

Sandip University
School of Engineering and Technology
Department of School of Science

PHYSICS LAB EQUIPMENT DETAILS

S.No.	Item description	Location Department	Value (in Rs.)			Present Condition	Date of Purchase
			Quantity	Value /Unit	Total Value		
1	Vernier Caliper, Item Type: L.C.0.001 cm, steel chrome plated	Physics	2	550	1100	Working	21/2/17
2	Screw Gauge, 20x1 mm	Physics	2	450	900	Working	21/2/17
3	Traveling Microscope	Physics	2	8000	16000	Working	21/2/17
4	Simple Pendulum	Physics	2	1500	3000	Working	21/2/17
5	Compound Pendulum	Physics	2	900	1800	Working	21/2/17
6	Searl Apparatus	Physics	2	1500	3000	Working	21/2/17
7	Stop Watch	Physics	2	830	1660	Working	21/2/17
8	Digital Stop Watch	Physics	2	3990	7980	Working	21/2/17
9	Study of multimeters (all AC, DC ranges, Least Count)	Physics	2	1317	2633	Working	21/04/20 17
	Analog Multimeter, low cost	Physics	2	0	0	Working	21/04/20 17
10	Determination of frequency of AC mains using sonometer and electromagnet complete setup consist of the following, 1) Sonometer 2) Slotted weights 500x5. 3) Stepdown transformer and electromagnet. 4) Stand for electromagnet.	Physics	2	4086	8172	Working	21/04/20 17
11	Determination of time constant of R-C circuit using charging and discharging of condenser through resistor. Charging and discharging of capacitor DC With two digital meters, variable DC voltage source, patch cords, multiple DC capacitors, both circuit in one board.	Physics	2	2452	4903	Working	21/04/20 17
12	Study of LR circuit: With complete circuit and one digital multimeter ,patch cords.	Physics	2	2452	4903	Working	21/04/20 17
13	Study of CR circuit: With complete circuit and one digital multimeter,patch cords.	Physics	2	2452	4903	Working	21/04/20 17

14	Study of LCR circuit With complete circuit and one digital multimeter ,patch cords, (Function generator)	Physics	2	2452	4903	Working	21/04/2017
15	Study of phasor diagrams of series LCR circuit	Physics	2	2452	4903	Working	21/04/2017
16	Study of Krichhoff's current law	Physics	2	2452	4903	Working	21/04/2017
17	Study of Krichhoff's voltage law	Physics	2	2452	4903	Working	21/04/2017
18	Faraday's Induction Experiment (Demonstration or Animation form presentation)	Physics	2	7082	14165	Working	21/04/2017
19	To study Self Inductance of a Coil by Anderson's Bridge using AC	Physics	2	10624	21247	Working	21/04/2017
20	To study the Mutual Inductance of Two Coils by Absolute method using a B.G.	Physics	2	4903	9806	Working	21/04/2017
21	Complete Experiment Kit for the measurement of coefficient of absorption of sound for different materials (cork, thermocol, mica, paper etc.)	Physics	2	12744	25488	Working	Purchase order raised
22	Complete Experiment Kit for the determination of the decrement factor by using Logarithmic decrement (in air / water).	Physics	2	5664	11328	Working	Purchase order raised
23	Resonance Pendulum: Velocity of sound by phase shift method.	Physics	2	8496	16992	Working	Purchase order raised
24	Study of oscillations under gravitational and magnetic field.	Physics	2	3717	7434	Working	Purchase order raised
25	Measurement of sound pressure level	Physics	2	9204	18408	Working	Purchase order raised
26	Complete Experiment Kit for the determination of frequency tuning fork using resonance tube.	Physics	2	3717	7434	Working	Purchase order raised
27	Ultrasonic interferometer for the determination of compressibility of given liquid	Physics	2	35164	70328	Working	Purchase order raised
28	Complete Experiment Kit for the determination of frequency of sound by using Kundt's tube.	Physics	2	17110	34220	Working	Purchase order raised

29	Complete Experiment Kit for the determination of reverberation time	Physics	2	17110	34220	Working	Purchase order raised
30	Complete experiment kit for the verification of Norton's theorem for DC circuits excluding DMM.	Physics	2	3186	6372	Working	Purchase order raised
31	Complete experiment kit for the verification of Thevenin's theorem for DC circuits excluding DMM.	Physics	2	3186	6372	Working	Purchase order raised
32	Complete experiment kit to study the characteristics of p-n junction diode excluding DMM.	Physics	2	3186	6372	Working	Purchase order raised
33	Complete experiment kit to study the characteristics of Zener diode excluding DMM.	Physics	2	3186	6372	Working	Purchase order raised
34	Complete experiment kit to study the output characteristics of a transistor in C-E configuration (for at least 3 base currents) and to determine voltage gain.	Physics	2	3186	6372	Working	Purchase order raised
35	Complete experiment kit to study the frequency response of Common emitter amplifier and to determine band width.	Physics	2	3186	6372	Working	Purchase order raised
36	Complete experiment kit to study Phase Shift oscillator (using transistor) for frequency measurement	Physics	2	3186	6372	Working	Purchase order raised
37	Dark and Illuminated Current-Voltage Characteristics of Solar Cell and Spectral Response Measurement of Solar cell: PV module kit, Sliding Rheostat (200 ohms, 2.5 Amps), Pouch (Extra accessories like cables, pins), Solar cell for radiation measurement.	Physics	2	3677	7355	Working	21/04/2017

