



हेमवती नंदन बहुगुणा गढ़वाल विश्वविद्यालय
Hemvati Nandan Bahuguna Garhwal University
श्रीनगर गढ़वाल, उत्तराखण्ड - 246174
Srinagar Garhwal (Uttarakhand) - 246174
केंद्रीय विश्वविद्यालय
(A Central University)

Global Tender Enquiry (GTE) for
Supply and installation of 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer

Tender Enquiry No: HNBGU/SP/ET/NMR/03

Dated: 08/09/2025

Hemvati Nandan Bahuguna Garhwal University (A central University)
Srinagar, Uttarakhand, 246174

1. Notice Inviting Quotation (E-Procurement Mode)

Notice Inviting *Global Tender* for procurement of **400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer** Hemvati Nandan Bahuguna Garhwal University (HNBGU) (A Central University) invites tenders from interested vendors for procurement of the above-mentioned item.

Vendors are requested to submit their bid for the supply of the above item as per details technical specification given and Price Bid as per BOQ.

The important information related to tender is as follows:

SCHEDULE	
Date of Issue/Publishing	08 Sep. 2025
Document Download/Sale Start Date	08 Sep. 2025
Seek Clarification Start Date	10 Sep. 2025
Seek Clarification End Date	14 Sep. 2025
Last Date and Time for Uploading of Bids	29 Sep. 2025
Date & Time of Opening of Technical Bids	30 Sep. 2025
Tender Fee (Non-Refundable) (In Rs.)	(Rs. 5000 + GST)
Estimated Tender Value (In Rs.)	Rs. 3,60,00000 (Inclusive of all the charges and GST)
EMD (In Rs.)	(Rs. 10,80,000) Bidder must submit EMD through Demand Draft in favor of "Finance Officer, HNBGU" payable at Srinagar Garhwal
Performance Security	5% of the contract value valid till the warranty period
Warranty	Minimum 7 Years comprehensive warranty with preventive maintenance from the date of installation or successful acceptance by HNBGU.
Delivery	120 Days
No. of submissions (1/2/3/4)	02 (one technical and one financial)
Bid Validity days	21 Days
Email Address (for Technical Clarifications)	hemwati.nandan.physics@gmail.com; ramsahu79@gmail.com; rohitmahar4u@gmail.com; digarsingh2022@gmail.com; skuphysics@gmail.com; garvpharma29@gmail.com

2. Instructions to Bidders

Instructions for Online Bid Submission:

Department of Expenditure has issued the directive to publish the tender document on the Central Public Procurement Portal (CPP) at <https://eprocure.gov.in/eprocure/app>. The bidders are required to submit soft copies of their bids electronically on the CPP Portal using valid Digital Signature Certificates. Below mentioned instructions are meant to guide the bidders for registration on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. For more information, bidders may visit the CPP Portal at <https://eprocure.gov.in/eprocure/app>. The tender document *can also be* downloaded from HNBGU website at <https://www.hnbg.ac.in/>

2.1. Registration Process

- a) Bidders to enroll on the e-Procurement module of the portal <https://eprocure.gov.in/eprocure/app> by clicking on “Click here to Enroll” link. Enrolment on the CPP Portal is free of charge.
- b) The bidders to choose a unique username and assign a password for their accounts. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- c) Bidders to register upon enrolment their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India with their profile.
- d) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse. Foreign bidders are advised to refer “DSC details for Foreign Bidders” for Digital Signature requirements on the portal.
- e) Bidder then logs in to the site through the secured login by entering their user ID / password and the password of the DSC / eToken.

2.2. Tender Documents Search

- a) Various built-in options are available in the CPP Portal to facilitate bidders to search active tenders by several parameters. These parameters include Tender ID, organization, location, date, value, etc.
- b) There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
- c) Once the bidders have selected the tenders they are interested in; they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- d) The bidder should make a note of the unique Tender ID assigned to each tender; in case they want to obtain any clarification / help from the Helpdesk.

2.3. Bid Preparation

- a) The bidder should take into account any corrigendum published on the tender document before submitting their bids.
- b) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.

- c) Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- d) The bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document /schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
- e) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

2.4. Bid Submission

- a) Bidder to log into the website well in advance for bid submission so that he/she could upload the bid in time *i.e.* on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- b) The bidder to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- c) Bidder must submit EMD through Demand Draft in favor of “Finance Officer, HNBGU” payable at Srinagar Garhwal UK-246174
- d) A standard BOQ format has been provided with the tender document to be filled in by all the bidders. Bidders to note that they should necessarily submit their financial bids in the prescribed format, and no other format is acceptable.
- e) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- f) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data, which cannot be viewed by unauthorized persons until the time of bid opening.
- g) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- h) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- i) Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

2.5. Assistance to Bidders

- I. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- II. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 2337315.

2.6. General Instructions to the Bidders

- a) The tenders will be received online through portal <https://eprocure.gov.in/eprocure/app>. In the Technical Bids, the bidders are required to upload all the documents in portable document format (PDF).
- b) Possession of Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card Token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link "Information about DSC". The bidders are advised to follow the instructions provided in the "Instructions to the Bidders" for the e- Submission of the bids online through the Central Public Procurement Portal for e-Procurement at <https://eprocure.gov.in/eprocure>.

3. Online Bid Submission

**** All the pages of the technical bid must be properly numbered and supporting page numbers should be mentioned in the COVER – 1, failing which bid will be rejected.**

The bids (complete in all respect) must be uploaded online in **two** Covers as explained below.

Cover – 1 (Following documents to be provided)				
S.N o.		Content	Supporting Page No. of bid	File Types
1	Technical Bid	Proof of payment of EMD.		.PDF
2		Copy of GST Certificate and PAN.		.PDF
3		Compliance Sheet (Annexure-I) (Detailed Catalogue/Literature of the relevant item/product must be attached in the bid)		.PDF
4		Non Blacklisting of Supplier as per Annexure-II		.PDF
5		Bidder Must have 3 years of experience of supply of similar equipment's in reputed IITs/NITs/Central Universities reputed institutions. All the details be filled in Annexure III and supporting Purchase Order's be attached. Only experience of the supply of similar equipment will be considered. The bidders who do not satisfy this condition, their bids will be rejected.		.PDF
6		Declaration of Local Content (Annexure-V)		.PDF
7		Price reasonability certificate (Annexure VI)		.PDF
8		Dealers participating in the tender should submit the Manufacture's Authorization Form from OEM and in case OEM is participating in the bid, OEM should submit proof of ownership. (Annexure- VII)		.PDF
9		All supplied items should be covered under warranty as mentioned in the tender document. Warranty service should be provided onsite at HNBGU and factory site for the duration of the warranty period. (Written assurance certificate must be provided on the letterhead of OEM/Dealer)		.PDF
10		Un-priced Bid (Annexure A)		.PDF

Cover - 2			
Ser.	TYPES	Content	File Type
1.	Financial Bid	Price bid as per BOQ format only. <i>(Note: -Comparison of prices will be done ONLY on the bids submitted for the Main Equipment and anything asked as 'Optional' in the specifications is not to be included for overall comparison)</i>	.XLS

FINANCIAL BID (PRICE-BID): Bidder has to quote separately for all the fields as mentioned in the Price Schedule. Adding 0 'Zero' shall be treated as unresponsive. Bids will be accepted only in online mode through the portal. Bids submitted by any other means will not be accepted.

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4. Invitation for Tender Offers for Procurement of 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer.

Hemvati Nandan Bahuguna Garhwal University (A Central University) invites online Bids (Technical bid and Commercial bid) from eligible and experienced OEM (Original Equipment Manufacturer) OR OEM Authorized Dealers for Procurement, of the above-mentioned item with a comprehensive warranty (warranty period as stated at “Schedule”) from the date of receipt of the material as per terms & conditions specified in the tender document, which is available on CPP Portal <https://eprocure.gov.in/eprocure/app>.

