



**COLLEGE OF AGRICULTURAL INFORMATION TECHNOLOGY
ANAND AGRICULTURAL UNIVERSITY
ANAND – 388 110.**



TENDER NOTIFICATION

Principal, College of AIT, Anand Agricultural University, Anand invites sealed quotations for purchase of (1) Electronics Practical Laboratory Kit (2) Lab Pro, Resistance Capacitor Diode Practical kit at our college.

The complete details of specifications and other terms & conditions of the tender including EMD/Security deposit can be downloaded from University website www.aau.in / can be obtained from College office against tender fee of Rs.1500/- (Cash or D.D.). Along with filled tender, crossed account payee D.D. (of Nationalized Bank only) in the name of “Anand Agricultural University Fund Account”, Anand of Rs.1500/- is to be submitted.

Last date for submission of filled Tender (by RPAD/Speed post only) is: 25-10-2016.

**Principal
CAIT, AAU, Anand**

For official use only

Tender No:

Signature:

Date of Issue:

TENDER FORM

for

1. Electronics Practical Laboratory Kit
2. Lab Pro, Resistance Capacitor Diode Practical kit

DOWNLOADED FROM WEBPAGE
or
COLLECTED HARD COPY FROM THE
OFFICE

Last date of tender submission to reach the office through speed post/registered post

25-10-2016

NOTE

Payment of Rs. 1500/- by cash or DD drawn in favour of "AAU Fund A/C", payable at Anand as tender fees should accompany the filled tender otherwise the tender form shall be treated as incomplete and cancelled.

**PRINCIPAL AND DEAN
COLLEGE OF AGRICULTURAL INFORMATION TECHNOLOGY
ANAND AGRICULTURAL UNIVERSITY, ANAND - 388 110 (GUJARAT)**

Tel.: (02692) 263124

e-mail: deanait@aaui.in

Terms and Conditions:

- The quotation must be in Indian rupees and rates quoted should be **inclusive of all applicable Taxes and F.O.R. at Anand at our Laboratories inclusive of packaging, forwarding, freight & insurance, installation, commissioning and demonstration by technical team at our site.**
- Our University will supply custom/central excise duty exemption certificate for being educational institute.
- Validity of the quotation should be **120** clear days from the last date of receipt of the quotation.
- **Payment shall be made only after satisfactory supply/installation and demonstration. No advance or part payment or payment through bank can be entertained.**
- Tender forms only from original manufacturers/their authorized dealers/stockists who are in the concerned field will be considered, along with the said certificate.
- The credentials of the party, list of customers and complete illustrated literature should be enclosed with the tender form. The firm should be ready for pre inspection of the item and its performance, if necessary.
- All the electronic hardware should comply with international standards for safety, electromagnetic emissions and immunity. etc.
- Tenderers will have to attach original colour catalogue of the each quoted product ensuring exact specifications.
- In case of defective items, the same shall have to be replaced by the party concerned at its own cost, and risk, and within stipulated time.
- The Earnest Money Deposit (EMD) in the form of account payee Demand Draft in the name of “AAU Fund Account” payable at Anand, shall have to be accompanied with the filled Tender Forms. Tender submitted without EMD shall not be considered. The deposit shall be forfeited if the party in any case is not able to supply the ordered goods in stipulated period and at the rates approved.
- Duly filled tender forms in sealed envelopes through **registered post/speed post only** should reach the office of the **Principal, College of Agricultural Information Technology, Anand Agricultural University, Anand- 388 110, (Gujarat)** before **17.00 h on 25-10-2016**
- Please super scribe the envelope, **“TENDER DOCUMENTS FOR (1) Electronics Practical Laboratory Kit (2) Lab Pro, Resistance Capacitor Diode Practical : Principal, College of Agricultural Information Technology, Anand Agricultural University, Anand-388110”** and mention clearly senders’ name and address.
- The PRINCIPAL shall be empowered to reject any one or all the tenders without giving any reason for doing the same. This shall not be challengeable in the Court.
- Parties may be called for scientific discussion and price negotiation, if required.
- In case of disputes, decision of Vice Chancellor, Anand Agricultural University, Anand will be final and acceptable to all the parties.

