

Dempo Charities Trusts
DHEMPE COLLEGE OF ARTS AND SCIENCE
MIRAMAR, PANAJI-GOA 403001

OPEN TENDER DOCUMENT

For procurement of equipment under
Star College Scheme of Department of Biotechnology
Ministry of Science & Technology, Govt. of India.

INSTRUCTIONS TO THE TENDERERS

Section 1

1. **Tender Reference:** DBT Star College Scheme.
2. **Date, Time, and Place of Submission:** The tender form should be downloaded from www.dhempecollege.edu.in or obtained from the office of the College on payment of Rs. 500/-. The Tender Form, duly filled in, should be submitted at the office of the Principal, Dhempe College of Arts & Science, Miramar, **on or before 11.00 a.m. on 04 -08 2023**, along with the Earnest Money Deposit.
3. **Bid Type :** Two Bid System: (Technical and Financial bid)
4. **Mode of Submission:**

Tender should be submitted with duly signed covering letter. Documents must be submitted in two sealed envelopes Technical Bid and Commercial Bid/Financial Bid subscribing on both the envelopes the Tender Reference

The tender envelope shall clearly specify the Category and Code of equipment for which the tender is submitted Both these sealed envelopes are to be put in a bigger cover which should also be sealed and duly subscribed with our Tender reference & Date.

5. The tender shall be submitted in a sealed envelope, and shall contain the original Tender Document duly filled in, with quoted rates, details of warranty, etc.
6. Only those tenderers who qualify for the Technical Bid will be invited for commercial /financial bid
7. The Tender envelope should be superscribed by the **Category, Serial Number** and **Code Number** of the equipment. Details of the specification provided in **Annexure 2**.
8. Tenders without above details on the envelope will be rejected without assigning any reason.
9. The leaflets, catalogues, etc. should be sent invariably so that a proper evaluation of the equipment offered is possible. Tenders without these details will be rejected.
10. Quoting of Price (s): Price quoted should be in Indian Rupees, free delivery at Dhempe College at site.
11. Communication with bidders will be carried out electronically and /or in hard copy. All bidders must provide their current email address.
12. The purchase shall not be responsible for any postal delay and delay in receipt of the offer. Any bids received by the purchase which does not fulfil the desired terms and conditions shall be rejected out rightly and no communication in this regard shall be sent. Delayed /Late Bids will not be accepted, at any circumstances
13. All the equipment should be supplied with minimum three years warranty
14. Price bid must be submitted in enclosed price bid format only. If Price bid is not quoted in PRICE BID as provided in Appendix 1 then, the bid will be rejected.
15. Quoting of Price (s): Price quoted should be in Indian Rupees, free delivery shall be given at Dhempe College of Arts & Science, Miramar, Panaji, Goa.

16. Any bidder currently engaged in litigation with other Organizations, must inform their status in writing.
17. Communication with bidders will be carried out electronically and /or in hard copy. All bidders must provide their current email address and phone numbers.
18. The college shall not be responsible for any postal delay and delay in receipt of the offer. Any bids received by the college which does not fulfil the desired terms and conditions shall be rejected out rightly and no communication in this regard shall be sent. Delayed /Late Bids will not be accepted, at any circumstances.
19. **Opening of Tenders:** The tenders will be opened in the presence of the tenderers or their duly authorized representatives, if any as per schedule to be communicated to the tenderers, as per the category of the equipment.
20. **Validity of the Tender:** The tenders submitted shall remain valid for a period of 90 days from the date of opening. Tenders once submitted shall not be withdrawn.
21. **General Instructions:** The tenderers shall carefully examine the list of equipment and the technical specifications provided in the **Annexure 2** and strictly adhere to the technical specifications' detail provided therein.
22. **Certificate of Authorization:** Only those vendors who are authorized suppliers of the equipment shall be permitted to submit their bid, and the certificate of authorization issued by the company shall be submitted along with the tender document. Bids received without the certificate/s shall be considered invalid.
23. **Time for supply of Equipment:** 30 days from the date of issue of Purchase Order.
24. **Advance: NOT ADMISSIBLE**

25. Taxes: The rates quoted by the tenderers shall be **inclusive of GST. No other charges, including packing, delivery and installation shall be admissible.**

26. Earnest Money Deposit (EMD): The tenderer shall submit Earnest Money Deposit equivalent of 2% of the amount quoted. Tenders received without EMD shall be considered as invalid. The EMD of unsuccessful bidders shall be returned within two weeks of opening of the tenders.

27. The successful bidder shall submit 5% of the cost of equipment as security deposit. Security deposit will be returned on the completion of the warranty period.

28. Terms of Payment: Full and final payment shall be effected within 30 days from the completion of installation and successful commissioning of the equipment.

All payments shall be effected through the Public Finance Management System (PFMS).

29. Cancellation of the tender

Notwithstanding anything specified in this Tender. document, Dhempe College in his sole discretion, unconditionally and without having to assigned any reasons, reserves the rights:

- To accept OR reject lowest bidders or any other bidder or all the bidders.
- To accept any bid in full or in part.
- To reject the bid not confirming to the TENDER terms.

30. TRANSFER AND SUBLETTING: The seller shall not sublet, transfer, assign or otherwise part with the acceptance to the TENDER or any part thereof, either directly or indirectly, without the prior written permission of the Dhempe College.

Section 2 :EVALUATION OF OFFER

1. Dhempe College evaluates technical and commercial acceptable offers on landed net Price basis.
2. Offer which deviates from the vital conditions (as illustrates below) of the TENDER shall be rejected:
 - Non submission of complete offers.
 - Receipt of offers after due date and time and or by email / fax (unless specified otherwise).
 - Receipt of offers in open conditions.
3. In case any BIDDER is silent on any clauses mentioned in this TENDER documents, Dhempe College shall construe that the BIDDER had accepted the clauses as per the invitation to TENDER no further claim will be entertained.
4. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of TENDER.
5. **Right on Acceptance of Tender:** The College reserves the right to reject or accept any of the tenders without assigning any reason

SECTION 2 – ELIGIBILITY CRITERIA

- The Bidder's firm should have existence for minimum period of 3 years – (Copy of Certificate of Incorporation / Registration Certificate of the firm).
- Copy of the PAN CARD of the firm.
- Copy of GST registration certificate.
- Copy of MSME certificate (if registered).
- The Bidder must not be blacklisted /suspended or any service-related dispute with any Organization /Govt. Organizations / Bank in or outside India -or any litigation pending. **Annexure 3.**
- Client Details – The bidders must submit at least 3 successfully completion certificates of rate contracts or completed orders. Copies of such rate contracts or purchase orders must be enclosed with the offer. **Annexure 4.**
- Undertaking **Annexure 5.**
- If bidder is Local dealer/distributor/stockiest, it is mandatory to attach Authorization Certificate along with bid.

SECTION 3 Model Clauses for Tenders (including tenders issued manually or any electronic portal including GeM):

- I. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority. Further, any bidder (including bidder from India) having specified Transfer of Technology (TOT) arrangement with an entity from a country which shares a land border with India, shall also require to be registered with the same Competent Authority
- II. “Bidder” (including the term ‘tenderer’ ‘consultant’ or ‘service provider’ in certain contexts) means any person or firm or company including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. ‘Bidder (or entity) from a country which shares a land border with India’ for the purpose of this Order means: -
 - A) An entity incorporated, established, or registered in such a country; or
 - B) A subsidiary of an entity incorporated, established, or registered in such a country; or
 - C) An entity substantially controlled through entities incorporated, established, or registered in such a country, or
 - D) An entity whose beneficial owner is situated in such a country; or
 - E) An Indian (or other) agent of such an entity, or
 - F) A natural person who is a citizen of such a country; or
 - G) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- IV. The beneficial owner for the purpose of (iii) above will be as under:

In case of a company or Limited Liability Partnership, the beneficial owner is the natural persons(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

SECTION 4– TERMS AND CONDITIONS

A. AWARD OF CONTRACT :

1. A committee will select the bidders/suppliers for award of contract.
2. The empanelled suppliers will be abiding by all the Terms & Conditions of the TENDER document.
3. All the discounts quoted should be valid for at least two months.

DELIVERY SCHEDULE :

1. Materials should be door delivered at Dhempe College.
2. Delivery must be made within specified schedule from the issue of the order either directly or through their dealer network unless otherwise specified.
3. If the suppliers fail to deliver the material within the allotted delivery period as specified above, the purchaser may procure goods or services similar to those undelivered upon such terms and in such manner as it deems appropriate from any other firm and the supplier will be liable to the purchaser for any excess cost.
4. Part Supply is normally not acceptable. But may be allowed on genuine cases, on written request only.

B. PENALTY: Timely delivery is essence of the contract and hence if any consignment be delayed, liquidated damages at the rate 0.5% of the price of the delayed consignment, for each week or part whereof shall be levied and recovered subject to maximum of 5% of total purchase order value.

C. FORCE MAJEURE: Force Majeure will be accepted on adequate proof thereof.

D. DISCOUNT: Special Discount should be allowed on your printed Catalogue Price.

E. APPOINTMENT OF LOCAL DEALER/STOCKIEST :

1. The Manufacturers (OEMs) / principals offering for the TENDER may furnish the name and address of their local distributor / dealers, so that the copies can be endorsed them for expeditious supply. In such cases where local dealers / stockiest has been nominated by the principle, the bill raised by them against our purchase order will be accepted.
2. Any addition and deletion of dealership/ distributorship shall be intimated to the undersigned immediately on authorization of a new party.

F. TAXES & DUTIES :

1. GST will be charged as applicable. Any statutory variation will be paid to documentary evidence. Kindly clearly indicate the percentage of GST applicable.

G. LOSS, DAMAGE & SHORTAGE: Dhempe College shall not be responsible for any loss, damages and shortage during transit. Payment shall be made for materials received in GOOD CONDITION only.

H. GENERAL :

1. The material so supplied will have to be of high quality & grade and in the event if equipment's are found to be of inferior quality, the supplier is liable to be banned or suspended from doing business in Dhempe College.
2. The acceptance of the offer will rest with the Dhempe College, who does not bind himself to accept the lowest bid and reserves the right to reject/accept partially or wholly the TENDER received, without assigning any reason.
3. Mere submission of applicable/ proposal does not imply acceptance of the same at this end and the firms will be enlisted only after meeting the laid down qualifying parameters for which decision of Dhempe College shall be final and binding on the parties.

