

OFFICE OF THE PRINCIPAL, JKBK GOVT. COLLEGE, CUTTACK

No. 197 / Date 3/2/24
TENDER CALL NOTICE

Sealed tenders are invited from registered firms/dealers/suppliers having valid GST registration, PAN and IT Clearance for supply of laboratory equipments for the College so as to reach the undersigned through registered/speed post within 7days of publication of this advertisement. The undersigned reserves the right to accept or reject any or all quotations without assigning any reason thereof. The details of terms and conditions and department wise list of equipments are available in the website of the College www.jkbkgovtcollege.ac.in

Documents to be submitted with the tenders

1. Copy of GST registration certificate
2. Copy of updated GST clearance
3. Copy of PAN Card of the firm
4. Income Tax Return certificate for the three preceding financial years
5. Manufacture's authorization certificate

Terms and Conditions

1. The bidders must submit the tenders department wise in the separately envelopes mentioning clearly the name of the Department on the envelope.
2. The bidder must submit the tender in the enclosed tender format only as given in Annexure-I.
3. The bidder must provide the general information about the firm in the enclosed proforma as given in Annexure - II.
4. The quotations must be sent though registered/speed post only to Principal, JKBK Govt. College, Cuttack, 753003 with all relevant documents so as to reach latest by 5.00 PM on or before 12.02.2024.
5. The undersigned is not responsible for any postal delay.
6. Incomplete tenders or tenders received after last date are liable to be rejected.
7. EMD of Rs.15,000/- (Rupees Fifteen thousand) only is to be submitted by the bidder in shape of accounts payee demand draft drawn in favour of Principal, JKBK Govt. College, Cuttack payable at Bhubaneswar in any Nationalized Bank.

Anuj Mahapatra
Principal 03/02/24

JKBK Govt. College, Cuttack

Memo No. 198 /Date 3/2/24

Copy to OIC, College Website/ Account Section/ Section Officer/ Guard File for information.

Anuj Mahapatra
Principal 03/02/24

JKBK Govt. College, Cuttack

ANNEXURE-I
TENDER FORMAT

Name of the Department:-

Sl No	Name of the Equipment	Specifications	Make/ Brand	Price per unit (Rs.)	GST (Rs)	Total Price including GST (Rs)

ANNEXURE-II
GENERAL INFORMATION ABOUT THE FIRM/ BIDDER
(To be filled in by the Bidder)

1. Name of the Bidder :
 2. Full address of the Bidder:
 3. Mobile No.:
 4. Emil ID
 5. Registration No. of Firm:
 6. PAN:
 7. GST Registration No. with up-to-date GST Clearance Certificate:
 8. IT Return for the last three financial years:
 9. Details of EMD : DD No. _____ Date _____ Amount _____
- Drawn on the Bank _____

Seal and Signature of the Bidder

Department of Physics
J.K.B.K GOVT.COLLEGE,
CUTTACK

This is to certify that these instrument highly required for smooth conduct the U.G .
Hons & G.E practicals.

SL No	NAME OF INSTRUMENT	SPECIFICATION	QUANTITY
1	Travelling Microscope	Travelling Microscope (Vernier Type), Base: Iron, Scale: Stainless Steel, Vertical Scale: Main Scale: 0-150mm, Vernier Scale: 0-1mm, Least Count: 0.01mm, Horizontal Scale: Main Scale: 0-180mm, Vernier Scale: 0-1 mm, Least Count: 0.01mm, Eyepiece: 10X	2
2	Newtons ring Microscope	Type : Bridge type microscope, Main scale : Range 0 -170mm, 1 MSD 0.5mm, Vernier LC : 0.01mm, Magnifier : FL 50mm, dia. 25mm, Eyepiece : Ramsden 10X, Objective : 3X, Spherometer : 3 legs, Vertical scale 6 x 6mm (WxT), disk(brass) Micrometer 40mm, Brass disc dia. 60mm,Range 10-0-10mm, Least count 0.01mm, Plano convex : Dia. 61.5mm, Glass, FL 200mm, Lens holder : 80 x 30mm,Sodium source : MS housing, 200 x 85mm (LxØ), slit (LxW), 20x16mm, Sodium bulb : Threaded type socket 20W, Reflector ass. : PVC, 105 x 100 x 110mm, Fuse : 2A	1
3	Measure Dielectric constant of a dielectric material with frequency	Dielectric Constant App. consists of R.F. Generator (Range : 9-10MHz apprx.). Micro ammeter (Range : 0-50m A). Potentiometer for Sensitivity selection. Fixed Capacitor (Metal). Variable Gang Capacitor. Sockets for test capacitor and variable capacitor brought out at front panel. One solid Bakelite plate to be insert in rap of capacitor.	1
4	e/m by Thomson's experiment	DC Power Supply for CRT, Display for Deflection : 7 Segment LED Display Display for Coil Current : 7 Segment LED Display, Focusing adjustment	1