• **Name of supplier / firm :**

• **Complete postal address:**

• **Telephone Number :**

• **FAX Number (if any) :**

• **e-mail address (if any) :**

• **Details of Tender fee :**

D.D.Number :

Bank's Name :

Amount :

Date :

• **Details of EMD :**

D.D.Number :

Bank's Name :

Amount :

Date :

• **Sales Tax No. :**

• **Registration No. :**

• **Any other details :**

We agree to abide by the terms and conditions of supply mentioned in this tender document

**Signature of Tenderer
(With Stamp, Name, Designation and date)**

Lowest competitive rates are hereby invited for the purchase of Laboratory Equipment with following specifications

Sr. No.	Specifications and other details of items to be purchased				EMD (Rs.)	Qty
1	Electronics Practical Laboratory Kit				12000	2
	Sr. No.	Item Name	Overall Specifications	Detailed Technical Specifications		
	A	OPERATIONAL AMPLIFIER LAB KIT NVIS 6578	1. Compact portable platform to perform more than 12 Experiments 2. In-built power supply 3. Bread Board 4. In-built Function Generator 5. Compact and slim design 6. Easy to carry 7. Learning material soft copy	Mains power supply : 90 - 270V $\pm 10\%$, 50Hz (SMPS) Fixed DC power supply : +12V, Regulated, -12V, Regulated +5V, Regulated, -5V, Regulated Variable DC power supply: +1.5V to +10V Regulated using LM317: -1.5V to -10V Regulated using : LM337 Function Generator Sine Wave; Frequency : 1KHz to 100KHz Frequency Control : 100KV, 10 turn Potentiometer Amplitude : 0V to 5Vpp Amplitude Control : 100KV, Single turn Potentiometer Triangular Wave; Frequency : 1KHz to 100KHz Frequency Control : 100KV, 10 turn Potentiometer Amplitude : 0V to 5Vpp Amplitude Control : 100KV, Single turn Potentiometer Square Wave; Frequency : 1KHz to 100KHz Frequency Control : 100KV, 10 turn Potentiometer Amplitude : 5Vpp, fixed Bread Board Dimension(mm) : 175 x 61 x 10; Distribution strips : 2; Distribution holes : 200; Terminal holes : 640 Op-amp : IC uA741 (2 Nos.) : All pins terminated on 2 mm; Banana Sockets; Supply Voltage : $\pm 22V$ max.; Differential Input Voltage : $\pm 30V$ max.; Input Voltage : $\pm 15V$ max.; Slew Rate : 0.5 V/ μs (VCC = $\pm 15V$) Resistor Bank SMD Resistance 1KV 1% 1/4W (5 Nos.) SMD Resistance 10KV 1% 1/4W (5 Nos.) SMD Resistance 100KV 1% 1/4W (5 Nos.) Diode : Diode 1N 4007 Capacitor Bank : Electrolyte Cap. 1mf/63V Disc cap. 1nf/63V Disc cap. 10nf/63V Disc cap. 100nf/63V		