4. Printed terms and conditions of the applicant on their quotation Form/ Literature/ Letter etc. If any, will not be binding on us.

I. **ACCEPTANCE / REJECTION: Dhempe** College reserves the right to accept a quotation in part or in full or to reject all quotations or any of the quotation received, for noncompliance of any of the above items, conditions or instructions or for any other reason without assigning any reason thereof.

J. **LEGAL MATTER:** All disputes are subject to Goa jurisdiction only.

Annexure 1 BIDDER'S INFORMATION

Sr. No.	Vendor's Details	
1.	NAME & ADDRESS OF THE FIRM/VENDOR (with Tel./Mobile/email address)	
2.	NAME & ADDRESS OF THE LOCAL AUTHORISED DEALER/DISTRIBUTERS, if applicable	
	Phone with STD code	
	Fax	
	Email	
	Contact Person	
Mobile No.		
3.	GST NO. OF THE FIRM / DEALER (Copy to be attached)	
4.	PAN NO. OF THE DEALER (copy to be attached)	
5.	Type of Bidder –	
	Manufacturer (Please mention)	
	Authorised Dealer/Stockiest of Chemical / Glasswares/ Labwares (Attach Authorisation Certificate)	

6.	Bank Details :	
	Account Number	
	Bank Name	
	Bank Address	
	IFSC Code	
7.	MSME Details (If registered)	

Annexure 2**A. Specification of the equipment for Technical Bid****Category 1. Desktops**

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
1	M18	Mathematics	Desktop (Geogebra, python, R, latex, Anaconda etc) and programming)	i3 Processor,12 generation, 64 bit,4 core,8 GB Ram, 1 TB HDD plus 256 GB SSD, OS: Win 11 Pro,19.5" Monitor. with Wi-fi,800 VA UPS, USB Optical wired Mouse and Key Board, Microsoft office. with Three years onsite warranty	12	
2	M19	Mathematics	Desktop(Designing of games/ models to teach the properties of Group theory. Application of groups in compound formation in chemistry (by making models). Design of 3D model of Riemann sphere to understand the complex plane and point at infinity.	intel i9, 3.10ghz 32GB RAM 240 GB SSD. 4TB hard disk, 4GB Graphic card with WiFi 19.5"Mointor, Mouse, Keyboard. With external graphic card. with Three years onsite warranty	3	
3	Z62	Zoology	Desktop	Intel i5 processor, 512GB SSD, 8 GB Ram, 2 GB graphics card, OS :Win11 Pro, 21" monitor, 800 VA UPS, USB Optical wired Mouse and Key Board, Microsoft office. with Three years onsite warranty.	1	

4	BT69	Biotechnology	Desktop	Processor-Intel 10th Gen core i3, RAM 8GB, OS:Win 11 Pro,19.5" with Wi-fi, windows 11, with 800 VA UPS, 512 GB SSD, USB optical mouse and keyboard, Three years onsite warranty	5	
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Category 2. Printers

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
5	M20	Mathematics	Printer -Laser Jet Tank	Digital MFP, Print/Copy/Color, Scan A4 size with Wi-fi connectivity, 20 cpm speed, One paper cassette, touch panel 25%-400% magnification, 512 MB RAM, warm time 13 seconds, Copy Resolution 600x600dpi, 1-99 multiple copies, Push/Pull Scan JPEG, PDF etc. with warranty.	1	
6	P50	Physics	Printer	Eco tank, print, scan, copy, with Print resolution of 5760 dpi, print speed 20 ppm (black),15ppm (colour). with Three years onsite warranty	1	

Category 3. Water Baths

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
7	B3	Botany	Water bath	Complete SS model, double walled, 16 to 18 lts ,No. of holes: 12 holes of 7.5cm diameter, Rating watts: 2000, Temperature Range: 40.0 to 100.0 degree Celsius, Temperature controlled thermostat, Microprocessor based auto tune PID digital temperature controlled, and with timer ranging from 0 mins to 60 mins with warranty.	1	
8	C29	Chemistry	Thermostat	Double walled construction round in shape stainless steel capacity: 3 L temperature range: 40 to 100 degree centigrade	6	

Category 4. Microscopes

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
9	B4	Botany	Inclined microscopes	All metal rugged stand with individual coarse fine focus drive with focus stop maintenance free ECO LED illumination, including battery backup with regulating intensity control for 220 V / 50Hz movable achromatic condenser 0.09 NA with aperture iris diaphragm 115 x 125 mm double plate mechanical stage with coaxial XY drive knobs, achromatic objectives 4x, 10x, 40x (spring), 100x (spring oil imm.) 360 degree rotatable 45 degree inclined. with warranty.	2	
10	B5	Botany	Binocular Microscopes	Inclined binocular halogen light illuminator, co-axial coarse and fine focusing controls, high resolution long barrel achromatic objectives 4x, 10x, 40x(spring), 100x (spring oil imm.) with an inclined binocular observation tube rotatable through 360 degree fitted with fungus resistant, anti-reflection coated prism, compensating wide field eyepiece WF10x (F.N.18) and with right hand co-axial low drive mechanical stage, substage abbe condenser 1.25 N.A. with iris diaphragm focusable with rack and pinion. with warranty.	2	

11	BT74	Biotechnology	Microscope with Digital camera	High contrast, 4x, 10x, 40x to 100x visual magnification, 10" to 12.2" TFT, IPS touch screen, 360 degree rotatable, up to 2000 hours halogen lamp life, mention LED life, in built voltage stabilizer, good digital camera, Bluetooth, battery up to 8 hours, memory card compatible with Windows 10/11, USB port, micro SD card slot and all other necessary cleaning items including box for storage, mention warranty.	4	
12	Z60	Zoology	Light Microscope (Binocular)	Advanced lab Binocular Digital Microscope used in clinical studies and research, with Siedentopf Binocular Head, Wide Field Eyepiece, Backward Quadruple Nosepiece, Achromatic Objectives, LED Illumination ; Eyepiece WF10x/18 P16x/12, Nosepiece Backward Quadruple Nosepiece, Objective: Infinite corrected plan Achromatic Objective 4x, 10x, 40x, 100x and anti-fungus treatment, and should be compatible with coverslip, Stage Double Layers Mechanical Stage 132x142mm/ 75x40mm, Condenser Abbe NA1.25 with Iris Diaphragm & Filter Focusing Coaxial Coarse & Fine Adjustment, Fine Division 0.002mm, Coarse Stroke 37.7mm per Rotation, Fine Stroke 0.2mm per Rotation, Device powered by 3 light sources, built in	1	

				Halogen, illumination base, LED illumination - high intensity, uniform (uniform illumination throughout the field even at low magnifications) and battery backup; with camera attachment facility, and digital electronic eyepiece camera with USB to connect to Laptop, with warranty.		
13	Z61	Zoology	Photographic Attachment (Camera)	Around 8 or more Megapixel CMOS Image Sensor; 1/2.33 Inch Image Sensor; HDMI 1080P 60 frame output; USB2.0 1080P 30 frame output; 4K video recording, required to attach to the microscope etc, with compatible software. with warranty.	1	

Category 5. Stereomicroscope

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
14	B6	Botany	Stereomicroscope	C- Mount tube for camera attachment 45degree inclined having zoom ratio 1:7, objective zoom range 0.65- 4.5x, magnification range: 6.5x - 45x with 10x eyepiece paired widefield eyepieces SWF10x/22mm, working distance 100mm, with in-built stand (incident : 6V 15W Lamp / Transmitted: 5W Fluorescence lamp. with warranty.	1	
15	Z68	Zoology	Binocular zoom Stereomicroscope	Built-in illumination system, Magnification: 7X - 45X, 3.5X - 270X With additional optics, extra wide field high eye point 10X (paired) F.O.V. 20mm, continuous zoom 0.7X to 45X with zoom ratio of 6:4:1, with camera attachment facility, with warranty.	1	

Category 6. Micrometers

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
16	B15	Botany	Stage micrometer	Erma horizontal slide, (1mm 100 div.) with warranty.	10	
17	B16	Botany	Occular micrometer	Glass disk, engraved with ruled scale that fits in an eyepiece of a microscope with warranty.	9	

Category 7. Analytical Balance

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
18	B9	Botany	Digital analytical balance	Capacity: 220 g/0.1mg, Repeatability (std dev) Mg : 0.1 mg, Readability: 0.0001g, Linearity (mg) : 0.4 gm, Tare range: Full, pan size : 90mm to 100mm diameter, Display: LCD with back light, Power supply: AC220 V / 50-60Hz, with warranty	1	
19	C35	Chemistry	Electronic balance	Internal Electronic Analytical Balance, Capacity: weighing range 0- 220 g, Accuracy: 0.1mg., With warranty	1	
20	P37	Physics	Analytical weighing balance	measuring 0.0001g to 220g, pan size : Approx. 91 mm dia accuracy: 0.0001 gms. easy to switch between a response focus (R) and a stability focus (S) during measurements	1	

				Equipped with: USB with warranty.		
21	Z63	Zoology	Semi micro-Analytical Balance	<p>Dual Range Semi Micro analytical Balance Max: 80 / 220 gm, Range: (preferably ranging between 0.001 mg to 20 mg) Display: 0.001 / 0.1 mg, Readability: 0.001 mg, Pan Size : Ø 80 mm or the suitable, Calibration: Fully automatic Motorized Internal Calibration, Display: Bright LCD Display with LED back-lit, with warranty.</p> <p>Large graphic display, easy and efficient operation, Record the saved weight value in GLP/ISO format, including date, time, and serial number, Large windshield glass cover, with 3 sliding doors, easy to operate the items to be weighed, Keyboard plastic protection</p>	1	
22	BT79	Biotechnology	Digital Weighing balance	Range: 1mg to 220gm accuracy: up to 2 points, with warranty.	2	

Category 8. Distillation Units

Sr. No.	Code No	Department	Name of the equipment	Specifications	Total	Specification provided by the Tenderer
23	C25	Chemistry	Steam distillation unit	1.Copper vessel (Steam generator), height 24 cm, diameter 11.5 cm 2. Safety tube, bent tube, round bottom collection flask and delivery tube, condenser, adapter, receiving flask With warranty	2	
24	C27	Chemistry	Distillation units	1.Magnetic stirrer/heating mantle-200 mL capacity 2. Condenser, double walled-B19 3. T joint- B19 4. Receiving band-B19 5. Guard tube-B19 6.Round bottom flask-B19 100 mL, 250 mL 7.Thermometer pocket B19 8.Thermometer: 0 to 360 degree centigrade.	4	