		Knob, Intensity adjustment Knob, Current Control Knob, Polarity Switch CRT : Dimension-11"x7"x4", Cathode Ray Tube having provision of Sliding inside the solenoid, Octal socket provided on the front panel of power supply for connecting CRT	
5	Transistor	This instrument is designed to study input and output characteristics of common emitter and common base PNP & NPN Transistors DC Supply : 0-1V/100mA (Variable) : 0-10V/100mA (Variable) DC Voltmeter: 0-1V (Moving Coil) DC Voltmeter: 0-10V (Moving Coil) DC Ammeter : 0-250 μ A (Moving Coil) DC Ammeter: 0-50mA (Moving Coil) Transistor : NPN & PNP meters for voltage and current measurement.	4
6	Digital storage Oscilloscope	Warranty-12 months 70Mhz/Dual Channel 1Gs/sec per channel TFT Screen 7"	2
7	Determination of Boltzmann Constant from forward I - V characteristics of P-N diode	Selector Switch : V-I and V-T experiment, Bias & Junction Voltmeter & Current Display : 3½ digit, 7segment LED Voltage Range : 0.000-1.999V & Current Range : 0-20mA Display : 3½ digit, 7segment LED, Selector Switch at V-T position/Junction :- Voltage Range : 0.000-1.999V Temperature Display : 3½ digit, 7segment LED, Temperature Range : 273K to 353K, Oven : Heater pin 4 & 5. Temperature pin 1 & 2, Oven Connector : 5 Pin, DIN type, Diode & Transistor : 4mm safety socket, Input Voltage : 220V, 50Hz AC TEMPERATURE SENSOR-Heating Element : 35 ohm, Oven Connector : 5 Pin, DIN type, Ambient Temperature : 353K Temperature Sensor : Pt100, Output Pin : Heater pin 4 & 5. Temperature pin 1 & 2	2
8	Diode Laser Diffraction Experiment	To study the diffraction of light by single slit, double slit, Diode laser:- Wavelength: 635nm. Photo detector:- Silicon photocell, Aperture: atleast 1mm,	1


		rod. • Multimeter. Optical bench:- length not less than 1 meter with 4 point levelling screw. • Slider (Transversal) with least count 0.01mm. • Fixed Slider. • Connecting leads:- Banana plug Screen:- Translucent of size 150x150mm • Diffraction slides:- Frame size: 50x50mm, Slit: separation of 0.20mm and width 0.06mm, Grating: 50 lines/mm, 80 lines/mm, 300 lines/mm, 3000 lines/mm	
9	Study of Planck's Constant by means of LED	• A highly stable current source with 3½ digit display. Range : 0-2 μ A with resolution of 1 μ A Oven, PCO-01 It is a small temperature controlled oven with built-in RTD sensor. Temperature adjustable from ambient to 338K Digital display of temperature • High stability 1K Variable Voltage Source (0-2V) • A high stability voltage source with 3½ digit display. FOUR DIFFERENT COLOUR LEDs	1
10	Sodium Vapour Lamp Transformer	Phase-single, Power- 35W, input Voltage- 220V, Frequency- 50HZ, Output Voltage- 420V	4
11	Sodium vapour lamp	Starting Voltage : 470 Volts, Input Voltage : 220V, 50 Hz, Lamp House : 300x85mm (Lx ϕ), Aperture dia. : 25mm, Sodium Light Transformer	4
12	Mercury vapour lamp	Starting Voltage 470 Volts, Input Voltage 220volts, 50 Hz, Lamp House 250 x 100mm (L x dia.) Aperture dia 25mm, Mercury Lamp 125W.	4
13	Thevenin's Theorem Trainer Kit	DC Regulated Power Supply : One Fixed (+12V) Analog Moving Coil Meters : Two (3V / 15V & 15mA) Load Resistance : Three (25 Ω , 50 Ω , 100 Ω) Sockets : 4mm Banana type Panel : ISI marked fine quality Backelite Panel Box : Light weight shock proof	2

		<p>Plastic cabinet Cabinet Size (mm) : 280 x 205 x 85 Power Requirement : 220V AC $\pm 10\%$, 50Hz Standard Accessories : Patch Cords</p>	
14	Anderson Bridge Trainer	<ul style="list-style-type: none"> • On board oscillator section. • On board circuit for designing Anderson's Bridge • On board amplifier section • On board unknown inductors for conducting the experiment • On board Speaker interface • Test points are provided to analyse signals at various points • ON/OFF switch and LED for power indication. • Bare board Tested Glass Epoxy SMOBC PCB is used. • Block Description Screen printed on PCB • All interconnections are made using 2mm banana Patch cords • Supplied with User manual and patch cords • With built-in power supply (5-12DC, single phase) • Enclosed in a wooden/plastic box 	2
15	Carey Foster's Bridge	<ul style="list-style-type: none"> • Decade Resistance in ten step 0.1 ohms, Total Resistance 1 ohms • Digital Galvanometer • Wire wound potentiometer mounted with three sockets in place of Rheostat 10E 1W • Cell Eliminator with switch voltage 1V5 substitute Leclanche Cell. • Unknown resistance wire of two different gauges each of 50cm • Carey Foster's Bridge - Four gaps, Sunmica top with sliding jockey • OMEGA TYPE CFB-182. Weight : 3.5 Kg. (Approx.) • Adequate no. of connecting wires, 50cm long. • Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References. 	2

