

National Museum Institute
of History of Art, Conservation and Museology,
First Floor, National Museum Campus, Janpath, New Delhi-110011
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Tender Document for Supply of **Portable Energy Dispersive X-Ray Fluorescence Spectrometer, Portable FTIR Spectrometer and Upright Polarized Light Optical Microscope** and their maintenance during defect liability period for Conservation Laboratory National Museum, National Museum Institute of History of Art, Conservation and Museology, Janpath, New Delhi.

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NATIONAL MUSEUM INSTITUTE
of History of Art, Conservation and Museology
(Deemed to be University)
Ministry of Culture, Government of India
National Museum, Janpath, New Delhi - 110011
Ph: 011-23062795, 23012106

Tender No.: 6(8)/2020-NMI/1696

Dated: 06-10-2020

Re-tender (E-Procurement Mode)

In continuation to our earlier e-tender notice No. 6(8)/2020-NMI/1551 dated 03.07.2020. Re-tender invited in Two Bid System (Technical Bid & Financial Bid) from appropriate class of suppliers/Agencies/Firms dealing in (1) **PORTABLE ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER; (2) PORTABLE FTIR SPECTROMETER and (3) UPRIGHT POLARIZED LIGHT OPTICAL MICROSCOPE**. These equipments are required for Conservation Laboratory, National Museum & National Museum Institute of History of Art, Conservation and Museology, Janpath, New Delhi.

Earnest Money: The amount of Earnest Money (EMD) 2% of the estimated value as mentioned in page no. 5 of the tender documents.

CRITICAL DATE SHEET

Tender shall be Published on	07-10-2020	09:00 Hrs
Tender document download start date	07-10-2020	10:00 Hrs
Clarification start date	07-10-2020	10:00 Hrs
Clarification end date	14-10-2020	17:00 Hrs
Bid submission start date	07-10-2020	10:00 Hrs
Last date of submission bid	04-11-2020	17:00 Hrs
Bid opening date (Technical)	06-11-2020	11:00 Hrs
Financial Bid opening Date & Time	To be notified later	

Notes: All details regarding the tender notification & specification are available on <https://www.eprocure.gov.in>, <http://www.nmi.gov.in>

Sd/-
(Dr Praduman K. Sharma)
Registrar

CRITICAL DATE SHEET (Tender Schedule)

Sr. No.	Description of Events	Important Date and Time	
1	Publication Date	07-10-2020	09:00 Hrs.
2	Bid Document Download/Sale Start Date	07-10-2020	10:00 Hrs.
3	Clarification Start Date & Time	07-10-2020	10:00 Hrs.
4	Clarification End Date& Time	14-10-2020	17:00 Hrs.
5	Bid Submission Start Date& Time	07-10-2020	10:00 Hrs.
6	Last date of Submission Date & Time	04-11-2020	17:00 Hrs.
7	Bid Opening Date & Time (Technical)	06-11-2020	11:00 Hrs.
8	Financial Bid opening Date & Time	To be notified later	

National Museum Institute
of History of Art, Conservation and Museology,
First floor, Janpath, New Delhi-110011

NOTICE INVITING Re-TENDER (E-PROCUREMENT MODE)

Ref. No.:6(8)/2020-NMI/1696

Date-06.10.2020

National Museum Institute of History of Art, Conservation and Museology, New Delhi is a deemed to be University under Ministry of Culture, Government of India. This document describes the technical specifications for an Energy Dispersive X-Ray Fluorescence (EDXRF) spectrometer to be purchased by the Institute for non-contact and non-destructive analysis and identification of art and archaeological objects.

E-bid item rate are invited by National Museum Institute of History of Art, Conservation and Museology NMI from eligible Contractors/firms/ suppliers for the following work: -

Description of work	Estimated cost (in Rs.) excluding GST	Bid Security amount (in Rs.)
Supply of PORTABLE ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER, PORTABLE FTIR SPECTROMETER and UPRIGHT POLARIZED LIGHT OPTICAL MICROSCOPE with maintenance during defect liability period.	1,20,00,000/-	The amount of Earnest Money (EMD) 2% of the estimated value as mentioned in page no. 5.

Notes:

- i. Details regarding the tender notification and specification are available on Institute website <https://www.eprocure.gov.in>, <http://www.nmi.gov.in>. Any changes/modification in the Tender Documents shall be published through above Websites only. Bidders are therefore advice visit the websites regularly to keep themselves updated.
- ii. Manual bids will not be accepted.
- iii. For submission of E-bids, the bidders are required to get registered with <https://www.eprocure.gov.in> along with the Digital Signature Certificate issued by CCA under IT Act-2003.
- iv. Earnest Money should be deposited in the form of BG/DD favour of **Registrar, National Museum Institute of History of Art, Conservation and Museology, National Museum Campus, Janpath, New Delhi - 110011**. The amount of Earnest Money (EMD) 2% of the estimated value as mentioned in page no. 5. The bid without EMD shall not be accepted. Bidders should attach scanned copies of Earnest Money along with their e-Tender.
- v. Those who have submitted tender in response to Tender F.No. 6(8)/2020-NMI/1551 dated 03.07.2020 and submitted Earnest Money (EMD), need not submit again. However they are required to submit proof of EMD submitted earlier.
- vi. After the award of above work the Performance Security as fresh shall be required in this case & EMD will be returned once the Performance Security is received within 15 days from the date of issuance of letter of intent specified time otherwise EMD forfeited. The Performance Security will be returned after 36 months from the date of completion of all contractual obligations of the supplier.
- vii. Any queries relating to the process of online bid submission or queries relating to CPP portal in general may be directed to 24x7 CPP portal helpdesk on toll free no. 18002337315.
- viii. Any issues/clarifications relating to e-tender please contact in office working time 09.30 am to 06.00 pm no. 011-23012106
- ix. National Museum Institute reserves the right to accept or reject any bid without assigning any reason or incurring any liability whatsoever. Prospective bidders are advised to regularly visit <https://eprocure.gov.in/eprocure/> app. corrigendum/amendments etc., if any, will be notified on these websites only and separate advertisement will not be made for this.

REGISTRAR

ADVERTISED Re-TENDER (E-PROCUREMENT MODE)

Ref. No.:6(8)/2020-NMI/1696

Date-06.10.2020

In continuation to our earlier e-tender notice No. 6(8)/2020-NMI/1551 dated 03.07.2020. Item Rate Sealed Re-tenders are invited from the appropriate class of Suppliers/Agencies/Firms who have been experienced to (1) **PORTABLE ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER**; (2) **PORTABLE FTIR SPECTROMETER** and (3) **UPRIGHT POLARIZED LIGHT OPTICAL MICROSCOPE** for Conservation Laboratory National Museum, National Museum Institute of History of Art, Conservation and Museology, Janpath, New Delhi.

The tendering process is online at NIC CPPP e-portal URL address <http://etender.gov.in/eprocure/app>

Sl. No.	Particulars	Estimated Cost (Rs.) excluding GST	Earnest Money (Rs.)	Tender Fee (Rs.) (including GST) non-refundable
1.	PORTABLE ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER	70,00,000/-	1,40,000/-	500/-
2	PORTABLE FTIR SPECTROMETER	35,00,000/-	70,000/-	
3	UPRIGHT POLARIZED LIGHT OPTICAL MICROSCOPE	15,00,000/-	30,000/-	

Note :The agency may quote for the items they wish to supply one or more.

