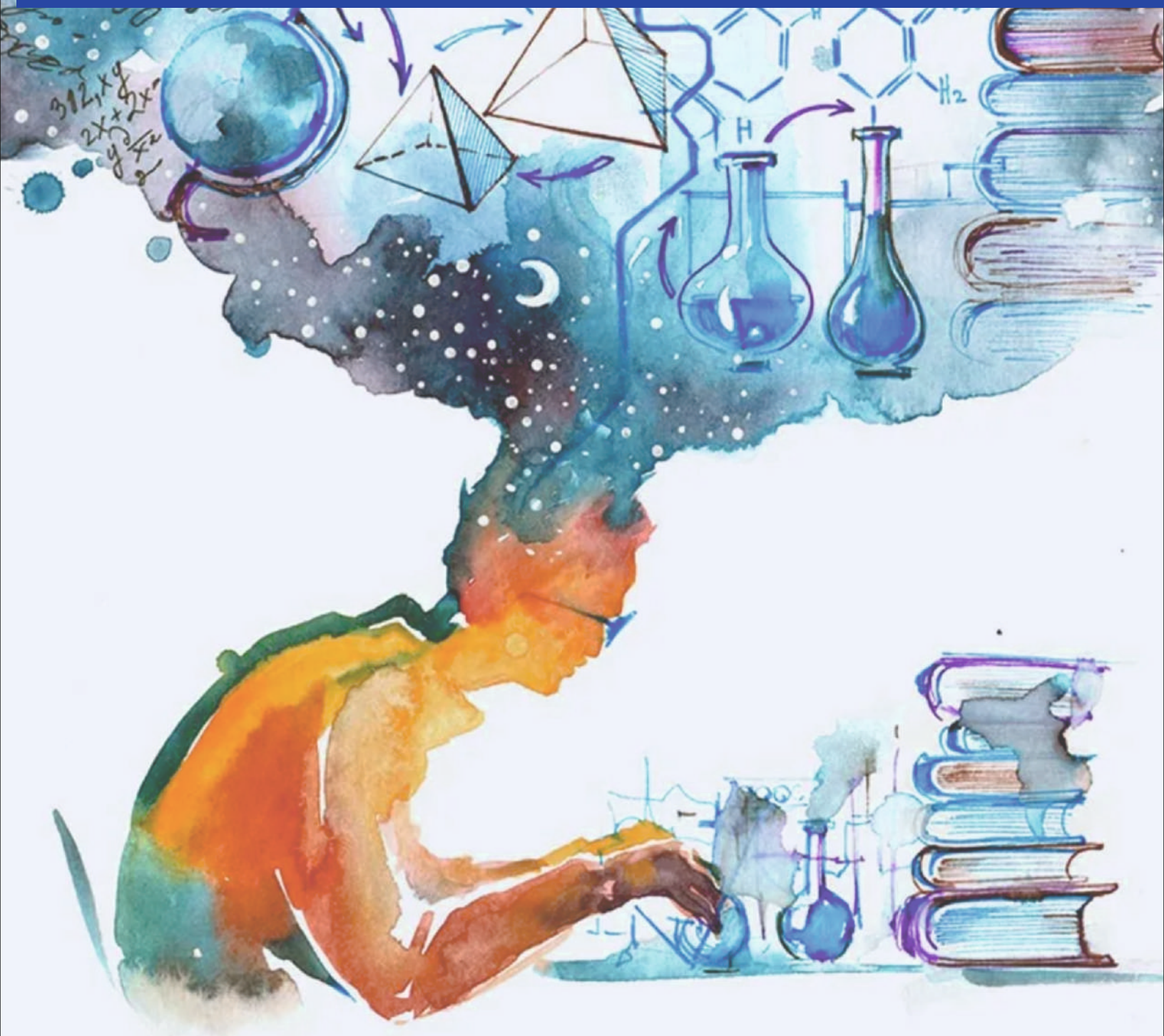


mvtex science industries



Educational & Scientific Laboratory Products

Catalogue (2023-2024)



OUR GROUP OF BRANDS

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Catalogue (2023-2024)

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Choose Solutions, Not Problems

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Complete Solutions
for Laboratory
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Fixtures

CATALOGUE

Edition 2023-2024



Educational & Scientific Lab Instruments

www.mvtexscientific.com

WHO ARE WE?

Established in the year 1986, at Ambala (Haryana, India), we **“MVTEX SCIENCE INDUSTRIES”** recognized as a well renowned **Manufacturer & Supplier of superior quality range of Educational and Scientific Equipment.**

WHAT WE DO?

We manufacture over 500 unique products covering a wide range of category which includes Educational Instruments covering ranges like Physics, Biology, Chemistry and Maths and Laboratory Plasticware & Glassware.

We are MVTEX,
Education for us is not just business, but a cause.



FROM MANAGING DIRECTOR'S DESK

Dear Scholars, Scientists & Trade Partners,

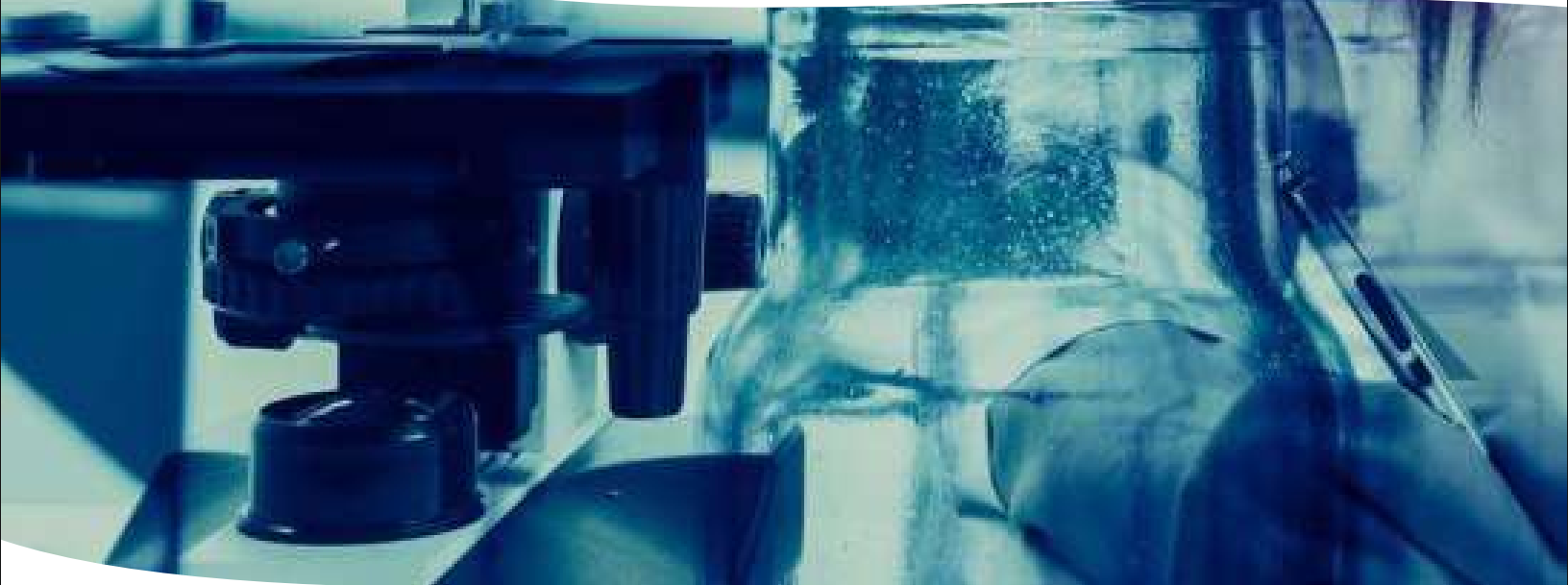
Heartiest Greetings to you.

We present our 2023-24 Catalogue with great enthusiasm. MVTEX has registered very good topline growth last year and it is our promise to our customers and trade partners that this growth will continue Y-O-Y.

The company is marching ahead by implementing strong strategies to operate our ever expanding business operations. A good alliance with our customers helps us understand their product-related needs and provide the best solution in the shortest period.



Yours Sincerely
Manoj Aggarwal



WHY US?

With Management consisting of Engineers & Scientists having combined experience extending to more than 75 years and a team dedicated to produce quality products with latest technologies. We specialize in providing high precision goods at competitive prices. We also provide customized solution as per client's requirement.

WHO WE CATER TO?

Our team understand the diverse demands of the Education System followed around the globe. Therefore we manufacture products which can fulfill the complete demands of Schools, Colleges & universities.

We are **MVTEX**,
a name synonymous
with reliability and trust.



mvtex
science industries



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OUR VISION & VALUES



TOMORROW'S SCIENCE

Depends on what we do today. We aim to contribute to a healthier, smarter and safer world by supporting science and the people who work within it.



WE ENDEAVOUR

To be the scientist's supplier of choice by delivering the highest quality products and services supported with a fast, approach.



ACCOUNTABILITY

Corporate Citizenship, Honesty & Integrity
Scientific Expertise
Diversity Teamwork, Precise Engineering & Longer Function Life



OUR PRODUCTION

MVTEX

is fully equipped to manufacture and assemble high volume of products. Our production facility includes Metal Working, Glass Blowing, Woodworking and Injection Molding Machines. These Automatic and semi-automatic machines ensures standardization and consistent quality of all our products.





OUR INFRASTRUCTURE

MVTEX

has state-of-art production facility spread over 100,000 sq. ft. Our well-built and high-tech infrastructure is equipped with modern machines & technology. Spanning across a large area, we have divided our infrastructure into several in-house departments



CERTIFICATIONS

We at Mvtex Science Industries shall always strive to provide the best quality Laboratory & Medical Equipment and a various range of new products required for teaching, research, analysis for better quality of life



To achieve our goals, we have instituted a quality management system conforming to ISO 9001:2015, ISO 13485:2016 & CE Certification for our range of products.



It is our constant endeavor to achieve maximum customer satisfaction by implementing an efficient customer relationship management system to meet the requirements and expectations of our valued customers.



Customised Instruments

We undertake the manufacturing of special instruments to agreed specifications. Please send us your queries at the address below, including complete details of specifications, and drawings wherever possible.

We would be pleased to assist you in formulating specifications within normal working tolerances. Usually, we only accept orders with a minimum order quantity.

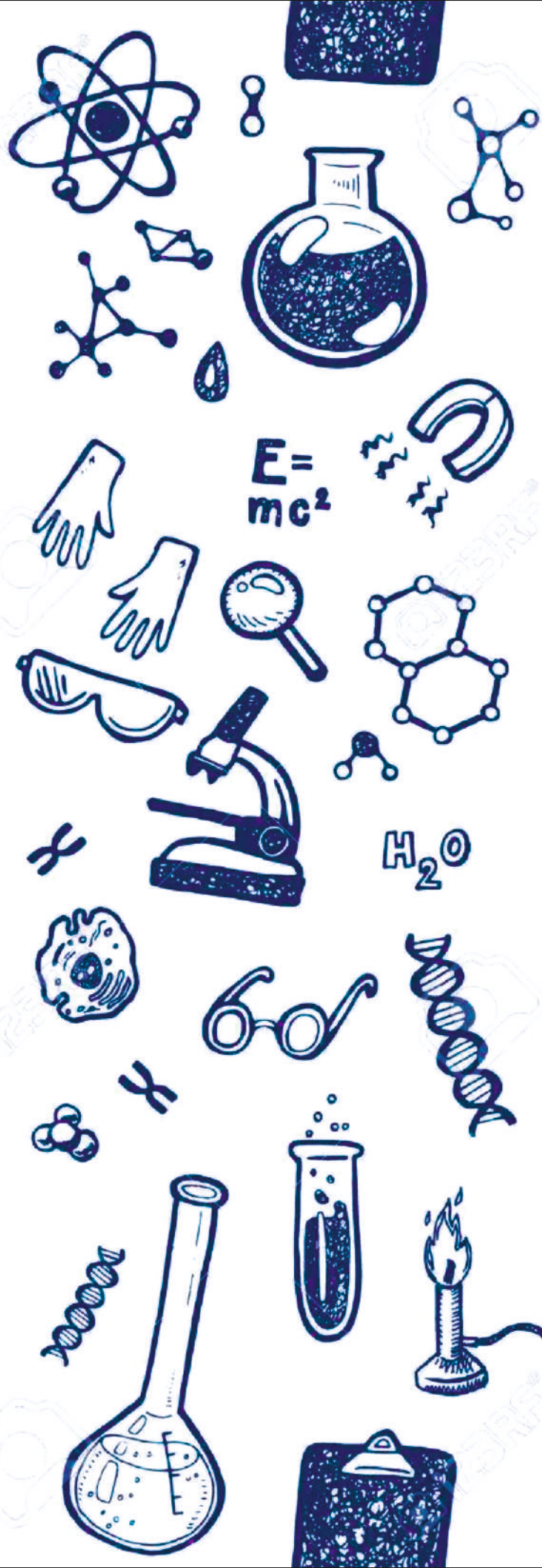
Corporate Office

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[Email : info@mvtexscientific.com](mailto:info@mvtexscientific.com)

Conditions of Sale

At MVTEX, it is our policy to market our laboratory Instruments through our wide network of Authorised Dealers. Strategically located all over World, they are best equipped to satisfy the individual requirements of users across the World.

The products supplied will usually be in accordance with illustrations and descriptions however, MVTEX reserves the right to make alterations and modifications depending upon circumstances and/or changes in official specifications, or as a result of design improvements.





6 Steps
to quality



Quality of Planning
& Communication

Quality plan for communication with customers



Quality of Product
Customization

Quality in translating customers requirements
(to our objectives) Products



Quality of Raw
Material

Quality of raw material, including accuracy of
semi finished and in process material



Quality of Technology
& Workforce

Quality in plant setup, including, trained
manpower, machinery updates & technology



Quality of After
Sales Support

Quality in customer services



Quality of Inspection

Analysis of all processes, both quantifiable and
quality.

**For MVTEX, Quality is the foundation in
all the production**



20+
Customer Care
Personnel



50+
Certified Support
Engineers



10+
highly qualified
Relationship
Managers



20+
Academic
Trainers

**We MVTEX, are
always available to
support you**

Who We Are

Established in the year 1986, at Ambala (Haryana, India), we "MVTEX Science Industries", are a **Sole Proprietorship Firm**, recognized as a well renowned **Manufacturer, Trader and Supplier** of superior quality range of **Microscopes Equipment, Spectrometer Machine, Digital Ph Meter, Photoelectric Colorimeter, Industrial Autoclave, Bar Pendulum And Battery Eliminator, Bunsen Burner And Centrifuge Machine, Deflection Magnetometer, Digital Colony Counter, Fly Wheel, Gold Leaf Electroscope, Inclined Plane, Induction Coil**, etc. Appreciated for optimum performance, less maintenance, rigid construction, precise engineering, easy installation and longer functional life, these products are broadly recognized in the market.

[Read More](#)

If you require any further information, feel free to contact me.

Your Name

Your Email

Your Mobile No.

Your Message

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If you have any queries, just simply fill up the form and our team will be there to support you

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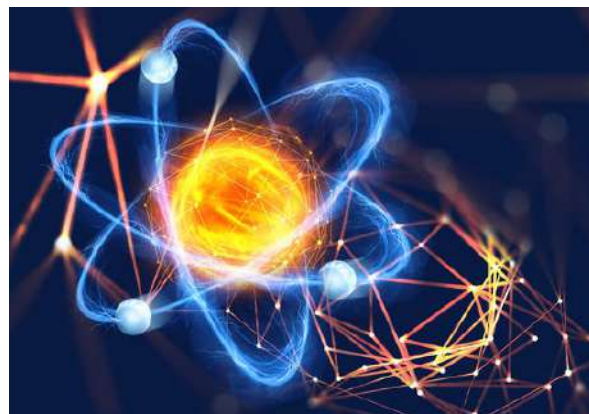
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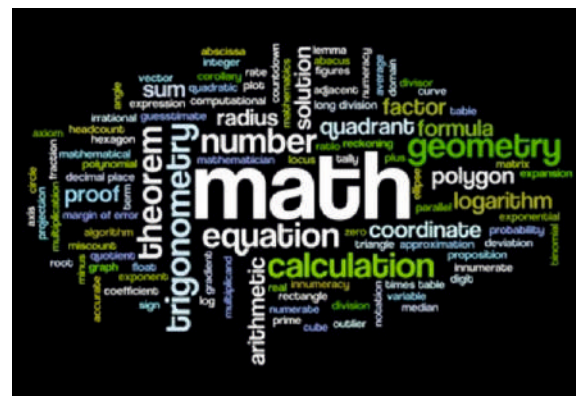
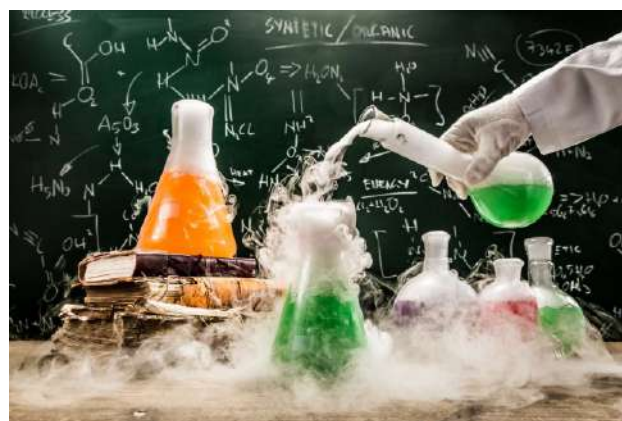


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MATH LAB

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physics

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MBP-01 METER SCALE ONE METER

Made from seasoned wood, accurately graduated in cm with clear and fine divisions
'A' grade
'B' grade.



MBP-02 METER SCALE HALF METER

Made Scale same as but half meter.
'A' grade
'B' grade

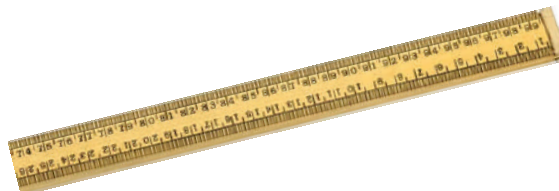


MBP-03 METER SCALE 0 CENTRE



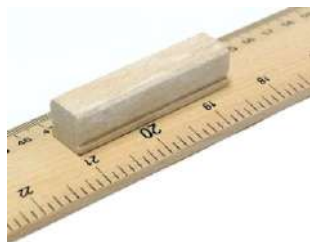
MBP-04 METER SCALE

boyle's law and resonance app.



MBP-05 METER SCALE WITH HANDLE

A 1 meter
B 1/2 meter



MBP-06 VERNIER CALIPERS

with thumb wheel C.P. packed in printed duplex box.



MBP-07 VERNIER CALIPERS S.S.

with thumb wheel Packed in Velvet case.



MBP-08 VERNIER CALIPERS I.M.E TYPE

In Velvet Case



MBP-09 VERNIER CALIPER WITH DIGITAL READ OUT

conversion button, on/off switch and zero setting switch. Metal knob for locking the device is provided at the top.



MBP-10 DEMONSTRATION VERNIER CALIPER MODEL WOODEN



MBP-11 MICROMETER SCREW GAUGE (BRASS MADE)

micrometer with ratchet stop, dull chromium plated brass body, accurately threaded M.S...rod. Zero correction screw is provided at one end of a body. Packed individually in beautiful printed duplex box. Pitch 1 mm

A	10mm
B	15mm
C	20mm
D	25mm



MBP-12 MICROMETER SCREW GAUGE S.S

provided with stainless steel rod packed in plastic case. Pitch 1mm.

A	10mm
B	15mm
C	20mm
D	25mm



MBP-13 MICROMETER SCREW GAUGE (MORSE AND WRIGHT TYPE)

Morse and wright type 25MM with stainless steel rod, provided with locking arrangement, packed in velvet box.



MBP-14 VERNIER CALIPERS (WITH DEPTH GAUGE)

Regular quantity with thumb wheel chrome plated 12.5cm with depth gauge.



MBP-15 MICROMETER SCREW GAUGE WITH DIGITAL READ OUT

For taking direct readings. The micrometer is provided with mm/inch conversion button, on/off switch and zero setting switch. Lever for locking the device is provided at upper part of body. Battery compartment is at the back of body



MBP-18 SPHEROMETER BRASS

Brass scale and disc, base fitted with threaded rod and legs, packed in printed duplex box. 1/100mm

Least count of spherometer = $\frac{\text{Pitch of Spherometer}}{\text{No. of Div on circular scale}}$ in mm.

No. of Div on circular scale

Pitch of Spherometer = $\frac{\text{Distance moved on vertical scale}}{\text{No. of complete Rotation given to Cir. Scale}}$

No. of complete Rotation given to Cir. Scale



MBP-20 SPHEROMETER PYE TYPE DOUBLE DISC

Heavy and superior quality packed in printed duplex box. 1/100mm



MBP-16 SCREW GAUGE DEMONSTRATION MODEL

20 cm long. made of silver alloy useful for class instructions, packed in card box.



MBP-17 SPHEROMETER S.S

same as but with stainless still rod and legs. 1/100 mm



MBP-19 SPHEROMETER DOUBLE DISC

with stainless steel rod & legs. 1/100 mm



MBP-21 DEMONSTRATION SPHEROMETER MODEL

Disc dia 15 cm, Metal body, instructive model.



MBP-22 ANALYTICAL WEIGHT BOX

Tested, presented in seasoned cabinet polished velvet lined box packed in printed duplex box. our tasted.

A	50gms.
B	100gms.
C	200gms.



MBP-23 PHYSICAL WEIGHT BOX IRON

A	100gms.
B	200gms.
C	500gms.
D	1000gms.



MBP-24 PHYSICAL WEIGHT BOX BRASS

brass NP, cabinet polish wooden box, duly tested packed in printed duplex box.

A	50gms.
B	100gms.
C	200gms.
D	500gms.
E	1000gms.



MBP-25 ANALYTICAL LOOSE WEIGHT

Brass C.P. tested.

A	1gm.
B	2gms
C	5gms.
D	10gms.
E	20gms.
F	50gms.
G	100gms.



MBP-26 PHYSICAL LOOSE WEIGHTS

Brass C.P. tested.

A	1gm.
B	2gms
C	5gms.
D	10gms.
E	20gms.
F	50gms.
G	100gms.



MBP-27 FRACTIONAL WEIGHT BOX

1mg to 500 gm in plastic box.(Anchor)



MBP-28 FRACTIONAL WEIGHT BOX (TESTED A GRADE)

Analytical tested A grade in Printed duplex box.



MBP-29 SLOTTED WEIGHT BRASS

C.P., Precisely machined & carefully adjusted set of 5 including hanger.

A	5gmx5 25gms
B	10gmsx5 50gms
C	20gmsx5 100gms
D	50gmsx5 250gms
E	100gmsx5 500gms



MBP-30 SLOTTED WEIGHT IRON

CP set of 5 including hanger.

A	10gmsx5 50gms
B	20gmsx5 100gms
C	50gmsx5 250gms
D	100gmsx5 500gms



MBP-31 SLOTTED WEIGHTS

Iron black painted set of five including hanger.

A	500gmsx5 2.5kg.
B	1000gmsx5 5.0gms



MBP-32 SLOTTED WEIGHTS (SUPERIOR QUALITY)

Superior quality made from Iron Shaft, powder coated, dead accurate, rust proof & elegant looking.

A	500gmsx5 2.5kg.
B	1000gmsx5 5.0gms



MBP-33 SPRING BALANCE ACRYLIC

Tubular body in card box.

Capacity	
A	100gms.
B	250gms.
C	500gms.
D	1000gms.



MBP-34 SPRING BALANCE

Flat form, high impact polystyrene body with zero adjustment, anodised metal scale with clear and accurate divisions, high tension special steel wire spring is used for more durability, provided with ring & hook packed in printed duplex box. Available in different capacities.



MBP-35 STOP CLOCK

Table top model, metal body with start, stop and Reset levers (clock resets to zero and starts timing again). Two hands indicating minutes and seconds. one winding is sufficient for 24 hours. Dial approx. 100 mm dia.



MBP-36 STOP CLOCK (SMITH'S TYPE)

smith type, fly back action, metal body with new machine. stop start lever at right side. left side has lever to bring the needle to Zero after the mechanism has stopped. Least count - 1 sec.



MBP-37 STOP WATCH

Mechanical stop watch in stainless steel case with dual dial for minutes and seconds. Measuring range 15 minutes, reading accuracy 0.1 second, diameter approx. 45 mm.



MBP-38 DIGITAL STOP CLOCK



MBP-39 DOUBLE CONVEX LENS

Highly polished and well edged, manufactured from plate glass optically true

	Diameter		Focal Length	
A	50MM	5cm	10cm	more than 10cm
B	75MM	5cm	10cm	more than 10cm



MBP-40 CONCAVE AND CONVEX MIRROR

superior, optically true, back nicely silvered with protective coating, any focal length from 15 to 100 cm.

Diameter		
A	50MM	any focal Length
B	75MM	any focal Length



MBP-41 MAGNIFIERS (PLASTIC FRAME)

in plastic frame: FL 15 to 100cm

Diameter	
A	37MM
B	50MM
C	75MM



MBP-42 MAGNIFIERS (METAL FRAME)

with metal handle, brass C.P. ring. FL 20 to 100 cm

Diameter	
A	50MM
B	75MM
C	100MM



MBP-43 GLASS SLAB

Made from Superior quality moulded glass with glossy surface.

A	75x50x12MM
B	70x50x18MM
C	100x60x18MM
D	100x60x25MM



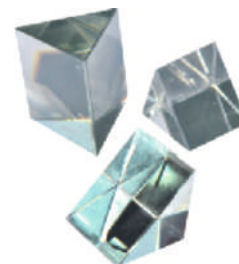
MBP-44 TORCH MAGNIFIERS



MBP-45 GLASS PRISM

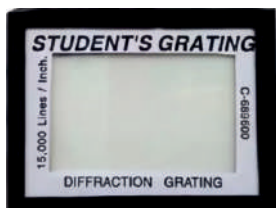
Equilateral, highly polished surface.

	(i)	(ii)
	Regular	Superior
A	38MM	38MM
B	50MM	50MM
C	Right Angle prism	



MBP-46 DIFFRACTION GRATING

15000 lines per inch

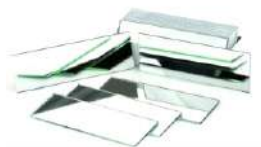


MBP-47 SPECTROMETER PRISM

	(i)	(ii)	(iii)
	Crown Glass R.I.1.65	Dense Flint R.I.1.65	Extra Dense Flint R.I.1.65
A	25X25MM	25X25MM	25X25MM
B	32X32MM	32X32MM	32X32MM
C	38X38MM		

MBP-48 MIRROR STRIP

silvered back with protective coating. Available in different sizes.



MBP-49 FRESNEL BIPRISM

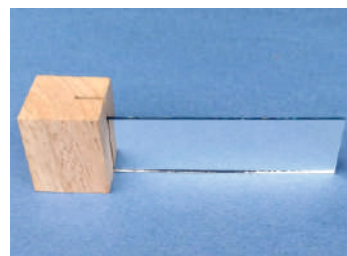


MBP-50 HYDROSTATIC BALANCE BRASS



MBP-51 MIRROR STRIP HOLDER

wooden cube with a slot to hold the mirror strip.



MBP-52 MIRROR STRIP (ON WOODEN STAND)

5x21/2 inch pasted on wooden stand complete.



MBP-53 MODEL OF COMPOUND MICROSCOPE

All metal fitted on metallic base.



MBP-54 MODEL OF ASTRONOMICAL TELESCOPE

All metal fitted on metallic base.



MBP-55 MODEL OF TERRESTRIAL TELESCOPE

All metal fitted on metallic base.



MBP-56 PERSISTENCE OF VISION APP.

(Bird & cage app.) Battery operated.



MBP-57 OPTICAL LEVER

single aluminum body.



MBP-58 NEWTON RING APP

A pair of glasses. one Plane, other convex 50 mm in metal frame with three screws for Applying pressure.



MBP-59 NEWTON RING APP (WOODEN FRAME)

With wooden frame



MBP-60 LENS HOLDER

V - Shaped wooden polished.



MBP-61 LENS HOLDER TEAKWOOD MADE

V- Teak wood



BASIC PHYSICS

MBP-62 UNIVERSAL LENS HOLDER

Metal on adjustable stand.



MBP-63 SPRING ACTION LENS HOLDER

Brass on adjustable metal stand.



MBP-64 GROUND GLASS SCREEN (IN WOODEN FRAME)

Wooden Polished



MBP-65 WIRE GAUGE SCREEN (IN WODEN FRAME)

Wooden Polished



MBP-66 GROUND GLASS SCREEN (IN WOODEN FRAME)

In Metal frame on adjustable stand.



MBP-67 WIRE GAUGE SCREE (IN METAL FRAME)

In Metal frame on adjustable stand.



MBP-68 CANDLE HOLDER

Metal on adjustable metal stand.



MBP-69 PARALLAX PIN

On adjustable metal stand.

A	6MM
B	9MM



MBP-70 LLYOD'S MIRROR

Provided with special circular scale

A	Wooden
B	Brass



MBP-72 KALEIDOSCOPE

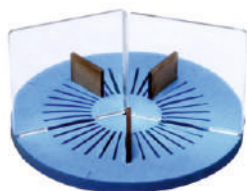
Brass N.P



MBP-74 ANGULAR MIRROR

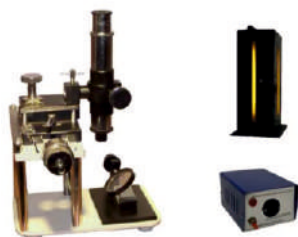
Brass N.P

A	Big
B	Small



MBP-76 AIR WEDGE APPARATUS

Consists of two optically true glass plates, having a very fine wedge between them. The glass plates are kept on a wooden platform with adjustable glass window.



MBP-71 PIN HOLE CAMERA



MBP-73 PERISCOPE

Made from wood polished.



MBP-75 SPECTROSCOPE

Wooden



MBP-77 LAMP BOX WOODEN

With three windows, bulb holder & lead wire.



MBP-78 TICKER TAPE TIMER

Complete wooden on A.C Mains.



MBP-80 DIRECT VISION SPECTROSCOPE

(Hand Spectroscope) wide spectrum 10x10MM Direct vision prism with precision slit, fitted in brass body with telescopic focussing.



MBP-82 G-CLAMP

A	B	C
2"	3"	4"



MBP-84 PULLEY APP

Consist of a pair of pulleys which can be used to decrease the magnitude of forces being exerted against the load.



MBP-79 MIXING OF LIGHT APPARATUS

(Primary colour Apparatus) consists of three torches of primary colours i.e. red, blue and green on plastic base. Provided with Power Supply and on/off switch in Wooden box.



MBP-81 PULLEYS

37mm all aluminum.

A	Single
B	Double Long or Parallel
C	Tripple Long or Parallel



MBP-83 PULLEYS (WITH BRASS FRAME)

37mm all aluminum brass frame.

A	Single
B	Double Long or Parallel
C	Tripple Long or Parallel



MBP-85 PULLEYS (FOR PARALLELOGRAM APP)

- a) For parallelogram of forces app. Iron body.
- b) Improved pattern all aluminum export quality.



MBP-86 WHEEL AND AXLE

Hardwood polished, comprising 2 grooved wheels 150 mm and 75 mm diameter mounted jointly on wooden stand.



MBP-87 CYLINDER OF METALS.

Set of 6 different metal cylinders. All surface & edges are smooth.

A	B	C
25x12mm	37x12mm	50x12mm



MBP-88 CUBES OF METALS

set of 6 different metal cubs. (Brass, Aluminum, Copper, Zinc, Iron and lead cubes) all edges are smooth. can be provided with hole.

A	10mm
B	20mm
C	25mm



MBP-89 PENDULUM BOB APPARATUS

Set of 6 different metal bobs with hook.

A	12mm
B	18mm
C	25mm



MBP-90 PENDULUM BOB SPARE

or sphere with hook

A	Iron	18MM	25MM
B	Brass	18MM	32MM



MBP-91 GEOMETRICAL FIGURES

Wooden, set of 12 or 16 in box. includes major shapes used in physics & mathematics.

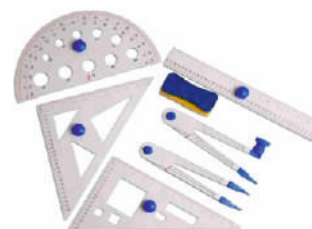
A	B	C
3"	6x4"	12x6"



MBP-92 GEOMETRICAL INSTRUMENT BOX

A Pair of set squares, protector, compass, divider and duster housed in a box, all made from seasoned hardwood.

A	Superior Quality
B	Routine Quality



MBP-93 GEOMETRICAL INSTRUMENT BOX PLASTIC

A	Superior Quality
B	Medium Quality



MBP-94 GEOMETRICAL INSTRUMENT BOX (WOODEN MADE)

Wooden Classic Model



MBP-95 DRAWING BOARD

Made from Seasoned Soft wood.

A	B	C
18"x12"x5/8"	23"x16"x5/8"	24"x18"5/8"



MBP-96 DYNAMO GEAR TYPE

Ac/Dc actual model fitted on sum mica base with LED indicator and reversing switch, packed in card box.



BASIC PHYSICS



MBP-97 DYNAMO WHEEL TYPE

Working model fitted on sun mica base with Led, packed in card box. Available in AC/DC, AC and DC.



MBP-98 MOTOR-CUM-DYNAMO

It can work as a dynamo as well as motor, provided with U-Shape magnet, Led with holder, provided with terminals fitted on sun mica clad wooden base, packed in card box.



MBP-99 HYDRO POWER TURBINE

Mounted on sun mica clad wooden base, packed in card box.



MBP-100 TOOTHED WHEEL

Mounted on wooden base.



MBP-101 MOTOR HEAVY

Mounted on sun mica clad wooden base workable on 2-4 volt DC with New ton colour disc,



MBP-102 MOTOR EXPORT MODEL

Fitted on wooden base with brass screws.



MBP-103 NEWTON COLOUR DISC

Disc 6" hand operated , on metal base.



MBP-104 COPPER WIRE

Double cotton covered (D.C.C.) for connections. **S.W.G.22,24**

- a) 100gm reel
- b) 500gm reel





BASIC PHYSICS

MBP-105 NICHROME WIRE

S.W.G.2
2,24,100 gm reel



MBP-106 EUREKA WIRE OR CONSTANTAN WIRE

S.W.G.22,24,100gm reel



MBP-107 MANGANIN WIRE

S.W.G.# 22, 100gm reel



MBP-108 BRASS WIRE

S.W.G.22,24,100gm reel



MBP-109 STEEL WIRE

S.W.G. 22, 24, 100gm reel



MBP-110 GLASS ROD

300mmx 3/8" dia.



MBP-111 EBONITE ROD

300mmx 3/8" dia.



MBP-112 ELECTROPHORUS

Brass disc with knob and ebonite handle, fitted on ebonite base.
Proof Plane with handle.



MBP-113 GOLD LEAF ELECTROSCOPE

In bell jar with aluminum parts.



MBP-115 GOLD LEAF ELECTROSCOPE (IN CONICAL FLASK)

In conical flask.



MBP-117 PITH BALL PENDULUM

On stand with insulated arm on Bakelite base.



MBP-119 BIOTS APPARATUS

With one central sphere and two hemispherical covers with handle, dia 2". To show electrostatic charge resides on the outer surface of a conductor.



