VIVEKANANDA COLLEGE

• Estd : 1985 •

P.O. ALIPURDUAR, DIST. ALIPURDUAR

Pin : 736121, Phone & FAX : 03564 - 274705

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QUOTATION
TENDER NOTICE

Sealed tender is invited by the undersigned from bonafied Distributor/Dealer for Physics equipments suppliers. The equipments carrying charge borne by the supplier. Sealed quotation may be submitted within 10(Ten) days from the tender notice. Supplier shall have to deliver the equipment within 10(Ten) days from the date of receiving supply order details may be seen from the college website (www.vivekanandacollegealipurduar.in). The Undersigned has the right to reject or accept any quotation without assigning any reason whatsoever.

VICE PRINCIPAL
VIVEKANANDA COLLEGE
ALIPURDUAR

Vice-Principal
Vivekananda College
P.O.& Dist: Alipurd

B.SC General
Semester -I

SL No	EQUIPMENTS	UNIT
01.	**Vernier Calipers** – Brass Body	1
02.	**Screw Gauge** – Brass Body	1
03.	**Travelling Microscope** – Two Motion T-Shape: Model with horizontal and vertical scales. Machined and interground on the guide ways of horizontal bed. The carriage is fitted with vertical brass pillar carrying a microscope tube on a ground fitted vertical carriage. The base is fitted with two leveling screws. Horizontal scale is 18 cms. And vertical 16 cms. Long. Both the horizontal scale and vertical carriages are provided with slow motions which travels app. 3 cms in one traverse. Microscope tube is provided with rack and pinion. A milky white Perspex platform is provided on the horizontal bed. Vernier constant 0.001 cms. Complete in well polished wooden case. CAT NO : DR-101	1
04.	**To determine the height of a building using a Sextant**. The total setup complete with the flowing a) Sextant standard pattern with stand – 160mm radius, designed to give maximum accuracy. Made from a strip	

	of stainless steel so inlaid in the circular arc as to be considered integrated with it. b) Measuring Tape five meter long	1 1
05.	**To determine the Moment of Inertia of a Flywheel.** The total setup complete with the flowing a) Fly Wheel - Comprising of carefully machined and balanced cast iron wheel of about 20cm in dia and 4.4cm thick, and steel spindle supported on the ball bearings in strong iron brackets. The sides of the wheel is chrome plated and is marked with a thick red line. A pointer is fixed to one of the brackets. Diametric holes is drilled in the shaft to take a pin and cord. The base is provided with four holes so that the apparatus can be fixed on a wall complete with cord & hook, with weight b) Stop Watch – Digital c) Measuring Tape – d) Slide Calipers – Brass body –	1 1 1 1
06.	**To determine Young's Modulus of a Wire by Optical Lever Method** The total setup complete with the flowing a) Young modulus wire by Optical Lever method – Stand type with 250gm x5 slotted weight. b) Reading Telescope – highly improved apparatus mounted on a 1" dia. Pillar of 18" length fitted on a heavy cast iron circular base with three leveling screws. With the help of a special arrangement applied to the carriage, the telescope can be rotated in a horizontal as well as in vertical plane. The telescope is fitted with achromatic objective and is focused by rack and pinion arrangement. It has a focal range from 3 feet to infinity. Complete with Perspex scale and holder. Both brass tubes	1 1
07.	**To determine the Elastic Constant Wire**	

	by Searle's method. The total setup complete with the flowing a) Rigidity Apparatus (Searle's Pattern) with stand – One can find the modulus of rigidity and Young's modulus for the material of a wire by Searle's method. The 30cm long wire under test is connected to two brass rods about 30cm long at their mid points by two screws fitted at the ends of thfe wire. The rods are suspended from hooks. Complete with three test wires and connecting screws. b) Screw gauge – Brass Body c) Vernier Calipers – Brass Body d) Stop Watch – Digital e) Spring Balance –	1 1 1 1 1
08.	**To determine the value of g using Bar Pendulum.** The total setup complete with the flowing a) Compound pendulum (Iron C.P.) – It consists of a powdered coated steel bar of dimensions 100x3.75x0.5cm with a number of equidistant holes drilled along its length at equal intervals of 5cm. The pendulum is provided with two removable knife edges passing through anyone of the holes. Complete with wall bracket & two removeable knif e edges. b) Stop Watch – Digital c) Reading Telescope – Highly improved apparatus mounted on a 1" dia pillar of 18" length fitted on a heavy cast iron circular base with three leveling screws. With the gelp of a special arrangement applied to the carriage, the telescope can be rotated in a horizontal as well as in vertical plane. The telescope is fitted with achromatic objective and is focused by rack and pinion arrangement. It has a focal range from 3 feet to infinity. Complete with Perspex scale and holder. Bo th brass tubes.	1 1 1
09.	**To determine the value of g using Kater's Pendulum.**	

