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No. GECA/E&TC/Store/2018-19/

Date. 29.11.2018

To

GEca Notice Board and Website

Subject :- Quotation for Supply of Following Item As per Annexure Attached

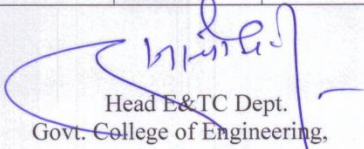
Dear Sir,

You are requested to send your competitive quotations for the supply of the following items subject to the following conditions.

CONDITIONS:

1. Rates quoted should be FOR AURANGABAD or free delivery at the Institute inclusive of all lead and Lift.
2. Detailed specifications of the articles you intend to supply should be given. If not according to the specification, laid down here under.
3. The material should be supplied within (04) Weeks from the date of order. List of material is given below.
4. The earliest delivery period should be quoted if you cannot supply within the period mentioned above.
5. Quotation should be in sealed cover and superscripted as “**Quotations**” for **Electronics & Telecommunication Department** Due on 17.12.2018 at 5 P.M.
6. Quotation should be valid for Six Month. 17.12.2018
7. Quotation not complying with the above conditions and incomplete once will not be considered.
8. Right to reject any or all quotations rates are with the under signed.
9. No advance shall be paid and No part payment shall be made.
10. Rates quoted must be inclusive of All applicable Taxes.
11. Order is finalized after pre dispatch inspection , if Department required
12. Only Registered Venders need to submit Quotation
13. Order will be finalized based on overall value of items 1 to 6

Sr.No.	Specification	Approx Qty.	Remark
01	Arduino and ARM 9 Boards with peripherals interface development board	As per Details attached	


Head E&TC Dept.
Govt. College of Engineering,
Aurangabad

Arduino Kits with ARM 9 peripheral and interfacing Development Boards

Sr No	Name of the component	Quantity
1	Arduino Uno <ul style="list-style-type: none"> • Microcontroller ATmega328 (PDIP) • Operating Voltage 5V • Input Voltage (recommended) 7-12V • Input Voltage (limits) 6-20V • Digital I/O Pins 14 (of which 6 provide PWM output) • Analog Input Pins 6 • DC Current per I/O Pin 40 mA • DC Current for 3.3V Pin 50 mA • Flash Memory 32 KB (ATmega328) of which 0.5 KB used by bootloader • SRAM 2 KB (ATmega328) • EEPROM 1 KB (ATmega328) • Clock Speed 16 MHz 	30
2	GLCD <ul style="list-style-type: none"> • 128x64 resolution • Samsung Controller KS0108B • +5v operation • 8 datalines and on board negative voltage supply 	05
3	Arduino MEGA <ul style="list-style-type: none"> • Microcontroller ATmega2560 • Operating Voltage 5V • Input Voltage (recommended) 7-12V • Input Voltage (limits) 6-20V • Digital I/O Pins 54 (of which 15 provide PWM output) • Analog Input Pins 16 • DC Current per I/O Pin 40 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 • Resettable polyfuse that protects PC USB ports from shorts and overcurrent 	10
4	esp32 IoT Board <ul style="list-style-type: none"> • Xtensa 32-bit LX6 microprocessor(s) • upto 240 MHZ clock frequency • integrated WLAN MAC protocol. • Integrated Bluetooth link controller 	5