General Instructions:

- Vendors will have to make arrangements for all the other essential accessories for the successful operation of the equipment.
- Installation certificate will be issued only after satisfactory working of the instrument (Demo of all the modules) & onsite training at HNB Garhwal University.
- Used or remanufactured or refurbished equipment/items will not be considered for award. The country of origin and year of manufacturing, makes and models should be clearly indicated for full NMR system including accessories. The system should be upgradable in future as and when necessary.
- The vendors may note that the technical specifications provided in following para are minimum to be mandatorily met by the systems quoted by them.
- The vendors should highlight and specify any additional functionalities of their system that enhance the capabilities of the system or the ease with which the user can process and analyse the data and provide information about the value addition from such functionalities.
- All the quoted technical specifications must be verifiable from the manufacturer’s international website and published literature.
- Vendors should have good support and service centres located in India and elaborate the proposed service modalities for HNB Garhwal University. They should also confirm the availability of minimum essential spares for the next 10 years after installation.
- The vendors should provide relevant documents to demonstrate their relevant experience.
- The vendors should provide a detailed list of places where similar instrument has been satisfactorily functional for at least 3 years along with the contact details of the concerned scientist/faculty/officer in charge. They should also provide a letter of reference from such users.
- The quoted model should have at least 02 numbers of installations in India; else the vendor is ineligible. List of such users with copy of PO, contact numbers of faculty Incharge and copy of their installation report should be provided.
- The vendors should quote rates of AMC as “optional item” for three years year wise after the completion of Seven years comprehensive warranty period.

4.1. TECHNICAL SPECIFICATIONS

400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer

Quantity: 1 No.

S. No.	Technical Specifications
1.	<p>Magnet</p> <ol style="list-style-type: none"> 1. Latest technology-based stable and actively shielded superconducting magnet with an operational frequency of 400 MHz for ^1H. 2. Shortest possible 5G [radial from the centre of the magnet ($< 0.5\text{ m}$) and axial from the centre of the magnet ($< 1.0\text{ m}$)] fringe field with advanced shielding technology. 3. Bore diameter: Standard Bore Size 4. Expected field drift: $< 4\text{ Hz/h}$ or better. 5. Liquid nitrogen hold-time: Minimum two weeks or better 6. Liquid helium hold-time: Minimum 365 days or better 7. Meters to show the liquid helium and nitrogen levels with alarm functions for low levels. 8. Number of cryo-shims: minimum 08 or more 9. Number of room-temperature shim systems: Minimum 25 or more 10. Dampening of the floor vibrations: Anti-vibration feet pad should be provided which can damp frequencies of 14 Hz or above. 11. Transfer lines: One set of each for liquid helium and nitrogen. 12. All supportive equipment for the cryostat should be provided.
2.	<p>Spectrometer Console</p> <ol style="list-style-type: none"> 1. Advanced two independent broadband RF generation channels with highest frequency and phase resolution; fast switching time for all parameters without any hidden delays. It should include <ol style="list-style-type: none"> a) waveform generators for pulse shaping, b) amplitude, phase and composite pulse decoupling generator, c) preamplifiers with standard filters, d) digital receiver control with oversampling, and e) quadrature detection with digitizer's facility for complete elimination of quadrature spikes. 2. Digital ^2H lock channel: Lock system with high precision phase and field corrections. Corrections for short-term disturbances with documental evidence is required. 3. Receiver System with full digital quadrature detection (DQD). It should have oversampling and on-line digital filtering along with complete elimination of the quadrature images/spikes and artifacts in the centre of the NMR spectrum. 4. 2-Channel Amplifier System: It should have two high performance linear amplifiers, among them one for high frequency (HF) channel (^1H or ^{19}F) with pulse power 100W or higher and another for low frequency (LF) channel (^{31}P to ^{15}N) with minimum pulse power of 500W or higher. Please specify power (Wattage), duty cycle, max. pulse duration etc. 5. Frequency synthesizers transmitter controllers for each channel. 6. The vendor must ensure that the amplifier system should have optimum pulse power for HF and LF channels and must be suitable for Solution as well as Semi-Solid NMR analysis. 7. The console should also be ready for magic-angle-spinning (MAS) NMR (or equivalent) for Semi-Solid sample analysis. The necessary power amplifiers, RF trans-receiver accessories, circuitry and

	<p>filters should be provided for full operation of MAS NMR. All the other necessary accessories, and pneumatic accessories should be supplied for full operation of MAS NMR.</p> <ol style="list-style-type: none"> 8. Fully automated pneumatic unit for insertion of rotor containing Semi-Solid samples. The system should be capable of controlling the spinning, up and down of rotors and should be able to monitor from the workstation. 9. Accurate spinning rate stabilization for tissue sample, gel, cell suspension, and food stuffs. 10. Sample (rotor) ejection and insertion should be performed from the top without taking out probe from the magnet along with for Installation Qualification (IQ), Operational Qualification (OQ), and Performance Qualification (PQ) compliance. 11. Status indicator for interface for remote control of automated operation, keyboard for manual local operation, cables etc. 12. Transfer tube for pneumatic insertion of 4 mm Zirconium MAS rotors. 13. Capability of acquiring Deuterium NMR spectrum and deuterium decoupling on and off with proton and <i>vice versa</i>. 14. Acquisition system: Capable to control a minimum of two RF channels. 15. Should have preamplifiers, multinuclear preamplifier, and ^2H preamplifier for locking and ^2H experiments. 16. Should have built-in tune/match display. 17. Gradient system for Z-shielded gradient: Should have a gradient strength up to 45G/cm or more for gradient NMR experiments. Should have PFG of any desired shape and gradient shimming capabilities. 18. Low- and high-temperature accessories: <ol style="list-style-type: none"> i. Computer controlled temperature with safety alert facility. ii. Temperature range for the liquid-state samples should be at least between -100 to $150\text{ }^{\circ}\text{C}$ with a temperature resolution of less than or equal to $0.1\text{ }^{\circ}\text{C}$. iii. Variable temperature (VT) accessories with Liquid Nitrogen Dewar of the capacity of 10 Litre or more. iv. Suitable NMR spinner turbine should be provided for variable temperature experiment (Quantity at least 02), if required additionally with the system.
3.	<p>Probes: Quantity: THREE (03)</p> <ol style="list-style-type: none"> 1. 5mm Z-gradient probe for multinuclear broad-band direct / observe covering nuclei ^1H, ^{13}C, ^{19}F, ^{15}N, ^{31}P and ^{109}Ag with automatic tuning and matching. Please provide the technical printed specifications for the probe-heads e. g. Sensitivity, resolution, and line-shape, pulse width, pulse power etc for ^1H, ^{19}F, ^{13}C, ^{31}P and ^{15}N. The S/N ratio of ^1H should be 550 or more, ^{13}C should be 200 or more and ^{19}F should be 500 or more on standard test samples. 2. 4mm z-gradient multinuclear broadband NMR Probe with magic angle spinning (MAS) capabilities and should be equipped with automatic tuning and matching facility. The probe should have decoupling capabilities and must have an excellent sensitivity for direct observe nuclei. The probe must have ^2H lock channel and automatic magic angle adjustment for stable data acquisition with better quality. The probe should provide spectral resolution for Semi-Solid samples - like intact tissues (plants and animals), cell pellets, gel-like samples and food materials-without extraction. Should be able to perform cell metabolomics and fluxomics (^1H, ^{13}C, and ^{31}P etc) on cell pellets, fish organs, and plant metabolomics for intact Semi-Solid samples (seeds, fruits, and other plant parts). Monitoring fruit ripening, verifying geographical origins of fruits

