

VIDYASAGAR COLLEGE FOR WOMEN

39,Sankar Ghosh Lane

Dept.of Electronics

Kindly submit the quotation for the following items within 2nd July 2019. (Including GST tax for each item.)
Details specification given as below.

Serial no.	Specification	
1.	<p>AM Modulation & Demodulation Trainer kit.</p> <ol style="list-style-type: none">1. Power supply requirement : 230V AC, 50 Hz.2. Built in IC based power supply.3. On Board AF Modulating signal generator - Sine wave Frequency Range : 300 Hz to 3.4 Khz Amplitude : 0 to 5 Vpp.4. On Board RF carrier signal generator. Frequency Range : 200 KHz to 1 MHz. Amplitude : 0 to 10 Vpp.5. Modulator Type : Balanced modulator.6. Demodulator Type : Envelope Detector (Diode detector).7. All parts are soldered on single PCB with complete circuit diagram screen-printed.8. Standard Accessories :<ol style="list-style-type: none">1. A Training Manual.2. Connecting Patch cords. <p>Experiments</p> <ol style="list-style-type: none">1. To generate AM signal using Double Balanced Modulator.2. To measure modulation index of AM signal.3. To demodulate AM signal using Diode detector (Envelope detector) and to see the effect of different RC time constant on demodulated output i.e. Diagonal clipping and negative clipping.4. To see the effect on AM modulated output by varying the amplitude and frequency of modulating signal.	
2.	<p>FM Modulation & Demodulation Trainer kit.</p> <ol style="list-style-type: none">1. Power supply requirement : 230V AC, 50 Hz.2. Built in IC based power supply.3. On Board AF Modulating signal generator - Sine wave Frequency Range : 300 Hz to 3.4 KHz Amplitude : 0 to 5Vpp.4. Modulator Type : Reactance Modulator and Varactor Modulator5. Demodulator Type : Detuned Resonant Detector Quadrature Detector Foster -Seeley Discriminator Ratio - Detector Phase Locked Loop Detector6. Low Pass Filter/Amplifier : 3.4 KHz. Cut off Frequency with adjustable gain7. Amplitude Limiter : 1 Nos8. All parts are soldered on single pin TAGS on single PCB with complete circuit diagram Screen-printed.9. Standard Accessories :<ol style="list-style-type: none">1. A Training Manual2. Connecting Patch cords. <p>Experiments</p> <ol style="list-style-type: none">1. To study theory of Frequency Modulation & Demodulation.2. To generate FM signal using Reactance modulator.3. To generate FM signal using Varactor modulator.4. To demodulate FM modulated signal using 5 Different types of Demodulator	
3.	<p>PAM/PWM/PPM Trainer Kit.</p> <ol style="list-style-type: none">1. Power supply requirement : 230V AC, 50 Hz.2. Built in IC based power supply : +15V, -15V, +5V.3. On Board AF Modulating signal generator - Sine wave Frequency Range : 300 Hz to 3.4 KHz, Amplitude : 0 to 2 Vpp.4. On Board Sampling Pulse signal generator. Frequency Range : 2 KHz to 40 KHz.5. On Board variable DC power supply to see the effect of DC on the output waveform : 0 to + 5 VDC6. On Board Input Audio amplifier with Volume control for modulating external signal from Mike.7. On Board Output Audio amplifier with speaker & Volume Control.8. Types of Modulation processes : PAM, PWM, PPM.9. Demodulator Sections : Comparator, Low Pass Filter-2nd order- 3.4KHz10. Standard Accessories :<ol style="list-style-type: none">1. Experimental and Circuit Description Manual.2. Connecting Patch cords. <p>Experiments</p> <ol style="list-style-type: none">1. To study theory of PAM/PWM/PPM Modulation & Demodulation.2. To generate and demodulate PAM signal3. To generate and demodulate PWM signal	

	<p>4. To generate and demodulate PPM signal 5. To execute Voice communication using PAM</p> <p style="text-align: center;">Specification</p>																			
4.	<p>ASK/PSK/FSK Trainer kit.</p> <ol style="list-style-type: none"> 1. Power supply requirement : 230V AC, 50 Hz. 2. Built in Gaussian Noise generator source. 3. On Board Digital Data generator to generate to any binary input word with Bit clock & Word clock. Word Length : 8 Bits. Word Clock Frequency : 8 KHz Data Format : NRZ 4. On Board Carrier Oscillators, Frequencies Range : 320KHz & 640KHz. 5. Modulator Type : Balanced modulator 6. Demodulator Type : Balanced Modulator, Diode Detector & Squarer. 8. All parts soldered on single PCB of size 14" X 11" with complete circuit diagram Screen Printed. 9. Standard Accessories : A Training Manual, Connecting Patch cords. <p>Experiments</p> <ol style="list-style-type: none"> 1. To study theory of ASK, FSK, PSK Modulation & Demodulation. 2. To Study Block diagram of ASK, FSK, PSK Modulation & Demodulation. 3. To generate and Demodulate ASK signal. 4. To generate and Demodulate FSK signal. 5. To generate and Demodulate PSK signal. 																			
5.	<p>8051 Microcontroller Trainer kit.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">CPU</td> <td>8031 / 8051 operating at 11.0592 MHz</td> </tr> <tr> <td>MEMORY</td> <td>EPROM1 32KB bytes with monitor software EPROM2 Optional – 32KB ROM RAM1 32 KB Data RAM RAM2 32 KB program/Data RAM</td> </tr> <tr> <td>I/O PARALLEL</td> <td>48 I/O lines using two 8255</td> </tr> <tr> <td>I/O SERIAL</td> <td>One RS232 compatible interface</td> </tr> <tr> <td>TIMER</td> <td>Three 16 bit counter /timer using 8253</td> </tr> <tr> <td>KEYBOARD</td> <td>Consisting of 28 numbers of computer grade keys</td> </tr> <tr> <td>DISPLAY</td> <td>Six numbers of seven segment displays</td> </tr> <tr> <td>BUS SIGNALS</td> <td>All bus signals are terminated in berg stick. Controller specific lines like p INT1, etc. are terminated in a burg stick header</td> </tr> <tr> <td>MONITOR SOFTWARE</td> <td>32KB of powerful user friendly monitor software with keyboard and serial modes</td> </tr> </table>	CPU	8031 / 8051 operating at 11.0592 MHz	MEMORY	EPROM1 32KB bytes with monitor software EPROM2 Optional – 32KB ROM RAM1 32 KB Data RAM RAM2 32 KB program/Data RAM	I/O PARALLEL	48 I/O lines using two 8255	I/O SERIAL	One RS232 compatible interface	TIMER	Three 16 bit counter /timer using 8253	KEYBOARD	Consisting of 28 numbers of computer grade keys	DISPLAY	Six numbers of seven segment displays	BUS SIGNALS	All bus signals are terminated in berg stick. Controller specific lines like p INT1, etc. are terminated in a burg stick header	MONITOR SOFTWARE	32KB of powerful user friendly monitor software with keyboard and serial modes	
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6.	<p>50MHz Digital storage oscilloscope Make –Scientific Model- SMO502</p>																			
7.	<p>30MHz Dual trace Oscilloscope with digital frequency counter. Make –Scientific</p>																			