MAULANA AZAD COLLEGE
8, Rafi Ahmed Kidwai Road, Kolkata- 700013

Memo No. **828/Tender** Date:-**26.03.2019**

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TENDER NOTICE

Invites sealed quotations from Government Registered / Authorized vendors, Corporations, Cooperative Society, WEBEL, WBHIDC, DGS & T, Agencies and Organizations for purchase of following items / service / AMC/ Maintenace in our college for the financial year 2019-20.

I) Purchase of Stationery Goods and Sanitary Items, Furniture, Equipments, Chemicals, Glass / Polymer goods, Computers, Laptops & related Accessories, Software, Hardware components.

II) AMC/ Maintenance of Equipments including Scientific Instruments, Water Purifier System, Copier Machines and related items, Networking System, College Garden, Generator Set, Computers, Projectors, etc.

III) Engagement of Security and Housekeeping Personnel.

IV) Printing and Publications, Digital Cataloging, Binding, Lamination of Books and Printed Matters, Pest control.

V) Teaching Aids & Laboratory Aids including Biological Specimens etc.

VI) Online admission and e-Counseling, items for smart class rooms, virtual class rooms and Language laboratories.

VII) Sports and Athletic Items.

Interested applicants may apply in their letterheads to the Principal with relevant documents that reveal their government affiliation along with documents of i) Income Tax clearance, ii) Photocopy of PAN card iii) GST no. iv) Trade license as applicable, v) Mobile No. **Application should reach the office within 30th April, 2019**. E Tendering process will be followed as per rule. Sealed quotations will be accepted at Office of the Principal (in a Tender Box). The authority has every right to cancel any quotation without stating any reasons, thereof. List equipments have been displayed in the departmental Notice Board and will be procured subject to availability of funds.

Sd/-
Principal
Maulana Azad College

Maulana Azad College, Kolkata-13
Department of Zoology
List of Instruments

Sl No.	Name of Instrument	Specifications (Model No.)
1	SPINOT™ Digital Magnetic Stirrer Hot Plate	Top Plate Size: 18 x 18 cm Top Plate Material: Ceramic Tarson 6040
2	Analytical Balance	Capacity 220 gm Minimum Display 0.1mg Repeatability (Standard Deviation) </- 0.1mg Shimadzu ATX224 Linearity ± 0.2mg Stabilisation Time*1 Approx. 3.0 seconds Operating Temperature and Humidity Limits 5-40°C 20-85%*2
3	pH meter Meter Kit	Cole-Parmer P200-02
4	portable pH Meter	HANNHA
5	Finnpipette F2 Kit 2 (0.2 to 1000µL)	Thermo Scientific 4700880
6	Remi R-8C BL Laboratory Centrifuges	Remi (with 16x15 ml Angle Rotor Head)
7	Veriti™ 96-Well Fast Thermal Cycler	Applied Biosystems (4375305)
8	Photoperiodic Chamber	Make: ASP Brand .Model : ASP-PGC-10
9	Stainless Steel 6x2x2 Feet Biological Safety Cabinet	Scientech SS-106
10	U.V. Cabinet for TLC	IKON INDUSTRIES
11	Portable Lux Meter	0.001 Klux; 0.01 Klux; 0.1 Klux HANNHA
12	Haemoglobinometer (Sahli's)	Singla Scientific Industries
13	Microprocessor Haemoglobin Meter	SYSTONIC S-917
14	Multiparameter Waterproof Meter	(pH/ORP/EC/TDS/Salinity/DO/Pressure/ Temperature)HI98194 HANNA India
15	Research Binocular Microscope with illumination	Olympus CX-21i
16	Soxhlet extraction apparatus extractor	capacity 200 mL Sigma Aldrich Z556203
17	Portable Autoclave Stainless Steel 20 Ltr	Size 12x12 by mLabs
18	Digital Incubator (60-100 degree)	Central Scientific
19	Neubeur Blood Counting Chamber (Hemocytometer)	HBG Germany
20	Solo Microwave Oven 17 L	IFB(17PM MEC 1, White)
21	Automatic Digital Blood Pressure Monitor	Omron HEM 7120
22	Magnetic Stirrer Mixer Stirring Bar Rod Bead set	G LAB B25 (Teflon)
23	0-60 RPM Dancing Shaker	Tarson MC-02
24	120L Metal Top Single Door Deep Freezer	,-20 degree centigrade
25	4 degree refrigerator	320 Litre with Transparent door Voltas