16	BH curve of Fe using solenoid and the energy loss	<p>A Step down Transformer On Board. One Solenoid Coil, One Search Coil. Output Brought Out Through BNC Connectors.</p> <p>1) Type Different Types of Controls Through 10 Turn Potentiometer Length of Sample 39mm, Diameter of Sample 1mm (Approx.) Sample Type: 1. SOFT IRON, 2. NICKLE, 3. HARD STEEL (Without CRO)</p>	1
17	Refractive index liquid by total internal reflection using Wollastons air film	<p>The unit is built on heavy cast-iron base. The movement is controlled by knob at the side of the base, and can be fixed in any position with clamping screw, and Vernier scale allows precise measurement to 0.01 mm. The carriage has two locations for the microscope, which allows it to be mounted with its axis in any position relative to travel. The microscope itself features 7x magnification Ramsden objective, 3x magnification 50 mm FL eyepiece, and cross-piece graticule, with rack-and-pinion focusing.</p> <p>Sodium Light Lamp 35W, Transformer with metal Box, Lamp house : 300x85mm(LxΦ), Aperture dia : 25mm</p>	1
19	Refractive index of glass and a liquid by total internal reflection using Gaussian eye piece	<p>SPECTROMETER-Scale: Brass, dia, 190mm, 9mm dia, Objective: Achromatic lens, $f = 178\text{mm}$, Aperture 32mm Slit: Brass with, micrometer, Reticle : 90 cross etched on glass, Least count: 1 minute Eyepiece: 10X, Gauss eyepiece, Vernier: 2 verniers (0-30div) in-built magnifier Base: 190mm Triangular, Cast iron, Special Features : Manufactured on CNC machine. Illumination device for cross wire, adjusting screws for lateral & height adjustment</p> <p>SODIUM LIGHT SOURCE-Starting Voltage : 470 Volts, Input Voltage : 220V, 50 Hz, Lamp House : 300x85mm(LxO), Aperture dia. : 25mm, PRISM Size : 38 x 38 x 38 mm., Height : 38mm, Material : EDF, MICROMETER SLIT Pitch : 0.5 mm., Least Count: 0.005 mm, Range : 0 -6.5 mm, Diameter : 38 mm approx.</p>	1

20	Wave length of ultrasonic wave	<p>HIGH FREQUENCY GENERATOR: The frequency of oscillations is of the order of 3MHz. The liquid is set into longitudinal vibrations mechanically using a crystal and RF oscillator.</p> <p>SPECTROMETER The diameter of the brass scale is 7" Vernier constant: 1 minute. Spectrometer is provided with 20" long telescope Magnification using 50mm diaacromatic objective lens. Collimator tube is provided with 1" diameter acromatic objective and a sharp adjustable slit. Telescope is factory adjusted for parallel rays a cut mark is made on the inner adjustable tube. This mark is conceded with the edge of the outer black painted tube Telescope is set for parallel rays. Telescope and the collimator tubes can be adjusted by fine & smooth rack and pinion arrangement. Conventional prism table is replaced by a special rectangular table on which the glass cell is placed. Optional essential accessories Sodium light source Starting Voltage : 470 Volts, Input Voltage : 220V,50Hz Lamp House ; 300x85mm(Lx□), Aperture dia :25mm Sodium Light Transformer</p>	1
21	Battery ellimator	<p>Current- 5A Voltage -2-12Volt DC Socket type, Step type</p>	4
22	Inverter battery	12volt LED ACID rechargeable DC(150 AH/ 180 AH/200AH/,220AH)	✓
23	inverter	operatedbon12 VOLT DC LED ACID single battery, Invertor1500VA,1650VA(12volt &24 volt DC)	1

24	Precision Thermometer	-10 to 110 Mercury Thermometer 0 to 250 Degrees Celsius with $\frac{1}{2}$ degree precession for Laboratory	2	
25	Glass prism	Triangular shape, equilateral base glass prism 50*50*50mm	4	
26	LASER SOURCE	Peak wavelength: 635nm, Operating voltage : 5V DC, Operating current : 250mA, Optical power : 0.4-0.8mW, Laser product : Class II, Operating temp. : 0 - 40°C, Storage temp. : -10 to 50°C	3	
27	DESKTOP	DESKTOP i5/i7 Processor, 11th Gen/12th Gen, 8gb Ram, 256/512 GB SSD, 1TB HDD, 20" monitor, Windows 11, MS O-Home/Student along with UPS & CPU	4	
28	Digital Clamp Multimeter	Auto range, To measure DC Current (EXTRA FEATURE) 200milliamp- 1000Amp DC	2	
29	Storing Almirah (steel)	Made of white iron sheet, without locker Size 78inch*36inch*19inch with four shelves	4	


 HOD Physics
 H.O.D, Physics
 J.K.B.K. Govt. College
 CUTTACK

To

The Principal,

J.K.B.K. Govt College, Cuttack

Sub : Submission of list of necessary lab equipments.

Madam,

I herewith submit the list of necessary lab equipments required for +3 chemistry laboratory for the session 2023-24.

Sl No	Item	Specification	Quantity
1	pH-meter	Digital 2pt calibration buffer tablet	02
2	Potential meter	Automatic 0-2000 mV in-built magnetic stirrer	02
3	Conductometer	Automatic cell constant 1 - 0.1	02
4	Digital thermometer	0 to 300 °C range (2 decimal scale)	05
5	Bunsen burner	Standard	20
6	Test tube holder	Standard	30
7	Blow pipe	Standard	30
8	Dropper rubber bulb	Standard	50
9	Spectrophotometer	320 – 990 nm range tungsten halogen lamp- 6-10 watt	02

This is for your kind information and necessary action.


