GOVT. COLLEGE OF ENGINEERING, KARAD

Dist. Satara, Maharashtra, India Pin-415 124.
Te. No.91-02164-271711,27414, 27415
Fax No.91-02164-271713 Website : www.gcekarad.ac.in

No. :GCOEK/E&TC/2022/ 958 Date: 18 MAR 2022

To,
Notice Board

QUOTATION

Sub : Quotation for following material. (Due Date 21.03.2022)

Sealed Quotations are invited from eligible and interested manufacturers/ dealers/distributors/ for the following items on the terms and conditions mentioned below.

Sr. No	Particulars	Qty	Rate Per	GST %	Total Cost
	Analog Integrated Circuit Kits				
1	**V TO I CONVERTER** • Completely self - contained stand - alone unit. • Construction and study of op - amp as voltage to current converter (trans - conductance amplifier) • Study the working and verify that the output is proportional to the input voltage signal. • Study the effect of parameters. • Test points provided at various stages in the circuit. • Set of required number of patch cords. • Housed in an elegant metal cabinet with a well spread intelligently designed circuit layout on the front panel. • Strongly supported by a comprehensive instruction manual complete with theory and operating details. • Built - in DC regulated power supply with short circuit protection and LED indication for supply "ON" to works on 230V AC Mains.	02			
2	**I TO V CONVERTER** Electronic switches offers signal converters in various applications. 0-10 vdc to 0-10 vdc converter. aux supply 220 vac or 24 vdc is offered. we offer many more models in signal convertors. 0-10 vdc to 0-10 vdc 0-10 vdc to 4-20 ma 4-20 ma to 0-10 vdc 4-20ma to 4-20 ma	02			

3	**WEIN BRIDGE OSCILLATOR USING OP AMP** WEIN Bridge Network • Power Supply +15V • Variable Capacitor • Feedback amplifier using Op 741 • Closed wooden box • Input 230V AC	02			
4	**COLPITTS OSCILLATOR USING OP AMP** Without Power Supply • On board test points to observe signals • On board schematic diagram • Flexibility of making circuit connections • Lightweight & compact Online product tutorial	02			
5	**HERTLEY OSCILLATOR USING OP AMP** Inbuilt fixed DC regulated power supply of 12 volt. Resistive, capacitive & inductive network is used in the circuit. Capacitor bank is provided on the front panel to change the frequency of wave shape. Circuit diagram is printed on highly insulated front panel .	02			
6	**MONOSTABLE MULTIVIBRATOR USING OP AMP** • On board circuit to study op-amp as monostablemultivibrator • ON/OFF switch and LED for power indication. • Bare board Tested Glass Epoxy SMOBC PCB is used. • Block Description Screen printed on glassy epoxy PCB • All interconnections are made using 2mm banana Patch cords • Supplied with User manual and patch cords • With built-in power supply • Enclosed in a wooden/plastic box • Power supply-220V	02			
7	**ASTABLE MULTIVIBRATOR USING OP AMP** • On board circuit to study op-amp as astable multivibrator. • ON/OFF switch and LED for power indication. • Bare board Tested Glass Epoxy SMOBC PCB is used. • Block Description Screen printed on glassy epoxy PCB • All interconnections are made using 2mm banana Patch cords • Supplied with User manual and patch cords • With built-in power supply • Enclosed in a wooden/plastic box • Power supply-220V	02			

8	**SCHMITT TRIGGER** Built in power supply : +12V DC. Mains : 230V AC. Dimension : 27CMS X 17CMS [metal cabinet] Weight : 2KGS APPX.	02			
	Tempeature Measurements Kits				
1	**Temperature Measurement Using Thermocouple** **Specification:** • **Sensor** K-type Thermocouple is used. Temperature measurement up to 100°C • **MeasurementOptions** On-board Digital Panel Meter provided Output available on 2mm Banana sockets for Monitoring Thermometer for measurement of temperature • **OnboardFeatures** Thermometer for measurement of temperature up to 100°C Water Heater with AC mains Chord provided Onboard Instrumentation Amplifier provided Block Description Screen printed on glassy epoxy PCB Facility to Interface with PC **(Optional)** Facility to Interface with 8085/86/51 kit**(Optional)** • **Interconnections** All interconnections are made using 2mm banana Patch cords. • Testpointsareprovidedtoanalyzesignalsatvariouspoints. • All ICS are mounted on ICSockets. • Bare board Tested Glass Epoxy SMOBC PCB isused. • In-BuiltPowerSupplyof+5V/1.5A,±12V/250mAwith Power indication • Attractive ABS Plasticenclosures • Set of 2mm Patch cords forinterconnections User'sManual	02			
2	**Temperature measurement using Thermister/ AD590** **Specification:** • **Transducer/Sensor** AD590 /Thermistor Sensor is used. Temperature measurement up to 100°C • **MeasurementOptions** On-board Digital Panel Meter provided Output available on 2mm Banana sockets for Monitoring Thermometer for measurement of temperature • **OnboardFeatures** Onboard Instrumentation Amplifier provided Block Description Screen printed on glassy epoxy PCB Thermometer for measurement of temperature up to 100°C Facility to Interface with PC **(Optional)** Facility to Interface with 8085/86/51 kit**(Optional)** • **Interconnections** All interconnections are made using 2mm banana	02			