	<p>and vegetables and dairy products. Profiling plant responses to stresses such as drought, salinity, or pathogens; and decoding soil–pollutant interactions. (Specify the detailed parameters of the probe).</p> <ul style="list-style-type: none"> • Spinning speed: 15 kHz (Maximum). • Provide best resolution, line-shapes, line-widths, resolutions, signal-to-noise (S/N) ratio values for ^1H, ^{13}C, and ^{31}P for the quoted probe. • Provide reference NMR data and standard sample used for reference data. • Additional MAS sample rotor kit. • The effective volume should be 50 μL or more • One set of standard sample kit for probe calibration purpose <p>3. 5mm $^1\text{H}/^{13}\text{C}$ or equivalent z-gradient Solution State NMR probe with best resolution and line-shapes. Please specify the line-widths and resolutions achievable, signal-to-noise (S/N) ratio values for ^1H and ^{13}C.</p>
4.	<p>User Interface</p> <p>Data Management – Computer 1 – Acquisition and control</p> <ol style="list-style-type: none"> 1. High performance state-of-the-art workstation (Windows operating system) for spectral acquisition and processing that can be easily serviced in India in case of any fault: The work station should at least have 16 GB RAM, 1 TB hard disk capacity (SSD), with 24’’ LED display, latest available processor, CD-DVD read-write drives, USB Ports, Wi-Fi compatibility, LAN connectivity for offline processing of data. 2. One color laser printer with network and Wi-Fi capability, and other necessary accessories. 3. Licensed Software Modules to include: <ol style="list-style-type: none"> i) Acquisition, Processing, Plotting, Analysis-1D, 2D, 3D and 4D data, Experiment Simulation, Spectra Simulation, Multiplet Analysis, Deconvolution, Automation, Projection Reconstruction Spectroscopy. ii) Software should have the capability of performing chemometrics tasks such as bucketing, binning, normalization, and data processing for multivariate analysis. Softwares like MestReNova or equivalent will work. iii) Most recent and advanced software for data analysis is required. At least 20 free licenses within the campus for data analysis should be provided iv) A complete set of operation manuals should be provided. All required hardware and software documents, installation manuals, CDs/DVDs etc. to be provided. All manuals (service and operational) should be provided as hard copies as well as soft copies (on CDs) 4. All Licenses must be perpetual licenses and should be updated as and when required or whenever there is a new release from the vendor. <p>Data Management – Computer 2 – Data Processing</p> <ul style="list-style-type: none"> • One additional High performance state-of-the-art workstation (Windows operating system) for processing that can be easily serviced in India in case of any fault: The work station should at least have 16 GB RAM, 1 TB hard disk capacity (SSD), with 24’’ LED display, latest available processor, CD-DVD read-write drives, USB Ports, Wi-Fi compatibility, LAN connectivity for offline processing of data should be included in the offer.

5.	<p>Accessories required for the equipment</p> <ol style="list-style-type: none"> 1. An ISO-9001 certified 3 HP oil-free reciprocating air compressor complete with dry spell dryer and capable of catering all the needs. It should have a big buffer tank of 300 L or more capacity next to the Air Compressor and an additional buffer tank of 90 L or more capacity in the NMR room. It should have 4 or more filters between Air Compressor through buffer tanks and NMR console. 2. 100 high quality 5mm NMR tubes with caps. 3. 50 high quality 3mm NMR tubes with caps. 4. 5 high quality 5mm Screw-cap NMR tube for carrying out for titration NMR study. 5. Ten (10) spinners for 3 mm NMR tube. 6. Twenty (20) 4 mm Zirconium oxide MAS rotors with full sets. 7. Liquid Nitrogen Containers <ul style="list-style-type: none"> • Four (04) units of 50 litre or more Liquid Nitrogen container along with filling assembly or transfer line, which can fill Liquid N₂ from the in-house Liquid Nitrogen generator or other sources. Should have trolley along with containers. • Two (02) units of Self-Pressurized 150 litre or more Liquid Nitrogen container along with filling assembly or transfer line, which can fill Liquid N₂ from the in-house Liquid Nitrogen generator or other sources. Should have trolley along with containers. 8. Standard calibration samples for 5 mm NMR probes. 9. NMR software for processing the FID files in the PC/Laptop. 10. All tubing, pipes, wires, and other essential accessories required for installation and functioning of the NMR, instrument should be supplied with the systems.
6.	<p>UPS System</p> <p>A branded ISO-9001 certified online UPS (at least 5 KVA or rating compatible with the NMR system) with isolation transformer for the whole system with a minimum backup of 1 hour. The UPS should be provided with 7 Years of warranty.</p>
7.	<p>Autosampler</p> <p>Auto sampler with a capacity of minimum 24 or better NMR samples and necessary accessories including 24 sample spinners.</p>
9.	<p>Installation and Commissioning</p> <ul style="list-style-type: none"> • Complete installation of the equipment, and the liquid helium required for the installation and complete fill (up to 100%) at the time of installation should be done/provided by the NMR supplier. In case of magnet-quench during the installation or at any subsequent time due to faulty design or any other technical failure, the complete cost of recharging or replacement should be borne by the vendor. • Installation, complete interfacing of the system with its subsystems, and commissioning is to be carried out by the vendor's factory-trained engineers, followed by a demonstration of the system's performance to the user's complete satisfaction. • An estimated time schedule for installation, commissioning and training must be provided.
10.	<p>Liquid Helium Supply</p> <p>The supply of the liquid Helium should be provided for the next Five (05) Years after the complete installation. If the magnet hold time is 365 days or better, then after completion of 5 Years post-installation, the level should be maintained at 100% Helium. Typical Liquid Helium filling can be done once the Helium level reaches 30-40% or whatever is appropriate for the magnet.</p>

	Note: The Liquid helium required for installation is already covered during commissioning of NMR instrument. The cost of liquid helium for additional 5 years with yearly break up should be quoted and overall price should be included in the price of main NMR instrument.
11.	Service Facility and Down-Time Call Attendance <ul style="list-style-type: none"> Supplier should clearly mention about their service set up in India for prompt service support along with contact details of service engineers specially trained on the offered system. The manufacturer and/or their Indian representative must have at least two qualified and factory trained service engineer in North India to be able to attend to service on submitting a complaint. Training certificates from the manufacturer have to be provided with the tender.
11.	General Requirement All the items quoted by the vendor should be their latest model. The bid should include complete technical specification sheets where magnet, probe, and electronic specifications can be found. It should include complete pulse width and power level specifications, as well as sensitivity and resolution specifications on the stated standard samples (^1H , ^2H , ^{13}C , ^{15}N , ^{19}F and ^{31}P).
12.	Power Supply Should meet Indian Power standards preferably without use of external converters
13.	All the items asked in the NIQ must be included in the technical & financial quotation/bid.

4.2.Terms and conditions:

Warranty	Seven (07) years of comprehensive warranty on full NMR system should be covered with unconditional preventive maintenance from the manufacturer. All parts including spares should be covered under the warranty and this fact should be clearly and explicitly specified in the tender document. The entire comprehensive warranty with unconditional preventive maintenance for 7 years must be included in the overall cost of the instrument and should cover: <ol style="list-style-type: none"> All parts of NMR magnet and spectrometer including console, amplifiers, all probes, VT accessories, autosampler, other accessories, spares and labour on site. Free transportation, maintenance and service on site or at factory with no cost Regular up-gradation of software All third-party items such as Air Compressor, PCs, UPS system, and other peripheral accessories. No Purchase Order will be raised for purchasing any parts of the NMR instrument under the seven-year comprehensive warranty.
Single Vendor Solution	The complete system must be supplied, and installed by a single/same vendor to provide seamless integration. All accessories including Liquid Helium must be supplied through the same vendor.
Service and Support	The supplier must fully support NMR for at least 10 years. Services and spare support need to be provided.
Specification Sheet	A detailed specification sheet highlighting all the above specifications and all supportive documents need to be attached for all the claims in the specification mentioned.
User Reference List	Vendors should provide a list of recent installations (in the past 5 years), model details, and modules supplied. They should also provide the performance certificates from the users (at least 3).

