

	<b>Central University of Himachal Pradesh</b> (Established under Central Universities Act 2009)
<b>Tender No. 17 /2014/CUHP/NIT</b>	<b>Dated: 27.11.2014</b>
<b>Notice Inviting Tender</b>	
<p>Sealed Tenders consisting of Technical and Financial Bids (Two Bids put in separate envelopes) are invited for supply &amp; installation of :</p> <p>➤ <b>24 Channel Engineering Seismograph with 4.5 and 14 Hz Geophones and data recorder.</b></p> <p>Tender form along with Specifications and Terms &amp; Conditions can be downloaded from the University website: <a href="http://www.cuhimachal.ac.in">www.cuhimachal.ac.in</a>.</p> <p>Interested/eligible parties may submit their tenders in the prescribed format along with Demand Draft amounting to Rs.500/- as processing fees and EMD as stipulated in Tender Document by <b>12.01.2015 (3.00 PM)</b>. The tenders shall be opened on the date, place and time mentioned in the Tender document.</p>	
<b>FINANCE OFFICER</b>	
<small>Camp Office, Dharamshala, District Kangra, Himachal Pradesh – 176215, E-mail : brdhiran1955@gmail.com, Phone No. 01892-229330, 229573, Fax No. 01892-229331</small>	

**TENDER DOCUMENT  
FOR  
SUPPLY & INSTALLATION OF**

**24 channel Engineering Seismograph  
with 4.5 and 14 Hz Geophones and data recorder**

**FOR  
Sponsored project under Ministry of Earth Sciences  
Department of ENVIRONMENTAL SCIENCES  
SCHOOL OF EARTH & ENVIRONMENTAL SCIENCE,  
CUHP, SHAHPUR**



<b>REFERENCE NO.</b>	:	17/2014/CUHP/NIT
<b>DATE OF ISSUE OF TENDER</b>	:	27.11.2014
<b>LAST DATE FOR RECEIPT OF TENDER DOCUMENT</b>	:	12.01.2015(3.00 PM)
<b>TIME AND DATE FOR OPENING OF THE TENDER (Technical bid)</b>	:	12.01.2015 (3.30 PM)

**SIGNATURE OF THE QUOTEE  
WITH SEAL**



# हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

## Central University of Himachal Pradesh

PO Box: 21, DHARAMSHALA, DISTRICT KANGRA, HIMACHAL PRADESH – 176215  
PHONE No.01892-229330, 229573, FAX No.01892-229331

Web site: [www.cuhimachal.ac.in](http://www.cuhimachal.ac.in)

### **NOTICE INVITING TENDER FOR SUPPLY & INSTALLATION OF 24 channel Engineering Seismograph with 4.5 and 14 Hz Geophones and data recorder Sponsored project under Ministry of Earth Sciences, Department of ENVIRONMENTAL SCIENCE, SCHOOL OF EARTH & ENVIRONMENTAL SCIENCE, CUHP, SHAHPUR, DISTRICT KANGRA (HP)**

The sealed tenders / proposals under two bid pattern are hereby invited from the Reputed International/National Manufactures or their authorized Indian Agents /Dealers/ suppliers in the prescribed non-transferable Tender Forms for **supply & installation of 24 channel Engineering Seismograph with 4.5 and 14 Hz Geophones and data recorder** required under **Sponsored project under Ministry of Earth Sciences at Department of Environmental Science, School of Earth & Environmental Sciences, CUHP, Shahpur, District Kangra (HP)**. The eligible and interested parties may send their Tenders/proposals on the prescribed application form **as per ANNEXURE – I (Technical Bid)** along with the quoted rates as per **Annexure – II (Financial Bid)** with a non-refundable processing fees of ₹ 500/- in shape of Bank Demand Draft in favour of Finance Officer and Earnest Money of ₹ 1,00,000.00 (Rupees One lakh only) **in the shape of Account Payee Bank Draft or F.D.R duly pledged in the name of Finance Officer, Central University of Himachal Pradesh, Dharamshala or a Bank Guarantee (Annexure III), for equal amount furnished on prescribed Performa, from any commercial bank. The tenders received without processing fee and EMD will be rejected straight way.**

#### **Submission of Bids.**

**The documents should be enclosed in separate envelopes of appropriate size each of which should be sealed.**

- a) **ENVELOPE NO. 1:** Should contain (i) covering letter (ii) Technical Bid (**Annexure - I**) duly signed and stamped and (iii) Requisite Fee (Processing fee and Earnest Money).
- b) **ENVELOPE NO. 2:** Should contain the Financial Bid duly signed, stamped and super-scribed as “Financial Bid Annexure – 2”.
- c) **ENVELOPE NO. 3:** Should contain Envelope 1 and 2.

