

**B.Sc. Physics Practicals for Semesters I & II (Mechanics, Waves & Oscillations)****For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
1	Bar Pendulum ( with equidistant hole, two knife edge & wall clamp)	With equivalent specifications from any firm	1110
2	Battery eliminator (2, 4, 6, 8,10, 12 V and 2 amps dc with rotary switch)		1206
3	Beaker (plastic)		145
4	Brass circular metal disc with wall clamp (torsional pendulum)		1544
5	Brass metal bob with hook (radius 2.5 cm)		150
6	Capillary tube of uniform bore with rubber cork		121
7	Coupled Oscillator, wall fixing type with pendulum bobs		434
8	Recer Digital Stop Watch		579
9	Analogue weighing machine (upto 5 kg)		1206
10	Electrical tuning fork, bench clamp with pulley and pan		5066
11	Fly-wheel moving in new ball bearings with counter		4729
12	Funnel with rubber tube and Pinch cork		1206
13	Wooden Half meter scales superior quality		63
14	Lamp and scale arrangement		5018
15	Large trough and Circular mirror		531
16	Measuring Jar (plastic)		145
17	Wooden Meter Scale : superior quality		97
18	Retort stand with clamp and boss head		531
19	Rubber Cork with hole at the center		12
20	Rubber tipped hammer		169
21	Cathode Ray Oscilloscope (Dual trace with 20 MHz)		23643
22	Screw Gauge 20 mm steel screw superior		347
23	Signal/function generators(1 MHz, Digital Display)		5549
24	Slotted Weights 2.5 kg		579
25	Sonometer (Teak wood with bridges and wires)		1689
26	Spiral springs of different spring constants		2171
27	Spirit level		116

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
28	Split rubber cork		12
29	Steel, Brass and Copper wires per coil		212
30	Thin strong cotton string (thread)		19
31	Travelling Microscope Horizontal, Vertical scale, cross motion		12063
32	Tuning forks of different frequencies (set of 8 welch type large)		917
33	Vernier Calliperse student grade with wheel		154
34	Volume Resonator (2 Ltr.)		1592
35	Wax		48
36	Physical Weight boxes (1, 2, 5, 10, 20, 50, 100, 200 gms)		627
37	Weight hangers (5x50 gms, slotted weights)		241
38	Aluminum with hooks in all planes (weight 800 gm - Al)		917
39	Young's modulus of bending of beam heavy metal strip, table clamp with knife edges & weight carrier for uniform & nonuniform bending		2654

**Abstract -B.Sc. Physics Practicals Paper-III (Thermal Physics)****For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
1	Lees disc apparatus including 3 bad conductor discs	With Equivalent specifications from any firm	5139
2	Steam generator (boiler) 1 Litr.		979
3	Thermometers (0.1 degree least count)		169
4	Pressure rubber tube (20 mts)		48
5	Stefan's Constant Apparatus		7720
6	Newton's law of cooling apparatus		2413
7	Heating Efficiency of an Electrical Kettle with varying voltages set		3812
8	Potentiometer 10 wires 1 mt. long fully laminated $\frac{3}{4}$ " wooden board stretched, over pulleys. Total resistance 10 ohms with pencil jockey		2316
9	Daniel cell		869
10	Rheostat (2.3 A, 100 ohms)		1544
11	Resistance box 10000 ohms		1882
12	High resistance Box 5 kilo ohms		434
13	Galvanometer		376
14	Borosil Beakers (500 ml)		116
15	Thermo couple (copper - iron)		338
16	4 way commutator		309
17	Hot plate with thermostat		4053
18	Connecting wires multi stand		338

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
19	Copper Calorimeter with a wooden lid having two holes for inserting thermometer for cooling curve of metallic body		1206
20	Rubber stoppers with holes (2)		10
21	Thermister characteristics setup with builtin calorimeter, variable resistance, power supply, Galvanometer and thermometer		3812
22	Specific heat of solid rod (Graphite) sample in cylindrical shape		13510
23	study mechanical energy to heat setup		8203

**Abstract - B.Sc. Physics Practicals Paper-IV (Optics)****For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
1	Frenel's Biprism setup	With equivalent specifications from any firm	16888
2	Sodium Vapor lamp setup		6659
3	Spirit level		116
4	Magnifying glass (Reading lens)		174
5	Newton's Rings Apparatus (All in built)		9264
6	Spherometer (to know the radius of convex lens)		241
7	Plane transmission grating		1399
8	Mercury vapour lamp setup		2750
9	Magnifying Torch light		627
10	Diode laser setup with builtin power supply		4777
11	Diffraction Grating 2500 lpi		1399
12	Polarimeter Apparatus with bi-quartz system		8637
13	Pulfrich refractometer Apparatus setup		1206
14	Wedge method-thickness of wire setup		1206
15	Crown Prism (Dispersive power of prism)		627
16	Spectrometer (60' and 175 mm scale with round adjustable slit)		13993
17	Telescope for resolving power		3619
18	Slit for resolving power with micrometer head		1351
19	Wiremesh		290
20	Mercury ( 250 Bottle)		3378
21	Watch glass pack of 12		58

**Abstract - B.Sc. Physics Practicals Paper V (Electromagnetism)****For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs. )
1	Thevenin's and Norton's Theorem circuit Board with 2 digital meters	With equivalent specifications from any firm	3378
2	Super Position Theorem circuit board with 2 digital meters		3378
3	Maximum Power Transfer Theorem circuit Board		3378
4	Carey Foster Bridge		1399
5	Battery Eliminator		1206
6	Variable Resistance Box (1000 ohms)		1882
7	Galvanometer		376
8	High Resistance Box (15000 ohm)		2171
9	Unknown resistance coil		58
10	A Dry Cell		29
11	A Plug Key		77
12	Function Generator/Signal Generator 1 MHz digital display		5549
13	Anderson's Bridge circuit Board with oscillator & Head phone		6659
14	Ballistic Galvanometer		5018
15	Lamp & Scale Arrangement		5018
16	Fixed condenser		290
17	Digital multi meter		1206
18	Commutator round four plugs		314
19	High resistance coil 10K ohms		434
20	Rheostat 2.3A 60 ohms		1544
21	Desauty's bridge set-up with oscillator & Head phone		6659
22	Rayleigh's Bridge set-up with oscillator & Head phone		12063

**Abstract - B.Sc. Physics Practicals Paper VI (Modern Physics)****For one batch of 25-30 Students**

S.No.	Name of the Equipment (with specifications)	Company	HACA (unit price in Rs.)
1	Mercury Valve Board	With equivalent specifications from any firm	1737
2	Stabilized Power Supply for Mercury Valve		4053
3	Helium - Neon laser light (5 mw)		23643
4	Plane diffraction grating		1399
5	Determination of work function by photoelectric effect: Power supply with two digital meters,optical bench, five glass filters, Built in Mercury vapour lamp, Photo Cell inbox		23643
6	Hall Effect Experiment-Electro Magnets coils (10000 Gauss), Digital Gauss Meter (20 KGauss) & Hall Probe setup, Electro Magnet Power supply (5 amp.),		50180
7	Plane Transmission Grating		1737
8	hydrogen gas discharge tube with transformer		11580
9	Energy Gap of Intrinsic Semiconductor Circuit Board-Apparatus		3812
10	Single slit (with stand)		1206
11	Double slit (with stand)		1592
12	Plank's constant using LEDs-Power supply with digital voltmeter , Digital Ammeter, Digital Temperature Indicator with sensor & Oven, and four different calibrated LEDs		14379
13	G.M.Counter experimental setup with single source		65620

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