Tool kit	Tool kit must be included with all required accessories during installation and post-installation.
Training	The manufacturer/supplier of 400 MHz NMR should provide at least five days onsite training initially during installation and during the subsequent installation/interchange of Probes.
Installation in India	The quoted system or any equivalent category system should have at least five numbers of installations in India by the vendor.
Spares	The supplier should confirm the availability of spares for next 10 years from the date of installation.
Custom Clearance and Delivery	The supplier must ensure the custom clearance and delivery of equipment at the premises (or installation site) of HN BGU. The HN BGU shall provide the bank release order and GST charges details. Also mention if some additional accessories will be delivered later.
Turnover Certificate	The vendor must provide the turnover of the last three financial years to verify the financial standing.

6. GENERAL TERMS & CONDITIONS

- 5.1** All the pages of the technical bid must be properly numbered and supporting page numbers should be mentioned in the COVER – 1, failing which bid will be rejected.
- 5.2 Due date:** The tender has to be submitted online on or before the due date. The offers received after the due date and time will not be considered.
- 5.3 EMD:** The Bidder must submit EMD through Demand Draft in favor of “Finance Officer, HNBGU” payable at Srinagar Garhwal UK
- 5.4 Refund of EMD:** The EMD will be returned to unsuccessful tenderers **only after the Tenders are finalized**. In case of successful Tenderer, it will be retained till the successful and complete installation of the equipment.
- 5.5 Opening of the tender:** The online bid will be opened by a committee duly constituted for this purpose. Online bids (complete in all respect) received will be opened as mentioned at “Annexure: Schedule” in presence of bidder’s representative if available. Only one representative will be allowed to participate in the tender opening. The technical bid will be opened online first and it will be examined by a technical committee (as per specification and requirement). The financial offer/bid will be opened only for the offer/bid which technically meets all requirements as per the specification, and will be opened subsequently for further evaluation.
- 5.6 Acceptance/ Rejection of bids:** The Institute reserves the right to reject any bid not fulfilling the eligibility criteria. Submission of incomplete bid/ incomplete bid format would lead to rejection of bids. All documents required to be submitted should be the part of the bid. If any document is not submitted, the bid will be treated as incomplete and this would lead to rejection. No communication in this regard will be entertained.
- 5.7 Eligibility Criteria:**
- 5.7.1** Tenderer should be the manufacturer / authorized dealer.
 - 5.7.2** Non-compliance of tender terms, non-submission of required documents, lack of clarity of the specifications, contradiction between tenderer specification and supporting documents etc. may lead to rejection of the bid.
 - 5.7.3** All the bidders should fill all the sections of compliance sheet (Annexure – I) after ensuring that the equipment complies the tendered specification. Incomplete compliance sheet will leads to the rejection of bid.
 - 5.7.4** An undertaking from the OEM is required stating that he has not been Blacklisted from any organization and would facilitate the tenderer on a regular basis with technology/product updates and extend support for the warranty as well. (Ref. Annexure-II)
 - 5.7.5** Bidder must submit as undertaking that he is not from the Country sharing Land border with

India & Registration of Bidder with Competent Authority (Annexure - IV)

- 5.7.6 Class-I, Class-II local supplier and Non-Local supplier will be eligible to bid notified vide (DPIIT) Notification No.P-45021/2/2017-PP (BE-II) dated 4th June, 2020. An undertaking is required to be submitted (Annexure-V) failing which the bid will be rejected.
- 5.7.7 Bidder Must have minimum 3 Years of experience of supply of similar equipment's in IITs/NITs/ Central Universities reputed institutions. All the details be filled in Annexure III and supporting purchase Order's must be attached with the bid. Only experience of the supply of similar equipment will be considered. The bidder who do not satisfy this condition, their bids will be rejected.
- 5.7.8 An undertaking from the OEM is required stating that they would facilitate the tenderer on a regular basis with technology/product updates and extend support for the warranty as well. All supplied items should be covered under warranty as mentioned in the tender document. Warranty service should be provided onsite at Hemvati Nandan Bahuguna Garhwal University (A Central University) for the duration of the warranty period. (Written assurance certificate must be provided on the letterhead of OEM/Dealer).
- 5.7.9 The bidder must provide the Price reasonability certificate (Annexure - VI).
- 5.7.10 Dealers participating in the tender should submit the Manufacturing Authorization Form from OEM and in case OEM is participating in the tender, OEM should submit proof of ownership (Annexure – VII).
- 5.7.11 Bidders must specify the Pre-Installation requirement (if any) in advance.
- 5.7.12 Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can participate in the bidding process but both cannot bid simultaneously for the same item/product in the same tender. In such cases the bid submitted by OEM will only be considered.
- 5.7.13 If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

5.8 Performance Security: The supplier shall require to submit the performance security in the form of irrevocable bank guarantee issued by any commercial bank for an amount which is stated at the “Schedule” of the tender document within 21 days from the date of receipt of the purchase order/LC and should be kept valid for a period of 120 days beyond the date of completion of warranty period.

5.9 Force Majeure: The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

- (i) For purposes of this Clause, “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- (ii) If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

5.10 Risk Purchase Clause: In event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from the other source on the total risk of the supplier under risk purchase clause.

5.11 Packing Instructions: Each package will be marked on three sides with proper paint/indelible ink, the following:

- (i) Item Nomenclature
- (ii) Order/Contract No.
- (iii) Country of Origin of Goods
- (iv) Supplier's Name and Address
- (v) Consignee details
- (vi) Packing list reference number

5.12 Delivery and Documents:

Delivery of the goods should be made within a maximum period mentioned at the 'SCHEDULE' from the date of placement of purchase order. Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e mail the full details of the shipment including contract number, railway receipt number/ AAP etc. and date, description of goods, quantity, name of the consignee, invoice etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:

- (i) Four copies of the Supplier invoice showing contract number, goods' description, quantity unit price, total amount;
- (ii) Insurance Certificate if applicable;
- (iii) Manufacturer's/Supplier's warranty certificate;
- (iv) Inspection Certificate issued by the nominated inspection agency, if any
- (v) Supplier's factory inspection report; and
- (vi) Certificate of Origin (if possible by the beneficiary);
- (vii) Two copies of the packing list identifying the contents of each package.
- (viii) The above documents should be received by the Purchaser before arrival of the Goods (except where the goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

5.13 Liquidated Damages (L.D):

If a supplier fails to execute the order in time as per the terms and conditions stipulated therein, it will be open to the purchaser to recover liquidated damages for delay in delivery and installation from the supplier at the rate 0.5% of the value of the order per week subject to a maximum of 10% of the total order value. The L.D charges can be increased in case of gross violation of the Purchase Order terms as decided by the Director of the Institute.

5.14 Prices: The price should be quoted in BoQ format only. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However, the percentage of taxes & duties shall be clearly indicated. The price should be quoted without custom duty and excise duty, since Hemvati Nandan Bahuguna Garhwal University (A Central University) is exempted from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand.

5.15 Progress of Supply: Wherever applicable, supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under:

- (i) Quantity offered for inspection and date;
- (ii) Quantity accepted/rejected by inspecting agency and date;
- (iii) Quantity dispatched/delivered to consignees and date;

- (iv) Quantity where incidental services have been satisfactorily completed with date;
- (v) Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date;
- (vi) Date of completion of entire Contract including incidental services, if any; and
- (vii) Date of receipt of entire payments under the Contract (In case of stage-wise inspection, details required may also be specified).

5.16 Resolution of Disputes: The dispute resolution mechanism would be as follows:

- (i) In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Hon'ble VC, Hemvati Nandan Bahuguna Garhwal University (A Central University) and if he is unable or unwilling to act, the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.
- (ii) In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (i) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.
- (iii) The venue of the arbitration shall be the place from where the order is issued.

