

ANNEXURE 12

FORM OF SHORT TENDER NOTICE

Tender No. 3/2023-24 /GCW

Govt. College for Women,
Vazhuthacaud ,
Thiruvananthapuram.

TOTAL ESTIMATE-4,99,000/-

Sealed tenders are invited for the supply of the following stores- **Lab equipments to Physics, Chemistry, Botany, Psychology and Microbiology Departments. - 2202 -03 -103 -47 - Physical, Human and IT Infrastructure Upgradation, Development and Maintenance -Plan Fund 2023 -2024.**

The envelopes containing the tender should bear the superscription "**Tender for the supply of Lab equipments to Physics, Chemistry, Botany, Psychology and Microbiology Departments**" and should be addressed to **Principal, Govt. College for Women, Vazhuthacaud, Thiruvananthapuram - 14.**

Last date for the receipt of tenders will be 12/01/2024 11.30 a.m. Late tenders will not be accepted. The tenders will be opened at 02.00 p. m. on 12/01/2024 in the presence of such of the tenderers or their authorized representatives who may be present at that time.

Intending tenderers may, on application to the Principal, Govt. College for Women , Vazhuthacaud, Thiruvananthapuram obtain the requisite tender forms on which tenders should be submitted. Application for the tender form should be accompanied by a cash remittance of **Rs. 1600/-+G.S.T. 18%** (GST amount of the tender form Rs.288/-should be remit on reverse charge mode by the registered tax payer and the printout of the chalan should be submitted to office) which is the price fixed for a form/set of forms and which is not refundable under any circumstances. The tender forms are not transferable. Sale of tender forms will be closed at 12.30 p.m. on 11/01/2024 Cheques, postage stamps, etc., will not be accepted towards the cost of forms, nor will the forms be sent p2er V. P. P. Duplicate tender forms, if required will be issued at Rs.800/-+GST per copy.

The Earnest Money deposit @ 1% of the total amount tendered for subject to a minimum of Rs.1500/- should be accompanied by Demand Draft in favour of the **Principal, Government College for Women, Thiruvananthapuram** or fixed deposit receipts. The tenderers who are eligible for exemption from payment of EMD/Security deposit should enclose a copy of the latest certificate in support of the claim issued by Government of Kerala, Store Purchase Department Dus & D etc. Otherwise the tender will be summarily rejected. The right to accept or reject the tender without assigning any reason thereof is vested with the undersigned. Total tendered amount must be specified clearly in the tender.

NB: The price to be quoted in the tender must be inclusive of all taxes.

Place: Vazhuthacaud

Date: 26/12/2023.

(Name and Designation of Issuing
Officer).

Approval Valid

Digitally Approved By
DR. ANURADHA. V. K
Date: 27.12.2023
Reason: Approved

Department of Physics

Purchase of Laboratory equipment under plan fund 2023-24

Sl No	Apparatus	Specification	Quantity
1	Potentiometer	Wooden base with brass blocks, fitted with 4 mm socket terminals and a 100 cm wooden scale and knife edge jockey Warranty- Minimum 2 years	1
2	CF bridge	DC Power Supply : 3V Variable resistance : 0-1000 Galvanometer Deflection : 30-0-30 Resistance : 800 Wire Type : Constantan Length : 1m SWG : 28 Diameter : 0.37mm Resistance : 100(2 nos.) Bridge scale : 0-100cm Jockey : Copper Mains Supply : 90-275V, 50Hz	1
3	Deflection magnetometer	a) Deflection magnetometer Length: 40 cm on either side from centre Material: Acrylic Track for bar magnet: Yes, 12.5 mm width b) Compass Size: 100 mm diameter Mirror for reduced parallax error Graduation: 1° c) Bar magnet pair Length: 50 mm each width: 12 mm Material: AlNiCo	2
4	Commutator-Reversing Key	Switch -rotatable spring loaded beam of plastic, two brushes connected to 4mm insulating plastic	3
5	Pointer type galvanometer	Scale Division- 30-0-30, Accuracy-1.5 %class	2
6	Fractional resistance box	Resistance in ohms There should be fractional resistance	2

