CSK HIMACHAL PRADESH KRISHIVISHVAVIDYALAYA,
COLLEGE OF BASIC SCIENCES PALAMPUR – 176062,
DEPARTMENT OF PHYSICAL SCIENCES & LANGUAGES

No.QSD.3-16/PSL-COBS/Store/- 173-83 Dated 25/6/24

To

M/S Addresses Overleaf

Subject: **Notice inviting quotations for the Physics Instruments.**

Sir,

The Department of Physical Sciences & Languages, College of Basic Sciences, CSKHPKV, intends to purchase Physics Instruments as per detail/specification given below:

Sr. No.	Name of the item	Specifications	Qty
1	Hall Effect Experiment Kit	Enclosed with in	1 No
2	Pin Diode Characteristics	Enclosed with in	1 No
3	Study of BH Curve with DEEP	Enclosed with in	1 No
4	Determine Steffen's Constant	Enclosed with in	1 No
5	Specific Heat of Solids	Enclosed with in	1 No
6	Thermal & Electrical Conductivity	Enclosed with in	1 No

In view of the above, the sealed quotations are hereby invited form the interested firms in a sealed cover, addressed to the Head, Department of Physical Sciences & Languages, College of Basic Sciences, CSKHPKV, Palampur by **15/07/2024 at 5:00PM**.

Terms & Conditions

Following Terms & Conditions must be met, else your bid will be cancelled :-

1. Warranty minimum 1 year. Bidder should quote separately for AMC charges for next 03 years.
2. The vendor should provide the satisfactory training to our technical staff after installation/commissioning. The trainer should be a permanent employee of the OE with a minimum of 3 years experience (joining proof to be attached) in demonstrating such equipments. The details about the training programs and a brief bio-data of the trainer should be submitted along with the technical bid.
3. Items of indigenous nature or quoted in INR, more than 1 authorized representative may participate in the same tender and submit their bids on behalf of their OEM/Principal/Manufacturer if the OEM permits more than one authorized bidder in such a case as per their policy.
4. The weblink of quoted products must be provided in the Technical compliance Sheet. Details of parts of the products & experiments must be mentioned on the website.
5. It is necessary to quote all the items.
6. Valid copy of Factory License, Sales Tax and Income Tax Registration Certificates, GST Certificate must be submitted by the OEM. OEM must have in house facilities of CNC Machines. An OEM must exist for the past 20 years **(Proof of the same to be attached along with the technical bid)**.
7. OEM/bidder must submit minimum 3 order copies of . 50% quoted products to State or Central University/NIT/IIT with the same detailed specification as per tender.
8. The department can ask for any technical details to ensure the equipment quality (Bidders should be present for technical presentation of the quoted items)
9. The bid will be terminated if any term & Condition is not provided by the bidder
10. If required Equipments has to be demonstrated at the college site, results should be repeatable within ±2% of the sample calculations provided.

Shanda 25/6/24
Head

Head
Deptt. Of Physical Sciences
& Languages
COBS, CSKHPKV, Palampur

Copy to:

1. The Dean, College of Basic Sciences, CSKHPKV, Palampur for information please
2. The Incharge, UNS, CSKHPKV, Palampur for uploading on the website for wider publicity.

TECHNICAL SPECIFICATIONS

Sr. No	Name & Specification
1	**Hall Effect Experiments:** Exp-1 To Determine Hall Voltage (P Or N Type). Exp-2 To Determine Hall Coefficient. Exp-3 To Determine The Type Of Charge Carrier . Exp-4 To Determine Charge Density Of Carriers. Exp-5 To Determine The Resistivity Of A Given Sample. Exp-6 To Determine The Mobility Of Charge Carriers. Exp-7 To Determine The Hall Angle . **Constant Current Source** Current Display : 0-20 Ma Dc Voltage Display : 0+200mv@0.1mv Resolution : 10 Micro Ampere Current Adjust : 10-Turns Potential Meter Power : 220v ± 10%, 50 Hz Ac Display : 3½ Digit Led Weight : 3 Kg Approx. **Power Supply** Voltage : 0-20v 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 **Hall Effect Apparatus** Coils : 500 Turns. Coil Current : 8.5amp (Max.) Connection : 4mm Safety Socket. U Core : 150x130mm2(Lxh), 40x40mm2 Cross Section. I Core : Length=150mm, 40x40mm2 Cross Section. Core Material : Ferromagnetic. Base Dimension : 360x180x33mm3 Weight : 8.8kg (Approx.) **Digital Gauss Meter** Range : 200 Gauss & 2 K Gauss Resolution : 0.1gauss At 0 - 200 Gauss Offset : By Potentiometer To Set Zero Display : 3½ Digit Led Input Voltage : 220 V, ± 5 %, 50 Hz Ac Axial Hall Probe : Inas **Ge Crystal Pcb** Crystal : Ge Wafer, P Type Crystal Size : 6x7 X 0.5mm3 (Lxwxthickness) Resistivity : 1~ 10 Ohm-Cm Orientation : <100> Offset Pot : Trim Pot Connection : 4mm Safety Socket

