OFFICE OF THE DIRECTOR-PRINCIPAL
Government Hydro Engineering College Bandla, Distt. Bilaspur
Phone 01978-292326, hecbilaspur@gmail.com, https://www.ghec.ac.in

LIMITED TENDER NOTICE

(Limited tender No. GHEC/BLP/STORE/ Limited Tender / 2026

Sealed limited tenders are invited from the eligible manufacturers /firms/authorized dealers for the purchase of Lab Equipment's for M .Tech. **for** the Govt. Hydro Engg. College as per specifications given in the bid document. The bids must be accompanied with Earnest Money given as per schedule of requirements in the shape of Demand Draft or duly pledged fixed deposit receipts in favor of **Director-cum- Principal Government Hydro Engineering College Bandla, Distt. Bilaspur.**

A complete set of Bid Documents along with detailed terms and conditions can be download from the institution website (www.ghec.ac.in) or from the Office of the Director-Principal**Government Hydro Engineering College Bandla, Distt. Bilaspur-174001.**

The following procedure will be adopted:

- Tenders in a sealed cover shall comprise two separate envelopes, each envelope shall contain separately the technical bid and the financial bid. The envelopes shall be marked as **'TechnicalBid**' and **'Financial Bid'** in bold and legible letters to avoid any confusion.
- Technical Bid envelope must containTender Fee & Earnest Money in the Shape of DD drawn in favor of Director-cum-Principal Govt. Hydro Engg. College Bandla.
- Initially technical bid will be opened.
- The technical bid shall be evaluated without reference to the price and will be rejected if it does not confirm to the specific technical criteria.
- During the technical evaluation, no amendments to the technical proposal shall be permitted.
- The financial bid will be opened after the evaluation of technically qualified bidder.
- The bid found to be lowest evaluated bid shall be accepted.
- This office will not be held responsible for the postal delay, if any.
- Undersigned reserves the right to accept or reject all or any of the tenders without assigning any reason(s).

-Sd-
Director-cum-Principal
Govt. Hydro Engg. College Bandla
Distt.Bilaspur (H.P)

OFFICE OF THE DIRECTOR-PRINCIPAL
Government Hydro Engineering College Bandla, Distt. Bilaspur
01978-292326, hecbilaspur@gmail.com, https://www.ghec.ac.in

No. GHEC/BLP/STORE/ Limited Tender / 2026 Dated:

Limited Tender Document

To,

……..

……..

……

.

From:

-Sd-
Director-cum-Principal
Govt. Hydro Engg. College Bandla
Distt.Bilaspur (H.P)

OFFICE OF THE DIRECTOR-PRINCIPAL
Government Hydro Engineering College Bandla, Distt. Bilaspur
01978-292326, hecbilaspur@gmail.com, https://www.ghec.ac.in

Limited Tender Notice

No. GHEC/BLP/STORE/ Limited Tender / 2026

Limited Tender Document for the supply of Lab Equipments for M. Tech. required in Government Hydro Engineering College Bandla, Distt. Bilaspur.

Schedule

1	Limited tender for supply of	Lab Equipment's
2	Limited Tender Reference	**GHEC/BLP/STORE/ Limited Tender /2026**
3	Last date and time for receipt of tender	04.02.2026 at 12.30 Noon
4	Time and date of opening of Technical Bids	04.02.2026 at 2.00 Noon
5	Time and date of opening of Financial Bids	04.02.2026 at 02.30 PM
6	Place of opening of tender:	Office of The Director-Cum-Principal Government Hydro Engineering College BandlaDistt. Bilaspur
7	Address for communication	Office of The Director-Cum-Principal Government Hydro Engineering College BandlaDistt. Bilaspur
8	Earnest money	Rupees 30, 000/- only
9	Cost of limited tender document	Rupees 500/- only

-Sd-
Director-cum-Principal
Govt. Hydro Engg. College Bandla
Distt. Bilaspur (H.P)

SECTION-A

1. Name of the firm/Organization : ----------
2. (a) Registration No : ----------
   (b) GST No.: :……..
   (c) PAN : ……..
3. Complete Postal address : ----------
-
   : ----------
   : ----------
4. Phone No. with STD code : ----------
5. E-mail address (if any) : ----------
6. Whether Manufacturer/Dealer/Supplier : ----------
7. Detail of earnest Money Draft No. & Date : ----------
8.
   Amount : ----------
   Bank : ----------

