



We, **Visionary Technologies (www.vistech.in)**, / **NICE Industry Mall** introduce ourselves as the manufacturer and dealers of Educational Lab Equipments for Engineering Colleges and Polytechnic Colleges, customized products as well as delivering high quality Training Courses in PLC, SCADA, HMI & VFD through Visionary Industrial Automation Training Academy (www.Viata.in)

We aim to deliver the quality, reliable and state of art solutions to ensure customer satisfaction, loyalty and enhancement in our product offerings. We are specialised in Automation (PLC) Training Kits which are well suitable for Engineering and polytechnic colleges syllabus.

We may assure you of our prompt services. If you have any clarifications, feel free to contact us.

We are providing Free demonstration of our trainer kits with anytime online support on phone.

### Client For Training Kit

- ▶ Sandip Foundation, Nashik
- ▶ Pravara Engg. College, Loni
- ▶ KVN Naik College of Engg., Nashik
- ▶ Matoshri College of Engineering & Research
- ▶ SVIT, Chincholi, Nashik
- ▶ SND College of Engineering, Yeola
- ▶ Shatabdi College of Engineering, Agaskhind, Nashik
- ▶ Gokhale Education Society's R. H. Sapat collage of Engineering, Nashik
- And many more.....!

Sai Enterprises - 95617 00758

## NICE INDUSTRY MALL

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## Visionary Technologies

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## Visionary Technologies NICE INDUSTRY MALL

Training Kit Dealer / Manufacturer



### - Our Product Range -

- ▶ TESTING MEASURING & LABORATORY INSTRUMENTS
- ▶ ELECTRONICS LAB TRAINING MODULES
- ▶ DIGITAL ELECTRONICS LAB TRAINING MODULES
- ▶ BASIC & ADVANCE COMMUNICATION LAB TRAINING MODULES
- ▶ POWER ELECTRONICS LAB TRAINING MODULES
- ▶ PHYSICS LAB EXPERIMENTALSETUPS
- ▶ INSTRUMENTATION LAB TRAINING MODULES
- ▶ INSTRUMENTATION LAB TRAINING MODULES
- ▶ BREAD BOARD TRAINERS
- ▶ DYNAMIC DEMONSTRATORS & TRAINERS
- ▶ MICROPROCESSOR & MICROCONTROLLER LAB
- ▶ ELECTRICAL LAB TRAINING MODULES & EQUIPMENTS
- ▶ POWER PROTECTION LAB TRAINERS
- ▶ MICROWAVE EXPERIMENTAL TRAINERS
- ▶ CIVIL AND MECHANICAL EQUIPMENTS





## TESTING MEASURING & LABORATORY INSTRUMENTS



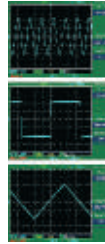
**Analog Oscilloscope**

- Analog Oscilloscopes (ME 3000 Series)
- Digital Storage Oscilloscopes (ME 4000 Series)
- Spectrum Analyzers (ME 5000 Series)
- Logic Analyser (PC Based)
- Function Generators / Frequency Counters / Soldering Stations



**Digital Storage Oscilloscope**

- DC Regulated Power Supplies Single Channel / Dual Channel
- Multimeters / Clamp Meter / Analog Meter / Wattmeters
- Decade Capacitance Box
- Decade Inductance Box
- Decade Resistance Box



**Electronic / Electrical Work Bench**

**Electronic / Electrical Work Bench**  
Inbuilt option available CRO/DSO, Spectrum Analyser, Function Generator, Frequency Counter, Power Supply AC/DC, Multimeter, LCR Meter Soldering / Desoldering Station etc.

## ELECTRONICS LAB TRAINING MODULES



**ME 533D - Transistor Characteristics Apparatus**

### Characteristics & Applications

- ME 500 Discrete Component Trainer
- ME 510 Linear IC Trainer
- ME 511 Digital IC Trainer
- ME 521 Diode Valve Characteristics Apparatus
- ME 522 Triode Valve Characteristics Apparatus
- ME 523 Tetrode/Pentode Valve Characteristics Apparatus
- ME 524 Ionization Potential of Mercury
- ME 525 IGBT Characteristics & Application
- ME 526 Planck's Constant Apparatus
- ME 527 Photo Cell Characteristics Apparatus
- ME 528 Work Function of Diode (Richardson Law)
- ME 529 Solar Cell Characteristics Apparatus
- ME 530 Transistor Designer Kit (Discrete)
- ME 532D H' Parameter of PNP Transistor in CE mode
- ME 533D Transistor Characteristics Apparatus
- ME 534D SCR Characteristics Apparatus
- ME 535D FET Characteristics Apparatus
- ME 536 Microphone and Loudspeaker Characteristics Apparatus
- ME 537 Tunnel Diode Characteristics Apparatus
- ME 539D PN Junction Diode Characteristics Apparatus
- ME 542D Voltage Stabilization Characteristics of Zener diode
- ME 542RFD Zener Diode V-I Characteristics Apparatus (Forward & Reverse)
- ME 543D PN / Zener Diode / LED Characteristics Apparatus
- ME 544D Energy Band Gap Apparatus
- ME 545 Energy Band Gap by Four Probe Method
- ME 546D Thermistor Characteristics Apparatus
- ME 547BD UJT Characteristics & UJT as Relaxation Oscillator
- ME 548D Mosfet Characteristics Apparatus
- ME 550 Characteristics & Application of Basic Thyristors
- ME 550A Characteristics & Application of Semiconductors & Thyristors
- ME 551D Diac Characteristics Apparatus
- ME 552D Triac Characteristics Apparatus
- ME 553 Opto Coupler Characteristics Apparatus
- ME 554D LDR Characteristics Apparatus
- ME 556D LED Characteristics Apparatus
- ME 557D Opto Electronic Devices Characteristics
- ME 558D Photodiode Characteristics Apparatus
- ME 559D Photo Transistor Characteristics Apparatus
- ME 560D Measurement of Peak, Average & RMS value of a AC signal
- ME 561D Verification of KCL & KVL
- ME 562D Resistance in Series & Parallel Apparatus
- ME 563 Ohm's Law Apparatus with 2 round meters
- ME 563PD Ohm's Law Apparatus with Power Supply
- ME 564D Charging & Discharging of Condenser
- ME 565 Flashing & Quenching of Neon Bulb
- ME 566 B.H. Curve Apparatus
- ME 567D Conversion of Galvanometer into Voltmeter & Ammeter
- ME 568D Voltage Doubler & Tripler Circuit with Two Meters
- ME 570D LCR Resonance Apparatus
- ME 571D LCR Resonance Apparatus With built in Oscillator



**ME 581 - e/m by Thomson Method**

- ME 572D LCR Impedance Apparatus
- ME 573 RC Circuit as Low Pass & High Pass Filters
- ME 574 Study of AC Fundamentals
- ME 576 Clipping & Clamping Circuit Apparatus
- ME 577D Half Wave, Full Wave & Bridge Rectifier Apparatus
- ME 578 Voltage Regulation using IC 317
- ME 578B Voltage Regulation using Zener Diode & Transistors
- ME 578C Voltage Regulation using 78 Series Voltage Regulators
- ME 579D Ripple factor Apparatus
- ME 569D DC Regulated Power Supply Trainer
- ME 1153 Analog Lab Trainer (with Bread Board)
- Optional Ready** to use modules available for ME 1153
- e/m Apparatus
- ME 580 e/m by Thomson Method
- ME 581 e/m by Helical's Method
- ME 582 e/m by Short Solenoid Method
- ME 583 e/m by Magnetic Focusing Method
- ME 584 e/m by Milikan's Oil Drop Method

