



# GOVERNMENT ENGINEERING COLLEGE

(Dept. of Technical Education, Govt. of Gujarat)  
Mavadi Kankot Road, Near Krishnanagar - Rajkot

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सत्यमेव जयते

Date: 22/10/2018

No: GECR /2018/SSIP/ 1737 /67/11-25/ 1258C1 20 87

To

Subj.: Quotation of Items required for SSIP PoC/Prototype Making Project No. 11-25 (As per Annexure attached).

Sir,

I request you to sent your valued QUOTATION for the items mentioned in the statement enclosed (where necessary), with this letter. The following Conditions should be complied within your quotation and failure to which will render your quotation liable to rejection.

The quotation should be sent in a sealed cover. Outside the cover it should be clearly written Quotation for SSIP PoC/Prototype Making Project No. 11-25. Last date 19/11/2018. If this writing is not shown outside the cover, the cover is likely to be opened earlier and be rejected.

1. The last date for receiving the quotation is 19/11/2018, and the quotations will be opened at 16.00 hrs on 20/11/2018. You may remain present at the time and date of opening, if you so desire.
2. Your rates should be strictly F.O.R. Institute, giving bifurcation of base price and applicable taxes. The delivery of items should be at Government Engineering College, Mavadi-Kankot road, Near Krishna nagar, Rajkot.
3. The specifications of each item quoted should be completely described in the quotation. These specifications should be the same as those given in the statement enclosed herewith. In case you are unable to quote for one or more item/s, exactly as per the specifications of the tender/inquiry, you may quote for the item/s having identical or nearest resembling specifications stating respectively in accordance with specifications of the item offered by you differs with those prescribed by us.
4. Rate must be quoted in specified units mentioned in the tender/quotation form.
5. Conditional tender will not be accepted.
6. Quotation must be on letter pad and duly signed and stamped otherwise quotation will be rejected.
7. The validity period for the quotation should be at least 3(three) months or more from the date of opening of tender/quotation. Tender/Quotation once submitted shall remain final and irrevocable.
8. Items should be given in same serial number in the quotations as given in the tender form.
9. The inspection of the materials for approving them will be done only after the receipt of the goods by this Institution. Payment will be made only after the receipt of totally ordered acceptable items. Every effort will be made to make payment at an earliest, but in no circumstances any offer of discount for early payment will be accepted and any such offer of discount shall mean that you desire to give the said discount, and the said discount will be deducted from your bill under all circumstances.
10. Goods/Articles ordered are not receivable by retrieving documents through bank as no Security Deposits or Earnest Money Deposit are taken from the bidders nor the inspection of goods is carried out prior to the dispatch.
11. This Office reserves the right to accept or reject any or all quotation/s without assigning any reason.
12. You may please note that you have to quote only those items which are ready in your stock and the delivery can be made within 07 days.

Yours faithfully,

*ceded*

PRINCIPAL,  
GOVT. ENGINEERING COLLEGE,  
RAJKOT.