	<ul style="list-style-type: none"> • Compliant with Bluetooth v4.2 BR/EDR and BLE specification • Class-1, class-2 and class-3 transmitter without external power amplifier • Frequency range: 2.4 GHZ ~ 2.5 GHZ • 520 kB (8 kB RTC FAST Memory included) of on-chip SRAM for data and instructions. • Integrated 802.11 b/g/n WIFI transceiver • 2.2 to 3.6V operating range • OPerating current : 80mA • Operating temperature range: -40°C ~ +80°C 	
5	Node MCU - ESP8266 IoT Development Board	10
6	Particle Photon (WiFi IoT Development Board)	5
7	LPG Gas Sensor (MQ2)	20
8	Body Temperature Sensor	20
9	Blood Pressure Sensor	20
10	2.8" TFT TOUCH SHIELD FOR ARDUINO WITH CAPACITIVE TOUCH	05
11	ARDUINO WITH SENSORS AND COMPONENTS KIT A] Each 03 1. MQ-2 Gas Sensors 2. Thermometers Dallas DS1820 3. IR Sensors 4. Resistance Thermometers 5. Ultrasonic Range Finder module sensor 6. RH Sensor 7. Three Axis Grroscope Accelerometer Sensor 8. Module for Arduino 9. hall effect sensor 10. Temperature and humidity sensor 11. accelerometer module 3 axis B] 1. Salinity Sensor Kit 2. PH Sensor Kit 3. Temperature Sensor Kit 4. Dissolved Oxygen Kit 5. Tentacle Shield for Arduino 6. Vernier Arduino Interface Shield Microcontroller Board c. Raspberry Pi 3 Model B+	03
12	Ardino Based Vision Based Robots Set-up Consist of (a) Colour based Recognition, (b) Pattern Based Segmentation, configurable smart cameras with the included Vision Builder for Automated Inspection (AI) software and program the camera with the L> LabVIEW Real-Time Module and the Vision Development Module.	01
13	ARM processor based development board Microcontroller based on ARM Cortex –M	02

	<p>(B) ARM Cortex-R4 based processors (C) Legacy ARM7 and ARM9 Devices (D) ARM SecurCore based devices (E) Compiler Support for Cortex-M, ARM7, ARM8, ARM9 (F) Including middleware, • IPv4 Networking • USB Device • File System • Graphics (G) Documentation CD, Manual and Learning material CD if any</p>	
14	<p>CORTEX M3 Board with Interfaces (Hardware) (A) Single Board Computer/Evaluation Board for NXP LPC1760 series (1) 100MHz ARM Cortex -M3 processor - LPC 1768 based MCU in 100 -pin LQFP (2) On -Chip Memory: 512KB Flash and 64KB RAM 3) Color QVGA TFT LCD (4) 10/100 Ethernet Port (5) USB 2.0 Full Speed - USB, USB – (6) Control for ADC Input OTG, and USB Host (7) 2 CAN interfaces, 2 Serial Ports, SD/MMC Card Interface, 5 -position Joystick and push –button (8) Analog Voltage (9) Amplifier and Speaker (10) Debug Interface Connectors: 20 -pin JTAG (0.1 inch connector), 10 -pin Cortex debug (0.05 inch connector) (11) Provision to work with Interfaces for academic / development B) Interfaces; 1. Elevator Interface : Elevator representation by a column of ten LED s . Key (request) and LED indicator (status) for each floor assumed. 2. Dual DAC Interface: Two 8 - bit D/A converters which can provide current/voltage output 3. 4X4 Matrix Hex Keypad Interface: 16 keys from (0 to F) 4. DC Motor Interface: +12V , 250mA DC motor , Speed control using pulse width modulation technique with 100 Hz pulse frequency 5. 16 Channel 8 -bit ADC Interface: 16 channel 8 bit data acquisition device based on ADC 0816 . Provision for on -board reference voltage generation using precision voltage Each 01 No. of quantity 13 regulator LM 723. Input signal voltage range ; 0 -5V 6. Calculator type keyboard Interface: keys 0 to 9, +, -, x, /, =, %, AC, CE, etc. arrangement in 2 groups of 3x4 matrix 7. Keyboard/Display Interface: Calculator style keyboard with seven segment display. 20 Keys arrangement in a 4x5 matrix (0 to 9, ., =, +, -, x, /, %, AC, CE, CHK) and six 7 -segment displays 8. LCD (16X2) Interface: 16x2 (sixteen character per line and two lines) alphanumeric LCD module which can be directly coupled to the programmable peripheral interface 8255 on any of the trainers 9. Real Time Clock Interface: Based on MSM5832 real - time clock/calendar (RTC) chip which can be interfaced to the programmable peripheral interface 8255A. Battery backup for RTC . Stepper Motor Interface with Stepper Motor & Power Adapter: Interface should permit ON/OFF control of the individual coils of the stepper motor at varying speeds in either direction. +12V to +5V DC, 3 Kg.cm torque stepper motor. Power Supply and required driver circuitry along with the necessary software to</p>	02