Maulana Azad College, Kolkata
Department of Microbiology
List of Instruments

Sl. No.	Instrument Name	Specification
1	**Mini Vertical gel (10 X 8 cm gels) with Power Supply Basic**	Should be capable of running up to 4 mini gel (10 X 8 cm) simultaneously.
		Flexible- Capable of running hand cast as well as precast gel.
		Running and casting module should be different
		Interchangeable module- Should be capable of using blotting module to do western blotting.
		Should be leak proof, tape free and easy assembly.
		Should have permanently bonded spacer plates for leak proof, without agarose sealing & taping casting
		Casting frame with simple cam closure mechanism that gives precision alignment on any flat surface.
		Side by side casting stands that allow access to both gels simultaneously.
		Should able to run gels in 15-20 mins.
		Should come with buffer dam.
		It should be Supplied with 10% Stain free Fast Acrylamide Starter Kit
		It should come with 3 years CMC (without spares)
		Power Supply Basic-
		Programmable power supply should be capable to operate four electrophoresis units simultaneously for
		The output range should be 10-300 V , 0.4-400 mA, 1-75 W .
		Constant voltage, current or Power with Automatic crossover
		Memory storage: 9 programs , 9 steps, Timer Control : 99 hr, 59 min
		Automatic Power up after Power failure, Safety features: No-load detection; sudden load change
		It should come with 3 years CMC (without spares)
2	**Gradient Thermal Cycler**	Should have the feature of dynamic ramping with identical hold times for all the 8 rows of gradient.
		Should have a temperature differential range of 1-25degC across the rows.
		Should have intuitive 5.7" (14.5 cm) touch screen interface which can displays graphics in high resolution for easy programming.
		The touch screen should be responsive for both gloved and ungloved fingers.
		Should be capable of running reaction volumes from 1-100ul.
		Should have a maximum ramp rate of 4 degC/second.
		Should have a temperature range of 4-100 deg C
		Should have a gradient range of 30-100 deg C
		Should have a temperature accuracy and uniformity of ±0.5 deg C
		Should have a memory of >500 programs with further expansion through a USB Flash drive for transfer of files.
		Should have block and calculated temperature control modes.
		The software should be capable of exporting Run logs and system error logs
		Should have quick boot up time of not more than 1 min.
		Should be quiet in operation.
		System should have built in library of standard protocols for long PCR, fast PCR, reverse transcription PCR etc.
		Should have the feature of "Instant Incubation" to keep samples at constant temp for ligation and restriction digests.
		Should have power save mode.
		Should be compatible with all kind of plastic consumables and reagents specially reusable sealing Mats.
		It should come with 3 years CMC (without spares)