Prospective tenderers are advised to get register themselves at NIC CPP portal, obtain 'Login ID' & 'Password' and go through the instructions available in the Home Page after log into the CPP-portal <http://etender.gov.in/eprocure/app>. They should also obtain Digital Signature Certificate (DSC) in parallel which is essentially required for submission of their tender.

The tenderer shall submit their tender only at CPP portal <https://etender.gov.in/eprocure/app>. Tenderer/Supplier are advised to follow the instruction provided in the tender document for online submission of bids. Tenderers are required to upload the digitally signed file of scanned document a long with scanned copy of Demand Draft for EMD.

Uploading of tender in location other than specified above shall not be considered. Hard copy of tender shall not be entertained.

Eligibility Criteria- Supplier/agencies who fulfil the following requirements shall be eligible to apply.

1. Only Original Equipment Manufacturer (OEM)/OEM's authorized dealers are eligible to participate in this tender. In case of authorized dealer, copy of dealership certificate from OEM (valid till December 2020 or after) must be submitted along with the e-tender.
2. Authorized after sales service network shall be available in India to provide after sales technical support. Full details of authorized partner for technical support shall be provided in the bid.
3. The OEM should provide at least three years of standard warranty on equipment's parts and accessories. OEM shall also commit to support uninterrupted operation, services and maintenance (including spare parts) of the offered instrument for ten years after the successful installation of the instrument.
4. Hands-on training through authorized representative shall be provided to users at purchaser's site for safe operation of the handheld XRF analyser including details of hardware components, OS, application software, calibration checking, trouble shooting, compositional analysis and elemental mapping, report generation, data transfer and saving the spectra and composition results to other computers through USB or other means.

5. Should have satisfactorily completed the works as mentioned below during the last seven years ending up to previous day of last date of submission of tenders.
- (i) Three similar works each costing not less than Rs.3 lakhs
 - or
 - (ii) Two similar works each costing not less than Rs. 5 lakhs
 - or
 - (iii) One similar work costing not less than Rs. 7 lakhs.
8. Average Annual Financial Turnover during the last three financial years i.e.2017-18, 2018-19& 2019-20 should be at least 50% of the estimated cost.
9. **Registration/License:** The firm should have GST Registration with the appropriate Authorities.
10. If any information furnished by the applicant is found incorrect at a later stage, applicant shall be liable to be debarred from tendering in NMI. The department reserves the right to verify the particulars furnished by the applicant independently.

PROCEDURE FOR SUBMISSION OF BIDS:-

The Bid in original duly signed along with scanned copies of all relevant documents should be uploaded on e-Tender portal <https://eprocure.gov.in/eprocure/app> by the Bidder and original Hard Copies of EMD and Tender Fee must be submitted physically to **Registrar, National Museum Institute of History of Art, Conservation and Museology, 1st floor, Janpath, New Delhi-110011**. Bidder is advised to submit the BID strictly in accordance with the terms & conditions and specifications contained in the BID documents and need not to stipulate any deviation or condition. Institute reserves the right to reject any BID containing deviations to the terms & conditions and requirements stipulated in the BID document.

In the Commercial Bid, the Bidders must quote the rates in figures as specified in excel template (BoQ).

BID shall be submitted in two parts: Part I- Technical Bid in E envelope-1 and Part-II - Commercial Bid in E envelope-2.Both the envelopes should be submitted online.

The BID must contain the name, address and contact details of business of the person or persons submitting the BID and must **be signed and sealed by the Bidder with his/her signature on every page of the BID and upload the scanned copy.**

BID by a partnership firm must furnish names of all partners and be signed in the partnership name, followed by signatures and designations of authorized partners or other authorized representatives. The copy of partnership deed/agreement should also be furnished.

The Bidder's name stated in the BID shall be exact legal name of the firm/company/ corporation etc. as registered or incorporated. All changes/alterations/corrections in the BID shall be signed with date in full by the person or persons signing the bid.

Transfer of BID submitted by one Bidder to another is not permissible. No alteration in the essence of BID, once submitted shall be permissible.

Please use two cover systems for this tender.

- i) Envelope-1 i.e. Technical Bid
- ii) Envelope-2 i.e. Commercial/Financial bid/Price bid

Please note that **Rates should not be quoted in the Technical Bid**. Only Commercial Bid should indicate rates and should be uploaded on-procurement (<https://eprocure.gov.in/eprocure/app>) portal.

All the documents viz. Earnest Money Deposit and Tender Fee, as hereinafter directed are to be kept in a single sealed cover super-scribed with Tender Number, Due date, and the words

“SUPPLY OF PORTABLE ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER, PORTABLE FTIR SPECTROMETER, UPRIGHT POLARIZED LIGHT OPTICAL MICROSCOPE at National Museum, National Museum Institute of History of Art, Conservation and Museology, Janpath, New Delhi” due “NOT TO BE OPENED BEFORE TIME”.

The cover thus prepared should also indicate clearly the name and address of the Bidder, to enable the Bid to be returned unopened in case it is received after the specified date and time.

The Bid shall be in the prescribed format and shall be signed in original by the Bidder or a person duly authorized to bind the Bidder to the contract and scanned and uploaded in CPP Portal.

All pages of the bid except un-amended printed literature shall be initialled by the person(s) signing the Bid. The bid shall contain no interlineations, erasures or over writing except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person(s) signing the bid.

EARNEST MONEY DEPOSIT (EMD) & Tender Fee:

- i. The amount of Earnest Money Deposit (EMD) 2% of the estimated value of quoted items and Tender fee of Rs 500/- should be submitted along with the Tender by way of A Demand Draft/Bank Guarantee(BG) (only of Nationalized Bank) in favour of National Museum Institute of History of Art, Conservation and Museology, payable at New Delhi.
- ii. EMD received from unsuccessful Bidders' will be returned within reasonable time after the issuing of the contract to the successful bidder.
- iii. Bids without requisite Earnest Money shall be summarily rejected. However firms registered as MICRO and Small Enterprises (MSEs) as defined in MSME procurement policy may be exempted from paying the EMD/bid security/tender fee. To claim the exemption, the bidders must be offering/providing relevant Documentary proof. Exemption on submission of EMD only will be given against submission of valid MSME/NSIC certificate under valid category.
- iv. The successful Bidder's EMD/bid security will be discharged upon the Bidder accepting the job award letter and furnishing the Performance Guarantee.
- v. The EMD/bid security may be forfeited:
 - a. If a Bidder withdraws its bid during the period of bid validity; Or
 - b. If a Bidder makes any statement or encloses any form which turns out to be false, incorrect and/or misleading at any time and/ or conceals or suppresses material information; Or
 - c. In case of the successful Bidder, if the Bidder fails to sign the Agreement or to furnish performance guarantee.
- vi. The Technical Bid submitted in response to this Tender Document along with the supporting material, will become the property of the Institute.

1) TECHNICAL BID SHALL CONTAIN THE FOLLOWING:

List of all Mandatory Documents to be scanned and uploaded within the period of bid submission in E-Envelope 1:

- i. Cost of BID Tender Document/documentation fees of (Rs.500/-) in the shape of Bank Draft.
- ii. Earnest Money Deposit (EMD).
- iii. Bidding document duly signed and stamped on all pages by the authorized signatory thereby accepting all terms and conditions.
- iv. Manufacturer Authorization Form (MAF) from the respective make,if OEM self
- v. Declaration to be submitted on letter head of OEM.
- vi. Bidder's Eligibility Criteria i.e. work completion certificates.
- vii. Documents related to, GST, (enclose copy).
- viii. Agency should not be blacklisted (An affidavit on **NON JUDICIAL STAMP PAPER** of

Rs.10/-, signed by Director/Proprietor of the Firm).