	Patch cords. • Testpointsareprovidedtoanalyzesignalsatvariouspoints. • All ICS are mounted on ICSockets. • Bare board Tested Glass Epoxy SMOBC PCB isused. • In-BuiltPowerSupplyof+5V/1.5A,±12V/250mAwith Power indication • Attractive ABS Plasticenclosures • Set of 2mm Patch cords forinterconnections User'sManual				
3	**Temperature Measurement Using RTD (PT-100)** **Specification:** • **Sensor** • PT-100 Type RTD sensor is used • Temperature measurement up to 100°C • **MeasurementOptions** • On-board Digital Panel Meter provided • Output available on 2mm Banana sockets for Monitoring • Thermometer for measurement of temperature o **OnboardFeatures** • Thermometer for measurement of temperature up to 100°C • Water Heater with AC mains Chord provided • Onboard Instrumentation Amplifier provided • Block Description Screen printed on glassy epoxy PCB • Facility to Interface with PC **(Optional)** • Facility to Interface with 8085/86/51 kit**(Optional)** o **Interconnections** • All interconnections are made using 2mm banana Patch cords. o Testpointsareprovidedtoanalyzesignalsatvariouspoints. o All ICS are mounted on ICSockets. o Bare board Tested Glass Epoxy SMOBC PCB isused. • In-BuiltPowerSupplyof+5V/1.5A,±12V/250mAwith Power indication o Attractive ABS Plasticenclosures o Set of 2mm Patch cords forinterconnections User'sManual	02			
	Transducers & Measurement kits				
1	**Displacement Measurement Using LVDT Trainer** **Specification:** **Transducer** • LVDT Transducer with transparent enclosure. • Displacement of ± 5mm • Primary Excitation voltage of Sine wave 1V p-p **MeasurementOptions** • On-board Digital Panel Meter provided • Output available on 2mm Banana sockets for Monitoring • Screw Gauge for reference displacement reading **OnboardFeatures** • Provided with excitation voltage	01			

	• Onboard Instrumentation Amplifier provided • Block Description Screen printed on glassy epoxy PCB • Facility to Interface with PC **(Optional)** • Facility to Interface with 8085/86/51 kit**(Optional)** **Interconnections** • All interconnections are made using 2mm banana Patch cords. • Test points are provided to analyze signals at variouspoints. • All ICS are mounted on ICSockets. • Bare board Tested Glass Epoxy SMOBC PCB isused. • In-Built Power Supply of +5V/1.5A, o ±12V/250mA with Power ON indication • Attractive ABS Plasticenclosures • Set of 2mm Patch cords forinterconnections User'sManual				
2	**Pressure Measurement With Pressure Generator** **Specification:** • **Transducer** Resistive Pressure Transducer with transparent enclosure. Pressure of 0-300mm hg / 6psi Primary Excitation voltage of 5V DC • **MeasurementOptions** On-board Digital Panel Meter provided Output available on 2mm Banana sockets for Monitoring Pressure generation and Monitor using a Mercury gauge manometer **OnboardFeatures** Provided with excitation voltage Onboard Instrumentation Amplifier provided Block Description Screen printed on glassy epoxy PCB Facility to Interface with PC **(Optional)** Facility to Interface with 8085/86/51 kit**(Optional)** **Interconnections** All interconnections are made using 2mm banana Patch cords. Testpointsareprovidedtoanalyzesignalsatvariouspoints. All ICS are mounted on ICSockets. Bare board Tested Glass Epoxy SMOBC PCB isused. In-Built Power Supply of +5V/1.5A, ±12V/250mA with Pow indication Attractive ABS Plasticenclosures Set of 2mm Patch cords forinterconnections User'sManual	01			
3	**Load Measurement Using Strain Gauge (Load Cell)** **Specification:** **Transducer** Resistive Load cell is used. Load in weights can be measured up to 3 KGs. Primary Excitation voltage of 12V DC **MeasurementOptions**	01			