Note: EMD and processing fee should not be mixed in one bank draft/ FDR i.e. Demand draft for Processing fee and Demand Draft /FDR/Bank Guarantee for EMD should be prepared separately.

The inner and outer envelopes should be addressed to **The Dean, School of Earth & Environmental Sciences**, Temporary Academic Block, Central University of Himachal Pradesh, Shahpur , District – Kangra, H.P – 176206 (India) and should clearly mention “**Tender for supply & installation of 24 channel Engineering Seismograph with 4.5 and 14 Hz Geophones and data recorder**” required under **Sponsored project under Ministry of Earth Sciences at Department of Environmental Science, School of Earth & Environmental Sciences, CUHP, Shahpur, District Kangra (HP)**. The inner envelopes should also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared late. If the outer envelope is not sealed and marked as required, the University will bear no responsibility for the bids misplaced or premature opening. All Tenders/proposals should be made in English and rates to be quoted should be written in both figures and words. **Tender documents can be downloaded from the website (<http://www.cuhimachal.ac.in>) of the Institute.**

Firms/Dealers interested to participate can view the complete set of tender documents and read the tender document along with specifications of the instrument carefully and ensure compliance with all specifications/instructions herein. Non-compliance with specifications/instructions in this document may disqualify the bidders from the tender exercise.

**Any subsequent amendment/modification /corrigendum, if any, will be uploaded only on the website.**

The Central University of Himachal Pradesh, reserves the right to select the item (in single or multiple units) or to reject any quotation wholly or partly without assigning any reason.

The Tenders complete in all respects must be submitted in sealed envelopes which must be either delivered by hand or sent by registered mail, speed post or courier to **The Dean, School of Earth & Environmental Sciences**, Central University of Himachal Pradesh, on the below given address, super-scribing on the envelop “Tender for supply & installation of 24 channel Engineering Seismograph with 4.5 and 14 Hz Geophones and data recorder” so as to reach not later than **3:00 P. M. on 12.01.2015**. The University in no case will be held responsible for late delivery or loss of the documents so mailed. All the documents received after this specified date and time shall not be considered. The postal address is:

**Principal Investigator and the Dean,  
School of Earth & Environmental Sciences,  
Central University of Himachal Pradesh,  
Temporary Academic Block, Shahpur- 176206,  
Kangra (HP)**

The Tenders and the Technical Bids will be opened in the office of **The Dean, School of Earth & Environmental Sciences**, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur-176206, Kangra (HP) on **12.01.2015** at **03.30 PM** in the presence of all the tenderers or their authorized representatives with valid ID proof that they represent the respective firm. The bidders or their authorized representative may also be present during the opening of the Technical Bid, if they desire so, at their own expenses.

The Financial bid of only those bidders will be opened whose technical bids are found suitable by the committee appointed for the purpose. Information in this regard will be intimated by e-mail to each tenderer (firm). In exceptional situation, an authorized committee may negotiate price with the qualified bidder quoting the lowest price before awarding the contract. The tenderers/firms who will qualify in the Technical Bid are requested to present personally or send authorized person during opening the Financial Bid.

#### **Clarification:**

In case any tenderer/bidder requires any clarification regarding the tender document, they may contact **Prof. Ambrish Kumar Mahajan**, Dean, School of Earth & Environmental Sciences, Central University of Himachal Pradesh, Temporary Academic Block, Shahpur District Kangra (H.P.), (**Contact No. 094186-48086**), **email address is: [akmahajan@rediffmail.com](mailto:akmahajan@rediffmail.com)**

## GENERAL DECLARATION FORM FOR SUPPLIERS

1. Name and status of the Company :

MANUFACTURER:

EXCLUSIVE AGENT:

AUTHORISED DEALER:

2. Full address and Telephone / Fax no. :

3. Certificate showing the status of the Supplier (Exclusive Agent/Dealer):

4. Income Tax and Sales Tax clearance certificate for last 3 years: Price of equipment (Inclusive of installation, custom clearance and delivery):

(a) F.O.B.