- ix. Company or firm or proprietorship registered document/proof.
- x. Additional documents, if any.

Note: As mentioned earlier, scanned copies of all bid documents should be uploaded on CPP portal. If any bidder fails to upload scanned copies of all documents, the bid will not be accepted.

2) COMMERCIAL BID/Price Bid: Envelope 2 (Submitted through online only)

Commercial BID shall be uploaded as per **Schedule-1** of rates enclosed

- i. Copy of Commercial Bid shall be uploaded by the Bidder online on CPP Portal as per the rate schedule specified in the BoQ template (excel file). Bidders are advised to download the BoQ template from the CPP Portal.
- ii. The details of Rate Schedule for all the services under all the components of this Tender for which the Bidder is intending to quote, is given in Schedule-1(Part-II). The rates in these schedules shall be applicable in case the quantities of a particular order vary from those mentioned in relevant Technical BID. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed, they can be imparted training on online bidding process as per details available on the website.
- iii. The intending bidder must have valid **class-III digital signature** to submit the bid.
- iv. The Purchaser shall open the bids as per electronic bid opening procedures specified in Central Public Procurement Portal (CPPP) at the date and time specified. Bidders can also view the bid opening by logging on to the e-procurement system. Specific bid opening procedures are laid down at <http://eprocure.gov.in/eprocure/app> under the head —Bidders Manual Kit. The tenderer/bidder will be at liberty to be present either in person or through an authorized representative at the time of opening of the Bid or they can view the bid opening event online at their remote end. Price Bids of only those tenderers shall be opened whose technical bids qualify.
- v. Contractor can upload documents in the form of **JPG** format and **PDF** format.
- vi. Contractor must ensure to quote his tender item for the Estimated Cost. The column meant for quoting item rates in figures appears in **red colour** and the moment rate is entered, it turns sky blue.
- vii. The bidder can quote for single item, two items or all the items as per his choice and the lowest bidders shall be considered each item wise separately. The work orders shall be given separately for each item for the lowest bidder in each item. The unquoted items shall be left blank. Work order will be given to the lowest bidder(s) separately for each item or combined for all the items.
- viii. The successful tenderer shall be required to submit a **Performance Guarantee of 5%** (Five Percent) of the agreement amount within 10 days of issue of letter of intent. This period can be further extended by Registrar up to a maximum period of 7 days on the written request of the contractor.
- ix. Tenders with any condition including that of conditional rebates shall be rejected forthwith. Rates of such tenders shall neither be read out, nor entered in tender opening register at the time of opening of tenders.
- x. The Department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too may bids are received satisfying the laid down criteria.
- xi. Contractor shall not divert any advance payments or part thereof for any other purpose other than needed for completion of the contracted work. All advance payments received as per terms of the contract (i.e. mobilization, secured against materials brought at site, secured against plant & machinery and / or for work done during interim stages, etc.) are required to be re-invested in the contracted work to ensure advance availability resources in terms of materials, labour, plant & machinery needed for required pace of progress for timely completion of work.
- xii. The Registrar, NMI reserve the right to verify the credential submitted by the agency at any stage

(before or after the award of work). If at any stage, any information /documents submitted by the tenderer is found to be incorrect/false or have some discrepancy which disqualifies the contractor then the following actions are liable:

- a) Forfeit the entire amount of EMD submitted by the firm.
- b) The agency shall be liable for debarment from tendering in NMI, apart from any other appropriate contractual/legal action. The Registrar, NMI reserves the right of accepting or rejecting any or all tenders or any part thereof without assigning any reason.

Registrar

BIDDING PROCEDURE

The tenderers are required to submit digitally signed eligibility criteria of the conditions such as work orders of similar nature with completion certificate/certified bills indicating the value of work specified as above, GST registration certificate, ESI & EPF Registration if applicable etc.

- 1) Estimated Cost of the Contract Works are **Rs.120,00,000 (Rupees One crore twenty lakh Only)** for the market rates excluding GST.
- 2) Time for carrying out the work will be within 30 days and the date of commencement shall be reckoned from the seventh day of issue of award letter.
- 3) The tender shall not be issued physically. The tendering process is online at NIC CPPP e-portal URL address <http://etender.gov.in/eprcure/app>.
- 4) Earnest Money should be deposited in the form of BG/DD favour of **Registrar, National Museum Institute of History of Art, Conservation and Museology, National Museum Campus, Janpath, New Delhi - 110011**. The amount of Earnest Money (EMD) 2% of the estimated value as mentioned in page no. 5. The bid without EMD shall not be accepted. Bidders should attach scanned copies of Earnest Money along with their e-Tender and **Tender Fee of Rs 500/-(Rupees five hundred only)** as Demand Draft or pay order of a nationalized bank drawn in favour of "National Museum Institute of History of Art, Conservation and Museology", payable at New Delhi *should reach by post/courier/given in person to the concerned officials as mentioned in CRITICAL DATE SHEET*.

Estimated Cost Put to Tender : Rs.1,20,00,000/- (Excluding GST)

Earnest money : The amount of Earnest Money (EMD) 2% of the estimated value as mentioned in page no. 5. (To be returned after receiving Performance Guarantee).

Performance Guarantee : 5% of tendered/accepted value.

The successful tenderer shall be required to submit a Performance Guarantee of 5% (Five Percent) of the agreement amount within 10 days of issue of letter of intent. This period can be further extended by Registrar up to a maximum period of 7 days on the written request of the contractor.

- 5) The Employer does not bind himself to accept the lowest or any tender and reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rates quoted.
- 6) Canvassing in connection with the tenders is prohibited and the tenders submitted by the contractor who resort to canvassing are liable for rejection.
- 7) The tenders shall not be permitted to tender for works in the concerned unit of NMI in which a relative is posted in the grade between Registrar. He shall also intimate the names of persons who are working with him in any capacity or subsequently employed by him and who relatives are as mentioned above.
- 8) NMI reserves the right to increase or decrease the quantity of items in the BoQ. If required NMI may remove the item from issuing the work order during awarding the work as per requirement and for any Administrative reasons.

Note:

A person shall be deemed to be relative of another if, and only if, They are members of a Hindu undivided family; They are husband and wife; or The one is related to the other in the following manner: Father, Mother (Including step mother), Son (Including step son), Son's wife, Daughter (including step daughter), Father's father, Son's son, Son's son's wife, Son's daughter, Son's daughter's husband, Daughter's husband, Daughter's son, Daughter's son's wife, Daughter's daughter, Daughter's and daughter's husband, Brother (Including step brother), Brother's wife, Sister (including step sister), Sister's husband.

- 9) Tender submitted shall remain valid for 90 days from the date of opening for the purposed of acceptance and award of work, validity beyond 90 days from the date of opening shall be by mutual consent.
- 10) The tenderer shall quote rates both in figures and words. He shall also workout the amount for each item of work and write in both figures and words. On check, if there are difference between the rate s quoted by the tenderer in words and in figures or in the amount worked out by him, the following procedure shall be followed:

When there is a difference between the rates in figures and in words, the rates, which correspond to the amounts worked out by the tenderer, shall be taken as correct. When the tenderer does not work out the amount of

an item or it does not correspond with the rate written either in figures or in words, the rate quoted by the tenderer in words shall be taken as correct. When the rate quoted by the tenderer in figures and in words tallies but the amount is not worked out correctly the rate quoted by the tenderer shall be taken as correct and not the amount. When no rate have been quoted for any item (s), leaving space / coulombs both in figure & works and amount unfilled, it will be considered that the tenders has included cost of the item in thither items and rate for such items will be treated as “Zero” and work will be required to be executed accordingly.