	control the operation of the stepper motor. 11. Traffic Lights Interface: Interface with four directions (North, South, East, and West) LED indicators (Left, Right, Straight, Amber, Red and Pedestrian Red/Green). Provision to control 24 LEDs through 24 port lines of 8255 12. Zigbee Interface: Interface with Tarang ZigBee Transceiver module (User can select and program in any network topology) 14 13. Power Supply, +5V @3A; +/- 12V @ 250mA, +30V @ 100mA (C) Sample programs for all interfaces, software CD and documentation, Manual and Learning material CD if any	
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Add on Shields for Raspberry Pi B+ as well as arduino Dev Boards

Sr. No.	Name of the component	Quantity
15	LCD Shield	5
16	Sense HAT packs an 8x8 colour LED matrix Specifications: • Gyroscope – angular rate sensor: +/-245/500/2000dps • Accelerometer - Linear acceleration sensor: +/-2/4/8/16 g • Magnetometer - Magnetic Sensor: +/- 4/8/12/16 gauss • Barometer: 260 – 1260 hPa absolute range (accuracy depends on the temperature and pressure, +/- 0.1 hPa under normal conditions) • Temperature sensor (Temperature accurate to +/- 2 degC in the 0-65 degC range) • Relative Humidity sensor (accurate to +/- 4.5% in the 20-80%RH range, accurate to +/- 0.5 degC in 15-40 degC range) • 8x8 LED matrix display • Small 5 button joystick • Product Dimensions: 65.1mm x 56.6mm x 13.9mm / 2.6" x 2.2" x 0.5" • Product Weight: 20.4g / 0.7oz	5
17	MotoZero - Motor control module Specifications: • MotoZero PCB • 40-pin GPIO header • 2x Motor driver chips • 2x Motor driver sockets • 5x Terminal blocks • 1x capacitor	05
18	SD Card Shield	5
18	RTC Module shield	5
20	Dot Matrix display Module with MAX 7219 IC	5
21	Camera Module V2 compatible with arduino and raspberry Pi B 8 megapixel sensor Specifications: Weight 3g Still resolution 8 Megapixels Video modes 1080p30, 720p60 and 640 x 480p60/90 Linux integration V4L2 driver available C programming API OpenMAX IL and others available Sensor Sony IMX219 Sensor resolution 3280 x 2464 pixels Sensor image area 3.68 x 2.76 mm (4.6 mm diagonal) Pixel size 1.12 µm x 1.12 µm Optical size 1/4" Focal length 3.04 mm Horizontal field of view 62.2 degrees Vertical field of view 48.8 degrees Focal ratio (F-Stop) 2.0	01
22	Pi NoIR Infrared Camera	01