### Network Theorems Verifications (In DC Circuits)

- ME 590D - I Network Theorems (Superposition & Maximum Power Transfer)
- ME 590D - II Network Theorems (Norton's & Thevenin's)
- ME 592D Superposition Theorem
- ME 593D Norton's Theorem
- ME 594D Thevenin's Theorem
- ME 595D Maximum Power Transfer Theorem
- ME 596D Reciprocity Theorem
- ME 597D Tellegen's Theorem
- ME 598D Millman's Theorem
- Amplifiers
- ME 606 Opamp Based Sinusoidal & Non Sinusoidal Wave Generator
- ME 607 IFT Tuned Amplifier
- ME 608 Class 'C' Amplifier
- ME 610 Darlington Pair Amplifier
- ME 611 Transistor Amplifier Circuits (CB, CE & CC Modes)
- ME 612 Audio Power Amplifier using IC TBA 810
- ME 613 FET Common Source Amplifier
- ME 614 Common Collector (Emitter Follower) Transistor Amplifier
- ME 617 Common Base Transistor Amplifier
- ME 618 Common Emitter Transistor Amplifier
- ME 619 Two Stage RC Coupled Amplifier
- ME 620 Transistor Push Pull Amplifier
- ME 621 Complementary Symmetry Amplifier
- ME 622 Class 'A', 'B', 'AB' & Push Pull Amplifier
- ME 623 Biasing of Transistor in Class 'A' Amplifier
- ME 624 Biasing Techniques of Transistor (BJT)
- ME 1160 Amplifier Lab Trainer with Power Supply (with Bread Board)



**ME 545 - Energy Band Gap by Four Probe Method**

- ME 1161 Amplifier Lab Trainer with Built in Power Supply, AC Millivoltmeter & Function Generator (with Bread Board)
- Optional Ready** to use modules available for ME 1160 / ME 1161

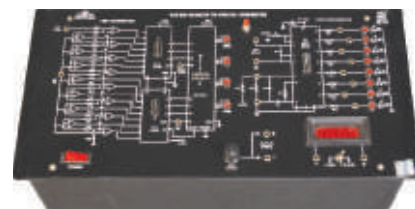
### Operational Amplifiers

- ME 625 Operational Amplifier as Inverting, Non-Inverting, Summing & Difference Amplifier with one Digital Voltmeter
- ME 626 Operational Amplifier as Inverting, Non-Inverting, Unity Gain Amplifier & Frequency Response with Analog Voltmeter
- ME 627 Applications of Operational Amplifiers (Discrete)
- ME 627B Characteristics of Operational Amplifier (Discrete)
- ME 629 Operational Amplifier as Summing, Scaling, Averaging, Window Detector & Zero Crossing Detector
- ME 631 Operational Amplifier as Differentiator & Integrator
- ME 633 Operational Amplifier as Schmitt Trigger
- ME 634 Linear Wave Shaping Circuits (Study of Clipping, Clamping, Integrator, Differentiator)
- ME 635 Operational Amplifier as Square wave Generator
- ME 638 Operational Amplifier as Voltage Comparator
- ME 639 Operational Amplifier as Differential Amplifier
- ME 640 Operational Amplifier as V-I & I-V Converter
- ME 641 Feedback Amplifier Series & Shunt Voltage
- ME 644 Operational Amplifier as Voltage & Current Feedback Amplifier
- ME 645 Operational Amplifier as Instrumentation Amplifier
- ME 646 Operational Amplifier as Logarithmic Amplifier
- ME 647 Precision Rectifier using Operational Amplifier
- ME 649 Audio Power Amplifier (Class 'A' using BJT)
- Multivibrator & Oscillator
- ME 650 Application of IC 555
- ME 656 Bistable Multivibrator using Transistors
- ME 657 Monostable & Free running Multivibrator using Transistors
- ME 659 F-V & V-F Converter using IC 337
- ME 660 Oscillators Circuits (Hartley, Colpitt, Wein Bridge, Relaxation, Clap, Tuned, Crystal and RC Phase Shift Oscillator)
- ME 661 Hartley Oscillator
- ME 662 Colpitt Oscillator
- ME 664 Phase Shift Oscillator
- ME 664A Phase Shift Oscillator using OP-AMP
- ME 665 Wein Bridge Oscillator using Operational Amplifier IC 741
- ME 665A Wein Bridge Oscillator using Transistor
- ME 666 Relaxation Oscillator using UJT
- ME 667 Tuned Collector Oscillator
- ME 667A Oscillators Circuits (Hartley, Colpitt, Wein Bridge, phase shift oscillator)
- ME 668 Crystal Oscillator
- ME 669 Voltage Controlled Oscillator using PLL 565

## DIGITAL ELECTRONICS LAB TRAINING MODULES

ME 675 Logic Gates using Six TTL IC's (6 in 1)  
 ME 678 RTL Logic Gates (5 in 1)  
 ME 679 Basic Logic Gate using Discrete Components (7 in 1)  
 ME 690 Digital Logic Trainer (Logic Gates, Boolean Identities & Demorgan's Theorems)  
 ME 692 Verification of truth tables of Logic Gates using Universal Gates  
 ME 695 Pulse/ Clock Generator using NAND Gate  
 ME 699 4 Bit Adder & Subtractor Circuits using IC 7483  
 ME 701 Digital Full Adders & Subtractors using NAND Gates  
 ME 702 Flip Flops using NAND Gates & TTL IC's  
 ME 711 Decade / Modulo-N Counter  
 ME 712 4 Bit Counters (Synchronous & Asynchronous)  
 ME 716 4 Bit Shift Registers

ME 718 Encoder & Decoder Circuits  
 ME 720 16 to 1 line Multiplexer & 1 to 16 Line Demultiplexer  
 ME 720A Encoder/Multiplexer  
 ME 720B Decoder/ DeMultiplexer  
 ME 722 RAM Circuit using IC 7489  
 ME 723 Parity Generator/Checker  
 ME 724 4 Bit Digital Comparator  
 ME 731 4/8 Bit Analog to Digital Converter  
 ME 731E 4 Bit A/D Converter  
 ME 732 4/8 Bit Digital to Analog Converter  
 ME 732E 4 Bit D/A Converter  
 ME 734 Transfer Characteristics of TTL and TTL Schmitt Trigger Inverter  
 ME 737 TTL-CMOS, CMOS-TTL Interfacing  
 ME 738 Arithmetic/Logic Unit (ALU)



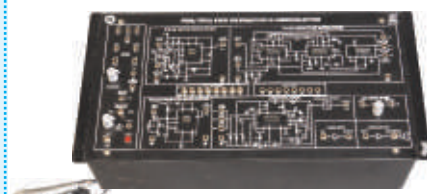
**ME 731 - 4/8 Bit Analog to Digital Converter**

ME 739C TTL IC Characteristics Apparatus  
 ME 739T CMOS IC Characteristics Apparatus  
 ME 1154 Digital Lab Trainer (with Bread Board)  
**Optional Ready** to use modules available for ME 1154

## BASIC & ADVANCE COMMUNICATION LAB TRAINING MODULES

ME 741 Amplitude Modulation & Demodulation  
 ME 742 Frequency Modulation and Demodulation  
 ME 743 Pulse Amplitude Modulation & Demodulation  
 ME 744 Pulse Width Modulation & Demodulation  
 ME 745 Pulse Position Modulation & Demodulation  
 ME 746 PAM/PPM/PWM Modulation & Demodulation  
 ME 747 Phase Modulation and Demodulation  
 ME 748 Frequency Shift Keying Modulation & Demodulation  
 ME 749 Amplitude Shift Keying Modulation & Demodulation  
 ME 750 Phase Shift Keying Modulation & Demodulation  
 ME 751 Pulse Code Modulation and Demodulation  
 ME 752 Delta Modulation and Demodulation  
 ME 753 Adaptive Delta Modulation and Demodulation  
 ME 754 Single Side Band Modulation & Demodulation  
 ME 756 Sample & Hold Circuit using Op-Amp  
 ME 757 Detection of FM using Phase locked loop (PLL)  
 ME 758 Balanced Modulator/DSB-SC (DSB-SC Amplitude Modulation and Demodulation)  
 ME 761 Frequency Division Multiplexer & Demultiplexer  
 ME 762 QAM Modulation & Demodulation

ME 770 Frequency Modulation & Demodulation  
 ME 771 Delta, Adaptive Delta and Delta Sigma Modulation & Demodulation  
 ME 772 TDM Pulse Code Modulation Transmitter  
 ME 773 TDM Pulse Code Modulation Receiver  
 ME 774 Data Formatting and Carrier Modulation Transmitter  
 ME 775 Data Formatting and Carrier Demodulation Receiver  
 ME 776 Analog Signal Sampling & Reconstruction  
 ME 777 TDM Pulse Amplitude Modulation & Demodulation  
 ME 780 8 Bit Variable Data Generator for Model (ME 774 & ME 775)  
 ME 781 DSB/SSB AM Transmitter  
 ME 782 DSB/SSB AM Receiver  
 ME 785 Transmission Line Trainer  
 ME 786 Mobile Phone Trainer  
 ME 787 GSM Trainer  
 ME 788 CDMA Trainer  
 ME 789 Lan Trainer  
 ME 790 Antenna Trainer (50-860 MHz)  
 ME 790M Antenna Trainer Motorized (50-860 Mhz)