- 11) In case of doubt obtain required particulars, which may in any way influence his tender from the person as no claim whatsoever will be entertained for any alleged ignorance thereof.
- 12) Earnest money shall be forfeited if the contractor fails to commence the work as per letter of award. If any tenderer withdraws this tender within the validity period or makes any modification in terms and condition of the tender which are not acceptable to the Department, then NMI shall without prejudice to any right or remedy, be at liberty to forfeit 50% fifty percent) of the earnest money absolutely.
- 13) Except writing rates and amount, the tenderer should not write any conditions or make any changes, additions alterations and modifications in the printed form of tenders. Tenderers who are desirous to offer rebate, the same should be brought out separately in the covering letter and submitted along with the tender.
- 14) Some of the provisions of General Conditions of Contract are given below. Interpretation however shall be as given in the General Conditions of the tender.
- 15) The supplier shall have to dispose of all the building rubbish (malba) accumulated during execution suitable outside the campus of NMI.
- 16) Deduction of Income Tax and Labour cess at the prevailing rate shall be made from the running and final bills of the work.
- 17) The supplier shall quote their rates inclusive of all applicable Taxes and Duties, GST etc.

DEFECT LIABILITY PERIOD (REFUND OF SECURITY DEPOSIT):

The defect liability/maintenance period shall be 12 months after the date of completion of work for this contract agreement. The Security Deposit shall be released after the defect liability period of 12 months after completion of work and for this, the contractor shall have to produce a certificate stating that no defects are pending for rectification from the Lab-in-charge, but subject to other provisions specified elsewhere in the contract agreement.

Supply Requirements

1. List of Goods and Delivery Schedule

S. No.	Description of Goods	Qty.	Final (Project Site) Destination as specified in BDS	Make / Brand of the Items / Goods	Earliest Delivery Date	Latest Delivery Date	Bidder's offered Delivery Date
1	PORTABLE ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER	01	As per Tender Documents				
2	PORTABLE FTIR SPECTROMETER	01	As per Tender Documents				
3	UPRIGHT POLARIZED LIGHT OPTICAL MICROSCOPE	01	As per Tender Documents				

2. List of Related Services and Completion Schedule

Service	Description of Service	Quantity, if any	Physical Unit	Place where Services shall be performed	Final Completion Date(s) of Services

3. Technical Specification

i) TECHNICAL SPECIFICATIONS FOR PORTABLE ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER

S. No.	Technical Parameters	Value/detail as per indent specification
1	Element detection range	EDXRF should be able to analyze all elements from Na (11) to U (92) simultaneously in art objects without any contact with the sample/object. Helium Gas flushing facility should be built-in for analysis of light elements.
2	Elemental mapping	EDXRF should be capable of automatic x-y axis, 1D and 2D elemental mapping with minimum 5-10 cm ² coverage area in single scan set up. The x-y movement of tripod/stage should be motorized and controlled through software.
3	Excitation Source/probe beam	EDXRF should be equipped with Rh-target, 4W micro-focus x-ray tube anode, capable of generating up to 50 kV, suitable for analysis of both low and high Z elements and should also be equipped with appropriate set of user-replaceable filters for detection of various elements with wide difference in atomic numbers.
4	Detector	High Resolution & large area fast Silicon Drift Detector (Fast SDD) with at least 25mm ² active area.
5	Spectral resolution	Spectral resolution of <140 eV and capability to acquire X-ray data/count rate >100,000 counts per second (cps).
6	Focusing and Measurement	The instrument should be equipped with video assisted, accurate focusing and precise alignment of x-ray beam on to the measuring spot. Spot size shall be 3 mm or less.
7	Portability	EDXRF should be light-weight and portable for outdoor/field applications. It should have operating capabilities in non-contact and non-destructive mode, without the requirement for sampling.
8	Application Software	<ul style="list-style-type: none"> • A Windows based software should be supplied for instrument control, data acquisition, data evaluation, analysis, presentation and report generation. • The software should be capable of single and multiple point elemental mapping, colour-coded visualization of elemental maps and map stitching. • Spectral deconvolution for qualitative, semi-quantitative and standardless fundamental parameter for semi-quantitative analysis. • Built in calibration check at start. Standard/reference sample set for calibration maintenance.
9	Operating environment & Safety provisions	<ul style="list-style-type: none"> • Temperature: 5-50 °C or more; Humidity: 10% to 90% relative humidity (non- condensing). • Built-in safety provision and compliance certificate for health hazards due to X-ray.

10	Accessories	<ul style="list-style-type: none"> • Portable computer (laptop) for instrument operation and data analysis <ul style="list-style-type: none"> ○ OS – Windows 10 pro 64 bit ○ RAM – 8 GB DDR4 SDRAM or higher ○ Processor – Intel Core i7 – 10th Generation with Intel UHD graphics or better ○ Hard Drive – SSD, 512 GB or higher ○ Display – 14” • Battery backup for remote field application. • Tripod/stand for hands free use. • Rugged carry case. • Backup of all essential software related to OS and application software. • Built-in system for helium purge • Power and data transfer cables • All other essential accessories
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ii) TECHNICAL SPECIFICATIONS FOR PORTABLE FTIR SPECTROMETER

S.No.	Technical Parameters	Value/Details as per indent specification
1	Spectral Range	6000-600 cm ⁻¹ or better
2	Spectral resolution	2cm ⁻¹ or better
3	Wave number accuracy	0.1 cm ⁻¹ or better
4	Signal-to-noise ratio	50,000:1 or better
5	Optics	ZnSe beam splitter optics, optical unit sealed and desiccated for application in humid conditions, all mirrors gold coated.
6	Interferometer	Permanently aligned, high stability for field operations, non-hygroscopic windows to work under extreme humid conditions
7	Detector	High sensitivity DTGS/DLaTGS detector
8	Sampling interfaces	The instrument must accommodate multiple sampling interfaces (particularly Diamond ATR for analysis of samples and External Reflectance interface for non-destructive analysis). Sampling modules must be automatically recognised and spectral test routines must automatically start to verify interface’s performance.
9	Software	<p>PC based Software for data measurement, manipulation and evaluation with a step by step assistance. Should include search capabilities as well as the possibility to create user own libraries. Should include quantitative analysis, data processing, peak picking, peak height, peak area, peak width, smoothing, baseline correction, subtraction, etc.</p> <p>Must contain a comprehensive library of ATR spectra of polymers, monomers, additives, plasticizer, fillers, building materials, excipients, organic and inorganic chemicals, fibres, proteins, fatty acids, lipids, ingredients, natural products, pigments, minerals, silicon containing compounds, etc.</p>
10	Portability	<ul style="list-style-type: none"> • FTIR should be light-weight and portable for outdoor/field applications.
11	Accessories	<ul style="list-style-type: none"> • Portable computer (laptop) for instrument operation and data analysis <ul style="list-style-type: none"> ○ OS – Windows 10 pro 64 bit ○ RAM – 8 GB DDR4 SDRAM or higher

		<ul style="list-style-type: none"> ○ Processor – Intel Core i7 – 10th Generation with Intel UHD graphics or better ○ Hard Drive – SSD, 512 GB or higher ○ Display – 14” ● Tripod stand for hands-free operation of the instrument ● Battery packs, power and data transfer cables and all other essential accessories should be quoted as standard.
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iii) TECHNICAL SPECIFICATIONS FOR UPRIGHT POLARIZED LIGHT OPTICAL MICROSCOPE:

S.N.	Items	Description
1	Microscope Body/Frame	<ul style="list-style-type: none"> ● Polarising Microscope for Reflected Light (RL) and Transmitted Light (TL) illumination. ● Focusable Bertrand lens should be provided for conoscopic & orthoscopic observation. ● Allows Interchangeable stages.
2	Intermediate Magnification Changer	<ul style="list-style-type: none"> ● 1x to 2x
3	Phototube	<ul style="list-style-type: none"> ● Wide-field Trinocular tube with 25mm FOV (<i>or better</i>)
4	Focus	<ul style="list-style-type: none"> ● Stroke: 25 mm, 2 to 3 step focus, minimum graduation 1 μm.
5	Eye Piece	<ul style="list-style-type: none"> ● Pair of wide-field 10x focusable eyepiece (one with cross hair and micrometer scale) with 25mm FOV (<i>or better</i>),
6	Nose-piece	<ul style="list-style-type: none"> ● Revolving quintuple, coded nosepiece (<i>or better</i>); compatible for BF, DF, POL, DIC
7	Illumination	LED Transmitted and Reflected light sources with lamp house.
8	Objectives	<ul style="list-style-type: none"> ● All objectives lenses should be compatible for BF, DF, POL, & DIC applications <ul style="list-style-type: none"> ○ 5x, NA \geq 0.12 ○ 10x, NA \geq 0.25 ○ 20x, NA \geq 0.4, ○ 50x, NA \geq 0.75 ○ 100x, NA \geq 0.9 ● All the objectives should have chromatic aberration corrected in the visible region (Violet to red). (<i>All details like objective type, manufacturer name and N.A. etc. should be mentioned on the objectives lenses to ensure the quality.</i>)
9	Stage	<ul style="list-style-type: none"> ● Rotatable Stage for POL with attachable mechanical stage and 45^oclickstop. Graduated 1^o increments. ● Additional X-Y right hand mechanical stage (75x50 mm or bigger) for transmitted and reflected light with slide holder.
10	Polarizer and Analyzer	360-degree rotatable polarizer and analyser for TL and RL.
11	Condenser	Swing out polarizing condenser
12	Filters	Light balancing filter & Neutral Density filters
13	Compensators	Quarter wavelength plate & Tint plate
14	Camera and Software	<ul style="list-style-type: none"> ● High resolution, 12 Megapixel CMOS/CCD colour camera (<i>or better</i>) ● Pixel Size: 1.25x1.25 μm (<i>or better</i>) ● Sensor size 1/2.3” (<i>or better</i>) ● Fast live image capture with at least 30 FPS at full resolution (<i>or better</i>) ● Fast USB-3 connection (<i>or better</i>) ● Compatible software for camera control and data analysis (camera and software should be from same manufacturer). ● Image Analyzer Software should be capable of image acquisition,

		<p>including HDR and auto-calibration of magnification, video acquisition, annotations, layer management, scale bar, cross hair, info stamp display and image filters, digital reticle/grid, interactive measurements etc.</p> <ul style="list-style-type: none"> • Software should be capable of doing of automatic point counting, grain size measurement, linear distance, curved length, area, angle, count, grey level and panoramic image capture with seamless stitching of images in order to acquire area larger than field of view in XY. • Data exported to MS Excel or Word, Report creation, document storage and support for microscopes and cameras • C-mount adapter for camera and other camera accessories
15	Workstation	<ul style="list-style-type: none"> • Portable computer (laptop) for instrument operation and data analysis <ul style="list-style-type: none"> ○ OS – Windows 10 pro 64 bit ○ RAM – 8 GB DDR4 SDRAM or higher ○ Processor – Intel Core i7 – 10th Generation with Intel UHD graphics or better ○ Hard Drive – SSD, 512 GB or higher ○ Display – 14”
16	Upgradability	Microscope should be easily upgradable and should also be able to include Fluorescence microimaging in future.
17	Compatibility and integration	Microscope, objective lenses, camera & software should be from same manufacturer for better compatibility, integration and future upgradation.

GENERAL TERMS & CONDITIONS OF THE WORK

- A. The bids should be uploaded in <https://eprocure.gov.in/eprocure/app>. Please follow the guidelines of the site.
- B. The bidder is requested to visit the work site and get acquainted with site conditions regarding layout and all other matters, affecting the work before filling in the item rates. Submission of a tender by a bidder, implies that they have read these instructions and have made themselves aware of the scope of the work, conditions of contract and NMI will not, therefore, bear any extra charges on any account, in case the bidder finds later on to have misjudged the site conditions or specification.
- C. The supplier has to quote his best competitive price considering all the factors. The price shall be inclusive of all type of taxes, duties, statutory labour liabilities etc. all complete. No escalation on any account shall be admissible during the currency of contract.
- D. The Registrar, NMI, reserves the right to cancel any or all the tenders without assigning any reason.
- E. The supplier shall be responsible for any damage to the equipments caused due to faulty operation/poor servicing/mishandling etc. by their staff and shall rectify the defects free of cost. Decision of the Registrar, NMI, shall be final in this matter.
- F. No escalation in any form either of material (spares) consumable or labour shall be payable by NMI during the tenure of this tender contract.
- G. All the tools shall be arranged by the Contractor and must be kept at the site.
- H. During the testing and commissioning electricity shall be supplied by the NMI free of cost.
- I. Any other small items of repair/replacement not specified in the contract shall be got done by the supplier.
- J. Validity of Tender: Ninety days from the date of opening of tender. During this period no bidder shall be allowed to withdraw his tender. In case of withdrawal, the EMD submitted by the bidder shall be forfeited and no claim shall be entertained on this regard.
- K. The supplier shall ensure compliance of all statutory laws and bye laws of the Central Govt./State Govt./Municipal Authorities related to the employment of their staff and all such obligations under Wage Act, Workmen Compensation Act, ESI Act, Provident Fund and Miscellaneous Provision Act and Contract Labour Act, 1970 etc. NMI will not be responsible for such purposes in anyway.
- L. Conditional tenders will not be accepted.
- M. A penalty of 0.5% of the delivered price / total order value per week shall be levied for the delay subject to a maximum of 5% of the total order value shall be imposed.

N. FORCE MAJEURE

For the purpose of and within the scope of contract by way of indication and not of limitation, the term "Force Majeure" shall mean acts of nature, strikes, Lockouts, or other industrial disturbances, act of public/enemy, wars, blockades, insurrection, riots, epidemics, landslides, earthquakes, storms lightening, flood, washouts, civil disturbances, explosion and any other similar even not within the control of either party on which by exercise of due care and diligence neither party is able to prevent or overcome.

If a Force Majeure situation arises, the firms shall promptly notify the Institute in writing of such conditions and the cause thereof.

O. PAYMENT TERMS

No payment shall be made in advance. Payment will be made as per details below

1. **Where installation is not required:** 100% payment will be made after satisfactory delivery of material duly certified by the HOD & Registrar

OR

Where Installation is required: 100% payment will be made after satisfactory delivery and installation of the material duly certified by the HOD& Registrar

2. The firm should submit the Tax invoice for the supplied items. Taxes or Govt. levy, if any as applicable at the time of delivery the same must be shown separately in the bill.
3. Payment will be released, after receipt and acceptance of items by the authorized representative of the Institute and on submission of the bill along with the list of items supplied as per the purchase order. No advance amount will be paid.
4. NMI does not have any exemption from custom duty nor any certificate for reduced custom duty.