(b) Freight and Insurance

6. List of current users in and around in Himachal Pradesh:

7. Details of after sales service: Warranty period:

I / We hereby certify that my / our firm has not been disqualified by any office / Dept. of Central Government / State Governments, Undertakings of Government of India/ State Governments / Government of Himachal Pradesh at any time.

Date:

Signature of Authorized Person

Place:

Designation

Seal of Authentication

### Format of Warranty Clause

1. The supplier warrants that the goods supplied under this contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and material unless provided otherwise in the contract. The supplier further warrants that Goods supplied under this contract shall have no defect, arising from design, materials and workmanship or from any act of omission of the supplier that may develop under normal use of the supplied Goods in condition prevailing in this country.
2. This warranty shall remain valid for minimum 12 months after the Goods have been delivered / installed or 18 months after the shipment from the port of source country, whichever period concludes earlier.
3. The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
4. Upon receipt of such notice the supplier shall within a short period of time and with all reasonable speed, repair or replace the defective Goods or parts thereof, without any cost to the purchaser.
5. If the supplier, having been notified, fails to rectify the defect(s) within a reasonable period, the purchaser may proceed to take such remedial action as may be necessary at the supplier's risk and expense.

Date:

Signature of Authorised Person

Place:

Designation

Seal of Authentication

### Points to be noted

1. Before receiving the order, the current photocopies of the Income Tax, Sales Tax and Professional Tax clearance certificates have to be submitted. The supplier / firm should be liable to submit the proof of the above clearance certificates, if called for by the University.
2. No advance payment will be made to the successful tenderers.
3. Customs clearance procedures charges and transportation procedures charges will have to be borne by the supplier/agency and no such charges will be paid by the University. The equipment will have to be delivered within a stipulated period of time.
4. With regard to interpretation of terms and conditions, the decision of University shall be final and binding to the agency. University reserves the right to accept or reject any or all quotations without assigning any reason.

### CONTRACT AGREEMENT

(To be signed by the finalized bidder before rendering services to the University, on a non-judicial stamp paper of Rs.100/-)

AGREEMENT BETWEEN the Central University of Himachal Pradesh, India and M/S -----  
(Foreign Manufacturer)

1. This agreement made on this day of \_\_\_\_\_ amongst M/s -----, India (Supplier/Beneficiary), (here in after referred as Party 2) and M/s -----(Foreign Manufacturer) (here in after referred as Party 3) which expression shall, unless excluded by or repugnant to the subject or context, include their successors, representatives, heirs, executors and administrators) on the one part and the Central University of Himachal Pradesh, Dharamsala District Kangra, Himachal Pradesh, (India) ,(here in after called Party 1) on the other part.
2. Whereas Party1 has placed an order to party 3 through their Indian supplier Party 2 vide buyers order No. ----- Dated ----- for ----- number of ----- along with accessories. Party 2 and Party 3 have agreed to sell/supply, install, commission and maintain the system/equipment at Temporary Academic Block, University of Himachal Pradesh Shahpur. Distt. Kangra Himachal Pradesh-176206 (India).
3. Party 2, Party 3 and Party 1 hereby further agree that the said order together with the schedule(s) instructions and all special conditions shall be deemed to form part of this agreement as though separately set out herein and are included in the expression contract whenever used in the connection with the said order.

#### **4. DELIVERY / INSURANCE.**

- a) Delivery of the system will be within 45 days from the date of receipt of acceptable letter of Credit by Party 3. Extension under any circumstances will not be considered. Any cost escalation due to delay on account of default by Party 2 and Part 3 will be on the account of Party 2 and Party 3.
- b) That Party 2 and Party 3 shall replace any part or even the whole part of the system as may be necessary, if found damaged on arrival at site or during installation of the system or if found not conforming to the specifications as described in Annexure –IV at their own cost.
- c) The equipment shall be insured up to site of Party 1 by Party 3 for full CIF Value up Temporary Academic Block, University of Himachal Pradesh Shahpur. Distt. Kangra Himachal Pradesh-176206 (India).