Category 9. Furnaces

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
25	C28	Chemistry	Muffle furnace	Horizontal Rectangular light- weight with Triple walled construction, Working Chamber Made of Ceramic with Alumina Muffle, Heating System (Kanthal A-1), Embedded in ceramic Muffle, PID, PROGRAMMABLE CONTROLLER Maximum Temperature 1200 degree centigrade, Chamber size (Width X Height X Length) 130 mm X 130 mm X 200mm, With warranty.	1	
26	P36	Physics	Muffle furnace -	Working Temperature 1200 degree Celsius, Chamber : horizontal Rectangular shape , Made of Ceramic with Alumina Heating System (Kanthal A-1), Embedded in ceramic Muffle, with Dimensions (Width X Height X Length) 130mm X130mm x250mm with timer. Digital PID PROGRAMMABLE CONTROLLER with warranty	1	

Category 10. Hydraulic press

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
27	C21	Chemistry	Laboratory Hydraulic press	Material steel, Load range 0-15 ton, laboratory Hydraulic Pellet Press to make 10 mm Pallet used for IR/FTIR/XRF Solid Sampling, With warranty	1	
28	P38	Physics	Pellet Maker hydraulic Press	Maximum capacity :10 tons, Cylinder type, hand operated, laboratory Hydraulic Pellet Press to make 10-20 mm Pellet used for IR/FTIR/XRF, with safety features: pressure relief valve to safeguard against applying over pressure. with warranty	1	

Category 11. Heaters (hot plates) with Stirrers

Sr. No	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
29	C26	Chemistry	Stirrer with heater (with temperature control)	Stainless steel, heating range- room temperature to 300 degree centigrade, maximum stirring volume 1L, Top Plate Size 135 x 135 mm, Speed (RPM) up to 1200 rpm, With warranty.	4	
30	P40	Physics	Magnetic Stirrer with hot plate	1 litre capacity, with hot plate and digital speed indicator. with warranty	1	

Category 12. pH meters

Sr. No	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
31	C34	Chemistry	pH meters	Table-Top pH meter with glass electrode. PH range 0-14, resolution 0.01pH. With warranty	2	
32	BT 78	Biotechnology	pH meter	Range : 0-14 pH, calibration 2 points, with an electrode, table top type with warranty offers and accessories.	3	

Category 13. AAS lamps

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
33	B11	Botany	AAS lamp of zinc	HOLLOW CATHODE Lamps for Shimadzu Atomic Absorption Spectrophotometer HOLLOW CATHODE LAMP: Zn L233, L233-30NQ, Part No. SSOT-AK000 1-0ZN with warranty.	1	
34	B12	Botany	AAS lamp of potassium	HOLLOW CATHODE Lamps for Shimadzu Atomic Absorption Spectrophotometer HOLLOW CATHODE LAMP: K L233, L233-19NB, Part No. SSOT-AK000 1-00K with warranty.	1	
35	B13	Botany	AAS lamp of lead	HOLLOW CATHODE Lamps for Shimadzu Atomic Absorption Spectrophotometer HOLLOW CATHODE LAMP: Pb L233, L233-82NQ, Part No. SSOT-AK000 with warranty. 1-0PB	1	
36	B14	Botany	AAS lamp of calcium	HOLLOW CATHODE Lamps for Shimadzu Atomic Absorption Spectrophotometer HOLLOW CATHODE LAMP: Ca L233,L233-20NU, Part No. SSOT-AK000 1-0CA with warranty.	1	

Category 14. Micropipettes

Sr.No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
37	B17	Botany	Micropipette	Variable type 0.5 - 10 microlitre with warranty.	1	
38	BT77	Biotechnology	Micropipette (variable volumes)	Variable type 100-1000 microlitres with warranty	5	

Category 15. Vacuum pumps

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
39	C22	Chemistry	Vacuum pump for chiller	Diaphragm (Oil free) vacuum pump made from chemically resistant material, 2 mbar vacuum requirement for rotary evaporator. With Warranty	1	
40	C23	Chemistry	Submersible pumps for water circulation	40 watt water lifting capacity, With warranty.	9	

Category 16. UV Visible and Visible spectrophotometers

Sr. No	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
41	Z59	Zoology	UV-Visible double beam Spectrophotometer	<p>Optical System Double Beam(1200 Lines/mm Grating), Modes- Basic, Wavelength Scan, Multi-Wavelength, Kinetics, Quantitative, DNA/Protein, Wavelength Range 190-1100nm, Bandwidth 1nm, Wavelength Accuracy $\pm 0.3\text{nm}$, Wavelength Repeatability $\pm 0.2\text{nm}$, Scanning Speed Fast, Medium & Low, Photometric Accuracy $\pm 0.3\%T$, Photometric Repeatability $0.2\%T$, Photometric Range $-0.3-3A$, $0-200\%T$, $0-9999C$, Stability $\pm 0.001A/h$ @ 500nm, Baseline Flatness $\pm 0.001A/h$, Noise $\pm 0.001A/h$, Stray Light $\leq 0.05\%T$ @ $220\text{nm}, 360\text{nm}$ Data Output Port USB Printer Port, Parallel Port, Display LCD, Lamps D2 Lamp & Tungsten Halogen Lamp (W Lamp), Detector Silicon Photodiode, with compatible software "with warranty". And Accessories such as Quartz Cuvettes – A set of 2, Microcuvettes, Glass Cuvettes – A set of 4 Mains Lead, Operation Manual and Dust Cover, etc. The instrument output should be available in terms of % Transmission (%T), Absorbance (Abs.), & Concentration (Conc.). The instrument should be suitable for clinical lab applications, pharmaceutical and biochemical, as well as routing applications such as quantitative analysis, kinetics, wavelength scan,</p>	1	

				multi-wavelength and DNA/Protein analysis. The instrument should have sample storage memory and printer output port for printing of data with any dot matrix printer. The PC can be connected using the USB Interface and Customized report formatting suitable for publishing data. Provision for 8 position auto cell changer with 10 mm path-length cuvette should be provided.with warranty		
42	BT75	Biotechnology	Visible Spectrophotometer	Range: 340 nm -1000nm, with glass cuvettes, to measure absorbance, and transmission, with warranty.	1	

Category 17. Other Equipment's

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Specification provided by the Tenderer
43	B1	Botany	Horizontal Laminar Air flow	Size:3'x2'x2' GI Powder coated, aluminium framed high efficiency particulate air (HEPA) EU 13 filter, with a minimum efficiency of 99.99% at 0.3 micron, Prefilter: washable type pleated pre-filter with 90% efficiency, Digital screen displaying: Filter usage time, UV lamp usage time, UV hour meter and air pressure with warranty.	1	

44	B2	Botany	Water dispenser	. Capacity: 500ml, Packing: 12 per pack.	One pkt	
45	B7	Botany	Soxhlet Extraction apparatus along with controlled heating mantles (1Lt)	Soxhlet Extraction apparatus along with Fibre glass hand knitted heating surface having Nichrome wire heating elements. Body made of M.S. sheet duly finished with powder coating with energy regulators with warranty.	1	
46	B8	Botany	Gel electrophoresis unit	GEL size: 70 x 100mm (W x L), Horizontal sub marine gel electrophoresis system: gel running tray 70 x 50 mm – 1No. 270 x 100 mm gel casting tray 1 No., Acrylic comb of 1.5 mm thick, 8 wells -2 Nos. and 3 wells- 1 No., Model banana cord - 1 pair, lid platinum electrodes-1 set, Electrophoresis Power Supply (2 terminal output) 50v and 100v with DC output with warranty.	1	
47	B10	Botany	Autoclave 16L capacity	Size: 300 x 230 mm (12 x 9), capacity: 16 L, Dressing drum size: 270 x 220 mm (11x 9"), cross dimension: 530 x 530 x 550 mm / 14 kg, Heater: 1.8kW Psi: 15Psi, Hassle free - preset automatic (electronically controlled) - with auto switch off with warranty.	1	
48	C24	Chemistry	Digital melting point apparatus	Display type-4 digit, 7 segment LED, Range-Ambient to 360 degree centigrade, resolution 1 degree centigrade. With Warranty	3	
49	C30	Chemistry	Kipp's apparatus	500 mL capacity Borosilicate Glass Kipps Apparatus, With warranty.	5	

50	C31	Chemistry	Mild Steel Ice Crusher Machine	Material mild steel, Motor 1HP, Capacity 100 kg/Hr, With warranty.	1	
51	C32	Chemistry	Safety shower and Eye wash	GI and Stainless Steel, Hand and Foot Operated and Push Plate operated height 7 feet, ISI approved, With warranty.	2	
52	C33	Chemistry	Laboratory fume hood	Stainless Steel structure, Internal size in mm (W-1525 x D-750 x H-1220) motor capacity 1.5 HP, with Exhaust System. With warranty.	1	
53	P39	Physics	Dia for pellet making	Rectangular shape , size 10mm circular and 10mm. rectangular with warranty.	2	
54	P41	Physics	Dielectric measurements setup (research make):	<p>Temperature Range Ambient to 600° C</p> <p>Power Supply 100-240VAC; 50/60Hz</p> <p>Display Method 7 Segment LED display</p> <p>Input Sensor Thermocouple (Chromel - Alumel)</p> <p>Control Method PID, ON/OFF Control, P, PI, PD, PIDF, PIDS</p> <p>Display Accuracy $\pm 0.3\%$</p> <p>Setting Type Setting by front push buttons</p> <p>Proportional Band (P) 0 to 100.0%</p> <p>Integral Time (I) 0 to 3600 Sec</p> <p>Derivative Time (D) 0 to 3600 Sec</p> <p>Sampling Time 0 to 120 Sec</p> <p>Sampling Time 0.5 Sec</p> <p>Setting (P, I & D) Manual / Auto</p> <p>LCD Display</p> <p>Data - Hold Switch (HOLD)</p> <p>Cx+, Cx - Input Jack</p> <p>Back Light Button Switch</p> <p>Wide measuring range, covering 9 measuring sections from 0.1pf to 20,000μF that includes nominal value of any capacitance</p> <p>. with warranty</p>	1	