5.17 The place of jurisdiction would be Uttarakhand

5.18 Right to Use Defective Goods

If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

5.19 Transfer and Subletting: The supplier shall not sublet, transfer, assign or otherwise part with the acceptance to the tender or any part thereof, either directly or indirectly, without the prior written permission of the Purchaser.

5.20 Supplier Integrity

The Supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state of the art methods and economic principles and exercising all means available to achieve the performance specified in the contract.

5.21 Installation & Demonstration

The supplier is required to do the installation and demonstration of the equipment within two weeks of the arrival of materials at the Hemvati Nandan Bahuguna Garhwal University (A Central University), site of installation, otherwise the penalty clause will be the same as per the supply of materials.

In case of any damage to equipment and supplies during the carriage of supplies from the origin of equipment to the installation site, the supplier has to replace it with new equipment/supplies immediately at his own risk. Supplier will settle his claim with the insurance company as per his convenience. Hemvati Nandan Bahuguna Garhwal University (A Central University) will not be liable to any type of losses in any form.

5.22 Insurance (if applicable): For delivery of goods at the purchaser's premises Hemvati Nandan Bahuguna Garhwal University (A Central University), the insurance shall be obtained by the supplier from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes. The insurance shall be valid for a period of not less than 3 months after installation and commissioning.

5.23 Warranty:

- (i) Warranty period shall be (as stated at "Schedule "of this tender) from date of installation of Goods and acceptance at Hemvati Nandan Bahuguna Garhwal University (A Central University). The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests. The warranty should be comprehensive on site.
- (ii) The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall arrange to repair or replace the defective goods or parts within 07 days free of cost in Hemvati Nandan Bahuguna Garhwal University (A Central University). The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter. The period for correction of defects in the warranty period is 07 days. If the supplier having been notified fails to remedy the defects within 07 days, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expenses and without prejudice to any other rights, which the purchaser may have against the supplier under the contract.
- (iii) The warranty period should be clearly mentioned. The maintenance charges (AMC) under different schemes after the expiry of the warranty should also be mentioned. The comprehensive warranty will commence from the date of the satisfactory installation/commissioning of the equipment against the defect of any manufacturing, workmanship and poor quality of the components.

5.24 Governing Language

The contract shall be written in English language. English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the same language.

5.25 Applicable Law

The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction.

5.26 Notices

- (i) Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX or e mail and confirmed in writing to the other party's address.
 - (ii) A notice shall be effective when delivered or on the notice's effective date, whichever is later.

5.27 Taxes and Duties

Suppliers shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser. However, GST in respect of the transaction between the Purchaser and the Supplier shall be payable extra, if so stipulated in the order.

Hemvati Nandan Bahuguna Garhwal University (A Central University) is exempted from paying custom duty under notification No.51/96 (partially or full) and necessary "Custom Duty Exemption Certificate" can be issued after providing following information and Custom Duty Exemption Certificate will be issued.

HNBGU is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which following information are required.

- (i) Quotation with details of Basic Price, Rate, Tax & Amount on which ED is applicable.
- (ii) Supply Order Copy
- (iii) Performa-Invoice Copy.

Hemvati Nandan Bahuguna Garhwal University (A Central University) will issue Custom Duty Exemption Certificate (CDEC) (for import items).

5.28 Payment:

- (i) For Indigenous supplies, 100% payment shall be made by the Purchaser against delivery, inspection, successful installation, commissioning and acceptance of the equipment at Hemvati Nandan Bahuguna Garhwal University (A Central University) in good condition and to the entire satisfaction of the Purchaser and on production of unconditional performance bank guarantee as specified in Clause 4.8 of tender terms and conditions.
- (ii) For imported items Payment will be made through Wire Transfer. Wire Transfer will be established in favor of foreign Supplier after the submission of performance security. The Wire Transfer will be established on the exchange rates as applicable on the date of establishment. For Imports, Wire Transfer will be opened for 100% value shall be released after the installation and demonstration of the equipment at the Hemvati Nandan Bahuguna Garhwal University (A Central University) site of installation in faultless working condition for period of 60 days from the date of the satisfactory installation and subject to the production of unconditional performance bank guarantee as specified in Clause 4.8 of tender terms and conditions.
- (iii) Indian Agency commission (IAC), if any shall be paid after satisfactory installation & commissioning of the goods at the destination at the exchange rate prevailing on the date of negotiation of LC documents, subject to DGS&D registration for restricted items.
- (iv) All the bank charges within India will be borne by the Institute and outside India will be borne by the Supplier.
- (v) GST Deduction at source as per Order/ notification of the Govt.
- (vi) GST No of HNBGU is
- (vii) HSN/SAC No of the items must be clearly mentioned in the quotation along with GST No.

5.29 Manuals and Drawings:

- (i) Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals. These shall be in such details as will enable the Purchaser to operate, maintain, adjust and repair all parts of the works as stated in the specifications.
- (ii) The Manuals shall be in the ruling language (English) in such form and numbers as stated in the contract.
- (iii) Unless and otherwise agreed, the goods equipment shall not be considered to be completed for the purposes of taking over until such manuals and drawing have been supplied to the Purchaser.

5.30 Application Specialist: The Tenderer should mention in the Techno-Commercial bid the availability and names of Application Specialist and Service Engineers in the nearest regional office. (Ref. to Annexure-III)

5.31 Site Preparation: The supplier shall inform to the Institute about the site preparation, if any, needed for the installation of equipment, immediately after the receipt of the purchase order. The supplier must provide complete details regarding space and all the other infrastructural requirements needed for the equipment, which the Institute should arrange before the arrival of the equipment to ensure its timely installation and smooth operation thereafter. The supplier may visit the Institute and see the site where the equipment is to be installed and may offer his advice and render assistance to the Institute in the preparation of the site and other pre- installation requirements.

5.32 Spare Parts

The Supplier may be required to provide any or all of the following materials, notifications, and Information pertaining to spare parts manufactured or distributed by the Supplier. Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and In the event of termination of production of the spare parts; Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested. Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares. Other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order.

5.33 Defective Equipment: If any of the equipment supplied by the Supplier is found to be substandard, refurbished, un-merchantable or not in accordance with the description/specification or otherwise faulty, the committee will have the right to reject the equipment or its part. The prices of such equipment shall be refunded by the Supplier with interest if such payments for such equipment have already been made. All damaged or unapproved goods shall be returned at suppliers cost and risk and the incidental expenses incurred thereon shall be recovered from the supplier. Defective part in equipment, if found before installation and/or during warranty period, shall be replaced within 7 days on receipt of the intimation from this office at the cost and risk of supplier including all other charges. In case supplier fails to replace above item as per above terms & conditions, Hemvati Nandan Bahuguna Garhwal University (A Central University) may consider “Banning” the supplier.

5.34 Termination for Default

- (i) The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:
 - a. If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the order, or within any extension thereof granted by the Purchaser or
 - b. If the Supplier fails to perform any other obligation(s) under the Contract.
 - c. If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- (ii) For the purpose of this Clause:
 - a. “Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
 - b. “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Tenderer (prior to or after bid submission) designed to establish bid prices at artificial non- competitive levels and to deprive the Borrower of the benefits of free and open competition;”

- (iii) In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner, as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

5.35 Downtime: During the warranty period, not more than 1% downtime will be permissible. For every day exceeding permissible downtime, penalty of 1/365 of the 1% contract value will be imposed. Downtime will be counted from the date and time of the filing of complaint within the business hours. Supplier should clearly mention about their service set up in India (preferably in Northern part of India) for prompt service support. The manufacturer and/or their Indian representative must have at least three qualified and factory trained service engineer in India to be able to attend to service at Hemvati Nandan Bahuguna Garhwal University (A Central University) within 48 hours on submitting a complaint. Training certificates from the manufacturer have to be provided with the tender. During the warranty period, only factory trained and certified engineers are acceptable to attend the service.