		0.1,0.2,0.3,0.4,0.5, 1,2,5,10 ohms Range 0.1 -10ohm Plug type Manganian coil 9/16" Thick Brass Blocks Warranty- Minimum 2 years	
7	Microammeter	0-50 range	2
8	Milliammeter	0 - 50 range	3
9	Dual power supply	Dual DC 0 to 30V, 3A Constant voltage & constant current operation Digital displays for voltage & current Adjustable current limiter Protection against overload & short circuit Warranty- Minimum 2 years	2
10	Beaker, 500ml	Borosil, 500ml	5
11	Beaker,100ml	Borosil, 100ml	2
12	Beaker, 150ml	Borosil, 150ml	2
13	Wash bottle	Plastic, 500ml	5
14	Measuring cylinder, 250ml	Borosil, 250ml	1
15	Agate and mortar	6 inch(152.4mm) inner diameter	2
16	Hydrothermal autoclave,	100ml	1
17	PTFE Teflon beaker,	100ml	1
18	200 mesh sieves	Diameter 8inch(0.075mm)	2
19	Alumina boat crucible	(117 lengthx30 widthx19 height) mm	3
20	Cylindrical crucible	(41 mm outer diameter, 56mm height), 60ml	2
21	Cylindrical crucible	(55 mm outer diameter, 40 mm height), 50ml, Silicon	3
22	Glass rod	(9mm length, 205mm diameter), Borosil	3
23	Magnetic bead	(cylindrical) (25 mm length, 8 mm width)	3

24	Clay graphite high temperature alumina crucible	(withstand 1750 degree celsius), 250ml	1
25	Alumina boat crucible	(100 lengthx30 widthx20 height) mm for tube muffle furnace	3
26	Laboratory Hot plate	<p>Display Digital LED Controller PID controller Keys, Switch & knobs Press buttons Keys, On/Off Switch & Energy Regulator Top Plate material -Stainless Steel Number of Plate Single Plate Temperature Range (°C) 0~300°C Plate Dimensions (inch) 12" x 18" Power rating (kW) 2.0 kW Overall Dimensions (W x L x H) mm 350*400*170 Power Supply AC 220V, 50/60Hz</p>	1

DEPARTMENT OF CHEMISTRY, GOVT. COLLEGE FOR WOMEN, THIRUVANANTHAPURAM

Annual purchase of equipments under PLAN FUND 2023-24

Sl No	Name of Equipment	Specification	Quantity
1	Digital conductivity meter	Cond. Range : 20 μ S to 200 μ S, TDS Range :0 ppm – 20ppm, 200ppm, 2ppt & 200ppt Resolution : 0.01, 0.1, 0.001, 0.1, conductivity cell, stand , rod and clambReadout : 3.5 digits LED	1
2	Digital photo Colorimeter	Digital Photoelectric Colorimeter with 8 filters Small convenient sample size of 1 ml, Long life Broad Spectrum LED Light Source. Compact space saving design. Wavelength : 400 to 700 nm selected by filter mounted on a turretLight Source : 6 V LED, cuvette included	1
3	Electric bunsen burner	Electrically operated bunsen burner made of SS. The unit is fitted with built in energy regulator and indicating lamp. Suitable for heating crucible with samples. Temperature Range : Ambient +5 to 600 °C Power Rating: 300W Power Supply: 230V Single Phase, 50 cys.AC	10
4	Hot plate (Circular)	3" dia heating pan (Material :SS) , Temperature range upto 400 °C, Energy regulator, Power indicator, Power supply 220/240 V, 50/60 Hz	5
5	Kipp's apparatus	Gas generator, Borosilicate Glass, 1000 mL capacity	1
6	Kipp's apparatus	Polyethylene, 1000 mL capacity	1
7	Manual Polarimeter	College grade, With transformer and sodium vapour lamp, with laurent half shades, 200 mm tube	1
9	Stalagmometer	Borosilicate glass	10
10	Vacuum pump (oil free)	Portable type vacuum pump,oil free, light weight ,weight,Vacuum gauge with regulator, improved chemical resistance, very low vibration, oil-less operation-The ball bearing should be self-lubricating and never need oiling, Should have a Built-in -Motor-Mounted Pumps, thick walled hose for vacuum or pressure applications, Regulator valve for intake allows the adjustment of the ultimate pressure-Dial gauge indicates the vacuum level-Air regulator valve mounted directly on the pump,Vacuum 106 mbar (27 inHg),Pressure 4.2 kg/sq.cm(60 psi),Motor 1/8 hp	1
11	Water bath (rectangular)	Double walled construction outer body made of MS sheet, powder coated, inner body made of 304 quality, flat lid, SS sheet, LxWxH: 45.5 x 35 x 27.5 cm, 6/8/12 holes, hole diameter 7.5 cm, 8-10 litre capacity	2