**ME 746 - PAM/PPM/PWM Modulation & Demodulation**



**DSB/SSB AM Transmitter & Receiver  
ME 781 & ME 782**

## POWER ELECTRONICS LAB TRAINING MODULES

ME 791 Light Intensity control using SCR & Triac  
 ME 792 SCR Firing Circuits  
 ME 793 SCR Commutation Techniques  
 ME 794 Phase control using Triac  
 ME 795 Switching Action of a BJT  
 ME 795A Switching Action of a FET  
 ME 796 Thyristor Firing Circuit Kit (UJT Controlled SCR Time Delay)  
 ME 797 Zero Voltage Switching using SCR

ME 798 Step up Chopper  
 ME 799 SCR Single Phase Half Wave, Full Wave, Fully Controlled Bridge Rectifier/Converter  
 ME 800 DC Motor Control using SCR's (with tachometer)  
 ME 802 Three Phase Fully Controlled Converter  
 ME 803 Three Phase Induction Motor Speed Controller  
 ME 804 Single Phase Cycloconverter  
 ME 806 SMPS Trainer Kit  
 ME 807 Jones's Chopper

ME 808 Morgan's Chopper  
 ME 809 Series Inverter using SCR's  
 ME 810 Parallel Inverter using SCR's  
 ME 812 Single Phase Inverter (using power mosfet)  
 ME 813 Chopper Circuit (using power mosfet with Motor)  
 ME 814 DC Drive Trainer  
 ME 815 Single Phase Half Controlled DC Drive  
 ME 816 SCR Ring Counter

## PHYSICS LAB EXPERIMENTALSETUPS

ME821 Measurement of High Resistance using Substitution Method  
 ME 822 Lissajous Figure Apparatus  
 ME 823 Stefan Constant Apparatus  
 ME 824 Dielectric Constant Apparatus (Solid & Liquid)  
 ME 825 Hall Effect Experiment  
 ME 826 Fourier Analysis Kit  
 ME 827 Measurement of Susceptibility of Paramagnetic Solution by Quinck's Tube Method  
 ME 828 Heat Efficiency of an Electric Kattel  
 ME 829 Choke Characteristics Apparatus  
 ME 830 Inductance Measurement (Impedance at Different Freq)  
 ME 831 Determine the Hight of Tower with the Help of Sextant  
 ME 840 GM Counter Experimental Setup  
 ME 850 Determine The Ballistic Constant of a Ballistic Galvanometer  
 ME 851 The ECE of Copper using Tangent Galvanometer  
 ME 852 Determine the Wavelength of Sodium Light by Fresnel's Biprism Kit  
 ME 852D Determine the Wavelength of Sodium Light by Fresnel's Biprism Kit with Stainless Steel Optical Bench  
 ME 853 Determine the Focal Length of Two Lenses by Nodal Slide and Locate the Position of Cardinal Points  
 ME 853D Determine the Focal Length of Two Lenses by Nodal Slide and Locate the Position of Cardinal Points with Stainless Steel Optical Bench

ME 854 Determine of the Specific Rotation of the Cane Sugar Solution with the Help of Polarimeter  
 ME 855 Determine the Wavelength of Spectral Lines using Plane Transmission Grating  
 ME 856 Determine the Viscosity of a Liquid by Stroke's Method  
 ME 857 Determine the Frequency of AC Mains by Electrical Vibrator  
 ME 858 Determine the Wave Length of Sodium Lamp by Newton Ring Method  
 ME 859 Determine Magnetic Field using Stewart and Gee's Apparatus  
 ME 860 Determine the Velocity of Ultrasonic Waves by using a Crystal  
 ME 861 Laser Experimental Setup with Diode Laser  
 ME 861D Laser Experimental Setup with Diode Laser & Stainless Steel Optical Bench  
 ME 861H Laser Experimental Setup with He-Ne Laser  
 ME 861HD Laser Experimental Setup with He-Ne Laser & Stainless Steel Optical Bench  
 ME 861L He-Ne Laser with Power Supply  
 ME 862 High Resistance by Leakage Method  
 ME 864 Calibration of Voltmeter using Potentiometer  
 ME 865 Determine Young's modulus's, modulus of rigidity and poisson's ratio of the material of a given wire by Searle's dynamical method  
 ME 866 Determine the Frequency of a Tuning Fork with the help of Sonometer  
 ME 867 Determine the Frequency of A.C. mains by Means of a Sonometer



**Spectrometer**

**Newton Ring Microscope**

ME 868 Determine the Dispersive Power of the Material of the Prism for Violet & Yellow Colors of Mercury Light with the Help of Spectrometer  
 ME 869 Determine the Resolving Power of Telescope  
 ME 870 Determine the Wave Length of Sodium Lamp by Michelson Interferometer  
 ME 871 Determine the Refractive Index of Liquid using Diode Laser  
 ME 872 Determine the Malus Law using Diode Laser  
 ME 873 Determine the Brewster Angle using Diode Laser  
 ME 875 Determine the Refractive Index of Prism using white light & Spectrometer  
 ME 876 Carrey Foster Bridge with Four Gap  
 ME 880 Determine Thermal Conductivity using Lee's Disc  
 ME 891 Sodium Vapour Lamp 35 Watt fitted in Box with Transformer  
 ME 892 Sodium Vapour Lamp 55 Watt fitted in Box with Transformer  
 ME 893 Mercury Vapour Lamp 80 Watt fitted in Box with Choke



## INSTRUMENTATION LAB TRAINING MODULES

ME 1050 Instrumentation Trainer Using Transducers  
LVDT, RTD, Thermocouple Thermistor, Opto  
Devices (Photo Diode, PhotoTransistor, LDR,  
Zener, Diode) , Wheatstone Bridge &  
Instrumentation Amplifier  
ME 1051 Strain Gauge Trainer Kit(with Cantilever Beam)  
ME 1052 LVDT Trainer Kit  
ME 1053 RTD Trainer Kit  
ME 1054 Thermocouple Trainer Kit  
ME 1056A Speed Measurement Module using Photo  
Electric Sensor  
ME 1056B Speed Measurement Module using Magnetic  
Sensor

ME 1057 Inductive Pick Up  
ME 1058 Capacitive Pick Up  
ME 1059 Piezo Electric Transducer  
ME 1060 Hall Effect Sensor  
ME 1061 Pressure Measurement using Strain Gauge  
ME 1062 Load Cell Trainer Kit  
ME 1063 Temperature Sensors Kit  
ME 1064 Study of Linear Potentiometer Instrument Trainer  
ME 1065 Data Logger (Voltage, Current, Temperature &  
Pressure)



ME 1052 - LVDT Trainer Kit

## CONTROL LAB TRAINING MODULES

ME 1100 PID Simulator  
ME 1101 PID Controller Kit (Model Process)  
ME 1103 ON/OFF Temperature Controller  
ME 1104 AC Servo Speed Torque Characteristics  
ME 1105 DC Servo Motor Speed Torque Characteristics  
ME 1106 AC Position Control System Trainer  
ME 1107 DC Position Servo Mechanism Trainer  
ME 1108 AC Servo Voltage Stabilizer as Servomechanism  
ME 1109 Stepper Motor Controller Trainer  
(Manual & Microprocessor Control)  
ME 1109D Stepper Motor Controller Trainer  
(Manual Control)  
ME 1112 Potentiometer as Error Detector  
ME 1113 Synchro Transmitter Receiver Pair  
ME 1114 Study of Compensation Network  
ME 1115 Magnetic Amplifier  
Accessories for ME 1115  
ME 2300 Variac 2 Amps Single Phase  
ME 463D AC Ammeter (Rectifier Type) 0-1A  
ME 463D AC Ammeter (Rectifier Type) 0-5A  
ME 457D DC Voltmeter 0-300V (Internal shunt)  
ME 462D AC Voltmeter (Rectifier Type) 0-150V  
ME 240 DC Regulated Power Supply Dual Channel  
0-  $\pm$ 30VDC/2 Amps  
ME 2364 Rheostat 50 Ohms/ 5 Amps. (Double Tube)  
ME 2365 Rheostat 250 Ohms/ 3 Amps.