In case the Equipment / System remains non-operational for more than 7 days then warranty period will be extended for the equivalent period for which Equipment /System remained non-operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract.

Hemvati Nandan Bahuguna Garhwal University (A Central University) would like to enter in service agreement through which Hemvati Nandan Bahuguna Garhwal University (A Central University) will receive replacement of defective spares/part (if any, that are not covered under warranty) immediately so as to minimize the down time. Order, if any, required to be placed for such spares/parts will be done by Hemvati Nandan Bahuguna Garhwal University (A Central University) in due course of time.

5.36 Training of Personnel (if applicable): The supplier shall be required to undertake to provide the technical training to the personnel involved in the use of the equipment at the Institute premises, immediately after completing the installation of the equipment if applicable.

5.37 Compliancy certificate: This certificate must be provided indicating conformity to the technical specifications. (Annexure-I)

5.38 Genuine Pricing: Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold. Copy of the latest price list for the quoted item, applicable in India, must be enclosed with the offer (particularly to IIT/Institutes and other Government Organization).

5.39 Comparison of Bids:

1. Only the short-listed bids from the technical evaluation shall be considered for commercial comparison.
2. For comparison of prices, the prices quoted by the bidder for all the items taken together, as per Price Bid shall be considered.
3. The bids shall be evaluated on the basis of the total prices including all taxes and duties.
4. For the purpose of comparison of prices on equal basis, the prices quoted in foreign currency (if any) by bidders shall be converted to equivalent Indian Rupees. The exchange rate as on the

date of opening of financial bids shall be considered for the purpose of comparison.

5.40 Award of Contract

Hemvati Nandan Bahuguna Garhwal University (A Central University) shall award the contract to the eligible bidder whose technical bid has been accepted and determined as the lowest evaluated commercial bid based on the criteria mentioned above. However, Hemvati Nandan Bahuguna Garhwal University (A Central University) reserves the right and has sole discretion to reject the lowest evaluated bid.

In case more than one bidder happens to quote the same lowest price, Hemvati Nandan Bahuguna Garhwal University (A Central University) reserves the right to decide the criteria and further process for awarding the contract, decision of Hemvati Nandan Bahuguna Garhwal University (A Central University) shall be final for awarding the contract.

COMPLIANCE SHEET

TECHNICAL SPECIFICATION

	Name of the Item: 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer Make: Model:		
400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer			
S. No.	Description	Comply (Yes/No)	Supporting Page No.
1.	Magnet <ol style="list-style-type: none"> 1. Latest technology-based stable and actively shielded superconducting magnet with an operational frequency of 400 MHz for ^1H. 2. Shortest possible 5G [radial from the centre of the magnet ($< 0.5\text{ m}$) and axial from the centre of the magnet ($< 1.0\text{ m}$)] fringe field with advanced shielding technology. 3. Bore diameter: Standard Bore Size 4. Expected field drift: $< 4\text{ Hz/h}$ or better. 5. Liquid nitrogen hold-time: Minimum two weeks or better 6. Liquid helium hold-time: Minimum 365 days or better 7. Meters to show the liquid helium and nitrogen levels with alarm functions for low levels. 8. Number of cryo-shims: minimum 08 or more 9. Number of room-temperature shim systems: Minimum 25 or more 10. Dampening of the floor vibrations: Anti-vibration feet pad should be provided which can damp frequencies of 14 Hz or above. 11. Transfer lines: One set of each for liquid helium and nitrogen. 12. All supportive equipment for the cryostat should be provided. 		
2.	Spectrometer Console <ol style="list-style-type: none"> 1. Advanced two independent broadband RF generation channels with the highest frequency and phase resolution; fast switching time for all parameters without any hidden delays. It should include <ol style="list-style-type: none"> a) waveform generators for pulse shaping, b) amplitude, phase and composite pulse decoupling generator, c) preamplifiers with standard filters, d) digital receiver control with oversampling, and e) quadrature detection with digitizer's facility for complete elimination of quadrature spikes. 2. Digital ^2H lock channel: Lock system with high precision phase and field corrections. Corrections for short-term disturbances with documental evidence is required. 3. Receiver System with full digital quadrature detection (DQD). It should have oversampling and on-line digital filtering along with complete elimination of the quadrature images/spikes and artifacts in the centre of the NMR spectrum. 4. 2-Channel Amplifier System: It should have two high-performance linear amplifiers, among them one for the high frequency (HF) channel (1H or 19F) with 		

	<p>pulse power 100W or higher and another for the low frequency (LF) channel (^{31}P to ^{15}N) with minimum pulse power of 500W or higher. Please specify power (Wattage), duty cycle, max. pulse duration etc.</p> <ol style="list-style-type: none"> 5. Frequency synthesizers transmitter controllers for each channel. 6. The vendor must ensure that the amplifier system should have optimum pulse power for HF and LF channels and must be suitable for Solution as well as Semi-Solid NMR analysis. 7. The console should also be ready for magic-angle-spinning (MAS) NMR (or equivalent) for Semi-Solid sample analysis. The necessary power amplifiers, RF trans-receiver accessories, circuitry and filters should be provided for full operation of MAS NMR. All the other necessary accessories, and pneumatic accessories should be supplied for full operation of MAS NMR. 8. Fully automated pneumatic unit for insertion of rotor containing Semi-Solid samples. The system should be capable of controlling the spinning, up and down of rotors and should be able to monitor from the workstation. 9. Accurate spinning rate stabilization for tissue sample, gel, cell suspension, and food stuffs. 10. Sample (rotor) ejection and insertion should be performed from the top without taking out probe from the magnet along with for Installation Qualification (IQ), Operational Qualification (OQ), and Performance Qualification (PQ) compliance. 11. Status indicator for interface for remote control of automated operation, keyboard for manual local operation, cables etc. 12. Transfer tube for pneumatic insertion of 4 mm Zirconium MAS rotors. 13. Capability of acquiring Deuterium NMR spectrum and deuterium decoupling on and off with proton and <i>vice versa</i>. 14. Acquisition system: Capable to control a minimum of two RF channels. 15. Should have preamplifiers, multinuclear preamplifier, and ^2H preamplifier for locking and ^2H experiments. 16. Should have built-in tune/match display. 17. Gradient system for Z-shielded gradient: Should have a gradient strength up to 45G/cm or more for gradient NMR experiments. Should have PFG of any desired shape and gradient shimming capabilities. 18. Low- and high-temperature accessories: <ol style="list-style-type: none"> i. Computer controlled temperature with safety alert facility. ii. Temperature range for the liquid-state samples should be at least between -100 to 150 $^{\circ}\text{C}$ with a temperature resolution of less than or equal to 0.1 $^{\circ}\text{C}$. iii. Variable temperature (VT) accessories with Liquid Nitrogen Dewar of the capacity of 10 Litre or more. iv. Suitable NMR spinner turbine should be provided for variable temperature experiment (Quantity at least 02), if required additionally with the system. 		
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3.	<p>Probes: Quantity: THREE (03)</p> <ol style="list-style-type: none"> 1. 5mm Z-gradient probe for multinuclear broad-band direct / observe covering nuclei ^1H, ^{13}C, ^{19}F, ^{15}N, ^{31}P and ^{109}Ag with automatic tuning and matching. Please provide the technical printed specifications for the probe-heads e. g. Sensitivity, resolution, and line-shape, pulse width, pulse power etc for ^1H, ^{19}F, ^{13}C, ^{31}P and ^{15}N. The S/N ratio of ^1H should be 550 or more, ^{13}C should be 200 or more and ^{19}F should be 500 or more on standard test samples. 2. 4mm z-gradient multinuclear broadband NMR Probe with magic angle spinning (MAS) capabilities and should be equipped with automatic tuning and matching facility. The probe should have decoupling capabilities and must have an excellent sensitivity for direct observe nuclei. The probe must have ^2H lock channel and automatic magic angle adjustment for stable data acquisition with better quality. The probe should provide spectral resolution for Semi-Solid samples - like intact tissues (plants and animals), cell pellets, gel-like samples and food materials-without extraction. Should be able to perform cell metabolomics and fluxomics (^1H, ^{13}C, and ^{31}P etc) on cell pellets, fish organs, and plant metabolomics for intact Semi-Solid samples (seeds, fruits, and other plant parts). Monitoring fruit ripening, verifying geographical origins of fruits and vegetables and dairy products. Profiling plant responses to stresses such as drought, salinity, or pathogens; and decoding soil–pollutant interactions. (Specify the detailed parameters of the probe). <ul style="list-style-type: none"> • Spinning speed: 15 kHz (Maximum). • Provide best resolution, line-shapes, line-widths, resolutions, signal-to-noise (S/N) ratio values for ^1H, ^{13}C, and ^{31}P for the quoted probe. • Provide reference NMR data and standard sample used for reference data. • Additional MAS sample rotor kit. • The effective volume should be 50 μL or more • One set of standard sample kit for probe calibration purpose 3. 5mm $^1\text{H}/^{13}\text{C}$ or equivalent z-gradient Solution State NMR probe with best resolution and line-shapes. Please specify the line-widths and resolutions achievable, signal-to-noise (S/N) ratio values for ^1H and ^{13}C. 		
4.	<p>User Interface</p> <p>Data Management – Computer 1 – Acquisition and control</p> <ol style="list-style-type: none"> High performance state-of-the-art workstation (Windows operating system) for spectral acquisition and processing that can be easily serviced in India in case of any fault: The work station should at least have 16 GB RAM, 1 TB hard disk capacity (SSD), with 24’’ LED display, latest available processor, CD-DVD read-write drives, USB Ports, Wi-Fi compatibility, LAN connectivity for offline processing of data. One color laser printer with network and Wi-Fi capability, and other necessary accessories. Licensed Software Modules to include: <ol style="list-style-type: none"> Acquisition, Processing, Plotting, Analysis-1D, 2D, 3D and 4D data, Experiment Simulation, Spectra Simulation, Multiplet Analysis, Deconvolution, Automation2Projection Reconstruction Spectroscopy. Software should have the capability of performing chemometrics tasks 		