#### **5. CUSTOM CLEARANCE**

Customs clearing procedures & charges shall be borne by Party 2 and also transportation procedures & charges shall be undertaken by Party 2 under their responsibility and for which no additional payment will be made by Party 1. For Custom clearance certificate Party 2&3 should approach Party 1 (CUHP) **20days** in advance.

## 6. PRICE/PAYMENT TERMS

- a) The Total Price of ----- with accessories is -----\$/Euro/Yen etc. (in words and figures) which is CIF value,  
The payment for the imported goods shall be made through a confirmed, irrevocable letter of credit/sight draft to M/s -----, the Principal (Party 3) and the payment for local items and service shall be made through irrevocable letter of credit / bank draft etc to----- (Party 2) and the payment of service charges shall be payable in Indian Rupees through bank draft etc. in favour of M/s ----- . The actual custom duty and any increase in actual custom duty applicable at the time of clearance will be due to the account of Party 1.

The release of the payment will be in the following way:

- (i) Advance Payment: Nil.
- (ii) On delivery, Eighty percent (80%) of the contract price shall be paid on receipt and installation of Equipment and upon submission of the documents.
- (iii) On Final Acceptance: The remaining twenty percent (20%) of the contract price shall be paid to the supplier after adjudging the working of the equipment for three months.
- b) Installation and commissioning of the ----- is free of charge and installation would be carried out by M/s -----
- c) Maintenance of the system including all the spare parts required during the warranty period of ----- year for the main system from the date of installation and successful operation of the unit will be at the cost of Party 2 and Part 3. Party 3 will provide spare parts.
- d) The import license, permanent account number and any other necessary documents required for custom clearance will be provided well in advance by Party 1
- e) Party 1 will provide way bill if necessary.

## 7. INSTALLATION

Party 2 and Party 3 shall demonstrate, conduct and trial run to establish successful performance and handing over of the said equipment in satisfactory working condition within a period of 90 days from the date of delivery of the equipment at site of Party 1.

N.B: All the prerequisites for installations including site have to be made ready to avoid any delay in installation after arrival of consignment by Party1.

## 8. BIDDERS WARRANTY / SERVICE

- a) The Party 2 and Party 3 have agreed that the system ----- shall remain under warranty for a period of 12 months from the date of installation, acceptance and commissioning OR 15 months from date of shipment whichever occurs earlier.
- b) Party 1 will provide duty exemption certificate in connection with the import of any replacements.
- c) In case of detection of any fault in the **three** working days and take appropriate measures to rectify the problem.
- d) In the event of any correction of defects or replacements of defective materials during the warranty period, the warranty for the corrected replaced material shall be extended to a further period of 12 months and the performance bank guarantee for the proportionate value shall be extended 60 days over and above the extended warranty period. The time taken to repair the instrument within the warranty period will be added to the present warranty period and will be extended accordingly.

9. (a) The guarantee is subject to the agreement by Party 1 that no alteration / repair is carried out to the equipment by any person other than an authorized representative of Party 2 and Party 3.

(b) In the event the equipment so supplied does not produce expected result (as per offered specification) in spite of its maintenance by Party 2 and Party 3 as agreed during its guaranty period or warranty period the said equipment will be made fully functional to the satisfaction of Party 1 by Party 2 without charging any additional cost and / or purchase price including installation charges. Custom Duty exemption certificate should be provided for replacement if any.

10. The terms of tender which have not been mentioned in the contract shall also apply and form part of the contract for all the intents and purposes.

11. That in case of contractor withdraws from the contract within the stipulated period of contract, the CUHP shall forfeit the security amount without any refund and further the contractor shall be liable to pay a sum of Rs.5 lakhs (Five lakhs) to CUHP.

12. That in case of any loss suffered by CUHP or the violation of the terms and conditions of contract, the CUHP shall have the right to deduct all claims against contractor for the security and CUHP shall have the right to forfeit and deduct the claim amount from the security amount partly or entirely as per the claim.

