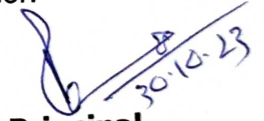


**BOUDH PANCHAYAT DEGREE, COLLEGE, BOUDH
AT/PO/DIST- BOUDH**

No. 1132

Date: 30.10.2023

Quotations are invited from intending Firms/Supplier/Authorised Dealers having PAN/GST registration no. for supply of Laboratory equipments as per list. The quotations should reach the undersigned within a period of **two weeks** from the date of advertisement. The details of the requirements for different department of science with specification, term/condition and updates are available in the college website: www.bpcollegeboudh.org . The undersigned reserves the right to accept or reject or cancel any or all the quotations without specifying any reason thereof.

 30.10.23

**Principal,
B.P.College, Boudh**

**PRINCIPAL
OUDH PANCHAYAT COLLEGE
BOUDH**

Pancyat College Boudh

Requirement of Laboratory Equipments (UG -CBCS) (FY-2023-2024)

Name of the Department:- PHYSICS

Sl. No	Name of the Equipments	Specification / Description	QTY	Unit Price	Total Price
ELECTROMAGNETIC THEORY					
1	verify the law of Malus for plane polarized light	OPTICAL BENCH-Black Ionised with with Updoen precision Saddle LC-001, Scale : 0-150cm, Least count : 1mm, Length :1mtr, POLARIZER / ANALYZER-BRASS , Angle : Adjustable (0°-90°), Aperture : 21mm dia.Frame : 130mm dia., Rod : 10 mm dia.,DETECTOR-Detector : Terminals : 4mm safety socket, Aperture : 1 mm , Rod : 10 mm diameter, Voltmeter : 0-20V DIODE LASER- Peak wave length: 635nm Operating voltage: 5V DC, PIN HOLE PHOTO DETECTOR, Detector : Silicon photocell, Terminals : 4mm safety socket, Aperture : 1 mm, Rod : 10 mm diameter,Single Slit,Double Slit,Diffraction Grating,Screen Must Have Digital Multimeter - 3 3/4 True RMS with 10A Current & Auto Power Make SPANCOTEK -EM045A	1	₹26,000.00	₹26,000.00
2	To verify the Stefan's law of radiation and to determine Stefan's constant	DC Power Supply : 12V/250mA DC Voltmeter : 0-12V DC Ammeter :0-250mA DC Bulb :12V Components are mounted on board Front panel built with high class insulated sheet Make SPANCOTEK-EMT008	1	₹3,500.00	₹3,500.00
3	Boltzmann constant using V-I characteristic of PN diode.	Digital DC Voltmeter to measure the voltage across the diode.Highly stabilized variable D.C. power supply (0 - 2Volts).Digital Milliammeter to measure forward bias current in diode.Silicon Diode mounted inside the cabinet.Temperature controlled oven 70 degree C to heat the diode for different set of readings. Digital temperature indicator to measure temperature directly Make- SPANCOTEK EMT - 012	1	₹7,500.00	₹7,500.00

Name of the Department:- PHYISCS

Sl. No	Name of the Equipments	Specification / Description	QTY	Unit Price	Total Price
B	SOLIDSTATE PHYSICS				
1	Measurement of Susceptibility of Paramagnetic Solution (Quinck's Tube Method)	POWER SUPPLY: Voltage : 0-16V DC continuously variable & stabilized,Voltage display : 3½ digit LED, Ripple : Less than 25mV,Overload : Current limiting protection, Current : 5 A continuously variable, 10% to full rating,Current display : 3½ digit LED, Working voltage : 230V AC, 50 Hz single phase,DIGITAL GAUSS METER: Range : 200 G & 2 kG,Resolution : 1G at 0 - 200G, Power : 220 V, 50 Hz AC, Hall probe : InAs, TRAVELING MICROSCOPE: Travel : Horizontal 170mm, Vertical 110mm,Least Count : 0.01mm,Working distance : 50mm, Eyepiece Ramsden : 8x, Reticle : 90° cross on glass.DIGITAL WEIGHING SCALE: Capacity : 700g., Display :Digital, Least count : 0.1g., Body : Plastic, ELECTROMAGNET: Coils: 400 Turns. Coil Current: 4.5Amp (Max.), Connection: 4mm safety socket.U Core: 150x130mm (LxH), 40x40mm cross section. ,I Core : Length=150mm, 40x40mm cross section.,Core material: Ferromagnetic. MAKE SPANCOTEK--SSP-002	1	₹57,000.00	₹57,000.00