Yours faithfully

H.O.D. Chemistry
J.K.B.K. Govt. / Junior College
Cuttack-3

To

The Principal

JKBK Government college, Cuttack

Sub- Lists of items to be procured for +3 Botany Practical lab for the financial year 2023-24

Respected Madam

As per office order no-104/Dated-16/01/2024 below mentioned lab equipment are required to be procured for smooth conduct of +3 practical for Department of Botany.

Sl.No	Name of Equipment	Specification	No. of items required
1.	Vertical electrophoresis system	Dimensions of Glass Plates in cm x cm10x10 Dimensions of Gel in cm x cm8x8.5 Thickness of comb (mm)1 Thickness of spacers (mm)1 Construction of Unit (Moulded/Fabricated)Single Moulded Upgradable OptionYes Casting Module IncludedYes System should be provided with atleast three sets of output terminals to deliver constant voltage or currentNo, Comprehensive Warranty in years2	1
2	Vertical Electrophoresis system Power Pac	Dimensions of Glass Plates in cm x cm20x10 Dimensions of Gel in cm x cm8x8.5 Construction of Unit (Moulded/Fabricated)Single Moulded System should be provided with atleast three sets of output terminals to deliver constant voltage or currentNo, Output rangevoltage: 10-300v; current: 4-400ma; power: 75 watts or better, Led display for voltage, current, power and timeYes, Safety feature Overload/short circuit detection; over voltage protection, Comprehensive Warranty in years2	
3	Bench top Non Refrigerated centrifuge (1.5 ml)	Centrifuge designBench Top Type of MotorWith Carbon Brushless Configuration of Rotor supplied with centrifuge machineswing out and angle rotor Size of rotor supplied with centrifuge"24x1.5ml(for angle rotor) RPM 16000" Warranty period in years1	

		<p>The Equipment shall be installed and demonstrated before Acceptance</p> <p>Yes</p> <p>Servo Controller Voltage Stabilizer supplied with Item</p> <p>No</p> <p>Servo stabilizer ratings in KVA</p> <p>Not Supplied</p> <p>Warranty of stabilizer in years</p> <p>Not supplied</p>	
4	Bench top Refrigerated centrifuge (15 ml/50 ml Capacity)	<p>Type of Motor</p> <p>Brushless (without carbons)</p> <p>Type of lid lock</p> <p>Electronic lid locking with automatic lid opening at end of run</p> <p>No of acceleration and deceleration profiles in built for rotor speed while automatic braking</p> <p>Acceleration and Deceleration Profile- 9/10</p> <p>Configuration of Rotor supplied with centrifuge machine</p> <p>Angle rotor</p> <p>Size of rotor supplied with centrifuge in ml</p> <p>"24x1.5ml (for angle rotor) RPM 16000"</p> <p>,"6x50 mL (for angle rotor) RPM 13000"</p> <p>,"12x15ml (for angle rotor) RPM 13000"</p> <p>,"12x2ml (for angle rotor) RPM 20000"</p> <p>.2 micro plates of 96 wells each (for swing out type or angle rotor RPM 3500)</p> <p>Warranty period for equipment & Rotor (on site and comprehensive warranty) in years</p> <p>1</p> <p>Condensed Water Drainage System</p> <p>Yes</p> <p>The Equipment shall be installed and demonstrated before Acceptance</p> <p>Yes</p> <p>Servo Controller Voltage Stabilizer supplied with Item</p> <p>Yes</p> <p>Servo stabilizer ratings in KVA</p> <p>2</p> <p>Warranty of stabilizer in years</p> <p>3</p>	1
5-	Double beam UV-Visible spectrophotometer	<p>Light Source</p> <p>Deuterium Lamp , Tungsten Halogen Lamp</p> <p>Diffraction Grating (lines/mm)</p> <p>1200</p> <p>Switching of Light Source</p> <p>Automatic</p> <p>Wavelength Setting and Scanning</p> <p>Automatic</p> <p>Type of Spectrophotometer</p> <p>UV-Visible spectrophotometer, Type of Optical System</p> <p>Double Beam, Monochromator</p> <p>Type</p> <p>Holographic Grating, Detector</p> <p>Type</p> <p>Photodiode</p> <p>Spectral Bandwidth Type</p> <p>Fixed Bandwidth</p> <p>Source Wavelength - Minimum</p> <p>190 nanometer</p> <p>Source Wavelength - Maximum</p> <p>1100 nanometer</p> <p>Resolution</p> <p>0.3 nanometer</p> <p>Wavelength Accuracy (+/-)</p> <p>0.3 nanometer</p> <p>Bandwidth (nm)</p> <p>1</p>	1