ME 1116 DC Voltage Regulator as a Closed Loop  
Relay Control System  
ME 1117  
ME 1118 Measurement of water level using strain gauge  
ME 1119 Educational Analog Computer  
ME 1122 Light Intensity Control  
ME 1123 Digital Control System  
ME 1125 PLC Trainer Demonstration Unit  
ME 1126 Linear System Simulator (Open loop & Close  
loop System of First order & Second order  
Systems)



ME 1105 - DC Servo Motor Speed Torque Characteristics



ME 1109 - Stepper Motor Controller Trainer



ME 1107 - DC Position Servo Mechanism Trainer

## BREAD BOARD TRAINERS

ME 1150 Bread Board Trainer with Power Supplies  
(General Purpose)  
ME 1151 Operational Amplifier Trainer  
(Bread Board Model)  
ME 1152 Digital Electronics Circuit Trainer  
(Bread Board Model)  
ME 1152OP Set of 20 IC's & Instruction Manual for more than  
60 Experiments  
ME 1153 Analog Lab Trainer (with Bread Board)

ME 1154 Digital Lab Trainer (with Bread Board)  
ME 1155 Analog & Digital Lab Trainer (Bread Board Model)  
ME 1160 Amplifier Lab Trainer with Power Supply (with  
Bread Board)  
ME 1161 Amplifier Lab Trainer with Built in Power Supply,  
AC Millivoltmeter & Function Generator (with  
Bread Board)  
Note: Optional Ready to use modules available for ME  
1153, ME 1154, ME 1155, ME 1160, ME 1161



ME 1153 - Analog Trainer with Modules

## DYNAMIC DEMONSTRATORS & TRAINERS

ME 1200 Black & White Television Demonstrator  
( with 14" CRT)  
ME 1201 Color Television Demonstrator (with 20" CRT)  
ME 1201A Color Television Demonstrator (with 14" CRT)  
ME 1202 Video Compact Disc Player Demonstrator  
ME 1203 Digital Versatile Disc Player Demonstrator  
ME 1205 Stereo Tape Recorder Trainer  
ME 1206 Analog Multimeter Trainer  
ME 1207 Digital Multimeter Trainer  
ME 1208 Analog Fiber Optic Voice Transmission  
Demonstrator  
ME 1209 CRO Demonstrator (20MHz Dual Channel)  
ME 1210 Function Generator Demonstrator  
ME 1211 FM Radio Receiver Demonstrator  
ME 1212 Telephone Trainer  
ME 1213 AM Radio Receiver Demonstrator (Two Band)

ME 1214 UPS Trainer 500 VA  
ME 1214A UPS Trainer 1KVA  
ME 1215 Video Cassette Recorder Demonstrator  
ME 1216 Camcorder Demonstrator  
ME 1217 EPBAX Demonstrator  
ME 1218 Fax Demonstrator  
ME 1219 Walkie Talkie Demonstrator  
ME 1220 ECG cum Heart Beat Monitor Trainer  
ME 1221 Battery Monitoring System  
ME 1223 Washing Machine Trainer (Automatic)  
ME 1224 Washing Machine Trainer (Semi Automatic)  
ME 1225 Microwave Oven Demonstrator  
ME 1226 Two in One Trainer  
ME 1227 AM / FM Radio Receiver Demonstrator  
ME 1228 Multimedia Computer Trainer  
ME 1250 Pattern Generator (For TV)



ME 1201 - Color Television Demonstrator

## MICROPROCESSOR & MICROCONTROLLER LAB

ME 1300 8031 Microcontroller Training Kit with Inbuilt  
Power Supply  
ME 1300L 8031 Microcontroller Training Kit with Inbuilt  
Power Supply (LCD Display, ASCII Keyboard)

ME 1302 8085 Microprocessor Training Kit with Inbuilt  
Power Supply  
ME 1302L 8085 Microprocessor Training Kit with Inbuilt Power  
Supply (LCD Display, ASCII Keyboard)

ME 1303 8086 Microprocessor Training Kit with Inbuilt  
Power Supply  
ME 1303L 8086 Microprocessor Training Kit with Inbuilt  
Power Supply (LCD Display, ASCII Keyboard)  
Interfacing Cards & Study Cards available

## ELECTRICAL LAB TRAINING MODULES & EQUIPMENTS



Electrical Panels



Electrical Accessories



Cut Section Motor (Working Model)

### Electrical Bridges

ME 2200E	Anderson Bridge
ME 2201E	Schering Bridge
ME 2202	Kelvin Bridge (Industrial)
ME 2203	Kelvin Bridge (Student)
ME 2204E	Maxwell Inductance Bridge
ME 2205E	Weins Bridge (Capacity Measurement)
ME 2206E	Weins Bridge (Frequency Measurement)
ME 2207	Wheatstone Bridge (Portable)
ME 2208E	Desauty Bridge
ME 2209E	Hay's Bridge
ME 2214	Owen's Bridge
ME 2217	Callender and Griffith's Bridge

'E' Model consist of inbuilt Digital Null Detector, Sinewave Oscillator etc as required

### Isolation Transformers

ME 2240A	Single Phase Transformer 0.5KVA/230VAC With Tappings at 50% & 86.6%
ME 2240	Single Phase Transformer 1KVA/230VAC With Tappings at 50% & 86.6%
ME 2241	Single Phase Transformer 2KVA/230VAC With Tappings at 50% & 86.6%
ME 2242	Three Phase Transformer 3KVA/440VAC
ME 2242B	Three Phase Transformer 1KVA/440VAC

### Variable Auto Transformers (VARIAC), Loading Rheostats & Motors

Variat available from model ME 2300 to ME 2311 (Single Phase & Three Phase) closed type	
ME 2315	DC Rectifier Unit, I/P-440VAC, O/P-0-250VDC/20A
ME 2316	DC Rectifier Unit, I/P-440VAC, O/P-0-250VDC/50A
ME 2321	Loading Rheostat 1 KW Single Phase in 5 Steps of 200 Watt Each
ME 2322	Loading Rheostat 2 KW Single Phase in 8 Steps of 250 Watt Each
ME 2323	Loading Rheostat 3 KW Three Phase (Each Phase of 1 KW) in 8 Steps.
ME 2323B	Loading Rheostat 1.5 KW Three Phase (Each Phase of 0.5 KW) in 4 Steps.
ME 2325	Inductive Load 10A Three Phase
ME 2326	Capacitive Load 10A Three Phase
ME 2327E	Resistive lamp Load 500W in 5 steps
ME 2328	Resistive Lamp Load 1 KW
ME 2328E	Resistive lamp Load 1000W in 5 steps

ME 2329	Capacitive Load 200mfd Single Phase in 20 Steps
ME 2330	Inductive Load 5Amp. Single Phase in 5 Steps
ME 2331	Resistive Lamp Load 3 KW
ME 2332	Resistive Lamp Load 5 KW
ME 2333	Three Phase Resistive Lamp Load 1 KW
ME 2335	Current Transformer (CT 30/5Amp)
ME 2336	Potential Transformer (PT 220/100V)
ME 2350	Phase Shifting Arrangement
ME 2360	Rheostat 10ohms/10Amps
ME 2362	Rheostat 300ohms/2Amps
ME 2363	Rheostat 100ohms/5Amps
ME 2364	Rheostat 50 Ohms/ 5 Amps. (Double Tube)
ME 2365	Rheostat 250 Ohms/ 3 Amps.
ME 2377	Synchronous Motor 3HP
ME 2378	DC Shunt Motor 1HP
ME 2378CS	Study of Construction of a DC Motor 1HP
ME 2379	Loading Arrangement for DC Shunt Motor 1HP
ME 2380	AC Induction Motor 3HP Single Phase Coupled with 1KW DC Series Generator
ME 2381	AC Induction Motor 3HP Three Phase with Loading Arrangement
ME 2382	DC Series Motor 1HP
ME 2383	Induction Motor 3 Phase 5 HP/ 415V.
ME 2384	Induction Motor Single Phase 1 HP/ 230V
ME 2390	Starter DC Motor 1HP (3 Point)
ME 2391	Starter DC Motor 1HP (4 Point)