Name of the Department:- PHYSICS

Sl. No	Name of the Equipments	Specification / Description	QTY	Unit Price	Total Price
2	Hall coefficient of a semiconductor sample	<p>ELECTROMAGNET - Made of soft iron, specially design for Hall Effect experiments, mounted on a wooden base for stable performance, Pole pieces :- 50mm dia. tapered type Field :- 7.5kg at 10mm. air gap, Energizing Coils :- Two coils each with total resistance of 9 ohms (approx).DIGITAL POWER SUPPLY FOR ELECTROMAGNET - 0 - 6Amp, 60V digital display, It is a constant current power supply, with long time operation and continuously variable current. DIGITAL GAUSS METER: Range: 0-2 K Gauss & 0-20 K Gauss, Resolution: 1Gauss at 0-2 K Gauss Range, Accuracy: $\pm 0.5\%$, Display: $3 \frac{1}{2}$ Digit, 7 Segment LED with Gauss Probe</p> <p>CONSTANT CURRENT POWER SUPPLY: (i) Digital Mill voltmeter Range: 0-200mV/2000mV (100μV minimum) Accuracy : $\pm 0.1\%$ of reading ± 1 digit, (ii) Digital Mill Ammeter Range : 0-10mA/20mA Accuracy : $\pm 0.1\%$ Make- SPANCOTEK SSP-008</p>	1	₹63,000.00	₹63,000.00
2	Measure the Dielectric Constant of a Dielectric Materials with frequency	<p>Actual capacitor :18pf,13pf,10pf,8pf Test capacitor without dielectric : 80pf,88pf,91pf,94pf Teas capacitor with dielectric :25pf,46pf,60pf,70pf High Frequency Oscillator :100KHz Gang Condenser :0 to180° The unit is complied on a Hylem Board Make-SPANCOTEK SSP-004</p>	1	₹8,000.00	₹8,000.00
3	BH Curve Appratus	<p>To trace Hysteresis curves on CRO using resistance, capacitance, and Inductance. Instrument comprises of AC power supply 3-15V AC, output selectable using band switch, Printed circuit diagram, Components connected behind the front panel, provision for connecting external inductance is given, input and output connections brought out at sockets. Optional- Duall Channel CRO . MAKE_ SPANCOTEK SSP-006</p>	1	₹3,900.00	₹3,900.00

Name of the Department:- PHYISCS

Sl. No	Name of the Equipments	Specification / Description	QTY	Unit Price	Total Price
ANALOG SYSTEM & APPLICATION					
C					
1	To study V-I characteristics of PN junction diode (FWD & Reverse)	Variable DC supply: 0-3V & 0-30V Voltmeter :0-3V & 0-10V (Moving Coil) Ammeter :0-150 μ A & 0-15mA (Moving Coil) Variable pot :500K -2nos Interconnection :4mm patch cord Resistance:1k Ω -3nos Diode Type : Germanium & Silicon LED Type : SMT & Semiconductor Front panel built with high class insulated sheet Circuit & Symbol diagram printed on front panel Make-SPANCOTEK-ASP-001	1	₹2,800.00	₹2,800.00
2	Zener diode and its use as voltage regulator with 3 Meter	Variable DC supply:0-15V Voltmeter :0-15V (Moving Coil)-2nos Ammeter :0-1.5mA & 0-15mA (Moving Coil) Variable pot :500K -1no Interconnection :4mm patch cord Resistance:1k Ω -3nos Zener Diode : 6V,9V&12V Make-SPANCOTEK-ASP-002	1	₹3,500.00	₹3,500.00
3	V-I & power curves of solar cells, and find maximum power point & efficiency.	DC Ammeter : 2000 μ A & 200mA DC Voltmeter : 0-20V Ammeter Display : 3 ½ Digit Voltmeter Display : 3 ½ Digit Solar Cell : Restive Load : 100 Ω ,250 Ω ,500 Ω & 1K,2K,5K. Make-SPANCOTEK-ASP-003	1	₹3,600.00	₹3,600.00