55	P42	Physics	Law of Motion set up	<p>Dynamic Trolley Dimensions : 155 x 77 x 55 mm (Lx W x H) approx. In-elastic collision : Via 2 nos. velcro pad. Stacking : Two or more trolleys with 2 nos. guiding pins Wheels : PVC, 4 nos. low frictions. Weight mount : 4mm socket at center to mount slotted weights Clamping screw : To attach ticker tape or thread. Suspension : Spring loaded. Slotted weights</p> <p>Track For Dynamic Trolley Dimension : 119.5 x 10cm (L x W) excluding pulley. Scale : 0 to 115cm, graduated in mm.</p> <p>Digital Timer & Photogate Display : 2 line LCD Type : Micro controller based Time resolution : 0.1 milli second Mode : Time, Speed & Acceleration</p> <p>Interface : USB</p> <p>Photogate detector : Infra-Red Microcontroller based and in-built test functions. with a pair of photogate and photogate mounting rod</p> <p>Slotted Masses Weights : Stainless steel/brass Hanger with warranty</p>	1	
56	P43	Physics	Forced Oscillators and Resonance	<p>Contents : Base unit with frequency generator Spring</p>	1	

				<p>Weight 50gms Scale (10cm-0-10cm) Power adapter Thread roll Acrylic cylinder . with warranty</p>		
57	P44	Physics	Function Generator	<p>Max. Frequency 25 MHz Waveforms: Sine 1 μHz to 25 MHz, Square 1 μHz to 10 MHz, Ramp 1 μHz to 500 kHz, Pulse 1 μHz to 10 MHz Noise 1 μHz to 10 MHz DC 2 kbps to 20 Mbps Dual-tone 1 μHz to 20 MHz Built-in Arbitrary Waveforms 160 types of waveforms, including Sinc, Exponential Rise, Exponential Fall, ECG, Gauss, HaverSine, Lorentz, etc. RS232: baud rate range: 9600, 14400, 19200, 38400, 57600, 115200, 128000, 230400 Accuracy: $\pm(1 \text{ ppm of the setting value} + 10 \text{ pHz})$, 18°C to 28°C Harmonic Distortion: Typical (0 dBm) DC to 10 MHz (included): $<-55 \text{ dBc}$ 10 MHz to 20 MHz (included): $<-50 \text{ dBc}$ Spurious (non-harmonic): Typical $\leq 10 \text{ MHz}$: $<-60 \text{ dBc}$ $>10 \text{ MHz}$: $<-60 \text{ dBc} + 6 \text{ dB/octave}$ Duty: 0.01% to 99.99% (limited by the current frequency setting) Modulation Type: AM, FM, PM, ASK, FSK, PSK, PWM Carrier Waveform: Sine, Square, Ramp, Arb</p>	2	

				<p>Source: Internal/External Modulating Waveform: Sine, Square, Ramp, Noise, Arb Modulation Frequency: 2 mHz to 1 MHz Carrier Waveform: Sine, Square, Ramp, Arb</p> <p>With warranty</p>		
58	P45	Physics	He-Ne Laser	<p>He -Ne laser source enclosed in box Optical Bench Scale : 0-100cm, Least count : 1mm With Single slit, double slit, multiple slit 3, multiple slit 4, multiple slit 5, single tapered slit, fine grating 15000 lines /inch, 4 holes, circular opaque spots. gray filter, mesh, coarse grating & grid pattern. Frame Size : 50mm x 50mm Measuring Tape Length : 3m Least Count : 1mm Width : 16mm Fixed Slider With Large Width Base width : 80mm Height : 115mm can hold rod from 8mm to 15mm Object Screen Material : Translucent, Acrylic. Size : 300 x 300 mm Rod : 10 mm diameter Cylindrical Base Material : Ferrous Mount : Rod 10-14mm dia : Flat object up to 10mm Groove : Slide object,</p>	1	

				<p>30x10mm (LxW) Prism Table Disc : 75mm diameter. Rod : 10 mm diameter With prism With warranty</p>		
59	P46	Physics	Timing Ball	Timing ball working on battery	2	
60	P47	Physics	Balmer series and Rydberg's Constant	<p>High quality grating (100,300,600 line/mm). Electrical safety tested high voltage power supply with overload current protection. Tube filed with research-grade gasses & vapors Advanced Spectrometer Scale : Brass, Dia. 175mm. Objective : Achromatic lens, f = 178mm, Aperture 32mm Slit : German silver with knurled screw Least count : 30 seconds Eyepiece : 15X, Ramsden eyepiece Spectrum Tube Power Supply Input Voltage : 220V, 50 Hz AC Output Voltage : 0-5000V (open circuit) Overload : 2mA (Max.) with reset swtich Protection window for tube with red switch for safe operation Diffraction Grating Size : 89 X 38 mm Aperture size : 16 X 9 mm Rulings : 100,300,600 lines/mm Prism Size : 38x38x38mm (LxBxH) Height : 38mm Hydrogen Tube</p>	1	

				<p>Gas : Hydrogen research grade</p> <p>Magnifier With Led</p> <p>Dia : 6-8cm</p> <p>Light : LED (cell operated)</p> <p>FL : 5cm</p> <p>Hand held magnifier with better zoom and in built light source. with warranty</p>		
61	P48	Physics	Millikan's oil drop	<p>Millikan's Apparatus</p> <p>Input voltage : AC 220V, 50Hz</p> <p>Output power : 5W.</p> <p>Plate voltage : 0~500V DC</p> <p>Change over switch : Between +ve, -ve and 0 field</p> <p>Plate distance : 5 ± 0.2mm.</p> <p>Total Magnification : 30X</p> <p>Linear field of vision : ≥ 3mm.</p> <p>Scale division : 2 ± 0.01mm.</p> <p>Objective lens : 100 lines/mm.</p> <p>Digital Stop Watch</p> <p>Display : 6 Digit</p> <p>Accuracy : 0.01sec</p> <p>Digit size : 5mm</p> <p>Mode : Start, Stop & Reset</p> <p>Necklace length : 2 feet</p> <p>USB Camera</p> <p>Sensor : 1.2 MP</p> <p>Eyepiece : 10X with adaptor ring</p> <p>Connectivity : USB</p> <p>System Requirement</p> <p>CPU : PIV 2.0GHz or above</p> <p>RAM : 1GB or above</p> <p>O.S : Win10/11</p> <p>With warranty</p>	1	

62	P49	Physics	Viscosity of Glycerine	<p>Glass Tube Length : 110cm Dia : 50mm</p> <p>Digital Timer & Photogate Display : 2 line LCD Type : Micro controller based Time resolution : 0.1 milli second Mode : Time, Speed & Acceleration Photogate : 2 Nos. Interface : USB Operating voltage : 5V DC Photogate detector : Infra-Red Dimension : 210x130x65mm.</p> <p>ELECTROMAGNET Terminal : 4mm safety socket Input voltage : 0 - 5 V DC Mounting rod : 10 mm dia</p> <p>FERRITE MAGNET Dimension : 40x25x10 mm Material : Ferrite</p> <p>Glycerine Quantity : 500mlx3 Supplied in plastic Bottle</p> <p>'g' By Free Fall Stand Base Size : 280mm (Cast Iron) Leveling knob : 2 Material : MS Sheet Channel Length : 110cm Scale : 0-100cm Rod : 12mm, 1meter Base : Star type with warranty</p>	1	
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63	P51	Physics	Polarimeter	<p>Polarimeter Tube Length : 200mm With central bulb, metallic caps & cover glasses packed in a velvet case.</p> <p>Laurent's Half Shade Circular scale : 0o - 360o Least count : 1o Vernier Reading : 6 min. Dimensions : Dia. 12 mm, length 200mm</p> <p>Sodium Light Source Starting Voltage : 470 Volts Input Voltage : 220V, 50 Hz Lamp House : 300x85mm(LxØ) Aperture dia. : 25mm With warranty</p>	1	
64	P52	Physics	Spectrometer	<p>Scale: Brass, Dia 150mm. Objective : Achromatic, focal length 178mm(collimator and ocular telescope, aperture 32mm Slit : German silver. Reticle : 90⁰ cross on glass. Least count: 1 minute. Base: Aluminium Casting width entrance slit: 0...1,5 mm Compact device with two angular verniers Focusing fine drives for slit and ocular the collimator with adjustable slit is fixed in position with respect to the device Grating with holders and prism with holder Grating: Size (mm): 38 x 50, Lines / inch:15000 Prism: Size (mm): 32 x 32 x 32 Material: Flintglass (n = 1.65) With warranty</p>	4	

65	P53	Physics	Three phase power analyser	to detect three phase power with clamp. with warranty. with warranty	1	
66	P54	Physics	Container for liquid nitrogen	3.5-4 litre container	1	
67	P55	Physics	Digital (LCR) Multimeter	with resistance 200 Ohms to 2000Mohms, Capacitor from 200 pico farad to 20 mF, inductance 2mH to 20H. with warranty	1	
68	P56	Physics	Agate Mortar with pestle	4 inch in dimensions	1	
69	P57	Physics	Cathode Ray /Digital Storage Oscilloscope 2 channel	50 Mhz Digital storage oscilloscope Technical Specifications Bandwidth : 50MHz Realtime Sample Rate : 500MSa/s (Single Channel) Equivalent Sample Rate : 50GSa/s Number of Channels : 2 CH +1 Ext Memory Depth : 32 Kpts (Single Channel) Acquisition Modes : Normal/Average/Peak Detect Average : Selectable from 4 to 256 Vertical Sensitivity : 2mV/div - 10V/div Vertical Resolution : 8bits Input Impedance : 1 MW \pm 2% II 17 pF \pm 3 pF Input Coupling : DC, AC and GND Maximum Input Voltage : \pm 400Vpp Trigger Sources : CH1, CH2, Ext, Ext /5, AC Line Trigger Modes : Auto, Normal, Single Trigger Type : Edge, Pulse Width, Slope, Video, Alternate Auto Measure : Vpp, Vmax, Vmin, Vamp, Vtop, Vbase, Vavg, Mean, Crms, Vrms, ROVShoot, FOVShoot, RPRESshoot, FPRESshoot, Rise time, Fall time, Freq, Period, + Wid, -Wid, +Dut, -Dut, BWid, Phase, FRR, FRF, FFR, FFF, LRR, LRF,LFR, LFF Cursor Measure : Manual, Track and Auto measure mode Maths : +, -, \times , /, FFT Waveform Interpolation : Sin x/x, Linear	2	