				Variable Resistance bank 1KV Single turn Potentiometer (2 Nos.) 10KV Single turn Potentiometer (2 Nos.) 100KV Single turn Potentiometer (2 Nos.) 1MV Single turn Potentiometer (2 Nos.) Fuse : 500mA, slow blow Dimensions (mm) : W 350 x D 280 x H 55		
	B	Control System Kit NVIS 3000A	Features with DATA Acquisition system 4 Analog Input (ADC) channels 1 Analog Output (DAC) channels 1 PWM Output 22 Digital Input and Output channels 10-bit ADC resolution Data logging facility USB interface Two unity gain given to strengthen the weak signal from any Sensor Removable screw terminals for easy signal connectivity Exhaustive course material & references Features Open Loop Control System Close Loop Control System On board Temperature Sensor and heater Feedback concept P, PI & PID Control System using software External DC Motor with encoder On board LED lamp and Light Sensor On board Buzzer for Alarm On board Infrared Sensor On board Relay interface On board LED bar display On board Servo Motor control DC Motor speed control Light intensity control V/F, F/V & V/I conversion Breadboard for circuit design 2 Year Warranty DAQ Frequency Counter : 0 to 6 MHz (Square Wave) DAQ PC Interface : USB 2.0 Weight : 1.5 kg (Approximately) Mains Supply : 230V +/- 10%, 50/60Hz Power Consumption : 4VA (Approximately)	Operating Voltage : +5V, - 5V, +12V, -12V Servo Motor : +5VDC DC Motor : +12VDC Temperature Sensor : 10mV/ C Light Sensor : Photo Conductive Cell (LDR) Light Source : 2 LED's V/F : Input 0-5V Output 0-5 KHz (Approximately) F/V : Input 0-5 KHz Output 0-5V (Approximately) V/I : 4 to 20mA Clock Generator : 0-43.50 KHz SPST Relay : +5V DPDT Relay : +5V De-Bounce Switch : Monostable (5V output) PWM : 1 no. Buzzer : +5V Switches : IR Switch, DIP switch Test Points : 25 DAQ Analog Inputs : 4 Inputs with 10 bit resolution DAQ Analog Output : 1 Output 10 bit resolutions DAQ Digital Inputs : 11 TTL Inputs DAQ Digital Outputs : 11 TTL Outputs DAQ Unity gain amplifier : 2 (0V to 10V)		

			<p>Included Accessories :</p> <p>Nvis 630 (Data : 1 no. Acquisition System)</p> <p>Patch cords : 12 nos.</p> <p>SMPS Power Supply : 1 no.</p> <p>Optional: Laptop</p>			
	C	<p>Flip-Flop Training Kit NVIS 6555</p>	<p>Features: Exclusive and compact design Adaptable illustration of Flip-Flops +5V SMPS Adaptor provided with the trainer 4 power supply Designed, considering all the safety standards Online product tutorial Low cost 2 years warranty</p>	<p>Input : +5V DC Logic levels +5V : HIGH(Logic 1) 0V : LOW (Logic 0) Dimensions (mm) : W 240 x D 345 x H 110 Weight : 1kg (approximate)</p>		
	D	<p>Logic Gates Training Kit NVIS 6551</p>	<p>Features: Exclusive and compact design Straight forward representation of all logic gates +5V SMPS Adaptor provided with the trainer for power supply}Designed by considering all the safety standards}Online product tutorial}Low cost product including illustration of all logic gates 2 Years warranty</p>	<p>Input : +5V DC Logic levels +5V : HIGH (Logic 1) 0V : LOW (Logic 0) Dimensions (mm) : W 240 x D 345 x H 110 Weight : 1 Kg.</p>		
	E	<p>Transistor Characteristics Training Kit NVIS 6502</p>	<p>Features: In-built Ammeter and Voltmeter are provided On board Fixed and Variable DC Power Supplies are provided Digital display for displaying Voltage and Current Three important characteristics of a Transistor can be performed on this board : Input characteristic, Output characteristic, Constant current transfer characteristic 2 Year Warranty</p>	<p>Fixed DC Power Supply : +5V, -5V, +12V, -12V Variable DC Supply : $\pm 1.5V$ to $\pm 11V$ Transistor : BC547, BC557 Ammeter Range : 1μA to 200mA Display : 3½ digit Voltmeter Range : 1mV to 200V Display : 3½ digit Mains : 230V AC $\pm 10\%$ Dimension (mm) : W 450 x D 280 x H 113 Weight : 2kg (approximate)</p>		