	The total set up is complete with the following a) Katter's Reversible Pendulum – Chrome plated brass rod of 1200mm. long & 11 mm/ diameter with one pair small & large chrome plated brass weights sliding along steel rod having clamping arrangement & another pair of identical shaped bodies made of ebonite two steel knife-edges in metal holder fixed on a metal bracket which has attachment suitable for wall mounting. b) Reading Telescope – Highly improved apparatus mounted on a 1" dia pillar of 18" length fitted on a heavy cast iron circular base with three leveling screws. With the gelp of a special arrangement applied to the carriage, the telescope can be rotated in a horizontal as well as in vertical plane. The telescope is fitted with achromatic objective and is focused by rack and pinion arrangement. It has a focal range from 3 feet to infinity. Complete with Perspex scale and holder. Both brass tubes. c) Stop Watch – Digital d) Meter Scale – Wooden 1meter long	1 1 1 1

10.	**To determine g and velocity for a freely falling body using Digital Timing Technique.** The total setup complete with the flowing a) It has an electronics timer unit on which three are four 4 mm sockets, two for gates and another two for solenoid and a toggle switch for release and catch the ball. The other unit consists of heavy retort stand. The said retort stand carries two base boards. Out of them, one is solenoid holding base of size 149x97x113 mm providing with two banana sockets of 4mm. when the toggle switch is on 'Catch' position, the current is flowing in solenoid and it produces magnetic field and a steel ball make a attraction towards it. Another base connected to retort	1

	stand is of steel base on which the ball is dropped having base of size 115x60x2mm. as well as switch is positioned on rel ease, their, breaking the contact between solenoid and ball is dropped on steel plate and there is some time displayed on the timer. Supplied with steel ball of 12 mm & 18mm diameter.	

B.SCGeneral
Semester - II

SL No	EQUIPMENTS	UNIT
01.	**Digital Multimeter MODEL NO : 6030** 6000 Counts Backlit LCD, T - RMS Multimeter, Auto Power Off, Data Hold, MAX/MIN, AC / DC Voltage, AC/DC Current 20A, Resitance, C apacitance, Frequency, Transistor Test, Diode and Continuity Test	1
02.	**Resistance Box -** Fitted with rectangular brass metal heavy blocks and spray painted box. Coils are connected with double nut system. Accuracy ±0.2 to ±0.1% precision quality (Manganine Coil) a) 1 Ω - 10000Ω - b) 0.1 Ω - 10 Ω - c) 1M Ω - 5M Ω - **(dial type single dial)**	1 1 1
	Standard Resistance Box – Four terminal a) 1 Ω- b) 5 Ω- c) 10 Ω-	1 1 1 1

03.	**Ballistic Galvanometer** – Coil resistance – 100 ohms,Time period – 12 sec. sensitivity – 300 m.m. per micro coulomb at 1-meter distance	1
04.	**Determine a high resistance by leakage method using Ballistic Galvanometer.** a) Ballistic Galvanometer – Coil resistance – 100 ohms,Time period – 12 sec. sensitivity – 300 m.m. per micro coulomb at 1-meter distance b) Resistance Box – High Resistance Box- Dial type – 1 MΩ to 20MΩ	1 1