### Experimental Control Panel for Electrical Lab

ME 2400A	Panel for Measurement of Power in Three Phase Circuit by Three Wattmeter Method.
ME 2400	Measurement of Power in 3 Phase Circuit by Two Wattmeter Method
ME 2401	Measurement of efficiency of Single Phase Transformer (Direct Loading)
ME 2402	Determination of Parameter and Losses in a Single Phase Transformer by OC and SC Test
ME 2403	Study of Single Phase Energy Meter
ME 2404	Earth Resistance by Fall of Potential Method
ME 2405	Calibration of Wattmeter by DC Potentiometer
ME 2406	Calibration of Voltmeter & Ammeter by DC Potentiometer
ME 2407	Single Phase Energy Meter with Phantom Loading
ME 2408	Starting and Reversing of DC Shunt Motor
ME 2410	Sumpner's Test (Back to Back) Test on Single Phase Transformer
ME 2411	Parallel Operation Single Phase Transformer
ME 2412	Voltage Relationship of Three Phase

ME 2413	Transformer in Various Connections
ME 2414	Speed Control of D.C. Shunt Motor (By Armature and Field Current Control Method)
ME 2415	To Study Scott Connection of a Transformer
ME 2416	Load Test of DC Shunt Motor
ME 2417	To Plot Magnetizing Curve of a DC Series Generator
ME 2417	Different Type of Contactor Control Circuit Accessories for above
ME 2411B	a) Remote Control Circuit
ME 2419C	b) Time Delay & Sequential Circuit
ME 2418	c) Interlocking Circuit
ME 2418	Angular Displacement Measurement of Synchronous Motor
ME 2422	Measurement of Power & Power Factor in Single Phase Circuit
ME 2423	Measurement of Power in 3 Phase Circuit by CT, PT & 3 Phase Wattmeter
ME 2423A	Measurement of Power in Single Phase Circuit by CT, PT & Single Phase Wattmeter
ME 2424	Panel for Load Test of DC Series Motor
ME 2426	To Obtain Efficiency of DC Shunt Motor by Swinburne's Test
ME 2427	To Obtain Losses & Efficiency of DC Machine by Hopkinson's Test
ME 2428	Study of Different Type of Fuses, MCBs & ELCBs
ME 2429	To Connect, Start & Reverse the Direction of Rotation of a Single Phase Induction Motor
ME 2430	To Connect, Start & Reverse the Direction of Rotation of a 3 Phase Induction Motor
ME 2431	To Perform the Block Rotar Test of 3 Phase Induction Motor
ME 2432	Motor Generator Set to plot OCC and Load Characteristics of DC Shunt Generator
ME 2433	Motor Generator Set to plot Load Characteristics of DC Series Generator
ME 2434	Motor Generator Set to plot Load Characteristics of DC Compound Generator
ME 2435	Domestic Home Wiring Demonstration Panel
ME 2450	Electrical Machine Trainer (Complete Setup)
ME 2460	Panel to Study Synchronization and Parallel operation of Two Alternator (ii) To study the Synchronization of two alternator by two bright & one dark lamp method with Synchroscope

### MISC

Primary / Secondary Injectors, Portable Meters, Meggers, Insulation Testers, LCR Meters, Transmission Line Models, Power Analyzers, CT Test Setup

## POWER PROTECTION LAB TRAINERS

- ◆ IDMT Over Current Relay Testing Kit (Electromechanical Type)
- ◆ Earth Fault Realy Testing Kit (Electromechanical Type)
- ◆ Thermal Over Load Relay Testing Kit
- ◆ Bucholz Relay Test Setup
- ◆ Under Voltage / Over Voltage Relay Testing Kit (Static Type)
- ◆ Instantaneous Earth Fault Relay Testing Kit (Electromechanical Type)
- ◆ Over Voltage Relay Testing Kit (Electromechanical Type)
- ◆ Under Voltage Relay Testing Kit (Electromechanical Type)
- ◆ Over Current & Earth Fault Relay Testing Kit (Three Phase Static Type)
- ◆ Over Current Relay Testing Kit ( Static Type)



## MICROWAVE EXPERIMENTAL TRAINERS

ME 6000	Experiments of Reflex Klystron
ME 6010	Experiments on Gunn Diode
ME 6020	Experiments to measure the Polar Pattern & gain characteristics of the antenna
ME 6030	Experiment to measure dielectric constant of Solids & Liquid and to measure Phase Shift & 'Q' of a cavity.
ME 6040	Study of Microwave components (Magic T, Directional Coupler, Isolator, Circulator)

### MARS Microwave Power Meters

OP 6000	Microwave Power Meters 8.2GHz ~ 12.4GHz
OP 6000A	Microwave Power Meters 10MHz ~ 18GHz



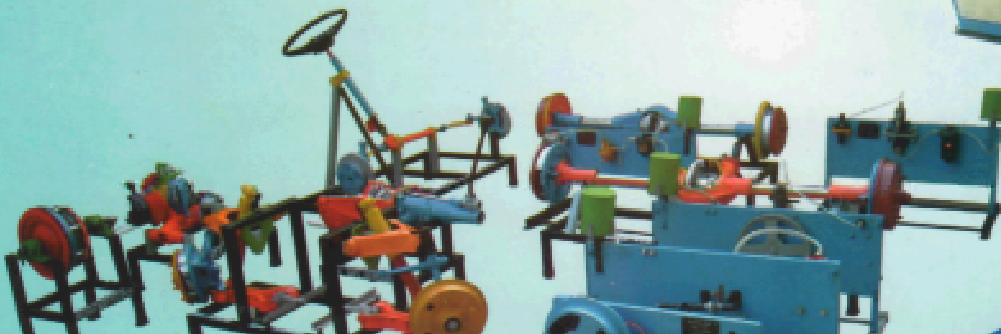
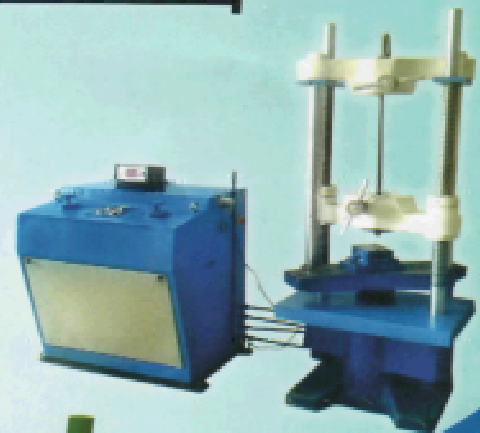
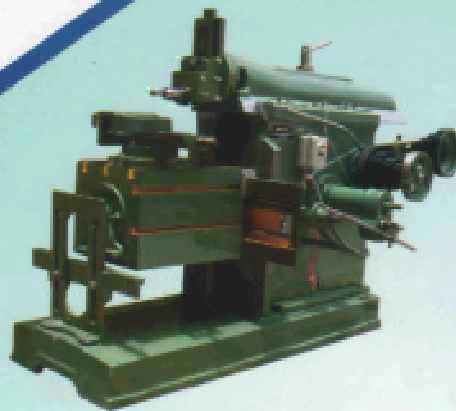
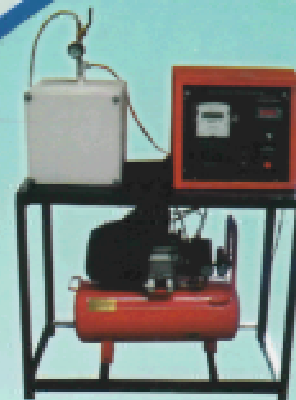
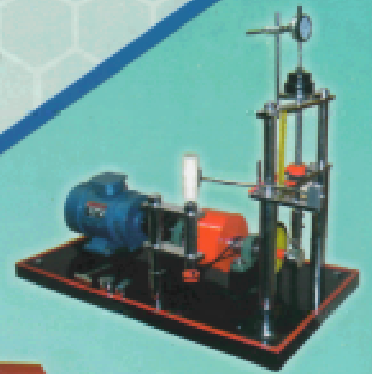
ME 6000 Series - Microwave Test Bench