Head, Department of Chemistry

DEPARTMENT OF BOTANY
GOVERNMENT COLLEGE FOR WOMEN THIRUVANANTHAPURAM

SPECIFICATIONS FOR LABORATORY EQUIPMENTS TO BE PURCHASED UNDER PLAN FUND 2023-24
AS PER ORDER No. A6/2293/2023/GCWT

SL.NO	ITEM	QUNTIY
1	REFRIGERATOR	1
2	PH METER	1
3	ELECTRONIC BALANCE	1
4	CENTRIFUGE	1
5	MAGNETIC STIRRER CUM HOTPLATE	1
6	ELECTROPHORESIS TANK WITH ACCESSORIES	1
7	HAEMOCYTOMETER	1
8	COLORIMETER	1
9	WATER BATH	1
10	HOT AIR OVEN	1

ITEM NO. 1

REFRIGERATOR

1. Attractive painted GI steel exterior
2. Polypropylene interior
3. Self closing double door with locking facility
4. CFC Free refrigerant
5. Refrigerant: R134A
6. Hermatic Compressor &eco friendly refrigerant
7. Digital Temperature controller cum indicator
8. High and low temperature door open visual alarm.
9. Defrost:Frostfree
10. Castor wheels
11. Temp range: 2oC to 8oC
12. Capacity: 350ltrs
13. Shelves/Drawer: 8 Nos.

14. Power : 220-240V, I phase,50Hz
15. Supplied with stabilizer.
16. CE CERTIFIED
17. 5 years of warranty

ITEM NO.2

PH METER

- . The measurement of pH, mV and temperature should be possible.
1. Working pH range from 0 to 14 with a resolution of 0.1/0.01 or 0.001 pH.
 2. Temperature measurement range from zero to 100oC with ATC
 3. Range for mV should be -999.9 to +999.9. Accuracy for each mV measurement should be ± 0.3 mV. Auto range function for mV, which can be switched off, if needed.
 4. Should have Automatic calibration facility.
 5. Should have data storage facility and record maximum and minimum value.
 6. Should have 3 stage calibration. (For calibration, pre programmed buffer sets should be supplied)
 7. Should have digital display with 0.01 pH unit readability
 8. Electrode: Tri-combination pH/ATC electrode
 9. Should supply Electrode + Standard buffer solution (pH 4.0, 7.0, 10.01 x 50ml for each bottle) + standard electrode holder +AC /DC Adaptor.
 10. Should be provided with an electrode holder/arm with smooth movement.
 11. Suited for 230V power supply.
 12. 2 year warranty and 3rd year AMC contract to be provided.

ITEM NO.3

ELECTRONIC BALANCE

1. Capacity : Should have capacity range of 0.1 mg-230 g
2. Calibration : Perfect Auto Internal Time
3. Readability : Should have Readability ≥ 0.0001 gm (0.1mg)
4. Repeatability (+/-) : Should have Repeatability at least 0.1mg
5. Auto zero setting : Should have automatic zero setting
6. Tare range : Full range
7. Sensitivity drift : ± 2 ppm/degC or better
8. Stability : Should have Stability indicator

9. Response time : Should have Response time < 10 seconds
10. Weighing mode : Should have single Weighing mode
11. Leveling : Leveling should be automatic
12. Display : LCD with back light / LED
13. 2 YEAR WARRANTY AND 3RD YEAR AMC contract to be provided

ITEM 4

CENTRIFUGE

1. Digital Speed control upto 10,000 rpm
2. Safety lid lock
3. Imbalance detection
4. Rotors 15 ml tube , 8 tube capacity; 12 tubes, 2 ml capacity
5. Timer 20 sec to 99 min
6. Low sound while working
7. Electrical 230V
8. Warranty 2 years

ITEM NO.5

MAGNETIC STIRRER CUM HOT PLATE

1. Speed Range 0-1600 RPM
2. Max. Capacity : 5000 ml
3. Plate Size:150x150 mm
4. Operating temp: upto 65 degrees
5. Dimensions: 270x 280x 60 mm
6. Weight: 2.5 kgs
7. Digital display
8. Power source : 220V 50Hz 300 W

ITEM NO.6

HORIZONTAL ELECTROPHORESIS APPARATUS

1. Casting gel tray 15x10 cm
2. Comb set 1.5 mm thick 15 and 20 well comb
3. Electrode set
4. UV transparent running tray
5. Compact tank, safety lids with cables.

ITEM 7

HAEMOCYTOMETER

1. Slide should be designed for routine counts of blood cells, bacterial cells and algae.
2. Double ruling counting chamber
3. A pair of cover glasses and 2 dilution pipettes.