	c) Plug Commutator – d) Lamp & Scalearrangement – Extra superior quality and heavy in construction. The lamp house is of cast aluminium, machine turned and finished is pleasing colour it is fitt ed with 6 volt bulb and suitable transformer to work the unit on 220 volts AC current. Translucent Perspex scalegraduatedin25-0-25cmisused in this unit. Complete on heavy cast iron standwithadjustablebracketsfor lamp house and scale. e) DCC Wire –500gm f) Plug Key – Two Way g) Variable DC Power Supply – 0- 12V/1amp	1 1 1 1 1
05.	**Measurementoffieldstrength Bandits variation in a Solenoid (Determine** **dB/ dx)** Apparatus consists of the following : **MODEL NO : MFM-01** a) Digital Gaussmeter– Range : 0-200G Resolution : 0.1G Accuracy :±0.5% Display: 3½digit 7segmentLEDwith auto polarity b) Two Coils Diameter: 200mm Number of turn :1000 c) Constant Current Power Supply Current: 0-0.5A Smoothlyadjustable LineRegulation: ±0.2%for10% mains Variation. LoadRegulation: ±0.2%for0tofull load Display: 3½digit 7segmentLED Display Protection : Against overload/ short circuit. Thetwocoilsaremountedonplatform onecoil isfixedand other coilmoves smoothlyonarailalongtheaxisofthe coils.	Set
06.	**Tostudythecharacteristicsofaseries RC Circuit.** (C.R. Characteristics Appa ratus) – Completewithinbuilt TwoDigital20V	

	metre, Regulated power Supply 0 -20V DC, charging & discharging switch, one dial type resistance box (.1 to 10MΩ), One dial type capacitance Box (1 t 100μf), circuit diagram in front panel board, all 4mm connecting lids heavy metal base, manual & connecting lids etc.	1
07.	**To study response curve of a Series/Parallel LCR circuit and determine its (a) Resonant frequency, (b) Impedance at resonance, (c) Quality factor Q, and (d) Band width. LCR Resonance Kit – (Series & Parallel Combined)** Complete with the following - One 20 volt AC digital meter, one 20mA AC digital meter, Resistance (50,100,200Ω), Capacitor (.1, .22, .47μF), Inductance (10, 30mH) inbuilt 10 to 100 KHz Oscillator with frequency multiplier (10,100,1K,10K), all 4mm connecting lids heavy base, Attach with bread board, circuit diagram, manual & connecting lids etc.	1
08.	**To study response curve of a Series/Parallel LCR circuit and determine its (a) Resonant freque ncy, (b) Impedance at resonance, (c) Quality factor Q, and (d) Band width. LCR Resonance Kit – (Series & Parallel Combined)** Complete with the following - One 20 volt AC digital meter, one 20mA AC digital meter, Resistance (50,100,200Ω), Capacitor (.1, .22, .47μF), Inductance (10, 30mH) inbuilt 10 to 100 KHz Oscillator with frequency multiplier (10,100,1K,10K), all 4mm connecting lids heavy base, Attach with bread board, circuit diagram, manual & connecting lids etc.	1
09.	**To determine an unknown Low Resistance using Carey Foster's Bridge.** The total Set up is Complete with the following : -	

	a) Standard Low Resistance Four terminal b) Rheostat - 116Ω/1.8Amp c) Table Galvanometer -30-0-30MR-100 d) Resistance Box -10000Ω e) Power Supply – 0-12V/ 1Amp DC f) plug key – Two way g) Carry Foster bridge - Complete with 2gap or 4gap. Fitted with brass jockey & complete with teak wood base.	1 1 1 1 1 1 1
10.	**Verification of Thevenin, Norton's and Maximum power transfer theorem's –** Complete with the fofllowing – One digital selectable (2V/ 20V) DC voltmeter, One digital 100mA ammeter, regulated power supply (0-5V/100mA), two load resistance (0x10Ω), (0x100Ω), all 4mm connecting lids, heavy metal base, with circuit diagram, manual & connecting knob, etc.	1
	To verify the Superposition, and Maximum power transfer theorems. Complete with the flowing – one selectable digital miliammeter (20mA/ 200mA) & one digital voltmeter. Inbuilt power supply with load regulation. all 4mm connecting lids, heavy metal base, with circuit diagram, manual & connecting knob, etc.	1