(**Signature of the Tenderer with seal)**

SECTION-B

Schedule of Requirement

Sr. No.	Description of item(s)	Qty.
Schedule- A		
	Supply of Lab Equipment's for M. Tech. required in Government Hydro Engineering College Bandla, Distt. Bilaspur	As per list attached in section C

-Sd-
Director-cum-Principal
Govt. Hydro Engg. College Bandla
Distt. Bilaspur (H.P)

SECTION-C

DETAILED SPECIFICATION OF THE ITEMS MENTIONED IN SCHEDULE-A

S. N	Description of item		
	LIST of Machinery and Equipment required in Government Hydro Engineering College Bandla (Bilaspur)		

1	DSP TI F28379d Microcontroller	Hardware features
		• USB connected isolated XDS100v2 JTAG debug probe for real-time debug and flash programming
		• 4x 20-pin headers/connectors
		• Programmable buttons and LEDs
		• Hardware files can be found by downloading C2000Ware inside this folder: boards\LaunchPads\LAUNCHXL_F28379D
		• TMS320F28379D: 200 MHz dual C28xCPUs and dual CLAs, 1 MB Flash, 16-bit or 12-bit ADCs, comparators, 12-bit DACs, delta-sigma sinc filters, HRPWMs, eCAPs, eQEPs, CANs and more
		• C2000 Delfino™ MCU position manager-ready TMS320F28379D MCU capable of interfacing to absolute encoders as well as resolvers and SINCOS transducers
		• Supports two BoosterPack™ Plug-in Modules
		• Two encoder interface connectors
		• Isolated CAN transceiver connector
		Software features
		• Free download of Code Composer Studio™ IDE
		• Free download of C2000Ware for device drivers and example projects
		  ○ DesignDRIVE platform support
		  ○ powerSUITE software support
		• MathWorks Embedded target support
		• solidThinking Embed support	

2	LV 25p Voltage Sensors module with potentiometer	**Technology: Closed-loop (compensated) voltage transducer using the Hall effect.** **Input/Output: 10mA nominal primary current, 25mA nominal secondary current.** **Voltage Range: Suitable for 10V to 1500V (requires an external series resistor ,R1cap R sub *R*).** **Accuracy: Approximately 0.9%.** **Power Supply: $\pm$12V to $\pm$15V DC.**	

		Isolation: High galvanic isolation between primary and secondary circuits.	
3	LV 55p Current Sensors module with potentiometer	• **Technology: Closed-loop (compensated) Hall-effect.** • **Isolation: Full galvanic isolation between primary (high power) and secondary (electronic) circuits.** • **Current Range: Measures from DC up to 200 kHz, with nominal primary current typically 50A (ranges up to ±70A or more).** • **Accuracy: High accuracy, often around 0.65%.** • **Output: Analog voltage or current output (e.g., 1:1000 ratio, 50mA nominal secondary current).** • **Mounting: Designed for Printed Circuit Board (PCB) mounting.**	
4	Three-phase IGBT educational inverter SEMITEACH 08753450CA	**Key Components & Features:** • **Three-Phase IGBT Inverter: The core of the system, using Insulated Gate Bipolar Transistors (IGBTs) for switching.** • **Rectifier: Converts AC input to DC.** • **Energy Recovery Chopper: Allows for regenerative braking or energy storage.** • **Educational Focus: Designed for practical learning in power electronics, likely covering motor drives and power conversion.** **Technical Specifications (Example from Datasheet 08753450):** • **Max Output Voltage: 400 VAC.** • **Max DC Bus Voltage: 750 VDC.** • **Max Output Current: 30 ARMS.** • **Max Switching Frequency (fSW): 50 kHz.** • **Max Output Frequency (fOUT): 500 Hz.** **Purpose:** **This system provides a platform to study and experiment with three-phase power electronics, including:** • **Voltage and current characteristics of IGBTs.** • **Pulse Width Modulation (PWM) for inverters.** • **Rectification and inversion processes.**	
5	PCB Board		
6	DC Capacitors	**{ 100µF/450V, 12µF/250V, 12µF/450 V, 250µF/450, 1µF Film capacitor, 6 microfard film capacitor, 12 microfarad film capacitor, 100µF/250V, 10µF/100V, 50µF/450, 56µF/150V, 10µF/150V, 6µF/150V} -)-**	
7	IGBT Gate Driver	**Key Components & Features**	