	F	Universal Gates Training Kit NVIS 6552	Features: Exclusive and compact design Straight forward representation of Universal Gates +5V SMPS adaptor provided with the trainer for power supply Designed by considering all the safety standards Online product tutorial Low cost trainer including illustration of logic gates design using universal gates 2 Year warranty	Input : +5V DC Logic levels +5V : HIGH (Logic 1) 0V : LOW (Logic 0) Dimensions (mm) : D 345 × W 240 × H 110 Weight : 1kg (approximate)		
	G	Clipper and Clamper Taining Kit NVIS 6511	Features: Built-in 1KHz Sine Wave Generator Good quality, reliable sockets and test points are provided Strongly supported by systematic operating instructions A low cost training system including many experiments 2 Years warranty	Mains Supply : 230 V ±10%, 50 Hz Sine Wave Generator : 1 KHz, 15V Vpp (approx.) DC Power Supply : 0 - 5 V (vary through (2No.) rotary switch for specific voltage level) Weight : 1.7 Kgs. (approx.) Dimensions (mm.) : W 260 × D 355 × H 125		
	H	Power and Differential Amplifier Kit NVIS 6522	Features: In-built DC Power Supply In-built Sinewave Generator Easy Illustration of different types of amplifier Online product tutorial 2 Years Warranty	Mains supply : 230V ±10%, 50Hz DC power supply: Fixed : +12V, -12V, +5V, -5V Frequency: Variable : 10kHz to 100kHz Amplitude Variable : 0 to 5Vpp Fuse: Slow Blow : 500mA Dimensions (mm) : W 345 x D 240 x H 110 Weight : 2kg (approximate)		

I	Kit for Electricity Lab Practicals NV 6000	Features: Stand alone operation Durable, Easy to use kit Includes all the Basic Electrical fundamentals Solderless connections Complete set of coils and cores to understand the Basics of Electro magnetic induction and Transformers Provided with a component box to perform all the experiments CBT covering all the experiments Online product tutorial 2 Years Warranty	DC Power Supply : 5V, 200mA AC Power Supply : 6V, 1A Relay : 5V Galvanometer : 30 - 0 - 30 Galvanometer Resistance : 80W Light Bulbs : 6V Potentiometers : 25W, 1W, 10kW, 1W Switch : 1 Pole, 2 Way Toggle type Core Types : E, I, U Fuse : 1A Power Supply : 230V ±10%, 50Hz Dimension (mm) : W 345 x D 245 x H 105 <table><tr><th colspan="4">Coils</th></tr><tr><th>No. of Turns</th><th>Wire Dimension (mm)</th><th>Maximum Current (Amp)</th><th>Inductance (Approximate)</th></tr><tr><td>200 Turn</td><td>0.818</td><td>1.46</td><td>590 mH</td></tr><tr><td>400 Turn</td><td>0.573</td><td>0.728</td><td>2.3 mH</td></tr><tr><td>800 Turn</td><td>0.404</td><td>0.363</td><td>9.2 mH</td></tr><tr><td>1600 Turn</td><td>0.251</td><td>0.144</td><td>34.2 mH</td></tr><tr><td>3200 Turn</td><td>0.170</td><td>0.072</td><td>134 mH</td></tr></table> Training System Should Include: 1. Components box with a. Resistors b. Capacitors c. Transistors d. Diode e. Potentiometer 2. E, I, U cores 3. Set of coils 4. Magnetic compass 5. Bar magnets 6. Screw driver 7. Multimeter 8. Connection patch cords	Coils				No. of Turns	Wire Dimension (mm)	Maximum Current (Amp)	Inductance (Approximate)	200 Turn	0.818	1.46	590 mH	400 Turn	0.573	0.728	2.3 mH	800 Turn	0.404	0.363	9.2 mH	1600 Turn	0.251	0.144	34.2 mH	3200 Turn	0.170	0.072	134 mH
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J	Adders and Subractors Experiment Kit NVIS 6554	Adaptable illustration of Binary Adders and Subtractors. +5V SMPS Adaptor provided with the trainer for power supply. Designed by considering all the safety standards. Experimentation with Adders and Subtractors PLUG and PLAY design. Should be capable of performing multiple experiments simultaneously. 2 Years Warranty	Input : +5V DC Logic levels: +5V : HIGH (Logic 1) 0V : LOW (Logic 0) Dimensions (mm) : W 240 x D 345 x H 110 Weight : Approx. 1 Kg.																												