				<p>Storage : Internal : 2 Group reference waveforms, 20 waveforms and 20 Setups USB : BMP, CSV, Waveforms, Setups Communication Port : USB Host, USB Device, RS232, Pass/Fail Sample Types : Real Time and Equivalent Time FFT : Window: Hanning, Hamming, Blackman, Rectangular Measure Display Modes : Main, Window, Window Zoom, Scan, X-Y Menu Display : 2 sec, 5 sec, 10 sec, 20 sec, Infinite Display : 7 inch TFT Color LCD Display Power : 100 - 240V AC, 50VA Max Net Weight : 2.3kg Dimensions : 305 x 133 x 154 mm . with warranty</p>		
70	P58	Physics	Optical Bench with fittings	<p>Optical bench 1.5meter with adjustable slit, eyepiece, biprism with stand, Lloyd's mirror with stand, convergent lenses with stand, zone plate with stand. Material : Aluminium extrusion Type : Triangular shape Scale : 0-100cm Least count : 1mm, with four levelling arrangement made of SS material and flexible feet. Self cantering rider assembly (8-14mm rod. with warranty</p>	1	
71	Z64	Zoology	Portable Turbidity meter	<p>Equipped with a tungsten lamp, the meter should meet the EPA 180.1 turbidity measurement method from 0 to 40 NTU (Nephelometric Turbidity Units).with Warranty</p>	1	
72	Z65	Zoology	Water and Soil Analysis kit	<p>Measures parameters like pH, TDS, Conductivity, DO, Salinity, mV, Temperature etc, alphanumeric LCD Display, Battery cum main operated with all accessories fitted in a briefcase, Data storage facility upto 1000 samples and external printer attachment facility, computer interface through USB, etc. with expiry date approx. 3 years.</p>	2	
73	Z66	Zoology	Medical Centrifuge	<p>Laboratory centrifuge with 24x15ml swing out Head, Speed: 6000 to 10,000 rpm, with warranty.</p>	1	

74	Z67	Zoology	Garmin eTrex 32 x rugged hand held GPS Navigator	hand held GPS Navigator, with warranty.	1	
75	BT70	Biotechnology	Potometer	With a proper base (wooden/steel), the Height to the top of the reservoir 170 mm, the diameter of the reservoir 20 mm, overall length 320 mm. With warranty	5	
76	BT71	Biotechnology	Rotary microtome	Feed adjustment: 1-50 microns in steps of 1 micron, Total feed excursion: 28 mm, opening of object clamp: 37x25mm, Overall dimension: 400w x 250d x 225ht mm approx., With warranty.	1	
77	BT72	Biotechnology	UV transilluminator	shield for UV protection, viewing area: either 20cm x 15cm, or 20 cm x20 cm, upto 365 nm, UV tubes 4 No.s x 8 watts, With warranty for UV transilluminator.	1	
78	BT73	Biotechnology	Portable DO and BOD meter	DO Range: 0.00 to 50.00 ppm (mg/L); 0.0 to 600.0% saturation, DO Resolution: 0.01 ppm (mg/L); 0.1% saturation DO calibration: automatic one or two points at 100% saturation (8.26 mg/L) and 0% saturation (0 mg/L) DO temperature compensation: automatic from 0.0 to 50.0 ^o C Barometric Pressure Compensation: automatic from 450 to 850 mmHg Salinity compensation: automatic from 0 to 70 g/L Temperature range: -20.0 to 120 ^o C Temperature resolution: 0.1 ^o C	2	

				<p>Temperature accuracy: $\pm 0.2^{\circ}\text{C}$ (excluding probe error) DO probe: Polarographic DO probe with a protective sleeve, internal temperature sensor, DIN connector, and 4m cable (included) BOD/OUR/SOUR: Direct DO, BOD, OUR, SOUR Environment: 0 to 50°C, RH 100% Accessories: PTFE membrane cap, electrolyte solution, bicomponent zero oxygen solution, PC software, Plastic beakers Atmospheric Pressure range: 450 to 850 mm Hg Atmospheric pressure resolution: 0.1 mm Hg Atmospheric pressure accuracy: ± 3 mm Hg within $\pm 15\%$ from calibration point Atmospheric Pressure calibration: automatic at one custom point. With warranty</p>		
79	BT76	Biotechnology	Refrigerator	<p>Twin cooling, Frost free, 300 to 400 Liters, temp range 1°C to -23°C, 2/3 star with a good warranty on compressor and fridge.</p>	1	

B. Specification of the equipment for Financial Bid

Category 1. Desktops

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
1	M18	Mathematics	Desktop (Geogebra, python, R, latex, Anaconda etc) and programming)	i3 Processor,12 generation, 64 bit,4 core,8 GB Ram, 1 TB HDD plus 256 GB SSD, OS: Win 11 Pro,19.5" Monitor. with Wi-fi,800 VA UPS, USB Optical wired Mouse and Key Board, Microsoft office. with Three years onsite warranty	12		
2	M19	Mathematics	Desktop(Designing of games/ models to teach the properties of Group theory. Application of groups in compound formation in chemistry (by making models). Design of 3D model of Riemann sphere to understand the complex plane and point at infinity.	intel i9, 3.10ghz 32GB RAM 240 GB SSD. 4TB hard disk, 4GB Graphic card with WiFi 19.5"Mointor, Mouse, Keyboard. With external graphic card. with Three years onsite warranty	3		
3	Z62	Zoology	Desktop	Intel i5 processor, 512GB SSD, 8 GB Ram, 2 GB graphics card, OS :Win11 Pro, 21" monitor, 800 VA UPS, USB Optical wired Mouse and Key Board, Microsoft	1		

				office. with Three years onsite warranty.			
4	BT69	Biotechnology	Desktop	Processor-Intel 10th Gen core i3, RAM 8GB, OS:Win 11 Pro,19.5" with Wi-fi, windows 11, with 800 VA UPS, 512 GB SSD, USB optical mouse and keyboard, Three years onsite warranty	5		

Category 2. Printers

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
5	M20	Mathematics	Printer -Laser Jet Tank	Digital MFP, Print/Copy/Color, Scan A4 size with Wi-fi connectivity, 20 cpm speed, One paper cassette, touch panel 25%-400% magnification, 512 MB RAM, warm time 13 seconds, Copy Resolution 600x600dpi, 1-99 multiple copies, Push/Pull Scan JPEG, PDF etc. with warranty.	1		
6	P50	Physics	Printer	Eco tank, print, scan, copy, with Print resolution of 5760 dpi, print speed 20 ppm (black),15ppm (colour). with Three years onsite warranty	1		

Category 3. Water Baths

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
7	B3	Botany	Water bath	Complete SS model, double walled, 16 to 18 lts ,No. of holes: 12 holes of 7.5cm diameter, Rating watts: 2000, Temperature Range: 40.0 to 100.0 degree Celsius, Temperature controlled thermostat, Microprocessor based auto tune PID digital temperature controlled, and with timer ranging from 0 mins to 60 mins with warranty.	1		
8	C29	Chemistry	Thermostat	Double walled construction round in shape stainless steel capacity: 3 L temperature range: 40 to 100 degree centigrade	6		

Category 4. Microscopes

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
9	B4	Botany	Inclined microscopes	All metal rugged stand with individual coarse fine focus drive with focus stop maintenance free ECO LED illumination, including battery backup with regulating intensity control for 220 V / 50Hz movable achromatic condenser 0.09 NA with aperture iris diaphragm 115 x 125 mm double plate mechanical stage with coaxial XY drive knobs, achromatic objectives 4x, 10x, 40x (spring), 100x (spring oil imm.) 360 degree rotatable 45 degree inclined. with warranty.	2		
10	B5	Botany	Binocular Microscopes	Inclined binocular halogen light illuminator, co-axial coarse and fine focusing controls, high resolution long barrel achromatic objectives 4x, 10x, 40x(spring), 100x (spring oil imm.) with an inclined binocular observation tube rotatable through 360 degree fitted with fungus resistant, anti-reflection coated prism, compensating wide field eyepiece WF10x (F.N.18) and with right hand co-axial low drive mechanical stage, substage abbe condenser 1.25 N.A. with	2		

				iris diaphragm focusable with rack and pinion. with warranty.			
11	BT74	Biotechnology	Microscope with Digital camera	High contrast, 4x, 10x, 40x to 100x visual magnification, 10" to 12.2" TFT, IPS touch screen, 360 degree rotatable, up to 2000 hours halogen lamp life, mention LED life, in built voltage stabilizer, good digital camera, Bluetooth, battery up to 8 hours, memory card compatible with Windows 10/11, USB port, micro SD card slot and all other necessary cleaning items including box for storage, mention warranty.	4		

12	Z60	Zoology	Light Microscope (Binocular)	<p>Advanced lab Binocular Digital Microscope used in clinical studies and research, with Siedentopf Binocular Head, Wide Field Eyepiece, Backward Quadruple Nosepiece, Achromatic Objectives, LED Illumination ; Eyepiece WF10×/18 P16×/12, Nosepiece Backward Quadruple Nosepiece, Objective: Infinite corrected plan Achromatic Objective 4×, 10×, 40×, 100× and anti-fungus treatment, and should be compatible with coverslip, Stage Double Layers Mechanical Stage 132×142mm/ 75×40mm, Condenser Abbe NA1.25 with Iris Diaphragm & Filter Focusing Coaxial Coarse & Fine Adjustment, Fine Division 0.002mm, Coarse Stroke 37.7mm per Rotation, Fine Stroke 0.2mm per Rotation, Device powered by 3 light sources, built in Halogen, illumination base, LED illumination - high intensity, uniform (uniform illumination throughout the field even at low magnifications) and battery backup; with camera attachment facility, and digital electronic eyepiece camera with USB to connect to Laptop, with warranty.</p>	1		
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13	Z61	Zoology	Photographic Attachment (Camera)	Around 8 or more Megapixel CMOS Image Sensor; 1/2.33 Inch Image Sensor; HDMI 1080P 60 frame output; USB2.0 1080P 30 frame output; 4K video recording, required to attach to the microscope etc, with compatible software. with warranty.	1		
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Category 5. Stereomicroscope