### **DETAILED TERMS AND CONDITION**

1. All rates quoted should be F.O.R destination and should be net i.e. including packing weighing, insurance and forwarding charges. The sales tax will however be extra in case quoted by the supplier.
2. Sample wherever required shall be submitted by the Firms duly signed/stamped/tagged indicating specifications, make/brand so as to reach this office by the date and time fixed for opening of tender. Samples should be sent against pre-paid RRs/G.T.R.S. 'To-pay consignments' will not be entertained and sample will remain undelivered with railway authorities and transport companies at the risk of the Firm.
3. In case where full specifications are not incorporated or where specifications are such that the supplier cannot quote for, the supplier's own specifications should be stated in full for the articles quoted for. Any illustrative literature available, duly stamped and signed, should also accompany.
4. In all cases the country of manufacturers/particulars of manufacturer and unit of measurement etc., must prominently be stated. The unit should usually be the one stated in the inquiry.
5. All containers, packing cases, bags etc. will be deemed to be non-returnable unless specifically stated otherwise in the tender.
6. The area of supply is throughout Himachal Pradesh where the activities of the University are located and the suppliers shall have to execute each order placed by any of indenting officers of the University individually, irrespective of its quantity/numbers.
7. All supplies should be made within a fortnight of supply order or **by the date stated in the order whichever is earlier**. In case it is brought to the notice of the undersigned that the supply has not been made within the prescribed period, the tender will be cancelled and earnest money will be forfeited. The University shall then be at liberty to make the purchase from any other source at supplier's risk and the University shall be free to blacklist the firm/suppliers.
8. No price increase will be allowed during the currency of the contract and rates approved shall remain in force during the currency of the rate contract.
9. The quantity of supply can be increased or decreased at the discretion of the University.
10. (i) The authorized dealers/suppliers once notified by the manufacturer/proprietors shall not be allowed to be changed in between the period of contract.
10. (ii) Sufficient number of samples according to the approved pattern for supply to each of the INDENTING OFFICER and two spares will have to be supplied and got approved if considered necessary by this office.
10. (iii) The inspection of goods will be carried out by the consignee at the destination and rejected goods will have to be removed by the party at its own cost within 10 days of dispatch of advice from the indenting office failing which the goods will be at supplier's risk which may be disposed of by the University by public auction, if so considered.
11. (i) The rejected goods will have to be replaced within 15 days of the dispatch by the Indenting Officer's registered notice intimating that the goods have been rejected, failing which



the Indenting Officer will be entitled to make purchases at the risk and cost of the Contractor/Firms without any further reference to them.

11. (ii) If the supplier claims that the goods supplied by him/them are strictly according to the approved samples/specifications, he may file an appeal to the Vice-Chancellor of the University within five days of the receipt of the Registered Notice from the Indenting Officer/Consignee. Where such appeals have been filed, the Indenting Officer /Consignee will hold the goods with him till the final decision of the Vice-Chancellor.
12. **All quotations/Tenders should be accompanied with an earnest money amounting to ₹1,00,000/- (Rupees One lakh only) in the shape of Account Payee Bank Draft or F.D.R duly pledged in the name of Central University of Himachal Pradesh, Dharamshala or a Bank Guarantee for equal amount furnished on prescribed Performa, from any commercial bank.** The EMD shall be returned in case the offer of bid is not accepted by the University.
13. The supply must be completed satisfactorily within the stipulated period failing which the Indenting Officer concerned will have the right to purchase or allow to purchase the goods at supplier's risk, provided that where goods are not supplied according to the specifications and on account of urgency of the demand, the Indenting Officer decides to retain the inferior goods, the supplier will be entitled to receive payment not at the contract rate but at the rate fixed by the University with due regard to the quality of the material supplied.
14. The quotations may be accepted in part or whole.
15. **The University reserves the right to enter into parallel contract with two or more firms and to enter into negotiation with the concerned firm and to accept or reject any tender without assigning any reason, if so required.**
16. The rates and units shall not be over written, amount shall be both in figures and words. All corrections must be signed in full by the Firm.
17. In case of goods controlled by the Government, the quotations must be sent subject to the control rates and the other conditions and supplier will be paid at the controlled rate or on the rate offered by the supplier whichever is lower.
18. Any dispute arising out of the deal shall be subject to the decision of the Vice-Chancellor of the University whose decision shall be final. Settlement of all disputes will be made within the jurisdiction of Central University of Himachal Pradesh at Dharamshala.
19. **The University reserves the right to accept or reject any/all the tender without assigning any reason**
20.
  - i. A tenderer shall have the right to be heard in case, it is felt that proper procurement process is not being followed and /or its tender has been rejected wrongly.
  - ii. The tenderer may be permitted to send written representation which may be examined by the Finance Officer or an Officer to be designated by the Vice Chancellor.
  - iii. The tenderer could make such representation within one month from the date of placement of contract and the said representation shall be decided /replied within one month from the date of its receipt.
21. The signature on the tender/quotations and samples etc. sent therewith will be deemed to be the authorized signature of the Firm.
22. The tenders received **after due date or without the earnest money and processing fee or without samples wherever required shall stand cancelled.**
23. In case it is agreed by the University and is incorporated as a conditions of the contract, to accept supply through bank, the bank charges accruing thereon, shall be borne by the supplier. No request and or payment above 75% through bank shall normally be accepted. However, in special circumstances depending upon the merit of the case and or credibility of the tender, the payment up to 90% through bank will be considered at the time of purchase of the material
24. **Any term/condition given by the supplier/firm, in contravention to the terms contained in the tender shall not be acceptable and shall be treated as null and void.**
25. In the event of tender, being accepted, the quotations will be converted into a contract which will be governed by these terms and conditions.