Maulana Azad College, Kolkata
Department of Microbiology
List of Instruments

Sl. No.	Instrument Name	Specification
3		Should be compact (Table top)
		· Temperature Range -10 to +120ºC.
		· PID Temperature Controller with Soak Timer.
		· Control accuracy of ±0.1ºC for water & ±0.2ºC for oil.
		· Excellent stirring enables uniformity better than 0.3ºC.
		· LED displays for process temperature and set temperature / time.
		· Powerful two speed external pumping
		· **CE certified.**
		· Capacity: 6 litre
		· Temp. Range: -10ºC to +120ºC
		It should come with 3 years CMC (without spares)
4	**Orbital Shaking Incubator with Voltage Stabiliser**	Should have temperature Range & Accuracy 5°C to 60°C, ± 0.5°C
		Internal Volume (Liters) 215
		Platform Size 580mm x 600mm
		Maximum Shaking Capacity (Volume x No. of flasks) = 100ml x 49, 150ml x 49, 250ml x 33, 500ml x 24, 1000ml x 15, 2000 ml x 9
		Shaking Speed range (RPM) 20 to 250
		Shaking Amplitude 25 mm
		Internal Dimensions W x D x H (mm) 660 x 765 x 650
		External Dimensions W x D x H (mm) 800 x 1150 x 1300
		Temperature control Microprocessor with PT-100 sensor
		Display 4″ LCD Screen, Large size Display for ease of reading
		Power Failure Alarm, Audio Visual Alarm
		Door Open Alarm Audio Alarm in case door open for over one minute
		Temperature Variation Alarm Set Temperature ± 2°C, Audio Visual Alarm
		Illumination by Fluorescent Tube
		Internal Body Material Stainless Steel
		External Body Material Powder Coated CRCA Steel/Stainless Steel
		Insulation (CFC free polyurethane foam) 70 mm minimum for Body & 80 mm for Door
		Noise Level Less Than 65 db (A)
		Voltage Stabilizer VS-02
		It should come with 3 years CMC (without spares)
5	**Bio safety cabinet Class II, Type A2**	· Should provide Class 100 or better clean environment
		· Digital display of differential pressure
		· Internal & External stainless steel construction
		· LCD microprocessor based control with filter change alarm
		· Provision for Air & Gas connection, plus electrical sockets for connection to any external device.
		· The high performance ULPA and HEPA filters produce a Class 100 or better Clean Air Environment.
		· Specialized sound absorbing materials, reduces noise significantly.
		· Low discharge volume and quiet operation mechanism.
		· Ventilated unit with inward air flow for personnel & product protection.
		· Adjustable blower speed in 9 steps.
		· In-built timer for UV light.
		· The front window is made up of tempered safety glass which enhances UV protection for operators.
		· Interior is made up of Stainless Steel. Exterior construction of Steel with heat cured epoxy coating.
		· Counter balanced sliding glass door ensures clear view of work area.
		· **ULPA filter (99.99% efficient at 0.3 um particles)** is installed as a main filter.
		· HEPA filter (99.97% efficient at 0.3 um particles) is installed as an exhaust filter.
		· Equipped with analog manometer.
		· High efficiency UV lamp comes with strong germicidal power & disinfects environment in 30 min.
		Fitted with gas & air connections plus electrical sockets for connection to any external equipment.
		Capacity: 880 mm (3 ft)
		It should come with 3 years CMC (without spares)

Maulana Azad College, Kolkata
Department of Microbiology
List of Instruments

Sl. No.	Instrument Name	Specification
6	**Anaerobic culture Jar**	Should have aluminium cast lid, heat cured epoxy coated with a bridge clamp for easy tightening.
		SS Rack for 100 mm Ø plates, with gas pack sachet holder.
		Cold Catalyst fitted to underside of lid.
		Compound Gauge on lid.
		Two needle valves on lid.
		Safety valve on lid.
		Capacity: 2.8 ltr
7	**Liquid Nitrogen Container**	3 litre capacity, portable with carrying arrangement
8	**Deuterium lamp and tungsten filament lamp for JASCO V630**	Should be original accessories
9	**Multi parameter Meter**	Should have the ability to Measure pH, ORP, Conductivity, TDS, Temperature
		Should have auto-calibration with preset values for quick easy calibration as well as manual multi-point calibration
		pH Range -2.00 to 16.00 pH , Resolution / Accuracy 0.01 pH / ± 0.01 pH mV, Conductivity Range 0.01 µS/cm to 200.0 mS/cm (Resolution / Accuracy 0.01 µS
		TDS Range 0.01 to 100 ppt @ 0.5 TDS factor Resolution / Accuracy 0.01 ppm; 0.1 ppm ; 1 ppm ; 0.01 ppt ; 0.1 ppt
		Temp. Range 0.0 to 100.0 ºC / 32.0 to 212.0 ºF
		Coefficient (Per ºC) Linear & pure; 0.00 to 10.00 %
		Normalization 15.0 to 30.0 0C (adjustable)
		Having 2-Cell Conductivity/ATC Electrode, stainless steel sensor, Polyetherimide (Ultem)-body, Cell Constant K = 1.0 and
		Plastic body pH electrode
		Easy standardization with auto-standardization feature – detect the exact cell constant value of your electrodes with the press of a button
		Non-volatile memory; up to 100 data points storage
10	**Hot plate/ water heater (x2)**	2000 W
11	**4 degree refrigerator**	320 Litre with Transparent door
12	**Finnpipette F2 Kit 2 (0.2 to 1000µL)**	Thermo Scientific 4700880