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
14	B6	Botany	Stereomicroscope	C- Mount tube for camera attachment 45degree inclined having zoom ratio 1:7, objective zoom range 0.65- 4.5x, magnification range: 6.5x - 45x with 10x eyepiece paired widefield eyepieces SWF10x/22mm, working distance 100mm, with in-built stand (incident : 6V 15W Lamp / Transmitted: 5W Fluorescence lamp. with warranty.	1		

15	Z68	Zoology	Binocular zoom Stereomicroscope	Built-in illumination system, Magnification: 7X - 45X, 3.5X - 270X With additional optics, extra wide field high eye point 10X (paired) F.O.V. 20mm, continuous zoom 0.7X to 45X with zoom ratio of 6:4:1, with camera attachment facility, with warranty.	1		
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Category 6. Micrometers

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
16	B15	Botany	Stage micrometer	Erma horizontal slide, (1mm 100 div.) with warranty.	10		
17	B16	Botany	Ocular micrometer	Glass disk, engraved with ruled scale that fits in an eyepiece of a microscope with warranty.	9		

Category 7. Analytical Balance

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
18	B9	Botany	Digital analytical balance	Capacity: 220 g/0.1mg, Repeatability (std dev) Mg : 0.1 mg, Readability: 0.0001g, Linearity (mg) : 0.4 gm, Tare range: Full, pan size : 90mm to 100mm diameter, Display: LCD with back light, Power supply: AC220 V / 50-60Hz, with warranty	1		
19	C35	Chemistry	Electronic balance	Internal Electronic Analytical Balance, Capacity: weighing range 0- 220 g, Accuracy: 0.1mg., With warranty	1		
20	P37	Physics	Analytical weighing balance	measuring 0.0001g to 220g, pan size : Approx. 91 mm dia accuracy: 0.0001 gms. easy to switch between a response focus (R) and a stability focus (S) during measurements Equipped with: USB with warranty.	1		
21	Z63	Zoology	Semi micro-Analytical Balance	Dual Range Semi Micro analytical Balance Max: 80 / 220 gm, Range: (preferably ranging between 0.001 mg to 20 mg) Display: 0.001 / 0.1 mg, Readability: 0.001 mg, Pan Size : Ø 80 mm or the suitable, Calibration: Fully automatic Motorized Internal Calibration, Display: Bright LCD Display with LED back-lit, with warranty.	1		

				Large graphic display, easy and efficient operation, Record the saved weight value in GLP/ISO format, including date, time, and serial number, Large windshield glass cover, with 3 sliding doors, easy to operate the items to be weighed, Keyboard plastic protection			
22	BT79	Biotechnology	Digital Weighing balance	Range: 1mg to 220gm accuracy: up to 2 points, with warranty.	2		

Category 8. Distillation Units

Sr. No.	Code No	Department	Name of the equipment	Specifications	Total	Rate (Rs.)	Amount (Rs.) Inclusive of GST
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23	C25	Chemistry	Steam distillation unit	1.Copper vessel (Steam generator), height 24 cm, diameter 11.5 cm 2. Safety tube, bent tube, round bottom collection flask and delivery tube, condenser, adapter, receiving flask With warranty	2		
24	C27	Chemistry	Distillation units	1.Magnetic stirrer/heating mantle-200 mL capacity 2. Condenser, double walled-B19 3. T joint- B19 4. Receiving band-B19 5. Guard tube-B19 6.Round bottom flask-B19 100 mL, 250 mL 7.Thermometer pocket B19 8.Thermometer: 0 to 360 degree centigrade.	4		

Category 9.Furnaces

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
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25	C28	Chemistry	Muffle furnace	Horizontal Rectangular light- weight with Triple walled construction, Working Chamber Made of Ceramic with Alumina Muffle, Heating System (Kanthal A-1), Embedded in ceramic Muffle, PID, PROGRAMMABLE CONTROLLER Maximum Temperature 1200 degree centigrade, Chamber size (Width X Height X Length) 130 mm X 130 mm X 200mm, With warranty.	1		
26	P36	Physics	Muffle furnace -	Working Temperature 1200 degree Celsius, Chamber : horizontal Rectangular shape , Made of Ceramic with Alumina Heating System (Kanthal A-1), Embedded in ceramic Muffle, with Dimensions (Width X Height X Length) 130mm X130mm x250mm with timer. Digital PID PROGRAMMABLE CONTROLLER with warranty	1		

Category 10. Hydraulic press

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
27	C21	Chemistry	Laboratory Hydraulic press	Material steel, Load range 0-15 ton, laboratory Hydraulic Pellet Press to make 10 mm Pallet used for IR/FTIR/XRF Solid Sampling, With warranty	1		
28	P38	Physics	Pellet Maker hydraulic Press	Maximum capacity :10 tons, Cylinder type, hand operated, laboratory Hydraulic Pellet Press to make 10-20 mm Pellet used for IR/FTIR/XRF, with safety features: pressure relief valve to safeguard against applying over pressure. with warranty	1		

Category 11. Heaters (hot plates) with Stirrers

Sr. No	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
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29	C26	Chemistry	Stirrer with heater (with temperature control)	Stainless steel, heating range- room temperature to 300 degree centigrade, maximum stirring volume 1L, Top Plate Size 135 x 135 mm, Speed (RPM) up to 1200 rpm, With warranty.	4		
30	P40	Physics	Magnetic Stirrer with hot plate	1 litre capacity, with hot plate and digital speed indicator. with warranty	1		

Category 12. pH meters

Sr. No	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
31	C34	Chemistry	pH meters	Table-Top pH meter with glass electrode.PH range 0-14, resolution 0.01pH. With warranty	2		
32	BT 78	Biotechnology	pH meter	Range : 0-14 pH, calibration 2 points, with an electrode, table top type with warranty offers and accessories.	3		

Category 13. AAS lamps

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
33	B11	Botany	AAS lamp of zinc	HOLLOW CATHODE Lamps for Shimadzu Atomic Absorption Spectrophotometer HOLLOW CATHODE LAMP: Zn L233, L233-30NQ, Part No. SSOT-AK000 1-0ZN with warranty.	1		
34	B12	Botany	AAS lamp of potassium	HOLLOW CATHODE Lamps for Shimadzu Atomic Absorption Spectrophotometer HOLLOW CATHODE LAMP: K L233, L233-19NB, Part No. SSOT-AK000 1-00K with warranty.	1		
35	B13	Botany	AAS lamp of lead	HOLLOW CATHODE Lamps for Shimadzu Atomic Absorption Spectrophotometer HOLLOW CATHODE LAMP: Pb L233, L233-82NQ, Part No. SSOT-AK000 with warranty. 1-0PB	1		
36	B14	Botany	AAS lamp of calcium	HOLLOW CATHODE Lamps for Shimadzu Atomic Absorption Spectrophotometer HOLLOW CATHODE LAMP: Ca L233,L233-20NU, Part No. SSOT-AK000 1-0CA with warranty.	1		

Category 14. Micropipettes

Sr.No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
37	B17	Botany	Micropipette	Variable type 0.5 - 10 microlitre with warranty.	1		
38	BT77	Biotechnology	Micropipette (variable volumes)	Variable type 100-1000 microlitres with warranty	5		

Category 15. Vacuum pumps

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
39	C22	Chemistry	Vacuum pump for chiller	Diaphragm (Oil free) vacuum pump made from chemically resistant material, 2 mbar vacuum requirement for rotary evaporator. With Warranty	1		
40	C23	Chemistry	Submersible pumps for water circulation	40 watt water lifting capacity, With warranty.	9		

Category 16. UV Visible and Visible spectrophotometers

Sr. No	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
41	Z59	Zoology	UV-Visible double beam Spectrophotometer	<p>Optical System Double Beam(1200 Lines/mm Grating), Modes- Basic, Wavelength Scan, Multi-Wavelength, Kinetics, Quantitative, DNA/Protein, Wavelength Range 190-1100nm, Bandwidth 1nm, Wavelength Accuracy $\pm 0.3\text{nm}$, Wavelength Repeatability $\pm 0.2\text{nm}$, Scanning Speed Fast, Medium & Low, Photometric Accuracy $\pm 0.3\%T$, Photometric Repeatability $0.2\%T$, Photometric Range $-0.3-3A$, $0-200\%T$, $0-9999C$, Stability $\pm 0.001A/h$ @ 500nm, Baseline Flatness $\pm 0.001A/h$, Noise $\pm 0.001A/h$, Stray Light $\leq 0.05\%T$ @ $220\text{nm}, 360\text{nm}$ Data Output Port USB Printer Port, Parallel Port, Display LCD, Lamps D2 Lamp & Tungsten Halogen Lamp (W Lamp), Detector Silicon Photodiode, with compatible software "with warranty". And Accessories such as Quartz Cuvettes – A set of 2, Microcuvettes, Glass Cuvettes – A set of 4 Mains Lead, Operation Manual and Dust Cover, etc.</p> <p>The instrument output should be available in terms of % Transmission (%T), Absorbance (Abs.), & Concentration (Conc.). The instrument should be suitable for clinical lab applications, pharmaceutical and biochemical, as well as routing applications such as quantitative analysis, kinetics, wavelength scan, multi-wavelength and DNA/Protein analysis. The instrument should have sample storage memory and printer output port for printing of data with any dot matrix printer. The PC can be connected using the USB Interface and Customized</p>	1		

				report formatting suitable for publishing data. Provision for 8 position auto cell changer with 10 mm path-length cuvette should be provided.with warranty			
42	BT75	Biotechnology	Visible Spectrophotometer	Range: 340 nm -1000nm, with glass cuvettes, to measure absorbance, and transmission, with warranty.	1		

Category 17. Other Equipment's

Sr. No.	Code No	Department	Name of the equipment	Specifications	Quantity	Rate (Rs.)	Amount (Rs.) Inclusive of GST
43	B1	Botany	Horizontal Laminar Air flow	Size:3'x2'x2' GI Powder coated, aluminium framed high efficiency particulate air (HEPA) EU 13 filter, with a minimum efficiency of 99.99% at 0.3 micron, Prefilter: washable type pleated pre-filter with 90% efficiency, Digital screen displaying: Filter usage time, UV lamp usage time, UV hour meter and air pressure with warranty.	1		
44	B2	Botany	Water dispenser	. Capacity: 500ml, Packing: 12 per pack.	One pkt		