26. The above conditions will be enforced unless written order of the Controlling Officer/Competent authority is obtained relaxing any specific condition in any particular instance.
27. The tender not strictly in accordance with the above conditions are liable to be rejected.
28. The tender shall be on the prescribed tender Form. The rates should be quoted against each item in the tender form. The special terms, if any, should be added on a separate sheet with tender.
29. The successful Firms will have to execute an agreement on the non-judicial paper of the value of Rs. 100.00 (specimen enclosed for ready reference) duly signed and stamped.
30. On acceptance of the tender, the Contractor shall furnish Performance Security amounting to 5% of the total amount of the ordered items/equipments, in the shape of Account Payee Bank Draft or Fixed Deposit Receipt (FDR) duly pledged in the name of the University or Bank Guarantee for equal amount on the prescribed proforma, to Central University of Himachal Pradesh. This performance security must be deposited within 5 days of the award of the contract and the same shall be in addition to the BD/EMD already deposit, which will be converted into performance security deposit on award of the contract. No interest will be paid on the performance security amount.
31. **TDS and other taxes** as applicable will be deducted from contractor's bill as per Govt. Instructions from time to time.
32. All supplies should be made within a fortnight of supply order or **by the date stated in the order whichever is earlier**. In case it is brought to the notice of the undersigned that the supply has not been made within the prescribed period a penalty @ 0.5% of the delivered price of the delayed goods for each week, with maximum limit of 10% would be deducted from the bill or the tender will be cancelled and Performance Security will be forfeited. The University shall then be at liberty to make the purchase from any other source at supplier's risk and the University shall be free to blacklist the firm/suppliers.
33. Company/supplier must furnish proof of at least five such Government Orders that they have supplied these instruments with satisfactory report.
34. **Billing for the supply of the equipment should be done directly in the favour of CUHP to avail the benefits of exemption of Custom Duty/ Excise Duty, if the equipment is imported item or any excise duty is payable on sale of said equipment within India by the sole manufacture/ Dealer of said equipment.**

Finance Officer,  
Central University of Himachal Pradesh

**READ AND ACCEPTED**

**Signature of Quotee(s) with seal and Date**

## Specifications:-

### Technical Specification for 24 Channel Engineering Seismographs under the Ministry of Earth Science project no Bud.4-18/CUHP/2014/8545-48 dt 31.10.2014

#### 24 channel Engineering seismograph

24 Channel Signal Enhancement Engineering Seismograph System for multi-channel Surface wave seismic exploration surveys.

1. It should be compact, portable, lightweight, low power consumption, field ruggedised, single in-house unit with LAN/USB cable for data Transfer and recording.
2. The system should be compatible with geophones (manufactured by main system manufacturer), Seismic land cables, portable weight drop source to get deeper penetration, hammer switch, battery and battery charger, carrying bag etc.
3. Software for 2D seismic surface wave analysis should be provided along with the complete system.
4. Geophones, software etc. should be manufactured by the main system manufacturer for proper compatibility.
5. Data acquisition and processing software should be Windows-7 or more compatible.
6. The system should be compatible for 1-D Surface Wave, 2-D Surface wave, Seismic Refraction, Micro-tremor array measurement data acquisition.
7. The system should be compatible to any PC or laptop for data acquisition.

The equipment should satisfy the following requirement.

