quad Encoder Geared DC Motor 200 RPM, 12 V DC	Motor with Quad encoder 200RPM 12V DC motors with Metal Gearbox and Metal Gears 4680 Counts per Revolution. 6mm Dia shaft with M3 thread hole Gearbox diameter 37 mm. Motor Diameter 28.5 mm Length 84.5 mm without shaft Shaft length 30mm 170gm weight 13.5kgcm Holding Torque No-load current : 800 mA, Load current : upto 7.5 A(Max)	8
16	Micro servo motors	Operating Voltage is +5V typically · Torque: 2.5kg/cm · Operating speed is 0.1s/60° · Gear Type: Plastic · Rotation : 0°-180° · Weight of motor : 9gm	4
17	L3G4200 3 axis digital gyroscope	Current draw: 6.7mA @ 3.3VDC, 7mA @ 5VDC. Communication: I2C (up to 400kHz) or SPI (10MHz; 4 & 3 wire) Dimensions: 0.85 x 0.80 in (2.16 x 2.03cm) Operating temp range: -40 to +185 °F (-40 to +85 °C)	2
18	LSM303 3 axis digital accelerometer and 3 axis magnetometer	Onboard 3.3V Low Drop voltage regulator with input range of 3.6V to 6V. Logic supply voltage range of 1.8 to 3.3V. Logic supply pin is accessible through 9 pin header Dimensions: 0.9"(L) X 0.5"(W) 2 x Mounting holes 3 magnetic field axis and 3 acceleration axis Full scale range of ± 1.3 to ±8.1 gauss magnetic field ±2g/±4g/±8g/±16g user selectable full-scale acceleration ranges 16 bit data output I2C serial interface Power-down mode/ low-power mode 2 independent programmable interrupt generators for free-fall and motion detection Embedded temperature sensor 6DOF orientation detection	2

SlNo	Description		Qty
19	Gyroscope, accelerometer and GPS interfacing module for the robot	Operating Voltage 5V (typical) Accelerometer Range ±2g, ±4g, ±8g, ±16g Gyroscope Range ±250°/s, ±500°/s, ±1000°/s, ±2000°/s Temperature Range -40 to +85°C Absolute Maximum Acceleration Up to 10,000g	2
20	GPS receiver	48 Channel , Frequency L1 1575 MHz, 3.0-3.6 V DC, Position Accuracy 2.5 m, Prorocol- NMEA SiRF Binary , Module Interface - I2C, SPI, UART	2
21	Two Axis Camera pod with Wireless Camera	Image sensor CMOS Image sensor size 1/2.8 Lightfinder Lightfinder 2.0 Wide dynamic range Forensic WDR Min illumination/ light sensitivity (Color) 0.05 lux Min illumination/ light sensitivity (B/W) 0.01 lux	2
22	USB TV Tuner for Interfacing wireless camera with Laptop (supports windows 8)	Package Dimensions 12 x 8 x 5 cm; 80 Grams Operating System Windows,Microsoft Hardware Interface USB, USB 2.0	2
23	Arduino Uno with sensors	Microcontroller: ATmega328P Operating Voltage: 5V Input Voltage (recommended): 7-12V Inout Voltage (limit): 6-20V Digital I/O Pins: 14 (of which 6 provide PWM output) PWM Digital I/O Pins: 6 Analog Input Pins: 6 DC Current per I/O Pin: 20 mA DC current for 3.3V Pin: 50 mA Flash Memory: 32 KB (ATmega328P) of which 0.5 KB used by bootloader SRAM: 2 KB (ATmega328P) EEPROM: 1 KB (ATmega328P) Clock Speed: 16 MHz LED_BUILTIN: 13 Length: 68.6 mm Width: 58.4 mm Weight: 25 g	10
24	Metal-gear Servo Motors	Size: 40x20x40.5mm Weight: 60g Voltage: 4.8V – 6.6V Stall Torque (4.8V): 18.5 kg/cm Stall Torque (7.2V): 21.8 kg/cm Rotation: 180 Degree Gear: Metal Gear	10

SINo	Description		Qty
25	Sharp GP2D120C infrared range sensor (4cm to 30cm)	operating voltage: 4.5 V to 5.5 V average current consumption: 33 mA (typical) distance measuring range: 4 cm to 30 cm (1.5" to 12") output type: analog voltage output voltage differential over distance range: 2.3 V (typical) response time: 38 ± 10 ms package size: 29.5×13.0×13.5 mm (1.16×0.5×0.53") weight: 3.5 g (0.12 oz)	10
26	Sharp GP2Y0A21YK0F infrared range sensor (10cm to 80cm)	Operating Voltage (VDC) 4.5 ~ 5.5 Distance measuring range (cm) 10 ~ 80 cm Screw Holes 37mm apart, 3 mm diameter. Connecting cable length - 15 cm Length - 44 mm Width - 18 mm Height - 13 mm Weight - 4gm	10
27	Sharp GP2Y0A02YK infrared range sensor (20cm to 150cm)	Operating voltage: 4.5 V to 5.5 V Average current consumption: 33 mA (note: this sensor draws current in large, short bursts, and the manufacturer recommends putting a 10 µF capacitor or larger across power and ground close to the sensor to stabilize the power supply line) Distance measuring range: 20 cm to 150 cm (8″ to 60″) Output type: analog voltage Output voltage differential over distance range: 2.05 V (typical) Update period: 38 ± 10 ms Size: 44.5 mm × 18.9 mm × 21.6 mm (1.75″ × 0.75″ × 0.85″) Weight: 5 g (0.18 oz)	5
28	Sharp GP2Y0A710K0F infrared range sensor (100cm to 500cm)	Supply voltage: 5V - Current: 33-50mA - Detecting range:100-550cm - Output:Analog, proportional to distance	5

SINo	Description		Qty
29	Maxbotix ultrasonic range sensor	Resolution of 1 inch 20Hz reading rate 42kHz Ultrasonic sensor measures distance to objects RoHS Compliant Read from all 3 sensor outputs: Analog Voltage, RS232 Serial, Pulse Width Virtually no sensor dead zone, objects closer than 6 inches range as 6 inches Maximum Range of 254 inches (645 cm) Operates from 2.5-5.5V Low 2.0mA average current requirement Small, lightweight module Designed for easy integration into your project or product Widest beam of the LV-MaxSonar-EZ sensors Great for people detection applications	5
30	12V Linear Actuator	Max Force/Thrust - 8.9 N, External Length- 21.31 mm, Supply voltage - 12 V DC, Product range- 26 DBM-L, Motor Size- 26.16 mm	3
31	12V 1/2 inch solenoid valve	Rated Operating Voltage - 12V DC Rated Current - 0.6A Operation Mode Normally Closed Power Consumption - 8W Pressure - 0.02- 0.8Mpa Filtering capabilities Removable cleaning filtration devices Energized forms -mIntermittent Inlet and outlet Dimeter - 1/2" (outer diameter) hose Dimensions (mm) LxWxH - 80 x 88 x 50 Weight (gm) -100	3

For spec. enquiry:- iedc@geckkd.ac.in

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20/11/2023
Dr. Francis Ermatty
(TBI faculty in charge)