# PRODUCT GUIDE



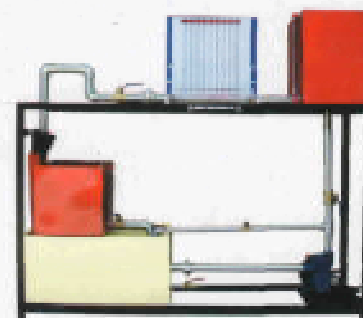
MECHANICAL  
CIVIL  
AUTOMOBILE  
MACHINERY TOOLS



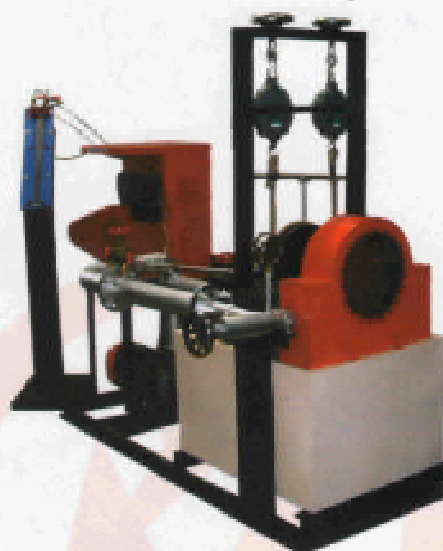
## FLUID MECHANICS LAB

- GN 7201 Bernoulli's Theorem Apparatus
- GN 7204 Reynold Apparatus
- GN 7206 Discharge Over Notches
- GN 7208 Impact of Jet of Vanes
- GN 7210 Pitot Tube Setup
- GN 7214 Hydraulic Ram Test Rig
- GN 7217 Flow Through Orifice & Mouthpiece
- GN 7220 Orificemeter Test Rig
- GN 7222 Venturimeter Test Rig
- GN 7225 Venturimeter & Orificemeter Test Rig
- GN 7228 Nozzle Meter Test Rig
- GN 7230 Losses due to Friction in Pipe Lines
- GN 7233 Losses due to Pipe Fitting, Sudden Enlargement & Contraction
- GN 7235 Free Vortex Apparatus
- GN 7237 Forced Vortex Apparatus
- GN 7240 Free & Forced Vortex Apparatus
- GN 7242 Piezometer tube apparatus (Capillary tube Viscometer)
- GN 7245 Newton Law of Viscosity Apparatus
- GN 7247 Metacentric Height Apparatus
- GN 7250 Center of Pressure Apparatus
- GN 7252 Darcy's Law Apparatus
- GN 7255 Axial Fan Flow Apparatus
- GN 7258 Jet Pump Test Rig
- GN 7260 Gear Pump Test Rig
- GN 7262 Centrifugal Pump Test Rig
- GN 7265 Reciprocating Pump Test Rig
- GN 7267 Single Stage Air Compressor Test Rig
- GN 7269 Double Stage Air Compressor Test Rig
- GN 7272 Tilting Bed Flow Channel
- GN 7275 Pelton Wheel Turbine Test Rig
- GN 7278 Francis Turbine Test Rig
- GN 7280 Kaplan Turbine Test Rig

- GN 7285 Hydraulic Bench with following experimental modules
- GN-BT Bernoulli's Theorem Experiment Unit
- GN-VO Venturimeter and Orifice Experiment Unit
- GN-FN Flow Over Notches Experiment Unit
- GN-FT Flow Through Orifice & Mouthpiece Experiment Unit
- GN-PT Losses Due to Friction in Pipe Line Experiment Unit
- GN-PS Losses in Pipe Fittings, Sudden Enlargement and Contraction Experiment Unit
- GN-UJ Impact of Jet of Vanes Experiment Unit
- GN-PT Pitot Tube Experiment Unit



BERNOULLI'S THEOREM APPARATUS



PELTON WHEEL TURBINE TEST RIG



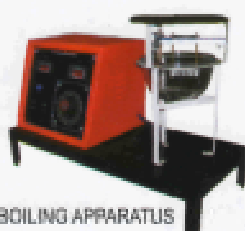
IMPACT OF JET OF VANES

## HEAT TRANSFER LAB

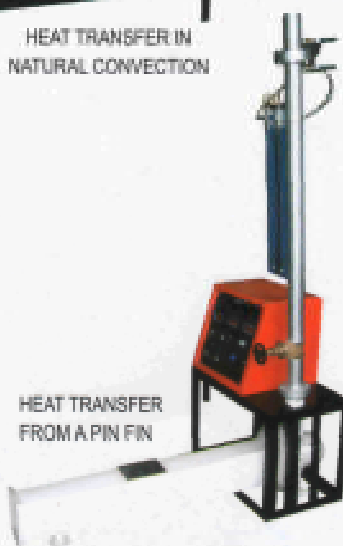
- GN 7301 Stefan Boltzman Apparatus
- GN 7304 Emissivity Measurement Apparatus
- GN 7307 Dropwise and Filmwise Condensation App.
- GN 7308 Pool Boiling Apparatus (Critical Heat Flux)
- GN 7310 Thermal Conductivity of Insulation Powder
- GN 7313 Thermal Conductivity of Insulation Slab
- GN 7315 Thermal Conductivity of Liquids
- GN 7318 Thermal Conductivity of Metal Rod
- GN 7320 Heat Transfer From A Pin Fin
- GN 7325 Heat Transfer in Forced Convection
- GN 7328 Heat Transfer in Natural Convection
- GN 7330 Heat Transfer Through Composite Walls
- GN 7335 Heat Transfer Through Lagged Pipe
- GN 7337 Mechanical Equivalent of Heat Apparatus
- GN 7340 Conduction Composite Cylindrical Apparatus
- GN 7344 Heat Pipe Demonstrator
- GN 7346 Calandria Evaporator
- GN 7350 Single Effect Evaporator
- GN 7352 Double Effect Evaporator ( Multi Effect)
- GN 7355 Open Pan Evaporator
- GN 7358 Shell & Tube Heat Exchanger
- GN 7360 Parallel/Counter Flow Heat Exchanger



HEAT TRANSFER IN NATURAL CONVECTION



POOL BOILING APPARATUS



HEAT TRANSFER FROM A PIN FIN

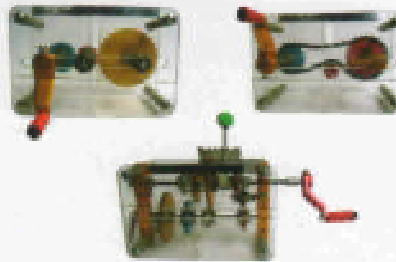
## MASS TRANSFER LAB

- GN 7370 Absorption in Packed Bed
- GN 7373 Absorption in Wetted Wall Column
- GN 7375 Batch Crystallizer
- GN 7378 Bubble Cap Distillation Setup
- GN 7380 Experimental Water Cooling Tower
- GN 7382 Fluidized Bed Dryer
- GN 7385 Liquid Extraction in Packed Bed
- GN 7387 Liquid in Liquid Diffusion Apparatus
- GN 7389 Natural Draft Tray Dryer
- GN 7390 Packed Distillation Column
- GN 7392 Rotary Dryer
- GN 7394 Simple Steam Distillation Setup
- GN 7395 Solid-Liquid Extraction (Bonnato Type)
- GN 7397 Solid-Liquid Extraction (Packed Bed Type)
- GN 7399 Vapour-Liquid Equilibrium Set-Up
- GN 7400 Wetted Wall Column, Humidification & De-Humidification Study

**Specialized in  
Customized  
Product Design  
&  
Development**

## APPLIED MECHANICS LAB

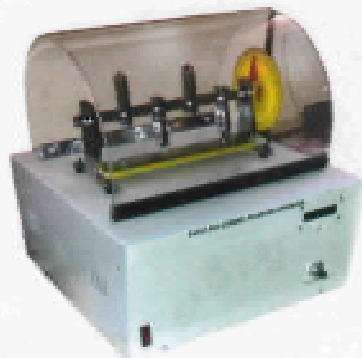
- GN 7401 Bell Crank Lever
- GN 7403 Bending of Beam Apparatus
- GN 7405 Compound Lever
- GN 7407 Compound Screw Jack
- GN 7410 Deflection of Beam Apparatus
- GN 7415 Friction Slide Apparatus
- GN 7418 Hook's Law Apparatus
- GN 7420 Inclined Plane and Friction Apparatus
- GN 7422 Inclined Plane and Friction Apparatus (Wooden Base & without Weight)
- GN 7425 Jib Crane
- GN 7428 Fly Wheel (20cm)
- GN 7430 Parallel Forces Apparatus Overhang Beam
- GN 7432 Parallelogram of Forces Apparatus
- GN 7435 Pulley System (First, Second, and Third)
- GN 7438 Screw Jack
- GN 7440 Simply Supported Beam
- GN 7442 Triangle & Parallelogram of forces Apparatus
- GN 7445 Universal Force Table
- GN 7448 Wheel and Differential Axle
- GN 7450 Winch Crab Double Purchase
- GN 7452 Winch Crab Single Purchase
- GN 7455 Worm and Worm Wheel (Double)
- GN 7458 Worm and Worm Wheel (Single)
- GN 7460 Worm and Worm Wheel (Triple)