1. **MAIN SYSTEM:** 24 Channel Signal Enhancement Engineering Seismograph  
System with complete Accessories with data acquisition software : 1 No

- Numbers of channels : 24ch
- Input impedance : 20K $\Omega$ , 0.02 $\mu$ F
- Gain : 24dB or 36dB
- Frequency band : 1.75Hz to 20KHz
- Noise filter Low Cut : out, 10- 400 Hz or better must be user selectable
- Noise filter High cut: Out, 32-1000 Hz or better and must be user selectable
- A/D resolution : 24 bit
- Sampling rates : 2 Hz to 20,000 Hz or better
- Data length : 1024, 2048, 4096, 8192, and 16384 samples
- Pre-trigger : Less than data length
- Trigger delay : 0 to 100 sec in one sample interval
- Data format : SEG-2, SEG-Y and SEG- D
- Destination to data save : Storage device in control PC (such as hard disk drive)
- Data transfer : Ethernet (EC at 5 or above)
- Power supply : DC 12V with 24 Ah (external battery)
- Consumption current : 15W or less
- Operation temperature : -20 to 70°C
- Main unit chassis : Splash-proof structure

2. **GEO PHONES:** A). 4.5Hz and 14 Hz Center frequency having connecting cable with Muller clips for connection to Seismic Cable.

b) Geophone spread: Multi conductor cable with 12 take out spaced at equal interval of 5 m , each end include of 5 lead cable terminated for connection with other 12 take out to make it 24 channel . The last end of the cable should have connector to mate with seismograph. Each take out cable should be folded on reel for smooth operation.

c) Trigger extension cable: 100 ft trigger extension cable on plastic reel for use with hammer switch or blaster or trigger geophone to increase distance from geophone spread and seismograph

d) All geophones should have 1m cable attached to it with muller clips on other end for further connection to geophone spread cable.

e) Hammer switch with 4m cable : 03 number

f) Transport cases: Rugged transport case must be supplied for transporting the equipments in the field.

3. **Seismic Source:** 8-10 kg sledge Hammer (**one number**).

40 kg or more **Electrically operated** weighth drop hammer with **operational battery (150 Ah or more) as power supply** with remote contro unit: **one number** with striking plate **one number** (2 X 2 sqft).

4. **Data recorder** (rugged field laptop) with window 7 or more operating system (with CD ) and compatible with all the processing software's having solid state hard derive more than 1TB, RAM should be greater than 8 GB, clock speed greater than 2 GHz, 14 "TFT colour display, GPS enabled battery backup greater than 10 hrs, HD graphic card port, RS 232 port . It should have USB, Ethernet interface for data acquisition in the field. Should work on the data collected using seismograph and geophones. Rechargeable battery, AC charger with two years warranty should be provided.

#### 5. **Processing Software:**

1. To achieve the 2D Surface Wave Velocity Structure based on CMP Cross-correlation gathering method.
2. Facility to convert to an estimated 'N' value profile.
3. Should be compatible to Windows-7/8 or more
4. Software supplied must be able to handle both active and passive seismic surveys
5. Separate Surfseis software latest model (surfseis 4.0) should also be supplied

#### **Schedule of Requirement**

1. 24 Channel Signal Enhancement Engineering Seismograph System : 01 No  
with all accessories as mentioned under heading 1.
  2. Seismic land Cables of 12 take outs at a interspacing cable of : 02  
5 meters with 12 terminals
  3. Land Geophones of Natural Frequency 4.5 Hz and 14 Hz vertical geophones  
for Surface wave method : 25 Nos each
  4. Drop weight hammer as seismic Source with 40 Kg or more hammer  
and battery for generating Seismic waves :01 No.
  5. Hammer Switch with cable : 03 Nos.
  6. Software for 2D Surface Wave Analysis and Modelling : 01 No.
  7. Surfseis software latest version : 01 no.
  8. Battery 12 V, 24 Ah and battery charger i/p 220 V AC : 01 No. each.
  9. Battery 12 V, 150 Ah and battery charger for drop weight hammer  
i/p 220 V AC : 01 no.
  9. DC to AC convertor for working in the field : 01 no.
  - 10 Data Recorder : 01 no.
  11. Battery Chargers for 12 V batteries for charging 24 Ah and 150 Ah batteries: 01 no.
- Optional software: SHAKE-2000 to be compatible with window 7 and 8 : 01 licence  
Portable diesel Genset > 500 watts 01 no.