Encl: 1 Sheet

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## Annexure - I

No.	Item Name	Detailed Specification	Quantity
1	16*4 LCD	Type: Character, Display format: 16 x 4 characters, Built-in controller: ST 7066 (or equivalent), Duty cycle: 1/16, 5 x 8 dots includes cursor, + 5 V power supply (also available for + 3 V)	1
2	50 kg-cm 12V DC Motor	30 RPM Side Shaft Super Heavy Duty DC Gear Motor Product ID: NR-GMD-SS-SHD-30 RPM: 30 at 12V Voltage: 4V to 12V Stall torque: 50 Kg-cm at stall current of 4.8 Amp. Shaft diameter: 8mm Shaft length: 25 to 30mm Gear assembly: Spur Brush type: Carbon Motor weight: 380gms	1
3	Accelerometer	ADXL335-tripple axis linear accelerometer	1
4	Adepter for DC Power Supply	5V, 2A Power Charger Adapter Power Supply + USB ON/OFF Switch Wire Cable	1
5	Arduino Mega 2560	The Arduino Mega 2560 is a microcontroller board based on the ATmega2560. It has 54 digital input/output pins (of which 15 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button.	1
6	Arduino MP3 Shield	Power Supply= 5V, Size= 47mm*53mm, SD Card Compatible, Supports MP3 file	1
7	ATMEGA328 chip	CPU :- 8-bit AVR Number of Pins :- 28 Operating Voltage (V) :- +1.8 V TO +5.5V Communication Interface :- Master/Slave SPI Serial Interface(17,18,19 PINS) Programmable Serial USART(2,3 PINS) [Can be used for programming this controller] Two-wire Serial Interface(27,28 PINS)[Can be used to connect peripheral devices like Servos, sensors and memory devices] ADC Module 6channels :- 10-bit resolution ADC PWM channels :- 6 Internal Oscillator :- 8MHz Calibrated Internal OscillatorProgram Memory Type :- Flash Program Memory :- 32Kbytes[10000 write/erase cycles] CPU Speed :- 1MIPS for 1MHz RAM :- 2Kbytes Internal SRAM EEPROM :- 1Kbytes EEPROM	1
8	ATtiny85 Microcontroller Development Board	32 x 8 General Purpose Working Registers •Non-volatile Program and Data Memories 2/4/8K Bytes of In-System Programmable Program Memory – 128/256/512 Bytes In-System Programmable EEPROM – 128/256/512 Bytes Internal SRAM – 8-bit Timer/Counter with Prescaler and Two PWM Channels – 8-bit High Speed Timer/Counter with Separate Prescaler, 2 High Frequency PWM Outputs with Separate Output Compare Registers – 10-bit ADC,4 Single Ended Channels,2 Differential ADC Channel Pairs with Programmable Gain (1x, 20x) – Programmable Watchdog Timer with Separate On-chip Oscillator – On-chip Analog Comparator • I/O and Packages – Six Programmable I/O Lines – 8-pin PDIP, 8-pin SOIC, 20-pad QFN/MLF, and 8-pin TSSOP (only ATtiny45/V) • Operating Voltage – 1.8 - 5.5V for ATtiny25V/45V/85V – 2.7 - 5.5V for ATtiny25/45/85	1

9	Bluetooth Module(HC05)	<ul style="list-style-type: none"> <li>• Profiles: Bluetooth Serial port Profile</li> <li>• Bluetooth protocol, Bluetooth Specification v2.0+EDR</li> <li>• Frequency: 2.4GHz ISM band, Modulation: GFSK(Gaussian frequency shift keying)</li> <li>• Emission Power: <math>\leq 4</math>dBm, class 2, Sensitivity: <math>\leq -84</math>dBm at 0.1% BER</li> <li>• Speed: Asynchronous: 2.1Mbps(Max)/160kbps, Synchronous: 1 Mbps/1 Mbps</li> <li>• Security: Authentication and encryption</li> <li>• Power supply: +3.3V DC 50mA</li> <li>• Working temperature: <math>-20 \sim +75</math>centigrade</li> <li>• Dimension: 26.9mm * 2.2mm</li> </ul>	1
10	Conveyer belt	6m length, 10cm width, 3mm thickness	1
11	DC Motor	300 rpm, 12V, 20kgcm	1
12	DC Motor(100rpm)	<ul style="list-style-type: none"> <li>• Weight: 100gm(Approx) RPM: 100</li> <li>• Operating voltage: 12v DC</li> <li>• Gearbox: Attached plastic(Spur) Gearbox</li> <li>• Shaft diameter: 6mm</li> <li>• Shaft length: 21mm</li> <li>• Torque: 1.2kg-cm</li> <li>• No-load current = 60mA(Max)</li> <li>• Load current = 300mA(Max)</li> <li>• Dimensions: Body diameter: 38mm,</li> <li>• Motor length with shaft: 77mm.</li> </ul>	1
13	DC motor(12v)	20 kg-cm, 30 rpm, 12 volt	1
14	DC Motor(500rpm)	<ul style="list-style-type: none"> <li>• 500RPM 12V DC motors with Gearbox</li> <li>• 3000RPM base motor</li> <li>• 6mm shaft diameter with internal hole</li> <li>• 125gm weight</li> <li>• Same size motor available in various rpm</li> <li>• 0.25kgcm torque</li> <li>• No-load current = 60mA(Max),</li> <li>• Load current = 300mA(Max)</li> </ul>	1
15	Display Display	Wangedd22 MAX7219 Dot Matrix Module For Microcontroller 4 In 1 Display with 5pin Line	1
16	Dual DC motor Driver 20 A	<p>Simple connectivity to IO pins of any MCU. Compatible with motors rated 6V - 18V Can easily deliver 20A of current during normal operation simple TTL/CMOS based interface that can connect directly to the IOs of an MCU Input Voltage: 7V minimum to 18V maximum Continuous Current (<math>&lt; 10</math>seconds) ~ 20A Continuous Current (<math>&lt; 60</math>seconds) ~ 10A Continuous Current (<math>&gt; 60</math>seconds) ~ 5A (without heat sink on MOSFETS) No short circuit protection on output of the driver</p>	1
17	Flex Sensor	<p>Height=0.43 mm Resistance Bend range= 45k to 125k Power Rating = 0.5W to 1W Active Length= 55.37mm Part Length= 73.66mm Size= 2.2 inches</p>	1
18	FR4 epoxy PCB	Double Side, 1.6mm, FR4, Glass Epoxy, 35micron Finish Cu thickness, Green Mask White Legend, HAL Finish, FPT Size: 50 MM X 50 MM	1