	Evaluation Platform for 3-Phase Inverter System	- **IGBTs/MOSFETs:** The power switches, often 1200V IGBT modules or discrete MOSFETs, forming the inverter bridge. - **Gate Driver ICs:** Isolated drivers with features like high/low-side driving, bootstrap, Miller Clamp, and protection (DESAT). - **Power Stage:** The complete 3-phase bridge, including input rectification, DC-link capacitors, and EMI filtering. - **Control Interface:** Connectors for PWM signals from a microcontroller (MCU) for control algorithms like FOC. - **Protection:** Overcurrent (OCP), DC-link voltage monitoring, thermal sensing, and sometimes Safe Torque Off (STO). - **Sensing:** Emitter shunts or current sense amplifiers (e.g., AMC1301) for feedback. -	
8	Ferrite Core E	○ **Core Material:** MnZn or NiZn ferrites, often in PC40 grade, are used for high permeability and low core losses at high frequencies. ○ **Structure:** E-cores (E-E or E-I combinations) allow for easy winding and, when combined with a push-pull topology, provide efficient, isolated DC-DC conversion to generate +15V/-8V or similar gate driving voltages.	
9	Gate Driver Module IRF520	1. Voltage: 3.3 – 5V. 2. Ports: Digital Level. 3. Output load voltage: 0-24 V. 4. Output load current: <5A (1A above need to add heat sink). 5. Platform: Arduino, MCU, ARM, raspberry pi. 6. Using original IRF520 Power MOS, you can adjust the output PWM	
10	Advance Electric Two Wheeler Powertrain Demonstration Bench	• **Powertrain Components:** The bench typically includes a functional, open-chassis setup featuring a Brushless DC (BLDC) hub motor or mid-drive motor, motor controller (inverter), Li-ion or LFP battery pack (e.g., 48V/60V), battery management system (BMS), DC-DC converter, and throttle. • **Load Simulation:** Equipped with a load roller or magnetic particle brake to simulate real-world road conditions like inclination and varying loads for performance testing. • **Diagnostic Tools:** Integrated with advanced instrumentation, such as oscilloscopes, CAN analyzers, and data acquisition systems, to monitor voltage, current, power, and efficiency. • **Safety Features:** Designed with safety in mind, featuring emergency	

		stops, circuit breakers, and, in advanced models, IoT-based RFID/password protection for secure access.	
11	Battery Charging and Discharging Machine	• **Voltage/Current:** Specify ranges (e.g., 9V-99V, 0.5-40A) for both charging and discharging, with high accuracy (e.g., ±0.03V/A). • **Battery Compatibility:** Lithium-ion, Lead-Acid, LiFePO4, etc., often with support for various pack configurations. • **Functions:** Charge (CC/CV), Discharge (CC), Auto Cycle, Data Analysis, Pulse Repair, Capacity Testing, Formation. • **Control & Interface:** LCD screen, buttons, PC software (TCP/IP, LAN), data export to Excel. • **Safety Features:** Over-temperature, over-voltage, reverse polarity, short-circuit protection, power-down memory. • **Channels:** Single channel for lab use or multi-channel (8, 128, 512+) for mass production/testing. • **Data Logging:** Real-time monitoring, interval recording (time, voltage, current), data export.	
12	Battery Equalizer	Applicable Battery Type 2V/3V/6V/9V/12V all kinds of lithium and lead acid batteries Cable Length 50cm(default).can be customized Terminal 1.25-8 type, can be customized Protection Reverse polarity protection Working Temperature -40℃-80℃	
13	Lithium Cell IR Machine	**Key Measurement Parameters** • **Resistance Range:** Typically 0.1mΩ to 200mΩ (or higher for larger cells/packs). • **Resistance Accuracy:** ±0.5% or better. • **Voltage Range:** e.g., 0-20V DC or up to 100V (model dependent). • **Voltage Accuracy:** ±0.5mV or better. • **Test Frequency:** Usually 1kHz AC signal. • **Test Current:** Varies by resistance range (e.g., 50mA for 20mΩ range, 0.5mA for 20Ω). **Performance & Features** • **Test Speed:** Very fast, often <20ms per cell for automation. • **Display:** Digital LCD or LED for simultaneous OCV (Open Circuit Voltage) & IR display. • **Connectivity:** RS232, USB for data logging and integration into sorting systems. • **Kelvin 4-Wire:** Ensures high-accuracy measurement by separating current/voltage leads. • **Auto-Zero & Calibration:** Maintains accuracy over time. **Physical & Power**	