MBP-114 GOLD LEAF ELECTROSCOPE (IN WOODEN FRAME)

Wooden both side glass, top disc made of aluminium



MBP-116 GOLD LEAF ELECTROSCOPE (IN METAL CASE)

Metal case, provided with highly sensitive gold leaves, export quality.



MBP-118 CONDUCTOR SET OF 3

Made of brass, fitted on insulated stand with tripod base, provided with cone, sphere and cylinder



MBP-120 FARADAYS BUTTERFLY NET

On insulated stand.





BASIC PHYSICS

MBP-121 COPPER PLATE

Heavy with brass terminal.



MBP-123 ZINC PLATE

Heavy with brass terminal



MBP-125 CARBON ROD

With brass terminal.



MBP-127 CHARGED POROUS

Pot 140x60mm.



MBP-122 POROUS POT EMPTY



MBP-124 ZINC ROD

With brass terminal 150x9mm.



MBP-126 COPPER ROD

With brass terminal.



MBP-128 CROCODILE CLIP

Red or Black



MBP-129 GOOD & BAD CONDUCTOR

On base



MBP-130 BATTERY CLIP

Steel C.P.



MBP-131 ELECTROLYTE NON ELECTROLYTE

Fitted with two carbon rods, LED and two terminals for DC supply.



MBP-132 SIMPLE VOLTIC CELL

Comprising of PVC jar 150x50mm, zinc and copper plates, fitted on bake lite with LED.



MBP-133 LECLANCHE CELL ELECTRIC

To draw strong current for short durations. Comprising a thick plastic jar, charged porous pot and zinc rod.



MBP-134 DANIEL CELL

To draw current in open or closed circuit Comprising of polished copper vessel with terminal empty Porous pot covered with copper lid and zinc rod.



MBP-135 LECLANCHE CELL

Electronic



MBP-136 WATER VOLTMETER (SCHOOL TYPE)

With glass jar on wooden base, provided with two glass tubes.



MBP-137 WATER VOLTMETER (COLLEGE TYPE)

With acrylic cup and two glass burettes.



MBP-139 BATTERY ELIMINATOR

With full bridge rectifier, transformer, rotary switch for output selection, on/off switch, workable on 220 volts AC mains, with safety fuse.

CURRENT OUTPUT

A	1 Amps. 2-12 volts DC
B	2 Amps. 2-12 volts DC
C	3 Amps. 2-12 volts DC



MBP-141 BATTERY CHARGER

Workable on 230 volts AC with heavy transformer, bridge rectifier, ammeter, current control switch and safety fuse DC output 6/12 volts selectable.

A	1 Amp.
B	2 Amp
C	3 Amp



MBP-138 BATTERY ELIMINATOR AC/DC (SUPERIOR)

Same as above with a provision to get AC output voltage across two separate terminals with the help of same selector switch, thus the battery eliminator can be used as step down transformer also.

CURRENT OUTPUT

A	1 Amps. 2-12 volts AC/DC
B	2 Amps. 2-12 volts AC/DC
C	3 Amps. 2-12 volts AC/DC



MBP-140 IC REGULATED BATTERY ELIMINATOR

A useful device with integrated circuits and heavy transformer. Output voltage is provided through a selector switch, with jewel light, safety fuse and lock type terminals.

A	2-12 volts DC at 1 Amp
B	2-12 volts DC at 2 Amp
C	2-12 volts DC at 3 Amp



MBP-142 AUTOMATIC BATTERY CHARGER

Workable on 230 volts AC with built in solid state circuit to provide constant output voltage, with ammeter current control rheostat and safety fuse. Output 12 volts Dc.

A	B	C	D
1 Amp.	2 Amp.	3 Amp.	4 Amp.



MBP-143 ACCUMULATOR MASS TYPE

Mass type, 2 volts plastic container with molded lid and terminals.

A	20Ah
B	45Ah
C	6 Volts, 7 Plates



MBP-145 PHYSICAL BALANCE

With three stone edges, capacity 250gm. Sensitivity 5mg. on wooden base with leveling screws, fitted in glass showcase.



MBP-147 CHEMICALS BALANCE

made from seven selected stone agate, Varanasi type, Capacity 200gm sensitivity 1/5mg brass beam has 50 engraved divisions on either side. Each division represents 1/5mg rider on scale. Detachable pans are suspended from double hooks. Mounted on wooden base with leveling screws and teakwood showcase



MBP-144 DEMONSTRATION TRANSFORMER

Fitted metal box.

Output 2, 4, 6, 8, 10, 12 volts AC Input-220 volt.

A	1 Amp.
B	2 Amp
C	3 Amp



MBP-146 DRY CELL 10-G- 2 VOLT

Capable of higher current for smaller duration.



MBP-148 PHYSICAL BALANCE (TEAKWOOD MADE WITH SEVEN STONE)

Seven made from selected stone agate, Varanasi type. General purpose balance. Hangers have double hook for up thrust experiments. Capacity 200gm sensitivity 2mgm. The balance is mounted on sturdy wooden base with leveling screws. Teakwood showcases with panel doors.



MBP-149 ANALYTICAL BALANCE

most accurate with straight, extended beam and rider attachment, 200gm sensitivity 1/10mg. Brass beam has 100 graduated divisions with 0 at the centre. Mounted on a wooden base with leveling screws and housed on teakwood case having side and front doors.



MBP-151 BARRANGER BALANCE

Capacity	
A	5kg
B	10kg



MBP-153 TRIPPLE BEAM BALANCE

For direct reading with sliding riders, fitted on metal base, mass can be weighed with following facilities.

- On Upper scale 100mgm to 1gm
- On the Beam 10mgm to 100gm
- On Lower Scale 1gm to 10gm
- Sensitivity 10mgm
- Capacity 111gm, 310gm



MBP-150 PERSONAL WEIGHING SCALE

Maximum capacity 120kg. Least count 0.5kg. zero adjustment disc provided. For laboratory and domestic use only.



MBP-152 DISPENSING BALANCE

Double pan packed in wooden box without weight. Capacity 100gm.



MBP-154 DIGITAL BALANCE

- Top pan, digital display, battery/mains operated.
- Sleek and elegant.
- Simple to use.
- Easy to store.
- Operates on 4 1.5volt (AA size) battery.
- Low battery indicator.
- Overload indicator.
- Mode function allows weight to be displayed in gram or ounces.
- ON/TARE function to reset scale to zero, to weight additional quantity.



ELECTRICAL



MEI-01 PLUG KEY

Made from 7/10" thick brass black, fitted on heavy Bakelite base. Brass plugs and lugs are thoroughly interlaped for perfect in individual.

A	B	C
One Way	Two Way	Three Way



MEI-02 PLUG KEY FOUR WAY

(Commutator Key) circular, on thick Bakelite base. Brass plugs and lugs are thoroughly interlaped for perfect locking, packed in individual duplex box.



MEI-03 PLUG KEY SIX WAY

circular on thick Bakelite base.



MEI-04 POHL'S COMMUTATOR

For use in hysteresis experiment- with brass C.P. parts fitted on thick Bakelite base.



MEI-05 REVERSING SWITCH

M.I.P type with handle, multi brush sweeping contacts move over either segment with a handle on thick Bakelite base.



MEI-06 TAPPING KEY SINGLE

Fitted on thick Bakelite base with brass C.P. points insulated knob and terminals max. current 5 amp. Packed in individual duplex box.



MEI-07 TAPPING KEY DOUBLE

Double contact with brass C.P. Points.



MEI-08 RALEIGH KEY

For self induction, fitted on thick Bakelite base with brass parts.



MEI-09 CHARGE & DISCHARGE KEY

For charging and discharging of a capacitor fitted on thick Bakelite base with silver contact.



MEI-10 D.P.D.T. SWITCH

Fitted with brass strip, mounted on board.



ELECTRICAL



MEI-11 RESISTANCE COIL

In round Bakelite case with brass screws and terminals, any value from 0.1 to 100ohms is available.



MEI-12 RESISTANCE COIL

In transparent plastic tube, accuracy, ± 0.2% any value 0.1 to 100ohms is available.



MEI-13 HIGH RESISTANCE COIL

Plug type, short circuit on Bakelite base.
Value 1K 2K 5K 10K 15K
(K stand for 1000ohms)



MEI-14 POST OFFICE BOX DIAL TYPE

Each dial consists of 10 steps provided with 4 ratio of 1, 10, 100 and 1000ohms and 2 ratio dials, fitted in teak wood box Accuracy ±0.05% to ±0.1%.

A	three ratio coils	three ratio coils
B	four ratio coils	four ratio coils



MEI-15 PRECISION RESISTANCE STANDARD

Fitted in Bakelite case with 4 terminals, any value from 0.01 to 100ohms, manganin coils.



MEI-16 RESISTANCE BOX DIAL TYPE

Designed for quick and accurate work. The resistor values shown on thick Bakelite sheet and read by a pointer. Each dial consists of 10 steps. Superior quality switches are used to ensure low contact resistance. Moving contacts are made from phosphorous bronze lamination to ensure long life. Fitted on spray painted box Accuracy ±1%.

A	B	C	D	E
One Dial	Two Dial	Three Dial	Four Dial	Five Dial



MEI-17 RESISTANCE BOX DIAL TYPE

In teak wood box fixed with 1/2" rectangular brass block. Double silk covered non inductive winding, accuracy ±0.02 to 0.1%. Interchangeable, plugs, heat treatment given to resistance. The coils are mounted on the lower side of the insulating panel with the help of threaded brass leads and connected across the gap between brass blocks. Seasoning of would bobbins to gain equilibrium. Managing Coils.

	Range	Total Resistance in ohms
(a)	1 to 1	2
(b)	1 to 5	11
(c)	1 to 10	21
(d)	1 to 1	2
(e)	1 to 1	2
(f)	1 to 1	2
(g)	1 to 100	210
(h)	1 to 500	1110
(I)	1 to 1000	2110
(j)	1 to 5000	11110
(k)	1 to 10000	21110



MEI-18 RESISTANCE BOX PLUG TYPE

Simple ordinary wood box fitted with 7/16" rectangular brass blocks accuracy ±0.1%, Constantan coils.

	Range	Total Resistance in ohms
(a)	1 to 1	2
(b)	1 to 5	11
(c)	1 to 10	21
(d)	1 to 1	2
(e)	1 to 1	2
(f)	1 to 1	2
(g)	1 to 100	210
(h)	1 to 500	1110
(I)	1 to 1000	2110
(j)	1 to 5000	11110
(k)	1 to 10000	21110



MEI-19 RHEOSTATS: 4.4CM DIA PORCE LAIN TUBE

Plug type, short circuit on Bakelite base. Value 1K 2K 5K 10K 15K(K stand for 1000ohms)

	Amp	15cm ohms	20cm ohms	25cm ohms	30cm ohms	35cm ohms	40cm ohms
(a)	2.8	15	22	29	36	43	50
(b)	2.3	23	34	45	56	68	80
(c)	1.8	37	55	73	91	110	128
(d)	1.6	50	75	100	125	150	175
(e)	1.4	64	96	128	160	190	220
(f)	1.2	89	135	180	225	270	315
(g)	1.0	116	175	235	290	350	405
(h)	0.8	160	240	320	400	480	560
(I)	0.6	270	400	540	680	820	960
(j)	0.5	400	600	800	1000	1200	1400
(j)	0.4	650	975	1300	1625	1950	2275
(j)	0.3	1150	1700	2250	2850	3400	3950



MEI-20 RHEOSTATS: 4.4CM DIA PORCELAIN TUBE

Wound with heavily oxidised eureka wire and mounted on duco painted metal feet, provided with laminated brush contacts of phosphorous bronze strips, with brass C.P. guide rod and lock type three terminals to use Rheostat as potentiometer. These rheostats have excellent heat dissipation, smooth moving rider and ruggedly built.

	Amp	15cm ohms	20cm ohms	25cm ohms	30cm ohms	35cm ohms	40cm ohms
(a)	6.5	3	4.5	6	7.5	9	10.5
(b)	5.0	4.5	6.5	9	11	13	15
(c)	4.2	8	12	16	20	25	28
(d)	3.3	10	16	22	28	34	40



MEI-22 RHEOSTATS SINGLE TUBE 5.6CM DIA

	Amp	15cm ohms	20cm ohms	25cm ohms	30cm ohms	35cm ohms	40cm ohms	45 ohms
(a)	2.8	12	28	38	48	57	66	76
(b)	2.3	26	41	56	71	86	102	114
(c)	1.8	47	70	93	116	139	160	185
(d)	1.6	64	96	125	150	190	225	250
(e)	1.4	80	120	160	200	245	285	325
(f)	1.2	115	170	230	290	345	400	450
(g)	1.0	148	225	295	365	445	520	590
(h)	0.8	200	300	400	500	600	700	800
(I)	0.6	345	510	675	835	1000	1165	1335
(j)	0.5	400	600	800	1000	1200	1400	1600
(j)	0.4	840	1200	1650	2070	2500	2900	3350
(j)	0.3	1350	2100	2850	3600	4380	5100	6000



MEI-21 DECADE CONDENSER BOX DIAL TYPE

(Capacitance Box) Manufactured in one or more dials, each consisting of ten steps, fitted in spray painted box.

Sub divisions (Micro Farad)	No. of steps	Total Values
One Dial		
a) 0.001	10	0.01
b) 0.01	10	0.1
c) 0.1	10	1.0
d) 1.0	10	10.0
Two Dial		
e) 0.001 and 0.01	20	0.11
f) 0.01 and 0.1	20	1.1
g) 0.1 and 1	20	11.0
Three Dial		
h) 0.001 and 0.01 and 0.1	30	1.11
I) 0.01 and 0.1 and 1	30	11.1
Four Dial		
g) 0.001, .01, .1 and 1	40	11.11



MEI-23 RHEOSTATS SINGLE TUBE 5.6CM DIA

Tube wound with heavily oxidised eureka wire and mounted on duco painted metal feet provided with laminated brush contacts of phosphorous bronze strips, brass C.P. guide and three lock type terminal to use Rheostat as potentiometer. These rheostats have excellent heat dissipation, smooth moving rider and ruggedly built. Total resistance and max. current capacity are marked on the slider.

	Amp	15cm ohms	20cm ohms	25cm ohms	30cm ohms	35cm ohms	40cm ohms	45 ohms
(a)	6.5	3.5	5.5	7.5	9.5	11	13	15
(b)	5.0	5.5	8	11	14	17	20	23
(c)	4.2	10	15	20	25	30	35	40
(d)	3.3	14	20	28	34	42	48	58



MEI-24 RHEOSTATS: 4.4CM DIA PORCE LAIN TUBE

Wound with kanthal wire on 5.6cm dia tube, most suitable for high currents. Temperature resistance 200C above room temperature, very useful for industries, projects and research laboratories.

Amp	15cm	20cm	25cm	30cm	35cm	40cm
	ohms A	ohms B	ohms C	ohms D	ohms E	ohms F
10.0	3	4.5	6	7.5	9	10
8.0	4	6	8	10	12	14
6.0	6	9	12	15	18	21
5.0	12	15	18	24	30	36
4.0	18	27	36	48	60	72



MEI-25 RHEOSTATS SPACE WINDING TYPE

Amp	15cm	20cm	25cm	30cm	35cm	40cm
	ohms A	ohms B	ohms C	ohms D	ohms E	ohms F
3.0	32	48	60	70	85	110
2.5	45	55	75	95	120	145
2.0	60	80	110	130	150	170
1.8	100	140	200	250	300	350
1.5	140	200	260	300	360	400
1.2	115	170	230	290	345	400
1.2	180	260	350	430	520	610
1.0	300	400	500	600	700	800
0.8	350	500	765	825	975	1100
0.6	600	800	1200	1500	1800	2000
0.5	700	1000	1300	1600	1900	2200
0.3	2000	2500	3000	4000	5000	6000



MEI-26 POST OFFICE BOX PLUG TYPE

Fitted with rectangular brass blocks, lacquered, inter change able plugs are connected with double nut system. Three ratio P.O. box has 16 non inductively wound coils and two proportional arms each with coils of 10, 100 and 1000ohms while 4 ratio P.O. box has 16 coils and 2 proportional arms each with coils of 1, 10, 100, 1000ohms. Two spring keys for battery and galvanometer are provided. Fitted in teak wood box. Accuracy±0.05 to 0.1%.

A	five dial	five dial
B	six dial	six dial



MEI-27 UNIVERSAL SHUNT

Dial type, based on Ayrton and Mather principle, total resistance 10,000 ohms, multiplying power 1,3,10,30,100,300,1000,3000 and 10000, provided with short circuiting push button switch.



MEI-28 FIXED CONDENSER BOX

High quality paper condenser fitted in teak wood box with ebonite top and terminals. (Microfarad= pfd)



MEI-29 POTENTIOMETERS

A simple instruments to teach students the techniques and method of e.m.f measurement. on nicely polished plywood base with sun mica top, fitted with soft wood graduated scale 100cm x 1mm, resistance wire is stretched along the ends of meter scale, brass CP connecting strips and brass terminals.

A	4 Wire
B	10 Wire



MEI-30 POTENTIOMETER DIAL PATTERN

Same as 1207 with 14 coils.



MEI-31 POTENTIOMETER 4 WIRE PJ

Same as 1202 but teakwood board and 3mm thick copper strips are used to minimize resistance.



MEI-32 POTENTIOMETER 10 WIRE PJ

Same as 1203 Teakwood board and 3mm thick copper strips are used to minimize resistance



MEI-33 POTENTIOMETER DIAL PATTERN

(for e.m.f, measurement)

This slide wire 50cm long is fitted over a graduated plate divided in 500 parts, The Jockey is of superior type and slides on the metal rod. The dial consists of 10 coils connected in series to the slide wire. Terminals for battery, galvanometer and test circuit are provided on the panel.



MEI-34 PENCIL JOCKEY BRASS

Provided with Bakelite handle, brass plated contact and terminal.



MEI-35 CROMPTON POTENTIOMETER (READING TYPE)

Direct reading type, consisting of 8 coils and a circular slide wire. The scale is divided into 200 parts with potential drop of 200 Milli-volts, direct reading with arrangement for standardizing with a standard cell. fine and coarse rheostats are provided for adjusting the slide wire. current range 0.001 to 1.8 volts, manganin coils, without standard cell accessories.



MEI-36 CROMPTON POTENTIOMETER (NEW PATTERN)

improved from provided with standardizing coil.



MEI-37 PLATINUM RESISTANCE THERMOMETER

Consisting of heat treated, winding of the purest form of platinum having resistance of 2.8 ohm, enclosed in a borosilicate glass grounded tube, provide with four terminals two for thermometer and two for compensatory leads are provided.



MEI-38 METER BRIDGE

(Wheatstone Bridge) One meter long, provided with four gaps/two gaps, plywood base and sun mica top, graduated scale, Constantan wire is stretched on top of meter scale, brass C.P. strip, end gaps can be closed by removable brass strips and brass terminals are provided to reduce resistance.

A	with pencil jockey
B	with pressing jockey brass



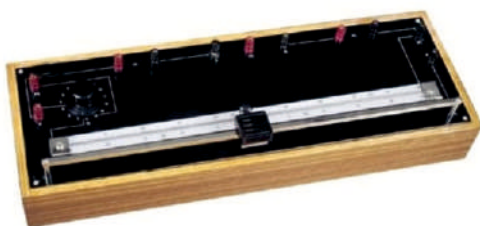
MEI-39 METER BRIDGE TEAKWOOD

Teakwood board and 3mm thick copper strips are used to minimize resistance.



MEI-40 CALLENDAR AND GRIFFITH' BRIDGE

Calendar and Griffith's Bridge, carry foster bridge and potentiometer, combined in one instruments. It is an improvement over the potentiometer. 50cm long slide wire of 1 ohm resistance is calibrated into 100 equal parts. 14 coils are arranged in series in dial from each being of 1 ohms resistance. Terminals arranged for appropriate working of different instruments. Jockey sliding on brass rod, accuracy of adjustments $\pm 0.05\%$



MEI-41 KOHLRAUSCH CONDUCTIVITY BRIDGE

For direct measurement of electrolytic resistance. Comprising a calibrated scale. 0.1-10ohms and multiplier ratio dial giving 6 ratios 0.1,1,10,100,1000 and 10000. It is useful for quick determination of resistance too when galvanometer replaces the headphone in the detector circuit. With fixed circular scale, accuracy \pm For comparison of capacities of condensers. Its consists of an AC source, a detector, 5 unknown values. Circuit diagram is printed on board and 2 ratio dials of X10&X100 only are provided
Accuracy $\pm 0.05\%$ to $+0.1\%$



MEI-42 HAMBURGER CELL

Conductivity coil with platinum electrode for use with Kohlrausch conductivity bridge, dip type.



MEI-43 RAYLEIGH BRIDGE

For measurement of self inductance of a coil, calibrated to $\pm 0.05\%$ to $\pm 0.1\%$



MEI-44 ANDERSON BRIDGE

OSAW type to be used as null detector in Wheatstone bridge and potentiometer experimenters. With built-in lamp and scale arrangement in a Bakelite case, a sensitive moving coil system is suspended in a taut band manner in uniform field of permanent magnet. Zero adjustments knob is provided to set spot of light. time period app.1.8 second working on 220v Ac, coil Resistance..



MEI-45 PORTABLE WHEATSTONE BRIDGE

It is fully portable with built in galvanometer and battery, designed to provided an accurate and sensitive measurement of resistance and locating faults in cables by adopting the Murray and Varley loop circuit for tests. Separate terminals for current, battery and galvanometer are provided on Bakelite panel. Range: 0.001 ohms to 11.11 me ohms. Contention coil, accuracy $\pm 0.1\%$



MEI-46 KELVIN DOUBLE BRIDGE

For precise measurement of low resistance, capable of measuring resistance from 0.1 micro-ohm to 1.1 ohms. Ten standard resistance of manganin are provided in steps in steps of 0.01 ohm each in dial form with five multiple ratio of 0.001,0.1,0.1,1 and 10 ohms. The circular slide wire of 0.01 ohms is also made from thick manganin wire having extremely low temperature coefficient. Calibrated to ± 0.05 to 0.02% with heavy construction.



MEI-47 STUDENT KELVIN BRIDGE

Simplified version, consists of ratio arm, one main dial, circular scale, built in galvanometer and double point press key, inbuilt supply is also provided with the instruments
Ammeter, Voltmeter, Galvanometer Moving coil Dc meters With stand.

Salient Features:-

1. Moving Coil instruments used for measuring DC quantities. They can be used with Ac system when fitted with bridge rectifiers.
2. Movement is provided between synthetic jewel bearing for negligible friction.
3. Zero adjuster accessible from front.
4. The instruments confirms to I.S. 1248/19868



MEI-48 AMMETER

DC mounted in beautiful ABS-plastic stand with accuracy $\pm 2.0\%$ F.S.D. lock type terminals, packed in card box. All common range available. All common ranges 1A, 3A, 5A etc. available

A	B	C
M065	Mr80	Mr100
Top Terminals	Deluxe-Squire	(80x100) Rectangular



MEI-49 MILLIAMMETER

Same as All common ranges 100 mA, 250mA, 500mA etc. Available.

A	B	C
M065	Mr80	Mr100
Top Terminals	Deluxe-Squire	(80x100) Rectangular



MEI-50 MICRO AMMETER

Available in 50uA, 100uA, 250uA and 500uA range

A	B	C
M065	MR 80	MR 100
Top Terminals	Deluxe-Squire	(80x100) Rectangular



MEI-51 VOLTMETER

DC mounted in beautiful ABS- plastic stand accuracy $\pm 2.0\%$ F.S.D. with lock type terminals. All common ranges 3V, 5V, 10V available.

A	B	C
M065	MR 80	MR 100
Top Terminals	Deluxe-Squire	(80x100) Rectangular



MEI-52 MILLIVOLTMETER

Available in 100mV, 500mV range.

A	B	C
M065	MR 80	MR 100
Top Terminals	Deluxe-Squire	(80x100) Rectangular



MEI-53 AC VOLTMETER/AC AMMETER (RECTIFIER TYPE)

Provided with moving coil, permanent magnet and transformer. Available in all ranges of voltage and current.



MEI-54 MULTIRANGE AMPERE VOLTMETER

DC Ammeter, Voltmeter is suitable for the laboratories of the schools & collage to measure voltage and current in the DC circuit. The volt-ammeter is a type of moving coil instruments. It consists of permanent magnet steel, pole terminals, soft iron core and coil etc. The coil which can rotate around its central axis is placed in the magnetic field. Two hair springs are soldering on both the ends of the axis of the coil respectively. On one end of the pointer is fitted. The dial and the zero adjuster are fixed on the support.

- Indicating panels is the Horizontal type
- Measuring ranges : Ampere: 0-1000uA-100mA-1A-5A
: Voltage:0-100mV-1V-10V-50V
- Accuracy : +2,5%FSD
- Dimensions : 162x114x60mm approx
- Scale length : 60mm approx
- Damping Time : not longer than 4s
- The basic sensitivity of the current of the meter is 35uA
- Weight : 400grms.Approx.



MEI-56 MULTIMETER ANALOG

A multi-range instrument for measurement of voltage, current and resistance. Moving coil meter having red pointer over two colour scale. Complete with test leads, probes and internal battery.



MEI-55 INTERSCALE DEMONSTRATION METER

The demonstration meter is used to demonstrate the working principle of AC And DC Ammeter, Voltmeter and Galvanometer with help of interchangeable plastic scales. A magnetically damped spring controller moving coil movement is housed in a plastic case with glass front and rear panel. A pair of 4mm socket terminals given on the right side zero adjustment control is given on the left side with the help of two knobs. The interchangeable scales are boldly marked on both sides enabling the class to view from the front and the demonstrator from the rear. Each scale is fitted through a slot on the right side of the case and has a plug connector which also serves to locate and align the scale positively in position. Locking system is provided to lock the pointer to avoid damage in transit.

- Basic Movement : 5mA - 100mV F.S.D
- Scale Length : 200mm Approx.
- Accuracy : +/-2.5% F.S.D
- Dimensions : 300x150x300mm Approx.
- Weight



MEI-57 MULTIMETER DIGITAL

Workable on 9 volt battery. DCV range 200 mv 1000v, ACV range 200v 750v, DCA 200ua 10amp. Resistor 200 2000 kohm. Provided with test leads.



MEI-58 GALVANOMETER

DC mounted in beautiful ABS- plastic stand with accuracy $\pm 2.0\%$ F.S.D with lock type terminals. Ranges available 30-0-30,50-0-50.

A	B	C
M065	MR 80	MR 100
Top Terminals	Deluxe-Square	(80x100) Rectangular



MEI-59 DIGITAL PANEL METER

3½ Digital display with 9 volt battery.

Ranges available

DC current: 199.99uA 1.99mA 19.99mA. 1.99A 19.99A

DC voltage: 199.9mv 1.99V 19.99V 199.9v



MEI-60 TANGENT GALVANOMETER

Having standard winding of 2-5-50 or 2,50,500. The Bakelite ring with windings is mounted on Bakelite base with four terminals. No. of turns is marked between the terminals. The whole assembly rotates on non magnetic tripod base with non magnetic leveling screws. Compass box is mounted on non-magnetic metallic cup and is free to rotate around it. Compass box is graduated in degrees.

A	Aluminum Brass
B	Brass Parts



MEI-61 TANGENT GALVANOMETER EXPORT QUALITY

Same as above but fitted with bigger brass cup, highly sensitive compass box with permanent magnet, aluminum tripod base fitted with lock type leveling screws.



MEI-62 STEWART AND GEE'S APP

To determine the variation of magnetic field along the axis of a coil, a circular non magnetic frame has copper wire wound on it. The ends of wire are connected to terminals on wooden board. Aluminium rods are graduated up to 50cm on both sides. A permanent magnet compass sitting on a non magnetic platform travels on alum rods.



MEI-63 HELMHOLTZ'S GALVANOMETER

With two coils exactly alike and parallel, the coils increase the uniformity of field and thus make it more sensitive. A permanent magnet compass is pivoted on the brass cup at the midway between the coils. With brass C.P. Parts and sensitive compass box.



MEI-64 COMPASS BOX

For tangent galvanometer with anti-parallax mirror and sensitive needle, packed in card box.



MEI-65 COMPASS BOX DELUXE

Same as 1239 with permanent magnet and stone agate bearing needle, highly sensitive, packed in card box.



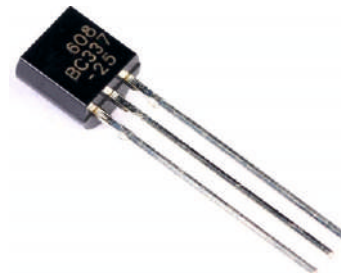
MEI-66 PNP TRANSISTOR

Fitted on board with banana socket and circuit diagram.



MEI-67 NPN TRANSISTOR

Fitted on board with separate banana socket and circuit diagram.



MEI-68 SPOT REFLECTING GALVANO METER (LONG SCALE)

For detection of low currents of the order of micro ampere This is a self contained reflecting galvanometer, housed in a aluminum case with built in lamp and scale, transformer for working on 220V AC 50HZ. Universal shunt is also fitted inside with shunt power of X1,X0.1,X0.01,X0.001.

Coil Resistance :100,ohms(direct)
 Sensitivity :15mm To 20mm/ua
 Period :2second (nominal)
 Range Attenuation :sensitivities Of X1,x0.1,x0.01 And X0.001 Related Both Voltage And Current Sensitivities with Constant Input Resistance.

Critical Damping Resistance : 1000,ohms
 Scale Division : 180mm Divided In Mm Cm With Left Hand and Centre Zero Scales.
 Dimensions : 295x210x30mm Approx



MEI-70 LAMP AND SCALE OUTFIT

Suitable for use with ballistic galvanometer, workable on 6 volt provided with step down transformer, 6V/20W lamp housed in metal container, a translucent perspex scale attachment graduated in 25-0-25 or 0-5cm attachment, plug and cord.



MEI-69 SPOT REFLECTING GALVANO METER

Highly sensitive instrument to be used as null detector in Wheatstone bridge and potentiometer experiments. with built in lamp and scale arrangement in a Bakelite case a sensitive moving coil system is suspended in a taut bond manner in a uniform field of permanent magnet. Zero adjustment knob is provided to set spot of light. Time period app.1.8 second working on 220 V AC, coil Resistance.

A	100 ohms
B	600 ohms.



MEI-71 BALLISTIC GALVANOMETER

Housed in Bakelite body for measurement of small quantities of electrical charge, deflection closely proportional to the electric charge. Robust and rigid in construction, easy to operate, provide with Zero adjusting and lacking devices. Time period 10-12 seconds. Coil resistance

Coil resistance

A	100 ohms
B	600 ohms.



MPE-01 ZENER DIODE

Fitted on board with separate banana socket and circuit diagram.



MPE-02 SEMI CONDUCTOR DIODE (JUNCTION DIODE)

Fitted on board with separate banana socket and circuit diagram.



MPE-03 OHM'S LAW KIT

A useful assembly of loose components for students to work for themselves and understand the basic concept. The kit consists of one circuit board, one rheostat, one voltmeter, one ammeter (MR-80) and patch cards. Supplied without power supply



MPE-04 PHOTO VOLTAIC CELL (Selenium Photo Cell)

Mounted on board with separate banana socket and circuit diagram.



MPE-05 OHM'S LAW APP (WITH POWER SUPPLY)

Same as 1257 but fitted with step down transformer giving 1, 5, 3, 4, 5, 6 volt, provided with lead wire. No need to use external power supply.



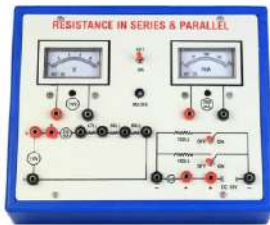
MPE-06 OHM'S LAW APP (WITHOUT POWER SUPPLY)

To verify ohm's law, consists of one dial type rheostat, MO 65 moving coil voltmeter 5 volt & milliammeter 500mA, mounted in spray painted metal box with terminals. Supplied without resistance coil and power supply.



MPE-07 RESISTANCE IN SERIES & PARALLEL APPARATUS

Versatile instrument to verify ohm's law as well as law of resistance in series & parallel, consists of two meter, five transparent resistance coil and a step down transformer giving 1,5,3,4,5 volts, housed in metal case & provided with on/off switch LED indicator and a lead wire.



MPE-08 DC REGULATED POWER SUPPLY

Continuously variable with two MO 65 moving coil analog meters. The unit is fabricated keeping stringent engineering standards in mind and using best available components. The unit has voltmeter and ammeter, pilot light on/off switch and provided with 2 terminals for out-put.

A	15 Volts, 1 Amp
B	30 Volts, 1 Amp



MPE-09 DIGITAL REGULATED POWER SUPPLY

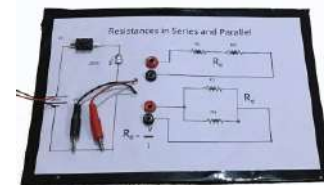
Basic features are the same as 1262 but out-put is shown through digital 3½ digital panel meter.

A	15 Volts, 1 Amp
B	30 Volts, 1 Amp



MPE-10 RESISTANCE IN SERIES OR PARALLEL KIT

It consists of two circuit boards, one rheostat, one voltmeter, one ammeter (MR-80) and patch cards.



MPE-11 DIODE VALVE CHARACTERISTIC APP.

With built-in stabilized power supply and two MO 65 moving coil meters, workable on 230 volts AC, fitted with diode valve on front panel. Consists of.

High Voltage : 0-250 volts AC at 25MA Continuously Variable

Low Voltage : 6.3 volt AC at 2 amps. With built in rheostat for filament control.



MPE-12 TRIODE VALVE CHARACTERISTIC APP.

With built-in stabilized power supply, workable on 230 volts AC, fitted with triodes valve on front panel. with two MO 65 moving coil meters (one meter dual range). Consists of.
 High Voltage : 0-300volts DC at 30ma continuously variable.
 Bias : 0-15 volts DC at 5ma (reversible) continuously variable.
 Low Voltage : 3 volts AC at 3 amps.



MPE-13 SEMI CONDUCTOR DIODE CHARACTERISTIC APP.

(PN Junction Diode App.) with built in dual power supply workable on 230 AC volts with four meters, fitted with semi conductor diode OA79 on front panel, different electrodes of semi-conductor diode, power supply, output and meter connections are brought out on panel with separate terminals. Four MO 65 moving coil meters used are 90V, 100uA, 3V and 15mA.

Output bias: 0-1.5 volts DC continuously variable (for forward bias)

Input bias : 0-30 volts DC continuously variable (for reverse bias)



MPE-15 E/M BY THOMPSON METHOD (BAR MAGNET METHOD)

With built-in power supply to operate cathode ray tube, one voltmeter shows deflection voltage, C.R.T. is mounted on teak wood stand with graph. Another wooden stand is provided to hold bar magnets and deflection magnetometer.



MPE-17 PN JUNCTION DIODE CHARACTERISTIC APP.

Same as but with 2 dual range MO 65 moving coil meters.



MPE-14 ZENER DIODE CHARACTERISTIC APP.

With built-in stabilized power supply and 2 MO 65 moving coil meters used are 15V and 100mA, workable on 230 volts AC, fitted with Zener diode 8.2 volts on front panel. Connections of zener diode, power supply, output and meters are brought out on the panel.



MPE-16 CHARGING AND DISCHARGING OF CONDENSER

To study RC time constant during charging and discharging of a capacitor, with built-in stabilized power supply, workable on 220 volts AC. Three different resistances and capacitors are mounted with separate terminals for different graphs, provided with DC Voltmeter & milliammeter.



MPE-18 PLANK'S CONSTANT APP.