2	**Pin Diode Characteristics** **Experiments:** Exp-1 Bpw34 Pin Photodiode Forward And Reverse Bias Characteristics For Fixed Irradiation. Exp-2 Dependence Of Photocurrent On Light Intensity **Optical Bench** Material : Alluminium Alloy Type : Hexagonal Section Scale : 0-50cm Least Count : 1mm **Power Supply 12v Ac/Dc** Output : 2,3,4,5,6,8,10 & 12vac Full Wave Rectified, Unsmoothed & Unregulated D.C. Overload : Resettable Thermal Trip. Input : 230 V Ac,50 Hz **Power Supply 0-16v,** Voltage : 0-16 Volt Dc Continuously Variable & Stabilized Ripple : Less Than 25mv Overload Protection : Current Limiting Current : 1 Amp. Continuously Variable From 10% To Full Rating Display : Two Separate Displays(3 Digit Led) Are Provided To Monitor The Output Voltage And Load Current Continuously Working Voltage : 230v Ac, 50 Hz Single Phase **Photo Detector** Detector : Silicon Photocell Terminals : 4mm Safety Socket Aperture : 1 Mm Rod : 10 Mm Diameter **Lamp Housing** Lamp : 12v, 21v Lens : Spherical Condenser, To And Fro Adjustment Connection : 4mm Plug Lead Mounting Rod : 10mm Dia. Housing : Aluminium, Heat Ventilation Arrangement **Resistence Module** Value : 5 Ohm & 5w Terminals : 4mm Safety Socket Resistence Covered In Acrylic Body For Clear Vision.
3	**Study of B-H Curve With Deep** **Experiments:** Exp-1 To Study Bh-Curve. Exp-2 To Study Permeability Curve **Data logger & Power Unit** **Data Logger** **Specifications:**

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	Input Channels : 4, 6pin Bt (British Telecom) Input Channels Resolution : 12 Bit Adc @ 100 Ksps Analog Input : 0-5 V Output Channels : 12 Bit Dac Analog Output : ± 12 V Max 10 Ma Current Booster : Upto 1 A Power Connector : 3pin Din Communication : Usb **Power Unit** **Specifications:** Power Supply Input Voltage : 220v, 50hz Ac Power Supply Output Voltage : ± 12 V, 3pin Din **Electromagnet** Coils : 300 Turns. Wire : 19swg, Cu. Connection : 4mm Safety Socket. U Core : 150x130mm2(Lxh), 40x40mm2 Cross Section. I Core : 150mm(L), 40x40mm2 Cross Section. Point Pin : Length=90mm, Core Material : Ferromagnetic. **Voltage & Current Sensor** **Voltage Sensor** **Specifications:** Voltage Sensor : ±1v Connection Out : 4mm Safety Socket Connection In : 6pin Bt (British Telecom) **Current Sensor Cd860** **Specifications:** Current Sensor : ±1a Connection Out : 4mm Safety Socket Connection In : 6pin Bt
4	**Determine Stefan's Constant** **Exp:-** To Determine The Value Of Stefan`S Constant **Scope Of Supply** Stefan`S Apparatus Thermometers Stop Watch Sensitive Galvanometer Silver-Constantan Thermocouple Beaker 600ml Steam Generator
5	**Specific Heat Of Solids** **Steam Chamber** Inner Chamber : 100x30mm (Lxφ) Outer Chamber : 80x75mm (Lxφ) Nozzle : 30x8mm (Lxφ) Handle : L=90mm, Pvc Supplied With Rubber Stopper & Silicon Tube. **Dewar Flask** Capacity : 350ml

	Temperature : -200°C To 150°C Inner Surface : Stainless Steel Outer Surface : Stainless Steel **Digital Weighing Scale** Body : Plastic Capacity : 700g. Least Count : 0.1g. 'A' Base **Mount : Support Rod Upto 8-14mm.** Material : Cast Iron Length : 280mm **Samples** Sample : Copper, Lead & Glass Weight : 100g Each Supplied In Plastic Bottle. **Digital Thermometer** Sensor/ Input : Pt-100 Range : -50 To +199.9 C Resolution : 0.1 C Accuracy : ± 0.2 C ± 1 Digit Battery : 9v **Steam Generator** Height : 154mm Outer Dia. : 140mm Inner Dia. : 89mm Inner Height : 108mm Water Capacity : 750ml Heater Power : 220w **Beaker** Material : Borosilicate Glass Graduation : 50ml Interval Volume : 250ml **Boss Head** Object Type : Square & Round Shape Object Size : Up-To 13mm Dia Material : Aluminium Alloy Object Can Be Held Both Vertically And Horizontally.
6	**Thermal And Electrical Conductivity Of Metals With Digital Temperature Sensor** **Conductivity Rod** Rod Dimension : 435 X 25.4mm2 (Length X Diameter) Current Connection : 4mm Socket Temperature Point : 2 Nos Jacket Dimension : 350 X 50mm2 **Power Supply 0-30v** Input Voltage : 220v, ±5%, 50hz Ac Output Voltage : 0-30v Voltage Resolution : 0.1v Voltage Display : 2½ Digit Led Output Current : 0-20 Amp Current Resolution : 0.1 Amp

	Current Display : 2½ Digit Led Protection : Current-Limiter Primary Fuse : 8 Amp **Digital Weighing Scale** Body : Plastic Capacity : 700g. Least Count : 0.1g **Lower Calorimeter Vessel** Height : 170mm Outer Dia. : 160mm Inner Dia. : 105mm Inner Height : 111mm Water Capacity : 1 L **Digital Thermometer** Display : 3 ½ Digit Lcd Range : -50 To +199.90c Accuracy : +0.20c + 1 Digit Till 2000c, 10c + 1 Digit Beyond 2000c Resolution : 0.1/10c Upto +199.90c, 10c Beyond 2000c Ambient : 0 To 500c Low Battery Control : Replace 9v Battery If Lcd Shows "1" **Digital Micro Voltmeter** Operating Voltage : 230v, 50hz Operating Range : 0-20mv, 0-200mv, 0-2000mv, 0-2v Accuracy : ± 0.01mv Least Count : 0.001mv **Heat Conductive Paste** Quantity : 20mg