DIFFERENT TYPES OF GEAR TRAINS



DIFFERENT TYPES OF MECHANISMS



STATIC & DYNAMIC BALANCING APPARATUS

## THEORY OF MACHINE LAB

- GN 7501 Universal Governor Apparatus
- GN 7502 Motorized Gyroscope
- GN 7505 Coriolis Component of Acceleration
- GN 7508 Cam Analysis Machine
- GN 7510 Epicyclic Gear Train Apparatus
- GN 7513 Journal Bearing Apparatus
- GN 7515 Universal Vibration Apparatus
- GN 7518 Whirling of Shafts Demonstrator
- GN 7520 Static & Dynamic Balancing Apparatus
- GN 7522 Models for Different Types of Mechanisms
- GN 7525 Models for Different Types of Gear Trains
- GN 7527 Models for Brake
- GN 7530 Models for Clutch



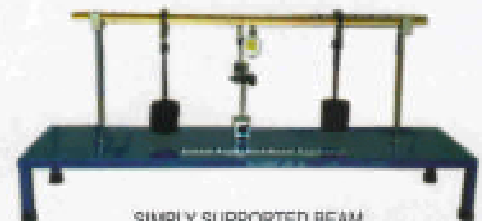
UNIVERSAL GOVERNOR APPARATUS

## STRUCTURE ANALYSIS LAB

- GN 7600 Simple Supported Beam Apparatus
- GN 7603 Clerk's Maxwell (Reciprocal Theorem)
- GN 7605 Deflection of Beam Apparatus (Elastic Properties)
- GN 7608 Three Pin Jointed Truss Apparatus
- GN 7610 Two Hinged Arch Apparatus
- GN 7613 Three Hinged Arch Apparatus
- GN 7615 Deflection of Truss Apparatus (Pin Jointed)
- GN 7618 Behavior of Column and Struts Apparatus
- GN 7620 Column Behavior & Buckling Apparatus (Digital)
- GN 7625 Curved Member Apparatus



COLUMN BEHAVIOR & BUCKLING APPARATUS



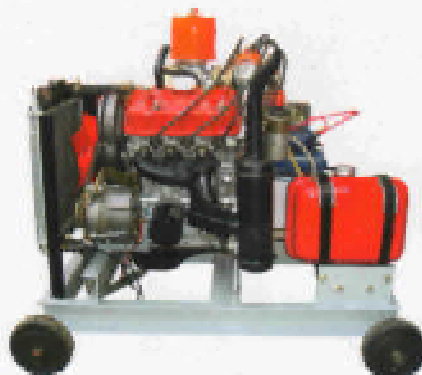
SIMPLY-SUPPORTED BEAM

**Export Quality Product**



## IC ENGINE LAB

GN 7701	Single Cylinder Two Stroke Petrol Engine Test Rig
GN 7705	Single Cylinder Four Stroke Petrol Engine Test Rig
GN 7710	Four Cylinder Four Stroke Petrol Engine Test Rig
GN 7715	Single Cylinder Four Stroke Diesel Engine Test Rig (Water Cooled)
GN 7720	Single Cylinder Four Stroke Petrol Engine (To Plotting Valve Timing Diagram). Actual Cut Section Model
GN 7725	Single Cylinder Two Stroke Petrol Engine (To Plot Port Timing Diagram). Actual Cut Section Model
GN 7730	Four Cylinder Four Stroke Diesel Engine Test Rig
GN 7733	Variable Speed Air Blow Test Rig
GN 7735	Single Cylinder Four Stroke Diesel Engine (To Plotting Valve Timing Diagram). Actual Cut Section Model
GN 7740	Sectional Working Model of 2 Stroke Petrol Engine
GN 7745	Sectional Working Model of 4 Stroke Petrol Engine
GN 7750	Sectional Working Model of 2 Stroke Diesel Engine
GN 7755	Sectional Working Model of 4 Stroke Diesel Engine



FOUR CYLINDER FOUR STROKE ENGINE



SECTIONAL WORKING MODEL OF ENGINE

## STEAM ENGINE MODEL

GN 7801	Model of Steam Engine
GN 7803	Steam Engine Model With A Boiler
GN 7805	Steam Engine 'D' Slide valve
GN 7807	Model of Piston Valve Steam engine
GN 7810	Model of Compound Steam Engine
GN 7812	Model of Uniflow Steam Engine
GN 7815	Model of Drop Valve Steam Engine
GN 7818	Model of Mayer Expansion Valve Steam Engine
GN 7820	Model OF Corliss Valve Steam Engine
GN 7822	Stephenson Link Motion
GN 7825	Gooch Link Motion
GN 7828	Allan Link Motion
GN 7830	Joy Valve gear
GN 7833	Walscharet Valve Gear

## BOILER MODELS

### Boiler Models

GN 7851	Model Of Lancashire Boiler
GN 7853	Model Of Cornish Boiler
GN 7855	Model of Babcock And Wilcox Boiler
GN 7858	Model of Locomotive Boiler
GN 7860	Model of Cochran Boiler
GN 7863	Vertical Water Tube Boiler
GN 7865	Model of Lamount Boiler
GN 7867	Model of Benson Boiler
GN 7870	Model of Loeffler Boiler
GN 7872	Model of Volex Boiler
GN 7875	Model of Marcel Boiler
GN 7878	Model of Stirling Boiler
GN 7880	Model of Nestler Boiler



BABCOCK AND WILCOX BOILER

### Mountings & Accessories of Steam Boilers

GN 7881	Lever Safety Valve
GN 7882	Spring Loaded Safety Valve
GN 7883	Dead Weight Safety Valve
GN 7884	Combined High Steam and Low Water Safety valve
GN 7885	Water Gauge Model
GN 7886	Stop valve-Hopkinson Type
GN 7887	Feed Check Valve
GN 7888	Steam Injector
GN 7889	Pressure Gauge
GN 7890	Blow Off Cock
GN 7891	Reducing Valve
GN 7892	Fusible Plugs
GN 7893	Anti-priming Pipe
GN 7894	Expansion Steam trap
GN 7895	Float Steam trap
GN 7896	Green Economiser
GN 7897	Sudgen Super heater



CAR STEERING SYSTEM



## AUTOMOBILE LAB

GN 7901	Air Brake (Actual Working)
GN 7903	Battery Cell Tester
GN 7905	Battery Hydrometer
GN 7907	Brake Cylinder
GN 7910	Brake Disc Type (Actual Working)
GN 7912	Brake Disc Type (Model)
GN 7915	Brake Double Shoe
GN 7918	Brake Internally Expanding
GN 7920	Brake Single Shoe
GN 7922	Brakes Unit (Hydraulic)
GN 7925	Brake Unit (Hydraulic) (Two Brake Drum)
GN 7928	Cam Shafts
GN 7930	Carburetor (Maruti Car Type)
GN 7932	Carburetor Solex Type
GN 7935	Clutch Centrifugal Type
GN 7937	Clutch Claw Type
GN 7940	Clutch Conical Friction Type
GN 7942	Clutch Multiplate Type
GN 7945	Clutch Plate Type
GN 7947	Coil Ignition System of an Automobile
GN 7950	Connecting Rod
GN 7952	Cooling System of a Automobile (With Actual Parts)
GN 7955	Crank Shaft
GN 7956	Distributor
GN 7958	Electrical Fuel Pump
GN 7960	Electronic Ignition System of an Automobile
GN 7965	Fuel Supply System of a 4 Cylinder Diesel Engine
GN 7970	Fuel Supply System of a Diesel Engine
GN 7975	Fuel Supply System of a Petrol Engine
GN 7980	Fully Automatic Battery Charger
GN 7981	Gear Box (Actual Cut Section)
GN 7982	Gear Box Car (Constant Mesh) Actual Cut Section
GN 7983	Gear Box Car Automatic (Internal Gear) Actual Cut Section
GN 7984	Gear Box Jeep (Synchronic Mesh) Actual Cut Section
GN 7985	Gear Box with Clutch (Actual Cut Section)
GN 7986	Gear Box with Clutch (Model)
GN 7987	Gear Lubricating Pump
GN 7988	Generator
GN 7989	Hydraulic Break unit (Four Brake Drum)
GN 7990	I.C. Injector
GN 7991	Ignition Coil
GN 7992	Lubrication System of an Automobile
GN 7993	Magneto
GN 7994	Master Cylinder
GN 7995	Mechanical Fuel Pump
GN 7996	Mock Layout of Car Wiring
GN 7997	Mock Layout of Tractor Wiring
GN 8000	Piston With Rings
GN 8003	Power Brake (Actual Working)
GN 8007	Power Steering of Car (Actual Working Model)
GN 8010	Radiator
GN 8012	Rear Axial Assembly (Actual Cut Section)
GN 8015	Self Starter
GN 8017	Shock Absorber
GN 8020	Spark Plug
GN 8025	Speedometer
GN 8030	Water Pump