	On-board Digital Panel Meter provided Output available on 2mm Banana sockets for Monitoring Weights can be verified by Physical counting of weights **OnboardFeatures** Provided with excitation voltage Weights of different denominationsprovided Onboard Instrumentation Amplifierprovided Block Description Screen printed on glassy epoxy PCB Facility to Interface with PC **(Optional)** Facility to Interface with 8085/86/51 kit**(Optional)** **Interconnections** All interconnections are made using 2mm banana Patch cords. Testpointsareprovidedtoanalyzesignalsatvariouspoints. All ICS are mounted on ICSockets. Bare board Tested Glass Epoxy SMOBC PCB isused. In-BuiltPowerSupplyof+5V/1.5A,±12V/250mAwith Power indication Attractive ABS Plasticenclosures Set of 2mm Patch cords forinterconnections User'sManual				
4	**Light Transducer Module** Selectable light sources for LDR, Photovoltaic, Photo Diode, Photo transistor sensors Light bulb luminous intensity adjustable	01			
	Microcontroller & interfacing lab.				
1	**Raspberry Pi4 Trainer Kit** Broadcom BCM2711, Quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz 1GB, 2GB or 4GB LPDDR4-3200 SDRAM (depending on model) 2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, Bluetooth 5.0, BLE Gigabit Ethernet 2 USB 3.0 ports; 2 USB 2.0 ports. Raspberry Pi standard 40 pin GPIO header (fully backwards compatible with previous boards) 2 × micro-HDMI ports (up to 4kp60 supported) 2-lane MIPI DSI display port 2-lane MIPI CSI camera port 4-pole stereo audio and composite video port H.265 (4kp60 decode), H264 (1080p60 decode, 1080p30 encode) OpenGL ES 3.0 graphics Micro-SD card slot for loading operating system and data storage 5V DC via USB-C connector (minimum 3A*) 5V DC via GPIO header (minimum 3A*) Power over Ethernet (PoE) enabled (requires separate PoE HAT) Operating temperature: 0 – 50 degrees C ambient	10			

2	**PIC 18Fxx microcontroller Trainer Kit** 40-pin ZIF socket. +12V and +5V regulators for direct input from 15V, 500 mA AC/DC wall adapter RS-232 socket and associated hardware for RS-232 interface. ICSP USB 2.0 Programmer with busy LED indication Two 5 KΩ pot and one LM35 for devices with analog inputs. Four push button switches for external interrupts and Reset. Red power-on indicator LED. Eight red LEDs connected to 10 Pin FRC. A 10 MHz crystal oscillator. Microchip 25C040 Serial SPI EEPROM. Atmel AT24c04 Serial I2C EEPROM Dallas DS1307 Serial I2C Real-time Clock LCD display with backlight Selection Jumper. Piezo buzzer and OEM Relay. Dallas DS1820 thermal sensor. Four 7Segment multiplexed display ULN2803 driver for unipolar Stepper motors 4x4 matrix keypad 8 way DIP switch for digital input 8 way Configuration DIP switch for multiple operation	10			
3	**ARM LPC214x Development Board** Stackable daughter board LPC2148. On board debugging JTAG Option USB onboard programming 8 interfacing LED's. 1 * 4 interfacing keys. 4* 4 interfacing keypad matrix. Two channel RS232 port for communication. 3 ADC potentiometer input interface.. 16X2 LCD interface. 46 general purpose IO On Board Power supply 3.3V,5V 12V,GND. 8 pin DIP switches. On board voltage level converter Board enabled with the header for stacking the Xbee product. Board enabled with the header for Stacking the Arduino shields. ON board Micro SD card ON/OFF slide switch. RDL bus. External jumper nodes. Reset button. Power plug-in DC Socket. Power supply indicator LED. Test led for Tx, Rx. 4 digit 7Seg Multiplexed Display. FT232RL USB communication.	10			

1	**Raspberry Pi with cloud Applications** **Specs** • Raspberry PI 4, powered by a 1.5GHz Broadcom 2711, 64-bit quad-core Cortex-A72 processor • 8GB LPDDR4-2400 SDRAM • 2 Micro HDMI ports (Dual micro-HDMI ports) • It should support -H.265 decode (4kp60) , H.264 decode (1080p60) , OpenGL ES 1.1, 2.0, 3.0 graphics with 2-lane display port, 2-lane camera port, 4-pole stereo audio and composite video port • High speed network connectivity with a True Gigabit Ethernet Port supporting upto 1Gbps Data transfer • on board Wireless LAN 802.11b/g/n/ac wireless (2.4 GHz, 5.0 GHz) • Bluetooth 5.0, BLE • Wireless Type - 5 GHz Radio Frequency • No Batteries Included Programming Interface	04			

Terms & Condition

1. The quotation should be sent to **"The Principal, Government College of Engineering, Karad" on or before 21.03.2022 at 5.30PM.**
2. Quotations will be opened at 3.00 PM on 22.03.2022.
3. Mention make / model no., warranty & delivery period of equipment quoted.
4. Quotation validity for at least 45 days from the date of opening.
5. Delivery at F.O.R. Govt. College of Engineering Karad.
6. 100% payment after satisfactory delivery & installation.
7. No extra charges will be paid for cartage etc. the material rejected and replaced.
8. After delivery quality conformance undertaking of equipment/machinery
9. The undersigned reserves the right to accept or reject any offer or all offers without assigning any reason thereof.

H.P.Chavan

H.P.Chavan

For Principal

S. R. Kulkarni, HOD- E&TC Engineering