19	GPS module	NEO-6M, This module has an external antenna and built-in EEPROM. Interface: RS232 TTL Power supply: 3V to 5V Default baudrate: 9600 bps Works with standard NMEA sentences	1
20	humidity Sensor	DHT11 Digital relative humidity and Temperature sensor	1
21	IR LED	IR LED	1
22	IR Proxy	3pin sensor, range = 10cm, 5v dc, o/p voltage 5V	1
23	IR sensor module FC-51	Detection distance: 2 ~ 30cm Detection angle: 35 ° Degree Working voltage: 3 - 5V DC Output type: Digital switching output (0 and 1) 3mm screw holes for easy mounting Board size: 3.2 x 1.4cm	1
24	J type Temperature Sensor	Thermocouple sensor J type -46C to 400C	1
25	Jumpers set	male-male, male-female, female-female	1
26	Keypad Module	5Pcs 4x4 16-Key Matrix Keypad Keyboard Module	1
27	Laser Light	10Mw 532nm	1
28	Laser Rx	CJMCU 9930 APDS-9930 Digital Proximity	1
29	Laser Tx	KY 008	1
30	LED (17 Green, 17 Yellow, 17 Red)	3mm (Green, Yellow, Red), Voltage range : 1.6V to 2.7V, Current Range : 16 to 20 mA	1
31	Linear Potentiometer	20 mm stroke -10k ohm linear potentiometer	1
32	Lipo Battery	3.7V, 450 mAh	1
33	Load Cell	Capacity: 10kg Material: Aluminium alloy Type: Parallel beam type Platform size: 250 x 350mm Rated output: 1.0±0.15 mV/V Excitation Voltage: 5-10 Vdc Input Resistance: 1000±15 Ω Output resistance: 1000±10 Ω Operating Temperature Range: -10 - +55 C Combined Error : ±0.05 %FS	1
34	Load cell Amplifier module	HX711 Dual Channel 24 Bit ADC Weight sensor Amplifier Operating Voltage: 2.7-5 V Operating Current: < 1.5 mA	1
35	LVDT	4-pole ,50mm stroke, 5K ohm, input voltage 0-16v	1
36	Magnetic Switch	door/window contact magnetic reed switch, SEN-2697	1
37	memory card	64gb class-10 memory card	1
38	Metal detector sensor module	RC-A-354 VCC 9V Battery (From 9V Battery And Not Adapter) Logic High Out Put With Common Ground Can detect any metal at the range of 1Cm to 3Cm, you can connect 9V battery to make it handy Note: It will not detect coins if it is in the middle of the coil, it may detect if it is close to the coil, It will not detect any type of explosives Inclusions 1 X metal detector, metal sensor has to supply 12V from controllers and not 12V via adapter	1
39	Metal sheet	mild steel 0.5 mm width, 24" X 24"	1
40	Microphone	omni directional, range-20-20khz	1