MAULANA AZAD COLLEGE, KOLKATA
DEPARTMENT OF BOTANY
LIST OF INSTRUMENTS

Sl No.	Name of the Instrument(s) with details specification
1	**Shimadzu UV-VIS-Double Beam Spectrophotometer—**Model no. 2206, Wavelength: 190-1100nm; photometric: +/-3.0 Abs
2	Orbital Shaker Incubator Brand: Remi; Display: LED; Voltage: 220-240V/ Hitech BOD Incubator Temperature range:5 to 75 degree celsius, 5 to 105 degree celsius, 5 to 200 degree Celsius. Chamber Volume: 250L, 350L. 400 & 500 L. (TWO INCUBATORS will be merged into one)
3	NIKON DSLR D-90 (AF-S-18-105 mm VR kits)
4	BLUESTAR/CELL FROST -20 Degree Centigrade Refrigerator: Brand: Bluestar; Capacity: 340L (VERTICAL)
5	Cell Frost 4 degree Centigrade Refrigerator (320 L)
6	Magnetic Stirrer with hot plate 500ml (SMALL) Brand: REMI; 10ML DX, Stirrering capacity: 10L
7	pH Meter GLOBER pH Range: 0 to 14 Type: Digital Compensation: 0 to 80 degree celsius Type of PH Meter: Portable Resolution: 0.01 pH
8	Single PAN Balance Aarson Scientific Works
9	CARL ZEISS TRINOCULAR STEREOZOOM Microscope Model Sterni 508, Axiocam ERC 5S & Computer
10	Heater
11	Refrigerator Samsung Double Door (520 L)
12	Tabletop Centrifuge Benchmark (Small)
13	ALTIMETER (upto 5000 m) (3020 Trintec 10 inch Aviation Modern Altimeter Instrument -Stuyle Wall Clock)
14	GARMIN GPS 964s Hand held GPS Navigator
15	TREE PRUNER (Falcon extendable Long Reach Cut and Hand-Hold Premium Pruner FPLR-26-Falcon)

MAULANA AZAD COLLEGE, KOLKATA-13
DEPARTMENT OF PHYSICS
LIST OF INSTRUMENTS

Sl. No.	Item Name
1	Complete set to determine Coefficient of Viscosity of water by Capillary Flow Method (Poiseuille's method).
2	Traveling microscope and metal beam to determine Young's modulus by the method of flexure.
3	Complete set to determine the elastic constants of a material by Searle's method.
4	Bar Pendulum
5	Complete set to determine the height of a building using sextant.
6	Low Resistance and Potentiometer.
7	Low and high Resistance box and Carey Foster's Bridge
8	Variable 2 V, variable 5 V, variable 10 V Regulated power supply
9	Milliammeter 0-10, 1-50, 0-100; Microammeter 0-50, 0-100, 0-500; Voltmeter 0-1, 0-10, 0-20; digital and analog type
10	Complete set to study response curve of a Series LCR circuit
11	Complete set to study the characteristics of a series RC Circuit.
12	Complete set to determine horizontal component of the earths magnetic field.
13	Complete set to determine the frequency of an electric tuning fork by Melde's experi-ment and verify λ^2 − T Law law.
14	Sodium (vapour lamp) source 35W with power supply
15	High precision spectrometer (Inco make)
16	EDF prism, biprism, grating 100, 200, 300, 500 L/mm; cross grating 100 L/mm
17	Complete set for Newton's Rings wxperiment
18	Complete set to determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-shaped Film.
19	Digital Storage Oscilloscope (DSO) 1GHz Bandwidth
20	Digital Storage Oscilloscope (DSO) 5Mhz Bandwidth
21	Function Generator FG01 SES Instruments
22	AC Millivolt meter ACM102, ACM103 SES Instruments
23	Sigma DIGITAL LCR METER with Frequency 100Hz/1Khz/10KHz/100KHz
24	Function Generator 5MHz Scientific
25	Complete set-up for verification of Stefan's law using a torch bulb.