With built-in power supply having 2 meters, workable on 220 volts AC photo electric cell mounted in a metal box with slit to hold filter, provided with a light source.



MPE-19 TRANSISTOR CHARACTERISTIC APP

With built-in dual stabilized power supply, workable on 230 volts, AC, fitted with PNP transistor AC 128 on front panel. Different electrodes of transistor, power supply output and meter connection are brought out on panel with separate terminals. With four MO 65 moving coil meters used are 3V, 250 μ A, 50mA, 10V.



MPE-20 HALF WAVE/FULL WAVE & BRIDGE RECTIFIER

Objective: To study Efficiency & Ripple factor in case of Half wave, Full wave & Bridge rectifier o application of load & filters.

Features: Instrument comprises of AC Power Supply, 2 MO 65 moving coil meters 20V and 250 ma to measure output voltage & Output current, 4 pn Junction Diodes, Filter Circuit Kit, load Resistances selectable using band switch.



MPE-21 FIELD EFFECT TRANSISTOR (FET) CHARACTERISTIC APP.

With built-in stabilized power supply, workable on 220 volts AC, fitted with FET FW 10 on front panel, with three MO 65 moving coil meters 3V, 15mA, 15V.



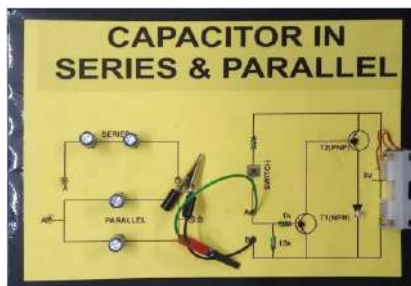
MPE-22 UNI JUNCTION TRANSISTOR (UJT) CHARACTERISTIC APP.

With built-in dual stabilized power supply workable on 220volts AC, fitted with UJT 2N 2646 on front panel, different electrodes of UJT, power supply, output and meter connections are brought out on the panel, with three MO 65 moving coil 15V, 1.5/60mA dual range, 30V meters.



MPE-23 SERIES AND PARALLEL RESONANT CIRCUIT

P provided with two AC meter 5V and 25mA, one inductance, three resistances and three capacitors with separate terminals for measurements of 'Q' value.



MPE-24 COMMON BASE TRANSISTOR AMP (FREQUENCY RESPONSE)

L instrument comprises of DC regulated power supply, printed circuit diagram and components mounted on the front panel.



MPE-25 MILIKAN'S OIL DROP APPARATUS

It consists of condenser, a light source and a measuring microscope all mounted on a common platform. A strong pillar mounted on a heavy base carries microscope and lamp house. An oil container with a pump is provided at the top of the pillar and oil drops pass through a hole in the plate (placed just below the oil container). The microscope has up down and sideways adjustment knobs, provided with power supply.



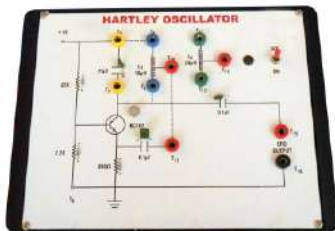
MPE-26 E/M BY LONG SOLENOID/HELICAL METHOD

Kit comprises of high voltage power supply unit with intensity, focus X and Y, deflection & solenoid current controls, two meters are provided for acceleration voltage control & for solenoid current control, solenoid unit comprises of one solenoid mounted on wooden stand & 3" Cathode ray tube is kept in the solenoid pipe.



MPE-27 HARTLEY OSCILLATOR

To study frequency and wave shape generated by Hartley Oscillator. Instrument comprises of 30V DC regulated power supply, printed circuit diagram & components mounted on front panel.



MPE-28 COLPITTS OSCILLATOR

To study frequency and waveshape generated by Colpitts Oscillator, Instrument comprises of 12V DC regulated power supply, printed circuit diagram & components mounted on front panel.



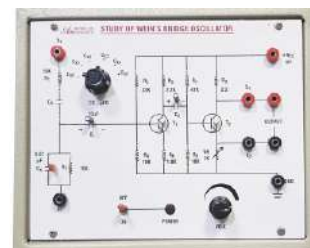
MPE-29 PHASE SHIFT OSCILLATOR

To study frequency and waveshape generated by Phase Shift Oscillator. Instrument comprises of 12V DC regulated power supply, printed circuit diagram & components mounted on front panel.



MPE-30 WEIN BRIDGE OSCILLATOR

Using Operational Amplifier IC 741: Instrument comprises of 12V DC regulated power supply, printed circuit diagram & components mounted on front panel.



MPE-31 FET VOLT-OHM METER SOLID STATE

(VTVM) triple range, fitted with deluxe meter with transparent cover, Input impedance 11 mega ohms.

A. As AC Voltmeter: 7 ranges, 0-1.5, 5, 15, 50, 150, 500 and 1500 volts FSD accuracy $\pm 5\%$.

B. As DC Voltmeter: 7 ranges, 0-1.5, 5, 15, 50, 150, 500 and 1500 volts FSD accuracy $\pm 3\%$.

C. As Ohm Meter: 7 ranges, 0-1000, 10000, 100000 ohm and 1, 10, 100 and 1000.megaohms FSD accuracy $\pm 3\%$.



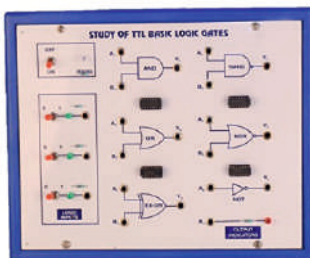
MPE-32 THERMISTOR CHARACTERISTIC APP.

With built-in stabilized power supply, workable on 230 volts AC. A thermistor is fitted with built-in oven with a thermometer is mounted on front panel. a heat control switch, one milli-ammeter 10mA and voltmeter 10V and separate terminals for thermistor are provided



MPE-33 STUDY OF BASIC LOGIC GATES AND, OR, NOT, NAND, NOR GATES

Complete with built in Stabilized power supply



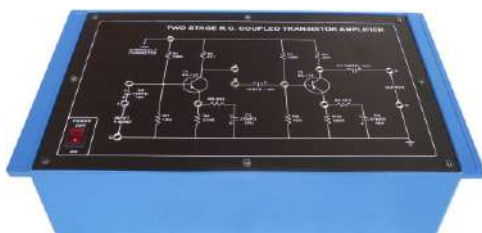
MPE-34 FUNCTION GENERATOR SOLID STATE

Range 1Hz to 100 KHz in five bands. Sine, Square and Triangular wave with output voltage variable up to 20 volts peak to peak at 50 Ohms impedance, accuracy $\pm 2\%$.



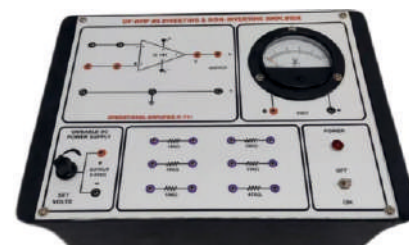
MPE-35 TWO STAGE RC COUPLED TRANSISTOR AMPLIFIER (FREQUENCY RESPONSE)

Instrument comprises of DC regulated power supply, printed circuit diagram and components mounted on the front panel.



MPE-36 OPERATIONAL AMPLIFIER AS INVESTING & NON INVESTING AMPLIFIER

Instrument comprises of DC regulated power supplies of 0-1.5 Volt DC 150 mA & ± 15 Volt DC, printed circuit diagram & different resistance connected externally for various observations, provided with digital panel meter.



MPE-37 ENERGY BAND GAP OF PN JUNCTION DIODE

To plot reverse saturation current vs temperature in reverse biased PN Junction diode. Instruments comprises of DC regulated power supply 0-20 volt DC/150mA, two MO 65 moving coil meters 20V and 100uA for voltage & current measurement, one PN junction diode (Ge Type) kept in oven with temperature control knob.



MPE-38 STUDY OF OPERATIONAL AMP. AS ADDER, SUBTRACT OR, INTEGRATOR AND DIFFERENTIATOR

Instrument comprises of 2 DC regulated power supplies of 0-5 volt DC and ± 15 volt DC, one digital meters to measure input and output voltages & combination of resistances, capacitors mounted on front panel.



MPE-39 VERIFICATION OF KCL AND KVL

Instrument comprises of DC regulated power supply 0-3 VDC/250mA, two MO 65 moving coil meters 5V, 250mA for voltage & current measurement, combination of resistances mounted on front panel.



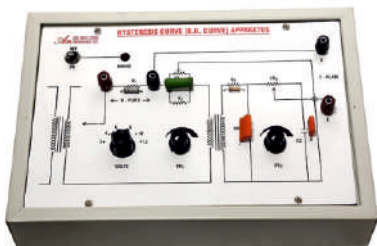
MPE-40 SOLAR CELL CHARACTERISTICS APPARATUS

To draw V I characteristics of solar cell, instrument comprises of moving coil meters filled on panel with power supply, lamp house, solar cell mounted, supplied with wooden plank.



MPE-41 BH CURVE APPARATUS

To trace hysteresis curves on CRO using resistance, capacitance & inductance. Instrument comprises of AC power supply 3-15V AC, output selectable using band switch, printed circuit diagram, components connected behind the front panel, provision for connecting external inductance is given, input & output connections brought out at sockets.



MPE-42 TUNNEL DIODE CH. APP.

In built DC regulatd power supply, two digital panel meters for measuring voltage across resistance and tunnel diode, current control on front panel.



MPE-43 CATHODE RAY OSCILLOSCOPE SINGLE BEAM, BAND WIDTH DC TO 10MHZ

Fully solid state workable on 220 volts 50 Hz. All supplies are stabilized by accurate and stable operation. The accurate triggering of time base enables clear and stable display on screen of size 8x8 cm. Vertical deflection can be selected for either AC or DC, provision for attenuation in the input circuit, calibrated from 5mV to 50V/cm.

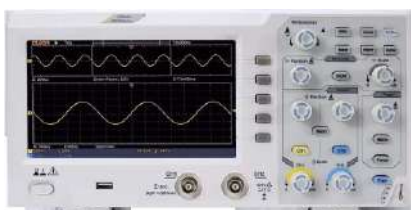
Specifications:

Band width	: Vertical DC to 10MHz (3db)
Sensitivity	: 10mV/cm
Input Impedance	: 1 M Ohm
Square wave calibration	: 2 volt P-P.
Triggering	: Internal from vertical amplifier or external.
Sweep Time factor	: 0.1 us/Div. 0.1s/div. $\pm 5\%$. Horizontal Amplifier
Band width	: DC to 1 MHz
Display	: 8x8 cm square
Power requirement	: 25 watt 230 V 50Hz.
Dimension	: 8"x5½"x11"



MPE-45 DIGITAL STORAGE OSCILLOSCOPE (DSO)

Signal bandwidth 25 MHz, independent vertical scale and position control knobs for each channel, 24 parameters of automatic measurements, low-pass, high-pass, band-reject digital filters with adjustable cut-off frequency, advanced cursor modes manual, auto and track, unique waveform recording and playback function, Pass/Fail detection, optical isolated Pass/Fail output, 10 internal setup and waveform files memories, external storage of setup, track, waveform, BMP bitmap and CSV files, USB host port, support USB disc storage.



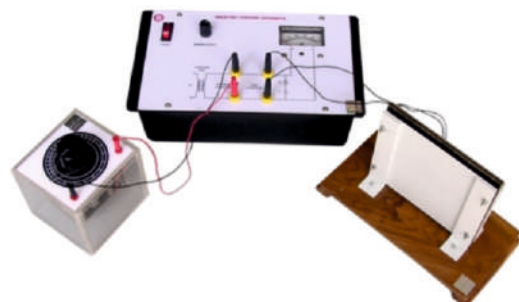
MPE-44 CATHODE RAY OSCILLOSCOPE DUAL TRACE, BAND WIDTH DC TO 20 MHZ

Workable on 220 volt, 50 Hz. Vertical deflection coefficients 5 mV to 20 V/div., time base 20 ns- 0.2 s/div., Variable hold off X10 magnification, Triggering DC- 20 MHz, active TV sync Sep., alternate triggering, LED indication for stable triggering, XY mode, Z modulation, saw tooth output (5 Vpp. approx..) component tester, 2 level calibrator.



MPE-46 DIELECTRIC CONSTANT APP.

To calculate dielectric constant of liquids and solids. The instrument consists of high frequency oscillator of tune able frequency, optimum tuning of oscillator can be measured using outer gang condenser. Dielectric is placed between parallel plates; change is detected and difference is noted for calculation.



MPE-47 G.M. COUNTER DIGITAL

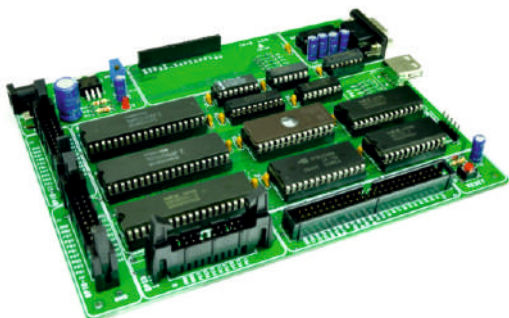
Instrument consists of power supply for G.M. Tube with digital read out meter. 6 Digit counting system with its power supply. Controls for reset, start and stop fixed on panel. One presentable timer with 3 digit display and them wheel switch. Complete with G.M. Tube, Stand and one radio active source.



MPE-49 MICROPROCESSOR TRAINING KIT (8085)

Kit is based on 8085 Microprocessor and is designed to provide ease in interaction with 8 bit Microprocessor capabilities. This kit can be used to train engineers about the Microprocessor Technology to control any industrial process and to develop software for 8085 system.

This kit has a powerful monitor in 4/8 bytes EPROM. The monitor can be extended to incorporate an Assembler and Disassembler for 8085. The input /output structure includes programmable 24 I/O lines. It has got 16 bit programmable Timer/Counter using 8253 for generation of any type of counting.



MPE-48 RESISTIVITY OF SEMI CONDUCTORS BY FOUR PROBE METHOD

The experiment consists of the following:

- Four Probe Arrangement Oven (upto 200°C)
- Sample : Ge Crystal Mounted Thermometer (0-200°C)
- Four Probe Setup Constant Current Power supply digital
- Accuracy : 0.25% of the reading +1 digit
- Load Regulation : 0.03% for no load to full load Electronic Milli Voltmeter 200 mV
- Accuracy : +0.1% of reading =1 digit
- Impedance : 1 M Ohm
- Display : 3½ digit, 7 segment (LED height 12.5mm)with auto polarity and decimal indication.



MPE-50 MICROPROCESSOR TRAINING KIT (8086)

Based on intel 8086 CPU operating at 2.5/5 MHz, provided with on board sockets, 16 k bytes of Ram,72 I/O lines, 16 bit timer, RS – 232 cord, 28 keys, hexadecimal keyboard, 8 seven segment display with powerful software commands and inbuilt power supply. Provided with detailed user's manual.



MPE-51 SUSCEPTIBILITY OF FERROUS SOLUTION (Quick's Tube Method)

To study susceptibility of ferrous solution in strong magnetic field, it consists of electromagnet of 7.5 K.G. strength, power supply 0-100V variable 4 amps. variable power supply. Digital Gauss Meter 0-20 kg with hall probe, graduated capillary tube.



MPE-52 ULTRASONIC INTERFEROMETER

It is a simple device to determine the ultrasonic velocity in liquids, the principle is based on an accurate measurement of wave length in the medium . Ultrasonic waves of known frequency are produced by a quartz plate fixed at the bottom of the cell. The waves are reflected by a movable metallic plate. If the separation between these plates is exactly whole multiple of sound wavelength, standing waves are formed. The acoustic resonance gives rise to electrical reaction on the generator and anode current becomes maximum. From the knowledge of wavelength, velocity can be obtained.



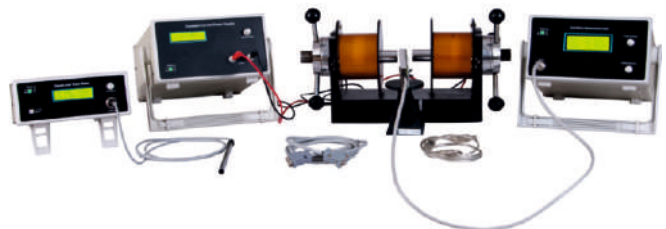
MPE-53 ULTRASONIC DIFFRACTION GRATING EXPERIMENT

(To determine velocity of ultrasonic wave): Complete apparatus with R.F. Oscillator 3-8 MHz, Crystal with tank, long tube Spectrometer with 7" protected circle, sodium lamp with wooden box and transformer.



MPE-54 HALL EFFECT EXPERIMENT

The setup consists of electromagnet of 7.5 kg, power supply for electromagnet 0-100V/4 amps, germanium crystal mounted and its constant current power supply 0-20mA fitted with two digital meters, Digital Gauss meter 0-20 kilo Gauss and hall probe.



MGO-01 SPECTROMETER STANDARD

A basic instrument for performing spectroscopy experiments. designed to give best possible results. Mounted on a stable cast iron base. Protected scale 150mm is divided on precision machine. Vernier reading 1 min. Telescope is fitted with 25mm dia. and 178mm focal length achromatic objective 10X. Collimator has an adjustable precision slit with 6mm long jaws of non-rusting metal, 8dia mm Prism/grating table is adjustable and has engraved ring pattern. Supplied in a beautiful plywood box with prism holder and grating holder.

A	Brass Scale
B	S.S Scale



MGO-02 SPECTROMETER COLLEGE PATTERN

Deluxe model designed to meet the demand of standard instrument for Degree College. specifications same as standard pattern but Telescope and collimator are held rigidly and in perfect alignment using height adjustment screws.

	(i)	(ii)
	15.0cm	17.5cm
A	Brass Scale	Brass Scale
B	S.S Scale	S.S Scale



MGO-03 SPECTROMETER COLLEGE TYPE

High precision quality using perfectly engineered and high class optics, Provided with 15.0cm protected circular scale.



MGO-04 TRAVELING MICROSCOPE

(Vernier Microscope) Consists of cast iron base with machined V-Shape vertical Pillar, Microscope tube consists of X10 eye piece and an achromatic objective of 50-75mm working distance, embedded stainless steel Horizontal scale is graduated upto 17cm and vertical scale 15cm, Vertical and horizontal slide can be clamped at any position using clamping screw, fine motion is brought about by micrometer screws, horizontal and vertical vernier of 0.01mm are provided along with two leveling screws, packed in plywood box.



MGO-05 TRAVELLING MICROSCOPE DELUXE MOTION

Specification same as but a sliding carriage is fitted on the top carriage which moves at right angle to the horizontal motion by means of rack & pinion, For certain experiments like Newton Ring and graph reading this microscope is very convenient to use. Supplied in plywood box.



MGO-07 NEWTON'S RING MICROSCOPE

Compact form with all the necessary arrangements for conducting Newton's ring experiment. A standard microscope unit with 30x magnification and rotatable cross line, The microscope tube unit can be raised or lowered can be clamped in any desired position. The Newton ring set consisting of plain and one Plano convex lens is placed in a metal case resting over the stage of the instruments which can be adjusted for the alignment and adjustable reflector plate is fitted in the required direction, a condenser lens is provided in front of reflector, Supplied in beautiful storing cabinet.



MGO-06 TRAVELLING MICROSCOPE (CLASSIC)

For precision movement and measurement of small distances. Nicely painted heavy base with leveling screws. SS horizontal scale is fitted onto the bed and is machine graduated into mm. SS vertical scale is fitted on vertical pillar and is also machine divided into mm. Both scales are provided with accurate verniers. Fine motion screws are provided to both scales. Microscope is fitted on vertical pillar and can be clamped in horizontal or vertical direction. It has a 10x remsden eye piece along with crossline graticule at one end and an achromatic objective at other end. Focussing in by rack & pinion. Supplied in wooden box.



MGO-08 MICHELSON INTERFEROMETER

It is divided in two parts :

(i) Mechanical

Bed: It is optically ground and stable.

Lead Screw : It is also optically ground with 200 mm length and 1mm pitch.

Optical Mirror Mount : Kinematic mirror mounts are provided to hold the mirror.

(ii) Optical Part :

Beam Splitter : It is optically work with $\lambda/10$ surface Surface flatness.

Compensating Plates : Two plates are provided.

Mirrors : 2 Nose mirror of focal length 25 mm are provided.



MGO-09 SIX POSITION VERNIER MICRO SCOPE

Consists of cast iron heavy base accurately machined with traveling carriage on top, Microscope is fitted with 10X Ramsden's eye piece and achromatic objective of 75mm working distance. Horizontal SS scale is machine divided, travelling carriage can be clamped in any position, a slow motion screw is provided for liner adjustments, Supplied in a wooden box.



MGO-11 AIR WEDGE PLATE

Consists of 2 optical plain glass plates having same length and width but a very small angle between them.



MGO-13 POLAROID

It consists of 2 identical units each with polaroid disc in a rotatable mount. Brass scales are divided into 360 L.C. 1 min.



MGO-10 STUDENTS POLARIMETER HALF SHADE

A simple and sensitive polarimeter designed on Laurent's half shade system for accurate results. Equipped with polarizer, analyzer and Laurent's half wave mica plate Precisely graduated scale mounted on sturdy tripod stand provision for height adjustment complete with 200mm tube.

Range of measurement : 0 to 360. Telescopic Magnification : 5x vernier accuracy : 0.1°.

A	Closed Model
B	Open Model



MGO-12 POLARIMETER BI-QUARTZ

Same as but provided with bi-quartz in place of half shade.

A	Closed Model
B	Open Model



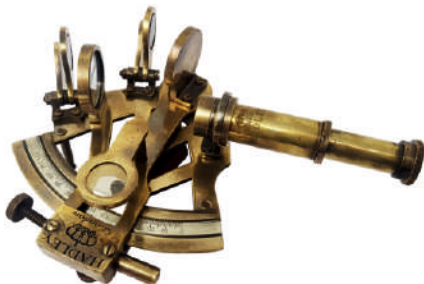
MGO-14 POLARIMETER TUBE

200mm with bulb in the center packed in velvet box.



MGO-15 SEXTANT STAND

Nice duco painted heavy base with steel C.P. Rod



MGO-16 SEXTANT STANDARD

Designed to give maximum accuracy with 160mm stainless still scale divided to 130 and vernier reading to 12 seconds. Telescope holder is adjustable to the required height. Complete with slight tube, one inverting one erecting telescope and one sun glass.



MGO-17 READING TELESCOPE

Simple form for school and junior colleges focussing from one meter to infinity. Ramsden eye piece 10x with cross wire, achromatic optical objective. Focusing with rack & pinion height of telescope is adjustable, fitted on cast iron base.



MGO-18 TELESCOPE FOLDING TYPE

Triple folding handy telescope for limited field work made of brass.



MGO-19 READING TELESCOPE CLASSIC

Superior quality all parts are made from brass, achromatic objective provided with wooden stand.



MGO-20 READING TELESCOPE UNIVERSAL DELUXE

Mounted on nice duco painted round cast iron heavy base with leveling screws. The telescope is provided with high class optical combination and brass C.P. fitting with up and down, to and from motion complete with Perspex scale and scale holder.



MGO-21 READING TELESCOPE WITH SCALE

Having achromatic objective 25mm dia. 175mm focal length 10X Ramsden's eye piece with cross wire. Focusing and rack & Pinion. Mounted on a heavy metallic standard supplied with Perspex scale and scale holder for accurate measurements



MGO-23 SLIT FOR RESOLVING POWER OF TELESCOPE

Consists of unilateral jaw movements through a micrometer head and three fixing screws.



MGO-25 SODIUM VAPOR LAMP TRANSFORMER

Metal box with piano type on/off switch. Output is through a 3pin socket. The transformer is auto leak type and gives starting voltage of 440V which reduce sit self when the lamp glows.

A	35 Watt
B	55 Watt



MGO-22 ABBE REFRACTOMETER

For accurate measurement of refractive index of transparent liquids, solids and solutions, used in sugar, ghee and oil mills, pharmaceuticals and chemical laboratories, jam factories and distilleries etc. Measuring range 1.3000 to 1.7000, measurement of sugar 0% to 95%. The body of instrument is fixed with a leaning of 60°, correct reading can be taken in the fields. It includes Abbe's double prism with thermostat, compensator, telescope mirror, graduated scale, reading magnifier and radial arm which carries vernier. Complete in polished wooden box.



MGO-24 SODIUM VAPOR LAMP

Low pressure lamp giving spectral lines in 5889° A and 5895° A wavelength range.

A	35 Watt
B	55 Watt



MGO-26 WOODEN BOX FOR SODIUM VAPOR LAMP 35 WATT

Wooden box with slits on three side stopper form 3 experiments at a time, each slit has two riders to adjust the length of slit or dose ii when no experiment is being performed.

- (a) Regular quality mode of ordinary wood.
- (b) Deluxe quality mode of superior wood and has different sized slits for different experiments. The height of the box can also be adjusted to suit their requirements of the experiment.



OPTICS

MGO-27 ASTRONOMICAL CUM TERRESTRIAL TELESCOPE

Same as above but with erector tube which can be slide into the main tube after removing eye piece and thus the astronomical telescope can be used as terrestrial telescope, complete in level lines case.

	with achromatic lens
	with single white lens



MGO-28 OPTICAL BENCH SIMPLE

Mode from seasoned

A	with achromatic lens
B	with single white lens



MGO-29 OPTICAL BENCH DOUBLE ROD (HALF SHAPER TYPE)

Consists of two 1 meter rods, one of the rods evenly divided in mm, supported on heavy cast iron feet. Provided with four heavy metal slider and accessories. Two of the sliders have transfer motion.



MGO-30 OPTICAL BENCH WOODEN BED AND METAL ACCESSORIES

One meter long, superior wood, scale in mm. Four metal base slides and four metal accessories. Two of the slides are provided with transfer slow motion arrangement.



MGO-31 OPTICAL BENCH 1.5 METER

1 1/2 meter long full shape red accessories with two steel rods and one extra rod supporting the base.

- (a) Steel rod.
- (b) Both rods covered with brass pipe.
- (c) Both rods stainless Steel.



MGO-32 OPTICAL BENCH DOUBLE ROD (FULL SHAPER TYPE)

Full Shaper red accessories.
 (a) Both rods covered with brass pipe to avoid rusting of rods.
 (b) Both stainless steel rods, to increase life of engraving on rod.

A	Half shapered accesories
B	Full shapered accesories



MGO-33 RESEARCH OPTICAL BENCH

Consist of heavy cast iron bed with strong central rib, thoroughly seasoned and aged before machining, total length 170mm fitted with stainless steel scale divided in mm. Four carriages are provided to carry the standard accessories. Accessories mounted on the riders are not part of standard equipment.



MGO-35 LUMMAR BRODHUM PHOTO METER ASSEMBLY

Complete with omponents 1.5 meter ss rod optical bench having the following Components:-

- a. L.B Photometer Head: made from precision optics. Light from two sources fall on either side of a uniform white opaque screen and is reflected by side reflectors. Then it passes through LB cube. Observing the field through a telescope, two light intensities are compared directly.
- b. Lamp House: two lamp houses with electric bulbs workable on 220v.



MGO-34 BIPRISM ASSEMBLY

To determination the phenomenon of interference of light using bi-prism and to understand the concept of interference, image formation and width of Fringes. It consist of 1 ½ meter long stainless steel double rod optical bench with following accessories.



MGO-36 NODAL SLIDE ASSEMBLY

It consist a 1 ½ meter long stainless steel double rod optical bench with the following accessories.

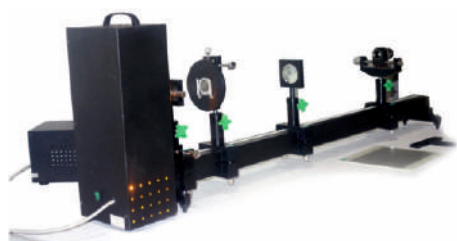
- (a) Lamp house: an electric bulb workable on 220VAC is encased in a metal case.
- (b) Metal Screen white with cross slit: the slit has one white surface and other black.
- (c) Plane true til table mounted mirror.
- (d) Lens assembly consisting of combination of single & double lens holder on a mount rotating on a vertical axis. The assembly is adjustable in height and can be moved by rack & pinion.



MGO-37 HE-NE LASER ASSEMBLY WITH OPTICAL BENCH

For demonstration of interference, diffraction and holography. Laser source and switch mode power supply are housed in a thick aluminium box with a hole through which laser beam comes out. The laser unit is mounted on a precision 1 meter double rod SS optical bench. Intensity of laser beam is 2Mw and it is red in colour. Input power is 220V AC. Minimum operating life is 15,000 hrs. and shelf is 10 years. The unit is supplied with single slit and diffraction grating viz.

1. Operate the laser at least once in a fortnight.
2. Never look directly into laser beam.
3. Never open the laser unit.
4. Teacher should be properly trained in handling such instrument.



MGO-39 POWER SUPPLY FOR RAY OPTICS KIT

Workable on 230V AC, it gives stabilized power output of 2 amp, 12V DC, housed in sturdy metal box.



MGO-41 TO DETERMINE ABSORPTION SPECTRUM OF IODINE VAPOR.



MGO-38 DIODE LASER ASSEMBLY

Same as Cat. No 1365 but with highly economical diode laser. Provided with set of 13 laser grating to perform simple experiments.



MGO-40 RAY OPTICS KIT

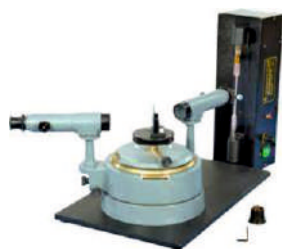
An ideal instruments to demonstrate basic principle of light like reflection, refraction, deviation of light through prism or slab, with standard accessories.



MGO-42 TO FIND REFRACTIVE INDEX OF THE PRISM MATERIAL USING SODIUM LIGHT WITH THE HELP OF SPECTRO METER.



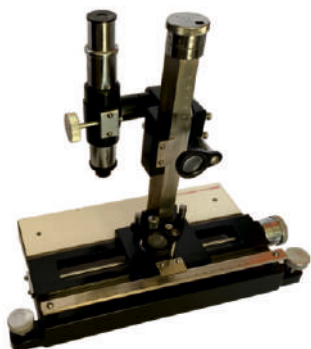
MGO-43 TO DETERMINE RYBDERG'S CONSTANT USING HYDROGEN DISCHARGE TUBE.



MGO-44 TO STUDY YOUNG MODULUS OF GIVEN MATERIAL BY FORMING HYPERBOLIC FRINGES USING CORNU'S METHOD.



MGO-45 TO DETERMINE SURFACE TENSION OF A LIQUID BY CAPILLARY RISE METHOD USING TRAVELING MICROSCOPE.



MGO-46 TO DETERMINE RESOLVING POWER OF READING TELESCOPE USING SLIT.



MGO-47 TO DETERMINE THE SPECIFIC ROTATION OF SUGAR USING LAURENT'S HALF SHADE POLARIMETER.



MGO-48 TO DETERMINE WAVE LENGTH OF SODIUM LIGHT USING NEWTON RING MICROSCOPE.



MPM-01 LEVER OF THREE ORDERS

Set of three half meter scales on wooden stand, supplied without weight.



MPM-03 INCLINED PLANE 4" (SOFT WOOD MADE)

Export quality complete with roller pan and brass Arc.



MPM-05 FRICTION BOARD APP.

To study laws of friction. 60cm long wooden board, fitted with glass plate, provided with frictionless pulley, wooden block, pan and a set of friction rollers.



MPM-07 INERTIA APP.(NEWTON'S 1ST LAW)

All metal big size export quality, packed in card box.



MPM-02 INCLINED PLANE 3"

60cm long, fitted with glass plate and clamping arrangement to change angle, provided with frictionless pulley, metal roller, scale-pan and graduated arc.

	Aluminium Arc
	Brass Arc



MPM-04 INCLINED PLANE 4" (TEAKWOOD MADE)

Teakwood board with levelling screws, heavy brass arc, Heavy



MPM-06 NEWTON'S SECOND LAW OF MOTION

Consisting of two identical wooden trolleys with Bakelite wheel and spring loaded axle.



MPM-08 NEWTON'S CRADLE

A simple experiment to show transfer of momentum. It consists of metal base with a wire frame. Six identical steel balls are suspended end to end. When one ball is made to strike the rest of the balls the last one ball is shifted away. When two balls are made to strike the rest of the system, last two balls are shifted.



MPM-10 INERTIA DISC

A disc of 125mm dia 6mm thickness has two holes drilled and tapped for chuck, one in centre and other along the edge of the disc.



MPM-12 SIMPLE PENDULUM STAND

The Apparatus consists of heavy metal base 9X6, iron rod, one set of clamp & boss-head, split rubber cork and 1" brass bob with thread.



MPM-09 INERTIA BAR MODULUS OF RIGIDITY

Solid brass bar with central split chuck for clamping and suspending wire, size 30cms long and 1.5cm dia, supplied with Wall Clamp.



MPM-11 INERTIA TABLE

An Aluminum Disc of turned, supports three or more masses fitted into a groove concentric with the circumference, fitted with chuck & mirror, supported by steel CP. rods, fitted on a heavy base with levelling screws.



MPM-13 G BY FREE FALL

To determine the value of G. It consists of an electronic unit having four sockets and a switch to help hold or release the ball. A heavy retort stand carries a solenoid. When toggle switch is a catch position, current flows through solenoid producing a magnetic field and holding the ball. The retort stand carries another base. The ball after being released from solenoid falls on the base. Time taken by the ball to travel from solenoid to second base is recorded in electronic unit.



MPM-14 COMPOUND BAR PENDULUM

To study variation of time with length for a compound pendulum. A powder coated steel bar 100x2.5cms bored at every 5cms and provided with 2 removable knife edges. Complete with powder coated wall bracket.

A	Steel Strip
B	Brass Strip



MPM-16 BIFILAR PENDULUM

To find the Moment of inertia of given mass of rectangular cross section. It consists of heavy cast iron rectangular plate having 6 holes. The plate is suspended by means of two strings of equal length from a rigid T-shaped support. Provided with heavy base and rod.



MPM-18 MAXWELL'S VIBRATION NEEDLE

Brass C.P. for experiments on rigidity. It consists of a hollow cylindrical brass tube open at both ends with a chuck carrying a mirror. The tube is graduated in mm on both sides, 2 solid and 2 hollow cylinders, all 10cm long, fitted in the bore of the tube without stand.



MPM-15 TORSION PENDULUM

A carefully turned brass disc 125mm dia and 12mm thickness is provided with split chuck in the centre. An aluminum ring of outside dia exactly 125mm has two pins which fit into two cavities in the disc so that edge of the ring is in flush with the edge of the disc.

A	Brass Disc
B	Iron Disc



MPM-17 KATER'S REVERSIBLE PENDULUM

Consists of steel C.P. rod one meter long, two adjustable knife edges facing each other, two cast iron weights are provided to slide along the length of the bar and can be clamped in any position, two hardwood weights can be used to compensate iron weights. The apparatus used to find acceleration due to gravity at a place.

A	Iron CP Parts
B	Brass CP Parts



MPM-19 DOUBLE INCLINED PLANE

Consists of two inclined tracks, all wooden.



MPM-20 SEARLE'S RIGIDITY APP.

To find the modulus of rigidity & Young's Modulus for a wire. The 30cm long wire under test is connected to two brass rods 30cm long. Completestwith test wires with connecting screws.



MPM-21 RIGIDITY APP. STAND

Specially designed heavy stand consists of two metal feet, 4 iron rods and one metal strip.