45	B7	Botany	Soxhlet Extraction apparatus along with controlled heating mantles (1Lt)	Soxhlet Extraction apparatus along with Fibre glass hand knitted heating surface having Nichrome wire heating elements. Body made of M.S. sheet duly finished with powder coating with energy regulators with warranty.	1		
46	B8	Botany	Gel electrophoresis unit	GEL size: 70 x 100mm (W x L), Horizontal sub marine gel electrophoresis system: gel running tray 70 x 50 mm – 1No. 270 x 100 mm gel casting tray 1 No., Acrylic comb of 1.5 mm thick, 8 wells -2 Nos. and 3 wells- 1 No., Model banana cord - 1 pair, lid platinum electrodes-1 set, Electrophoresis Power Supply (2 terminal output) 50v and 100v with DC output with warranty.	1		
47	B10	Botany	Autoclave 16L capacity	Size: 300 x 230 mm (12 x 9), capacity: 16 L, Dressing drum size: 270 x 220 mm (11x 9"), cross dimension: 530 x 530 x 550 mm / 14 kg, Heater: 1.8kW Psi: 15Psi, Hassle free - preset automatic (electronically controlled) - with auto switch off with warranty.	1		
48	C24	Chemistry	Digital melting point apparatus	Display type-4 digit, 7 segment LED, Range-Ambient to 360 degree centigrade, resolution 1 degree centigrade. With Warranty	3		
49	C30	Chemistry	Kipp's apparatus	500 mL capacity Borosilicate Glass Kipps Apparatus, With warranty.	5		
50	C31	Chemistry	Mild Steel Ice Crusher Machine	Material mild steel, Motor 1HP, Capacity 100 kg/Hr, With warranty.	1		
51	C32	Chemistry	Safety shower and Eye wash	GI and Stainless Steel, Hand and Foot Operated and Push Plate operated height 7 feet, ISI approved, With warranty.	2		
52	C33	Chemistry	Laboratory fume hood	Stainless Steel structure, Internal size in mm (W-1525 x D-750 x H-1220) motor capacity 1.5 HP, with Exhaust System. With warranty.	1		

53	P39	Physics	Dia for pellet making	Rectangular shape , size 10mm circular and 10mm. rectangular with warranty.	2		
54	P41	Physics	Dielectric measurements setup (research make):	<p>Temperature Range Ambient to 600° C</p> <p>Power Supply 100-240VAC; 50/60Hz</p> <p>Display Method 7 Segment LED display</p> <p>Input Sensor Thermocouple (Chromel - Alumel)</p> <p>Control Method PID, ON/OFF Control, P, PI, PD, PIDF, PIDS</p> <p>Display Accuracy $\pm 0.3\%$</p> <p>Setting Type Setting by front push bottons</p> <p>Proportional Band (P) 0 to 100.0%</p> <p>Integral Time (I) 0 to 3600 Sec</p> <p>Derivative Time (D) 0 to 3600 Sec</p> <p>Sampling Time 0 to 120 Sec</p> <p>Sampling Time 0.5 Sec</p> <p>Setting (P, I & D) Manual / Auto</p> <p>LCD Display</p> <p>Data - Hold Switch (HOLD)</p> <p>Cx+, Cx - Input Jack</p> <p>Back Light Button Switch</p> <p>Wide measuring range, covering 9 measuring sections from 0.1pf to 20,000μF that includes nominal value of any capacitance</p> <p>. with warranty</p>	1		
55	P42	Physics	Law of Motion set up	<p>Dynamic Trolley</p> <p>Dimensions : 155 x 77 x 55 mm (Lx W x H) approx.</p> <p>In-elastic collision : Via 2 nos. velcro pad.</p> <p>Stacking : Two or more trolleys with 2 nos. guiding pins</p> <p>Wheels : PVC, 4 nos. low frictions.</p> <p>Weight mount : 4mm socket at center to mount slotted weights</p> <p>Clamping screw : To attach ticker tape or thread.</p>	1		

				<p>Suspension : Spring loaded. Slotted weights</p> <p>Track For Dynamic Trolley Dimension : 119.5 x 10cm (L x W) excluding pulley. Scale : 0 to 115cm, graduated in mm.</p> <p>Digital Timer & Photogate Display : 2 line LCD Type : Micro controller based Time resolution : 0.1 milli second Mode : Time, Speed & Acceleration</p> <p>Interface : USB</p> <p>Photogate detector : Infra-Red Microcontroller based and in-built test functions. with a pair of photogate and photogate mounting rod</p> <p>Slotted Masses Weights : Stainless steel/brass Hanger with warranty</p>			
56	P43	Physics	Forced Oscillators and Resonance	<p>Contents : Base unit with frequency generator Spring Weight 50gms Scale (10cm-0-10cm) Power adapter Thread roll Acrylic cylinder . with warranty</p>	1		
57	P44	Physics	Function Generator	<p>Max. Frequency 25 MHz Waveforms: Sine 1 μHz to 25 MHz,</p>	2		

				<p>Square 1 μHz to 10 MHz, Ramp 1 μHz to 500 kHz, Pulse 1 μHz to 10 MHz Noise 1 μHz to 10 MHz DC 2 kbps to 20 Mbps Dual-tone 1 μHz to 20 MHz Built-in Arbitrary Waveforms 160 types of waveforms, including Sinc, Exponential Rise, Exponential Fall, ECG, Gauss, HaverSine, Lorentz, etc. RS232: baud rate range: 9600, 14400, 19200, 38400, 57600, 115200, 128000, 230400 Accuracy: $\pm(1 \text{ ppm of the setting value} + 10 \text{ pHz})$, 18°C to 28°C Harmonic Distortion: Typical (0 dBm) DC to 10 MHz (included): <-55 dBc 10 MHz to 20 MHz (included): <-50 dBc Spurious (non-harmonic): Typical $\leq 10 \text{ MHz}$: <-60 dBc $> 10 \text{ MHz}$: <-60 dBc + 6 dB/octave Duty: 0.01% to 99.99% (limited by the current frequency setting) Modulation Type: AM, FM, PM, ASK, FSK, PSK, PWM Carrier Waveform: Sine, Square, Ramp, Arb Source: Internal/External Modulating Waveform: Sine, Square, Ramp, Noise, Arb Modulation Frequency: 2 mHz to 1 MHz Carrier Waveform: Sine, Square, Ramp, Arb</p> <p>With warranty</p>			
58	P45	Physics	He-Ne Laser	He -Ne laser source enclosed in box	1		

				<p>Optical Bench Scale : 0-100cm, Least count : 1mm With Single slit, double slit, multiple slit 3, multiple slit 4, multiple slit 5, single tapered slit, fine grating 15000 lines /inch, 4 holes, circular opaque spots. gray filter, mesh, coarse grating & grid pattern. Frame Size : 50mm x 50mm</p> <p>Measuring Tape Length : 3m Least Count : 1mm Width : 16mm</p> <p>Fixed Slider With Large Width Base width : 80mm Height : 115mm can hold rod from 8mm to 15mm</p> <p>Object Screen Material : Translucent, Acrylic. Size : 300 x 300 mm Rod : 10 mm diameter</p> <p>Cylindrical Base Material : Ferrous Mount : Rod 10-14mm dia : Flat object up to 10mm Groove : Slide object, 30x10mm (LxW)</p> <p>Prism Table Disc : 75mm diameter. Rod : 10 mm diameter With prism With warranty</p>			
59	P46	Physics	Timing Ball	Timing ball working on battery	2		

60	P47	Physics	Balmer series and Rydberg's Constant	<p>High quality grating (100,300,600 line/mm). Electrical safety tested high voltage power supply with overload current protection. Tube filed with research-grade gasses & vapors Advanced Spectrometer Scale : Brass, Dia. 175mm. Objective : Achromatic lens, f = 178mm, Aperture 32mm Slit : German silver with knurled screw Least count : 30 seconds Eyepiece : 15X, Ramsden eyepiece Spectrum Tube Power Supply Input Voltage : 220V, 50 Hz AC Output Voltage : 0-5000V (open circuit) Overload : 2mA (Max.) with reset swtich Protection window for tube with red switch for safe operation Diffraction Grating Size : 89 X 38 mm Aperture size : 16 X 9 mm Rulings : 100,300,600 lines/mm Prism Size : 38x38x38mm (LxBxH) Height : 38mm Hydrogen Tube Gas : Hydrogen research grade Magnifier With Led Dia : 6-8cm Light : LED (cell operated) FL : 5cm Hand held magnifier with better zoom and in built light source. with warranty</p>	1		
61	P48	Physics	Millikan's oil drop	<p>Millikan's Apparatus Input voltage : AC 220V, 50Hz</p>	1		

				<p>Output power : 5W. Plate voltage : 0~500V DC Change over switch : Between +ve, -ve and 0 field Plate distance : 5 ± 0.2mm. Total Magnification : 30X Linear field of vision : ≥ 3mm. Scale division : 2 ± 0.01mm. Objective lens : 100 lines/mm.</p> <p>Digital Stop Watch Display : 6 Digit Accuracy : 0.01sec Digit size : 5mm Mode : Start, Stop & Reset Necklace length : 2 feet</p> <p>USB Camera Sensor : 1.2 MP Eyepiece : 10X with adaptor ring Connectivity : USB</p> <p>System Requirement CPU : PIV 2.0GHz or above RAM : 1GB or above O.S : Win10/11 With warranty</p>			
62	P49	Physics	Viscosity of Glycerine	<p>Glass Tube Length : 110cm Dia : 50mm</p> <p>Digital Timer & Photogate Display : 2 line LCD Type : Micro controller based Time resolution : 0.1 milli second Mode : Time, Speed & Acceleration Photogate : 2 Nos.</p>	1		

				<p>Interface : USB Operating voltage : 5V DC Photogate detector : Infra-Red Dimension : 210x130x65mm. ELECTROMAGNET Terminal : 4mm safety socket Input voltage : 0 - 5 V DC Mounting rod : 10 mm dia FERRITE MAGNET Dimension : 40x25x10 mm Material : Ferrite Glycerine Quantity : 500mlx3 Supplied in plastic Bottle 'g' By Free Fall Stand Base Size : 280mm (Cast Iron) Leveling knob : 2 Material : MS Sheet Channel Length : 110cm Scale : 0-100cm Rod : 12mm, 1meter Base : Star type with warranty</p>			
63	P51	Physics	Polarimeter	<p>Polarimeter Tube Length : 200mm With central bulb, metallic caps & cover glasses packed in a velvet case. Laurent's Half Shade Circular scale : 0o - 360o Least count : 1o Vernier Reading : 6 min. Dimensions : Dia. 12 mm, length 200mm</p>	1		