Name of the Department:- PHYSICS

Sl. No	Name of the Equipments	Specification / Description	QTY	Unit Price	Total Price
4	Investigate the use of an op-amp as an Integrator & Diifferentiator	DC Supply: +12V & -12V Fixed AC Signal:200KHz AC Voltage:1V OPAMP-IC741 Resistor : 1KΩ,10KΩ-2nos,100KΩ-2nos,1MΩ,10MΩ Capacitor:0.01μF-2nos,100pF Oscilloscope -50 MHz 200KHz Signal Generator MAKE-SPANCOTEK	1	₹3,600.00	₹3,600.00
E					
ELEMENT OF MODERN PHYSICS					
1	To setup the Millikan oil drop apparatus and determine the charge of an electron (with PC connectivity Facility)	Millikan's Apparatus Input Voltage : AC 220V, 50Hz, Output Power : 5W. Plate Voltage : 0~500V DC, Plate Distance : 5±0.2mm., Total Magnification : 30X Linear field of vision : =3mm. Scale division : 2±0.01mm. Objective lens : 100 lines/mm. Operating temperature : -10~40°C. Relative Humidity : Not less than 85% (at 40°C) Dimensions : 320mmx220mmx190mm. AtomizerBottle material : Glass Sprayer : Throat double pipe sprayer MAKE-SPANCOTEK-EMP008	1	₹16,000.00	₹16,000.00

Name of the Department:- PHYISCS					
Sl. No	Name of the Equipments	Specification / Description	QTY	Unit Price	Total Price
2	To determine the Wavelength of laser Source using diffraction Single Slit/Double Slit & Grating.	Research OPTICAL BENCH-Black Ionised : Aluminium alloy, Type : Hexagonal section, Scale : 0-100cm, Least count : 1mm, DIODE LASER - Peak wave length: 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, PIN HOLE PHOTO DETECTOR ,Detector : Silicon photocell,Terminals : 4mm safety socket,Aperture : 1 mm, Rod : 10 mm diameter with Digital Microvoltmeter MAKE-INDOSAW	1	₹39,000.00	₹39,000.00
3	To determine the Planck's constant using 4 LEDs Using Oven.	DC Supply :0-5V/150mA DC Voltmeter : 0-5V DC Ammeter: 0-2000µA LED : RED-630nM,YELLOW-578nM,BLUE-436nM, GREEN-546nM	1	₹3,600.00	₹3,600.00
4	To show the tunneling effect in tunnel diode (Digital Meter)	Inbuilt Fixed DC regulated power supply DC Voltmeter : 0-600mV (digital) DC Ammeter : 0-50mA (digital) Tunnel Diode : IN 3717	1	₹8,000.00	₹8,000.00
D	WAVE & OPTICS				₹0.00
1	Melde's. Experiment with 3 A Power Supply	Heavy steel fork ,Heavy cast iron base, Electromagnet Weight box 1, Voltage source 1.5V – 12V / 3A, Pulley with clamp Reel of thread, Meter scale of length 1m,Scale pan Make- SPANCOTEK WO-001	1	₹6,300.00	₹6,300.00
E	DIGITAL SYSTEM				
1	To measure (a) Voltage, and (b) Frequency of a periodic waveform using a CRO	70MHz Dual Trace Dual Channel 1mv Sensitivity LCD Type: 6-inch rectangular with internal graticule 8x10div (1div=1cm). Bandwidth :X1 - DC (AC 10Hz) ~50MHz (-3dB) Mode:Ch1,Ch2,ADD,FFT SPANCOTEK	1	₹28,000.00	₹28,000.00
F	THERMAL PHYSICS				