MPM-22 TORSION APP SEARLE'S HORIZONTAL PATTERN

Consists of two cast iron feet, two supporting rods, one wheel with groove moving on ball bearings is provided with chuck to hold the test rod, aluminum scales with pointer are attached to specimen rod.

A	with half meter long rods and two scales.
B	with one meter long rods and three scales.



MPM-23 TORSION APP SEARLE'S (VERTICAL PATTERN)

It consists of a mild steel frame mounted on a heavy cast iron base fitted with leveling screws, three sliding circular scales graduated in degrees are provided which can be clamped at any position on one of the frame uprights, three pointers for clamping to the test rod are provided.



MPM-24 YOUNG'S MODULUS APP. (SEARLE'S)

To determine Young's Modulus of a wire. It consists of two rectangular frames connected by a link. The frames are fitted with self centering chucks, provided with a spirit level, a spherometer, a cast iron ceiling attachment and a weight

A	Iron Frame
B	Brass Frame



MPM-25 YOUNG'S MODULUS APP. (VERNIER TYPE)

Simple but efficient app. Consists of brass scale 10cms long and vernier to read 1/10mm with V-slides clamps, guides for wire ceiling and weight are provided.



MPM-26 YOUNG'S MODULUS OF METAL ROD BY INTERFERENCE METHOD

The experimental rod carries two metal plates at different points. These metal plates support a glass plate and a lens, One is on the top of the other adjusted by three springs and screws, On applying a load the rod bends slightly, increasing the distance between the plate and the lens. Newton's rings are observed before applying the load. As the load is applied gradually the rings run into the centre, disappearing one at a time. To the right is a microscope fitted with a micrometer eye piece scale for observing and making measurements upon the rings. The instrument is supplied w/o weight.



MPM-28 FLY WHEEL

20cms in dia and 45mm wide, accurately balanced wheel is mounted on a horizontal shaft held in ball bearings. The wheel is marked and a pointer is fixed to the bracket. The bracket has four holes and can be fixed to the wall.

A	Without Counter
B	With Counter



MPM-30 PARALLELOGRAM OF FORCES APP (WITH WOODEN STAND)

Same as 1405, but provided with wooden stand.



MPM-27 BENDING OF BEAM APP

Comprising a metal bar one meter long resting on knife edges of two heavy table clamps, hanger with knife edge moves on metal bar, a spherometer Fitted on cast iron stand with electric contacts is also provided.



MPM-29 PARALLELOGRAM OF FORCES APP (WITH METAL STAND)

For verifying the relation between forces acting at a point, provided with two clamp type pulleys for mounting at any position, 45cm x 30cm board wall type, complete with 3 sets of 50gm x 5 iron slotted weights.



MPM-31 PARALLELOGRAM OF FORCES APP (EXPORT QUALITY)

All metal stand, board covered with sun mica on both sides, three sets of 50gm x 5 iron slotted weights & two special export quality pulleys.



MPM-32 K. CONSTANT SPRING APP

Provided with half meter scale. spring with pointer and slotted weights fitted on nicely painted iron base.



MPM-33 CLEMENT & DESORME'S APPARATUS

Consists of wide mouth glass bottle of cap 10 Ltr. The bottle is placed inside a wooden box packed with cotton wool to protect from temperature change. It is fitted with metallic neck having three openings. Openings A is connected to compression pump, opening B connected to oil manometer and C is connected to atmosphere. Complete with pump & manometer.



MPM-34 MOMENT BAR APPARATUS

Consists of wooden Plank, two rods, metal strip with hooks, two acrylic spring balance 500gm each, one two sets of slotted weights 50gm \times 5. It is used to verify conditions of equilibrium for parallel forces by showing that sum of upward forces is equal to sum of downward forces.



MPM-35 JACK SCREW MODEL

A simple instrument to show conversion of circular motion into vertical motion.



MPM-36 CONVERSION OF MOMENT OF ENERGY (MAXWELL WHEEL)

To demonstrate the conversion of kinetic energy into potential energy and vice versa. It consists of a rotating axle which is held in horizontal position by two threads attached to a metal trip and is moved upwards by winding of thread. When the wheel is released from its wound position wheel acquires kinetic energy on its way down. At the lowest position when the threads are fully unwound they start rewinding around the axle of wheel and rises upward again. The whole assembly is fitted on a stand.



MPM-37 HOOK'S LAW APP

Fitted on stand with 6" mirror scale and hanger, supplied with out weights.

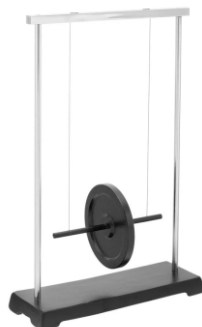


MPM-38 STEAM ENGINE BOILER TYPE WORKING MODEL

It consists of two parts

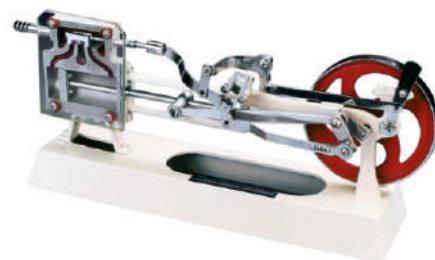
1. Steam Boiler
2. Engine

Steam boiler consists of a tank with a heating system to convert water into steam. The tank with heating system to convert water into steam. The engine has an inlet port, an exhaust port for steam. The piston chamber is pivoted on a fulcrum around which it oscillates. The piston is joined to a crank cum flywheel with connecting rod, which in turn drives the wheel.



MPM-39 STEAM ENGINE SECTIONAL WORKING MODEL

A steam engine utilizes the energy contained in steam under high pressure. The energy that's released when steam expands is made to produce rotary motion which can be used for driving the machinery. The steam from boiler is admitted into the cylinder having a piston, when the steam expands, it causes piston to move, when the piston has travelled to the end of the cylinder and thus completed the stroke. The expanded steam is allowed to escape from cylinder. At the same time the path of the steam is changed over i.e. live steam under pressure is admitted to the other side of piston causing the later to travel back past its starting point until it has reached the other end of stroke. A steam engine of this type is called double acting because force of steams applied alternatively on two side's piston'



MPM-40 PETROL ENGINE FOUR STROKE

Vertical flask type demonstration model on metal base. In a four stroke engine. to perform full cycle of operations (changing the contents of cylinder and effecting combustion) four strokes of piston are required. This type of engine is used in Motor bikes, Petrol driven cars and certain types of scooters.

This is an internal combustion engine. The vaporized fuel is mixed with air in carburetor. This mixture is sucked by engine (Intake stroke – 1st stroke) through inlet valve which opens. The descending piston draws fresh petrol and air mixture into the cylinder. This mixture is compressed (Compression stroke -And stroke). During compression the mixture gets heated and ignition burns the fuel converting into large volume of gas which pushes the piston. While the valves are closed the piston is pushed to the bottom of the cylinder by the gases of combustion (Power Stroke - 3rd stroke) The exhaust valve opens due to momentum gained by wheels, piston is pushed upwards and burnt gases are expelled (Exhaust stroke - 4th stroke)



MPM-42 PETROL ENGINE TWO STROKE

Vertical flask type demonstration model, on metal base. In a two stroke engine, to perform full cycle of operations (changing the contents of cylinder and effecting combustion) two strokes of piston are required. This type of engine is mostly used in petrol driven scooters.

It is an internal combustion engine. The thermal energy which is released when fuel is burned is converted into mechanical energy. Petrol is mixed with air in a device called carburetor to form a combustible mixture which is compressed in a cylinder and finally ignited by an electric spark produced between the electrodes of a sparking plug. The gases which are formed in the cylinder by the combustion of air petrol mixture, expand, and thrust the piston downward. Acting through the connecting rod, the piston imparts a rotary motion to the crankshaft. The energy to remove spent gases from the cylinder is provided by the flywheel thus paving the way for injection of fresh air petrol mixture, so that a new cycle can begin.



MPM-41 DIESEL ENGINE - TWO STROKE

Vertical flask type demonstration model, on metal base.

This type of engine is mostly used in Motor boats.

A two stroke diesel engine takes in air and discharges exhaust through a system called crank-case scavenging. Scavenging begins with piston at bottom dead centre. At this point, the intake port inside the cylinder are uncovered and the exhaust valve is open. The air is forced into the cylinder, and the air is forced in, the burnt gases from the previous operating cycle are forced out. The two strokes involve Compression stroke and Power stroke.



MPM-43 DIESEL ENGINE –FOUR STROKE

Vertical flask type demonstration model, on metal base. This type of engine is used in Diesel cars, Jeeps, Buses, Trucks, Tractors and Generating sets. This is an internal combustion type engine. The thermal energy which is released when the fuel is burned is converted into mechanical energy. In this type of engine air alone is drawn into the cylinder and is compressed in a ratio of 14:1 to 25:1. As a result of this high compression, air is heated to a temperature of 700°C to 900°C. Now a certain amount of diesel is injected into the cylinder. Because of the prevailing high temperature, the fuel ignites spontaneously.

The four strokes involves are:

1. Intake stroke
2. Compression stroke
3. Power stroke
4. Exhaust stroke.



MPH-01 AIR PUMP

Fitted with aluminum plate of dia. 15cm and steel C.P. barrel on wooden base, provided with a stop cock, an inlet screw and a connection for pressure rubber tubing.



MPH-02 MAGDEBURG HEMISPHERE

To demonstrate pressure of atmosphere, two 7.5cm dia iron cups are provided, one is fitted with handle and other is fitted on stand, an air pump is also supplied along with.



MPH-03 PRESSURE OF LIQUID APP. PASCAL LAW

To show that pressure is transmitted equally in all directions, consists of a hollow metal ball 2" dia with holes along the circumference, a branch tube and a piston, when water is pushed out by piston, it streams out in all directions at the same distance



MPH-04 BOYLE'S LAW APP. UNIVERSITY PATTERN

Two glass tubes one closed at the top and other open are held in clamps which can be locked at any position, clamps can slide on two steel C.P. rods fitted on base, wooden plank carrying a meter scale is mounted on heavy cast iron base with leveling screws, supplied without mercury and rubber tubing.



MPH-05 QUILL'S TUBE

A 50 cm glass capillary tube having a uniform, fine bore. The tube is open at both ends and is graduated in mm. Mercury can be filled in the tube.



MPH-06 FORTIN'S BAROMETER

An instrument to measure atmospheric pressure in laboratories. With Metric and English system scales reading 25" to 32" and 64cm to 81cm. Vernier operating with rack and pinion, reads 0.1" and 0.1 cm. Mercury level is adjusted by means of a knurled knob mounted at the bottom of the casing. When the knob is turned all the way into the casing, mercury fills the entire system and the tube accepts a very small volume to allow for thermal expansion. Borosilicate glass tube, fitted on wooden base supplied without mercury.



PNEUMATICS & HYDROSTATICS

MPH-07 BOYLE'S LAW APP.

With two steel CP. rods carrying clamps, wooden scale fitted on metal strip, two glass tubes mounted on cast iron stand, supplied without mercury and rubber tubing.



MPH-08 WOODEN CASE

For Fortin's barometer with glass on three sides.

A	Soft Wood
B	Teak wood



MPH-09 MERCURY PURIFIED

Packed in plastic bottle, sealed, 500gms.



MPH-10 ANEROID BAROMETER (WITH PUMP)

Wall type. An inexpensive barometer for elementary study of weather, the dial shows mercury pressure equivalent in both English and millibar scales. It has a hook for suspension and a stationary hand for comparison with previous reading. The movement is housed in a round plastic case.



MPH-11 ANEROID BAROMETER

Demonstration type. The aneroid movement with dial is mounted vertically inside a transparent case. In addition to observing true atmospheric pressure one can also change the pressure within the dome by means of rubber bulb to show how the mechanism works.



MPH-12 RAIN GAUGE APP.

A non rusting metal vessel having a funnel approx. 4" dia fitted on top of a cylindrical container of same diameter, provided with polythene measure.

A	G.I. Steel
B	Brass Steel



MPH-13 SELF RECORDING RAIN GAUGE

Spring balance type rain gauge consisting of a metal reservoir placed on the top of a sensitive dial pattern machine. It records rain fall up to 10cm.



MPH-14 OVER FLOW VESSEL

For multipurpose use in density and specific gravity experiments.

A	G.I. Steel
B	Brass Steel
C	Plastic



MPH-15 BUCKET AND CYLINDER

To demonstrate the Archimedes Principle made iron and brass.

A	1½"
B	2"



MPH-16 ARCHIMEDES PRINCIPLE APP.

It consists of a 8X5" base and a rod, spring balance with lamp, plastic measuring cylinder, a brass bob of 25 mm dia. It demonstrates that when a body is weighed in a liquid, it experiences an upward thrust equal to the weight of the liquid displaced.



MPH-17 HARE'S APP

For comparing densities of liquids by measuring the heights of two columns of liquid produced by applying suction to the short centre limb, fitted on wooden stand.



MPH-18 U-TUBE APP.

For use as a manometer, provided with glass tube, meter scale and fitted on wooden stand.



MPH-19 BELL IN BELL JAR

Experiment to demonstrate that sound cannot travel in vacuum, it consists of a bell jar fitted with electric bell. Operates on 6 volt.

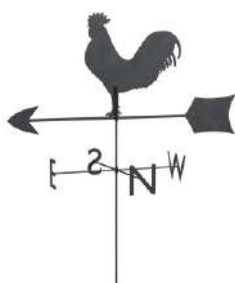


MPH-20 THERMOMETER METAL FOR BAROMETER



MTS-01 WIND VANE

Wind sized, cock shaped, fitted on base with N W E S arms clearly visible.



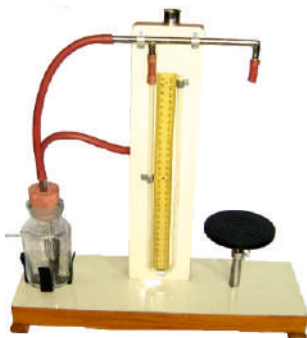
MTS-03 ANEMOMETER

Cup Shape with Counter. The instruments has a cup wheel consisting of three conical cups in horizontal Plane. The cup wheel spindle is connected by worm gearing to a revolution counter in a waterproof housing. By observing the counter reading at the beginning and end of ant period of interest the average wind speed during the interval can be calculated



MTS-05 JAEGER'S SURFACE TENSION APP.

This method is suitable for the purpose of studying the variation of surface tension with concentration of solution of common salt in water.



MTS-02 WIND VANE HEAVY

It meets all important requirements for accurate indication of wind direction. It consists of a heavy metal base with a vertical Pillar. The pillar carries the wind assembly that rotates with minimum friction. This assembly is balanced to avoid bias towards any direction. It is suitable for mounting on the buildings



MTS-04 RISING TABLE (SLOW MOTION STAND)

A machine cast aluminum table 10 cm dia having a stem of 12 cm can be lowered or raised to desired to desired height and it can be tightened with a thumb screw. In addition to this coarse movement, fine adjustment is provided by a flush in arrangement fitted on a heavy circular base with two leveling screw and one rod to hold capillary clamp.



MTS-06 SURFACE TENSION BALANCE (SEARLE'S)

For measuring surface tension of soap film or any transparent liquid, deflection of pointer on scale gives the reading ,steel wire is stretched on a tripod stand. With tightening screw, scale-pan and slide clip.



SURFACE TENSION



MTS-07 POISEUILLE'S VISCOSITY APP.

With the help of this app. one can find the coefficient of viscosity of water by noting its flow through a capillary tube of uniform bore. The capillary tube is fitted on a wooden board and two ends are joined by rubber tubing to two L shaped glass tubes. The wooden plank is fitted with wooden scale. Complete with constant level tank and rubber tubing.



MTS-09 POISSON'S RATIO OF RUBBER APP.

To find relationship between longitudinal strain and lateral strain in case of rubber tube. Consists of a cycle rubber tube of about one meter length with a small pointer, fitted on a heavy cast iron stand.



MTS-11 INERTIA BALANCE KIT



MTS-13 CENTRE OF GRAVITY TOYS

Set of three all brass toys (i) a rider on horse (ii) a balancing man (iii) cone.



MTS-08 VISCOSITY APP. STOKE'S METHOD

The instrument is based on principle of fall of spherical ball through liquid. This instrument is used to determine viscosity of a transparent liquid like glycerine. It consists of a 35mm bore one meter long graduated borosilicate glass tube made to stand vertically firm in between three upright bars on heavy cast iron base, supplied with graduated glass tube.



MTS-10 VISCOMETER (SEARLE'S PATTERN)

The outer cylinder is clamped to its supporting pillar at various heights and the inner cylinder which is graduated revolves on a pillar fitted with two pulleys, complete with scale pan.



MTS-12 STOKE'S LAW TUBE

Graduated borosilicate glass tube for Stoke's App.



MTS-14 WOODEN STAND

Wooden stand for C.G. Toy.



MSP-01 TUNNING FORK

Set of 8, 256 to 512

A	Regular quality, steel chrome plated, in thermocol box
B	Pye Type, Bright chromium plated set of 8
C	Ragg's Type, blue steel set of 8



MSP-02 TUNING FORK WELCH TYPE C.I.

Due to large cross sectional area these forks have better accuracy, stability and duration of frequency. Supplied in velvet box.



MSP-03 TUNING FORK CALIBRATED

Highly accurate calibrated set of tuning forks made from aluminium alloy, packed in moulded box, provided with certificate.



MSP-04 RUBBER HAMMER

Provided with rubber cork fitted on wooden handle For striking tuning fork.



MSP-05 RESONANCE APP.

To determine the velocity of sound, it consists of a vertical wooden plank which carries a wooden scale at one side, a brass tube on another and a transparent tube in between. The lower end of brass tube carries a two way nozzle. The vertical end of the nozzle is connected to the transparent tube and the horizontal end is connected to a reservoir through rubber tubing, the wooden plank is supported on a heavy base with levelling screws, supplied without rubber tubing.



MSP-06 RESONANCE APP (UNIVERSITY PATTERN)

University pattern, consists of steel C.P. tube and steel reservoir mounted on heavy iron base, good quality, supplied without rubber tubing.



MSP-07 ELECTRICAL VIBRATOR

To determine the frequency of AC mains, e.m.f. of cells and capacity of condenser. A thin steel rod is clamped at one end and passes through a small solenoid. One end of the rod is flattened and a thread is tied to it. The solenoid is connected to AC mains through a suitable lamp resistance. The solenoid and horse shoe magnet cause the rod to vibrate with the frequency of AC supply. Fitted on a wooden board and complete with pulley, pan and thread.



MSP-08 MELDE'S APPARATUS HEAVY

Some as 1469, heavy pattern, with base having provision for transverse as well as longitudinal arrangement.



MSP-09 MELDE'S APPARATUS

Consists of electrically maintained tuning fork with frequency of 60 vibrations per sec., an electro magnet is placed between prongs of the fork without touching it, a small spring type strip is attached to one of the prong, can be used in vertical or horizontal position, supplied with silk cord, pulley, stand, scale-pan and G-clamp.



MSP-10 KUNDT'S TUBE

To find velocity of sound in a material of given rod, it consists of a 100 cm long tube mounted in adjustable clamp on a metal base. A rod about 60 cm long is held firmly in place at its mid point on one side. One end of the rod has a metal disc attached to it. The other end of the tube is closed by a piston which can move about 20 cm into the tube.



MSP-11 POWER SUPPLY FOR SONOMETER

A fixed voltage 2 amp. transformer housed in a beautiful case with on/off switch.



MSP-12 SONOMETER (ALUMINUM)

Consists of a wooden box one meter long with meter scales on both edges of box, provided with two wooden riders and 3 different wires each 100cm long attached to a fixed bridge. Pulley and fixed screw are provided to enable a wire to be fixed for tensioning by weights, supplied without weights.

A	Aluminum Fittings
B	Brass Fittings



MSP-13 SONOMETER

Same as but teakwood box and brass fittings.



MSP-14 ELECTRO MAGNET FOR SONO METER

To make the wire of sonometer to vibrate.



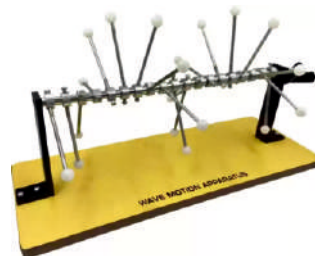
MSP-15 STAND FOR ELECTROMAGNET

Provided with base, rod and a special clamp to hold the electromagnet above the iron wire of sonometer.



MSP-16 WAVE MOTION APPARATUS NEW TYPE

This model consists of wooden base with aluminium frame and plastic spheres, when light from the projector is focussed on the model, shadow of spheres forms a sine wave which can be projected on a wall or on a screen.



MSP-17 WAVE MOTION APPARATUS

With heavy discs supporting a series of rods. On revolving the handle, motion is transmitted from one rod to next appearing as a travelling wave, fitted on nicely polished wooden base.

A	18 Pulley
B	24 Pulley



MSP-18 RIPPLE TANK

To study propagation, reflection, refraction, diffraction and interference of waves, consists of an enameled M.S. sheet frame with four adjustable legs, complete with all the accessories and working instructions, size of tank is 30x30cm.



MSP-19 REFLECTION OF SOUND APP.

To show that angle of incidence and angle of reflection are same for a particular setting. It has a D shaped base with two pipes having horns at one end each, one arm is set at an arbitrary angle and the other arm is set till one listens maximum sound.

A	Small
B	Big



MSP-20 RIPPLE TANK APPARATUS

A versatile instrument to study wave characteristics can be used as a standing bench model or atop an overhead projector. Moulded frame with dear bottom and slanting slopes. The tank has detachable legs mounted at underside of the corners. One side of frame has clamp for supporting lamp. Rippler assembly is suspended through an overhead support rod and carries spherical dippers and a low voltage motor, complete with accessories.



MGH-01 RING & BALL APPRATUS

To explain thermal expansion. It consists of a brass ring fitted on brass rod with wooden handle and a brass ball attached by chain. When ball and ring are all same temperature the ball passes through the ring but when the ball is heated it no longer passes through the ring.

A	Ball 18mm
B	Ball 25mm



MGH-02 COMPOUND METAL STRIP

(Bimetallic) two different metals riveted together end to end, with wooden handle, size 30 cms.as thermal expansion of two material is unequal, when heated, strip with bend.

A	Iron & all
B	Iron & brass
C	Iron & coper
D	Brass & coper



MGH-03 RING & BALL APPARATUS ON STAND

It consists of a ball and a ring –The ring is mounted on a vertical stand.

A	Ball 18mm
B	Ball 25mm



MGH-04 OXYGEN GENERATING TUBE

Brass with delivery tube screwed, soldering joints.



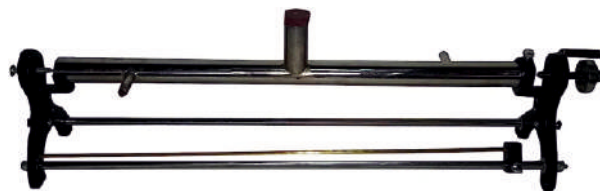
MGH-05 CONDUCTIVITY OF METAL STRIP

Four metal strips fixed on a wooden ring with front edges meeting at the Centre.



MGH-06 LINEAR EXPANSION APP.

Horizontal type 50cm long brass pipe and spherometer with three test rod of different metals



MGH-07 PYROMETER

(Linear expansion simple form) It consists of a metallic base with four vertical pillars. One pillar supports a pointer pivoted at its upper end and the other end moving freely on an arbitrary scale. Two pillars support the specimen rod with one of them having an adjustment screw for setting the pointer to zero.



MGH-08 CO-EFFICIENT OF LINEAR EXPANSION APP.

Vertical type, specially designed to measure the linear expansion of metals with the help spherometer, provided with three test rods of different metal. It consists of a nickel plated brass steam jacket containing one of the three test rods. Steam jacket carrier an opening for thermometer. The whole assembly is mounted in a heavy metal frame



MGH-09 NEWTON'S LAW OF COOLING

With two aluminium calorimeters hung inside a double walled tin tank fitted with a wooden top with holes for thermometer.

A	G.I Sheet
B	Brass Sheet



MGH-10 NEWTON'S LAW OF COOLING APP

University pattern set of two units each with double walled jointless brass vessel CP and a non inducting cover. A copper Calorimeter 3x2' hangs inside the brass vessel. The two vessels are joined by metallic T tubes and rubber coil. Provided with stirrer and a holed cork for thermometer.

A	30cm x 1.8cm copper rod
B	30cm x 2.5cm copper rod



MGH-11 NEWTON'S LAW OF COOLING (WITH COLORIMETER)

Single vessel. It consists of a thin walled copper calorimeter suspended in a double walled enclosure. The lid of the calorimeter has opening for stirrer and thermometer. The double walled enclosure has space for hanging a thermometer between the walls and is covered with Bakelite lid.



MGH-12 SEARLE'S THERMAL CONDUCTIVITY APP (UNIVERSITY PATTERN)

To find co-efficient of thermal conductivity of copper. It consists of copper rod 12" with its one end surrounded with a steam jacket for heating it from a boiler and the other end is kept cool by a stream of water floating through a spiral tube fitted to that, without thermometers. The assembly is kept in a wooden case.



MGH-13 CONDUCTIVITY APP. LEE'S AND CHARLTON'S

For determining the relative conductivity of thin layers of material, consists of cylindrical slab 11.5cm deep hollow cylinder of the same dia with inlet and outlet tubes for steam. Both have radial holes for thermometer. The brass slab is suspended from a ring through three strings and the whole assembly is supported on a heavy cast iron stand, Supplied without thermometer.



MGH-15 GLAZEBROOK AND SHAW'S COLORIMETER

(Regnault calorimeter) improved with water cooled jacket below the steam heater to prevent radiation



MGH-17 SPHERICAL COLORIMETER

50mm dia copper painted



MGH-14 CALLENDER AND BARNE'S CONTINUOUS FLOW COLORIMETER

To determine mechanical equivalent of heat. The apparatus consists of glass tubes open at both ends carrying inside a spiral of wire. The inlet and outlet system are connected to glass tube through rubber tubing and carry terminals for electrical supply. A stream of water is made to flow through the glass tube and heated by the spiral wire by passing electric current. The Whole apparatus is fitted on a polished wooden board. Complete with constant level tank but w/o thermometers.



MGH-16 CONSTANT LEVEL TANK

On stand.



MGH-18 COPPER COLORIMETER

Vessel of copper in outer wooden case, with thermometer holder and stirrer, well insulated, in card box.

A	3" x 2"
B	4" x 3"



MGH-19 JOULS'S ELECTRICAL COLORIMETER

Consist of a copper vessels placed in an outer box of superior wood fitted with ebonite top with holder for thermometer. The terminals are connected to coil of wire for 3 amps. Complete with stirrer.

A	3" x 2"
B	4" x 3"



MGH-20 STEAM BOILER COPPER

Cylindrical body with conical top and a short neck. Having an outlet tube.

A	1 litre
B	2 litre



MGH-21 STEAM GENERATOR OR HEATER

(sp. Heat App or Sinclair App.) Consists of a Cylindrical Copper Boileith Bakelite top.r with an inclined brass heating chamber, Closed by sliding inner tube provided.

A	1 litre
B	2 litre



MGH-22 HOPE'S APPARATUS

It consists of a cylindrical vessel surrounded by an annular trough and two thermometer opening above and below the trough. Mixture of ice and salt is placed in trough and temperature of water at top and bottom of cylindrical vessels is recorded.

A	G.I Sheet
B	Brass Sheet
C	Copper Sheet



MGH-23 HYPSONETER COPPER

In this compact self contained apparatus heat is produced heat is produced by friction between two concentric close fitting brass cones, one of which is maintained stationery by means of weight and force pulley, While others is rotated by a geared hand wheel. The wheel is grooved so that it may be rotated by a motor is desired.

A	Medium
B	Large



MGH-24 STEFAN'S RADIATION APPARATUS

Consists of blackened hollow hemisphere fitted in wooden board, a steam chamber above the hemisphere to measure the temperature by passing steam through it copper.



MAGNETISM

MGM-01 BAR MAGNET (ALNICO TYPE)

Powerful alnico alloy permanent magnet with ground surface, thickness 8x12mm, north and south poles are clearly marked.

A	B	C	D
50MM	75MM	100MM	150MM



MGM-02 BAR MAGNET

Cobalt steel alloy magnet in pairs with keepers in beautiful card box, north and south poles are clearly marked.

A	B	C	D
50MM	75MM	100MM	150MM



MGM-03 U-SHAPE MAGNET (ALNICO)

Alloy magnet, highly effective when high magnetic strength is required, permanent & powerful.

A	B	C
50MM	75MM	100MM



MGM-04 HORSE SHOE MAGNET

Steel with ground surface

A	B
50MM	75MM



MGM-05 CYLINDRICAL MAGNET ALNICO

Round bar magnet with poles clearly marked.

A	B	C
50x10MM	75x10MM	100x10MM



MGM-06 ELECTROMAGNET U-SHAPED

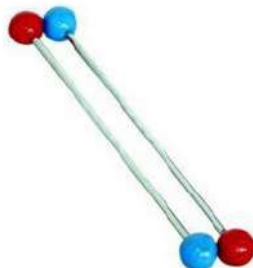
Soft iron core, wound with insulated copper wire, with bare ends, working on 6 volt DC.

A	B
50MM	75MM



MGM-07 BALL ENDED MAGNET

Approx. 6" long with ball shaped poles at each end.



MGM-09 SOLENOID

To show the effect of current flowing through a conducting material. It consists of a ferrous bar with copper winding on it and an iron strip. When current is flown through the wire, the bar becomes a magnet and the strip is attracted to it. As the intensity of current is increased through a potentiometer the force of attraction also increases, thereby showing that a stronger magnetic field is generated. The whole unit is mounted on a wooden box with terminals.



MGH-11 DEFLECTION MAGNETOMETER

To compare the magnetic moments of given short magnet. It consist of a compass box mounted at the centre of a wooden base about one meter long. A wooden scale extending outwards from each side of compass box is fitted on board to observe the position of magnet.



MGH-08 FLOATING (RING) MAGNET

Five ring magnets provided with a non-magnetic stick and base to prove the principle of attraction and repulsion.



MGH-10 VIBRATION MAGNETOMETER

It consists of a wooden box having a front glass door and glass on back side. It has a glass tube fitted with simple torsion head to support a strip that can hold a magnet, by means of a thread. Complete with a bar magnet and a brass strip of same dimensions.

A	With aluminium fittings
B	With brass fittings



MGM-12 DEFLECTION MAGNETOMETER (METAL)

Same as above but provided with non-magnetic metallic frame instead of wooden base.

MAGNETISM

MGM-13 DEFLECTION COMPASS

Same as with permanent magnet.



MGM-15 DEFLECTION COMPASS (PLASTIC BODY)

Consists of a moulded case with aluminium dial graduated in 90° four times. The magnet with aluminium pointer is pivoted at the jewel so that it can move without any friction. Anti parallex mirror is provided to take accurate readings.



MGM-17 INDUCTION COIL WITH TRANSFORMER

25mm in cabinet polish wooden box.



MGM-14 INDUCTION COIL

In cabinet polish wooden box, coils are made from best quality enamelled copper wire and paraffin insulation is provided throughout. Fitted with metal contact with removable spark discharger. Complete with ON/OFF switch of primary coil and two terminals. Coils up to 15mm spark length are workable on 4-6 volts and rest on 6-12 volts DC. The relevant data is printed on top of the wooden box.

A	B	C	D	E	F	G
10mm	15mm	20mm	25mm	50mm	75mm	100mm



MGM-16 SELF INDUCTION COIL

It consists of a thick wooden bobbin approx 9 inches dia, The bobbin is wound and two terminals are provided for a connections.



MGM-18 SELF & MUTUAL INDUCTION COIL

Consists of 3000 turns of 30 SWG copper wire wound on a pool which is mounted on a wooden base.



MGM-19 DIP CIRCLE SIMPLE FORM

Fitted in wooden frame having glass front & back. A circular scale graduated in degrees is attached to the pillar carrying a needle. Pointer is provided for reading the scale, metal base is provided with leveling screws, having aluminum parts.



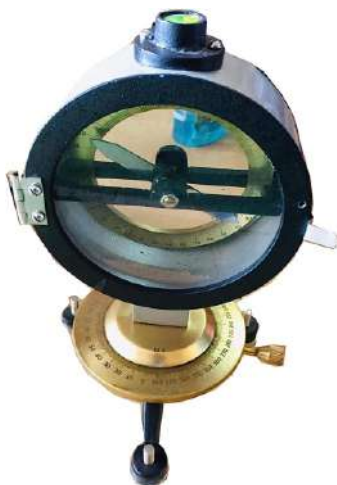
MGM-20 DIP CIRCLE STANDARD

Heavy and sturdy construction comprising an extra sensitive needle mounted on practically frictionless bearing and moving in vertical plane over an engine divided circular scale, enclosed in duco painted metal case, fitted with hardened steel pivot. Inclination scale is divided into 0-90°-0-90°xI°. Horizontal scale is divided into 0-360°xI°. The whole assembly is mounted on an aluminium base having levelling screws.



MGM-21 DIP CIRCLE DELUXE MODEL

With superior fittings and lifting arrangement to stop the needle movement when not in use with the help of a lever screw.



MGM-22 EARTH INDUCTOR IMPROVED FORM

Coil of insulated copper wire is wound on metal ring. A spring is arranged to turn the ring quickly through 180° when a catch is released. After having turned through 180° the coil is automatically fixed. Terminals for connection are fitted on the cradle. The cradle supporting the coil of non-magnetic alloy may be placed either on its base or side so that the axis of rotation of coil is either horizontal or vertical.

A	B	C	D
500 turns	1000 turns	2000 turns	5000 turns



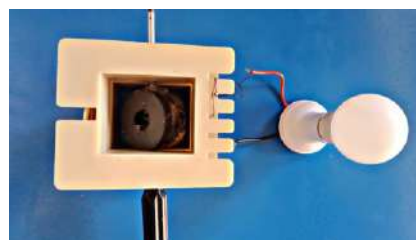
MGM-23 MAGNETIC FIELD APP.

The app. consists of solenoid having 3 coils of 5,10,15 turns of insulated copper wires on wooden base, provided with a magnetic compass



MGM-24 FARADAY'S LAW APP.

This apparatus explains the principle of electro-magnetic Induction, which says that magnetic field can produce electric current. The apparatus can work in three positions.



MGM-25 INDUCED CURRENT APP

It has a bulb in secondary coil and a make/break arrangement in primary coil to show the phenomenon of self and mutual induction.



MGM-26 ORESTED APP.

To show the effect on electric current on a magnet. It consists of a magnetic needle mounted on a nonmagnetic pillar and surrounded by a rectangular frame of nonmagnetic metal wire. The two ends of wire have terminals for passing current. Passage of current through wire causes needle to deflect.



MGM-27 ELECTRIC BELL

Demonstration type, all parts easily visible, mounted vertically on sunmica board, worked on 4-6 volt DC.



MGM-28 MAGNETIC COMPASS (ECONOMY MODEL)

Economic compass suitable for tracing the magnetic field of bar magnets, having 18 mm dia with glass on both sides and pointer of needle pointing towards north.



MGM-29 LIFTING MAGNET

Workable on 4-6 volt DC.



MGM-30 MARINER'S COMPASS (JIMBLE)

With floating dial all aluminium polished.



MGM-31 MAGNETIC COMPASS (DELUXE MODEL)

Highly magnetized needle in aluminium body with glass top. Dial shows cardinal points. North pole of the needle is colored red.

A	B	C	D
25MM	50MM	75MM	100MM



MGM-33 DIP NEEDLE

With graduated aluminium arc size 75mm, the needle is carefully balanced on steel pivot.