MAULANA AZAD COLLEGE, KOLKATA-13
DEPARTMENT OF PHYSICS
LIST OF INSTRUMENTS

Sl. No.	Item Name
26	Complete set-up for determination of the coeffcient of thermal expansion of a metallic rod using an optical lever.
27	Thermocouple copper - constantan, copper - iron with good guage and fine tiped junction
28	Complete set for potentiometer and hot plate for calibration of thermocouple
29	Complete set to determine for calibration of thermocouple [one end at room temperature other end in the oil bath] and determination of boiling point of water.
30	Complete set to determine the Coefficient of Thermal Conductivity of a bad conductor by Lee and Charlton's disc method.
31	Complete set to determine the Temperature Coefficient of Resistance by Platinum Resistance Thermometer (PRT).
32	resistor, capacitor, inductor, 1K 10K pot, diode, zener, transistor pnp npn type, ic 7400 series
33	bread board and connecting wires
34	Construction of FF circuits using NAND gates.
35	Construction of 4 bit shift registers (serial & parallel) using D type FFIC.
36	Construction of astable multivibrator using 555 Timer.
37	Complete set-up for measurement of Plank constant using LED
38	Complete set-up for determination of ionization potential of Mercury
39	Complete set-up determination of e/m by using bar magnet.
40	Complete set-up to study the photoelectric effect: variation of photocurrent versus inten-sity and wavelength of light.
41	Complete set-up to determine the wavelength of H-alpha emission line of Hydrogen atom.
42	Complete set-up to show the tunneling effect in tunnel diode using I-V characteristics.
43	Complete set-up to determine (1) wavelength and (2) angular spread of He-Ne laser/ solid state laser using plane diffraction grating.
44	Complete set-up to study PE hysteresis of ferroelectric crystal.
45	Complete set-up to study BH hysteresis of ferromagnetic material.
46	Complete set-up for measurement of susceptibility of paramagnetic solution by Quink"s tube method.
47	Complete set-up for measurement of magnetic susceptibility of solids.
48	Complete set-up for determination of variation of dielectric constant with frequency.
49	Complete set-up measurement of hall voltage by four probe method.
50	Complete set-up to study temperature coefficient of a semiconductor (NTC thermistor).

MAULANA AZAD COLLEGE, KOLKATA-13
DEPARTMENT OF PHYSICS
LIST OF INSTRUMENTS

Sl. No.	Item Name
51	Complete set-up to determine Brewster's angle for air-glass interface using a prism.
52	Complete set-up to study of Fresnels law by the reflection on the surface of a prism.
53	Complete set-up to study the Malus law using a pair of polaroids.
54	Complete set-up to study the specific rotation of optically active solution using polarimeter.
55	Complete set-up for determination of wavelength and velocity of ultrasonic waves in a liquid (kerosene, Xylene etc)..
56	Complete set-up to analyze elliptically polarized light by using babinate compensator.
57	Complete set-up to determine dispersive power and resolving power of a plane diffraction grating.
58	Complete set-up to design an Amplitude Modulator using Transistor
59	Complete set-up to study envelope detector for demodulation of AM signal
60	Complete set-up to study FM - Generator and Detector circuit
61	Complete set-up to study AM Transmitter and Receiver
62	Complete set-up to study FM Transmitter and Receiver
63	Complete set-up to study Time Division Multiplexing (TDM)
64	Complete set-up to study Pulse Amplitude Modulation (PAM)
65	Complete Set-up for determination of pressure coefficient of air using Jolly's Apparatus