				Sodium Light Source Starting Voltage : 470 Volts Input Voltage : 220V, 50 Hz Lamp House : 300x85mm(LxØ) Aperture dia. : 25mm With warranty			
64	P52	Physics	Spectrometer	Scale: Brass, Dia 150mm. Objective : Achromatic, focal length 178mm(collimator and ocular telescope, aperture 32mm Slit : German silver. Reticle : 90 ⁰ cross on glass. Least count: 1 minute. Base: Aluminium Casting width entrance slit: 0...1,5 mm Compact device with two angular verniers Focusing fine drives for slit and ocular the collimator with adjustable slit is fixed in position with respect to the device Grating with holders and prism with holder Grating: Size (mm): 38 x 50, Lines / inch:15000 Prism: Size (mm): 32 x 32 x 32 Material: Flintglass (n = 1.65) With warranty	4		
65	P53	Physics	Three phase power analyser	to detect three phase power with clamp. with warranty. with warranty	1		
66	P54	Physics	Container for liquid nitrogen	3.5-4 litre container	1		
67	P55	Physics	Digital (LCR) Multimeter	with resistance 200 Ohms to 2000Mohms, Capacitor from 200 pico farad to 20 mF, inductance 2mH to 20H. with warranty	1		
68	P56	Physics	Agate Mortar with pestle	4 inch in dimensions	1		

69	P57	Physics	Cathode Ray /Digital Storage Oscilloscope 2 channel	<p>50 Mhz Digital storage oscilloscope Technical Specifications Bandwidth : 50MHz Realtime Sample Rate : 500MSa/s (Single Channel) Equivalent Sample Rate : 50GSa/s Number of Channels : 2 CH +1 Ext Memory Depth : 32 Kpts (Single Channel) Acquisition Modes : Normal/Average/Peak Detect Average : Selectable from 4 to 256 Vertical Sensitivity : 2mV/div - 10V/div Vertical Resolution : 8bits Input Impedance : 1 MW \pm2% II 17 pF \pm3 pF Input Coupling : DC, AC and GND Maximum Input Voltage : \pm400Vpp Trigger Sources : CH1, CH2, Ext, Ext /5, AC Line Trigger Modes : Auto, Normal, Single Trigger Type : Edge, Pulse Width, Slope, Video, Alternate Auto Measure : Vpp, Vmax, Vmin, Vamp, Vtop, Vbase, Vavg, Mean, Crms, Vrms, ROVShoot, FOVShoot, RPRESshoot, FPRESshoot, Rise time, Fall time, Freq, Period, + Wid, -Wid, +Dut, -Dut, BWid, Phase, FRR, FRF, FFR, FFF, LRR, LRF,LFR, LFF Cursor Measure : Manual, Track and Auto measure mode Maths : +, -, \times, /, FFT Waveform Interpolation : Sin x/x, Linear Storage : Internal : 2 Group reference waveforms, 20 waveforms and 20 Setups USB : BMP, CSV, Waveforms, Setups Communication Port : USB Host, USB Device, RS232, Pass/Fail Sample Types : Real Time and Equivalent Time FFT : Window: Hanning, Hamming, Blackman, Rectangular Measure Display Modes : Main, Window, Window Zoom, Scan, X-Y Menu Display : 2 sec, 5 sec, 10 sec, 20 sec, Infinite Display : 7 inch TFT Color LCD Display Power : 100 - 240V AC, 50VA Max Net Weight : 2.3kg Dimensions : 305 x 133 x 154 mm</p>	2		
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				. with warranty			
70	P58	Physics	Optical Bench with fittings	Optical bench 1.5meter with adjustable slit, eyepiece, biprism with stand, Lloyd's mirror with stand, convergent lenses with stand, zone plate with stand. Material : Aluminium extrusion Type : Triangular shape Scale : 0-100cm Least count : 1mm, with four levelling arrangement made of SS material and flexible feet. Self cantering rider assembly (8-14mm rod. with warranty	1		
71	Z64	Zoology	Portable Turbidity meter	Equipped with a tungsten lamp, the meter should meet the EPA 180.1 turbidity measurement method from 0 to 40 NTU (Nephelometric Turbidity Units).with Warranty	1		
72	Z65	Zoology	Water and Soil Analysis kit	Measures parameters like pH, TDS, Conductivity, DO, Salinity, mV, Temperature etc, alphanumeric LCD Display, Battery cum main operated with all accessories fitted in a briefcase, Data storage facility upto 1000 samples and external printer attachment facility, computer interface through USB, etc. with expiry date approx. 3 years.	2		
73	Z66	Zoology	Medical Centrifuge	Laboratory centrifuge with 24x15ml swing out Head, Speed: 6000 to 10,000 rpm, with warranty.	1		
74	Z67	Zoology	Garmin eTrex 32 x rugged hand held GPS Navigator	hand held GPS Navigator, with warranty.	1		
75	BT70	Biotechnology	Potometer	With a proper base (wooden/steel), the Height to the top of the reservoir 170 mm, the diameter of the reservoir 20 mm, overall length 320 mm. With warranty	5		

76	BT71	Biotechnology	Rotary microtome	Feed adjustment: 1-50 microns in steps of 1 micron, Total feed excursion: 28 mm, opening of object clamp: 37x25mm, Overall dimension: 400w x 250d x 225ht mm approx., With warranty.	1		
77	BT72	Biotechnology	UV transilluminator	shield for UV protection, viewing area: either 20cm x 15cm, or 20 cm x20 cm, upto 365 nm, UV tubes 4 No.s x 8 watts, With warranty for UV transilluminator.	1		
78	BT73	Biotechnology	Portable DO and BOD meter	DO Range: 0.00 to 50.00 ppm (mg/L); 0.0 to 600.0% saturation, DO Resolution: 0.01 ppm (mg/L); 0.1% saturation DO calibration: automatic one or two points at 100% saturation (8.26 mg/L) and 0% saturation (0 mg/L) DO temperature compensation: automatic from 0.0 to 50.0 ⁰ C Barometric Pressure Compensation: automatic from 450 to 850 mmHg Salinity compensation: automatic from 0 to 70 g/L Temperature range: -20.0 to 120 ⁰ C Temperature resolution: 0.1 ⁰ C Temperature accuracy: ± 0.2 ⁰ C (excluding probe error) DO probe: Polarographic DO probe with a protective sleeve, internal temperature sensor, DIN connector, and 4m cable (included) BOD/OUR/SOUR: Direct DO, BOD, OUR, SOUR Environment: 0 to 50 ⁰ C, RH 100% Accessories: PTFE membrane cap, electrolyte solution, bicomponent zero oxygen solution, PC software, Plastic beakers Atmospheric Pressure range: 450 to 850 mm Hg Atmospheric pressure resolution: 0.1 mm Hg	2		

				<p>Atmospheric pressure accuracy: ± 3 mm Hg within $\pm 15\%$ from calibration point</p> <p>Atmospheric Pressure calibration: automatic at one custom point.</p> <p>With warranty</p>			
79	BT76	Biotechnology	Refrigerator	<p>Twin cooling, Frost free, 300 to 400 Liters, temp range 1 °C to -23 °C, 2/3 star with a good warranty on compressor and fridge.</p>	1		

(On Company / firm's Letterhead)

ANNEXURE 3 – DECLARATION REGARDING CLEAN TRACK

To,

Date :

The Principal

Dempo Charities Trusts
Dhempe College of Arts & Science

Miramar, Panaji, Goa

403001

Madam,

Ref : Tender for the Supply of Equipment's.

I/we carefully gone through the Terms & Conditions contained in the above referred Tender. I/we hereby declare that my company / firm is not currently debarred / black listed by any Government / Semi Government Organizations / Institutions in India or abroad. I/we further certify that I am competent officer in my company /firm to make this declaration.

Yours faithfully

(Signature of the Bidder)

Printed Name

Designation

Seal

(On Company / firm's Letterhead)
ANNEXURE 4: CLIENT DETAILS

Date :

To,
The Principal
Dempo Charities Trusts
Dhempe College of Arts & Science
Miramar, Panaji, Goa
403001

Madam

Ref: Tender for the Supply equipment's

I/we hereby mention following list of our clients which mention 3 successfully completion certificates of rate contracts or completed orders.
(Copies of such rate contracts or purchase orders must be enclosed with the offer).

Sr. No.	Name of Client	Purchase order / rate contract details	Amount of Order
1.			
2.			
3.			

Yours faithfully,

(Signature of the Bidder)

Printed Name

Designation

Seal

On Company / firm's Letterhead)

ANNEXURE 5 : UNDERTAKING

We hereby declare that all the particulars given in this TENDER are true and complete to the best of our knowledge and belief and we will produce all the relevant documents promptly, if necessary or as and when asked for by Dhempe College. We understand that information provided by us will serve as prequalification Criteria for enlistment on purchase order and in the event of any information being found false or incorrect or ineligibility being detected even after the approval of purchase order your order may be cancelled and all your claims may be forfeited by the Dhempe College. We have read and understood all the terms and conditions of TENDER and we fully agree to it. on.

(Signature of the Bidder)

Printed Name

Designation

Seal

Date :

Business Address :

SECTION 6 CHECKLIST

The following items must be checked before the TENDER is submitted:

1. Envelope “A”

- a. Eligibility Criteria Responses (each pages duly sealed and signed by the authorized signatory)
- b. Copy of this TENDER document duly sealed and signed by the authorized signatory on every pages.
- c. Technical bid
- d. Annexure A1: Declaration Regarding Clean Track by Bidder.
Annexure A2: Client's Details.
Annexure A3: Declaration of Annual Turnover and Income Tax Return.
Annexure A4: Undertaking.

2. Envelope “B”

- a. Commercial Bid

Your quotation must be submitted in two envelopes Technical Bid (Envelope A) and Commercial Bid (Envelope B) subscribing on both the envelopes the TENDER reference and the due date and both these sealed covers are to be put in a bigger cover which should also be sealed and duly subscribed with our TENDER reference & due date.