Training: **No training is required only testing of equipment in the field is necessary.**

Warranty: Minimum two years from the date of installation.

**Note:**

Central University of Himachal Pradesh, Dharamshala is registered with the Department of Scientific and Industrial research (DSIR) for the purpose of availing custom duty exemption in term of government notification no 51/96-customs dated 23-07-1996 and Central Excise dated 01-03-1997 as amended from time to time



# हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

## Central University of Himachal Pradesh

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PHONE No.01892-229330, 229573, FAX No.01892-229331

Web site: [www.cuhimachal.ac.in](http://www.cuhimachal.ac.in)

### Annexure- I

#### **Format for Technical Bid for Supply of 24 channel Engineering Seismograph with 4.5 and 14 Hz Geophones and data recorder**

1. Name of firm/agency:.....
2. Registered Address:.....
3. Telephone no:.....
4. Fax no:.....
5. Mobile no:.....
6. Email Address:.....
7. Name & Address of branch , if any:.....
8. Types of Organisation  
(Whether sole proprietorship/Partnership.....Private Ltd etc)
9. Name of Proprietor/Partner/Director of the Organisation /firm

#### **Payment Detail**

DD NO.....

DD Amount.....

Bank

Name/Branch.....

Sr . No.	Documentary Proof of	Attached Yes/No	Page appendix no If attached
1.	Incorporation/Inception the Agency		
2.	Dealership/Distributor/Supplier/Indian Agent/Foreign Associates Authorised Certificate for the supply of.....		
3.	Name of the Foreign/Indigenous/Principal of the Manufacture of .....machine/plant/Equipment from where these are to be important/Procured for supply		
4.	Name and Address of the Principal/Manufacture		
5.	Whether on rate contact with the DG&SD		
6.	PAN NO.		
7.	CST/ST NO.		
8.	Service Tax Registration NO.		
9.	VAT NO.		
10.	Satisfactory Performance of Supply of.....for last 3 Year from at least three organisation/Institution of repute.		
11.	Any other relevant information (specify)		
12.	Technical Specification of the.....		

**Name and Signature**

The Authorised Person of the Firm with seal



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**Annexure-II**

### **PROFORMA FOR FINANCIAL BID**

1. Name of the Organization/Firm.....

Pan No. ....

2. Please attach Proof wherever Possible.

Sr. No.	Name of Article & Specifications	Accounting Unit	Estimated Qty.	Rate Per unit	Remarks
1.	2.	3.	4.	5.	

The Financial bid being submitted has the approval of the..... (Name of the Agency) and I have been authorised to submit it.

**Place:**

**Signature.....**

**Date:**

**Name.....**

**Designation.....**

**Note:**

1. The rates quoted should be F.O.R destination and should be net i.e. including packing charges, weighing, insurance and forwarding charges.
2. The sales tax will however be extra in case quoted by the supplier.



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### Annexure-III

#### **MODEL BANK GUARANTEE FORMAT FOR FURNISHING BID SECURITY (EMD)**

Whereas.....(hereinafter called the “tenderer”) has submitted their offer dated.....for the supply of

.....  
(hereinafter called the “tender”) against the Purchaser’s tender enquiry No. .... KNOW ALL MEN by these presents that WE.....of.....having our registered office at.....are bound upto the Central University Of Himachal Pradesh (herein after called the “University”) in the sum of .....for which payment will and truly to be made to the said university, the Bank binds itself, its successors and assign by these presents. Sealed with the Common Seal of the said Bank this .....day of .....20.....

#### **THE CONDITIONS OF THIS OBLIGATION ARE:**

- (1) If the tenderer withdraw or amends, impairs or derogates from the tender in any respect within the period of this tender.
- (2) If the tenderer having been notified of the acceptance of his tender by the University during the Period of its validity.
  - a) If the tenderer fails to furnish the performance security for the due performance of the contract.
  - b) Fails or refuses to accept/execute the contract.

We undertake to pay the University up to the above amount upon receipt of its first written Demand, without the university having to substantiate its demand, provided that in its demand the University will note that the amount claimed by it is due to it owing the occurrence of one or both the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the bank not later than the above date.

**(Signature of the authorized officer of the bank)**

.....  
.....

**Seal, name and address of the Bank and address of the Branch.**