	<p>Specifications:</p> <ul style="list-style-type: none"> • Improved Resolution o 8 megapixel native resolution high quality Sony IMX219 image sensor o Cameras are capable of 3280 x 2464 pixel static images • Remaining High Quality 100 o Capture video at 1080p30, 720p60 and 640x480p90 resolutions o All software is supported within the latest version of Raspbian Operating System o No Infrared filter making it perfect for taking Infrared photographs or photographing objects in low light (twilight) conditions o 1.4 μm X 1.4 μm pixel with OmniBSI technology for high performance (high sensitivity, low crosstalk, low noise) o Optical size of 1/4" 	
23	<p>PiFace Digital</p> <p>Specifications: PiFace Digital is designed to plug on to the GPIO of your Raspberry Pi, allowing you to sense and control the real world. With PiFace Digital you can detect the state of a switch, for example from a door sensor, a pressure pad or any number of other switch types. Once this state has been detected, you can write your own software for Raspberry Pi that determines how to respond to that switch state. You can drive outputs to power motors, actuators, LEDs or anything you can imagine. • 2 Changeover Relays • 4 Tactile Switches • 8 Digital Inputs • 8 Open-Collector Outputs • 8 LED Indicators • Graphical Emulator • Easy to program in Python 3 and 2, Scratch and C • Support for interrupts</p>	01
24	<p>RaZberry Specifications:</p> <p>A Sigma Designs ZM5202 Z-Wave transceiver module (a so called 5th generation Z-Wave module, an external 32 K SPI flash for network data and a PCBA antenna. Two LEDs to indicate certain status of the Z-Wave controller chip. Beside the PCBA antenna there is an option to solder a whip antenna and a IPEX connector. The power consumption of the board is typically 18 mA @ 3.3 V but can peak at 40 mA when the chip is transmitting.</p>	01
25	<p>Unicorn HAT (LED square 8x8 matrix display)</p> <p>Specifications: • 64 RGB LEDs (WS2812B) • Python API • Compatible with Raspberry Pi B+ • EEPROM with Raspberry Pi HAT configuration details • LED data driven via DMA over PWM</p>	02

Wireless Modules

	Name of the component	Quantity
26	ESP-8266-01 - WiFi Module	10
27	Bluetooth Low Energy BLE HM-10	10
28	Bluetooth Classic Module HC-05	10
29	RFID Module With RFID Cards (3 tags)	10
30	GSM/GPRS Module (SIM 800)	10
31	GPS Module (Ublox 6M)	5
32	Finger Print Module (R305)	2

Sensors

	Name of the component	Quantity
33	HC SR-04 (Distance Sensor)	10
34	PIR Sensor (Motion Detection Sensor)	10
35	DHT 11 (Humidity and Temperature Sensor)	10
36	LM35 (Temperature Sensor)	10
37	LDR (Light Sensor for Arduino)	20
38	BH1750 Sensor (Light Sensor for Raspberry Pi 2)	5
39	Colour Sensor	5
40	Soil Moisture Sensor	10
41	ADXL sensor (Accelerometer Sensor) ADXL345	10
42	Water proof Temperature Sensor (DS18B20)	10
43	Xbee S2c series with Base board	10
44	Alcohol sensor Module (MQ-03)	10
45	Air quality sensor Module (MQ-135)	10
46	Carbon Monoxide Sensor Module (MQ-07)	10
47	Smoke Sensor (MQ-02)	10
48	Barometric Pressure Sensor (BMP 10)	10
49	Compass Module (HMC5885)	10
50	DHT22 Humidity and Temp sensor Module	10
51	Flex Sensor 2.2	5
52	Flex Sensor 4.2	5
53	Force sensor	5
54	IR Long Range sensor	5
55	IR Obstacle Avoidance sensor	10
56	Pulse Sensor	5
57	Raindrop sensor	10
58	Reflective Optical Sensor with Transistor Output	10
59	Sound Sensor Module	10
60	Tilt sensor Module	10
61	Hall effect sensor Module	10
62	ECG Module	2
63	EMG/EKG Shield	2

	Name of the component	Quantity
64	Stepper Motors -5v	10
65	Stepper Motors -12v	10
66	stepper Motor Driver Module	20
67	Batteries (9V Hw)	10
68	Snap Connectors with Power Plug	10
69	Servo Motor-1kg torque	10
70	Servo Motor-5kg torque	10
71	USB to RS232 Convertor	10
72	1-channel relay module	10
73	4-channel relay module	5

74	Buzzer	20
75	LCD 16*2 character	15
76	4-digit seven display	10
77	16keypad membrane	10
78	7-segment display	20

Prototyping for arduino

d/c

naresh