		<p>Focal length (mm)100 to 149</p> <p>Photometric measurement modesTransmittance ,Absorbance ,Concentration (Wavelength, time)</p> <p>Photometric Absorbance (Max) (Abs) (+/-)4</p> <p>Photometric Absorbance Accuracy (Max) (+/-)0.005, Photometric Transmittance (Max) (+/-)100 percent, Photometric Transmittance Accuracy (Max) (+/-)0.1 percent, Photometric Reflectance (Max) (+/-)0 percent, DisplayIn-built display</p> <p>Display typeLCD touchscreen, Display Size10.1 inch, Test result printingThrough external printer If inbuilt printer, Type of printerN/A</p> <p>Internal storage(GB)80, Mximum Path Length of sample10 millimeter, Number of Cuvettes supplied-inclusive in the scope of supply2, Spares and Consumables inclusive in the scope of supplyYes, Minimum Operating Temperature10 degree Celsius, Maximum Operating Temperature45 degree Celsius, Operating Humidity (RH) (%) at 40 degree C85 percent, Onsite Warranty1 year</p> <p>Availability of Spares (at extra cost)5 year</p>	
6-	PCR Machine (semiquantitative)	<p>Availability of ISO with manufacturerNo</p> <p>Display InterfaceLCD</p> <p>Block FormatFixed</p> <p>Capacity of Blocks0.2ml x 1x96well</p> <p>Maximum Heating Ramp rate in degree cycle per second4° C/S</p> <p>Maximum Cooling Ramp rate in degree cycle per second2° C/S</p> <p>Adjustable heating/cooling Ramp RateYes</p> <p>Temperature setting accuracy in °C±0.3 °C</p> <p>Well to well temperature uniformity in °C±0.4 °C</p> <p>Gradient Spread in °C1-25°C</p> <p>Hot Lid Temperature30-110°C</p> <p>Max No of Programmable Steps20</p> <p>Max No of Programmable CyclesUpto 100</p> <p>Availability of USB ports2</p> <p>Memory to store programs1000-5000</p> <p>Pause/Start functionYes</p> <p>Built-in Tm CalculatorYes</p> <p>Warranty 3</p> <p>Touch Screen of display should be responsive for both gloved and ungloved fingersYes</p>	1

7	Vortex Mixer	<p>Warranty on machine 2 year</p> <p>Type of Drive Motor Brushless AC Motor</p> <p>Display Option/Output Read out Option Analog</p> <p>Material of Mixing Head/vortex cup Rubber</p> <p>Type of Controller other</p> <p>Base material Die cast aluminium</p> <p>Number of Sample tubes testable simultaneously Multi-Tube</p> <p>User Interface Analog Front Panel</p> <p>Largest Volume of the tube testable 200 milliliter</p> <p>Finish of Body material Powder coated</p> <p>Body Material Plastic</p> <p>Noise Level (maximum) (db) 50 decibel</p> <p>Maximum Load capacity 0.1 kilogram</p> <p>IP rating or Ingress protection rating 21</p> <p>Activation mode Press Activated and Continuous run, Speed mode Variable Speed</p> <p>Number of Programmable/Programmed modes 0</p> <p>Minimum Speed (RPM) 100</p> <p>Timer Provided No, Programmable Pulse mode No, Speed control Accuracy (+/-) (RPM) 20</p> <p>Orbital Diameter 4 millimeter, Input Voltage (V) with number of Phases 230</p>	1
8	Micro weighing Balance with licensed software, Capacity 220g	<p>Capacity 220g</p> <p>Graphic display Black and white</p> <p>Weighing balance shall have Multi unit display Yes</p> <p>Display Size 4.3 inch</p> <p>Response time 2.5 second</p> <p>Weighing pan, mm 78x73 or better, Eccentricity deviation (sd) (test load) 0.1mg (100g), Capacity 220g, Linearity Deviation, mg 0.2, Sensitivity offset, Nominal load, mg 0.16, Repeatability, mg 0.4, Readability 0.1 mg, Conformity to CE Yes, Conformity to ISO, ISO 9001, Balance should be provided with Glass Draft Shield with Motorized drive, Balance should be supplied with PC licensed software.</p>	1
9	pH meter Automatic Microprocessor based	<p>Warranty (Year) 2, Impact Resistant, Ingress Protection, Water Tight, Storage pocket for pH electrode, System to be supplied with Measuring electrode combined & glass calomel, temperature probe, Electrode Stand, calibration buffer and maintenance kit, operation manual, power cable and plug, Microprocessor Based, Display LED / LCD / Touch Screen, 3 digits, Calibration upto 5, pH Range (pH), 0.00 to 14.00, Accuracy (pH) +/- 0.05.</p>	1