P. DELIVERY SCHEDULE

1. Free delivery and installation at National Museum, National Museum Institute of History of Art, Conservation and Museology, Janpath, New Delhi.
2. The items should be delivered, placed, installed and commissioned at National Museum, National Museum Institute of History of Art, Conservation and Museology, Janpath, New Delhi within a period of 30-60 days from the date of issue of the Purchase Order.
3. If the firm fails to supply the ordered quantity within the stipulated time period, the penalty @0.5% of the delivered price / total order value per week shall be levied for the delay subject to a maximum of 5% of the total order value shall be imposed.
4. Penalty as may be decided by the Institute is liable to be levied on the firm who does not supply the items according to quantity/specifications and time limit specified in the purchase order.

Q. ARBITRATION

In the event of any difference or dispute arising out of this agreement, all efforts shall be made by both the Parties to settle the same amicably. Failing an amicable settlement, the dispute shall be finally settled through an arbitration conducted under the Arbitration and Conciliation Act, 1996 by the sole Arbitrator appointed by the Registrar, NMI. The arbitrator shall give reasoned and speaking award.

R. TRANSFER AND SUB-LETTING OF CONTRACT

The bidder 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 approval of the Competent Authority.

S. THE TERMINATION OF CONTRACT

1. If the performance of the firm is found not satisfactory, breach in terms & conditions.
2. If the firm is found blacklisted by the any Govt. Establishment / University / Institution /Govt. Hospitals / Public Sector Undertaking, etc.
3. The firm should not indulge in any malpractice or illegal act concerning the contract at any time. If any malpractice followed by the firm is reported / discovered by the Institute, the contract shall be terminated without notice and action to blacklist the firm is liable to be taken.

SIGNATURE OF TENDERER

GENERAL TERMS & CONDITIONS

1. It is the responsibility of Bidders to read all terms & conditions of this tender carefully before filling the tender. Incomplete tender documents/or bids not responsive enough to the tender terms shall be rejected. NMI reserves the right to split or reject any or all the tenders without assigning any reason thereof. NMI shall not be responsible for any postal delays.
2. The Financial bids of only those firms who qualify in Technical Bid evaluation by the concerned Committee shall be opened. The financial bids of all those firms who fail to qualify in the technical bid will not be opened under any circumstances.
3. All entries in the tender form should be legible and filled clearly. Any overwriting or cutting which is unavoidable shall be signed by the authorized signatory. Any alterations without authentication will be treated as a 'NIL' entry.
4. Tender incomplete in any form will be rejected outright.
5. All the technical bids will be scrutinized, relevant documents checked for their authenticity.
6. No firm will be allowed to withdraw/modify bid after opening of their submitted bids within the bid validity period otherwise the EMD submitted by the firm would stand forfeited.
7. In case the successful firm declines the offer of contract, for whatsoever reason(s), its EMD will be forfeited.
8. Each page of the tender document should be signed and stamped by authorized signatory of the firm as a token of acceptance of the terms and conditions laid down.
9. The Institute reserves its right to reject all or any tender in whole, or in part or cancel the entire tender process, without assigning any reason thereof.
10. In case of breach of terms and conditions by the firm, the Security Deposit will be forfeited at the discretion of the Institute.
11. Institute reserves the right to rectify any discrepancy of this advertisement, if found later on. In case of any inadvertent mistake in the process which may be detected at any stage even after the issue of purchase order, the Institute reserves the right to modify/withdraw/cancel any communication made to the bidder.
12. Any corrigendum/addendum/errata in respect of the above advertisement shall be made available only at our Institute website www.iitr.ac.in & <https://eprocure.gov.in/eprocure/app>. Hence prospective bidders are advised to visit the Institute website/CPPP regularly.
13. Bidders shall be responsible for the correctness of the information provided in the enquiry letter/tender document. If it is found at a later date that any information given in the bid is Incorrect/false then the bid is liable to be disqualified/rejected.
14. Institute will not be responsible for non-receipt of bid(s) within the stipulated date and time due to any postal delay/loss of application/document sent in transit.
15. Before submission of bids, bidders should read the complete enquiry letter/tender document carefully and ensure that the bidders fulfil the eligibility criteria.
16. Canvassing in any form will result in disqualification.
17. If the firm quotes 'NIL' charges/consideration, the bid shall be treated as unresponsive and will not be considered.
18. If 'extra, as actual' etc. are mentioned against any of the price components in the bid, the bid will be rejected.
19. The items so supplied will have to be of high quality & grade and in the event if items are found to be of inferior quality, the supplier is liable to be banned or suspended from doing business in NMI.

Special Terms & Conditions

1. The bidder should quote their offer/rates in BoQ in clear terms without ambiguity and Period of guarantee/warranty, where applicable, should be specified in the bid.
2. Comprehensive warranty Clause: The warranty period should be followed as per technical specifications. Availability of Service centers of Bidders/OEM must have in the state of consignee's Locations. Details of Authorized Service Centers such as complete Address, Name of the Contact Person(s) with Phone Numbers to be furnished by the OEMs/Bidders in their letterhead/MAF (Manufacturer Authorization Form) is required to support warranty period.

SIGNATURE OF TENDERER

Note : The bidder can quote for single item, two items or all the items as per his choice and the lowest bidders shall be considered each item wise separately. The work orders shall be given separately for each item for the lowest bidder in each item. The unquoted items shall be left blank. NMI reserves the right to increase or decrease the quantity of items in the BoQ. If required NMI may remove the item from issuing the work order during awarding the work as per requirement and for any Administrative reasons.

ANNEXURES

Annexure mentioned below must be enclosed along with the bid on the letter head of the firm duly sealed & signed by the authorized signatory

ACCEPTANCE LETTER

(To be given on company letter head and uploaded in Technical Cover)

Ref. No.....

Dated.....

**The Registrar
National Museum Institute
of History of Art, Conservation and Museology
Japath, New Delhi**

Subject: - Acceptance of Terms and conditions of NMI Tender Document.

Name of Work:

Dear Sir,

1. The tender document for the work mentioned above have been downloaded from **Central Public Procurement Portal** by me/us and I / we hereby certify that I / we have read the entire terms and conditions of the tender document which shall form part of the contract/agreement and I/ We hereby unconditionally **accept** the Tender conditions / clauses of Tender document(s) / corrigendum(s) in its totality / entirety contained therein.
2. The corrigendum(s) issued from time to time by your department/organisation have also been taken into consideration, while submitting this acceptance letter.
3. It is certified that I/we have not stipulated any condition(s) in our tender offer. In case any condition(s) are found in our tender offer violated after opening of tender, I/we agree that the tender shall be rejected and NMI shall without prejudice to any other right or remedy to be liberty to forfeit the EMD absolutely.
4. The required Earnest Money Deposit (EMD) and Tender fee, for this work, have already been deposited in personal/by post in physical form in the Demand Draft drawn in favour of National Museum Institute of History of Art, Conservation and Museology, Janpath, New Delhi,
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by Govt. Department / Public sector undertaking.
6. I/ We do hereby declare that no alternate bid has been submitted by me/us.
7. I /We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then NMI shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said EMD/PBG.
8. I/We declare that I/We have not paid and will not pay any bribe to any officer of NMI for awarding this contract at any stage during its execution or at the time of payments of bills, and further if any officer of NMI asks for bribe/gratification, I will immediately report it to the appropriate authority in NMI.
9. That, I/we undertake that NMI's tender document shall form part of contract agreement. I/we understand the NMI is not bound to accept the lowest or any bid, NMI shall receive.