		• **Power Supply:** AC 220V, 50/60Hz common.	
14	DM series Module Gate driver Circuit	Input voltage (Vin) 4.5-V – 70-V DC (100-V transient) Output voltage (Vout) +15 V -8 V Output ripple ± 3% Maximum output current (Iout_max) 180 mA Switching frequency 90% peak, 88% at full load	
15	Lithium Cells)	18650, 3.7V, 2600mAh	
16	AC/DC Current Probe	Max current: 100 A, Min Current: 50m A, Max Rms Current: 71 A, 300 kHz, below 2% accuracy	
17	3 Pin Connectors	(300V, 10A----20 quantity), (300V, 24A------20 Quantiy), (500V, 30A------ 20Quantity), (500Vv, 50A------20 Quantity), (500V, 70A------10 Quantity), (500V, 100A------10 Quantity)	
18	High Voltage differential Probe	7000Vp-p/100 MHz	

-Sd-
Director-cum-Principal
Govt. Hydro Engg. College Bandla
Distt.Bilaspur (H.P)

SECTION-D

PRICE SCHEDULE

S. No.	Name of Equipment (Brief Specifications)	Qty	Price (Incl. GST)
1	DSP TI F28379d Microcontroller	3	
2	LV 25p Voltage Sensors module with potentiometer	10	
3	LV 55p Current Sensors module with potentiometer	10	
4	Three-phase IGBT educational inverter SEMITEACH 08753450CA	2	
5	PCB Board	2	
6	DC Capacitors ({ 100µF/450V, 12µF/250V, 12µF/450 V, 250µF/450, 1µF Film capacitor, 6 microfard film capacitor, 12 microfarad film capacitor, 100µF/250V, 10µF/100V, 50µF/450, 56µF/150V, 10µF/150V, 6µF/150V} -30 quantity each)	390	
7	IGBT Gate Driver Evaluation Platform for 3-Phase Inverter System	2	
8	Ferrite Core E	5	
9	Gate Driver Module IRF520	4	
10	Advance Electric Two Wheeler Powertrain Demonstration Bench	1	
11	Battery Charging and Discharging Machine	1	
12	Battery Equalizer	1	
13	Lithium Cell IR Machine	1	
14	DM series Module Gate driver Circuit	2	
15	Lithium Cells (18650, 3.7 V, 2600mAh)	10	
16	AC/DC Current Probe: Max current: 100 A, Min Current: 50m A, Max Rms Current: 71 A, 300 kHz, below 2% accuracy	1	
17	3 Pin Connectors (300V, 10A----20 quantity), (300V, 24A------20 Quantiy), (500V, 30A------20Quantity), (500V, 50A------20 Quantity), (500V, 70A------10 Quantity), (500v, 100A------10 Quantity)	100	
18	High Voltage differential Probe : 7000Vp-p/100 MHz	1	

Total Bid Price (Including Taxes in Rs) _____

(In words)_____

Date _____

Place_____

(Signature of the bidder with seal)

Name and Address----------

TERMS AND CONDITIONS

1. Bidders are required to submit the copy of Registration clearly mentioning the period of validity. Any firm failing to submit the same will not be entertained.
2. Rate has to be quoted for complete set (including all sub-parts/accessories, if any) of items to be supplied. Bidder quoting the lowest rate for complete set shall only be considered fulfilling all other requisite conditions.
3. The quantity demanded may be changed < or > 10 %.
4. The bidder shall also submit the proof that it is GST payee. The attested photocopy of the same is required to be submitted along with the bid document.
5. The rates quoted should be for destination at Govt. Hydro Engineering College, BandlaDistt. Bilaspur. The rates must also include delivery charges.
6. Standard GST rates are applicable, if any.
7. The duly constituted College Committee shall inspect all the items to satisfy itself for verifying specifications as mentioned in bid document.
8. The supplier shall be required to complete the delivery at college (including inspection) within stipulated days as mentioned in the supply order.
9. The items/equipments shall remain under Guarantee/Warranty by the supplier.
10. 100% payment will be made after receipt of items inspected/accepted by store duly supported with satisfactory inspection note at consignee site/destination. In case at any moment it is found that bidder is not providing quality goods to the institution, the tender will stand cancelled by the institution. The tendrer will not have any right to continue thereafter.
11. Successful bidder has to give the Bank Account Detail such as account name, number, IFSC code of bank, bank name, branch and PAN. Also provide AADHAR number in case the account is on the name of other person. Payment will be directly paid to account holder by Govt. treasury after completing all the required formalities.
12. Earnest money as mentioned in the document shall be required to be paid by the tenderer along with the tender document in shape of demand draft in favor of the Director-cum-Principal, Govt. Hydro Engineering College Bandla (Bilaspur).
13. The earnest money of the bidders whose tender/quotation has not been approved/qualify would be returned after award of contract whereas the earnest money of the successful bidder will be treated as performance security& returned after the final payment of bill.
14. The tenders/quotation not confirming to the specifications/descriptions mentioned in bid schedule will be summarily rejected.
15. If the date of accepting/opening the tenders/quotation happens to be holiday, the tenders will be opened on the next day at the same time.
16. Telegraphic, Fax, Conditional and tenders without earnest money shall not be accepted.
17. Govt. Hydro Engineering College Bandla (Bilaspur) reserves the right to accept or reject any or all tenders without assigning any reason.
18. The bidders shall keep their offer open for 6 months from the date of opening the tenders. A bid valid for shorter period may be rejected by the purchaser as non-responsive.
19. The Principal may appoint a “Negotiation Committee” if required.
20. The bidder will be responsible for damage or loss in transit and replace items/ goods broken within 10 days from the date of notice thereof.