10	Orbital Shaking Incubators	<p>Warranty in years3</p> <p>Range of Temperature5 °C above ambient to 80 °C ± 0.5 °C, Type of Display-LED, Type of speed control-Step, Orbital shaking amplitude in mm25 mm, Type of flask which can be accommodated100 ml ,250 ml ,500 ml ,1000 ml ,50 ml ,2000 ml ,Others ,6000 ml</p> <p>No of clamps for 100 ml flask to be supplied with system2, No of clamps for250 ml flask to be supplied with system2, No of clamps for 500 ml flask to be supplied with system2</p> <p>No of clamps for 1000 ml flask to be supplied with system1, Interior illuminationFlourscent bulb, Stabilizer should be provided</p>	1
12	Double door Refrigerator	242 L frost free double door refrigerator	1
13	Single channel volume Micropipette 0.1-2.5 µl	Variable Volume Single Channel micropipette, with material of piston-fortron, Micropipette with spring loaded tip cone, Autoclavable, Digital volume indicator, Volume Range of Variable Volume Single Channel pipette0.1 - 2.5 ul, ISO8655 certified, Volume increment (in Ul)-0.002	1
14	Single channel volume Micropipette 2-20 µl	Variable Volume Single Channel micropipette, with material of piston-fortron, Micropipette with spring loaded tip cone, Autoclavable, Digital volume indicator, Volume Range of Variable Volume Single Channel pipette 2-20 ul, ISO8655 certified, Volume increment (in Ul)-0.02	1
15	Single channel volume Micropipette 20-200 µl	Variable Volume Single Channel micropipette, with material of piston-chemical resistant, Micropipette with spring loaded tip cone, Autoclavable, Digital volume indicator, Volume Range of Variable Volume Single Channel pipette 20-200 ul, ISO8655 certified, Volume increment (in Ul)-0.1	1
16	Single channel volume Micropipette 200-1000 µl	Variable Volume Single Channel micropipette, with material of piston-chemical resistant, Micropipette with spring loaded tip cone, Autoclavable, Digital volume indicator, Volume Range of Variable Volume Single Channel pipette 100-1000 ul, ISO8655 certified, Volume increment (in Ul)-1	1
17	Microscope	<p>Typepathological binocular non hinged type with built in light and with light intensity regulator</p> <p>ISI MARKEDYes, Eye piece TypeCompensating</p> <p>Eye Piece with magnificationSet of Two For Binocular 10x, Objective Typeachromatic</p>	1

		Objective Magnification 4X, 10x, 40x, 100X Numerical Aperture of Objective 0.10, 0.25, 0.65, 1.25, Binocular Eye pieces Confirming to the requirements of IS: 8275/1976 Type of lamp for Illumination Halogen Warranty 2 year, Stage-Rectangular Size of stage-120X132mm, Coarse and fine movement of stage, Co-axial focussing, micrometer arrangement	
18	Microwave	ISI marked, Conformity to Indian Standard IS 11676 (Latest), Capacity / Volume (Litres) 25 Grill Heating Power (Watts) 201-250 Diameter of turn table-301-325, usable shelf area in m ² 510X 305X495, Convection heating, Rotisserie rack, Heating time adjustment Pitch (seconds) 600, Magnetron and Cavity Warranty 1 year, Convection heating, Touch control panel, Adjustment of microwave power, Finish of heating chamber Stainless steel, Heating time adjustment pith-600, Door open type- button	1
19	Scientific Dry block heater	Temperature Range, (+/-) Ambient 5 deg C to 130 deg C, Heating Up Time, (Minute) 20 Protection class according to DIN EN 60529 IP 21, EN 61326-1, Block material -Aluminium alloy, Diameter of probe tube-10 mm, Length of probe tube-100 mm, Tube type-PCR tube, Microfuge tube, Digital control and display of time and temperature, Should be used for DNA extraction and analysis, Timer range-0-9999 min, Temperature accuracy-0.1 ^o C	1

Thanking You
Yours Sincerely

Debasis Patra
Debasis Patra

HOD, Dept of Botany
JKBK Govt. College, Cuttack

H.O.D (Botany),
J.K.B.K. Govt. College
Cuttack

To
The Principal
J.K.B.K. Govt. College, Cuttack

(Subject: List for purchase of Laboratory equipment for Department of Zoology).

Madam,

As per your office order no. 104, dated 16.01.2024, please find annexed herewith the list for purchase of laboratory equipment for +3 practical for Department of Zoology.

Cuttack

19.01.2024

Yours faithfully,


19.01.24

Dr. Jutshina Hota

H.O.D. Zoology

J.K.B.K. Govt. College,
Cuttack

DEPARTMENT OF ZOOLOGY
J.K.B.K. GOVT. COLLEGE, CUTTACK
LIST OF INSTRUMENTS

SL NO.	NAME OF ITEMS	SPECIFICATIONS	Quantity
1.	Binocular Microscope	<ul style="list-style-type: none"> • Microscope Type: pathological binocular non hinged type with built in light and with light intensity regulator, LED. • Eye piece Type Huygenian, • Eye Piece with magnification Set of Two For Binocular 10x, LED, • Objective Type achromatic, • Objective Magnification 100X, • Numerical Aperture of Objective 1.25, • Stage: rectangular, • Size of Stage: 125 x 145 mm, • Coarse and Fine Movement of stage, • Co-axial focussing, Micrometer Arrangement 	04
2.	Monocular Microscope	<ul style="list-style-type: none"> • Microscope Type: pathological monocular non hinged type with built in light and with light intensity regulator, LED • Eye piece Type Compensating, • Eye Piece with magnification monocular 10 x, • Objective Type achromatic, • Objective Magnification 10 x ,40 x ,100X ,4X, • Numerical Aperture of Objective 0.25 ,0.65 ,1.25 ,0.10, • Eye Piece with magnification monocular 10 x, • Plano Concave mirror attachment, • Stage rectangular, Size of Stage 120mm x 125 mm, • Coarse and fine adjustment, • Micrometer arrangement 	04
3.	Stereo Zoom Microscope	<ul style="list-style-type: none"> • Microscope Type: Stereo zoom microscope, Binocular • Objective lenses Type: Achromatic • Objective lenses Magnification 1.0X • Numerical Aperture of Objective 0.10, Zoom Ratio 7:1 • Stage Type Manual mechanical stage with transmitted light bases and incident light • Zoom/Magnification • Operation Manual 	04