Name of the Department:- PHYSICS

Sl. No	Name of the Equipments	Specification / Description	QTY	Unit Price	Total Price
1	To determine mechanical equivalent of heat J by callender and barne's constant flow method	Calendar and Barn's continuous flow calorimeter AC Ammeter : 0- 3A (Moving Coil) AC Voltmeter : 0-10V (Moving Coil) Thermometers : 10°C to 100°C -2nos Measuring cylinder : 0 to 100mg DC Supply : 2V to 12V/3A Three Flow Water containg Beaker -1 no Rubber tubing : 8mm - 2Meter TPSM-001 Make-SPANCOTEK	1	₹9,000.00	₹9,000.00
2	To determine the temperature coefficient of resistance by Platinum resistance thermometer.	Platinum Resistance Thermometer Steam Boiler with Heating Arrangement DC Power Supply : 2V/100mA Calender and Griffith bridge with Jockey Galvanometer 30-0-30, 22 ohm Thermometer -10°C to 150°C Make-SPANCOTEK TPSM-007	1	₹15,000.00	₹15,000.00
3	To study the variation of thermo emf across two junctions of a thermocouple with temperature.	Copper-Iron Thermocouple & Potentiometer : 10 wire Water containg Beaker : 250ml 2Nos Heating Arrangement(electric) DC Voltage : 2V & 4V/100mA DC Voltmeter : 20V & 200mV (Switch Select) Ammeter : 0-200mA Resistance : 1Ω-10000Ω & 1KΩ -10KΩ Thermometer :10-100°C -2nos Sensitive Galvanometer 30-0-30, Stand for Thermocouple with base plate TPSM-008 Make SPANCOTEK-	1	₹13,000.00	₹13,000.00
1	ELECTRICITY & MAGNETISM				

Name of the Department:- PHYSICS

Sl. No	Name of the Equipments	Specification / Description	QTY	Unit Price	Total Price
1	To compare capacitances using De'Sauty's bridge.	On Board Decade Resistance: Range :10 ,100 & 1K Ω .-2nos Standard Capacitors : 0.1 μ f & 0.2 μ f Unknown Capacitors :4nos A.C supply of frequency : 10 KHz Null Detector : Digital Components are mounted on board Front panel built with high class insulated sheet Circuit & Symbol diagram printed on front panel Interconnection : 4mm banana patch cord Make-SPANCOTEK-EME-005	1	₹8,000.00	₹8,000.00
2	To Study the Characteristics of a Series RC Circuit.	Built in DC Regulated Power Supply :0-12V (Variable) Voltmeter : 0-12V (Moving Coil) Galvanometer : 1-0-1 (Moving Coil) Resistances :10K Ω ,15K Ω & 18K Ω Capacitors : 1000 μ f,2200 μ f & 4700 μ f Toggle Switch : 2way Make-SPANCOTEK-EME-008	1	₹3,000.00	₹3,000.00
3	LCR circuit Series & parallel and determine its (a) Resonant frequency, (b) Quality factor (C)Band width (d)Impedance at resonance	DC Voltmeter : 0-5V (Moving Coil) DC Ammeter : 0-25mA (Moving Coil) Resistances :100 Ω ,150 Ω & 220 Ω Capacitors : 0.1 μ f,0.2 μ f & 0.3 μ f Inductance : 50mH Independent Signal Generator -200Khz (Sine,Square) Make- SPANCOTEK-EME-009	1	₹7,000.00	₹7,000.00
GRAND TOTAL					₹3,38,300.00
GST@18%					₹60,894.00
GRAND TOTAL					₹3,99,194.00

-! List of Equipments!-

Department of chemistry Boudh Panchayat college
Boudh
CHEMISTRY

- ① Modern practical table (granite) including wash basin and bunsen burner with fittings.
- ② Visible spectrometer - model (2305) - 1
- ③ Conductivity Meter (Alpha 06) - 02 piece
- ④ Potentiometer (LT22) - 1 piece
- ⑤ Fire Extinguisher - 1 piece
- ⑥ Digital pH meter (101 & 111) - 2 piece
- ⑦ Small capillary tube - 300 nos
- ⑧ Fused tube - 300 nos
- ⑨ China disc - 100 piece
- ⑩ Mortar with pestle - 50 pairs
- ⑪ Blow pipe - 50 piece
- ⑫ Crook - 50 piece
- ⑬ Triangular file - 10 piece
- ⑭ Beaker - 200 nos.
- ⑮ Glass tube - 5 kg
- ⑯ Glass rod - 2 kg