## STRENGTH OF MATERIAL LAB

- UTM - Universal Testing Machine
- Brinell & Rockwell Hardness Tester
- Impact Testing Machine (Izod & Charpy)
- Torsion Testing Machine For Rod
- Torsion Testing Machine For Wires
- Spring Testing Machine
- Fatigue Testing Machine
- Column & Buckling Apparatus
- Vickers Hardness Testing
- Bend Testing Machine
- Pendulum Impact Tester
- Tensile Testing Machine



TORSION TESTING MACHINE

## CEMENT & CONCRETE LAB

- Air Entrainment Meter
- Air Permeability Apparatus
- Blaine's Air Permeability Apparatus
- Cement Mortar Permeability Apparatus
- Cement Sampler
- Channel Type Load Frame
- Compaction Factor Apparatus
- Compression Testing Machine
- Concrete Permeability Apparatus
- Concrete Test Hammer
- Cone Penetrometer For Mortar
- Pumping Unit
- Flexure Testing Machine
- Flow Table
- Gauging Trowel
- Gillmore Needle Apparatus
- Hydraulic Jacks
- Jolting Apparatus
- Kelley Ball Penetration Apparatus
- Laboratory Cement Autoclave
- Laboratory Concrete Mixer
- Laboratory Jaw Crusher
- Lateral Extensometer
- Le Chatelier Flask & Le Chatelier Mould
- Lea and Nurse Air Permeability Apparatus
- Length Comparator
- Mortar Penetrometer
- Needle Vibrator
- Permeability Apparatus
- Pillar Type Load Frame
- Pocket Concrete Penetrometer
- Ring Mould
- Roll Crusher
- Sand Absorption Cone and Tamper
- Shrinkage Bar Mould
- Slump Test Apparatus
- Southard Viscometer
- Tamping Bar and Rod
- Tensile Strength Tester
- Thickness Gauge
- Tile Abrasion Testing Machine
- Tile Flexure Testing Machine
- Trowel
- Vee Bee Consistometer
- Vibrating Table
- Vicat Needle Apparatus
- Volume Change Apparatus

## SOIL LAB

- California Bearing Ratio Apparatus
- Cone Penetrometer
- Consolidation Apparatus
- Core Cutter
- Dames and Moore Sampler
- Dead Weight Type Oil Water Constant Pressure System
- Direct Shear Apparatus
- Extractor Frame Hydraulic
- Grain Size Analysis
- Heavy Compaction Test
- High Speed Stirrer
- Lateral Pressure Assembly
- Liquid Limit Device
- Load Frame
- Load Truss
- Miniature Compaction Apparatus
- Miniature Field Permeameter
- Permeability Apparatus
- Piston Sampler
- Plastic Limit Set
- Plate Bearing Test
- Pocket Penetrometer
- Pore Pressure Apparatus
- Portable Aluminium Derrick
- Posthole Type
- Proctor Needles
- Proving Ring
- Pycnometer
- Rapid Moisture Meter
- Relative Density
- Sampling Outfit
- Sand Pouring Cylinder
- Shrinkage Limit Set
- Sieve & Sieve Shaker
- Soil Hydrometer
- Split Spoon Sampler
- Standard Compaction Test
- Static Cone Penetrometer
- Triaxial Shear Test Apparatus
- Tripod
- Tripod Pulley
- Unconfined Compression Tester
- Universal Automatic Compactor



LIQUID LIMIT DEVICE



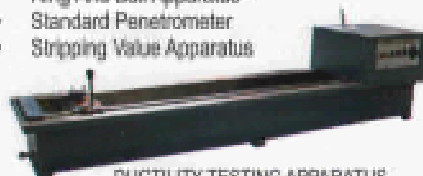
RAPID MOISTURE METER



TENSILE STRENGTH TESTER

## BITUMEN LAB

- Automatic Bituminous Compactor
- Automatic Standard Penetrometer
- Benkelman Beam
- Centrifuge Extractor (Hand Operated)
- Ductility Testing Apparatus
- Marshall Stability Test Apparatus
- Ring And Ball Apparatus
- Standard Penetrometer
- Stripping Value Apparatus



DUCTILITY TESTING APPARATUS

## AGGREGATE LAB

- Aggregate Crushing Value Apparatus
- Aggregate Impact Tester
- Bituminous / Asphalt Mixer
- Cylindrical Measures
- Density Basket
- Deval Attrition Tester
- Dorry Abrasion Testing Machine
- Length Gauge
- Los Angeles Abrasion Testing Machine
- Metal Measures
- Pug Mill For Grinding Lime Mortar
- Riffle Sample Divider
- Specific Gravity and Water Aggregates
- Thickness Gauge



LOS ANGELES ABRASION TESTING MACHINE

## ASPHALT LAB

- Asphalt & Concrete Floor Saw
- Core Cutting/ Core Drilling Machine
- Rock/Concrete Cutting Machine

## METALLURGICAL LAB

- Abrasive Cut-Off Machine (Chop Type)
- Abrasive Disc Cut-Off Machine (Chop Type)
- Linisher Polishing Belt (Belt Sander)
- Metallurgical Mounting Press
- Polishing Stand
- Specimen Mounting Press
- Specimen Leveller

## SURVEY LAB

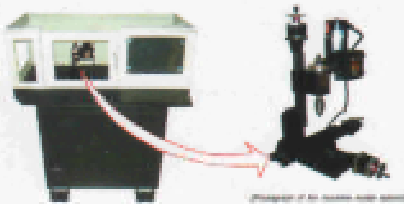
- Total Station
- Arrow
- Telescopic Alidade
- Tangent Clinometers
- Cross Staff
- Dumpy Level
- Level Automatic
- Abney Level
- Optical Square
- Prismatic Compass
- Ranging Rod
- Aluminum Staff 5 mtr.
- Vernier Theodolite
- Digital Theodolite
- Survey Tape
- Survey Umbrella
- Plane Table





## CNC MACHINE TRAINERS

- CNC Lathe Machine Trainer
- CNC Milling Machine Trainer



## PNEUMATIC & HYDRAULIC TRAINER

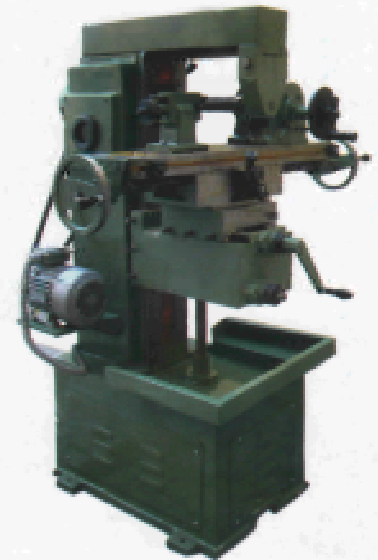
- Hydraulic Trainer
- Pneumatic Trainer



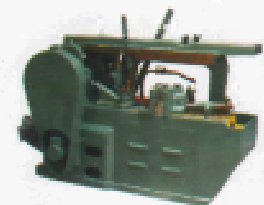
LATHE MACHINE

## LATHE MACHINE/ SHAPER MACHINE / DRILL & GRINDER

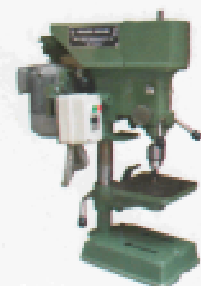
- Lathe Machine
- Capstan lathe
- Milling Machine
- Shaper Machine
- Shaping Machine (Hydraulic)
- Drilling Machine
- Double ended Pedestal Grinder
- Grinding Machine Pedestal Type
- Drill Machine Pillar Type
- Power Hacksaw



MILLING MACHINE



POWER HACKSAW



DRILLING MACHINE