		<ul style="list-style-type: none"> • Filters Daylight filter • Type of lamp for Illumination LED • DisplayThroughSystem(System/Laptop etc).Accessories (Inclusive in the Scope of Supply)Cable ,Stage plate ,Photo Adapter • Warranty of complete Microscope • Eye Piece magnification 10x, Objective lenses Type Achromatic, Minimum value of Magnification 5x, Maximum value of Magnification 100x • Type of lamp for Illumination LED 	
4.	Monocular compound microscope	<ul style="list-style-type: none"> • Pathological monocular hinged type without built in light and without light intensity regulator, • Eye piece type Huygenian, • Eyepiece with magnification 10x, • objective type achromatic; • objective magnification 45 x, • Numerical aperture of objective 0.25, • planoconcave mirror attached, • rectangular stage, • size of stage 120*120 mm, • coarse and fine movement of stage, • extra eye piece 15x. 	03
5.	Dissecting microscope	<ul style="list-style-type: none"> • Pathological monocular hinged type without built in light and without light intensity regulator, • ISI marked, • Monocular 10 x, • Objective type achromatic, • Objective Magnification 45x, • Numerical Aperture 1.25, • Stage rectangular, heavy base 	03
6.	pH meter for water testing	<ul style="list-style-type: none"> • Microprocessor Based Automatic pH Meter, Handheld • Warranty • Impact Resistant Yes, • Storage pocket for pH electrode Yes, • Display: LED / LCD / Touch Screen, 3 digits, Calibration:Upto 5, pH Range 0.00 to 14; Accuracy ± 0.01, corrosion resistant Yes, • Power Requirement 230 V, • Parallel Temperature indication Yes 	05
7.	Water Quality Meter/TDS	<ul style="list-style-type: none"> • Handheld • Calibration: Automatic • Ingress Protection (Main Unit) IP 67 • Total Dissolved Solids (TDS): Yes • Power Source: Alkaline Batteries 	05

		<ul style="list-style-type: none"> • Battery Size: AAA 	
8.	UV-Visible Spectrophotometer	<ul style="list-style-type: none"> • Light Source: Deuterium Lamp , Tungsten Halogen Lamp • Diffraction Grating (lines/mm) 1200 • Switching of Light Source: Automatic • Wavelength Setting and Scanning: Automatic • Type of Spectrophotometer: UV-Visible spectrophotometer • Type of Optical System: Double Beam • Monochromator Type: Czerny-turner • Detector Type: Photodiode • Spectral Bandwidth Type: Fixed Bandwidth • Source Wavelength - Minimum 190 nanometer • Source Wavelength - Maximum 1100 nanometer • Resolution 0.3 nanometer • Wavelength Accuracy (+/-) 0.3 nanometer • Bandwidth (nm) 1 • Focal length (mm) 100 to 149 • Photometric measurement modes Transmittance , Absorbance • Photometric Absorbance (Max) (Abs) (+/-) 4 • Photometric Absorbance Accuracy (Max) (+/-) 0.002 • Photometric Transmittance (Max) (+/-) 100 percent • Photometric Transmittance Accuracy (Max) (+/-) 0.2 percent • Photometric Reflectance (Max) (+/-) 0 percent • Display In-built display • Display type LCD touchscreen • Display Size 10.1 inch • Test result printing Through external printer • If inbuilt printer, Type of printer N/A • Internal storage (GB) 80 • Maximum Path Length of sample 10 millimeter • Number of Cuvettes supplied-inclusive in the scope of supply 2 • Spares and Consumables inclusive in the scope of supply No • Minimum Operating Temperature 10 degree Celsius • Maximum Operating Temperature 45 degree Celsius • Operating Humidity (RH) (%) at 40 degree C 85 percent • Onsite Warranty 1 year • Availability of Spares (at extra cost) 5 year • Availability of UL/CE Certification as per EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory 	01

		use General requirementsYes	
9.	Sphygmomanometer	<ul style="list-style-type: none"> • Type I – Portable, • Mercurial Sphygmomanometer, • ISI marked, • Compliance to Medical Device Rules (MDR) 2017 as amended till date, Standard Warranty 	03
10.	Water Bath (Rectangular) stainless steel	<ul style="list-style-type: none"> • Stainless steel, • Dimension 300*250*100, • Water bath Chamber Capacity>over 8 to 10 litre Chamber • Construction:Double walled rectangular chamber • Material of Outer Chamber Construction:Epoxy / Powder coated Stainless Steel SS304 • Number of racks provided with Water bath unit0 • Number of 75 mm diameter Holes provided:6 • Heating Capacity (\geq):1000 Watt • Control Panel has:ON/Off Switch , • Power mains Indicator ,Temperature controller • Type of Temperature controller:Thermostat based control • Water bath Display type:Analog Display • Integrated circulation pump for temperature homogeneityNo • Removable bottom plate and shaking insertsNo • Temperature range of bath chamber:5°C above ambient to 99.9°C • Temperature control sensitivity:$\pm 0.5^\circ\text{C}$ or better • Least temperature increment Step available1 degree C • Temperature Accuracy:$\pm 1^\circ\text{C}$ or better • Safety Features:Redundant safety thermostat • Power requirement:220 V 50 Hz Single Phase AC • Equipment has CE certificationYes • Warranty • Timer ProvidedYes • Timer Setting (minimum increment step)1 second • Drain plug in Chamber providedYes 	01
11.	Neubauer Haemocytometer with counting chamber	<ul style="list-style-type: none"> • Material of the case of Neubauer Chamber Padded wooden, • Purpose:Counting Chamber used to count number of cells, • Material of slide: Thick crystal, • Size of slide 30 mm x 70mm, Thickness of slide 4 mm, • Size of counting grid 3 x 3, • Number of square subdivisions in counting grid9, • Number of cover slips supplied with Neubauer 	05