CHEMISTRY

- (17) Test Tube - 10 BOX
- (18) Burette (BOROSIL) - 12 NOS
- (19) pipette (10ml) BOROSIL - 12 NOS
- (20) Smart Board - 1
- (21) projector - 1
- (22) Digital viscometer - 2
- (23) kipp's apparatus - 1
- (24) Double blue glass - 15 NOS.
- (25) watch glass - 50 NOS.
- (26) Test tube holder - 50 NOS.
- (27) spatula - 10 NOS.
- (28) Tongs - 20 NOS.
- (29) Funnel - 10 NOS.
- (30) Filter Stand - 10 NOS.
- (31) Tripod Stand - 10 NOS.
- (32) Glass cuvette (340 nm - 2500 nm)
Standard cell with Lid & Round bottom
VOLUME 3.5 ML / 3500 ML, path length - 10 mm
Dimension (mm) 45 X 12.5 X 12.5
For spectrophotometer, model no - 1305

Electronic
India
(EI)
Make

Department of Mathematics
Boudh Panchayat College, Boudh
List of Laboratory Equipments

Sl. No	Name of Instrument	Number of Instrument
1.	PC computer with APC	04
2.	Computer table	06
3.	Black/white 3-in-1 Printex	01
4.	whiteboard	01
5.	godrej stools	10

Zoology department equipment list

Sem-I

ZOOLOGY

- 1) Slides showing binary fission and conjugation in Paramecium
- 2) Specimen (museum) of Ctenophora
- 3) Metal quadrates
- 4) 500 ml Beaker - 3 (Borosil)
- 5) 200 ml Beaker - 3 (Borosil)
- 6) 100 ml Beaker - 3 (Borosil)
- 7) Micro pipette variable (digital) - 01
- 8) Monopan Balance (digital) - 01
- 9) TDS and salinity meter
- 10) Soil testing kit

Sem II

Barr. body slide

Sem III

- 1) Museum specimen - Ichthyophis
- 2) Hammer for reflex action - Chelone
- 3) Slides of endocrine glands

Sem IV

- 1) Disarticulated skeleton of toad, varanus, fowl & rabbit (Each 01 set)
- 2) Skull of dog - 01
- 3) ABO blood grouping chemical
- 4) Sphygmomanometer - 01

Sem-V

- 1) Slides of polytene chromosome
- 2) Slides of human karyotype (normal & abnormal)

Sem VI:-

ZOOLOGY

1) Slides on placental section

2) Fossil models

i) Different phytoplanktons and zooplanktons

ii) Secchi disc

iii) Von dom bottles

iv) conductivity meter

v) Turbidity meter

vi) PONAR grab sampler

vii) Auto analyser

viii) Projector ceiling hanging stand

List

BOTANY

- | | |
|--|--|
| 2. Lammar flow Air flow condition
unit (small) — 01 piece | 11. Slide |
| 3. Refrigerator — 01 piece | 12. cover slip |
| 4. Autoclave (Electric) — 01 piece
(24 lit) | 13. Speoran slide
of Algae, Fungi,
Bryophyte, pteridophyte,
Gymnosperm,
Fossils, Lichen. |
| 5. Digital pH metre — 01 | 14. Chromatography
Paper |
| 6. Ganong's Respirometer — 02 | 15. Ganong's potometer — 5 pc |
| 7. Microtome — 01 | 16. Wilmott's Rubbler — 5 pc |
| 8. Wooden Herbarium, etc — | 18. T/A Apparatus — 5 pc |
| 9. Hedge cutter, twig cutter | 19. Blotting paper — |
| 10. Slide Box (wooden) | |
| 11. Test tube | |

BOTANY

20. Specimen Jar - 10 PC.

21. Ocular micrometer - 1 PC

22. Stage micrometer - 1 PC