38	To study and measure the frequency response of FET amplifier: Power Supply, N-channel JFET 2N5457, Oscilloscope, Resistor 10k Ω (1/4W), 2 Digital Multimeter, 1 Resistor 3.3k Ω (1/4W), Breadboard, 1 Resistor 3.9k Ω (1/4W), 1 Function Generator, 1 Resistor 22k Ω (1/4W), 1 Mylar Capacitor 0.47 μ F, 2 Mylar Capacitor 0.1 μ F, 1 Mylar Capacitor 0.01 μ F, 1 50 k Ω potentiometer.	Physics	2	29328	58657	Working	21/04/2017
39	To study Drain Characteristics and Transfer Characteristics of a FET: JFET (BFW11/ BFW10), 2 Resistor (1K ,100K), Bread board, Dual DC Regulated Power supply (0 - 30 V), two Digital Ammeters (0 - 200 mA), Digital Voltmeter (0 - 20V), Connecting wires (Single Strand).	Physics	2	4358	8717	Working	21/04/2017
40	Op-amp (using Negative Feedback) as Difference, Summing amplifier, Integrator and Differentiator: variable regulated low voltage dc source, AFO, CRO, DMM, IC 741 op-amp, Bread board and wires.	Physics	2	29328	58657	Working	21/04/2017
41	Op-amp(using Positive Feedback) as Function Generator (Triangular and Square): Op-amp (741), two diodes (1N914), resistors (10k Ω and 3 100k Ω) two 10nF capacitors, function generator, oscilloscope, digital multimeter, DC power supply, breadboard.	Physics	2	29328	58657	Working	21/04/2017

42	Design, build and test first order & second order low pass and high pass filter using Op-amp: IC μ A741, Signal generator, Resistors (1K ohms), Capacitor (0.1 μ F), +/- 15V DC Power Supply, Digital Storage Oscilloscope & probes, Connecting wires & Bread Board.	Physics	2	32779	65558	Working	21/04/2017
43	To design and verify the following digital circuits using basic gates: i) S-R flip-flops, ii) J-K flip-flops, iii) 4 input multiplexer iv) 7-segment demultiplexer v) Mod-5 and decade counters: ICs for different logic gates, Logic Gates Circuit Trainer, connecting wires.	Physics	2	6538	13075	Working	21/04/2017
44	Study of AM modulator and demodulator: Regulated power supply, CRO, AFO, Resistors, capacitors Semiconductors: BC108, OA79, Function generators (sine, square, modulating signal), 1MHz maximum frequency, CRO - 20MHz, dual trace.	Physics	2	29328	58657	Working	21/04/2017
45	Build a very simple AM voice transmitter: A one megahertz crystal oscillator, 1000 ohm to 8 ohm audio transformer, printed circuit board, 1/8 inch plug, A 9 volt battery, set of alligator jumpers. Wires for connection.	Physics	2	4358	8717	Working	21/04/2017
46	Study of FM modulator and demodulator: Regulated power supply, CRO, AFO, Resistors: As per design, Capacitors: As per design, Semiconductors: IC NE 566, Function generator (sine, square, modulating signal), 1MHz maximum frequency, CRO - 20MHz, dual trace.	Physics	2	31508	63015	Working	21/04/2017
47	Quartz double distillation unit (water)	Physics	1	54162	54162	NA	Purchase order raised

48	SILAR Unit. Make : HOLMARC	Physics	1	3E+05	3E+05	NA	Purchase order raised
49	High speed centrifuge. Make : REMI	Physics	1	37170	37170	NA	Purchase order raised
50	Spin coating unit. Make : HOLMARC	Physics	1	3E+05	3E+05	NA	Purchase order raised
51	Dip Coating Unit. Make : HOLMARC	Physics	1	3E+05	3E+05	NA	Purchase order raised
52	Ultrasonic Sonicator (Bath) Make BIOTECH	Physics	1	26550	26550	NA	Purchase order raised
53	Magnetic Stirrer with Heating Plate. Make : REMI	Physics	1	9558	9558	NA	Purchase order raised
54	Chemical Bath Deposition Set-Up	Physics	1	21240	21240	NA	Purchase order raised
55	Precision balance (weighing machine). Capacity : 200 gm, Accuracy : 0.0001 gm, Make : Wensar	Physics	1	31360	31360	NA	Purchase order raised
56	Portable pH meter with Ph strips, Make : Equiptronics	Physics	1	15930	15930	NA	Purchase order raised
57	To determine g and velocity for a freely falling body using Digital Timing Technique: Carbon batteries, Digital photogate, C clamp, Knife Switches, Digital stopwatch, Ohaus CS series scale	Physics	1	18900	18900	Working	21/7/17
	Ballistic Galvanometer:						
	(i) Measurement of charge and current sensitivity						
	(ii) Measurement of CDR						
	(iii) Determine a high resistance by Leakage Method	Physics	1	8900	8900	Working	21/7/17
58	(iv) To determine Self Inductance of a Coil by Rayleigh's Method						
59	Measurement of field strength B and its variation in a Solenoid (Determine dB/dx). Magnetometer, search coil, solenoid.	Physics	1	13500	13500	Working	21/7/17

	To determine a Low Resistance by Carey Foster's Bridge.					
60	Known and unknown resistors, galvanometer, jockey, sorting plate, copper strip, dry cell, plug key, meterbridge with jockey	Physics	1	18900	18900	Working 21/7/17
	Study of B-H Curve Tracer	Physics	1	13500	13500	Working 21/7/17
61	A) CRO	Physics	1	22500	22500	Working 21/7/17