PRICE DETAILS OF EACH COMPONENT OF A COMPLETE SET UP SHOULD BE QUOTED

Maulana Azad College, Kolkata-13
Department of Chemistry
List of Equipments

Sl. No.	Name of Equipment	Specification
1	Electronic Weighing Balance	Weighing capacity 220 g; probability 1 mg, wenser/ Satorious
2	Electronic Weighing Balance	Weighing capacity 220 g; probability 1 mg, wenser/ Satorious
3	Boiling point bath (25 ml)	Glass made, with receiver bulb
4	Cork Borer	Local made
5	De-ionised water plant	Revera
6	Distilled water plant	
7	Vacuum pump	Specification (220V, 50Hz) ◆ Max. power： 90 W ◆ Max. current：0.5 A ◆ Max. vacuum：Ultimate 13mbar (-750mmHg) ◆ Max. flow rate： 18 l/min ◆ Max. vacuum： 1450 RPM ◆ Horse power： 1/6 HP ◆ Noise level： 50.0 dB ◆ Hose barb： 5/16 inch (8 mm) ◆ Net weight： 7.4 kg ◆ Dimension (LxWxH)：26.2x23.6x19.3 cm ◆ Glass vapor trap：Yes ◆ Vacuum Regulator：Yes
8	Magnatic Stirrer with Hot plate	Healing Capacity-150, External Dimention- 200×225×185, Model- Q-19, Length- 9×25 mm
9	Magnatic Stirrer with Hot plate	Healing Capacity-300, External Dimention- 200×225×185, Model- Q-19A, Length- 9×35 mm
10	Heating mantle with energy regulator	100 ml capacity, Local Made
11	Heating mantle with energy regulator	250 ml capacity, Local Made
12	Hot Air Oven copper	Temperature Range 5°C above ambient to 250°C maximum Temperature Accuracy + / - 2°C Temperature Uniformity + / - 1°C Controls PID Controller Temp Display LED Display Sensor PT-100 Heating Element Nichrome wire / Kanthal A1 Safety device Over temperature protection Electric leakage breaker Temperature safety as per DIN 12880 Class 3.1 Exterior Chamber MS powder coated Interior Chamber 304 stainless steel Insulation Mineral Wool Doors Solid doors w/ silicone rubber gasket & lock Shelves 2 – 3 Stainless steel shelves (Removable) Air Circulation Forced air circulation Power Supply 220 Volts, Inner Chember: 355 x 355 x 355 mm, Vol-45 lits
13	Ice-making machine (double door)	Hitachi or LG or Godrej
14	Melting point bath electrical	Toshniwal
15	Vacuum dessicator	Dia: 6 inch Tarson made
16	Vacuum dessicator	Dia: 12 inch Tarson made
17	Water bath electrical	6 holes, Stainless steel with water inlet & outlet
18	Mechanical shaker	12 pegs Local made