	<p>such as bucketing, binning, normalization, and data processing for multivariate analysis. Softwares like MestReNova or equivalent will work.</p> <p>iii. Most recent and advanced software for data analysis is required. At least 20 free licenses within the campus for data analysis should be provided</p> <p>iv. A complete set of operation manuals should be provided. All required hardware and software documents, installation manuals, CDs/DVDs etc. to be provided. All manuals (service and operational) should be provided as hard copies as well as soft copies (on CDs)</p> <p>4. All Licenses must be perpetual licenses and should be updated as and when required or whenever there is a new release from the vendor.</p> <p>Data Management – Computer 2 – Data Processing</p> <p>One additional High performance state-of-the-art workstation (Windows operating system) for processing that can be easily serviced in India in case of any fault: The work station should at least have 16 GB RAM, 1 TB hard disk capacity (SSD), with 24’’ LED display, latest available processor, CD-DVD read-write drives, USB Ports, Wi-Fi compatibility, LAN connectivity for offline processing of data should be included in the offer.</p>		
5.	<p>Accessories required for the equipment</p> <p>1. An ISO-9001 certified 3 HP oil-free reciprocating air compressor complete with dry spell dryer and capable of catering all the needs. It should have a big buffer tank of 300 L or more capacity next to the Air Compressor and an additional buffer tank of 90 L or more capacity in the NMR room. It should have 4 or more filters between Air Compressor through buffer tanks and NMR console.</p> <p>2. 100 high quality 5mm NMR tubes with caps.</p> <p>3. 50 high quality 3mm NMR tubes with caps.</p> <p>4. 5 high quality 5mm Screw-cap NMR tube for carrying out for titration NMR study.</p> <p>5. Ten (10) spinners for 3 mm NMR tube.</p> <p>6. Twenty (20) 4 mm Zirconium oxide MAS rotors with full sets.</p> <p>7. Liquid Nitrogen Containers</p> <ul style="list-style-type: none"> • Four (04) units of 50 litre or more Liquid Nitrogen container along with filling assembly or transfer line, which can fill Liquid N₂ from the in-house Liquid Nitrogen generator or other sources. Should have trolley along with containers. • Two (02) units of Self-Pressurized 150 litre or more Liquid Nitrogen container along with filling assembly or transfer line, which can fill Liquid N₂ from the in-house Liquid Nitrogen generator or other sources. Should have trolley along with containers. <p>8. Standard calibration samples for 5 mm NMR probes.</p> <p>9. NMR software for processing the FID files in the PC/Laptop.</p> <p>10. All tubing, pipes, wires, and other essential accessories required for installation and functioning of the NMR, instrument should be supplied with the systems.</p>		
6.	<p>UPS System</p> <p>A branded ISO-9001 certified online UPS (at least 5 KVA or rating compatible with the NMR system) with isolation transformer for the whole system with a minimum backup of 1 hour. The UPS should be provided with 7 Years of warranty.</p>		
7.	<p>Autosampler</p> <p>Auto sampler with a capacity of minimum 24 or better NMR samples and necessary accessories including 24 sample spinners.</p>		

8.	Installation and Commissioning <ul style="list-style-type: none"> Complete installation of the equipment, and the liquid helium required for the installation and complete fill (up to 100%) at the time of installation should be done/provided by the NMR supplier. In case of magnet-quench during the installation or at any subsequent time due to faulty design or any other technical failure, the complete cost of recharging or replacement should be borne by the vendor. Installation, complete interfacing of the system with its subsystems, and commissioning is to be carried out by the vendor's factory-trained engineers, followed by a demonstration of the system's performance to the user's complete satisfaction. An estimated time schedule for installation, commissioning and training must be provided. 		
9.	Liquid Helium Supply The supply of the liquid Helium should be provided for the next Five (05) Years after the complete installation. If the magnet hold time is 365 days or better, then after completion of 5 Years post-installation, the level should be maintained at 100% Helium. Typical Liquid Helium filling can be done once the Helium level reaches 30-40% or whatever is appropriate for the magnet. Note: The Liquid helium required for installation is already covered during commissioning of NMR instrument. The cost of liquid helium for additional 5 years with yearly break up should be quoted and overall price should be included in the price of main NMR instrument.		
10.	Service Facility and Down-Time Call Attendance <ul style="list-style-type: none"> Supplier should clearly mention about their service set up in India for prompt service support along with contact details of service engineers specially trained on the offered system. The manufacturer and/or their Indian representative must have at least two qualified and factory trained service engineer in North India to be able to attend to service on submitting a complaint. Training certificates from the manufacturer have to be provided with the tender. 		
11.	General Requirement All the items quoted by the vendor should be their latest model. The bid should include complete technical specification sheets where magnet, probe, and electronic specifications can be found. It should include complete pulse width and power level specifications, as well as sensitivity and resolution specifications on the stated standard samples (^1H , ^2H , ^{13}C , ^{15}N , ^{19}F and ^{31}P).		
12.	Power Supply Should meet Indian Power standards preferably without use of external converters.		
13.	All the items asked in the NIQ must be included in the technical & financial quotation/bid.		
14.	Warranty Seven (07) years of comprehensive warranty on full NMR system should be covered with unconditional preventive maintenance from the manufacturer. All parts including spares should be covered under the warranty and this fact should be clearly and explicitly specified in the tender document. The entire comprehensive warranty with unconditional preventive maintenance for 7 years must be included in the overall cost of the instrument and should cover:		