21. GST rates shall be indicated separately otherwise rates will be deemed to be inclusive of such levies and taxes and no future increase in duty/taxes/GST will be allowed.

22. In case where it has not been specifically indicated in the schedule that only manufacturer can participate in tenders/quotations, in such cases the tenderers other than manufacturers should attach authorization letter from such principal manufacturer along with the tender/quotation.

23. The tender form along with the earnest money and forwarding letter on Letter Head Pad of the firm should be sent through Regd. Post/Speed Post/By Hand well in advance so as to reach to the office of Director-cum-Principal, Govt. Hydro Engineering College BandlaBilaspuri.e**04.02.2026 up to 12:30 PM.** The offer should be sent in a sealed envelope clearly indicating on the top the tender number, due date and the category of items.

24. All the bidders are required to sign each paper of the bid document along with the stamp of their respective organization. Without signature and stamp the tender submitted by them are likable for rejection.

25. The bidder has to quote for all the items of respective schedule failing which the tender/quotation may be rejected.

26. All the disputes shall be settled with in the jurisdiction ofDistt. Bilaspur H.P.

27. The earnest money deposited by the tenderers shall be forfeited in the following events:

    i) A modification or withdrawal of tender after the deadline of submission of tenders and during the validity period.

    ii) Refusal by the tenderer to accept an arithmetical error or otherwise appearing on the face of the tender.

    iii) Failure on the part of the successful tenderer to provide performance security for the execution of the contract.

    iv) Failure on the part of the successful tenderer to execute the contract as per terms and conditions of the tender.

28. The purchaser may, at its discretion, extend deadline for the submission of bids by amending the bidding documents, in which case all rights and obligations of the purchasers and bidders previously subject to the deadline will thereafter be subjected to the deadline as extended.

29. The purchaser has the right to ask the supplier(s) to produce the sample of the item(s) for the purpose of comparison of prices and to evaluate technically before placing supply order to the firm.

30. The purchaser or its representative shall have right to inspect or test the goods to confirm their conformity to the contract. The inspection and tests may be conducted on the premises of the supply at his costs.

31. The purchaser reserves the right to increase or decrease the quantity of goods to be procured within a period of six months after issuance of tender.

32. An excused delay by the supplier in the performance of its delivery obligations shall rendered the supplier to termination of the contract for default.

33. Earnest money shall be deposited by the tenderer /bidder with tender documents through demand draft in favour of the Director-cum-**Principal, Govt. Hydro Engg. College Bandla, Distt. bilaspur.** Payable at **Bilaspur**

34. The cost of tender document i.e. Rs. 500/= (non-refundable) shall be required to be paid by the bidder preferably through demand draft in favour of the Director-cum-**Principal, Govt. Hydro Engg. College Bandla, Distt. Bilaspur.** Payable at **Bilaspur.**

I/We herewith enclose a sum of Rs. _____ as earnest money (EMD) in form of demand draft or equivalent and should I/We fail to execute an agreement embodying the above mentioned terms and conditions agree that the above sum as EMD shall be forfeited to the Director-cum-Principal, Govt. Hydro Engineering College Bandla (Bilaspur).

ALL THE ABOVE TERMS & CONDITIONS ARE ACCEPTABLE TO US

For (authorized Signatory)

Name of the Firm:_____

Complete Address:_____

Seal Stamp