Maulana Azad College, Kolkata-13
Department of Chemistry
List of Equipments

Sl. No.	Name of Equipment	Specification
19	Digital Colorimeter	Reads: 650A - % T & OD / 653 - OD; Power required: 230 V AC ± 10% 50 Hz, 10 VA; Filters: Disc mounted German filters 400, 420, 470, 500, 530, 620, 660, & 700 nm. All the eight filters are mounted on the disc. Selection is done by rotation of disc. The disc will be locked in desired position; Readout: 3 digit LCD display; Measurement: a) Transmittance 'T'-0-100% b) OD-0-1.99 (653 reads OD only); Accuracy: %T – ± 1% - OD – ± 0.01; Light Source: LED of infinite life; Detector: Photo to cell; Warming time: 5 minutes; Cuvette: Square cuvette 10 mm path length opti glass window; Body: ABS; Weight: 1 Kg. (approx); Dimension: 90 mm (H) x 225 mm (W) x 220 mm (L); Sample quantity: 1ml; Accessories: Square cuvette, Dust proof cover
20	Conductivitymeter	Readout: 4 digit LED display; Unit of meas.: MHO; Ranges: 0.01μΩ to 200 mΩ in 6 ranges; Six ranges: 200 mΩ , 20mΩ , 2 mΩ , 200 μΩ , 20 μΩ , 2 μΩ; Accuracy: :± 1% ± last 2 digits; Power required: 230 V AC ± 10%, 50 Hz, 5 VA or 9V battery; Body: ABS; Dimension: 80 mm (H) x 235 mm (W) x 155 mm (L); Weight: 1kg (Approx.); Warming period: Instant; Standard cond.: Conductance of 1.000 mΩ; Electrode: Cell K = 1 - PVC sleeved (EQ-708A); Accessories: Stand set, Screwdriver and Dust proof cover
21	pHmeter with combined electrode	Readout: 4 digit LED display; Range: pH: 0 to 14.00, mV: 0 to ± 1.999; Resolution: pH: 0.1, mV: 1; ; Accuracy: pH: ± 0.02, pH ± 2 least count, mV: ± 0.2%, ± 1 least count; Temp. comp.: 0 to 100°C; Power required: 230 V AC ± 10% 50 Hz, 4 VA; Warming time: 5 minutes; Electronic buffer: Equivalent signal output of ideal electrode in solution
22	Potentiometer	Readout: 4 digit LED display; Ranges: ± 1.999 V; Accuracy: 0.001 Volts; Standard Cell: 1.018 V inbuilt; Body: ABS; Stirrer Speed: 500 RPM fixed; Warming time: 5 minutes; Power: 230 V AC ±10% 50 Hz; Weight: 1 Kg (approx); Dimension: 90 mm (H) x 225 mm (W) x 220 mm (L); Accessories: Electrode clamp, Rod, Teflon magnet, Screwdriver and Dust proof cover
23	Digital polarimeter	Readout: 5 digit LED display for measurement; Angle of rotation: ±120° (- for levo, + for dextro); Resolution: 0.01°; Accuracy: 0.02°; PC Software: EZCRUZ - 16 POL; 21CFR: Provided; IQ, OQ, PQ: Provided; Calibration: Factory calibrated with degree Or international sugar scale as Perusers choice using shimadzu standard; Light Detection: Electronic sensor; Power: 230V AC ±10% @ 50 Hz 7VA; Weight: 7 kg approx; Size: 180mm (H) x 325mm (D) x 485mm (L); Sample Tube: Glass teflon tube of 20cm for organic solution; Accessories: Glass teflon tube of 20cm for organic solution
24	VIS double beam spectrophotometer-1203, Bandwidth - 5 nm	Wavelength Range: 340 to 999 nm; Accuracy: ±2 nm; Readout: 1 nm per step; Bandwidth: 5 nm; Photometric range: ±2.5 Abs; Accuracy: ±0.005 Abs at 1.0 Abs (with NIST Filter); Repeatablility: 0.005 Abs; Resolution: 0.1%T, 0.001Abs; Display: 4 Line 20 Ch. LCD; Drift: ±0.003 Abs/hour at 500 nm; Baseleine flatness: ±0.005 Abs; Scan speed: Slow, Medium, Fast; Grating: 600lines/mm; Source: Tungsten halogen lamp: Detector: 2-Silicon photodiode; Min. volume: 1 ml in 4 ml cuvette with cell riser; Operating mode: Single wavelength, Multiwavelength (Max. 8) Spectrum scan and Time scan; Measuring mode: Absorbance, %Transmittance and Concentration (with by factor and by standard curve fitting); K-factor range: 0.100 to 9999 with floating decimal point; Conc. range: 0.100 to 9999 with floating decimal point; Stray light: < 0.3%T at 370 nm; Printer Port: Epson compatible 80 column Dot Matrix; Power: 230V ±10%, 50 Hz; Dimension: 450(W) × 360(D) × 130(H) mm; Weight: 9 kg (approx.); Accessories: Two 10 mm glass cuvette, PC Link software, Epson compatible D.M. printer, Multi cuvette holders for 20/40/50 mm rectangular cuvette (factory installed)

Maulana Azad College, Kolkata-13
Department of Statistics
List of Equipments

Sl. No.	Item	Specifications
1	CPU	Intel Processor i3 Intel Chip Motherboard 4 GB RAM DVD Writer ATX Cabinet with SMPS 1 TB HDD
2	Desktop Monitor	LG LED
3	UPS	APC 600 VA
4	Mouse	Logitech