	<ol style="list-style-type: none"> 1. All parts of NMR magnet and spectrometer including console, amplifiers, all probes, VT accessories, autosampler, other accessories, spares and labor on site. 2. Free transportation, maintenance and service on site or at factory with no cost. 3. Regular up-gradation of software. 4. All third-party items such as Air Compressor, PCs, UPS system, and other peripheral accessories. 5. No Purchase Order will be raised for purchasing any parts of the NMR instrument under the seven-year comprehensive warranty. 		
15.	Single Vendor Solution The complete system must be supplied, and installed by a single/same vendor to provide seamless integration. All accessories including Liquid Helium must be supplied through the same vendor.		
16.	Service and Support The supplier must fully support NMR for at least 10 years. Services and spare support need to be provided.		
17.	Specification Sheet A detailed specification sheet highlighting all the above specifications and all supportive documents need to be attached for all the claims in the specification mentioned.		
18.	User Reference List Vendors should provide a list of recent installations (in the past 5 years), model details, and modules supplied. Also provide the performance certificates from the users (at least 3).		
19.	Tool Kit Tool kit must be included with all required accessories for installation and post-installation.		
20.	Training The manufacturer/supplier of 400 MHz NMR should provide at least five days onsite training initially during installation and during the subsequent installation/interchange of Probes.		
21.	Installation in India The quoted system or any equivalent category system should have at least five numbers of installations in India by the vendor.		
22.	Spares The supplier should confirm the availability of spares for next 10 years from the date of installation.		
23.	Custom Clearance and Delivery The supplier must ensure the custom clearance and delivery of equipment at the premises (or installation site) of HN BGU. The HN BGU shall provide the bank release order and GST charges details. Also mention if some additional accessories will be delivered later.		
24.	Turnover Certificate The vendor must provide the turnover of the last three financial years to verify the financial standing.		

Signature of Bidder

Name: _____

Designation: _____

Organization Name: _____

Contact No.: _____

<< Organization Letter Head >>

DECLARATION SHEET

We, hereby certify that all the information and data furnished by our organization with regard to these tender specifications are true and complete to the best of our knowledge. I have gone through the specifications, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

This is certified that our organization has been authorized (Copy attached) by the OEM to participate in Tender. We further certify that our organization meets all the conditions of eligibility criteria laid down in this tender document. Moreover, OEM has agreed to support on regular basis with technology / product updates and extend support for the warranty.

We, further specifically certify that our organization has not been Black Listed/De Listed or put to any Holiday by any Institutional Agency/ Govt. Department/ Public Sector Undertaking in the last three years.

The prices quoted in the financial bids are subsidized due to academic discount given to HNBGU and the rates quoted are not more than those quoted to any other Institution in India or abroad during the last one year.

Name & Address of the Vendor/ Manufacturer / Agent	
Phone	
Fax	
E-mail	
Contact Person Name	
Mobile Number	
GST number	
PAN Number	
(In case of on-line payment of EMD) UTR No. (For EMD)	

(Signature of the Tenderer)**Name:****Seal of the Company**

ANNEXURE – III

Bidder Must have 3 years of experience of supply of similar equipment's in reputed IITs/NITs/Central Universities/reputed institutions (Supporting Purchase Order's should be attached in the bid). Only experience of the supply of similar equipment will be considered. The bidder who does not satisfy this condition, their bids will be rejected.

Name of the organization	Name of Item	Name of Contact Person	Contact No.	Email

Name of application specialist / Service Engineer who have the technical competency to handle and support the quoted product during the warranty period.

Name of the organization	Name of Item	Name of Contact Person	Contact No.	Email

Signature of Tenderer

Name: _____

Designation: _____

Organization Name: _____

Contact No.: _____

<On Organization Letter Head>

ANNEXURE – IV

(For Goods/ Services Contract (If applicable))

No. _____ Dated: _

CERTIFICATE

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that the organization is not from such a country.

OR (whichever is applicable)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that the organization is from (Name of Country) and has been registered with the Competent Authority. I also certify that the organization fulfills all the requirements in this regard and is eligible to be considered.

(Copy/ evidence of valid registration by the Competent Authority is to be attached)

Signature of Bidder/ Agent

Name: _

Designation:

Organization Name:

Contact No.: _

DECLARATION OF LOCAL CONTENT

[For Local Content of Products, Services or Works]

(To be given on Company Letter Head – For tender value below Rs.10 Crores)

(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender value above Rs.10 Crores)

To,
The Hon'ble Vice-Chancellor
Hemvati Nandan Bahuguna Garhwal University (A Central University), 246174

Subject: Declaration of Local Content Tender reference No. _____
Name of Tender/Work: _____

1. Country of Origin of Goods being offered:_____.
2. With reference to Order No. P- 45021/2/2017-PP(BE-II) dated 16-09-2020 of DPIIT, Ministry of Commerce and Industry, Govt. of India, we fall under the following category of supplier (please tick the correct category) for the items for which this tender has been floated and being bided.
 - Class I local supplier – has local content equal to more than 50%. Local contents added at _____(name of location).
 - Class II local supplier – has local content more than 20% but less than 50%. Local contents added at _____(name of location).
 - Non-local supplier – has local content less than or equal to 20%. Local contents added at _____(name of location).
3. We are solely responsible for the abovementioned declaration in respect of category of supplier. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which we may can be debarred for up to 2 years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Signature & seal of the company Name

and address of the organization

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.....
.....

PRICE REASONABILITY CERTIFICATE
(to be submitted on firm's letterhead)

This is to certify that we have offered the maximum possible discount to you in our Quotation No.

_____ dated _____ for (Currency) _____. We would like to certify that the quoted price are the minimum and we have not quoted the same item on lesser rates, than those being offered to HN BGU, to any other customer nor will do so till the validity of offer or execution of purchase order, whichever is later.

Signature of Tenderer Name: _____

Designation: _____

Organization Name: _____

Contact No. _____

MANUFACTURERS' AUTHORIZATION FORM

The Tenderer shall require the Manufacturer to fill in this Form in accordance with the Instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer]

Date: [insert date (as day, month and year) of Bid Submission] Tender No.: [insert number from Invitation for Bids]

To: [insert complete name and address of Purchaser] WHEREAS

We [insert complete name of Manufacturer], who are official manufacturers of [insert type of goods manufactured], having factories at [insert full address of Manufacturer's factories], do hereby authorize [insert complete name of Tenderer] to submit a bid the purpose of which is to provide the following Goods, manufactured by us [insert name and or brief description of the Goods], and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 5.22 of the Terms and Conditions, with respect to the Goods offered by the above firm.

Signed: [insert signature(s) of authorized representative(s) of the Manufacturer] Name: [insert complete name(s) of authorized representative(s) of the Manufacturer] Title: [insert title]

Duly authorized to sign this Authorization on behalf of: [insert complete name of Tenderer]

Dated on _____ day of _____, [insert date of signing]

Training Requirement

1.	Product Description	
2.	Attendees	
3.	No. of Days	

Financial Bid (Un-priced Bid)

Ser.	Item Description	Quantity	Unit
1	Main Item		
1.01	400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer	1.00	Nos.

Note:

1. Above cost shall include Supply & installation.
2. All product brochures, technical documentation/specifications should be enclosed with the technical bid.
3. All the products should be supplied with complete accessories required.
4. Warranty: 07 year from the date of installation.
5. Delivery Period days.
6. Validity of the bid.....days from the date of submission of Bid.
7. Mode of Shipment..... (Please specify Air or Sea)
8. Bidder must quote both Ex-works, FCA/ FOB & CIF/CIP value separately.
9. Country of Origin

Date:**Place:****Designation:****Signature of Bidder****Name:****Address:**