MGM-32 MAGNETIC NEEDLE

Highly magnetized with brass center and low friction.

A	B
3"	4"



MGM-34 MAGNETIC NEEDLE STAND

Consists of a base and a pillar. The pillar carries a pin on which magnetic needle is suspended. Made from nonmagnetic material.

A	Plastic
B	Metal



VACUUM TUBES



VDM-01 GEISSLER TUBE

Set of six tubes of different shapes, tubes show different discharge phenomenon, illumination, pattern because of different degree of vacuum inside the tube, provide with permanent cemented cap for electrical connection with induction coil.

- a) Provided in card box.
- b) Provided in velvet lined case.
- c) Provided in well polished wooden showcase with rotary switch for easy connection to each tube.



VDM-03 SPECTRUM TUBES

Straight form with a piece of fine capillary in the middle to provide bright spectrum, total length 20cms filled with spectroscopically pure sample of gases. It is suggested that spectrum tubes be used in 30sec. "ON" cycle in order to increase life of the tube.



VDM-05 CATHODE RAY TUBE

Horizontal tube fitted with fluorescent painted aluminum plate, the cathode side of plate bent at right angle and provided with a slit, cathode rays passing through the slit cast a sharp and bright image, when magnet is brought near the cathode rays deflect violently.



VDM-07 X- RAY TUBE

Constructed for educational purpose, it comprises a glass sphere with a concave disc electrode and a tungsten target, tube should be used intermittently.



VDM-02 POWER SUPPLY FOR SPECTRUM TUBES

Easy to use and suitable for beginners. Operates on 220VAC 50 Hz. Tube is mounted from the front. Spring contacts are provided to ensure grip and minimize any transmission loss.

A	Krypton
B	Helium
C	Neon
D	Hydrogen



VDM-04 CRT DEMONSTRATION UNIT

Assembled in beautiful sheet metal box and provided with clamp to hold the tube, power supply consists of a on/off toggle switch, one potentiometer to adjust the voltage and two connectors for joining with the tube.



VDM-06 CROOK'S RADIOMETER SINGLE

A glass sphere having set of mica vanes placed on a vertical spindle, one side of the mica vanes is blackened and the other is bright, when placed in sun light or near any source of heat, the vanes rotate.



GEOGRAPHY MODELS

VDM-08 FOUR GLOBE ORREY APP. (SEASONS APP.)

A useful apparatus to study the cause of season, formation of day& night and oclipse etc. Four balls representing globes facilitate the comparative study of earth in different position. It has a disc having name of 12 months, 4 seasons and their cardinal points inscribed on it. The four balls around the sun represented by another ball. The assembly rotates upon a series of gears.



VDM-09 PHASES OF MOON

It consists of a circular disc on a pedestal stand. The disc carries eight smaller discs which indicate position of Full, Dark and Half Moon. The disc has Earth at its centre . The Moon revolves around the earth in such a way that its half side painted white always points in the same direction i.e. Sun.



VDM-10 DAY AND NIGHT APP.

It explains the motion of earth around Sun and its effects. It has a globe with an angle of inclination fitted on a base. An arc passing in a vertical plane around the globe is also attached to the base. The apparatus demonstrates the phenomenon of long and short days, early sunrise and late sunset in North latitude in summer.



VDM-11 SOLAR SYSTEM NINE PLANET

An instructive model to explain the solar system. The apparatus illustrates the size and color of planets. A bulb in the centre presents Sun. All the plants of solar system are made to rotate in same plane but different orbits. The position of 12 zodiac signs is shown on a printed base.



VDM-12 SOLAR SYSTEM NINE PLANET (MOTORIZED)

Workable on 220V AC 50Hz. The model shows planets in true color and size relationship. The whole assembly representing solar system rotates around a bulb i.e. Sun. Rotation of Earth around its axis along with Moon is specially shown. The approx.. distance of various planets from Sun are shown in a chart provided on the base.



VDM-13 MODEL OF SOLAR SYSTEM

In acrylic case.



VDM-14 SOLAR AND LUNAR ECLIPSE APP.

In this apparatus the Earth with its inclined axis revolves around Sun (represented by a candle) and the Moon revolves around the Earth. The eclipse can be easily explained with this simple apparatus.



VDM-16 MODEL OF STRUCTURE OF SUN

Made of fiber glass, placed on a wooden base, it shows the structure of sun along with different regions associated with sun and their re:



VDM-18 SOLAR WIND DYNAMO

This kit is to demonstrate the concept of conversion of solar energy to wind to electric energy. Keep the solar panel only in full sunlight and solar fan, dynamo in shaded area. Connect the wires to the solar panel, this energizes fan motor and couple this fan with dynamo motor (generator) thus air strikes the dynamo blade, it turns the coil of small generator to produces electricity by induced e.m.f. and lights up the LEDs and which indicates the current being produced by the generator.



VDM-15 MODEL EARTH'S LAYER

Made of fiber glass. It shows world atlas on the outer surface and the various layers inside the earth. Different colors are used to show the various layers.



VDM-17 MODEL ROCKET TO MOON

It consists of a world globe at the base and w a small ball representing the moon at the top and a rocket with three stages in the middle.



VDM-19 SOLAR BATTERY ELIMINATOR

A safe, simple, useful and economical source of power supply which runs on sunlight and gives 2, 4, 6, 8, 10, 12, volts at 100ma. It consists of a plate which has solar panel on the front side and tapings to draw output and a stand on the rear side. it is very useful for students doing outdoor activity.



NON-CONVENTIONAL OF ENERGY

VDM-20 SOLAR BULB

This working model is in two parts box, one part with solar cell and other with bulb (LED). The part with solar cell is placed in sunlight and the bulb glows, showing conversion of solar energy into electrical energy.



VDM-22 SOLAR PUMP

This kit is to demonstrate that solar irrigation could become economical and increased use of such system might be anticipated in future. A mini water pump is powered by solar energy, (solar panel included) allowing to run your pump all day long with no operating costs (no battery required). The kit comes complete with two heads for water displacement up to 2-3ft high. The panels are adjustable to receive maximum sunlight.



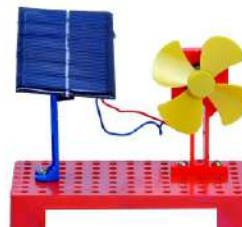
VDM-24 WIND MILL

It consists of two part wooden box. To make it work, first remove the lid from the bottom of the fan and then expose it to a little bit fast wind. (May be exposed to a fan in class room). The air strikes the generator blade which starts rotating and electricity is produced which is indicated by a bulb and meter. Thus conversion of wind energy into electrical energy is demonstrated.



VDM-21 SOLAR FAN

A plate carries solar panel and a fan. When the unit is placed in sun-light, the fan starts rotating. The solar energy gets converted into electrical energy which in turn energizes the fan. Thus conversion of solar energy into electrical energy and then mechanical energy is demonstrated.



VDM-23 SOLAR WATER HEATER

The app. Consists of two parts
Iron Metal Stand with Reservoir: the reservoir consists of cold water inlet, hot water outlet, air vent and two pipes for connection to water heater panel.
Solar Panel : this consists of thin wafers of blackened copper which absorb heat and transfer the same to water flowing through pipes beneath the copper plates. The panel is fitted with a hook to fix at an appropriate angle provided with thermometer and funnel.



VDM-25 SOLAR ENERGY KIT

This kit is to demonstrate the effect of solar energy and its ability to be converted into different form of energy like storage of energy, electrical energy, light energy, sound and electro mechanical energy. All the gadgets provided can be operated with charged battery as well as directly with the solar panel also. Solar Kit is provided with two Ni-Cd cells with holder, solar panel with lead, a motor fan, music chip, an LED and small voltmeter, all are fitted on base enclosed in wooden case.



VDM-26 BIO GAS PLANT

It consists of a digester tank, gas holding cylinder, feed inlet funnel, over flow pipe and a burner, the whole assembly is mounted on a wooden base, provided two rods and a metal strip.



VDM-27 SOLAR COOKER WOODEN

It consists of a wooden box of 12x12", having a hinged lid to clamp the lid in desired position. The lower part of box is blackened and has a glass lid. Two black vessels are placed inside the blackened lower part. The inside of the top lid is fitted with a mirror to enhance the heating effect of sun rays.



VDM-28 MODEL OF SPACE SHUTTLE

A demonstration model to explain the events taking place during the launch of a space shuttle. Various rockets and boosters are shown to explain the firing stages of the journey. Enclosed in a transparent acrylic cover.



VDM-29 MODEL OF SATELLITE

The model shows the transfer of data from transmitter to receiver with the help of a satellite.



VDM-30 MODEL OF DOMESTIC POWER SUPPLY

A complete demonstrative unit schematic that diagram that demonstrates how connections/wiring is made in our houses. The unit is operating on low voltage DC. All the components fuse, indicator, on/off switches, fan, bell, lamp and two DC moving coil meters are fitted on Bakelite sheet. A knife switch is provided to changeover the DC voltage/battery voltage.



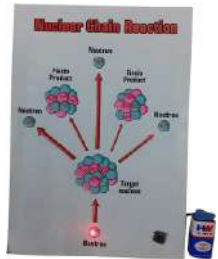
VDM-31 MODEL NUCLEAR REACTOR

A very useful model to explain the production of nuclear energy, assembled in a transparent acrylic box and all crucial parts visible and provided with key card. Once the nuclear material Uranium 235 is activated, the energy released in the process is used to heat water and produce steam and that runs the turbines of the generators to produce electricity.



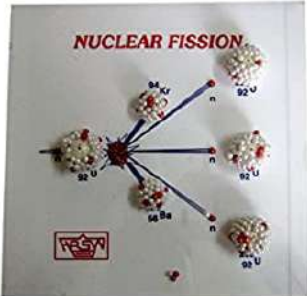
VDM-32 MODEL NUCLEAR CHAIN REACTION

An interesting model to explain the reaction involved in nuclear blast and release of energy, housed in transparent acrylic box and provided with key card. The model shows that fission process of uranium 235 results in release of three new neutrons and these free neutrons initiate more fission and each new neutron releases three more free neutrons and the chain process continues.



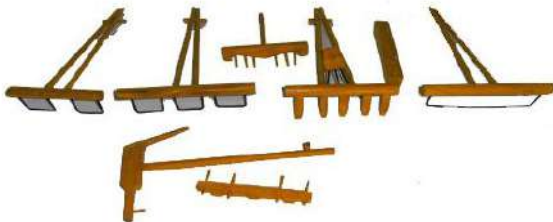
VDM-33 MODEL NUCLEAR FISSION

A smaller version of nuclear chain reaction model in which fission of a single atom and release of three free neutrons is shown. Housed in transparent acrylic case.



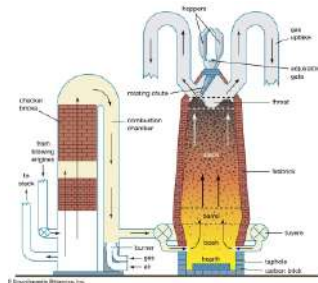
VDM-34 MODEL OF AGRICULTURAL EQUIPMENT

Set of 8 wooden models commonly used in agriculture. The equipments clearly explain the different functions performed by them.



VDM-35 MODEL BLAST FURNACE

An open model to show how a mixture of iron ore, lime stone and coke powder in introduced in blast furnace through cup and cone arrangement. The inside temperature of the furnace is lowest at the top and highest at the bottom. The molten iron slag floats on the surface. Housed in transparent acrylic box and all important details are shown.



VDM-36 MODEL TRAFFIC LIGHTS

A demonstration model to show how traffic is controlled at crossing. Red light indicates 'STOP' yellow light indicates 'WATCH' and Green light indicates 'GO'.



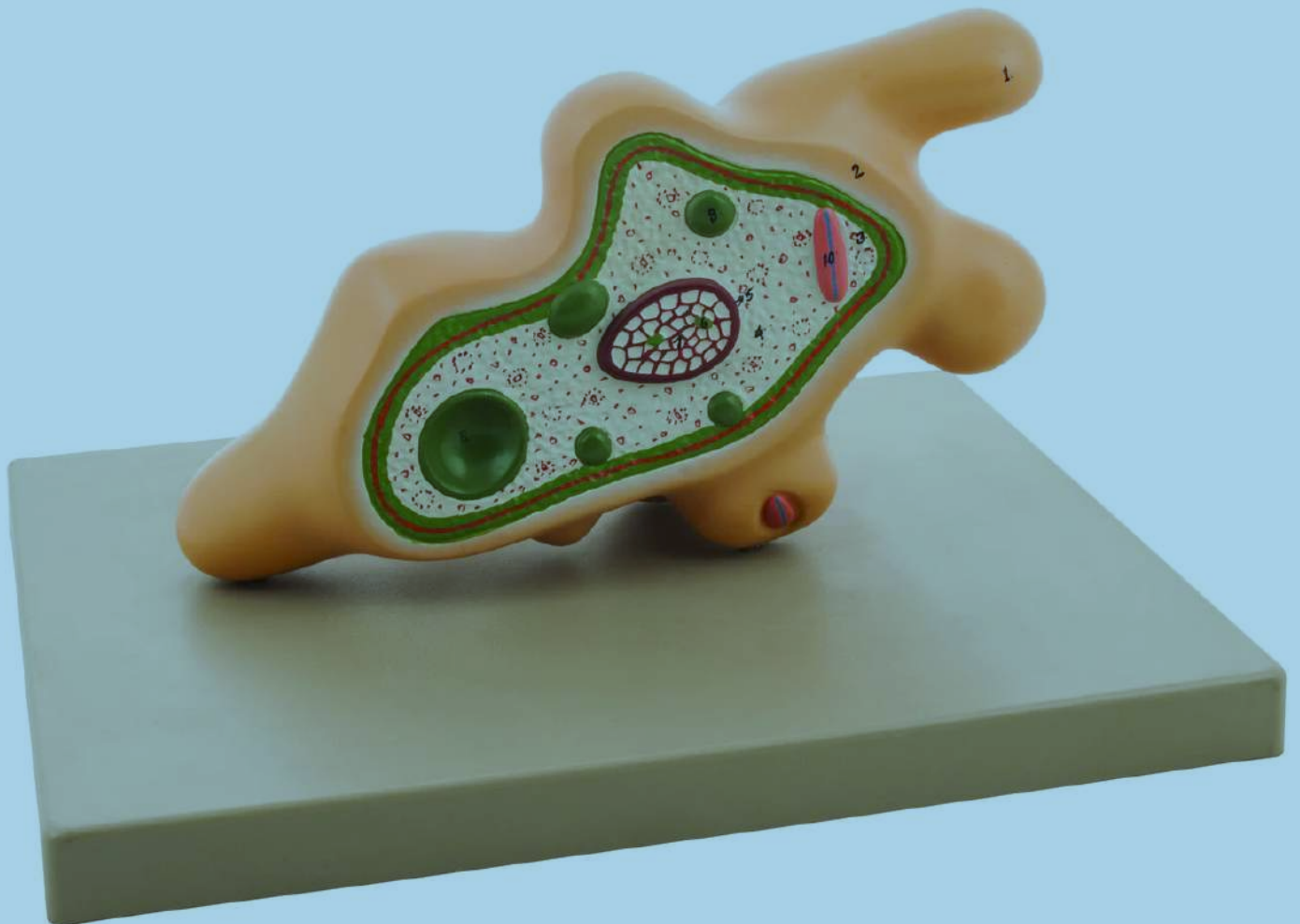
VDM-37 MODEL OF THERMOSTAT

To show how contact is made or broken by heating a metal strip. When the metal strip is heated it expands to complete the circuit and the LED glows. When the metal strip is allowed to cool, the contact breaks and the LED goes off.



biology

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AUDIO VISUAL AIDS

BAV-01 SLIDE PROJECTOR (CEILING MOUNTED)

Aluminum mounded compact body fitted with heavy transformer, 24 volt 150 watt halogen lamp, on/off switch, blower cooled with 2"x2" slide carrier focus tube, packed in sturdy case for storage and safety in transportation.



BAV-02 SLIDE PROJECTOR (VERTICAL PATTERN)

Vertical Pattern. Detail as per 1685. Packed in thermo scope and outer sturdy corrugated case for storage and safety in transportation.



BAV-03 SLIDE PROJECTOR

A sturdy and elegant slide projector for long life, molded ABS body, whisper quite blower cooled air circulation, 24 v-150w halogen lamp for bright and clear images, supplied with 2x2" slide carrier. Packed with 2x2" slide carrier. Packed in thermo scope and outer strong corrugated case.



BAV-04 CEILING MOUNT KIT

For use with LCD projector. The mount is tube type and fixed onto the roof of the room and the holding arm is lowered. The length of lowering can be adjusted and the position is fixed. The projector is safely placed on two brackets and secured by screws. The angle adjustment of the projector is provided at the head of the mount. The unit is all metallic and saves a lot of space. Sizes available

A	B	C	D
1'1"	1.5'x1.5'	2'2"	2.5'x2.5"



BAV-05 LCR PROJECTOR

A versatile audio visual tool. Operates on 100-240 V, 50-60 Hz, 3amp. 3D color Management wall color correction closed captioning Presentation Timer Quick auto search Panel key Lock.



BAV-06 PROJECTOR LIFT

A sturdy and elegant lift specially designed to carry the weight of projector and error functioning year after year. The lift is mounted onto the roof and can be lowered up to a distance of one meter. The movement is RF wireless remote controlled and soundless. Operates on 230-240V.





AUDIO VISUAL AIDS

BAV-07 OVER HEAD PROJECTOR

A modern, compact, light weight and sturdy model with clear aperture 240x240mm, provided with 24 volt 250 watt halogen lamp with heavy transformer, focusing by rack & pinion, cooling fan, folding projection arm, rotating projection head 360°, high class optics, superior Fresnel lens, efficient light intensity dim/bright switch, packed in thermocole case with card box. Quick lamp – changer in twin lamp model.



BAV-08 OVER HEAD PROJECTOR DELUXE MODEL

Trouble free performance, economically priced. Working stage 285x285 mm Folding arm and head for easy storage Anti glare Fresnel lens External color fringe control Twin halogen lamp 24V-250 Watt Tilt angle 0-60° head rotation 360° Safety cut off switch Approx. 2500 output lumens. Packed in thermocole, Supplied in outer sturdy corrugated box for safe transportation.



BAV-09 OVER HEAD PROJECTOR (EXPORT PATTERN)

Latest model of overhead projector, Versatile, efficient and cost effective. Light weight ABS body (weight approx 5.5 kg) with cooling fan device. Equipped with 24 V 250 W twin halogen lamp change system and low - high intensity control. Standard Fresnel lens of 250 x250 mm, single element lens, Revolving head to get projection on any of the four directions. Folding arm and handle for convenience of carrying. Power supply through heavy transformer. Provided with 3.5 meter long cord and fuse in fuse chamber. Gives approx. 2800 lumens at a distance of 1 meter. Packed in thermocole and outer corrugated case for safety during transportation. Size : 48x35x43 cm approx.



BAV-10 PROJECTION SCREEN (WITH AUTOMATIC SPRING)

Wall mounting type Automatic spring action. It can roll automatically with the help of spring.

A	90x120cm
B	130x175cm



BAV-11 PROJECTION SCREEN (MAP TYPE)

Simple, map type made of snow white synthetic cloth rolled on two fixed metal tubes.

A	90x120cm
B	130x175cm



BAV-12 PROJECTION SCREEN

150cm x150 cm Portable , Spring action type, Ideal for classroom and conference room.

Superior image resolution and accurate color reproduction, high grain color with a Contrasting border.

A	Wall type
B	With Metal Case
C	With Stand



AUDIO VISUAL AIDS



BAV-13 HALOGEN LAMP (150 Watts)

24volt 150watt



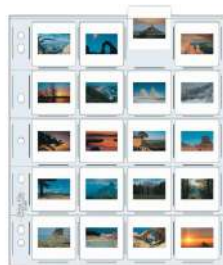
BAV-14 HALOGEN LAMP (250 Watts)

24volts 250watt



BAV-15 PROJECTION SLIDES

35MM coloured 2"x 2" mounted in file



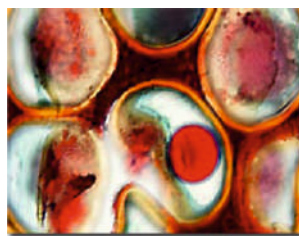
BAV-16 OVERHEAD TRANSPARENCY

In natural color mounted in duplex sheet



BAV-17 PROCESS COLORED

Overhead projector transparency



BAV-18 SLIDSCOPE

For viewing slides in available light



BAV-19 OVER HEAD TRANSPARENCY BLANK

A	Small 12"x 17"
B	Medium 14 1/2"x 19"
C	Big 18"x 24"



BAV-20 LAMINATED PORTRAIT OF SCIENTISTS





MICROSCOPY

BLM-01 DISSECTING MICROSCOPE (IN STYROFOAM PACKING)

C.I. base with closed glass stage having clips to hold specimen. Plano concave reflector and detachable hand rests, Bakelite fitting with two eye piece 10x 20x in thermocole box



BLM-02 DISSECTING MICROSCOPE (IN WOODEN PACKING)

(MVTEX) with round cast iron heavy base, sensitive focusing by rack & pinion with all brass parts arms, pipe, knobs with two eye piece 10x 20x packed in thick plywood box.



BLM-03 PENTEX MICROSCOPE

Easy to use maintenance free simple microscope having monocular body one 10x objective and one 10x eye piece, small reflector



BLM-04 SINGLE NOSE MICROSCOPE

It has a cast iron base and in undeniable body. Coarse motion is through rack & pinion. Supplied with 10x objective and 10x eye piece. Stage is fitted with iris diaphragm underneath and stage clip on it. Packed in thermocole box.



BLM-05 STUDENT MICROSCOPE

(MVTEX) It has a U- shaped heavy C.I. base with 90° inclinable body. Stage is 110x 110mm with stage clips Separate knobs for course and fine motion are provided on the body. Revolving triple nose piece carries the objectives. Illumination is by plane-concave reflector. A bright field condenser is fixed to the stage.

Objectives 10x & 45x Eye piece 10x & 15x, maximum magnification 675x. Objectives are achromatic and par-focal. Packed with instruction manual and vinyl cover in shock proof thermocole box and outer thick wooden box.



BLM-06 STUDENTS MICROSCOPE (ECONOMY MODEL)

Main specifications similar but the body is light weight and objectives are not par-focal comes in wooden box.



BLM-07 JUNIOR MEDICAL MICROSCOPE

(MVTEX) It has a U-shaped heavy C.I. base with 90° inclinable body. Stage is 110x 110mm with stage clips Separate knobs for course and fine motion are provided on the body. Revolving triple nose piece carries the objectives. Illumination is by plane-concave reflector. A bright field abbe condenser with diaphragm can be moved up and down through a knob provided on the lower left side of the body.

Objectives 10x & 45x Eye piece 10x & 15x, maximum magnification 675x. Objectives are achromatic and par-focal. Packed with instruction manual and vinyl cover in shock proof thermocole box and outer thick wooden box.



BLM-08 JUNIOR MEDICAL MICROSCOPE (ECONOMY MODEL)

Main specifications similar but the body is light weight and objectives are not par-focal comes in wooden box.



BLM-09 MEDICAL MICROSCOPE

(MVTEX) A microscope suitable for observation of cells and microorganisms. It has a U-shaped heavy C.I. base with 90° inclinable body. Stage is 110x110 mm with stage clips. Separate knobs for course and fine motion are provided on the body. The slow motion is drum type. A detachable mechanical stage can be fitted on the stage allowing precise forward/backward and left/right movement of the slide to find exact area of slide. Revolving triple nose piece carries the objectives. Illumination is by plane-concave reflector. A bright field abbe condenser with diaphragm and filter holder can be moved up and down through a knob provided on the lower left side of the body.

Optical Combination

Eye Piece 5x and 10x (Huygenian)

Objectives 10x45x(SL) (par-focal). (Oil immersion)

Packed with instruction manual and vinyl cover in shock proof thermocole box and outer thick wooden box.



BLM-10 BINOCULAR RESEARCH MICROSCOPE

This microscope offers viewing delight to the user. It is so designed that there is no eye strain and no back ache while working for longer durations. It consists of a heavy aluminum base with electrical fittings inside and an inclined metal stand. Large stage fitted with co-axial mechanical stage for easy manipulation of slide. 45° inclined binocular head is attached to the stand by means of a clamping screws. Binocular head has adjustable inter papillary distance adjustment and diopter adjustment on the left tube. Ball bearing type quadruple nose piece is provided for precise movement of objectives. Illumination is by 6 V- 20 W halogen lamp with on/off switch and intercity control knob. Abbe type condenser having glass of 1.25 Numerical Aperture with iris diaphragm and swing out filter holder is provided.



BLM-11 INCLINED MEDICAL MICROSCOPE

Ideal for precision work in secondary science and college labs. Robust metal construction having a revolving quadruple nose piece to carry four objectives, Fully rotatable 45° inclined tube illumination by 6 V-20 W halogen lamp with solid state control, The large stage is fitted with a co-axial mechanical stage for easy manipulation of slide, abbe Type moving condenser with diaphragm and swing out filter holder is provided below the stage. Optical combination. Eye Piece 5x, 10 x (Huygenian) Objective 5x, 10x, 40x, (Spring loaded), 100 x (spring Loaded, par-focal, Oil Immersion). Packed in shock proof thermocole box and outer thick wooden box with instruction manual and vinyl cover.



BLM-12 COAXIAL BINOCULAR MICROSCOPE

most modern, equipped with co-axial focusing system based on four stage gear reduction, travelling on ball bearing guides, locking device in coarse motion, coaxial mechanical stage, illumination by 6 V/20W halogen lamp, binocular head fitted with superior hard coated strain free prisms. Optical Combinations Eye piece 5x paired Huygenian, 10 x paired Wide Field. Objectives 5x, 10x, 40x (Spring Loaded) 100x (Spring Loaded, Par focal, Oil Immersion) Packed in shock proof thermocole box and outer thick wooden box with instruction manual and vinyl cover.



BLM-13 CO-AXIAL TRINOCULAR MICROSCOPE

Most modern, equipped with co-axial focusing system based on four stage gear reduction, travelling on ball bearing guides, locking devices in coarse motion, coaxial mechanical stage, illumination by 6V-20 W halogen lamp with trinocular observation head for Micro-Photography & C.C.T.V. Facility. Optical Combination : Eye piece 5x paired (Hug.) 10x paired wide field. Objectives 5x 10x 40x (SL) 100 x Oil Immersion (SL) (Self Parfocalised)



BLM-14 DIGITAL EYE PIECE

This is a small, light weight, 2 mega pixel, USB 2.0 interface camera for light microscopes.

This is equipped with high quality ½ inch sensor. The software opens camera with a simple click.

Advance controls white balancing, frame rate, brightness, contrast hue and saturation etc. are automatically adjusted. It also provides real time full screen display.



BLM-16 BINOCULAR METALLURGICAL MICROSCOPE

(Upright Model) – For use in material science, inspection of printed circuit boards, semiconductor products etc. This Microscope products door, sharp and bright image of metal specimen as well as other samples. A set of different achromatic par focal objectives having anti reflection coating and flat field are supplied with the microscope.

The microscope has a die cast arm and a large, heavy, stable base. The base accommodates transformer and electrical fittings. Binocular head is inclined at 45° and rotatable through 360°. It can be fixed in any position and has diopter adjustment and inter – papillary distance adjustment. Quadruple revolving nose piece with positive click stop is provided with ribbed grip for easy rotation. Mechanical stage is 135mmx140mm. X & Y movement is controlled by low co-axial drive controls. Low mounted coarse focus control knob can be adjusted through a tightening ring.

Standard optical combination includes

M4x, M10x, M40x. Wide field eyepiece 10x and 16x. Max. Magnification 640x.

BLM-15 PHASE CONTRAST EQUIPMENT

This equipment is useful for viewing detailed structure of unstained or living organisms.

This is due to the unique ability of phase contrast to convert small difference in thickness and refractive index of the specimen into difference in brightness. The assembly consists of phase turret condenser having glass of Numerical Aperture 1.25 with iris diaphragm, Phase achromatic objectives 10x, 20x, 40x and 100x (oil immersion) having 45 mm par focal distance, Phase centering telescopic eye piece, green filter and turret condenser key.



BLM-17 TOOLMAKER'S MICROSCOPE

This is a universal measuring instrument which is a must for tool room and testing department.

Technical Specifications:

Eyepieces – Wide field 10x with cross, H10 x with micrometer, H15 x with cross.

Objectives – 1x, 3x, 5x

Field of view – 10mm, 3.5mm, 2mm

Working Distance – 75mm, 35mm, 15mm

Magnification – 10x, 15x, 30x, 45x, 50x, 75x

Measuring stage: 125mmx125mm with interchangeable intermediate table to receive different optional accessories.

Equipped with micrometer head 0-25mm having least count 0.01mm. Life long smooth movement is assured by and transverse slides. Rotary measuring stage dia. 130mm is mounted on the table with 55mm glass aperture, circular graduated scale is divided into 360° with 5 minute vernier reading on both sides.

Surface incident illuminator for shadow free lighting for high power examination of opaque objects.

The Microscope is supplied in wooden storage cabinet with micrometer slide and dust cover.

BLM-18 STEREOSCOPIC BINOCULAR MICROSCOPE

Economical and convenient stereo Microscope.
 Straight Binocular Head with adjustable inter-papillary distance.
 Pole type stand allows easy repositioning of the head to accommodate specimen of different height – Focusing by rack & pinion.
 Objective : Fixed 2x or 3x or 4x
 Eyepieces :10x or 15x (paired).
 Packed in plywood box.



BLM-19 STEREO BINOCULAR MICROSCOPE

With Single Illumination Specifications same as 1746 except that it is supplied with base illumination system. The base carries a 6 V /20 W lamp workable through a transformer also fitted in the base. The artificial light ensures that specimen is viewed in best available light. Sliding objectives 2x&4x or 3x &5x, Eye piece wide Field 10X paired



BLM-20 ZOOM STEREOSCOPIC BINOCULAR MICROSCOPE

Zoom Stereo microscope can magnify micro objects continuously and show clear stereo picture. It can be used for observation studies in medical, health, gemology etc. It can also be used for inspection, assembly and repair of tiny precision parts in electronics.
 Zoom ratio 1x to 5x (or 0.6 x to 4x), eye –piece SWF 10x, base with dual light, field of view 33 mm to 5.1mm,working distance 108mm(without auxiliary lens) side mounted zoom control knobs, diopter Adjustment + 5 diopter.
 Optional accessories :
 SWF 15 x or SWF 20 x eye –piece paired.
 2 X or 0.5 x Auxiliary Objectives.



BLM-21 ADVANCE STEREO BINOCULAR MICROSCOPE

Heavy all metal construction, inclined head, rotatable at 360°, round stage 75 mm dia, frosted glass insert, Focusing by rack & pinion, built - in illumination for incident (Epi) and sub stage (Transmitted) light.Both can be used individually or simultaneously. Both illumination control knobs provided on the base.
 Packed in plywood box.
 Eyepieces: 10x wide field paired.
 Objectives : 2X & 4X on quick changing turret.
 Magnification :20x to 40x (can be varied from 10x to 160x with spare 15x eye piece &auxiliary objective lens 0.5 x to 2.0x.)



BLM-22 PROJECTION MICROSCOPE 4"

with one objective and one eyepiece packed in box.



BLM-23 PROFILE PROJECTOR

Compact, light weight table top model.

250 mm diameter screen with 90° cross line and chart holders. Screen is graduated to 360° with vernier reading 6 minutes. Projection light source 24V/150W halogen lamp. Double opaque light source for Surface illumination. Two adjustable dichotic reflector lamps 12V/100W each. Focusing through a knob. Optical distortion below 0.15%. Standard magnification 10x. Cooling by built-in noiseless & vibration free fan.

Technical Specifications –

X-Y range – 35x35 mm

Effective Table Area – 110x110 mm

Measuring unit – Standard Micrometer head 0-25 mm

Least Count – 0.01 mm

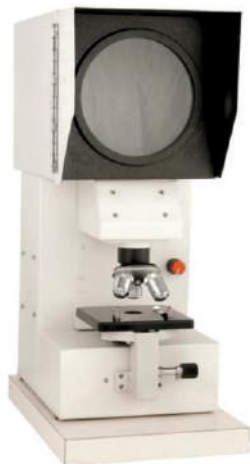
Rotary Measuring Stage Glass – 62 mm dia

Screen 360° graduated with vernier reading 6 minute.

Maximum Working Height – 100 mm

BLM-24 SENIOR PROJECTION MICROSCOPE

Compact, dust proof construction projection screen of 100mm Dia with provision of wall projection, 12V-100W halogen lamp, equipped with loop and arrow painter, supplied with mechanical stage and two objectives 10x, 40x, eyepiece 10x packed in a card board box.



BLM-25 HAND AND TABLE MICROTOME

With table clamping device and plano concave razor, feed adjustment in steps of microns.



BLM-26 ROCKING MICROTOME

(Cambridge Type) can cut sections of tissues upto 2-24 micron in steps of 2 microns. Suitable for basic level preparations Supplied with razor, oil can and dust cover.



BLM-27 ROTARY MICROTOME

(Erma, Japan Type) with three object holders, one razor 120mm and honing stone. Knife holder with lateral movement permits use of complete knife edge. Feed adjustment 1-25 microns in steps of one micron. Complete with 3 black holders, 1 honing stone, lubrication oil and dust cover and wooden box.



BLM-28 SENIOR ROTARY MICROTOME

(Spencer 820 Type) latest model, with one knife 120mm and honing stone . Knife holder with lateral movement permits use of complete knife edge. Feed range 150 micron in steps of one micron with automatic feed release device. Independent feed mechanism with auto safety device and vice type object holder adds versatility to this instrument. The interior mechanism rests on a heavy cast iron base and is covered with a full swing protective cover for easier cleaning and lubrication. Complete in box with three object holder, 120mm razor, oil can, honing stone and raxine cover.



BLM-29 AUTOMATIC KNIFE SHARPNER

(Spencer Type) complete with razor and accessories in wooden box.



BLM-30 EYE PIECE HUYGENIAN

10x or 15x – made up with a combination of two plano convex lens with convexity facing toward object.



BLM-31 EYE PIECE HUYGENIAN

5x same as



BLM-33 OIL IMMERSION 100X

Spring loaded to be used with oil (cedar wood oil), provided with ring on the body for par focal adjustment.



BLM-35 SUB STAGE CONDENSER WITH DIAPHRAGM

For use in almost all microscopes. It is two lens Abbe condenser N.A.1.25 with diaphragm and swing out filter holder.



BLM-37 POINTER EYE PIECE

A huygenian eye piece provided with an accurately centered fine pointer 10x or 15x in velvet case
Pointer Eye Piece 5x in velvet case.



BLM-32 WIDE FIELD EYE PIECE

10x – suitable for all type of microscope, these eyepieces give a large field of view. Design of consists of an achromatic doublet and one plano convex lens with convexity facing the objective.



BLM-34 ACHROMATIC OBJECTIVES

For use with students, junior and medical microscopes. Designed on JIS standard, the high power objective has a ring on the body which help in increasing or decreasing the length of the objective thus helping in par focalizing

A	B	C
5x	10x	45x



BLM-36 MECHANICAL STAGE

Detachable, graduated, horizontal movement 70mm, vertical movement 30mm. Both scales read by a vernier. Can be clamped onto the stage with screws



BLM-38 MICROSCOPE LAMP

Pin type sub stage lamp, having a plastic ventilated body with a blue filter on one side and plain ground glass filter on the opposite side. Fitted with 15W lamp and works on 220V AC. On/off switch provided on the lead wire.





MICROSCOPY

BLM-39 STAGE CLIP

Meant to grip the slide under observation.



BLM-41 CAMERA LUCIDA PRISM TYPE

In velvet box.



BLM-43 DOUBLE DEMONSTRATION EYE PIECE

Facilitates for two people to observe the same thing. A pointer is provided to pin point the exact location. Both horizontal and vertical eye piece have 10x magnification. Supplied in velvet case.



BLM-45 OCCULAR MICROMETER

Huygenian 10X eye piece fitted with ocular disc of 10 mm divided into 100 divisions



BLM-40 METALLIC ARC WITH REFLECTOR

50mm dia plano concave reflector mounted in a ring, Metallic arc holds the reflector



BLM-42 CAMERA LUCIDA MIRROR TYPE

It fits on any straight monocular tube. Useful in preparing accurate and neat drawings of microscopic materials.



BLM-44 STAGE MICROMETER

Calibrated glass slide with 1 mm scale length divided into 100 parts. Used for determination of objective magnification and measurement of samples



DISSECTION MATERIAL



BDI-01 PREPARED SLIDE

On Botany & Zoology, school standard.



BDI-03 PLAIN SLIDE

Size 75x25mm, thickness 1.3mm, packet of 50 slides.



BDI-05 COVER SLIP

Pack of 10 gms.

A	Square
B	Round



BDI-07 DISSECTING BOARD

Soft wood with lead

A	20x15cm
B	20x25cm



BDI-02 PREPARED SLIDES MITOSIS SET OF 5

Meiosis Set of 12 Prepared Slides



BDI-04 CAVITY SLIDE

A	One Cavity
B	Two Cavity
C	Three Cavity



BDI-06 DISSECTING TRAY

Heavy, G.I. sheet without wax.

A	12"x10"
B	15"x12"



BDI-08 DISSECTING BOX

Stainless steel in velvet box.

A	13 Instruments
B	17 Instruments



DISSECTION MATERIAL

BDI-09 INSECT NET BRASS

Ring 12" dia with metal handle.



BDI-10 DISSECTING NEEDLE

Plastic handle.



BDI-11 FORCEPS

Stainless steel, superior heavy (pointed)

A	B	C
4"	5"	6"



BDI-12 BONE CUTTER

Stainless steel.

A	B
5"	6"



BDI-13 SCISSORS

With plastic handle.

A	B	C
4"	5"	6"



BLM-14 SCISSORS S.S HEAVY

A	B	C
4"	5"	6"



BDI-15 SCALPEL



BDI-16 CRUCIBLE TONGS S.S

A	B	C	D	E
6"	8"	10"	12"	18"



DISSECTION MATERIAL



BDI-17 SURGICAL GLOVES LATEX



BDI-18 APRON COTTON CLOTH



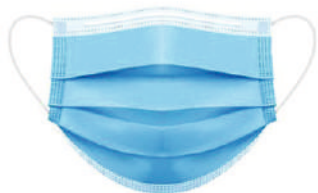
BDI-19 MASK CLOTH



BDI-20 POLLUTION MASK



BDI-21 DISPOSABLE MASK



BDI-22 DISPOSABLE CAP



BDI-23 LABORATORY COAT



BDI-24 SAFETY GOGGLES



DISSECTION MATERIAL

BDI-25 STAINING RACK

Wooden 6 hole.

A	30ml Bottle
B	60ml Bottle
C	125ml Bottle



BDI-26 INSECT BOX

With cork sheet (12"x15")



BDI-27 SLIDE BOX WOODEN

With Aliminum Grooves

A	25 Slides
B	50 Slides
C	100 Slides



BDI-28 SLIDE BOX PLASTIC

A	25 Slides
B	50 Slides
C	100 Slides



BDI-29 SLIDE CABINET

Each drawer to hold 100 slides drawer fitted with index card pulling knob and slider over metal rails with aluminum grooves.

A	500 Slides
B	1000 Slides



BDI-30 SLIDE TRAY

Aluminum cap. 20 slide.



FIBRE GLASS MODEL



BGA-01 HUMAN EYE MODEL

3 times dissectible into 7 parts.



BGA-02 HUMAN EYE WITH ORBIT MODEL



BGA-03 HUMAN EAR MODEL

Dissectible with three parts.



BGA-04 HUMAN BRAIN MODEL

A	Two parts
B	four parts

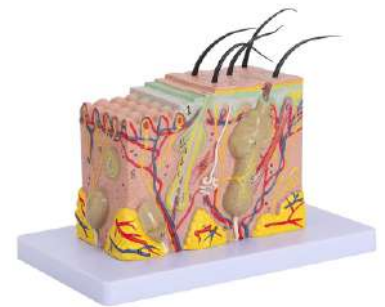


BGA-05 HUMAN HEART MODEL

A	Two parts
B	four parts



BGA-06 HUMAN SKIN MODEL



BGA-07 HUMAN KIDNEY WITH BLADDER MODEL



BGA-08 HUMAN HEAD & NECK MODEL



BGA-09 HUMAN TOOTH MODEL



FIBRE GLASS MODEL

BGA-10 HUMAN TEETH WITH JAW MODEL



BGA-11 HUMAN LUNGS MODEL



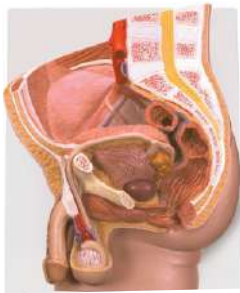
BGA-12 HUMAN LUNGS WITH HEART MODEL



BGA-13 HUMAN LARYNX MODEL



BGA-14 HUMAN REPRODUCTIVE SYSTEM MALE MODEL



BGA-15 HUMAN REPRODUCTIVE SYSTEM FEMALE MODEL



BGA-16 HUMAN CIRCULATORY SYSTEM MODEL



BGA-17 HUMAN NERVOUS SYSTEM MODEL



FIBRE GLASS MODEL



BGA-18 HUMAN RESPIRATORY SYSTEM MODEL



BGA-19 HUMAN DIGESTIVE SYSTEM MODEL



BGA-20 HUMAN BRAIN WITH SKULL MODEL



BGA-21 HUMAN PELVIS WITH BABY MODEL

Showing placement of child's head in vertical section of abdomen with pregnant uterus in the 9th month. Child can be taken out in order to show the exact position with its blood vessels, mounted on base.



BGA-22 HUMAN PERIOD OF GESTATION MODEL

A set of nine models, mounted on stand.



BGA-23 HUMAN TORSO DISSOCIABLE HEAD

Small on base, size 30".



BGA-24 HUMAN TORSO BIG

Sexless, dissectible into nine parts on wooden base.



BGA-25 HUMAN SKELETON MODEL BIG

Full size made from fiber glass & plastic, circulated.





FIBRE GLASS MODEL

BGA-26 HUMAN SKELETON PLASTIC

Made of plastic, size 30", packed in card box.



BGA-27 HUMAN SKELETON MODEL

Articulated, size 16" on stand packed in card box.



BGA-28 HUMAN SKELETON STAND

Superior heavy base, adjustable height.

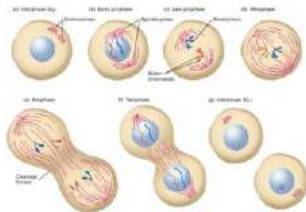


BGA-29 ANIMAL CELL



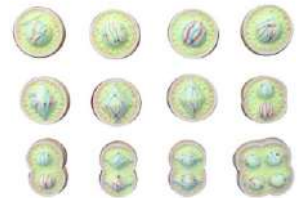
BGA-30 ANIMAL CELL DIVISION (MITOSIS)

Set of 10 mounted on board.



BGA-31 ANIMAL CELL DIVISION (MEIOSIS)

Set of 10 mounted on board.



BGA-32 MODEL DNA

Set of 4 models mounted on board.



BGA-33 DNA MODEL

On stand



FIBRE GLASS MODEL



BGA-34 MODEL RNA

Set of 3 models mounted on board.



BGA-35 RNA MODEL

ON STAND



BGA-36 MODEL AMOEBIA



BGA-37 MODEL OF PARAMECIUM



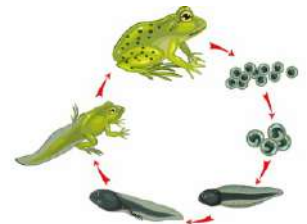
BGA-38 MODEL OF FROG

Dissection mounted on board.

A	Small Size
B	Big Size

BGA-39 FROG DEVELOPMENT

A set of 24 models showing the various stages of development of frog from egg to adult.



BGA-40 PLANT CELL



BGA-41 PLANT CELL DIVISION (MITOSIS)

Set of 12 models mounted on board.



BGA-42 TYPES OF BACTERIA

TYPES OF BACTERIA



BGA-43 MODEL OF SPIROGYRA



BGP-01 KYMOGRAPH

An instrument to record temporary variations in any physiological or muscular function. It essentially consists of a revolving drum bearing a sheet on which a stylus or pinpoint travels to and fro at right angle.

The electrically driven drum has 8 direct speed, it has S.S. spindle on ball-bearing movement, aluminum cylinder 6" dia, robust gear clutch. The cylinder is raised or lowered and is locked in position by a smaller lever.



BGP-03 SIMPLE LEVER BRASS



BGP-05 FRONTAL WRITING LEVER



BGP-07 MAYOGRAPH BOARD

6x4 board with cork top, clamp and fork.

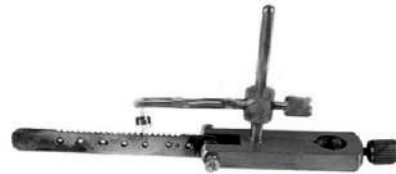


BGP-02 ACCESSORIES OF KYMOGRAPH

Set of seven accessories for conducting simple Muscle Twitch Experiment viz. Adjustable stand, My graph, Induction coil, simple Electrode Tuning Fork N-100, Weight Set, Power Supply, Glazed Paper Sheet.



BGP-04 STARLING HEART LEVER



BGP-06 AERATION TUBE



BGP-08 ORGAN BATH (SINGLE UNIT)

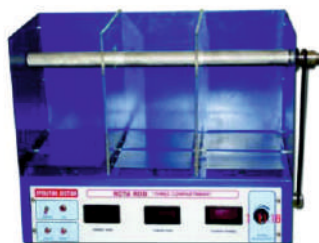
Make of transparent acrylic sheet, chemically welded to make it perfectly leak-proof. Complete with uprights, organs & oxygen tubes, capillary tubing, frontal lever. Temperature by immersion heater controlled by a Thermostat. Chamber Size 7"x5"x5".



BGP-09 ROTA ROD ASSEMBLY

For determining neuron toxicity, muscle tone, balance and motor co-ordination in rats and mice. Available in two, three or six compartment mode. Each compartment is fitted with time interval recorder.

A	Two Compartment
B	Three Compartment
C	Six Compartment



BGP-10 SPIRO METER

6 ltr. Capacity, to be used as a gas meter with chain compensated counter balance to the float. Float is balanced through its movement on pulley. Pulley is calibrated to denote volume, cock is provided for draining of water. Complete with corrugated tube, mouth piece and recording lever.



BGP-11 TABLET MARKING MACHINE

Hand operated single punch for making tablets upto 1000mg or as per size of the die and punch. Automatic compression and ejection device with each revolution of the wheel drive. Built on heavy cast body with eccentric pressure system. Stainless steel hopper is provided and connected by PVC tube.



BGP-12 TABLET DISINTEGRATION TEST UNIT

Single basket, electrically operated, suitable for finding out disintegration time of different types of tablets. Supplied with six discs and a bracket to hold six tubes.



BGP-13 BOTTLE FILLING MACHINE

Semi-automatic electric operated. All parts made of brass or S.S. Capacity of bottle can be adjusted.



BGP-14 BOTTLE SEALING MACHINE

Hand operated.



BGP-15 TUBE FILING MACHINE COLLAPSIBLE

Stroke type, barrel and piston arrangement with stroke setting of various capacities 5-100 gm tube. Detachable nozzle provided for each separate capacity. All contact parts and hopper made of SS. Mounted on heavy cast iron base.



BGP-17 AMPOULE FILLING & SEALING MACHINE

Hand operated, positive displacement type with two nozzles, interchangeable for vial/ampoule



BGP-19 CAPSULE FILLING MACHINE

A versatile lever operated semi-automatic machine for various operations. All contact parts are made of S.S. capacity 25-50 capsules of size "0".



BGP-21 MIRROR DRAWING WITH DIGITAL TIMER & DIGITAL ERROR COUNTER



BGP-16 TUBE SEALING MACHINE

Hand lever sliding movements with touched jaws. Robust construction.



BGP-18 TABLET COATING PAN

The machine is worked by oil immersed gear box with ¼ H.P. motor. Air blower is operated independently and air is thermostatically controlled to give temperature from 30 to 110C. Switches for motor, blower heater and thermostat is fixed on a panel. Supplied with mains cord and plug



BGP-20 BALL MILL

Motor driven for mixing and grinding purpose. Geared motor revolves a stainless steel drum. The drum has a rubber gasket which forms a tight seal. The speed of rotation is controlled with a single switch. Complete with mains lead, plug and safety fuse capacity 1 kg.



BGP-22 TINCTURE PRESS

Extra heavy for making tinctures, decoctions and infusions etc. Stainless steel disc with adjustable screw and SS imperforated vessel. Single walled. Capacity 1 lit. diameter of vessel 3".



BGP-24 SUPPOSITORY MOULDS

Mode from brass. Machine made with perfect shape. Smooth and polished cavities, nickel plated.

A	4-Moulds set, Cap. 1gm/1.5gm
B	6-Moulds set, Cap. 1gm/1.5gm
C	12-Moulds set, Cap. 1gm/1.5gm



BGP-26 TABLET HARDNESS TESTER MONSANTO TYPE

An instrument for taking quick reading of hardness of tablets. Made of brass, it has a scale of 0-20 kg. per sq.cm. with each division marked for 1 kg. Scale is adjustable for zero as per size of tablet setting



BGP-23 FRIABILITY TEST APPARATUS

Single Drum. Used to determine the durability and abrasiveness of tablets from time of production to the time of use. The drums rotates at a speed of 30 RPM by a geared motor. The drum rotation is controlled by a timer.



BGP-25 TABLET HARDNESS TESTER PFIZER TYPE

To test tablet hardness accurately and conveniently. It is handy, portable and records directly on a dial indicator. Capacity 0-20 kg accuracy +/- 0.5 kg. Accepts tablets upto 25mm dia.



BGP-27 ACTOPHOTOMETER (ACTIVITY CAGE)

A versatile instrument having 6 photo-cells and digital counter to indicate horizontal activity. It provides electric shocks of up to 100v, 0.2mA AC, indicated on a voltmeter for activating the animals. The counter is resettable, complete in Perspex chamber, variable intensity 100V (max.) in steps is provided.



BGP-28 ANALGESIOMETER

Radiate Heat Type or Tail Flicker Type- This instrument is meant to study the analgesic effect of morphine by observing the flickering of tail due to heat. The instrument is equipped with variable current source and produces heat.

Eddy's Hot Plate Type- For determining analgesic effect of drug. The animal is placed on a hot plate maintained at a constant temperature and the paw licking or jump response is studied. Provided with digital temperature controller.



BGP-29 ELECTRO CONVULSOMETER

Used for anti-convulsion & epileptic drug experiments. Provides 50Hz A.C. stimulus for producing min. & max. seizures. One pair each of corneal electrodes 4,6,8mm cups with leads and one pair of ear clips are provided.



BGP-30 POLE CLIMBING APPARATUS

Outer chamber made of thick plywood sheet with an observation window and inner animal chamber is made of clear acrylic sheet, bottom of chamber is provided with chrome plated brass bars. A latest design with solid state circuitry for lumes and shocks have been incorporated. All controls are provided on the front-side panel. A shocks of 1-phase, 100V AC, 50Hz, 0.2 mA is built in and is controlled by 11 position knob. Output for connection to kymograph or recorder has been brought out on terminal. An animal dropping removal tray has been provided for keeping the equipment clean.



BGP-31 STIMULATORS

Students Stimulator-transistorized



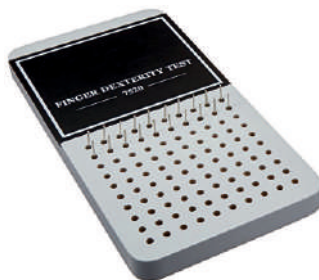
GPM-01 AESTHESIOMETER

This is simple instruments to check similar sensation at varying lengths. It is essentially a caliper, the jaws of which has two pointed extensions. When the caliper is closed and the extended jaws are touched firmly on forearm of a person who has been asked to close eyes, it gives feeling of a single point touch. Even when the jaws are slightly opened the feeling remains the same. Only at a significant distance does the subject realizes the touch as two point. That reading is noted.



GPM-03 FINGER DEXTERITY APPARATUS

For comparative study of right hand and left hand finger dexterity of a person. It consists of a wooden box containing 100 holes. There are pins kept separately to be placed in these holes. While keeping the apparatus on the right side of the subject, he/she is asked to insert pins in the holes with right hand. Time taken and errors committed are noted. Same procedure is repeated with left hand keeping the instrument to the left hand side of the subject.



GPM-05 PHI PHENOMENON APPARATUS

An instrument to determine optimal distance and time interval for occurrence of phi-phenomenon. It consists of a wooden box having arrangement of a pair of lights in shape of dots and arrows. The distance between on pair of light can be adjusted and recorded with the help of two knobs that slide over a scale. The flickering of the light can be varied with the help of an arrangement provided on front panel. There is a window at the rear to observe the lights. When a subject is made to observe two lights at a particular frequency. The distance is so varied that a particular distance the two lights appear a continuous light. The experiment is repeated at different frequencies and with different shape of light.



GPM-02 TWO HAND CO-ORDINATION APPARATUS

Electrically operated, provided with two handles.



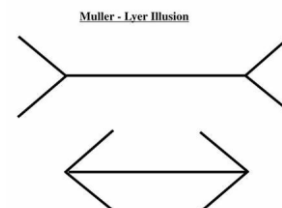
GPM-04 PERIMETER (WITH STAND)

Working model – It consists of a wooden board to which a circular disc graduated in degrees is fixed. The disc is fixed with a metallic pointer and a graduated metallic arc. The angular position of the metallic arc to the eye can be read with the help of a pointer on the graduated disc. In the middle of the disc is a point which is at the same level as the pupil of the eye. The arc in this rotation passes through all the radii along a spherical object corresponding to the surface of retina.



GPM-06 MULLER LAYER ILLUSIONS

To determine the extent of space error, movement error in perception of length of a line. The instrument consists of a stand with a wooden block. The wooden block on the front has a thick straight line with a fixed arrow and two movable arrow pointers of the same length. The arrows are made in such a way that they act as open ended or closed embedded arrows. On the rear side of the block a wooden scale is imbedded. A certain length of the line is fixed between two closed arrows and the subject is asked to adjust the length of the line equal to the fixed line with the help of pointer. The error in perception is measured with the help of scale at the rear.



GPM-07 MIRROR DRAWING APPARATUS

Electrical with Zero Reset- To demonstrate the phenomenon of trial and error in acquiring a new motor skill. It consists of a mirror drawing box, impulse counter and stylus. The wooden box has a metallic plate with a star pattern grooved in the middle. Over the metallic plate is hinged a screen and the inside of lid of the box carries a mirror. The box is connected to the mains and the error counter and the stylus operate through the mains.

The screen is placed in such a position that the subject is unable to see directly the star pattern but can see the image in the mirror. The subject is asked to move the stylus in between the grooved star in such a way that it does not touch the metallic parts, while looking at the image in mirror. Whenever the stylus touches the metallic parts, the circuit is closed and an error is counted along with a buzzer sound.



GPM-09 MAC DOUGALL DISC

A division of attention apparatus to show that if a job is done one at a time efficiency is more and if more than one jobs are performed simultaneously efficiency is reduced.

The apparatus has three vertical rods erected straight on a wooden base and there are black and white discs placed in the central rod. The individual is asked to put black discus in the left rod and white discus in the right rod with left hand. Time token is recorded. Now if the same individual is asked to repeat the same exercise with left hand and do some writing with the right hand, it is noticed that the efficiency is remarkably reduced.



GPM-08 TACHISTOSCOPE

(Fall Door Type) To evaluate span of visual attention. It consists of a wooden screen with a window in the centre, which is covered by a making falling shutter. The shutter can be closed or opened with the help of a lever at the back of screen at the top. The exposure time is usually 1/10 of a second. The instrument comes with a set of cards which has dots or words or numbers. The subject is exposed to the actual writing on the card for a short interval and the response of the subject is recorded.



GPM-10 WEIGHT DISCRIMINATION APP.

(Ascending Weight Apparatus)- If a blindfolded subject is given two similar shaped weights and asked to compare, he/she can differentiate better if the difference is more. However if the difference between the weights is gradually reduced at one point the subject fails to differentiate between two weights. It consists of a box with a no. of cylinders having different weights is ascending order.



GPM-11 MEMORY DRUM

Hand operated – The instrument consists of a rotating cylinder. over the drum is a metallic screen concealing the drum from outside. The middle of screen has a window opening with allows view of small portion of drum. A list of syllables is pasted on the rotating drum. When drum is rotated, the window allows a convenient vision of one syllable at a time.



GPM-12 CARD SORTING TRAY

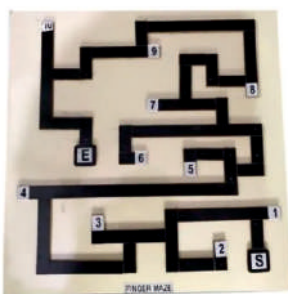
The apparatus demonstrates the phenomenon of Habit Interference with the underlying fact that time token to accomplish a practiced task is less than time taken to accomplish a new task. The apparatus consists of a tray with many numbered boxes and number indicating cards according to the number of boxes. Work to be done is to make the subject place the numbered cards in the same numbered box.

Different situations can be created like the number of the boxes is in serial order or the number of the boxes can be jumbled. or the subject is made to use right hand first and than left hand. Time taken in different situations is recorded.



GPM-13 FINGER MAZE

To study the natures well as progress in learning through maze. The apparatus consists of a wooden block and has grooved tracks. There are three tracks out of which only one leads to the aim. Time token in first attempt to reach the aim is more but once practiced, and if repeated again time taken to reach the target is much less.



GPM-14 HUMAN MAZE ELECTRICAL

This is an improved form of maze learning in which error committed can be objectively known. The apparatus has a wooden box. The top of the box has rows and columns of nail heads fixed. The Nails are connected to a stylus, a speaker and a bulb. The subject is asked to trace the right path white moving the stylus through the nail heads. If going a wrong path the bulb will glow and a beep will be heard.



GPM-15 HUMAN MAZE WITH DIGITAL TIMER & DIGITAL ERROR COUNTER



PLANT PHYSIOLOGY

PPM-01 GANONG PHOTOMETER

Simple type, borosilicate glass parts and stand.



PPM-02 SIMPLE PHOTOMETER

To demonstrate suction due to transpiration, having a graduated capillary tube with cylindrical funnel shaped top, made from borosilicate glass and supported on a stand.



PPM-03 FARMERS PHOTOMETER

Simple glass both and borosilicate glass fittings.



PPM-04 OSMOTIC PRESSURE APPARATUS

For determination of Osmotic pressure complete with simple glass jar. T.A. Apparatus For determining the rate of absorption of water by transpiring plants under varying circumstances.



PPM-05 RESPIROMETER

Complete with graduated and leveling tubes, rubber tubing and stand, borosilicate glass.



PPM-06 KUHNE'S FERMENTATION VESSEL

Made from borosilicate glass, fitted on a plastic stand.



PPM-07 DEMONSTRATION RESPIROSCOPE

Made from borosilicate glass and supplied with soda glass bottle.

PPM-08 TRANSPIRATION APP.

Apparatus for determination of quantity of water absorbed and given off by transpiring plants. Soda glass bottle and borosilicate glass fittings.

PPM-09 WILLMOTH BUBBLER

Borosilicate glass parts and glass bottle.

PPM-10 GANONG LIGHT SCREEN

Made of brass sheet.

PPM-11 ROOT PRESSURE APPARATUS

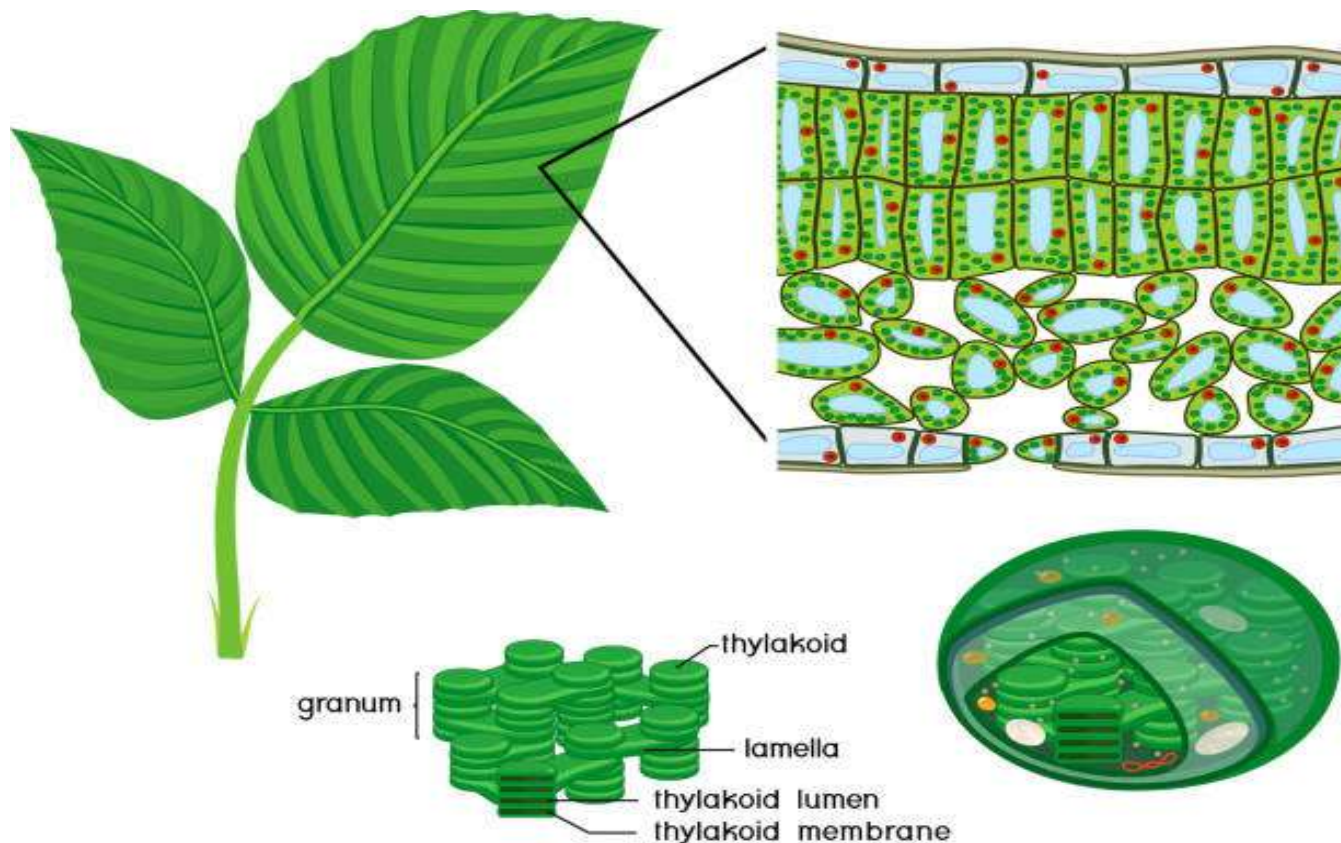
T-tube with stop cock with graduated cylinder

PPM-12 KLINOSTAT

With new clock movement having start and stop system, fitted on heavy cast iron base, a plant carrying cup is also provided.

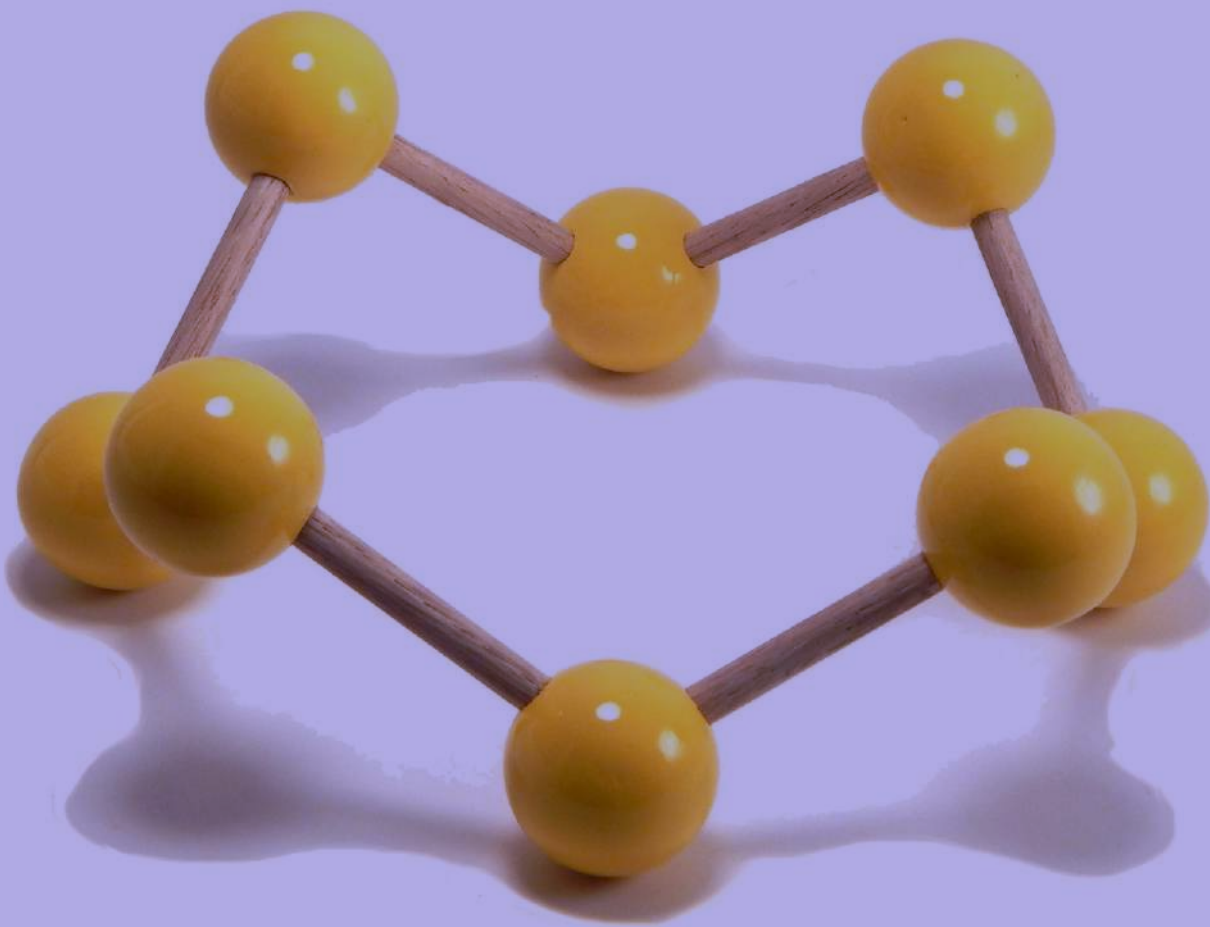
PPM-13 ARC INDICATOR

Small size, having graduated quadrant arc with pulley, light weight pointer, fitted on stand.



chemistry

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GCM-01 SPIRIT LAMP ALUMINUM

Die pressed 4 oz.

A	Jointless
B	Jointed



GCM-02 SPIRIT LAMP BRASS



GCM-03 SPIRIT LAMP STAINLESS STEEL



GCM-04 BLOW PIPE BRASS

A	B	C
8"	10"	12"



GCM-05 TEST TUBE HOLDER

Iron C.P.



GCM-06 TEST TUBE HOLDER

Flat form with wooden handle.

A	Iron
B	Brass



GCM-07 DEFLAGRATING SPOON

All brass.

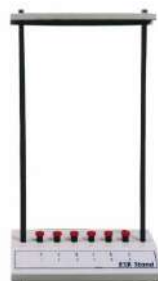


GCM-08 TEST TUBE HOLDER STAINLESS STEEL



GCM-09 ESR STAND

A	3 Tubes
B	6 Tubes



GCM-10 CRUCIBLE TONG

Iron C.P.

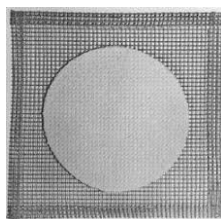
A	6"
B	8"



GCM-11 WIRE GAUGE (WITH ASBESTOS SHEET)

6"x6" with asbestos coating in centre.

A	No.1
B	No.2



GCM-12 SPATULA STAINLESS STEEL

Flat at one end and spoon at other end.

A	B	C
4"	6"	8"



GCM-13 WIRE GAUGE

In metal frame 6"x6". Superior.



GCM-14 SPATULA 6" SS FLAT



GCM-15 PLATINUM LOOP

School type in test tube.



GCM-16 PLATINUM WIRE FUSED

College type tested.



GCM-17 WATCH GLASS (SUPERIOR)

Uniformly molded ground edge, well packed in card box.

A	B	C
50mm	75mm	100mm



GCM-18 WATER BATH

Concentric rings, copper die pressed and polished hemispherical type with handle.

A	B	C	D
4"	5"	6"	8"





GENERAL CHEMISTRY

GCM-19 HOFFMAN SCREW CLIP

Iron



GCM-21 MAGNESIUM METAL RIBBON

25gm.



GCM-23 ZINC GRANULES

packet of 500gm.



GCM-25 SPIRIT LEVEL

A	B
4"	6"



GCM-27 LITMUS PAPER RED/ BLUE

Each packet consists of 10 books of 50 leaves each.

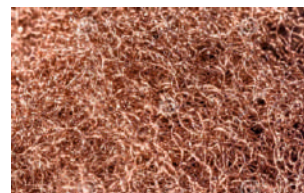


GCM-20 PINCH CLIP WITH THUMB



GCM-22 COPPER TURNING

packet of 500gm.



GCM-24 SPIRIT LEVEL (WOODEN)

With sun mica top 6" Wooden.



GCM-26 LEAD SHOTS (SMALL PACK)

250gm.



GCM-28 LEAD SHOTS (LARGE PACK)

Each packet consists of 10 books of 50 leaves each.



GCM-29 BURETTE BRUSH



GCM-30 BOTTLE BRUSH



GCM-31 SILICA CRUCIBLE ONLY

A	B	C
15mm	25mm	50mm



GCM-32 LID FOR SILICA CRUCIBLE

A	B	C
15mm	25mm	50mm



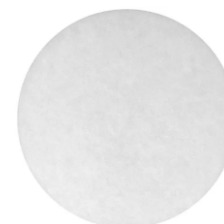
GCM-33 PH PAPER

Each packet consists of 10 books of 50 leaves each.



GCM-34 FILTER PAPER ROUND

A	B
11cm	12.5cm



GCM-35 GOOCH CRUCIBLE

(Sintered Glass Crucible)

	(i)	(ii)	(iii)
G3	15mm	25mm	50mm
G4	15mm	25mm	50mm



GCM-36 ADAPTOR FOR GOOCH CRUCIBLE

	(i)	(ii)	(iii)
G3	15mm	25mm	50mm
G4	15mm	25mm	50mm



GCM-37 PLASTIC CELL HOLDER BOX

A	Two Cells
B	Four Cells



GCM-38 CELL HOLDER WOODEN

A	B	C
One Cell	Two Cell	Four Cell



GCM-39 PRESSURE RUBBER TUBING

	Bore in mm	Wall Thickness mm
A.	4.0	3.0
B.	6.0	3.0
C.	8.0	3.0
D.	10.0	3.0



GCM-40 RUBBER TUBING

Suitable for general laboratory use, soft and strong coil of 10 meters tubing.

	Bore in mm	Wall Thickness mm
A.	4.0	1.0
B.	6.0	1.5
C.	8.0	1.5
D.	10.0	2.0



GCM-41 RUBBER CORKS

Special quality, extra soft, red colored.

Extra charges for one hole.

Extra charges for two holes.

	Dia Top mm	Bottom Dia mm	Height mm	Size No.
(a)	11	9	17	0
(b)	14	11	19	1
(a)	16	13	20	2
(d)	19	15	23	3
(e)	20	16	24	4
(f)	22	17	25	5
(g)	24	18	26	6
(h)	25	19	28	7
(l)	26	21	28	8
(j)	27	22	30	9
(k)	29	24	32	10
(l)	32	27	33	11
(m)	34	29	35	12
(n)	37	30	38	13
(o)	41	32	43	14
(p)	42	37	43	15
(q)	48	42	43	16
(r)	55	42	43	17



GCM-42 TEST TUBE STAND METAL

Available in aluminum & Stainless steel (SS)

S.No	Size(mm)	Holes
1	12	12
2	12	24
3	12	36
4	12	48
5	15	12
6	15	24
7	15	36
8	15	48
9	18	12
10	18	24
11	18	36
12	18	48
13	25	12
14	25	24
15	25	36
16	25	48



GENERAL CHEMISTRY



GCM-43 PIPETTE BULB

A	B	C
Small	Medium	Large



GCM-44 TEST TUBE STAND WOODEN

A	6 Hole
B	12 Hole



GCM-45 ROCKS SET OF 20



GCM-46 METALLIC ORES SET OF 20



GCM-47 METAL AND ALLOYS SET OF 24



GCM-48 TYPE OF METALS



GCM-49 BUNSEN BURNER WITH STOP COCK

same as above with stop cock.



GCM-50 BUNSEN BURNER MANSFIELD TYPE

Fitted on nicely duco painted heavy cast iron base provided with threaded air regulator and collar, packed individually in printed duplex box.



GCM-52 MECKER BURNER

Brass lacquered with ceramic grid cap to provide a wide flame.

A	18mm
B	25mm



GCM-51 TYPE OF GLASS

GCM-53 MECKER BURNER WITH STOP COCK

A	18mm
B	25mm



GCM-55 FILTER PUMP BRASS

Edward type 1.5 cm dia.



GCM-54 GAS TAPS

Brass C.P. leak proof, packed in card box.

A	B	C	D
One way	Two way	Three way	Four way



GCM-56 CORK BORER INDIAN PATTERN

With handle brass C.P.

A	B	C
Set of 3	Set of 6	Set of 12



GCM-57 CORK BORER GERMAN PATTERN

With handle brass C.P.

A	B	C
Set of 3	Set of 6	Set of 12



GCM-58 CORK BORER GERMAN PATTERN HEAVY (SET OF 6)

Made from thick brass pipe, strong handles, six borers, Packed in velvet box.



GCM-59 CORK BORER GERMAN PATTERN HEAVY (SET OF 12)

Made from thick brass pipe, strong handles, set of 12, Packed in Velvet box.



GCM-60 WATER TAPS

Swan neck type brass metal C.P. leak proof.

A	B	C
One way	Two way	Three way



GCM-61 CENTRIFUGAL MACHINE

Hand operated, metal parts with clamp, aluminum body, superior quality with plastic tubes.

A	Two Tubes
B	Four Tubes



GCM-62 CENTRIFUGAL MACHINE HEAVY

Improved design, a hand driven machine consisting of a cast iron base enclosing a steel pinion and worm drive, complete with removable crank handle with plastic tube of 15 ml.

A	Two Tubes
B	Four Tubes



GCM-63 BURETTE CLAMP FISHER TYPE

Made from thick still die pressed, powder coated, staple grey finish.

A	Single Burette
B	Double Burette



GCM-64 BURETTE CLAMP

Brass oxidized angle type, cork lined with brass head.



GCM-65 UNIVERSAL CONDENSER CLAMP

With cork lined half round cylindrical jaws with boss head.



GCM-66 THREE FINGER CLAMP

Made from aluminum, staple color, iron rod, finger covered with rubber tubing with iron boss head.



GCM-67 JAW CLAMP WITH BOSS HEAD

Consisting of four cork lined jaws, iron rod, long T-screw with iron boss head.



GCM-68 BOSS HEAD OXIDIZED

Made of brass with iron screws on both sides.



GCM-69 BOSS HEAD

Aluminum stable painted



GCM-71 RETORT STAND CAST IRON

Heavy cast iron base with hammertone paint and iron C.P. rod 12mm thick.

A	7"x5"x24"
B	8"x5"x24"



GCM-73 BURETTE STAND WOODEN



GCM-75 RETORT STAND SS

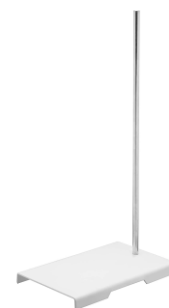
A	7"x5"x24"
B	8"x5"x24"



GCM-70 RETORT STAND SHEET METAL

Thick iron sheet 12 SWG, die pressed base and thick rod, powder coated staple colour, having wire for extra tightening of rod...

A	6"x4"x18"
B	7"x5"x24"
C	8"x5"x24"
D	9"x6"x30"



GCM-72 TRIPOD STAND

Duco painted triangular top and Zinc plated rods with plastic feet.

A	6"x4"
B	8"x4"



GCM-74 FUNNEL STAND WOODEN



GCM-76 PLATINUM LOOP HOLDER

Brass rod and chuck with Bakelite handle.



GCM-77 MINERALS SET OF 30



GCM-78 CHEMICAL THERMOMETER (MERCURY)

Made from yellow or white capillary tube, mercury filled by heat process, calibrated under controlled conditions, approx. 12 inches long and 7-8 mm thick. L.C.1° or 0.5° (for 110°C and 220°F)

A	110°C
B	220°F
C	250°C
D	360°C



GCM-79 CHEMICAL THERMOMETER (ALCOHOL)

Except that these are alcohol filled and hence give better visibility of reading.

A	110°C
B	220°F



GCM-80 PRECISION THERMOMETER

These are sensitive thermometers and calibrated in fractions of a degree. Mercury filled by heat process. Range : -5°C to 110°C x 1/10 and length is 18 inches.



GCM-81 WALL THERMOMETER

20 cms in length, red spirit filled, graduated in centigrade and Fahrenheit, Packed in individual duplex box.



GCM-82 WALL THERMOMETER DEMONSTRATION

Mounted on a wooden plank and filled with red spirit.

A	50cm long
B	100cm long



GCM-83 DRY-WET THERMOMETER

Molded body, superior quality packed in printed duplex box, humidity chart on centigrade & Fahrenheit Included.



GCM-84 DRY- WET BULB HYGROMETER

Deluxe model, mounded on plastic body, Centigrade & Fahrenheit humidity chart included.



GCM-85 MAXIMUM & MINIMUM THERMO METER (DELUXE MODEL)

Deluxe model, mounded on plastic body, temperature range - 30°C to 50°C, Calibrated in C & F, Mange contained on special holder for ease in operatio



GCM-86 MAXIMUM & MINIMUM THERMO METER (REGULAR MODEL)

Regular quality, mounded on molded body, temperature range - 30°C to 60°C, Calibrated in C& F, provided with button magnet, Packed in printed duplex b...



GCM-87 CLINICAL THERMOMETER (C & F)

For oral use, prismatic capillary, imported glass, screen printed, 94°F to 108°F or 43°C (dual scale), Accurate, over a length 100-120 mm, bulb length 12-18mm, scale length 40-70mm.



GCM-88 DIAL TYPE THERMOMETER

Vertical Pattern.



GCM-89 LACTOMETER REGULAR QUALITY

Black base, Shot& Wax poised, adjusted for use at 84°F.



GCM-90 LACTOMETER SUPERIOR QUALITY

Silver Coated, Shot & wax poised, adjusted for 84°F.



GCM-91 URINOMETER- REGULAR QUALITY

Black base, Shot& Wax poised, adjusted for use at 20°C.



GCM-92 DENSITY HYDROMETER

Shot & Wax poised adjusted for use at 15°C M-50 SP, maximum length 270 mm accuracy ± 0.0002 . Any range from 0.650 – 0.700 Sp.Gr.to 0.950 – 1.000 Sp.Gr. available.



GCM-93 HYDROMETER

For Light of Heavy liquid, for use in chemical industries and plant laboratories. Any range from 0.600 – 0.700 Sp. Gr. to 1.9000 – 2.000 Sp. Gr. available.



GCM-94 BEAUMES HYDROMETER

Shot & wax poised, adjusted for use at 20°C. Any range from 0.00 – 10.0 Be to 40.0 – 60.0 Be available. In card box.



GCM-95 DIESEL HYDROMETER

To measure the specific gravity of diesel. Scale 800 to 850, Packed in card box.



GCM-96 PETROL HYDROMETER

To measure the specific gravity of petrol, scale 700 to 750, Packed in card box.





GENERAL CHEMISTRY

GCM-97 ALCOHOLMETER

Gay Lussac % v/v ethyl alcohol in water, Shot & Wax poised, adjusted for use at 15.6°C/2/0°C. Range 0 to 100%



GCM-99 SOIL HYDROMETER

Shot & Wax poised, adjusted for use at 20°C. Range 995 to 1030 in box.



GCM-101 BATTERY HYDROMETER



GCM-103 DENSITY PETROLEUM KIT

Consists of 3 hydrometers of sp. gr. 700 – 750, 750- 800, 800 – 850, One thermometer 50°C, Filter paper no. 2, Water paste, oil paste and glass cylinder 500 ml.



GCM-98 UNIVERSAL HYDROMETER

For light & heavy liquid with lead Shots, range 700 to 2000.



GCM-100 BUTYROMETER

With stopper.



GCM-102 BRIX HYDROMETER

Glass hydrometer with built in thermometer, Shot & Wax poised, adjusted for use at 20°C.



GCM-104 WINE TESTING KIT

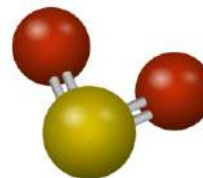
For sugar industries, consists of Sikes Hydrometer 55 -90SK, Thermometer – 20 to 120F, Sikes table book and glass cylinder 100 ml each.



GCM-105 HYDROCARBON CLASSIFICATION MODEL

a) Methane b) Ethane c) Propane d) Butane e) so-butane f) N-pentane g) Iso-pentane h) Neo pentane i) Ethane j) Ethylene

GCM-106 SULPHUR ATOMIC MODEL

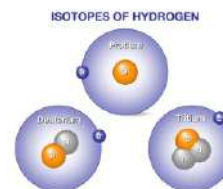


GCM-107 YELLOW PHOSPHORUS ATOMIC MODEL



GCM-108 ISOTOPES OF HYDROGEN

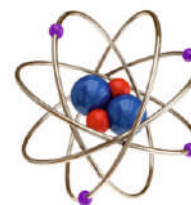
(Hydrogen, Deuterium, Tritium)



GCM-109 SILICON ELECTRONIC CONFIGURATION



GCM-110 ORBIT OF ATOM



GCM-111 DIAMOND CRYSTAL MODEL

(open Model)



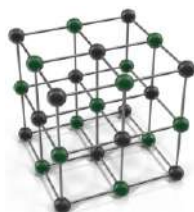
GCM-112 GRAPHITE CRYSTAL MODEL

(open Model)

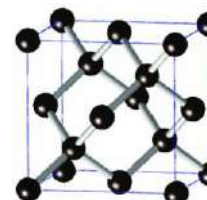


GCM-113 SODIUM CHLORIDE CRYSTAL MODEL

(open Model)



GCM-114 BLACK PHOSPHORUS ATOMIC MODEL





GENERAL CHEMISTRY

GCM-115 HYDROGEN MOLECULE MODEL

GCM-116 SODIUM ION FORMATION MODEL

GCM-117 FORMATION OF MAGNESIUM OXIDE ION

GCM-118 OXYGEN MOLECULE MODEL

GCM-119 COVALENT BOND IN CHLORINE MOLECULE

GCM-120 COVALENT BOND IN HYDROGEN MOLECULE

GCM-121 COVALENT BOND IN WATER MOLECULE

GCM-122 MOLECULES SET OF 5 MODEL

1. Water 2. Ammonia 3. Chlorine 4. Phosphorus 5. Sulphur

GCM-123 COVALENT BOND IN OXYGEN MOLECULE

GCM-124 STRUCTURE OF ATOM

GCM-125 BUCKY BALL

A bucky ball is a molecule containing 60 carbon atoms. Here each carbon atom is bound to three adjacent carbon atoms forming a sphere, which is around 1.0mm, in diameter. The bonds between atoms form a pattern of joined hexagons and pentagons that is similar to the panels on a soccer ball. It is also called fullerenes model.



GCM-126 NANO-TUBE

Carbon nanotubes are extension of Bucky balls. In fact, they are lucky balls without the ends closing. Hence, spheres are not formed and long tubular structures are formed that are called carbon nanotubes. Nanotubes are cylinders, which are lattice of carbon atoms, each atom covalently bonded to three other carbon atoms. The carbon nano tube derived from bucky ball is also called a Bucky tube.



ACM-01 CENTRIFUGE MACHINE

Electrical 4 tubes suitable for small capacity centrifuging requirements in pathological labs for routine tests. Made of rust proof aluminum body and filled with best quality rotor with double windings. The unit is fitted with resiliently mounded motor for vibration free performance and a five step speed regulator. Tube capacity is 15 ml. maximum revolution per minute are 3500 and operates on 220-240 volts 50Hz B. Centrifuge Machine : Same as 2141 but with 6 tubes.



ACM-03 DIGITAL TEMPERATURE INDICATOR CUM CONTROLLER EXTRA

To avoid temperature over- shoot and under – shoot and to have precise control of temperature, This device is fitted in place of capillary type thermostat.



ACM-02 CENTRIFUGE MACHINE 16 TUBES

A highly stable, low noise, low vibration machine. Table top model with digital tachometer and digital timer of 0-59 minutes range and variable speed Regulator, maximum RPM is 5200, cover is made of transparent acrylic and is light weight, operates on 220 volts 50Hz.



ACM-04 UNIVERSAL OVEN (MEMERT TYPE)

Meant for various applications like heating, drying sterilizing and baking. Suitable for temperature upto 200°C. External body is made of mild still, coated with scratch proof and heat resistance paint. Internal structure including door and chamber are manufacturer from either SS or aluminum. The double walled chamber is filled with high grade insulation to prevent heat loss. Heating element is roped in beads and placed at bottom and two sides. Temperature is controlled with a capillary type thermostat and read by a thermometer. Supported on heavy rubber feet to prevent slip page. Provided with indicator, temperature control knob and On/Off switch.

SS	Inner Chamber Size	Alum.
A	300x300x300mm (12"x12"x12")	E
B	350x350x350mm (14"x14"x14")	F
C	450x450x450mm (18"x18"x18")	G
D	600x600x600mm (24"x24"x24")	H





ACM-05 WATER STILL

Electrically operated, for progeny free distilled water. Main body is made of S.S. sheet .A triple vapor baffle of S.S. is provided, the lid gets automatically sealed by water forming in a recess in the head of the lid, minimizing loss of steam .The still is fitted with immersion type elements. In order to ensures long life of the still care should be taken to avoid dry running of the still. Burred out elements can be replaced easily. Output mentioned of the still is only approximate. Provided with wall bracket.

Cap. Per Hour	Rating KW
2 Liter	1.5 KW
4 Liter	3.0 KW



ACM-07 HEATING MANTLES

Designed to meet high-test electrical standards. The flexible mantle is suspended above a thermal insulating 'Former' Which provides maximum heat transfer coupled with minimum risk of flask breakage. The outer housing is made of aluminum.

	Capacity	Watts	Circuits
a)	50ml	60	I
b)	100ml	60	I
c)	250ml	150	I
d)	500ml	200	I
e)	1litre	300	I
f)	2litre	450	I
g)	3litre	450	I
h)	5litre	600	I
i)	10litre	2x500	I



ACM-06 INCUBATORS (BACTERIOLOGICAL)

Incubators have Different applications like drying of slides, paraffin embedding, tissue culture work, incubation of anti-body, microbiological determination and incubation of hydroxyl steroids and crystallization studies. Designed to work up to 80 C with accuracy of $\pm 1C$ External body is made of mild still, coated with scratch proof and heat resistance paint. Internal structure including door and chamber are manufactured from either S.S or aluminum. The double walled chamber is filled with high grade insulation to prevent heat loss. Heating elements roped in beads and placed at bottom and two sides. The front door is fitted with a window. Temperature is controlled with a capillary type thermostat and read by a thermometer. Supported on heavy rubber feet to prevent slippage. Provided with indicator, temperature control knob and on/off switch.

SS	Inner Chamber Size	Alum.
A	300x300x300mm (12"x12"x12"	E
B	350x350x350mm (14"x14"x14"	F
C	450x450x450mm (18"x18"x18"	G
D	600x600x600mm (24"x24"x24"	H



ACM-08 WATER BATH SEROLOGICAL

Suitable for Clinical procedures, incubation, inactivation etc. Double Walled Chamber inner of S.S, and outer of mild steel. Provided with drain plug to facilitate easy emptying and cleaning of inner chamber when required. Fitted with capillary type thermostat, indicator light and on/off switch.

SS	Inner Chamber Size
A	300x300x300mm (12"x12"x12")
B	350x350x350mm (14"x14"x14")



ACM-09 WATER BATH RECTANGULAR

Suitable for evaporating liquids like alcohol or for melting solids such as agar. Concentric rings can be removed to accommodate containers of various sizes. Double walled chamber, inner of S.S. and outer mild steel. Gap Between two chambers is filled with insulation to prevent heat loss. Temperature is controlled by a thermostat, provided with indicator light and on/off rotary switch.

A	6 Holes
B	12 Holes



ACM-10 HOT PLATE ROUND

Electrical operated, 8" dia round plate made of cast iron and body made of thick mild steel. With heat control switch, Workable on 220volts AC.



ACM-11 HOT PLATE ROUND DOUBLE

Two round plates of 20 cm dia. each.



ACM-12 HOT PLATE RECTANGULAR

Electrically operated, A rectangular cast iron plate is fixed on a thick mild steel body. Heating by Kanthal wire elements fitted beneath the plate. Temperature is controlled by energy regulator. Works on 220 volts AC.

	Size
A	30x25cm (12"x10")
B	40x25cm (16"x10")
C	45x25cm (18"x12")



ACM-13 MAGNETIC STIRRER ELECTRICALLY OPERATED

Fitted with speed regulator, maximum speed 1200 rpm. Cap.2 lit. Fitted with Teflon coated magnetic stirring bar, hot plate and energy regulator.





ANALYTICAL CHEMISTRY

ACM-14 LABORATORY STIRRER

Fitted with noiseless universal motor, maximum speed 4000 rpm with electronic variable speed regulator between 200-4000rpm. The stirrer shaft is of stainless steel with 3 bladed propeller having 37 mm sweep, shaft and stirrer coupled by means of simple bush coupling having grub screw. Stirrer is mounted on an adjustable heavy stand.



ACM-15 SLIDE WARMING TABLE

Thermostatically controlled uniform temperature upto 110 C top of anodized stainless steel.

	Inner Chamber Size
A	9x4x4" 225x100x100mm, 1.6KW
B	10x5x5" 225x125x125mm, 2KW



ACM-16 AUTOCLAVE – ELECTRICAL

Suitable for general laboratory and field sterilization of instruments and dressing etc. Lid is provided With dial pressure gauge, spring loaded safety valve, dead weight type safety valve and steam release valve. A joint less neoprene gasket is provided for leak proof sterilization.



ACM-17 MUFFLE FURNACE

For high temperatures of upto 900 C Outer body is made of thick mild steel. Temperature kanthal wire surroundings the heating chamber, assuring uniform distribution of heat. A highly efficient light weight insulation is cast permanently into the furnace body. The furnace can be operated continuously upto 900 C. Temperature is controlled by an energy regulator fitted on the front panel.



ACM-18 DIGITAL TEMPERATURE CUM INDICATOR CONTROLLER EXTRA MICROPROCESSOR TYPE

Micro processor based PID controller cum Indicator can be fitted instead of energy regulator and pyrometer at an extra cost.



ACM-19 LABORATORY JACK

12.5x15cm. A multi purpose rack constructed from S.S or M.S. Suitable for hot plate, burners, baths, glassware etc. it is a knob operated scissor action lifting arrangement for quick and easy height adjustment.



ACM-20 VACUUM PUMP

Cap.32 ltr. Per minute, single stage, oil sealed, air cool, V-belt driven and mounted on base plate with belt guard. AC single phase.



ACM-21 VACUUM PUMP OIL FREE

The unit is air cooled coupled with AC single phase motor. Highly suitable for general purpose such as filtration, filling and blowing. Lubrication of all moving parts is done automatically from the felt packed oil reservoir. Maximum vacuum 26 inches of mercury and free air displacement 70 lit. per min.



ACM-22 ANAEROBIC CULTURE JAR

All metal construction consisting of a stainless still jar with a top flange recessed for a cordial rubber sealing ring and a cover hold in place by a strong bridge clamp. The cover is fitted with two needle valves for evacuation and a sachet containing a catalyst. A side arm on the jar is provided for connecting to semi solid Lucas indicator. (The jar is supplied without semi solid Lucas indicator).with gauge.



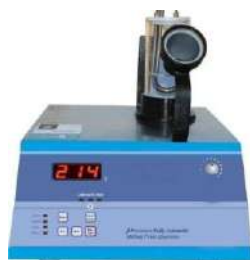
ACM-23 MELTING POINT APPARATUS

The apparatus is useful in determination of Melting point (upto 300C) of any substance in small quantity. It consists of an aluminum block which accepts three capillary tubes and a mercury thermometer. The block is heated by two elements clamped to the sides. The Built in lamp provides Uniform and shadow less illumination of sample tube which are viewed through magnifying lens Against either a dark or bright ground selected by rotation of knob at the rear of apparatus.



ACM-24 MELTING POINT APPARATUS DIGITAL

A compact and accurate instrument for determination of melting point of solids. The unit consists of a built in magnetic stirrer, a temperature controller for adjusting the rate of heating of silicon oil bath, an on/off switch, an indicator light, a magnifier and a glare free illuminated background.



ACM-25 VORTEX SHAKER

Vibration type motor driven instrument having variable speed to provide short, rapid and eccentric strokes. Neoprene cap imparts vigorous agitation to tubes or small flasks. Shaking starts when vessel is pressed against the cup. Provided with on/off switch, indicator and vacuum rubber feet.



ACM-26 SOXHLET EXTRACTIONS UNIT (MANTEL TYPE)

Ideal for carrying out extraction tests. The unit consist of a compact rectangular box section of metal housing the heating elements and built in controls. The Flexible elastic heating elements ensure close contact with flask surface and even distribution of heat over entire holes provided under the recess. Only metal part is provided. Rates of Glass Parts are extra.

A	Unit of three mantels of capacity 250ml
B	Unit of six mantels of capacity 250ml



ACM-28 KJELDHAL DISTILLATION UNIT

Unit of three tests. Electrically operated consisting of Following: Distillation Stand
Metal Condensor
Kjeldhal Heater
Without Glass Parts.



ACM-30 SIEVE SHAKER

Gyratory type, driven by 0.25 H.P. motor through a reduction gear mechanism. Suitable to carry maximum 7 sieves of 6" or 8" diameter. When clamped, the sieves do not rotate but are inclined from vertical axis and the direction of inclination changes. In addition there is upward and downward motion.



ACM-27 KJELDHAL DIGESTION UNIT

Supplied with heating shelf. The Heaters have Individual Switches with an energy regulator to control the heaters, each heater draws approx. 500 watts. It can accomodate flasks of cap. 500 & 800 ml.

Only metal part is supplied. Rates of Glass Parts are extra.
No. of Heaters On/OFF Switches



ACM-29 ROTARY SHAKER

The machine provides a uniform circular motion in horizontal plane. The rotation effect ranges from gentle rise and fall of the liquid to vigorous swirling. All positions on the platform receive identical agitation. Works on 220 volt AC single phase and fitted with 0.25 HP motor.



ACM-31 SAYBOLT VISCOMETER

Made as per ASTM D 88 specification with universal and fuel jets of SS. Stirring is done by hand with turn table arrangement without stainer, withdraw tube and glassware. Operates on 220 volt AC mains. Electrically heated with energy regulator.



OIL AND PETROLEUM TESTING INSTRUMENTS

ACM-32 REDWOOD VISCOMETER

Electrically operated, these viscometers are designed for viscosity tests of petroleum products. They conform to requirements of IP 70 (Former). Two adaptations of Redwood viscometer are available, No. 1 for liquids having Red Wood Flow 20 seconds to 2000 seconds and No. 2 for liquids whose flow time exceeds 2000 seconds. The complete outfit comprises stainless steel bath with electrical heating arrangement suitable to operate at 220 volts AC mains, fitted with tap, silver plated oil cup with precision stainless steel jet, cup cover, ball valve and thermometer-clip, stirrer and mild steel stand with leveling screws. Electrically heated with energy regulator for temperature control.

A	Redwood Viscometer No.1
B	Redwood Viscometer No.2



ACM-34 ANILINE POINT APPARATUS

Used for estimation of moisture in lubricating oils as per IP-74.



ACM-33 PENSKY MARTENS FLASH POINT APPARATUS

Made as per IP 34, ASTM D-93-58 T and IS 1448 (Part 1) 1270 (P: 21) and IS 1203-1953 method B. The apparatus consists of brass test cup with handle, removable cup cover, spring operated rotating shutter having pilot jet and stirrer with flexible shaft. The assembly rests in an air bath which is covered with dome shape metal top, the cup is fitted with insulated handle and locking arrangement near cup flange and the assembly is kept on round shape electric heater with temperature regulator. Suitable for operation on 220 volts 50 cycles AC circuits, provided with oil test jet and energy regulator control.



ACM-35 ABELS FLASH POINT APPARATUS

This apparatus is suitable for determining the closed cup flash point of petroleum and mixture according to IP 33 and IP 170 and also IS 1448 (part 1) 1985 (P:20). It is supplied with oil cup over, fitted stirrer, thermometer socket, S.S. water bath and stand. An electric heater is fitted at the bottom for operation on 220 volts AC circuits, provided with oil test jet, and energy regulator control.



ACM-36 CLOUD AND POUR POINT APPARATUS

Made according to specifications laid by IP 15 and IS 1448. The pour is the lowest temperature at which the oil will just fail to flow. The apparatus consists of a main cooling bath made of SS, stand unit with drain plug, cover having provision for fitting thermometer and a filling aperture for adding freezing mixture. A glass jar for containing oils, jackets, discs and gasket are also provided.



ACM-38 JUNKERS GAS CALORIMETER

This Gas Calorimeter is of non-recording and flow type and is used for the determination of calorific value (heat value) of combustible gases. This design is based on the widely practiced Junker's principle of burning a known amount of gas and transferring the resultant heat to a continuously flowing stream of water and measuring the volume of the gas, amount of flowing water and rise in temperature and finally equating the heat gained by the flowing water to the heat input of the burnt gas.

The Calorimeter mainly consists of gas combustion chamber, heat exchanger and water flow system. Gas flow meter is of rotary and wet type with a capacity of 2.5 ltrs./rev. The meter is used for under pressure conditions not exceeding 8" water column. The dial is graduated with the smallest division of 0.02 ltr. and has an accuracy of 0.5% of full scale. The pressure governor is to regulate the pressure of the gas before it enters the flow meter. Supplied with beam balance on knife edge, counter balance shot tube inlet union and outlet nosecock.



ACM-37 CLEVELAND FLASH AND FIRE POINT APPARATUS

Used for determination of flash and fire point of petroleum products having flash point below 800°C except fuel oil with open cup mechanism. The apparatus consists of a cup, heating plate of specific dimension, thermometer clip and test flame attachment with swivel joint for passing over test liquid surface in prescribed manner. Heating is controlled by means of energy regulator fitted to apparatus. Operates on 220 volt AC.



ACM-39 PENETROMETER APPARATUS

As per IP 49, and 50 and 167 specifications. The apparatus is used for penetration test on a wide variety of materials such as grease, petroleum, bitumen, tar, wax, polish, food stuff, rubber, asphalt and pharmaceutical creams. A given force is applied for a given period of time and a depression is made in the sample which is measured in tenth of a millimeter on a vertical rod which can be adjusted for height. A rack and pinion and pointer assembly provides fine adjustment for needle tip to sample and incorporates a slipping clutch mechanism which makes reading of penetration and subsequent resetting of sample for accurate operation. The dial is graduated from 0-400 in 1/10 millimeter sub-division. Provided with two sample containers.



PORCELAINWARE



MCP-1 CHINA DISH

Superior quality, round form with lip, glazed both inside and outside.

A	50mm
B	75mm
C	100mm
D	125mm
E	150mm



MCP-2 CRUCIBLE WITH LID

Tall form with lid, glazed inside and outside expect for bottom surface and rim.

A	15ml
B	25ml
C	50ml



MCP-3 BEEHIVE SHELF

All glazed expect bottom and top rim. Size 3"



MCP-4 BUCHNER FUNNEL

With thin stem, fixed perforated plate, glazed inside and outside expect for him.

A	2"
B	3"
C	4"



MCP-5 PESTLE & MORTAR

Mortar with lip, glazed outside bottom and unglazed inside, plate unglazed of grinding surface and oversized for hand comfort in grinding.

A	3"
B	4"
C	5"
D	6"



MCP-6 CLAY PIPE TRIANGULAR

With wire and unglazed pipes. 3"



MCP-7 ACID BOWL





PLASTICWARE

CGP-1 BEAKERS

Molded in polypropylene, excellent clarity, highly chemical resistant and Autoclavable. With tapering spout.

A	50ml
B	100ml
C	250ml
D	500ml
E	1000ml
F	2000ml



CGP-2 WASH BOTTLE

Made from Low Density polyethylene giving a translucent look. These are durable and dependable. Liquid can be poured easily by squeezing the bottle. Cap is fitted with delivery tube.

A	125ml
B	250ml
C	500ml
D	1000ml



CGP-3 REAGENT BOTTLE

Narrow Mouth or Wide Mouth, made from Low Density Polyethylene. These are rigid, translucent and have excellent contact clarity. These bottles are autoclavable. The cap has a built in seal ring to make them leak proof.

A	125ml
B	250ml
C	500ml
D	1000ml



CGP-4 TEST TUBE STAND

Fixed for six tubes. The most commonly used stand in various laboratories. The stand can be used to hold tube with solution or to drain the tube. The stand can hold 2 tubes of 25mm dia. And 4 tube of 15mm dia.



CGP-5 MEASURING CYLINDER

Made from Polypropylene. These one piece, autoclavable cylinders have prominently raised graduations for easy visibility and excellent contact clarity.

A	25ml
B	50ml
C	100ml
D	250ml
E	500ml
F	1000ml



CGP-6 MEASURING JUG

These handy jugs are molded in polypropylene, are clear autoclavable and have good chemical resistance. The jugs are provided with a handle for easy lifting.

A	250ml
B	500ml
C	1000ml
D	2000ml



CGP-7 DROPPING BOTTLE

Made from LDPF these bottles dispense small uniform drops of solution when pressed lightly.

A	60ml
B	125ml



CGP-8 CONICAL FLASK

Provided with screw cap & made from Polypropylene, the flasks are rigid, translucent and autoclavable. The screw cap keeps the contents of the flask contamination free and leak proof.

A	100ml
B	250ml
C	500ml



CGP-9 KIPP'S APPARATUS

Made from polythene this apparatus has three main parts. Top portion is fitted with thistle funnel and a bulb structure through which dilute acid can be poured. The acid reacts with metal sulfide kept in bottom portion. The H₂S gas that evolves collects in the middle portion and can be released through a leak proof stop cock, fitted with PTFE plug.

A	250ml
B	500ml
C	1000ml



CGP-10 FUNNEL

Long stem funnels have smooth walls, 60° cone angle and external ribs to prevent air lock. Made from polypropylene.

A	50ml
B	62ml
C	75ml
D	100ml



CGP-11 PETRI DISH

Made from PP powder. These are clear, unbreakable and autoclavable.

A	2"
B	3"
C	4"



CGP-12 VOLUMETRIC FLASK

With screw cap to avoid leakage. Made from polypropylene, these are rigid, unbreakable and have good contact clarity.

A	50ml
B	100ml
C	250ml
D	500ml
E	1000ml



CGP-13 BURETTE

Transparent acrylic body and leak proof stop cock with PTFE plug. The body is unaffected by dilute mineral, acids and bases except Hydrofluoric acid and Ammonium Hydroxide.

A	25ml
B	50ml



CGP-14 FISHER TYPE CLAMP

Totally corrosion proof, molded in polypropylene. The spring loaded jack in the middle provides a vice like grip to burette and prevents from slipping.

A	Single
B	Double



CGP-15 RETORT STAND

Non corrosive retort stand . Metal rod is also covered with polypropylene. The rod can be screwed into the heavy base of size 225x150mm, base provided with side hole.



CGP-16 COPLIN JAR

To hold 10 slides of size 75x25mm back to back. The interior of the jar is grooved in a way to hold slides in erect position. Doom and shallow threaded screw cap provides protection to slides.



CGP-17 DESSICATORS VACCUM

Desiccators are made of polypropylene and poly carbonate. These autoclaveable vacuum desiccator can hold vacuum upto 740 of hg for 24hrs. any greasing

A	6"
B	8"
C	10"



CGP-18 PIPETTE PUMP

A fast release pipette device for precise pipetting and quick emptying. The moulded chuck has a silicon rubber collect side to hold various pipette of standard size.

A	2 ml
B	10 ml
C	25 ml



CGP-19 DESSICATORS PLAIN

Autoclavable, can hold vacuum upto 740mm of Hg for 24 hours without any greasing. Top doom molded in transparent and rigid polycarbonate. Lower part is made of Polypropylene.

A	6"
B	8"
C	10"



CGP-20 PIPETTE STAND HORIZONTAL

A detachable stand can hold 12 pipettes, 6 on each side. Molded in polypropylene. Two sides of the stand are attached to each other through three metallic rods covered with polypropylene.



CGP-21 PIPETTE STAND VERTICAL

A stand and detachable stand to hold upto 28 pipettes with maximum dia. of 14mm. Heavy base measures 9" in dia. and polypropylene coated 15" long square rod is screwed into the base. Top and middle discs can be fixed on the rod and the distance between them can be adjusted to the length of the pipette.



CGP-22 SEPARATOR FUNNEL

Made of polypropylene, it is pear shaped, autoclaves and has a leak proof threaded screw cap. The stop cock is fitted with self lubricating PTFE plug.



CGP-23 SIMPLE CELL POT

For making cells and voltammeters. Made from polypropylene, these pots have good contact clarity and excellent chemical resistance.



CGP-24 CONICAL MEASURE

For measuring small quantities of reagents. These autoclavable measures have hexagonal base for extra stability.

A	12ml
B	25ml
C	50ml
D	125ml
E	250ml





PLASTICWARE

CGP-25 LECLANCHE CELL POT

For making Leclanche cell. Blown in polypropylene, it has excellent chemical resistance properties.



CGP-26 PNEUMATIC TROUGH

Made of polypropylene, these are autoclavable and are available in different sizes. These can be used for storage, Sterilization, drying etc.



A	8"x4"
B	10"x4"

CGP-27 SPECIMEN JAR

Transparent specimen jars used for preserving different specimens in the lab. Provided with a light fit cap. size 150x50mm.



CGP-28 ATOMIC MODEL SET

This crystal model set contains different colored jacks and connectors in prescribed numbers to be joined in an illustrated way to form the desired structure.

A	60 Balls
B	120 Balls



CGP-29 ATOMIC MODEL SET JUNIOR

It consists of 37 connecting lugs and 75 balls of different colors and sizes. Packed in moulded box.



CGP-30 ATOMIC MODEL SET SENIOR

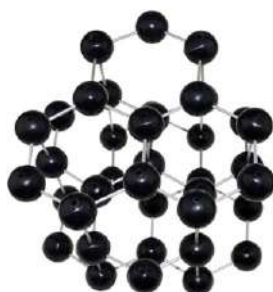
It consists of 185 lugs and 370 balls of prescribed color and size. Packed in moulded box.



CGP-31 GRAPHITE CRYSTAL

This crystal model set contains different colored jacks and connectors in prescribed numbers to be joined in an illustrated way to form the desired structure.

A	Superior
B	Regular



CGP-32 DIAMOND CRYSTAL

This crystal model set contains different colored jacks and connectors in prescribed numbers to be joined in an illustrated way to form the desired structure.

A	Superior
B	Regular



BOROSILICATE GLASWARE



GLG-01 BURETTE

With Teflon stop clock .(Borosilicate Glass) Automatic Burette Mounded on reservoir , Complete with rubber bellow. Capacity of reservoir for 25 ml and 50ml burette is 2000ml.

A	25ml
B	50ml
C	100ml



GLG-02 MEASURING CYLINDER

Graduated with spout, made from borosilicate glass.

A	5ml
B	10ml
C	25ml
D	50ml
E	100ml
F	250ml
G	500ml
H	1000ml



GLG-03 PIPETTE VOLUMETRIC

Vol. one mark (Borosilicate Glass).

A	5ml
B	10ml
C	25ml
D	50ml



GLG-04 VOLUMETRIC FLASK

(Measuring Flask)One mark, heavy type. (Borosilicate Glass) with Solid stopper.

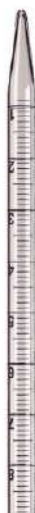
A	10ml
B	25ml
C	50ml
D	100ml
E	250ml
F	500ml
G	1000ml



GLG-05 PIPETTE GRADUATED

Graduated (Borosilicate Glass).

A	0.1ml
B	0.2ml
C	0.5ml
D	1.0ml
E	2.0ml
F	5.0ml
G	10.0ml
H	25.0ml



GLG-06 ROUND OR FLAT BOTTOM FLASK

Borosilicate Glass without joint.

A	50ml
B	100ml
C	25ml
D	500ml
E	250ml
F	1000ml



BOROSILICATE GLASWARE

GLG-07 CONICAL FLASK

(Borosilicate Glass).

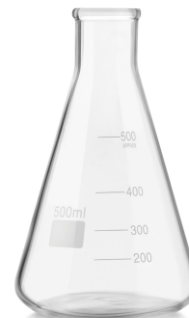
A	25ml
B	50ml



GLG-08 CONICAL FLASK

(Borosilicate Glass).

A	50ml
B	100ml
C	150ml
D	200ml
E	250ml
F	500ml
G	1000ml



GLG-09 BEAKER

(Borosilicate Glass) low form with spout.

A	5ml
B	10ml
C	25ml
D	50ml
E	100ml
F	150ml
G	250ml
H	500ml
G	1000ml



GLG-10 FUNNEL

Long stem, 60 angel walls. (Borosilicate Glass).

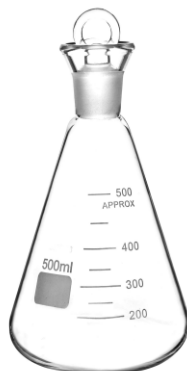
A	50ml
B	65ml
C	75ml
D	100ml



GLG-11 IODINE FLASK

With funnel Shaped cup and stopper.
(Borosilicate Glass.)

A	100ml
B	150ml
C	250ml
D	500ml



GLG-12 B.O.D. BOTTLE

With stopper.(Borosilicate Glass).

A	125ml
B	300ml



BOROSILICATE GLASWARE



GLG-13 REAGENT BOTTLE NARROW MOUTH

Narrow mouth with flat head stopper.
(Borosilicate Glass).

A	125ml
B	250ml
C	500ml
D	1000ml



GLG-14 REAGENT BOTTLE WIDE MOUTH

Wide mouth plastic screw cap and pouring ring.



GLG-15 NESSLER CYLINDER

(Borosilicate Glass) for color comparison.

A	50ml
B	100ml



GLG-16 SEPARATING FUNNEL

Heavy Type pear shaped, interchangeable stopper and plain stem. With stop clock. (Borosilicate Glass).

A	125ml
B	250ml
C	500ml
D	1000ml



GLG-17 RETORT GLASS

With interchangeable stopper.

A	250ml
B	500ml



GLG-18 SPECIFIC GRAVITY BOTTLE

Glass. (Borosilicate Glass) with glass stopper.

A	25ml
B	50ml





BOROSILICATE GLASWARE

GLG-19 WEIGHING BOTTLE

With stopper. (Borosilicate Glass) tall form.

A	5ml	15x25mm
B	15ml	25x60mm
C	25ml	30x60mm
D	50ml	40x90mm



GLG-20 LIEBIG CONDENSER

With B-24 Joints. (Borosilicate Glass)

A	300mm
B	400mm



GLG-21 THISTLE FUNNEL

(Borosilicate Glass)



GLG-22 DISTILLATION APPARATUS

With Graham Condenser interchangeable joint interchangeable stopper. (Borosilicate Glass)



GLG-23 DISTILLATION ASSEMBLY

The complete apparatus consists of the following items: Wooden stand with adjustable condenser support, Iron rod with fly nut for tightening, Tripod Stand, Bunsen Burner, Fisher type clamp, Distillation flask (Borosilicate glass), Condenser (Borosilicate glass), Conical Flask, Thermometer, Rubber Cork, Wire gouge, Rubber Tubing.

A	250ml
B	500ml
C	1000ml



GLG-24 SOXIET APP.

With Ext. Condenser, R.B. Flask with joint. (Borosilicate Glass)

A	300mm
B	400mm



GLG-25 CHROMATOGRAPHY SPRAYER

Flask capacity 250 ml with rubber below.



GLG-26 HOFFMAN VOLTMETER

Graduated limb and removable Platinum Electrode in thermocole packing. 50ml



BOROSILICATE GLASWARE



GLG-27 VICTOR MAYOR APPARATUS

Complete with copper jacket and inner glass tube.



GLG-28 LAND BERGER APPARATUS

For molecular weight determination. Boiling point method.



GLG-29 VISCOMETER

University Pattern (Borosilicate Glass).



GLG-30 STAINOMETER

Straight type (Borosilicate Glass).



GLG-31 MEMBRANE FILTER HOLDER

Assembly with support for membrane, Funnel, Flask and Cup. Standard Joint fitting. Membrane diameter 47mm, Funnel Capacity 300 ml, Flask capacity 1000ml.



GLG-32 PETRI DISH

A	5cm
B	7.5cm
C	10cm



GLG-33 AUTOMATIC BURETTE

Mounted on reservoir, complete with rubber bellow. Capacity of reservoir for 25 ml and 50ml burette is 2000ml.

A	25ml
B	50ml



GLG-34 CENTRIFUGAL TUBE PLAIN

A	10ml
B	15ml



BOROSILICATE GLASWARE

GLG-35 GAS ABSORPTION PIPETTE

With rubber cork, fitted in 75x10 mm test tube.



GLG-37 THEIL'S TUBE

A	18x150mm
B	25x150mm



GLG-39 VARIABLE VOLUME MICRO PIPETTE (STANDARD)

0.5-10, 5-50, 10-100, 20-200, 100-1000



GLG-36 TEST TUBE

Made from borosilicate glass, in pigeon hole packing.

A	100x12mm	box of 100 tubes
B	125x15mm	box of 100 tubes
C	150x15mm	box of 100 tubes
D	150x18mm	box of 100 tubes
E	150x25mm	box of 50 tubes



GLG-38 FIXED VOLUME MICROPIPETETTE

Range (ul) 5, 10, 20, 100, 200, 500, 1000



GLG-40 ANDERSON PIPETTE

Particle size determination pipette. Consists of a 500 ml graduated cylinder graduated from 0-20 cm and Fitted with 10 ml pipette with three way stop cock.



SODA GLASSWARE



GLS-01 BEAKER

Low form with Spout.

A	100ml
B	200ml
C	400ml
D	600ml
E	800ml
F	1000ml



GLS-02 FLASK

Round Bottom or Flat Bottom

A	100ml
B	150ml
C	100ml
D	250ml
E	500ml
F	1000ml



GLS-03 CONICAL FLASK

A	50ml
B	100ml
C	150ml
D	250ml
E	500ml
F	1000ml



GLS-04 VOLUMETRIC FLASK

With plastic stopper

A	100ml
B	250ml
C	500ml
D	1000ml



GLS-05 FUNNEL CONICAL

Shape (Long Stem)

A	5cm
B	6.25cm
C	7.5cm
D	10cm



GLS-06 PETRI DISHES

(with Grounded Edges)

A	5cm
B	7.5cm
C	10cm
D	15cm



GLS-07 REAGENT BOTTLE NARROW MOUTH

N/M F/S

A	30ml
B	60ml
C	125ml
D	250ml
E	500ml
F	1000ml



GLS-08 REAGENT BOTTLE WIDE MOUTH

W/M F/S

A	30ml
B	60ml
C	125ml
D	250ml
E	500ml
F	1000ml



GLS-09 ASPIRATION BOTTLE

With Ground stoppers.

A	1 lit.
B	2 lit.
C	3 lit.
D	5 lit.
E	10 lit.



GLS-10 BELL JAR (KNOBBED TYPE)

Knobbed

A	20x10cm (8x4inch)
B	22.5x15cm (9x6inch)



GLS-11 BELL JAR (STOPPERED TYPE)

Stoppard

A	20x10cm (8x4inch)
B	22.5x15cm (9x6inch)



GLS-12 DROPPING BOTTLE

T.K. Pattern

A	30ml
B	60ml
C	125ml



SODA GLASSWARE



GLS-13 GAS JAR

With ground flange & foot.

A	15x5cm
B	20x5cm
C	25x5cm
D	30x5cm



GLS-14 DESICCATORS

With ground glass cover knobbed. And perforated porcelain disc.

A	10cm
B	12.5
C	15cm
D	20cm
E	25cm



GLS-15 MEASURING CYLINDERS

Graduated. With plastic base.

A	5ml
B	10ml
C	25ml
D	50ml
E	100ml
F	250ml
G	500ml
H	1000ml
I	2000ml



GLS-16 KIPPS APP.

Gas Generating App. Complete with delivery tube, thistle funnel and rubber corks.

A	250ml
B	500ml
C	1000ml



GLS-17 CALCIUM CHLORIDE TOWER

250ml



GLS-18 WOULF BOTTLES

A	250ml
B	500ml



GLS-19 CAVITY BLOCKS

A	40x40mm
B	55x55mm



GLS-20 PESTLE & MORTAR GLASS

A	9cm
B	11.5cm
C	15cm



GLS-21 PNEUMATIC TROUGH

A	6x4
B	8x4
C	10x4
D	12x5



GLS-22 SPIRIT LAMP GLASS

A	60ml
B	125ml



GLS-23 SPIRIT LAMP HEXAGONAL

A	180ml
B	250ml
C	500ml
D	1000ml



GLS-24 SPECIMEN JAR

with plastic cap



GLS-25 SPECIMEN JAR RECTANGULAR

A	15x10x5cm	F	22x15x10cm
B	20x10x5cm	G	26x15x10cm
C	20x12x10cm	H	26x17x9cm
D	20x20x12cm	I	30x17x9cm
E	20x20x16.5cm	J	25x25x12cm



GLS-26 REAGENT BOTTLE NARROW MOUTH AMBER COLOUR

NM, FS Amber Colour

A	125ml
B	250ml
C	500ml



GLS-27 GAS JAR 3"



SODA GLASSWARE



GLS-28 GLASS TUBES & RODS

4mm to 8mm



GLS-29 COUPLIN JAR

Jar for 5 to 10 slides



GLS-30 WATER LEVEL

On stand



GLS-31 DROPPER

with Rubber Teat

A	4"
B	6"
C	8"



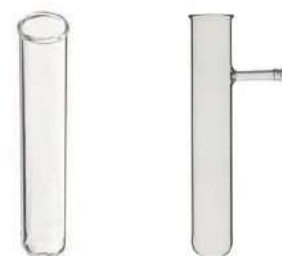
GLS-32 MELTING POINT CAPILLARY

On stand



GLS-33 IGNITION TUBE

with Rubber Teat



GLS-34 TEST TUBE

From neutral glass in pigeon hole packing.

A	100x12mm	box of 100tubes
B	125x15mm	box of 100tubes
C	150x15mm	box of 100tubes
D	150x18mm	box of 100tubes
E	150x25mm	box of 50tubes



GLS-35 WINCHESTER BOTTLES

Stoppered.

A	2 lit.
B	3 lit.
C	5 lit.
D	10 lit.



mathematics

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MAT-01 TIME TEACHER

Demonstration type, overall size 60x40cm with table stand, to teach 24-hours time concept and format.



MAT-02 TIME TEACHER, HANDY

To teach time concept.
Based on 12-hours format.
Based on 24-hours format.



MAT-03 CLOCK FACE DIALS

Simple time learning tool.



MAT-04 CLOCK STAMP

Rubber stamp for teachers to fix impression of clock in student's note book for exercise.



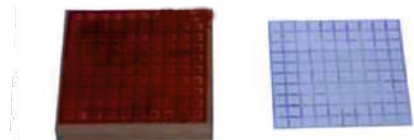
MAT-05 DICE LARGE, WOODEN

Large size, wooden, to learn probability.



MAT-06 BASE BOARD INK STAMPS

Set of two stamps for teachers to fix impression of 1-100 number grid as well as blank 100-grid impression in student's notebook for exercise.



MAT-07 CIRCLE FRACTION (MAGNETIC)

A set of circle fraction 1,2,3,4,5,6,8 & 10 using Magnets for classroom demonstration to solve.

- a) Multiplication
- b) Addition
- c) Subtraction
- d) Division
- e) Comparison of fraction etc



MAT-08 TANGRAM PUZZLE SET OF SEVEN



MAT-09 CIRCLE FRACTION (NON - MAGNETIC)

With base-keeper, set of circle fraction as above but non-magnetic, supplied with one keeper for placing fractions.



MAT-11 RECTANGULAR FRACTION (MAGNETIC)

Set of rectangular colored pieces representing halves, thirds, fourths, fifths, sixths, eighths, tenths and one whole



MAT-13 ABACUS SENIOR 5-ROWS

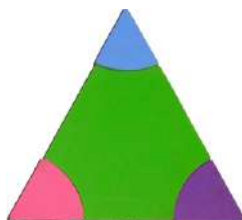
Each row contains 10 colored beads of size 38mm. provided with mathematical signs to solve.

- a) Place Value Problems
- b) Addition & Subtraction Problems
- c) To read Decimal Numbers



MAT-15 SUM OF 3 ANGLES OF TRIANGLE IS 180 (MAGNETIC)

Magnetic, class room demonstration to prove the principle. Set of 4 parts.



MAT-10 FRACTIONS KEEPER SPARE



MAT-12 SUBTRACTION OF 2-DIGIT NUMBER (MAGNETIC)

Magnetic wall hanging board to solve two digit subtraction problems with helps of squares.



MAT-14 ABACUS-10 ROWS PLACE VALUE BOARD

Same as 1626 but 10-rows to solve whole number to billion, decimal to 10 thousand and number system including comma, decimal points etc.



MAT-16 SUM OF 4 ANGLES OF QUADRILATERAL IS 360 (MAGNETIC)

To prove every quadrilateral has an angle sum total of 360°. Set of 5 parts.



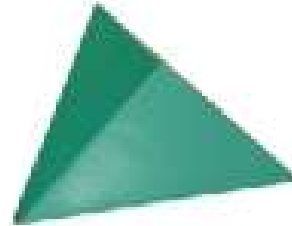
MAT-17 EQUAL CHORDS OF CONGRUENT CIRCLES SUBTEND EQUAL ANGLES

Set of 5 parts.



MAT-18 FINDING THE INCENTER OF DIFFERENT TYPES OF TRIANGLES

Magnetic set containing 4 types (Right Angle, Acute angle, Obtuse Angle, Equilateral Triangle) Set sectioned in parts.



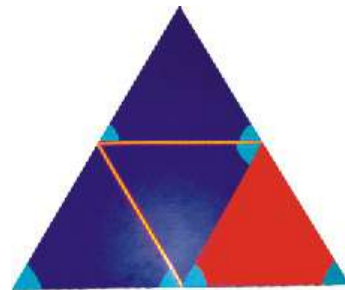
MAT-19 CIRCUM CENTRE OF A TRIANGLE (MAGNETIC)

Contains 3 types (Right Angle, Obtuse Angle & Acute Angle triangle) set sectioned in parts.



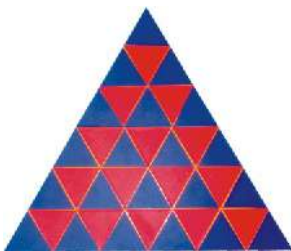
MAT-20 MID-POINT THEOREM

To prove the principle



MAT-21 RATIO OF AREA OF SIMILAR TRIANGLES (MAGNETIC)

Set of 4-parts.



MAT-22 VERIFICATION OF $A^2 - B^2$ (MAGNETIC)

Magnetic equipment along with theoretical proof. Set of 4 parts



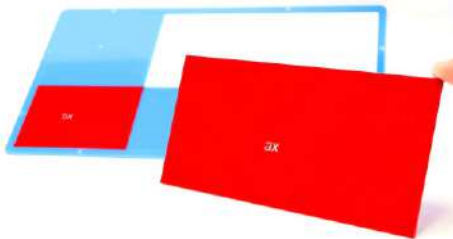
MAT-23 TRIANGLE EQUAL IN AREA OF PARALLELOGRAM (MAGNETIC)

Set of 3-parts.

MAT-24 TRIANGLE EQUAL IN AREA OF SQUARE (MAGNETIC)

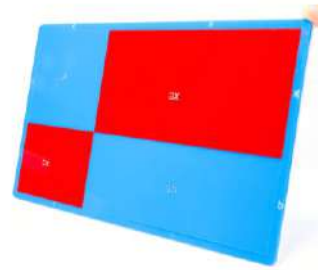
Set of 5-parts.

MAT-25 VERIFICATION OF $(A + B)^2$



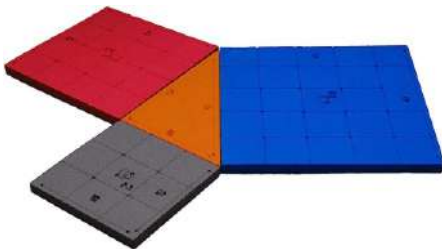
MAT-26 VERIFICATION OF ALGEBRAIC IDENTITY $(A + B)^2$

Colourful, clearly marked Comprising of 9 parts.



MAT-27 PYTHAGORAS THEOREM (MAGNETIC)

Magnetic equipment to verify square on the hypotenuse is equal of squares on the other two sides.



MAT-28 GEO BOARD DOUBLE SIDED

Sturdy board with square pin array on one side and circular pins fitted on other side, supplied with rubber bands.



MAT-29 GEOMETRICAL SHAPES

Magnetic Set of 12 shapes to study basic Geometrical shapes like triangle, quadrilateral, polygon etc.



MAT-30 VOLUME RELATION BETWEEN CONE & CYLINDER

Cone and Cylinder fabricated from sheet metal duly painted. To demonstrate volumetric relationship



MAT-31 VOLUME OF CYLINDER 2 PARTS

A set of two cylinder fits into the large one.



MAT-33 HEXAHEDRON MODEL

Large geometrical figure, six equal triangular faces, construction as above.



MAT-35 PYRAMID MODEL 2 PARTS

Large triangular base pyramid section of two parts.



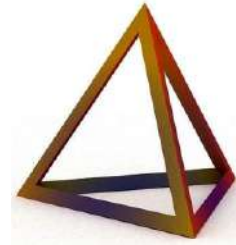
MAT-37 PYRAMID MODEL SECTION FROM A CUBE

Large section of two parts showing pyramid section.



MAT-32 TETRAHEDRON MODEL

Large geometrical figure, four equal triangular faces, attractively colored, made of medium density fiber board.



MAT-34 OCTAHEDRON MODEL

Construction as 1646. Eight equal triangular faces.



MAT-36 PYRAMID MODEL, VERTICAL CROSS SECTION

Two parts showing in vertical axis.



MAT-38 CUBE MODEL, SECTION IN TWO RIGHT ANGULAR PRISMS

Cubical shape, section in two parts making two right angular prisms from a cube.



MAT-39 CYLINDER MODEL IN TWO SEMI CYLINDERS

Large cylinder having vertical section of two parts.



MAT-41 TRUNCATED CONE MODEL

Conical shape with top angular cut.



MAT-43 SPHERE MODEL, SECTION IN TWO HEMISPHERE

15cm.dia. made out of medium density fiber board, sphere is sectioned in two parts.



MAT-45 GEOMETRICAL MODELS WOODEN

Set of 12, wooden size 10x15cm. Technically perfect.



MAT-40 FRUSTUM OF CONE MODEL

Large conical shape with top cut parallel to base showing frustum.



MAT-42 CONE MODEL, SECTION IN 5 PARTS

Large size having 5 parts showing truncated, frustum, hyperbola and parabola.



MAT-44 GEOMETRICAL MODEL

10cm plastic set of 12 Single Colored.



MAT-46 GEOMETRICAL MODELS PLASTIC

Large size 15x30cm, set of 12 made from medium density fiber board, multi colored.



MAT-47 AREA OF A PARALLELOGRAM (MAGNETIC)

Set of 3 Magnetic parts for demonstration on a magnetic board along with theoretical proof with instruction manual



MAT-49 AREA OF RIGHT ANGLE TRIANGLE (MAGNETIC)

Set of 4 Magnetic parts with instruction manual.



MAT-51 AREA OF ACUTE ANGLE TRIANGLE (MAGNETIC)

Set of 3 Magnetic parts with instruction manual.

MAT-53 AREA OF OBTUSE ANGLE TRIANGLE (MAGNETIC)

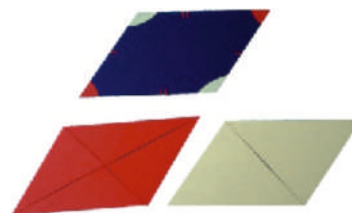
Set of 3 Magnetic parts with instruction manual.

MAT-54 AREA OF TRAPEZIUM (MAGNETIC)

Set of 4 parts with instruction manual.

MAT-48 PROPERTIES OF PARALLELOGRAM (MAGNETIC)

Set of 5 Magnetic parts showing; Angle, sides, diagonal properties for class room demonstration with instruction manual.



MAT-50 AREA OF RHOMBUS (MAGNETIC)

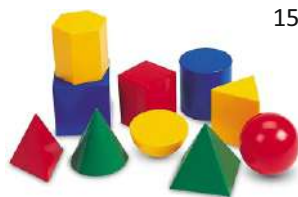
Set of 5 Magnetic parts to calculate area of rhombus with instruction manual.



MAT-52 3-D GEOMETRICAL MODELS SPARE

Made out of medium density fiber board, multi colored:

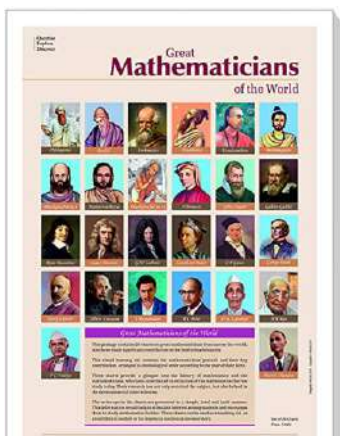
- Cube : Size 15x15cm.
- Cuboids : Size 15x15x30cm.
- Sphere : Size Dia. 15cm.
- Pyramid Triangular : Base Size 15x30cm.
- Pyramid Hexagonal : Base Size 15x30cm.
- Pyramid Square : Base Size 15x30cm.
- Cone : Circular base dia. 15cm and conical height 30cm.
- Cylinder : Two circular faces of dia. 15cm and height 30cm.
- Prisms Pentagonal : Two fives sides polygon faces and five rectangular faces. Overall size 15x30cm.



MAT-55 PORTRAITS OF MATHEMATICIANS

Size 31x43cms. With PVC bindings

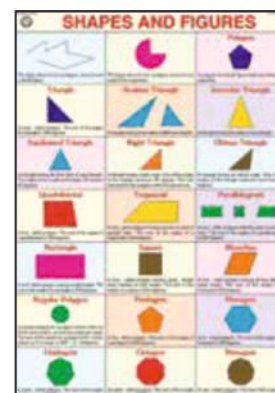
- a) Archimedes b) George Cantor c) Rene Descartes
- d) Euclid (Eukleides) e) Leonhard Euler
- f) Pierre de Fermat g) J.C. Friedrich Gauss
- h) Lagrange i) Laplace j) Leibniz
- k) Lady Love Lace l) Issac Newton m) Pascal
- n) Pythagoras o) Zeno of Elea p) Riemann
- q) Ramanujan r) Aryabhata s) Varah Mihir
- t) Bhaskaracharya



MAT-56 MATHEMATICAL CHARTS POLY. ART

Based on a mathematical syllabus printed on poly art material size 75x100cm. Covering the following heads.

- 1) Time Number
- 2) Measure
- 3) Shape
- 4) Geometry
- 5) Data
- 6) Fraction, Decimal & Percentage
- 7) Formulae for shapes
- 8) Money
- 9) Patterns
- 10) Algebra
- 11) Investigation
- 12) Plane figures (Triangles)
- 13) Plane figures (Quadrilateral)
- 14) Plane figures (Polygon & Circle)
- 15) 3-D figures
- 16) Co-ordinate Geometry
- 17) Transformation Geometry
- 18) Trigonometry
- 19) Trigonometry Ratios and value
- 20) Graphs of Trigonometric function



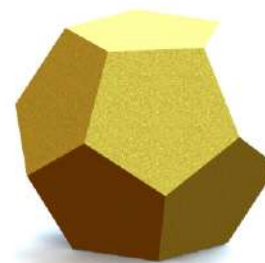
MAT-57 CLINOMETERS'

Mathematical Instruments to measure the angle of elevation /depression of an object.



MAT-58 3D MODEL DODECAHEDRON

Made of medium density fiber board 12 Pentagonal faces.



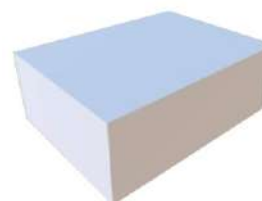
MAT-59 3D MODEL ICOSAHEDRONS

Made of medium density fiber board 20 triangular faces.



MAT-60 3D MODEL PARALLELEPIPED

Made of medium density fiber board section of two parts (Two Equilateral Prism).



INDEX

Basic Physics

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MBP-149	ANALYTICAL BALANCE	22	MBP-120	FARADAYS BUTTERFLY NET	17
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Lab Equipment Services

Leverage our expert-level services to maximize your productivity.

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- **Extended Warranty** - upgrade or extend your original equipment warranty to ensure priority service and support at fixed costs. Warranty covers equipment replacement, depot repair, as well as on site repair.
- **Installation** - coordinate equipment installation with product shipment to ensure precise functionality, and practical hands-on user training.
- **Support Plans** - an affordable range of service offerings to maintain equipment, proactively control service costs and maximize productivity.
- **Calibration** - assurance of consistent and accurate equipment performance.
- **Field and Depot Service** - certified manufacturer services and qualified OEM parts.



Service offerings may vary by regions, please ask your sales representative about the best option for your lab!

A Care and Maintenance Guide for Lab Equipment

Lab equipment is expensive and often fragile. For commercial laboratories and higher education research facilities alike, it is essential to keep your equipment functioning optimally for as long as possible. Well cared for equipment provides more reliable and consistent data and has a positive impact on your lab's productivity.

Research laboratory equipment can be challenging to maintain without the proper training. Hiring qualified professionals to keep your equipment working correctly is an integral part of your facility's quality assurance.

However, for everyday care and maintenance of lab equipment and tools, there are a few things you can do yourself to keep your lab running smoothly. What follows are general care and maintenance considerations for lab equipment.



Equipment Maintenance Documentation

The detailed collection of all information relating to each piece of equipment in your lab is vitally important for laboratory maintenance and management. It is a centralized archive that you can refer to in order to understand your equipment's history. It is also critical to log your equipment maintenance so that you can keep a regular schedule. For each piece of lab equipment, the maintenance log should include:

- Equipment name
- Model number
- Manufacturer
- Purchase date and location
- Warranty information
- Location in the lab
- Date of repair work
- Type of repairs performed
- Parts replaced
- Any tests or adjustments performed

Keep your equipment maintenance documentation as digital file with appropriate backup protocols. Your organization may allow cloud-based storage as part of your disaster recovery plan. The comprehensive maintenance document allows you to collect data such as repair costs, material durability, and equipment efficiency to help you make better decisions about the brand and type of equipment you need for your lab.

Cleaning

Keeping your lab equipment clean means that it will always be ready for use when you need it, and ensures that no impurities contaminate samples or skew data. Lab equipment should be cleaned after every use. When cleaning equipment, ensure that:

- Cleaning reagents are specifically formulated for use in a laboratory.
- The manufacturer's instructions are followed carefully as some pieces of equipment may require special solvents, cleaning tools, or drying procedures.

To ensure that each piece of lab equipment is cleaned regularly and with the correct procedure, lab managers should develop a detailed cleaning schedule with instructions. Place the schedule in a central location accessible to staff or a visible position next to the corresponding piece of equipment.

Repairs

Lab equipment is expensive, and for higher education institutions with budget restrictions, it is vital to make your lab equipment last as long as possible. Repairs and refurbishment prolong the life of your equipment, saving money for your facility. To determine whether your equipment needs repairs or refurbishment, consider the following:

- Can repairs be made by trained staff or do they require a professional?
- Is the machine that needs repairs a source of danger to lab staff?
- Does the equipment simply need refurbishing with polishing, lubrication, and small parts replacement?

Unfortunately, in some cases, equipment that cannot be repaired or refurbished must be replaced. We suggest that you buy new equipment from a reputable supplier with excellent technical support. The better the quality of your equipment, the easier it will be to maintain



Laboratory Safety Symbols

- **General warning:** sign age reminds us that the area where you work may contain risks and you must work accordingly.
- **Flammable material:** This mark usually appears in laboratories and means that there may be flammable materials.
- **Toxic substance:** You will find entry areas where substances that may harm humans are kept.
- **Low / High Temperature:** The icon indicates an area with low/high temperature.
- **Non-ionizing radiation:** You will find this symbol in areas where there is non-ionizing radiation.
- **Oxidizing material:** oxidizing substances such as bromine, chlorates, perchloric acid and peroxides Danger of laser beam.
- **Danger of explosives:** This symbol indicates that chemicals with explosive properties exist in the area.



Guaranteed Products!

MVTEX Product are Guaranteed to be free from defect in material and workmanship for one year from the date delivery, and if not, we will replace it.

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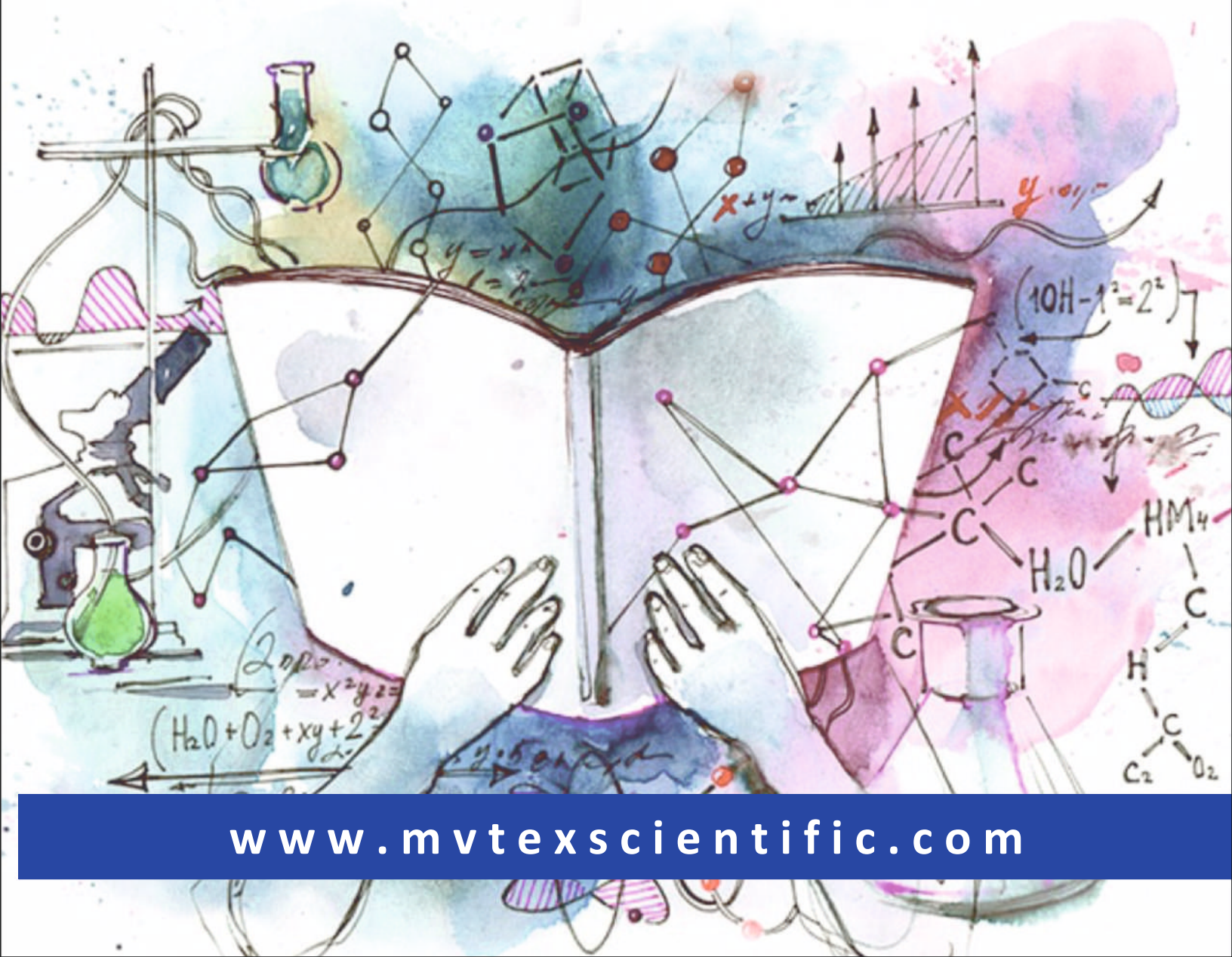

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