	K	Arithmetic and Logic Training Kit NV 6563	Features: Stand alone system Easy switching between arithmetic and logic mode operations 16 arithmetic operations 16 logic operations Easy illustration of ALU operation LEDs for visual indication of input and output logic states e-Manual 2 Year Warranty	DC power supply : +5 V Logic levels +5 V : High (logic 1) 0 V : Low (logic 0) LED Indication : LED will be 'on' for logic high state and will be 'off' for logic low state Dimension (mm) : W 240 x D 345 x H 110		
	L	GSM Remote Control Module NVIS 650	Features: Remotely operated SMS Control to Start / Stop and get current status through message alert Very easy to install and to operate 5 Users can be registered to Nvis 650 Password protection Mains status alert through SMS Pump ON/OFF LED indication Delete and updation of user registration Automatically sends SMS when input activated. It can be operated in GSM / Manual mode Also suitable for Single phase / Three phase pumps Quad-band GSM for worldwide use 2 Year Warranty	GMS Band : 900/1800MHz Relay rating : 110 / 230V, 5A Operating Voltage (AC) : 110 / 230V Power Consumption : 720 mW Approx. Operating Temperature : 0° to +50° Celsius Dimensions (mm) : W 140 X H 120 X D 55		
	M	LDR Characteristics Kit NV 6536	Features: Unique and Compact designStand alone operationSimple representation of LDR CharacteristicsMicrocontroller based LCD Displaye-Manual 2 Year Warranty	Mains supply : 90 - 275 V, 50 / 60 HzDC power supply : +12 V, - 12 V, +5 V Voltmeter (2Nos.) : 0 -12 V Weight : 1.21 Kg. (approx.)Dimensions (mm.) : W 240 × D 345 × H 110		
	N	Transient Analysis of RLC Circuits NVIS 6515	Easy experimental illustration of Transient Analysis of RLC circuit Built-in Signal Generator Low cost Online product tutorial 2 Year Warranty	Mains Supply : 230V ±10%, 50Hz Dimensions (mm) : D 250 x W 150 x H 80 Weight : 700g (approximate)		