41	Motor Driver L298N	<ul style="list-style-type: none"> <li>• The L298N driver module, Using</li> <li>• ST'S L298N chip can directly drive</li> <li>• Two 3-30v DC motor, And</li> <li>• provide a 5v output interface can 5v</li> <li>• Single-chip circuitry to supply,</li> <li>• Support 3 3V MCU control.</li> </ul>	1
42	Nodemcu V3	<p>It includes firmware which runs on the ESP8266 Wi-Fi SoC from Espressif Systems, and hardware which is based on the ESP-12 module. Built-in on-board USB-TTL serial converter based on CH340G, with Micro-USB socket. Power in for DC 4~9V DC to pin VIN.</p> <p>Pin headers 2.54mm (0.1") 15 pins x 2 rows.</p> <p>Arduino-like hardware I/O and can program in Arduino IDE.</p> <p>Event-driven API for network applications.</p> <p>10 GPIOs D0-D10, PWM functionality, IIC and SPI communication, 1-Wire and ADC A0 etc. all in one board.</p> <p>Wifi networking (can be uses as access point and/or station, host a webserver). connect to internet to fetch or upload data.</p>	1
43	odroid usb camera	ODROID USB-CAM 720P	1
44	Odroid xu4	<ul style="list-style-type: none"> <li>* Samsung Exynos5422 Cortex™-A15 2Ghz and Cortex™-A7 Octa core CPUs</li> <li>* Mali-T628 MP6(OpenGL ES 3.1/2.0/1.1 and OpenCL 1.2 Full profile), * 2Gbyte LPDDR3 RAM PoP stacked, * eMMC5.0 HS400 Flash Storage, * 2 x USB 3.0 Host, 1 x USB 2.0 Host, * Gigabit Ethernet port, * HDMI 1.4a for display, * Size : 83 x 58 x 20 mm approx.(excluding cooler), * Power: 5V/4A input, * Linux Kernel 4.14 LTS</li> </ul>	1
45	Optical Encoder	optical encoder input voltage 5 to 24 V, open collector output type (A,B,Z)	1
46	PCB	Special Purpose 6x4	1
47	Peizoelectric Weight sensors	27 mm Disc shaped Peizoelectric weight sensor	1
48	Pi Camera	The Raspberry Pi Camera Module v2, Sony IMX219 8-megapixel sensor, supports 1080p30, 720p60 and VGA90 video modes, as well as still capture, 15cm ribbon cable to the CSI port on the Raspberry Pi	1
49	PIR Sensor	HC SR 501	1
50	PLC	Delta PLC DVP 16ES200 (8 input / 8 output) with AC motor driver/servo drive control commands. Execution speed of basic instruction: 0.35 ~ 1micros.	1
51	Pressure Transducer	0-200 bar, input voltage 10V to 30V, output 4 to 20 mA	1
52	Pulley	2.5" A	1
53	Raspberry PI Case	Acrylic case with necessary slots for HDMI wires, power supply, SD Card and other connectors	1
54	Raspberry Pi Screen	7" TFT touchscreen display for Raspberry Pi, 800 x 480 display, HDMI Cable	1
55	Relay card 4 channel 5V	5V 4-Channel relay board controlled directly by micro-controller (Arduino, 8051, AVR, PIC, DSP, ARM, MSP430, TTL logic) need 50-60mA driver current	1
56	relay card with 8 channel	24V, 5A	1
57	RGB LEDs	5 mm RGB leds	1



58	Robocraze Digital Load Cell Weight Sensor 10Kg Portable Electronic Scale + Hx711 Weighing Sensors Ad Module	1 Weight Sensor 10KG 1 HX711 24BIT Precision ADC Module Connection: Red to E+ Black to E- Green to A+ White to A- On-chip active low noise PGA with selectable gain of 3264 and 128 On-chip power supply regulator for load-cell and ADC analog power supply On-chip oscillator requiring no external component with optional external crystal	1
59	Robot chases	25cm*15cm*9cm	1
60	Router	JIO-Fi M2S	1
61	servo motor	Torque: 3.2kg.cm, Operating Speed: 0.23 sec/60 degree	1
62	SIM 808	Quad-band 850/900/1800/1900MHz, GPRS multi-slot class12 connectivity: max. 85.6kbps(down-load/up-load), GPRS mobile station class B, Controlled by AT Command (3GPP TS 27.007, 27.005 and SIMCOM enhanced AT Commands), Supports charging control for Li-Ion battery, Supports Real Time Clock, Supply voltage range 3.4V ~ 4.4V, Integrated GPS/CNSS and supports A-GPS, Supports 3.0V to 5.0V logic level, Low power consumption, 1mA in sleep mode, Supports GPS NMEA protocol, Standard SIM Card	1
63	SIM 900 Module	Quad-Band 850/900/1800/1900 Using Remote Control	1
64	SMA connector female	connector interface SMA connector type: JACK Connector System : Cable-to-Board Sealable : No Connector & Contact Terminates To : Printed Circuit Board	1
65	Solenoid Plunger	DC 12V 1A 10mm Stroke Push Pull Type Open Frame Solenoid N3 Open frame style, open coil form, built-in mounting board, push pull type DC electromagnet. Body Size : 30 x 15x 14mm / 1.2"x 0.59"x 0.55"(L*W*T) Plunger Bar Size : 6 x 57mm / 0.24"x 2.2"(D * L) Cable Length : 20cm / 7.9 Weight	1
66	Solenoid Valve	DC 12V Plastic Electric 1/2" Water solenoid Valve, Thread size 1", 10bar	1
67	Strain Gauge	Gauge Factor: 2.11±1% Gauge Resistance: 350±0.3 Ω Gauge Length: 3 mm Temp. Compensation For: 11 X 10 <sup>-6</sup> /°C Transverse Sensitivity : 0.0%	1
68	SunFounder 7 Inch Monitor HDMI - 1024x600 HD TFT LCD Screen Display AV VGA Input	SunFounder 7 Inch Monitor HDMI - 1024x600 HD TFT LCD Screen Display AV VGA Input	1
69	SW 420 Arduino Vibration Sensor	Digital output, Supply voltage: 3.3V-5V, On-board indicator LED to show the results. On-board LM393 chip	1
70	TSOP	TSOP 1738	1
71	Ultra Compact Power Module HLK-PM01	AC-DC 220-5V Step Down Power Supply module HLK-PM01 Power Supply: 90 VAC to 264 VAC, 50/60 Hz Required Current Supply: 0.2 A (Max) Output Voltage: 5V Output Current: 600mA Power: 3 W Efficiency: 70% Dimensions: 1.5cm x 3.4cm	1
72	Ultrasonic Sensor	HC SR 04	1
73	USB Host Shield	Tiny Deal USB Host Shield For Arduino Compatible With Google Android ADK Support Uno Mega, Arduino communicate with other USB devices, and supports USB HUB function Package includes: 1 x USB Host Shield	1
74	USB to RS 232 convertor	usb to DB-9 RSR232	1
75	USB to RS 485 convertor	USB 2.0 to RS485/RS422 Serial	1

76	Water Flow sensor	Detect the Water and Flow	VF-5201, 1-30 L/min, 2 mPa	1
77	Wheel(Robotic)	4 Inch Plastic wheels with rubber grip		1
78	Wheels	65mm x 30mm		1
79	Raspberry Pi 3 B+	Broadcom BCM2837B0, Cortex-A53 (ARMv8) 64-bit SoC @ 1.4GHz 1GB LPDDR2 SDRAM, IEEE 802.11.b/g/n/ac wireless LAN, Bluetooth 4.2, BLE, Extended 40-pin GPIO header, Full-size HDMI, 4 USB 2.0 ports		1
80	Micro SD card	Category 10, 16 GB capacity		1
81	Micro SD card	Category 10, 32 GB capacity		1
82	Stereo Cable	3.5mm Stereo Male		1
83	HDMI Cable	HDMI Cable 1.5 Feet		1
84	Pen Drive	16GB USB 2.0 Pen Drive		1
85	Barcode scanner	USB laser Auto trigger barcode scanner, 5VDC $\pm$ 0.25V, power 675mW (standby), power 700mW(decoding), light source : visible laser diode 650nm $\pm$ 10nm, Visula indicator : green =laser shines, ready to scan; red= successful decoding, system interface USB, Scan patter single line, scan speed 72 scan lines/second, scan angle horizontal 46', all 1D standard decoding capabilities.		1
86	SMPS	24V,10A		1
87	SMPS	12V,10A		1
88	DC Power adaptor	12V,2A		1
89	DC Power adaptor	12V,1A		1
90	Battery	12V, 7Ah		1
91	Battery	12V, 1.3Ah		1
92	Battery	12V, 2Ah		1
93	Arduino Uno With Cable	The Arduino Uno ATmega328. It has 14 digital input or output pins(of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB connection, a power jack, an ICSP header and a reset button		1
94	PVC pipe	2 ft. length and 1.5 inch diameter, 2 mm width		1
95	Exhaust fan(Metal)	4 Blades air Exhaust fan blade		1
96	Bucket mop	<ul style="list-style-type: none"> <li>• 1Plastic mop Bucket with Stainless</li> <li>• steel Spinner, 1 Stainless steel</li> <li>• spin mop, 2refill</li> <li>• Item Dimension: 460mm * 260mm</li> <li>• 225mm</li> <li>• Package Contents: 1-piece Bucket</li> <li>• mop with 2 microfiber</li> <li>• Water outlet to remove dirty water out</li> </ul>		1
97	Speakers	3W power capacity, 5V applied voltage		1
98	power supply	5v/4A power supply		1
99	power supply	5v/2A power supply		1
100	Usb wifi module adepter	Generic 600Mbps USB Wifi Dongle 600Mbps Wireless Adapter 802.11N/G/B With Antenna		1
101	Solar panel	20W, 12V,		1

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**Mentors**

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