		Chamber50	
12.	Hot air oven	<ul style="list-style-type: none"> • Capacity in litres 45, • Power ratings in watts 750, • Ambient temperature range in °C Ambient to 250°C, • Temperature Accuracy in °C $\pm 2^\circ\text{C}$, • Insulation: Mineral Wool 75mm, • Type of Display: Analog, • Type of Shelves: Removable, • Number of shelves 2, • Material of Inner Chambers Aluminium, • Material of Outer Chamber MS with powder coated paint, • Material of Shelves SS wire mesh 	01
13.	Rotary microtome with Blade	<ul style="list-style-type: none"> • Semi-automatic rotary microtome, • Section thickness in μm: 1-100 μm, • Type of blocks which can be cut Both paraffin and epoxy resin blocks. • Motorized feed mechanism with manual cutting options, • Length of vertical stroke in mm 60mm for small standard clamp, • Horizontal specimen feed in mm 25, • standard specimen clamp, • Type of disposable blade Both high profile and low profile, • Number of packet of disposable blades (50 blades in 1 packet) 2 pkt, • Motorized Coarse feed in two speeds :300 mm/sec & 900 mm/sec, • Cutting speed: Manual sectioning in case of Semi-automatic microtome, • Warranty 	01
14.	Electrophoretic system Vertical with Power Pack	<ul style="list-style-type: none"> • Dimensions of Glass Plates in cm x cm 10x10 • Dimensions of Gel in cm x cm 8x8.5 • Thickness of comb (mm) 1.5 • Thickness of spacers (mm) 1 • Construction of Unit (Moulded/Fabricated) Single Moulded • Upgradable Option Yes • Casting Module Included Yes • Dimensions of Glass Plates in cm x cm 10x10, • Dimensions of Gel in cm x cm, • Number of gels can be run 2, • Number of well combs 10, • Thickness of comb (mm) 1.5, Thickness of spacers (mm) 1, Maximum Sample Capacity 800 	01

15.	Knee hammer	<ul style="list-style-type: none"> • Ergonomic Design, • Head Shape Triangular, • Head material Silicone Rubber, • Handle Material Mild steel, • Handle Shape T shape, • Overall Length (in cm) 15 to 20 cm 	10
16.	Refrigerator	<ul style="list-style-type: none"> • 242 L, convertible, Digital Inverter, with Display <p>Frost Free Double Door</p>	01


19.01.24.
(HOD Zoology)

Dept. of Mathematics

Lab equipments

This is to certify that Mathematics Hons have four no of practical papers one in each 1st, 2nd, 3rd and 4th sem. The practicals are purely based on computer and MATLAB software. The students needs to do practical by using computer and get the result as output, which is in the form of hard copy.

The following items are highly required for smooth conduct of practicals.

SI no.	ITEM NAME	SPECIFICATION	MAKE IN	Quantity
1	DESKTOP	i5/i7 Processor,11 th Gen/12 th Gen ,8gb Ram,256/512 GB SSD, 1TB HDD,20" monitor,Windows 11,MS O-Home/Student	REPUTED BRAND	12
2	UPS	10KVA	REPUTED BRAND	1
	Battery	35Ah	REPUTED BRAND	12
3	ANTIVIRUS	10 USERS	REPUTED BRAND	1
		2 USERS	REPUTED BRAND	2
4	Printer	Mfp duplex print	REPUTED BRAND	1
5	Installation + networking	-	-	12 pc networking
6	AC High cooling	5 star	REPUTED BRAND	1
7	Computer table		REPUTED BRAND	12
8	Student sitting stool		REPUTED BRAND	12

*HOD
Dept. of Mathematics*

Department of Psychology
J.K.B.K. Govt .College, Cuttack

This is to certify that these instruments are highly required for smooth conduct the U.G. Hons & G.E Practicals.

1	Desktop	Desktop -12th Gen Intel Core i3-1215U 21.5 inch(54.6 cm) FHD Anti Glare Display (8GB/ 1TB HDD+256GB SSD) Windows 11 Intel UHD Graphics/ Keyboard & Mouse ComboMS Office/Jet Black,22-dd2456in	1
2	Printer	HP Laserjet M126a, D&W Printer for Office 3-in-1 print, copy , scan, compact Affordable	1
3	SPASS Package	Software Jet- black 22-dd2456in	1
4	memory Apparatus	Electric Memory Drum	6
5	Thematic Appreciation Test	20 page manual -30 pict on card- Blank card in folder	5
6	Metronome	Normal Teen	5
7	Table Screen	Normal Teen	5

M. S. S.
H.O.D. 2/2/24
Psychology