	O	Transient Analysis of RC/RL Circuits NVIS 6514	<p>Easy experimental illustration of Transient Analysis of RC and RL circuits</p> <p>Built-in +5V DC Power Supply</p> <p>Built-in Signal Generator</p> <p>Low cost</p> <p>Online product tutorial</p> <p>2 Year Warranty</p>	<p>DC Power Supply : +5V</p> <p>Mains Supply : 230V \pm10%, 50Hz</p> <p>Dimensions (mm) : D 250 x W 150 x H 80</p> <p>Weight : 700g (approximate)</p>		
	P	Sensor Module (NVIS) MC 15	<p>Differential Input Pressure Transducer</p> <p>Temperature Sensor interface</p> <p>High Power Resistance for increasing the temperature</p> <p>Precise Signal Conditioning</p> <p>Self contained and easy to operate</p> <p>Sensitive, Linear, Stable and Accurate</p> <p>PC based programming</p> <p>Expansion connectors for plug in with Microcontroller unit and prototyping area</p> <p>Every pin is marked in order to make work easier</p> <p>Input/Output & test points provided on board</p> <p>Exhaustive Learning Material</p> <p>With required additional Display Module to run this KIT.</p> <p>Features of Display Module:</p> <p>16 x 2 Characters LCD interface</p> <p>4 Seven segment display interface</p> <p>4 LED bar graph interface</p> <p>4 PC based Programming</p> <p>4 Expansion connectors for plug in with Microcontroller Unit and prototyping area</p> <p>4 Every pin is marked in order to make the work easier</p> <p>4 Input/Output & test points provided on board</p> <p>4 Ready Experiments</p> <p>4 Exhaustive course & reference material</p> <p>4 Learning Material CD</p> <p>2 Year Warranty</p>	<p>Temperature Sensor : LM35 0 - 100°C</p> <p>Pressure Transducer : 0 to 100 psi, Differential Input</p> <p>Pressure Gauge : 0 to 100 psi</p> <p>Pressure Vessel : 0 to 100 psi</p> <p>Safety Valve : 0 to 100 psi</p> <p>Foot Pump : 0 to 150 psi</p> <p>Power Supply : From Microcontroller development platform NV50XX series</p> <p>Interface : 20 Pin FRC Cable</p> <p>Test point : 2 nos (Gold plated)</p> <p>Dimension (mm) : W 255 x D 155 x H 80</p> <p>Weight : 280 gms (approx.)</p> <p>Learning Material : CD (Theory, procedure, reference)</p> <p>Included Accessories :</p> <p>Patch cord : 2 nos.</p> <p>Foot Pump : 1 no.</p> <p>Pressure Vessel : 1 no.</p> <p>Learning material CD : 1no.</p> <p>Technical Specifications of Display Module:</p> <p>Display : 16 x 2 LCD</p> <p>Contrast control : 0 - 5 V (Variable)</p> <p>Backlight control : 0 - 5 V (Variable)</p> <p>Seven segment display : 4 Nos.</p> <p>Led bar graph : 1 No.</p> <p>Power supply : From Microcontroller development board with Programmer</p> <p>Interface : 20 pin FRC cable</p> <p>Test points : 32 Nos.</p> <p>Dimensions (mm) : W 250 x D 15 x H 80</p> <p>Weight : 380 g (approx)</p> <p>Accessories</p> <p>20 pin FRC cable</p> <p>Learning material CD</p>		

	Q	Universal IC Tester (NVIS) NB 9352	Features: Tests a wide range of Digital IC's such as 74 Series, 40/45 Series of CMOS IC's It can test Microprocessor 8085, 8086, Z80 To test Peripherals like 8255, 8279, 8253, 8259, 8251, 8155, 6264, 62256, 8288, 8284 Having Auto search facility of IC's Test by: Truth table/sequence table comparison It tests a wide range of Analog IC's such as ADC, DAC, Opamp, 555, Transistor Arrays, Analog Switches, Waveform Generator, Line Drivers, Voltages Regulators, PLL's, VCO, PWM Generator, Sample & Hold, Voltages References, Optocouplers, Comparators, Voltages Followers and Others Rest Seven segment display of common cathode & common anode type ZIF: Two Nos. of 40 pin DIP ZIF sockets for Digital & Analog IC's Keys: 50 cherry keys Key pad with numerical & functional keys Display: 16x2 Backlit LCD Display; Supply Input Voltage: 230V AC 2 Year Warrenty	With Following Accessories: Digital Ic's T.T.L. 74xxx Series Cmos (40/45 Xx Series) Cpu Peripheral Memory Real Time Clock Phase Frequency Detector Decoder/Encoder Supervisory Circuitry Seven Segment Display Oscillator / Divider Linear Ic's Analog To Digital Converter, Digital To Analog Converter, Comparator, Op-Amp, Voltage Follower, Line Drivers & Receiver, Transistor Array, Analog Switch, Waveform Generator, Timer, Pll, Vco, Sample And Hold, Pwm Generator, Dpm Ic, Opto-Coupler, Cross Point Switch, Latch Driver, Voltage Regulator, Voltage Reference, Dot/Bar Display Driver, Opamp And Comparator, Over Voltage Crowbar Sensing Circuit, Led Flasher, Frequency To Voltage Converter		
	R	Active Filters Experiment Kit NVIS 6504	low cost trainer demonstrating all the basic concepts of Active Filters Exclusive presentation and easy illustration of each part of the Filter Circuit Designed, considering all the Safety Standards Provided with briefly described operating manual Provided with inbuilt Function Generator Provided with inbuilt Power supply Selectable frequency range of Function Generator 2 Year Warranty	Function generator Frequency range of Function Generator :Selectable 1Hz to 10Hz 10Hz to 100Hz 100Hz to 1kHz 1KHz to 10 kHz 10kHz to 100kHz Amplitude controlled output Active Filter : Accurate frequency response : Variable Cutoff Frequencies : Adjustable Gain of output : Manual creation of Band Pass Filter using High Pass and Low Pass Filter Power Supply : 230V \pm 10%, 50Hz Fuse : 350Ma		

2	Lab Pro, Resistance Capacitor Diode Practical kit					15000	2
	Sr. No.	Item Name	Overall Specifications	Detailed Technical Specifications	Capable to perform Experiments as:		
	A	De-Morgan's Theorem NVIS 6553	Exclusive and compact design Easy explanation of both the De-Morgan's theorem statements +5V SMPS Adaptor provided with the trainer for power supply Designed by considering all the safety standards; With an extensive manual; low cost; Online product tutorial 2 Years Warranty	Input : +5V DC Logic levels +5V : HIGH(Logic 1) 0V : LOW (Logic 0) Dimensions (mm) : W 240 x D 345 x H 110 Weight : 1kg (approximate)	Verifying $(A+B)' = A' \cdot B'$ Verifying $(A \cdot B)' = A' + B'$		
	B	Active Filters Experimentations (with Diodes) NVIS 6504	A low cost trainer demonstrating all the basic concepts of Active Filters Exclusive presentation and easy illustration of each part of the Filter Circuit Designed, considering all the Safety Standards Provided with briefly described operating manual Provided with inbuilt Function Generator Provided with inbuilt Power supply Selectable frequency range of Function Generator 2 Years Warranty	Function generator Frequency range of Function Generator : Selectable Amplitude controlled output Active Filter 1Hz to 10Hz; 10Hz to 100Hz; 100Hz to 1kHz; 1KHz to 10 kHz; 10kHz to 100kHz Amplitude controlled output Active Filter: Accurate frequency response : Variable Cutoff Frequencies; : Adjustable Gain of output; : Manual creation of Band Pass Filter using High Pass and Low Pass Filter Power Supply : 230V \pm 10%, 50Hz Fuse : 350mA	Basic fundamentals of filter design and their working.		

	C	Experiments with Diodes NVIS06501	<p>A complete system to study the diode characteristics</p> <p>Forward and reverse characteristics experiment can be performed on this trainer kit</p> <p>Silicon, Zener and Light Emitting Diode (LED) are provided with this system</p> <p>Inbuilt Ammeter and Voltmeter are provided</p> <p>Digital display for displaying voltage and current</p> <p>Different test points are provided</p> <p>Online product tutorial</p> <p>2 Years warranty</p>	<p>On Board DC power supply : +12V DC</p> <p>Ammeter</p> <p>Range : 1μA to 200mA</p> <p>Display : 3½ digit</p> <p>Voltmeter</p> <p>Range : 1mV to 200V</p> <p>Display : 3½ digit</p> <p>Mains power : 230V AC ±10%</p> <p>Dimension (mm) : W 365 x D 260 x H 120</p>	<p>Study of V-I characteristics of Silicon Diode</p> <p>Study of V-I characteristics of Zener Diode</p> <p>Study of V-I characteristics of Light Emitting Diode (LED)</p>		
	D	Zener Diode Voltage Regulator Experiment Kit NVIS 6503	<p>Real time appearance of components</p> <p>Test points are provided in different sections of power supply</p> <p>Designed by considering all the safety standards</p> <p>Low cost trainer including many experiments</p> <p>Online product tutorial</p> <p>2 Years warranty</p>	<p>Transformer Rating : 9V center tapped (300mA) approximate</p> <p>Half wave Rectifier output : +4V DC approximate</p> <p>Center-Trapped Rectifier : +8V DC approximate</p> <p>Bridge Rectifier Output : +8V DC approximate</p> <p>Filter : LC Type</p> <p>Load : Resistive 220W, 0.5W</p> <p>Mains Supply : 230V ±10%, 50Hz</p> <p>Dimensions (mm) : W 250 x D 150 x H 80</p>	<p>Study of Half-wave Rectifier</p> <p>Study of Full-wave Center-tapped Rectifier</p> <p>Study of Full-wave Bridge Rectifier</p> <p>Calculation of Ripple Factor and Efficiency of various Rectifiers</p>		

	E	Experiments With Rectifiers	Real time appearance of components Test points are provided in different sections of power supply Designed by considering all the safety standards Low cost trainer including many experiments Online product tutorial 2 Years warranty	Transformer Rating : 9V center tapped (300mA) approximateHalf wave Rectifier output : +4V DC approximateCenter-Trapped Rectifier : +8V DC approximateBridge Rectifier Output : +8V DC approximateFilter : LC TypeLoad : Resistive 220W, 0.5WMains Supply : 230V \pm 10%, 50HzDimensions (mm) : W 250 x D 150 x H 80	Study of Half-wave Rectifier Study of Full-wave Center-tapped Rectifier Study of Full-wave Bridge Rectifier Calculation of Ripple Factor and Efficiency of various Rectifiers		
	F	STUDY OF RESISTANCE, DIODE AND TRANSISTOR	Auto identification of sensors High speed data transfer Programmable delay in data acquisition Programmable sampling frequency Graphical Analysis Automatic & manual mode of data acquisition 2 Years warranty	Circuit Board 1Lead (100cm) 8set Data Logger with Current Booster 1 Power Unit 1Diode Module 1 Zener Diode 3.9V Module 1 Zener Diode 5.1V Module 1 LED Module 1Resistor Module 100 Ω 1Resistor Module 10 Ω , 10W 1Resistor Module 1k Ω 1Resistor Module 10k Ω 1Transistor Module 1Voltage Sensor \pm 1V 1Voltage Sensor \pm 10V 1Current Sensor \pm 1mA 1Current Sensor \pm 10mA 1Current Sensor \pm 100mA 1Current Sensor \pm 1A Software 1	Ohm's law.V-I characteristics of Incandescent Lamp.Study of Rectifier Diode & applications.V-I characteristics of a Light Emitting Diode.Study of Zener Diode & applications.Study of NPN transistor characteristics		

	G	Lab (PRO) Study Kit / Analog System Lab Kit PRO	Three general-purpose OP-Amps, Three analog multipliers, Two D/A converters, A wide-input non-synchronous buck type DC/DC controller, A low-dropout regulator, Two transistor sockets, A general-purpose area which can be used as a proto-board 2 Years warranty	With all required accessories	Negative feedback in amplifiers Building instrumentation amplifier Understanding transient response, frequency response, DC transfer characteristics Hysteresis in switching circuits; Integrators & differentiators; Filters & frequency response, tuning filters; Function generator design, voltage controlled oscillator; Phase lock loop functionality; Automatic gain / volume control; Characteristics of DCDC converter; Design and study low dropout regulator; Study the characteristics of negative feedback amplifiers and design of an instrumentation amplifier Study the characteristics of regenerative feedback system with extension to design an astable and monostable multivibrator Study the characteristics of integrators and differentiator circuits Design of Analog Filters; Design of a self-tuned filter; Design a function generator and convert it to Voltage-Controlled; Oscillator/FM Generator Design of a Phase Lock Loop (PLL); Automatic Gain Control (AGC) ; Automatic Volume Control (AVC); DC-DC Converter; Design a Low Dropout (LDO) regulator. Study the parameters of an LDO integrated circuit Study the parameters of a DC-DC Converter using on-board Evaluation module Design of a Digitally Controlled Gain Stage Amplifier Design of a Digitally Programmable Square and Triangular wave generator/oscillator		
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