ITEM 8

COLORIMETER

1. 8 FILTERS
2. Wave length Range: 420-720 nm
3. 3 digit digital display
4. Flat bottom test tubes (6 nos)
5. Resolution: 0.01 in OD or Abs
6. Detector: High sensitivity silicon photocell.
7. Light source: 6V LED
8. Power: 230 V

ITEM NO 9

WATER BATH

1. Volume-13 Litre
2. Constant Temperature Baths with customized microprocessor -based controller for an interrupted long run usage & safety.
3. Should have a seamless tank & provide high control accuracy as well as uniformity.
4. Ideal for critical applications requiring a high degree of temperature accuracy and uniformity.
5. Stirring achieved by an efficient, continuously rated, self -cooling motor with SS shaft and propeller of anti-corrosive material.
6. Independent over-temperature self-resetting safety cut-off with alarm.
7. Full SS construction.
8. Uniformity: $\pm 0.1^{\circ}\text{C}$ at 37°C .
9. Resolution: 0.1°C .
10. CE certified.
11. Fully SS gabled lid

12. Should provide **Accessory immersion height adjustable tray** (Set of two shelves of 30 mm height to enable immersion reduction by 30 / 60 mm). Should Provide **Accessory TwomoldedWEIGHT RINGS**
13. Warranty: 2 years, 3rd year AMC contract to be provided.

ITEM NO.10

HOT AIR OVEN

1. Internal Dimension (WXDXH) (mm) 18x 18 x 18, with Capacity 35 ltrs
2. Outer body made of M.S sheet, powder coated.
3. Inner chamber and adjustable trays are made of Stainless Steel (SS-304grade).
4. Gap between the inner chamber and the outer wall is filled with high-grademineral wool for minimal heat dissipation.
5. Bigger sized units mounted on caster wheels for easy portability.
6. Temp: range Ambient +5 oC to 300 oC Accuracy : + 1oC at higher Temp:
7. The temp variation in time should be < +/- 0.5 Deg C or better and temp uniformityshould be < +/- 2.5 Deg C or better at 150 Deg C.
8. The unit shall be fitted with minimum 1 Nos Stainless Steel grids and there should befacility to accommodate total of 3 or more grids/shelves
9. The heating elements should be located on all 4 sides to ensure temp homogeneityinside the Oven.
10. Digital Temp: controller cum indicator (Micro processor based) & Aircirculation fan
11. Door fitted with heavy-duty hinges and door handle ensuring there are noleakages through the door gasket.
12. To work on 220/230V AV, 50/60 Hz supply
13. CE certified
14. 2 years of warranty and 3rd year AMC contract t be provided.

**Department of Psychology
Government College for Women
Thiruvananthapuram**

Lab Equipment Purchase List (Plan Fund 2023-24)

Sl No	Name of the test equipment	Quantity
1	Tachistoscope(Fall door type) with cards (Test for span of attention)	1
2	Stopwatch(Mechanical)	1
3	Stroop effect test(Cards)	1
4	Thematic Apperception Test - Indian adaptation by Uma Choudhary(Consists of 1 manual, 50 Answer Sheets and a set of 14 cards)	1
5	Blind goggles	1
6	Bender Visual motor gestalt test - Second Edition(BGT - II)(Stimulus cards, Examiner's Manual, 25 Test Records, 25 Motor Test Booklets and 25 Perception Test booklets)	1
7	Rozenweig's Picture frustration test for adult Indian adaptation(1 Manual, 25 Booklets and 100 Scoring Sheets)	1
8	Rorschach Test - Complete kit(Consists of Manual, Rorschach Psychodiagnostic Test Plates,Record and Analysis Blank and Location Chart)	1
9	Draw a Person Screening procedure for emotional disturbance(Contains Examiner's Manual, 10 Scoring Templates and 25 Record forms)	1

DEPARTMENT OF MICROBIOLOGY		
Government College for Women, Trivandrum		
List of Instruments required: (Plan Fund 2023-24)		
Sl. No.	Product Name	Quantity required
I	Instruments	
1	WATER BATH 15 liter capacity with 6 concentric adaptors temperature setting from RT + 5°C up to +99°C	1
2	HOT PLATE Size: 25x30 cms, Rating: 1.2 KW	1
3	AUTO CLAVE - TRIPLE WALLED (VERTICAL) Capacity 40 L -100 Ltrs, Stainless Steel Digital Temp. controller and Timer	1