Thanking You,

Yours faithfully,

Date:**(Signature of Bidder along with seal)****Name: -****Name and address of the Firm: -****Contact No:-****Email-**

(To be submitted with the technical bid)

Undertaking on Annual Financial Turnover

(To be given on the letter head of the Authorized Chartered Accountant/Company Secretary, do not use the Xerox copy of the letter head)

**The Registrar
National Museum Institute
of History of Art, Conservation and Museology
Japath, New Delhi**

This is to certify that the annual turnover of last three Financial Year i.e. 2016-17, 2017-18 and 2018-19 of the firm/company named as (Name of the firm & Address) is given below:

Financial Years	Turnover in Lakh/Crore
2016-17	
2017-18	
2018-19	

Name:

Signature of the Authorized Signatory:

Designation:

Seal of the Firm:

Date:

(To be submitted with Technical Bid)

CLIENT DETAILS

(To be given on the letter head of the firm, do not use the Xerox copy of the letter head)

Ref. No......**Dated**.....

**The Registrar
National Museum Institute
of History of Art, Conservation and Museology
Japath, New Delhi**

Sub: Supply of Portable Energy Dispersive X-Ray Fluorescence Spectrometer, Portable FTIR Spectrometer and Upright Polarized Light Optical Microscope and their maintenance during defect liability period for Conservation Laboratory National Museum, National Museum Institute of History of Art, Conservation and Museology, Janpath, New Delhi.

Sir,

I/We hereby mention following list of our clients with any Govt./Semi Govt. Units /IITs/NITs/other reputed Institutions/Deptt./ Offices or Public Sector Undertaking during the period of January 2016 to May 2020 for the similar items. **(Copies of purchase order must be enclosed with the offer)**

Sr. No.	NAME OF THE CLIENT	PURCHASE ORDER DETAILS	AMOUNT OF ORDER

Name:**Signature of the Authorized Signatory:****Designation:****Seal of the Firm:****Date:**

Technical Specification Proforma

(To be submitted with the technical bid)

i) TECHNICAL SPECIFICATIONS FOR PORTABLE ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER

S. No	Technical Parameters	Value/detail as per indent specification	Details filled by bidder
1	Element detection range	EDXRF should be able to analyze all elements from Na (11) to U (92) simultaneously in art objects without any contact with the sample/object. Helium Gas flushing facility should be built-in for analysis of light elements.	
2	Elemental mapping	EDXRF should be capable of automatic x-y axis, 1D and 2D elemental mapping with minimum 5-10 cm ² coverage area in single scan set up. The x-y movement of tripod/stage should be motorized and controlled through software.	
3	Excitation Source/probe beam	EDXRF should be equipped with Rh-target,4W micro-focus x-ray tube anode, capable of generating up to 50 kV, suitable for analysis of both low and high Z elements and should also be equipped with appropriate set of user-replaceable filters for detection of various elements with wide difference in atomic numbers.	
4	Detector	High Resolution & large area fast Silicon Drift Detector (Fast SDD) with at least 25mm ² active area.	
5	Spectral resolution	Spectral resolution of <140 eV and capability to acquire X-ray data/count rate >100,000 counts per second (cps).	
6	Focusing and Measurement	The instrument should be equipped with video assisted, accurate focusing and precise alignment of x-ray beam on to the measuring spot. Spot size shall be 3 mm or less.	
7	Portability	EDXRF should be light-weight and portable for outdoor/field applications. It should have operating capabilities in non-contact and non-destructive mode, without the requirement for sampling.	
8	Application Software	<ul style="list-style-type: none"> • A Windows based software should be supplied for instrument control, data acquisition, data evaluation, analysis, presentation and report generation. • The software should be capable of single and multiple point elemental mapping, colour-coded visualization of elemental maps and map stitching. • Spectral deconvolution for qualitative, semi-quantitative and standardless fundamental parameter for semi-quantitative analysis. • Built in calibration check at start. Standard/reference sample set for calibration maintenance. 	
9	Operating environment & Safety provisions	<ul style="list-style-type: none"> • Temperature: 5-50 °C or more; Humidity: 10% to 90% relative humidity (non-condensing). • Built-in safety provision and compliance certificate for health hazards due to X-ray. 	
10	Accessories	<ul style="list-style-type: none"> • Portable computer (laptop) for instrument operation and data analysis <ul style="list-style-type: none"> ▪ OS – Windows 10 pro 64 bit ▪ RAM – 8 GB DDR4 SDRAM or higher ▪ Processor– Intel Core i7– 10th Generation with Intel UHD graphics or better ▪ Hard Drive – SSD, 512 GB or higher ▪ Display – 14” • Battery backup for remote field application. • Tripod/stand for hands free use. • Rugged carry case. • Backup of all essential software related to OS and application software. • Built-in system for helium purge • Power and data transfer cables • All other essential accessories 	

ii) TECHNICAL SPECIFICATIONS FOR PORTABLE FTIR SPECTROMETER

S.No.	Technical Parameters	Value/Details as per indent specification	Details filled by bidder
1	Spectral Range	6000-600 cm ⁻¹ or better	
2	Spectral resolution	2cm ⁻¹ or better	
3	Wave number accuracy	0.1 cm ⁻¹ or better	
4	Signal-to-noise ratio	50,000:1 or better	
5	Optics	ZnSe beam splitter optics, optical unit sealed and desiccated for application in humid conditions, all mirrors gold coated.	
6	Interferometer	Permanently aligned, high stability for field operations, non-hygroscopic windows to work under extreme humid conditions	
7	Detector	High sensitivity DTGS/DLaTGS detector	
8	Sampling interfaces	The instrument must accommodate multiple sampling interfaces (particularly Diamond ATR for analysis of samples and External Reflectance interface for non-destructive analysis). Sampling modules must be automatically recognised and spectral test routines must automatically start to verify interface's performance.	
9	Software	PC based Software for data measurement, manipulation and evaluation with a step by step assistance. Should include search capabilities as well as the possibility to create user own libraries. Should include quantitative analysis, data processing, peak picking, peak height, peak area, peak width, smoothing, baseline correction, subtraction, etc. Must contain a comprehensive library of ATR spectra of polymers, monomers, additives, plasticizer, fillers, building materials, excipients, organic and inorganic chemicals, fibres, proteins, fatty acids, lipids, ingredients, natural products, pigments, minerals, silicon containing compounds, etc.	
10	Portability	<ul style="list-style-type: none"> • FTIR should be light-weight and portable for outdoor/field applications. 	
11	Accessories	<ul style="list-style-type: none"> • Portable computer (laptop) for instrument operation and data analysis <ul style="list-style-type: none"> ○ OS – Windows 10 pro 64 bit ○ RAM – 8 GB DDR4 SDRAM or higher ○ Processor – Intel Core i7 – 10th Generation with Intel UHD graphics or better ○ Hard Drive – SSD, 512 GB or higher ○ Display – 14” • Tripod stand for hands-free operation of the instrument • Battery packs, power and data transfer cables and all other essential accessories should be quoted as standard. 	

iii) TECHNICAL SPECIFICATIONS FOR UPRIGHT POLARIZED LIGHT OPTICAL MICROSCOPE:

S.N.	Items	Description	Details filled by bidder
1	Microscope Body/Frame	<ul style="list-style-type: none"> • Polarising Microscope for Reflected Light (RL) and Transmitted Light (TL) illumination. • Focusable Bertrand lens should be provided for conoscopic & orthoscopic observation. • Allows Interchangeable stages. 	
2	Intermediate Magnification Changer	<ul style="list-style-type: none"> • 1x to 2x 	
3	Phototube	<ul style="list-style-type: none"> • Wide-field Trinocular tube with 25mm FOV (<i>or better</i>) 	
4	Focus	<ul style="list-style-type: none"> • Stroke: 25 mm, 2 to 3 step focus, minimum graduation 1 µm. 	
5	Eye Piece	<ul style="list-style-type: none"> • Pair of wide-field 10x focusable eyepiece (one with cross hair 	

		and micrometer scale) with 25mm FOV (<i>or better</i>),	
6	Nose-piece	<ul style="list-style-type: none"> • Revolving quintuple, coded nosepiece (<i>or better</i>); compatible for BF, DF, POL, DIC 	
7	Illumination	LED Transmitted and Reflected light sources with lamp house.	
8	Objectives	<ul style="list-style-type: none"> • All objectives lenses should be compatible for BF, DF, POL, & DIC applications <ul style="list-style-type: none"> ○ 5x, NA ≥ 0.12 ○ 10x, NA ≥ 0.25 ○ 20x, NA ≥ 0.4, ○ 50x, NA ≥ 0.75 ○ 100x, NA ≥ 0.9 • All the objectives should have chromatic aberration corrected in the visible region (Violet to red). (<i>All details like objective type, manufacturer name and N.A. etc. should be mentioned on the objectives lenses to ensure the quality.</i>) 	
9	Stage	<ul style="list-style-type: none"> • Rotatable Stage for POL with attachable mechanical stage and 45°clickstop. Graduated 1° increments. • Additional X-Y right hand mechanical stage (75x50 mm or bigger) for transmitted and reflected light with slide holder. 	
10	Polarizer and Analyzer	360-degree rotatable polarizer and analyser for TL and RL.	
11	Condenser	Swing out polarizing condenser	
12	Filters	Light balancing filter & Neutral Density filters	
13	Compensators	Quarter wavelength plate & Tint plate	
14	Camera and Software	<ul style="list-style-type: none"> • High resolution, 12 Megapixel CMOS/CCD colour camera (<i>or better</i>) • Pixel Size: 1.25x1.25 μm (<i>or better</i>) • Sensor size 1/2.3" (<i>or better</i>) • Fast live image capture with at least 30 FPS at full resolution (<i>or better</i>) • Fast USB-3 connection (<i>or better</i>) • Compatible software for camera control and data analysis (camera and software should be from same manufacturer). • Image Analyzer Software should be capable of image acquisition, including HDR and auto-calibration of magnification, video acquisition, annotations, layer management, scale bar, cross hair, info stamp display and image filters, digital reticle/grid, interactive measurements etc. • Software should be capable of doing of automatic point counting, grain size measurement, linear distance, curved length, area, angle, count, grey level and panoramic image capture with seamless stitching of images in order to acquire area larger than field of view in XY. • Data exported to MS Excel or Word, Report creation, document storage and support for microscopes and cameras • C-mount adapter for camera and other camera accessories 	
15	Workstation	<ul style="list-style-type: none"> • Portable computer (laptop) for instrument operation and data analysis <ul style="list-style-type: none"> ○ OS – Windows 10 pro 64 bit ○ RAM – 8 GB DDR4 SDRAM or higher ○ Processor – Intel Core i7 – 10th Generation with Intel UHD graphics or better ○ Hard Drive – SSD, 512 GB or higher ○ Display – 14" 	
16	Upgradability	Microscope should be easily upgradable and should also be able to include Fluorescence microimaging in future.	
17	Compatibility and integration	Microscope, objective lenses, camera & software should be from same manufacturer for better compatibility, integration and future upgradation.	

(To be submitted with Technical Bid)**Details of the Vendor Firm/ Company (I)**

S. No.	Particulars	Details
1	Name and address of the Company	
2	Place of incorporation/ Year of incorporation / registration : Status of Firm: Corporation or Public limited / Private Limited / Partnership firm/ Individual Proprietorship Firm Registration No.	
3	Capacity of firm in present Tender (OEM/SI/Dealer/Supplier)	
4	Participating as MSME (Yes/No)	
5	Name of the Authorized signatory:	
6	GST Registration Number	
7	PAN	
8	Email Address:	
9	Phone Numbers : (landline and mobile) Fax No:	

Note: In support of data supported document(s) shall be uploaded in

Name:

Signature of the Authorized Signatory:

Designation:

Seal of the Firm:

Date:

ANNEXURE— F
(To be submitted with Technical Bid)
FALL CLAUSE NOTICE CERTIFICATE
(To be given on the letter head of the firm, do not use the Xerox copy of the letter head)

Ref. No.....

Dated.....

The Registrar
National Museum Institute
of History of Art, Conservation and Museology
Janpath, New Delhi

Sub: Supply of Portable Energy Dispersive X-Ray Fluorescence Spectrometer, Portable FTIR Spectrometer and Upright Polarized Light Optical Microscope and their maintenance during defect liability period for Conservation Laboratory National Museum, National Museum Institute of History of Art, Conservation and Museology, Janpath, New Delhi.

Sir,

This is to certify that we have offered the maximum possible discount to you in our Quotation No. _____ dated _____. The prices charged for the supplied Item/items should under no event be higher than lowest prices at which the party sells the items of identical description to any Govt./Semi Govt. Units /IITs/NITs/other reputed Institutions/Deptt./ Offices or Public Sector Undertaking during the period of contract failing which the “**FALL CLAUSE**” will be applicable. In case, if the price charged by our firm is more, NMI will have the right to recover the excess charged amount from the subsequent/unpaid bill of the supplier.

Name:

Signature of the Authorized Signatory:

Designation:

Seal of the Firm:

Date:

CHECK LIST OF SCANNED DOCUMENTS TO BE UPLOADED IN TECHNICAL BID COVER

(To be uploaded in Technical Cover Cover)

S. No.	Eligibility Bid Documents (in PDF Format)	Documents Uploaded (Yes / No)
1	Proof of OEM or Authorized Representative or System Integrator	
2	Letter for Un-conditional Acceptance of terms & conditions of tender as per as Annexure-A	
3*	Proof of EMD and Tender fee Payment.	
4	Copy of PAN, GST Registration Certificates.	
5	Proof of Experience of Works claimed. (PO / Work Order issued by the customer). If work experience is from non-government/non-PSU organizations, enclose copies of tax deducted at sources.	
7	Audited Balance Sheet along with profit & loss account during last three years ending 31 st March.	
8	Client Details as per Annexure-C List of client references with name, postal address, contact details, Email Ids and URL (if any).	
9	Articles of Memorandum of Association or Partnership Deed or Proprietorship Deed or company registration number.(As applicable)	
10	Details of the Vendor /Firm/Agency-I as per Annexure-E	
11	Undertaking on Annual Financial Turn over as per Annexure-B	
12	Document in support of Preference/relaxation/exemption.	
13	Duly Filled Specification Compliance Statement as per Annexure-D	
14	Supporting Documents /User manual/ Brochures in support of technical specifications and clearly highlight the specifications serial numbers	
15	Make and Model of offered items	
16	Signed Tender Document including all Corrigendum (if any).	
17	Declaration reading Blacklisting on NON JUDICIAL STAMP PAPER of Rs.10/- , signed by Director/Proprietor of the Firm	
19	Fall Clause Notice Certificate- Annexure-F	
20	Signed copy Check List. Annexure-G	

**Tender Fee and EMD are to be dispatched or given in person to O/o the Registrar, National Museum Institute, New Delhi in original*

Name:

Signature of the Authorized Signatory:

Designation:

Seal of the Firm:

Date: