

E-TENDER DOCUMENT

For

**Upgradation & augmentation of Electrical substation capacity
at National Science Centre, New Delhi-110001**

**राष्ट्रीय विज्ञान केंद्र, नई दिल्ली-110001
में विद्युत उपकेंद्र की क्षमता का उन्नयन एवं विस्तार
के लिए
ई-निविदा प्रपत्र**

TENDER INVITING AUTHORITY

**National Science Centre
Near gate No. 4, Pragati Maidan
Bhairon Marg, New Delhi – 110001
(A unit of National Council of Science Museums)**



**Ministry of Culture
Government of India**

**NATIONAL COUNCIL OF SCIENCE MUSEUMS
(MINISTRY OF CULTURE, GOVT. OF INDIA)
33, BLOCK-GN, SECTOR-V, BIDHAN NAGAR
KOLKATA – 700 091 INDIA**

INSTRUCTIONS TO THE CONTRACTOR'S /BIDDER'S FOR THE E-SUBMISSION OF THE BIDS ONLINE THROUGH TENDER SITE

<https://eprocure.gov.in/eprocure/app>

This tender document has been published on the Central Public Procurement Portal (URL: <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. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "Click here to Enroll" on the CPP Portal. Enrolment is free of Charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) 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.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- 5) 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 DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters These parameters could include organization name, location, date, value, etc. 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.
- 2) 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.
- 3) 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.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. 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.
- 2) 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.
- 3) 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.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that he/she 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.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as "offline" to pay the Tender Fee & EMD and enter details of DD/any other accepted instrument.
- 4) Bidder should prepare the TENDER FEE & EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the Tender Processing Section, latest by the last date and time of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the
- 5) Scanned copy and the data entered during bid submission time otherwise the Tender will be summarily rejected.
- 6) The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected
- 7) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. The price bid has been given as a standard BoQ format (BoQ_xxxx.xls) with the tender document, then the same is to be downloaded and to be filled by all the bidders Bidders are required to download the BoQ file, open it and complete the **cyan colored (unprotected)** cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected. In e-Tendering, intending bidder can quote his rate in figures only. The rate in words, amount of each item and total is generated automatically. Therefore, the rate quoted by the bidder in figures shall be taken as correct. The Comparative Statement is also generated automatically. The Comparative statement and rate quoted by each bidder shall be downloaded. **The manual calculation check of bids and comparative statement shall be final. In case, any discrepancy is noticed, the decision of appropriate NCSM authority shall be final and binding.**
- 8) 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. The bidders are requested to submit the bids through online e-tendering system to the **Tender Inviting Authority (TIA)** well before the bid submission end date & time (as per Server System Clock).
- 9) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized person until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done.
- 10) The uploaded tender documents become readable only after the tender opening by the authorized bid openers
- 11) 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.
- 12) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the **Tender Inviting Authority(TIA), Director (HQ.),National Council of Science Museums, Block-33/GN, Sec-V, Salt Lake, Kolkata- 700 091 or may call us on 033 – 23579347/0850/5545 or Email at.: sciencecentre@ncsm.gov.in**
- 2) 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 **1800-3070-2232**.

NATIONAL SCIENCE CENTRE
(A Unit of National Council of Science Museums)
NEAR GATE NO. 4, PRAGATI MAIDAN,
BHAIRON MARG, NEW DELHI-110001

Ref. No.NSCD/18011/E-TENDER 40 / 2025-26

Dated 13-01-2026

1. **National Council of Science Museums (NCSM)**, an autonomous organisation under the Ministry of Culture, Govt. of India, is the apex body of Science Centres in India.
2. Online e-tender (Percentage Rate Bid) are hereby invited from reputed and experienced Engineering/Technical contractors capable of carrying out the work of “**Upgradation & augmentation of Electrical substation capacity at National Science Centre, New Delhi-110001**” with excellent finishing quality. Documents are to be submitted online to the Central Public Procurement Portal website <https://eprocure.gov.in/eprocure/app>, before the prescribed date & time, using the valid Digital Signature certificate (DSC) obtained from the authorized agencies of NIC & valid GST registration no.
3. The place of work would be at: **National Science Centre, Near Gate No-4, Bharat Mandapam, Bhairon Road, New Delhi-110001**
4. **Important Information & Dates:**

Estimated cost of work	1,45,82,837/-
EMD	3,65,000.00
Period of completion	160 (One Hundred Sixty) Days
Bid Document Published Date	13-01-2026 16:00
Bid Document Download Start Date	13-01-2026 16:15
Bid submission Start Date	19-01-2026 12:00
Bid submission End Date	07-02-2026 14:00
Bid Opening (Technical) Date	09-02-2026 15:00
Bid Clarification start date	13-01-2026 16:30
Bid Clarification End date	17-01-2026 12:00
Address of Tender Inviting Authority	Director National Science Centre, Near Gate No-4, Bharat Mandapam, Bhairon Road, New Delhi-110001

5. Time for carrying out the work will be **160 (One Hundred Sixty) Days** from the date of issue of Letter of Intent.
6. **ELIGIBILITY CRITERIA:**
The agency must fulfil the criteria mentioned below and submit the documents in support of the following:
 - 6.1 **Financial: -**
 - 6.1.1 **Average Financial Turnover during the last 03 (three) years should be at least 50%** of the estimated cost put to tender during the immediate last three consecutive financial years.

6.2 Technical:-

- 6.2.1 Registration/Empanelment with other Govt. Departments/Agencies, if any. Please provide proof of registration / empanelment.
- 6.2.2 The agency should have experience of having successfully executed **similar works** (i.e. SITC of 11/.433 KV substation with SITC of VCB and LT panel) with Central / State Govt. Departments, PSUs, Autonomous Bodies, Reputed Private Sector (BSE /NSE listed), **during the last 05 (Five) years** ending previous day of last date of submission of tenders: -

3(three) similar (i.e. SITC of 11/.433 KV substation with SITC of VCB and LT panel) completed works (at least one of them should be in Central Government / Central Autonomous Bodies/ State PWD / Central Public Sector Undertakings), Reputed Private Sector (BSE /NSE listed) each costing not less than 40% of estimated cost.

OR

2(two) similar (i.e. SITC of 11/.433 KV substation with SITC of VCB and LT panel) completed works (at least one of them should be in Central Government / Central Autonomous Bodies/ State PWD / Central Public Sector Undertakings), Reputed Private Sector (BSE /NSE listed) each costing not less than 60% of the estimated cost.

OR

1(one) similar (i.e. SITC of 11/.433 KV substation with installation of VCB and LT panel) completed works (at least one of them should be in Central Government / Central Autonomous Bodies/ State PWD / Central Public Sector Undertakings), Reputed Private Sector (BSE /NSE listed) of aggregate cost not less than 80% of the estimated cost.

7. The intending bidder must read the terms and conditions of NCSM carefully. He should only submit his bid if he considers himself eligible and if he is in possession of all the documents required.
8. Information and Instructions for bidders posted on website shall form part of bid document.
9. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from <https://eprocure.gov.in/eprocure/app> free of cost.
10. Online bid documents submitted by intending bidders shall be opened only of those bidders, who has deposited e-Tender and Earnest Money Deposit and other documents scanned and uploaded are found in order.
11. Those contractors not registered on the website mentioned above, are required to get themselves registered beforehand.
12. The intending bidder must have valid Class II or Class III Certificates with signing key usage (DSC) to submit the bid.
13. The e-Tenders invited under two envelopes system, the first electronic envelope will be named as Technical Envelope & will contain documents of bidder's satisfying the eligibility conditions and 2nd electronic envelope will be named as Financial Envelope containing Rate Quote Sheet. The bidder shall submit **TECHNICAL BID ENVELOPE & FINANCIAL BID ENVELOPE** simultaneously. **The technical bids will be evaluated first and thereafter financial bids of eligible bidders only shall be opened.** These envelopes shall contain one set of the following documents: -
- a) **TECHNICAL BID ENVELOPE shall contain the following documents in .pdf format:**
- i) Scanned copy of Demand Draft / Pay order or Banker's Cheque of any Nationalised / any of the Commercial Bank/ Online payment transfer receipt towards Earnest Money Deposit (EMD) @2.5% of

the tender value in pdf format in favour of National Science Centre payable at New Delhi. Details of Bank account is as under: -

Name of the Account Holder	NATIONALSCIENCE CENTRE, DELHI
Account No.	2417101004100
Bank Name	CANARA BANK
Bank Address	6, Bhagwan Das Road, New Delhi
IFSC Code	CNRB0002417

- ii) Scanned copy of Enlistment Order/Registration certificate with appropriate Authority as applicable in pdf format, if any.
- iii) Scanned copies of WORK EXPERIENCE CERTIFICATES / COMPLETION CERTIFICATE issued by Govt./ Semi-Govt./ Autonomous/ PSUs and/or Reputed Institution of requisite magnitude with appropriate Authority as per NIT in .pdf format and scanned copies of GST registration and PAN Card, ESI, EPF, and license for engagement of labourers from appropriate authority etc. in .pdf format.
- iv) Scanned copy of UNDERTAKING (as per Annexure – “A”) duly signed with company seal in .pdf format which also includes the undertaking that "The physical EMD (except in case of online payment of EMD) shall be deposited by me/us with the office of NCSM calling the bid before the bid opening date otherwise the department may reject the tender/bid and also take action to withdraw my/our enlistment/debar me/us from further tendering in NCSM or any of its constituent units."
- v) Duly filled Declaration format as per Annexure “B” & Prequalification details & supporting documents in Annexure “C” with in pdf format. All ongoing works to be submitted in Annexure ‘D’. Affidavit as per Annexure “E” in pdf. format
- vi) Tender Document in pdf format (TENDERXXXXX.pdf file) digitally signed.
- vii) Relevant document for Average Financial Turnover on construction work which should be at least 50% of the value of the estimated cost put to tender during the immediate last 03 (three) consecutive financial years.
- viii) Bank Solvency Certificate of the amount equal to 40 % of the estimated cost put to Tender.

b) **FINANCIAL BID ENVELOPE** shall contain:

- (i) Rate Quote Sheet (Percentage basis) in .xls format.

- 14. It may be noted that the Technical Bid Envelope which are not found in order will be rejected.
- 15. Tenders, who do not fulfil any of the above conditions or are incomplete in any respect are liable for summary rejection.
- 16. The Museum/Centre does not bind itself to accept the lowest e-tender and reserves to itself the authority to reject or partially accept any or all the e-tenders, e-tendered items or schedules received without assigning any reason whatsoever.
- 17. Canvassing in connection with e-tenders is strictly prohibited and the e-tenders submitted by the e-tenderers who resort to canvassing will be liable for rejection on that ground alone.

18. All taxes including GST, labour cess, duties, etc on materials freight & transit Insurance F.O.R. site in respect of this contract will be payable by the successful tenderer. Nothing extra will be payable for increase in such taxes, duties, Labour Cess, etc even if imposed or levied either before or after the e-tenders are opened or during currency of contract.
19. Before submitting the e-tender, the tenderer shall examine all specifications, drawings, conditions of contract and inspect the site if necessary. The e-tender must be balanced in respect of individual items so that the rates quoted shall remain in force even if the quantities deviate before or during the execution of the work.
20. The successful e-tenderer selected for the work shall sign the formal agreement within 15 days from the date of issue of Letter of Intent to them by the Museum/Centre failing which the LOI for award of work is liable to be cancelled and EMD/Performance Security forfeited.
21. The selected e-tenderer will be issued a Letter of Intent by the Museum/Centre and given 15 days mobilisation time which shall be counted from the date of issue of the Letter of Intent. Within the mobilisation time the tenderer must scrutinise all the specifications, etc. and obtain clarifications from the Architect /Department wherever necessary and submit a revised BAR CHART if required by the Museum/Centre. During the mobilisation time, the tenderer shall also mobilise all his resources including men and materials, at site if necessary and Sign an Agreement with Museum/Centre in approved format at site and sign an Agreement with Museum/Centre in approved format on a non-judicial stamp paper of proper denomination. ***The date of commencement of work shall be the date of issue of Letter of Intent.***
22. The validity period of the e-tender shall be at **least six months** from the date of opening of e-tenders. This period may be extended with mutual consent if the decision regarding issue of Letter of Intent is delayed for any reason.
- ~~23. In case EMD is submitted in the form of Bank Guarantee, the Completion of the same should be at least 45 days beyond the bid validity period.~~

Clarification in Public Interest

It has been brought to our attention that certain unscrupulous elements are circulating fraudulent emails purporting to be from "NCSM"/"NCSM India"/"NSC Delhi". These emails attempt to mislead recipients into depositing money under the following pretexts:

- i) Mandatory Bid Fees/EMD in relation to bids submitted against e-tenders published by the Centre on CPP Portal/GeM etc.;

These emails are fraudulently attributed to NCSM/NCSM India/ NSC Delhi/ Recruitment Team.

NCSM/NCSM India/NSC, Delhi has not issued any such emails. Please note that **NCSM, as per established policy, does not ask for any money other than those mentioned in the e-tender documents** to be deposited through payment gateway while submitting the application online or through Demand Draft on offline mode i.e. hardcopy application.

These deceptive communications often use IDs or domain names resembling those of NCSM or/and constituent units viz. National Council of Science Museums (NCSM)/**National Science Centre, Delhi (NSC, Delhi)**/Nehru Science Centre, Mumbai (NSC, Mumbai)/Visvesvaraya Industrial & Technological Museum, Bangalore (VITM, Bangalore)/Birla Industrial & Technological Museum, Kolkata (BITM, Kolkata)/Science City, Kolkata/National Science Centre, Guwahati (NSC, Guwahati) (*or a deceptively similar name*) to make it look authentic. NCSM is taking appropriate measures to address this issue.

All tenderers, bidders are advised to remain vigilant and take note of the following indicators of fraudulent communication:

- NCSM/NSC Delhi does not request any payment from tenderers/bidders during the e-tendering process, except for the officially prescribed application fee payable through NCSM's payment gateway or via Demand Draft for offline applications.
- Fraudulent emails may include bank account details of private individuals. Such details are usually disclosed only after calling the number mentioned in the fraudulent email. Under no circumstances will legitimate NCSM communications provide or request payment to any bank account not bearing the name of NCSM or its constituent units.

All tenderers, bidders are strongly advised not to respond to any such fraudulent emails or phone calls and not to make any payment to any individual. The Centre shall not be responsible for any loss or damage arising from such fraudulent activities.

For any clarification or in case of doubt, please contact NSCD at Telephone No. 07428693715/16.

लोक हित में स्पष्टीकरण

हमारे संज्ञान में यह बात आई है कि कुछ असामाजिक तत्व “NCSM” / “NCSM India” / “NSC Delhi” के नाम से फर्जी ईमेल प्रसारित कर रहे हैं। इन ईमेल का उद्देश्य प्राप्तकर्ताओं को निम्नलिखित बहानों के तहत धनराशि जमा करने के लिए भ्रमित करना है:

- i) अनिवार्य बोली शुल्क/ईएमडी, जो कि सीपीपी पोर्टल/GeM आदि पर केंद्र द्वारा प्रकाशित ई-निविदाओं के विरुद्ध बोलीकर्ताओं द्वारा जमा की गई बोलियों से संबंधित है;

इन ईमेलों को गलत तरीके से NCSM/NCSM India/NSC Delhi/Recruitment Team के नाम से भेजा गया बताया जा रहा है।

NCSM/NCSM India/NSC, Delhi द्वारा ऐसे किसी भी ईमेल का प्रेषण नहीं किया गया है। कृपया ध्यान दें कि अपने स्थापित नीति-नियमों के अनुसार NCSM किसी भी प्रकार की धनराशि केवल उन्हीं मदों के लिए मांगता है जो ई-निविदा दस्तावेजों में स्पष्ट रूप से उल्लिखित हों अथवा ऑफलाइन (हार्डकॉपी) आवेदन जमा करते समय डिमांड ड्राफ्ट के रूप में देय हो।

ये भ्रामक संचार प्रायः NCSM या इसकी विभिन्न इकाइयों—जैसे नेशनल काउंसिल ऑफ साइंस म्यूज़ियम्स (NCSM), नेशनल साइंस सेंटर, दिल्ली (NSC Delhi), नेहरू साइंस सेंटर, मुंबई (NSC Mumbai), विश्वेश्वरैया औद्योगिक एवं प्रौद्योगिकीय संग्रहालय, बेंगलुरु (VITM Bangalore), बिरला औद्योगिक एवं प्रौद्योगिकीय संग्रहालय, कोलकाता (BITM Kolkata), साइंस सिटी, कोलकाता, तथा नेशनल साइंस सेंटर, गुवाहाटी (NSC Guwahati)—के नाम या उनसे मिलते-जुलते नामों का उपयोग करते हैं ताकि ईमेल को वास्तविक दिखाया जा सके। NCSM इस समस्या के समाधान हेतु आवश्यक कार्यवाही कर रहा है।

सभी निविदाकर्ताओं, बोलीदाताओं को सतर्क रहने एवं निम्नलिखित बिंदुओं पर ध्यान देने की सलाह दी जाती है:

- NCSM/NSC Delhi ई-निविदा प्रक्रिया के दौरान किसी भी निविदाकर्ता/बोलीदाता से अधिकृत आवेदन शुल्क के अतिरिक्त कोई भी भुगतान नहीं मांगता। यह शुल्क केवल NCSM के भुगतान गेटवे या ऑफलाइन आवेदन के लिए डिमांड ड्राफ्ट के माध्यम से ही देय होता है।
- फर्जी ईमेलों में निजी व्यक्तियों के बैंक खातों का उल्लेख हो सकता है, जिनका विवरण आमतौर पर ईमेल में दिए गए नंबर पर कॉल करने पर साझा किया जाता है। किसी भी स्थिति में वैध NCSM संचार किसी ऐसे बैंक खाते का उल्लेख या मांग नहीं करेगा जो NCSM या उसकी किसी इकाई के नाम से न हो।

सभी निविदाकर्ताओं, बोलीदाताओं को सलाह दी जाती है कि ऐसे किसी भी फर्जी ईमेल या फोन कॉल पर प्रतिक्रिया न दें तथा किसी भी व्यक्ति को कोई भुगतान न करें। ऐसे धोखाधड़ीपूर्ण कृत्यों से उत्पन्न किसी भी प्रकार के नुकसान के लिए केंद्र जिम्मेदार नहीं होगा।

किसी भी प्रकार की स्पष्टता या संदेह की स्थिति में कृपया NSCD के टेलीफोन नंबर **07428693715/16** पर संपर्क करें।

Appendix to NIT

1. SUMMARY CONDITIONS OF CONTRACT

Defect Liability Period	:	Two years from the date of virtual completion as certified by the Museum/Centre.
Time for Completion	:	160 (One Hundred Sixty) Days from the date of issue of Letter of Intent as per NIT Clause 5 read with NIT Clause 21.
Minimum value of work for Interim Certificate	:	10 % of the tendered value or less at the discretion of the Museum/Centre but not more than one running bill in a month.
Earnest Money to be deposited with the tender	:	Rs. 365000.00 (being 2.5% of the estimated value of tender, rounded off to nearest hundred), may be exempted for the MSME certified agencies for similar works.
Liquidated damages for non-completion of work in time (Clause 39d of the general conditions of contract).	:	One percent per week of the total cost of the work awarded subject to a maximum of 10% of gross value of work done or cost of the work awarded whichever is greater.
Liquidated damages for insufficient progress of work (Clause 39c of the general conditions of Contract).	:	Half percent per week of the total cost of the work awarded subject to a maximum of 10% of gross value of work done or cost of the work awarded whichever is greater.

2. RETENTION MONEY FOR INTERIM PAYMENT

	:	Total:- 10% as per the following detail
i) Performance Security/Guarantee	:	10% of tendered value (After adjusting EMD deposited with tender if any) to be deposited on award of work before signing of agreement through online bank transfer / Demand Draft/Banker's cheque/ issued by nationalized / scheduled bank to be drawn or duly pledged as the case be, in favour of the National Science Centre payable at New Delhi .
ii) Security deposit	:	7 % of the value of work done to be recovered from R.A. Bills so as to make up 10% of gross value of work done including Performance Guarantee.
iii) Period of submitting final bill by the successful e-tenderer	:	3 months from the date of virtual completion.

FORMAT FOR BANK GUARANTEE BOND

~~(For EMD only)~~ Not Applicable for this tender

1. In consideration of the (Name and address of the Museum/Centre) hereinafter called the Museum/Centre having stipulated under clause 10 of the Notice Inviting E-tender No. for the work of (mention name of work as in NIT) at the aforesaid site agreed to accept payment of Earnest Money for due fulfilment of the terms and conditions contained in the said NIT (including appendix) for participation in the e-tender from (Name and address of the prospective e-tenderer) (hereinafter called the prospective e-tenderer) by production of a bank guarantee of (Mention amount of EMD in figure & words) only, we (Name and address of Bank furnishing guarantee (Br. Code)) (hereinafter referred to as "The Bank") do hereby undertake to pay to the Museum/Centre an amount not exceeding (mention EMD amount in figure & Words) only against any loss or damage caused to or suffered or would be caused to or suffered by the Museum/Centre by reasons of any breach by the said prospective e-tenderer of any of the terms or conditions contained in the said NIT (including appendix) relating to participation in the e-tender.

2. We, (Name of Bank), do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Museum/Centre stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Museum/Centre under National Council of Science Museums by reasons of any breach by the said prospective e-tenderer of any of the terms or conditions contained in the said NIT (including appendix) or by reason of the prospective e-tenderer's failure to comply with conditions contained in the said NIT relating to participation in the e-tender. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this guarantee. However, our liability under this guarantee, shall be restricted to an amount not exceeding (mention amount of EMD in figures and words) only.

3. We, (Name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period as mentioned in Clauses 20 and 21 of the said NIT (including appendix) or the period stipulated under clause 22 for deciding the e-tender and that it shall continue to be enforceable till the dues of the Museum/Centre under or by virtue of the said NIT (including appendix) have been fully paid and its claims satisfied or discharged or the Museum/Centre certified that the terms and conditions of the said NIT (including appendix) have been fully and properly honoured and carried out by the said prospective e-tenderer for participation in the e-tender and accordingly discharges the guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the periods stipulated above, we shall be discharged from all liability under this guarantee thereafter.

4. We, (Name of the Bank) further agree with the Museum/Centre that they shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to extend time of deciding the e-tender as may be expedient and to forbear or enforce any of the terms and conditions relating to the NIT (including appendix) and we shall not be relieved from our liability by reason of any such extension being granted to the said proposed e-tenderer for any forbearance, or act of omission on the part of the Museum/Centre or any indulgence by the Museum/Centre to the said proposed e-tenderer or by any such matter or thing whatsoever which under the law relating to surety.

5. We, (Name of the Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Museum/Centre in writing.

Dated, the day of
.....For

.....

(Authorised signatory of the Bank with Seal)

~~FORMAT FOR BANK GUARANTEE BOND *~~
~~(For Performance guarantee /Retention Money/Security Deposit~~
~~only) (Not applicable for this tender)~~

1. In consideration of the
.....
..... (hereinafter called
"The
Museum/Centre") having agreed to exempt
.....
.....
.....
(Hereinafter called the "successful e-tenderer" from the demand, under Clause 10 of the Notice
inviting E- tender No. dated and/or
the terms and conditions of an Agreement dated Made between the
Museum/Centre and successful e-tenderer(s)
..... for
.....(hereinafter called "the said agreement")
of Performance guarantee /Earnest Money/Retention Money for the due fulfilment by the said
Contract(s) of the terms and conditions contained in the said NIT or the conditions of (execution of
work) or the agreement on production of a bank guarantee of
Rs..... (Rupees
.....
...
..... only),
We

.....(hereinafter referred to as "The Bank") do hereby
undertake to pay to the Museum/Centre an amount not exceeding
Rs..... against any loss or damage caused to or suffered or
would be caused to or suffered by the Museum/Centre by reasons of any breach by the said
successful e-tenderer of any of the terms or conditions contained in the said NIT, the conditions of
Contract or the Agreement.

2. We, do hereby undertake to pay the amounts due
and payable under this guarantee without any demur, merely on a demand from the
Museum/Centre stating that the amount claimed is due by way of loss or damage caused to or
would be caused to or suffered by the Museum/Centre under National Council of Science
Museums by reasons of any breach by the said successful e-tenderer of any of the terms or
conditions contained in the said NIT or the conditions of contract or the Agreement or by reason
of the successful e-tenderer's failure to perform as per conditions contained the said NIT or the
condition of contract or the Agreement. Any such demand made on the Bank shall be
conclusive as regards the amount due and payable by the Bank under this guarantee. However
our liability under this guarantee shall be restricted to an amount not exceeding
Rs.....

*Note:
(Bank guarantee bond towards Performance guarantee/Retention Money/Security
deposit as defined under clause 32 of the General Conditions of contract at the time
of signing of agreement on award of work acceptable only if furnished by any of
the Nationalised / Commercial Banks.)

3. We, further agree that the guarantee herein contained shall remain in full force and effect during the period as mentioned in Clause 20 of the said NIT read with clause 32 of the conditions of contract, or the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till the dues of the Museum/Centre under or by virtue of the said NIT or the conditions of contract or the Agreement have been fully paid and its claims satisfied or discharged or the Museum/Centre certified that the terms and conditions of the said NIT or the conditions of contract or the Agreement have been fully and properly honoured and carried out by said successful e-tenderer and accordingly discharges the guarantee.

Unless a demand or claim under this guarantee is made on us in writing on or before the

We shall be discharged from all liability under this guarantee thereafter.

4. We, further agree with the Museum/Centre that they shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said successful e-tenderer from time to time or to postpone for any time or from time to time any of the powers exercisable by the Museum/Centre against the said successful e-tenderer and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said successful e-tenderer for any forbearance, or act of omission on the part of the Museum/Centre or any indulgence by the Museum/Centre to the said successful e-tenderer or by any such matter or thing whatsoever which under the law relating to surety.

5. We, lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Museum/Centre in writing.

Dated, the day of

(Authorised signatory of the Bank with seal)

For

FORMAT FOR LETTER OF INTENT*

(Mention file number)

.....
Date.....

Sub: Letter of Intent for the work of

Dear Sirs,

With reference to your e-tender dated(and further clarification vide letter number dated) # it is intended to award the aforesaid work at the e-tendered amount of rs.....
(Value based on only items of work intended to be awarded for execution)

You are, therefore, requested to sign an agreement as per standard format already printed in the e-tender documents purchased by you while e-tendering for this job. For this purpose, you are requested to send us a non-judicial stamp paper of appropriate value for preparing the contract Agreement within a week from the date of this letter.

You may avail of 15 days mobilisation time from the date of issue of this letter of Intent for mobilising your men, materials and other necessary resources for the construction. During mobilisation period, you are requested to study all the drawings and designs annexed hereto and the Bar-Chart and obtain clarifications from the architect or this office immediately.

Please note that the work has to be completed within weeks/months in which mobilisation time period of 15 days is also included. The date of commencement of work would be reckoned as the date of issue of this letter (as per clause 21 of NIT).

Thanking you,

Yours faithfully,

Sd/-
CoA/Dy.CoA

** To be issued by the Administrative officer of the parent Museum/Centre, viz, B.I.T.M, V.I.T.M., NSCM, N.S.C.D., C.R.T.L., Science City, even though the work is to be done in any RSC/SRSC/DSC.*

Letter of intent is to be issued in the letter head of the parent Museums/Centres and a Xerox copy is to be maintained as office copy on which signature of the authorised representative of the successful e-tenderer is to be obtained with date at the time of issue of original letter of intent. # Delete words within brackets if not applicable in specific case.

FORMAT FOR ARTICLES OF AGREEMENT

INSTRUCTIONS (not to be typed in Agreement)

(Articles of Agreement have to be typed on non-judicial stamp paper. The value of the stamp paper varies from state to state and is to be known from the particular place. The stamp paper will be purchased by the successful e-tenderer and the agreement may be typed by the Museum/Centre according to the format.)

ARTICLES OF AGREEMENT made at

.....
..... (Place)

this..... day of
(Date) (Month & Year)

between the

.....
(Name of the parent Museum/Centre)

(under the National Council of Science Museums, a Society registered under the Societies Registration Act of West Bengal, 1961), hereinafter referred to as the Museum/Centre which expression shall include its successors and assigns on the one part and.....

.....
(name of the successful e-tenderer)

trading in the name and style of

.....
(Name and complete address of the successful e-tenderer)

hereinafter referred to as the successful e-tenderer which expression shall include his/their respective heirs, executors, administrators and assigns on the other part.

WHEREAS the Museum/Centre is desirous of getting the work of

.....
..... therein done and has caused

.....
(Name of the work)

Notice Inviting E-tender (Including appendix), drawings, schedule of quantities and specifications describing the work and conditions of contract to be prepared by.....

.....
(Name and address of the Architect).

AND WHEREAS the said NIT (including appendix) drawings as per list attached, specifications and the priced schedule of quantities and conditions of contract have been signed by or on behalf of the parties hereto. AND whereas the Successful e-tenderer has deposited in Cash or Bank Draft/Bank Guarantee a sum of Rupees

.....
(exact amount in words)

the amount being 3% of tendered value (after adjusting EMD) rounded off to the nearest thousand) with the Museum Centre as Initial Security/Performance Security for the due performance of this Agreement as provided in the said conditions. In the case of Bank Guarantee, the period of Bank Guarantee referred to being valid until the defect liability period as specified in e-tender and to be revalidated to required dates as demanded by the Museum/Centre if completion date is extended.

NOW IT IS HEREBY AGREED AND DECLARED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

1. In consideration of the payments to be made to him as hereinafter provided the successful e-tenderer shall upon and subject to the conditions herein contained execute and complete the work within months from the date of issue of letter of intent (as defined under NIT clauses 5 and 21) and as per the said drawings and such further detailed drawings as may be furnished to him from time to time and described in the said specifications and the said priced schedule of quantities along with the progress of the building work.
2. The Museum/Centre shall pay to the successful e-tenderer such sum as shall become payable hereunder at the time and in the manner specified in the said conditions.

3. Time is the essence of this agreement and the successful e-tenderer shall proceed with the work, throughout the stipulated period of this contract, strictly according to the CPM/PERT/BAR CHART attached herewith and forming a part of this agreement. At any stage during execution, if any work lags behind the target as indicated in the CPM/PERT/BAR CHART for reasons directly attributable to the successful e-tenderer, he shall pay or allow the Museum/Centre to deduct from any money due to him a liquidated damage as per Clause 39 of the conditions of contract.
4. This agreement comprises the work above and all subsidiary works connected therewith, even though such works may not be shown on the drawings, or described in the said specifications or the priced Schedule of Quantities.
5. The Museum/Centre through the Engineer (As defined under clause 2 of General conditions of contract) reserves to itself the right of altering the drawings and of adding to or omitting any item of work or of having portions of the same carried out departmentally or otherwise and such alterations or variations shall not vitiate this agreement.
6. All disputes and differences of any kind whatever except as excluded under Clause 2 of General Conditions of contract appended herewith, arising out of or in connection with the contract on the carrying out of works (Whether during the progress of the work or after their completion and whether before or after the determination, abandonment or breach of the contract) shall be referred to arbitration as per Clause 44 of the said conditions of contract. In case of any legal dispute, other than the arbitration, the court of jurisdiction shall be at the place written in the first line of this agreement.

The provisions of the Arbitration & Reconciliation Act 1996 or any Statutory modification or re-enactment thereof and of the rules made there under for the time being in force shall apply to arbitration proceedings under this clause.

In witness whereof the parties have set their respective hands the day and the year and the place hereinabove written.

Signed by for and on behalf of the Museum/Centre

.....
(Administrative Officer)

In the presence of

1.

(Finance & Accounts Officer)

2.

(Project Co-coordinator/Engineer)

Signed by the said Successful e-tenderer

In the presence of

(1).....

(2).....

Seal

Seal

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GENERAL CONDITIONS OF CONTRACT

1. INTERPRETATION

The terms as used in the e-tender documents and agreement and named hereunder shall have the meanings herein assigned to them except where the subject or context otherwise requires:-

“This agreement” shall comprise of the Articles of Agreement along with the Appendix, the Conditions of Contract, the Priced Schedule of Quantities, Specifications and Drawings and CPM/PERT/BAR CHART attached hereto and including those to which only a reference is made herein.

“Work” or “Works” shall mean all work or works defined by Bills of quantities, Drawings, Specifications and such other work or works as the successful e-tenderer may be entrusted with for carrying out under this agreement as per Clause 4 of the Articles of Agreement.

“Museum/Centre” shall mean under the National Council of Science Museums which shall include the person for the time being in management of the Society and its assigns.

“Engineer” shall mean the Curator or Technical Officer authorised as such by the Museum/Centre or in the event of his ceasing to be Engineer for the work such other firm or person as may be appointed by the Museum/Centre as Engineer for this work. (Further elaboration given in Clause 2 below):

“Successful e-tenderer” shall mean and shall include his/their respective heirs, executors, administrators and assigns.

“Site” shall mean the site of the construction works as shown on the site plan attached hereto including any buildings and erection thereon and any other land adjoining these to (Inclusive) as aforesaid allotted by the Museum/Centre for the use of successful e-tenderer.

“Act of Insolvency” shall mean any act of insolvency as defined by the Presidency towns Insolvency Act, or the Provincial Insolvency Act or any Amending Statute.

“Notice in Writing” or “Written Notice” shall mean a notice or communication in written, typed or printed or printed characters sent (unless delivered personally or otherwise proved to have been received) by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have received when in the ordinary course of post it would have been delivered. “Virtual Completion” shall mean that the works carried out are fit for occupation in every respect including removal of scaffolding, plant, surplus material and rubbish and cleaning of dirt from work and site.

Words imputing person include firms and corporations words imputing the singular only also include the plural and vice versa where the context so requires.

Short headlines are given to each Clause for convenience only and they will not limit the meaning or scope of the Clause in any way.

2. ENGINEER

The plans, agreement and documents above mentioned shall form the basis of this agreement and the decision of the said Engineer or the other Engineer for the time being as mentioned in the said conditions, in reference to all matters or dispute as to material and workmanship shall be final and binding on both the parties.

The term “Engineer” shall mean the firm or person(s) appointed by the Museum/Centre to superintend the work. He/They will receive his/their instruction for the work from the Museum/Centre.

The successful e-tenderer shall afford the said Engineer(s) every facility and assistance for examining the work and materials and for checking and measuring works and materials.

The Engineer or any Authorised Assistant of the Engineer shall have power to give notice to the successful e-tenderer or to his Supervisors of non-approval of any work, or materials, and such work shall be suspended or the use of such materials shall be discontinued. The work from time to time be examined by the Engineer or the Engineer’s Assistant but such examination shall not in any way exonerate the successful e-tenderer from the obligation to remedy any defects due to materials or workmanship not in accordance with the contract which may be found to exist at any stage of the work or may appear within the defects liability period mentioned in clause 20.

3. SCOPE OF THE CONTRACT

The successful e-tenderer shall carry out and complete the works in every respect in accordance with this contract and in accordance with the directions of the Engineer and to the satisfaction of the Engineer and the Museum/Centre. The Engineer may from time to time issue further drawings and/or written instructions, detailed directions and explanations in regard to :

- (a) The variation or modification of the design, quality or quantity of works for the addition or omissions or substitution of any work.
- (b) Any discrepancy in the drawings or between the schedule of quantities and/or drawing and/or specifications.
- (c) The removal from the site of any material brought therein by the successful e-tenderer and the substitution of any other materials there from.
- (d) The removal and/or re-execution of any works executed by the successful e-tenderer.
- (e) The dismissal from the works of any person employed thereupon.
- (f) The opening up for inspection of any work covered up.
- (g) The amending and making good of any defects under Clause 20.

The successful e-tenderer shall comply with and duly execute any work comprised in such instructions, detailed directions and explanations, provided always that if the Engineer's instructions involved variations from the priced Schedule of Quantities, such instructions shall be issued by the Museum/Centre and the successful e-tenderer shall take the action stipulated in Clause 34.

If the work shown on any such further drawings or detailed drawings or that may be necessary to comply with any such instructions, directions, or explanations be in the opinion of the successful e-tenderer, extra to that comprised in or reasonably to be inferred from the contract he shall before proceeding with such work, give notice in writing to this effect to the Engineer, and in the event of his not doing so three days before the commencement of such work the successful e-tenderer shall not be entitled to any allowance in respect of any such extra work. But if such notice has been duly given and the Engineer and the successful e-tenderer, fail to agree as to whether or not there is any extra, then if the Engineer decides that the successful e-tenderer is to carry out the said work, the successful e-tenderer shall do so accordingly, and the question whether or not there is any extra and if so, the amount thereof shall failing agreement be settled by the Arbitration as provided in Clause 44 on a reference being made by the successful e-tenderer.

4. SCOPE OF WORK

Even if not specifically mentioned in the schedule of quantities, the successful e-tenderer shall be deemed to have allowed necessary material, labour, tools and plants etc. required for satisfactory completion of the items of work as indicated in drawings and description given in the specifications, which are attached herewith unless the item specifies labour only or otherwise. Rates quoted also apply for work in patches, strips, small or large areas, and for different shapes and in different sizes and in different planes (Horizontal/vertical or inclined).

5. INSPECTION OF SITE

The e-tenderer must visit site before giving e-tender and must get acquainted with the working conditions.

The e-tenderer shall examine all specifications, e-tender conditions and drawings before e-tendering for the works.

The e-tenderer shall obtain all information relating to local regulations, bye-laws, application of any and all laws relating to his work or profession. No additional claims shall be admissible on this account.

6. WATER, ELECTRICITY AND CEMENT GODOWN

The successful e-tenderer shall construct at the site at their own cost temporary cement godown within the mobilisation time as described in NIT Clause 23, of appropriate size suitable for proper and safe storage of 3 months consumption of cement. They will also arrange at their own cost supply of water and electric power at site required by them for construction.

7. SUCCESSFUL E-TENDERER TO PROVIDE EVERYTHING NECESSARY

The successful e-tenderer shall provide everything necessary for the proper execution of the works according to the true intent and meaning of the drawings and specifications and bill of quantities taken together, whether the same may or may not be particularly shown on the drawings or described in the specifications or included in the bill of quantities, provided that the same is to be reasonably inferred there from and if he finds any discrepancy in the drawings, or between the drawings and specifications and bill of quantities, he shall immediately refer the same to the Engineer who shall decide which shall be followed. Figured dimensions shall be followed in reference to scale.

The Successful e-tenderer shall supply, fix and maintain at his cost during the execution of any works, all the necessary centering, scaffolding, staging, planking, timbering, shuttering, shoring, pumping, fencing, boarding, watching and lighting by night as well as by day required for the proper execution and protection of the public and the safety of any adjacent roads, streets, cellars, vaults, eaves, pavement, walls, houses, buildings and all erections, matters or thing, and they shall take down and remove any or all such centering, scaffolding, etc. as occasion shall require or when ordered to do so and shall fully reinstate and make good all matters and all things disturbed during the execution of the works to the satisfaction of the Engineer before a Virtual Completion Certificate is issued.

The Successful e-tenderer shall make his own arrangements for laying temporary water and electrical power lines including excavation if necessary so as not to cause any obstructions along locations approved by the Engineer. The water supply lines, hose pipes, electrical lines, underground or overhead etc. belonging to them should not cause damage to the property of the museum/centre including gardens, plants, flowers, hedges, flower pots in the Campus etc. Any expenditure incurred by the museum/centre due to damage so caused shall be debited to the Successful e-tenderer's account. It is their complete responsibility to ensure that the garden area and its approaches and other areas not allocated to them are not encroached upon by their men and materials. They have to provide a fence at their cost to confine the activities of construction, labour and materials, to the construction area as approved by the Engineer or his representative. The bitumen carpeted road in front of museum/centre's office, Science and Exhibits Laboratory, Stores and Workshop or garden paths and defined areas will not be allowed to be used by their labour, materials, trucks and other modes of transport system. Their labour is not allowed to use Campus grounds for baths, calls of nature etc.

The museum/centre shall on no account be responsible for the expenses incurred by the successful e-tenderer for hired ground or electric power or water obtained from elsewhere.

8. DRAWINGS, DESIGNS ETC.

Contract drawings are diagrammatic but shall be followed as closely as actual construction permits. Any deviations made shall be in conformity with the architectural and other service drawings.

Architectural drawings shall take precedence over electrical and other service drawings as to all dimensions.

Successful e-tenderer shall verify all dimensions at site and bring to the notice of the Engineer all discrepancies or deviations noticed. The Engineer's decision shall be final and binding.

All drawings issued by the Museum/Centre are the property of the Architects and shall not be lent, reproduced or used on any other works than intended without the written permission of the Architects.

Large size details and manufacturer's dimensions for materials to be incorporated shall take precedence over small scale drawings.

One complete set of drawing, specifications and schedule of quantities shall be furnished by the Engineer to the successful e-tenderer and the Engineer shall furnish, within such time as he may consider reasonable, one copy of any additional drawing which in his opinion may be necessary for the execution of any part of work. Such copies shall be kept on the works, and the Engineer and his representatives shall at all reasonable times have access to the same and they shall be returned to the Engineer by the successful e-tenderer before the issue of the certificate for the balance of this account under the contract.

Museum/Centre will make all efforts to give all drawings, designs, decision etc. from time to time and the successful e-tenderer shall make timely requests for the same. No claim whatsoever shall however be entertained for compensation for the delay in supply of drawings, designs, decisions, running payments, etc. from the Successful e-tenderer. Drawings shown at the time of issue of e-tenders and forming part of the contract shall indicate scope of work and drawings issued subsequently during the execution of work shall be deemed to be drawings elaborating the basic scheme. If any detailed drawings show an item for execution, which in the opinion of the successful e-tenderer is not covered under the items of the contract, he shall immediately refer it to the Engineer, for final decision. Decision of the Engineer as to whether it is an extra item or not or whether it is covered by contracts and if not what extra rate should be paid shall be final and binding on both the parties to the contract i.e. Museum/Centre and the Successful e-tenderer.

9. REFERENCE DRAWINGS & SHOP DRAWINGS

Reference Drawings

The Successful e-tenderer shall maintain one set of all drawings issued to him as reference drawing. These shall not be used at site.

All corrections, deviations and changes made at the site shall be shown on these reference drawings for incorporation in the completion drawings. All changes to be made shall be initiated by the Engineer.

Shop Drawings

The Successful e-tenderer at his own cost shall submit to the Engineer as well as to the Architect four copies of shop drawings related to structural steel work, Aluminium door/window, bar bending schedule, Electrical work, Air conditioning work etc. for approval.

10. SCHEDULE OF RATES AND SPECIFICATIONS

Specifications as attached herewith shall be applicable. However, the e-tenderer shall include in his rates all such items of work which are not specifically included in the e-tender schedule but are required to be executed to complete the works in accordance with the drawings, specifications etc. The Museum/Centre is not bound to follow the practice and mode of measurements followed by other departments.

11. ERROR IN SCHEDULE OF QUANTITIES, IF ANY

Should any error appear in the bill of quantities, other than the E-tenderer's prices and calculation, it shall be rectified by the Engineer after informing the Museum/Centre. Such variation shall constitute a deviation of the contract and shall be dealt with as hereinafter provided.

12. NOMENCLATURE OF ITEM

Nomenclatures of the items of works mentioned in the priced schedule are only a brief description of the work. The work shall have to be executed in accordance with the specifications for the work to the satisfaction of the Engineer of the work. Any omission in description will not absolve the successful e-tenderer from his responsibilities to complete the work in a satisfactory manner.

13. METRIC UNITS

The bills of quantity indicate the unit of Metric system. The mode of measurement of different items of work shall be as per details contained in specification and special conditions, with the equivalent of the units mentioned therein in Metric System.

14. CPWD/PWD SPECIFICATIONS AND I S CODES

CPWD/PWD specifications & relevant I.S. Code of practice shall be applicable, for all items of work.

15. ORDER OF PRECEDENCE

If any discrepancy is noticed between the conditions and specifications, drawing etc. the following would be the order of precedence:

- (a) Schedule of Quantities.
- (b) Notice Inviting E-tender (NIT)
- (c) General Conditions of Contract (GCC)
- (d) Drawings and notes thereon.
- (e) Specifications for General Building (civil works) Sanitary and Plumbing, Electrical Installation, Air-conditioning, Acoustic Treatment, Furniture making and/or Wood Panelling, Elevators and Escalators, etc.
- (f) CPWD/PWD Specifications & I.S. codes.

16. SETTING OUT WORK ETC.

- (a) The successful e-tenderer at his own expense shall set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions and alignment of all parts thereof. If at any time any error shall appear during the progress of any part of the work, the Successful e-tenderer shall at his own expense rectify such error if called upon to the satisfaction of the Engineer.
- (b) All soil, filth, or other matter of an offensive nature taken out of any trench, sewer, drains, cesspool or any other place shall not be deposited on the surface, but shall be at once carted away by the Successful e-tenderer to some pit or place to be provided by him.

17. MATERIALS

All materials used for this work shall be conforming to the Specifications.

As far as practicable materials shall conform to the latest Indian Standards as amended upto-date. All materials used on the project shall be approved by the Engineer before use.

Successful e-tenderer may be required to purchase such materials of particular make or from a particular source if in the opinion of Engineer the same is necessary and is required for the proper and reasonable compliance of the specifications and in the interest of better quality of work. The fittings and accessories to be used in the work shall be presented for approval well in advance. Approved fittings shall be kept in the office of the Engineer in a mounted lockable board, to be approved by the successful e-tenderer.

(a) Storage of Materials

All materials shall be stored in a proper manner protected from natural elements so as to avoid contamination and deterioration.

Successful e-tenderer's store shall be open to inspection by the Engineer at all reasonable hours

Locations of stores and storage yards shall be approved by the Engineer prior to construction or occupation. Successful e-tenderer shall take adequate protection of the materials against fire and other calamities.

All watch and ward staff for his work shall be appointed and maintained by the Successful e-tenderer at his own expense.

b. Inspection and Testing of Materials

The Successful e-tenderer at his own expense shall make all necessary arrangements for carrying out tests on materials as required by the Engineer. He shall also be required to produce manufacturer's test certificates for the materials supplied by him whenever required by the Engineer. The tests carried out shall be as per the relevant Indian Standards in approved laboratories. The Museum/Centre reserves the right to appoint the testing authorities.

18. FAULTY MATERIALS AND WORK

(a) The Engineer shall during the progress of the work has power to order in writing from time to time the removal from the work, within such reasonable time or times as may be specified in the order, to any materials and/or Workmanship which in the opinion of the Engineer are not in accordance with the specifications or the instructions of the Engineer. The substitution of proper materials or any workmanship and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the drawings and specifications or instructions shall have to be forthwith carried out by the Successful e-tenderer at his own cost upon receiving such order. In case of default on the part of the Successful e-tenderer to carry out such order the Museum/Centre shall have the power to employ any other person to carry out the same and all the expenses consequent thereon or incidental thereto shall be borne by the Successful e-tenderer and shall be recovered from them by the Museum/Centre from any money due to or that may become due to the Successful e-tenderer or from the amount of retention money.

(b) In lieu of rectifying the work not done in accordance with the contract the Engineer may, with the consent of the Museum/Centre allow such work to remain, and in that case may make allowance for the difference in value together with such further allowance for damage to the Museum/Centre as in their opinion may be reasonable.

Provided always that nothing in this clause shall relieve the Successful e-tenderer from his liability to execute the works in all respect in accordance with those terms and upon and subject to the conditions of this contract or from his liability to make good all defects.

19. ACCESS

The Museum/Centre or its representatives shall at all reasonable time have free access to the works and/or to the workshops factories or other places where materials are being prepared or constructed for the contract and also to any place where materials are lying or from which they are being obtained and the Successful e-tenderer shall give every facility to them for inspection, examination and testing of the materials and workmanship. Except the representative of Public Authorities and those mentioned above, no person shall be allowed on the works at any time without the prior written permission of the Engineer or the Museum/Centre.

If any work is to be done at a place other than the site of works the Successful e-tenderer shall obtain prior written permission of the Engineer for doing so.

20. DEFECT LIABILITY PERIOD AND DEFECTS AFTER COMPLETION

Defect Liability, Period shall be two years from the date of virtual completion of work, as certified by the Museum/Centre. Any defect, shrinkage or other faults, which may appear within the defect liability period, in the opinion of the Engineer, arising from materials or workmanship not in accordance with the contract or from failure to take due precautions, shall upon the directions in writing of the engineer and within such reasonable time as shall be specified therein be amended and made good by the Successful e-tenderer at his own cost. In case of default, the Museum/Centre may employ and pay any other person/person to amend and make good such defect, shrinkage or other faults and all damage, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Successful e-tenderer.

Such damage, loss and expenses shall be recoverable from the Successful e-tenderer by the Museum/Centre or may be deducted by them from any money due or that may become due to the Successful e-tenderer. The Museum/Centre may also in lieu of such amendments deduct from any money due to the Successful e-tenderer, a sum to be determined by the Engineer equivalent to the cost of amending such works, and in the event of the amount retained under Clause 32 (the amount held as retention money) being insufficient, recover the balance from the Successful e-tenderer, together with expenses the Museum/Centre may have incurred in connection therewith. The Successful e-tenderer shall remain liable under the provisions of this clause notwithstanding the signing by the Engineer of any certificate or the passing of any bills.

21. OPENING OF WORK

(a) All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the supervision of the Museum/Centre, Engineer or their representatives.

(b) The Successful e-tenderer shall notify the Engineer in writing immediately after the trenches or excavations, as shown in the drawings, are executed or as soon as any ground is cut into which from unexpected causes, appears to need immediate attention. After notifying the Engineer he shall await instructions which shall be given within seven days of receipt of such notice. If the Successful e-tenderer puts in, any part of the foundations before he has notified the Engineer and received instructions, he shall be liable to reinstate all work that may subsequently at any time, be damaged on account of any defect or insufficient foundations. The Successful e-tenderer shall at the request of the Engineer, within such time as indicated by the Engineer, shall open up for inspection any other work and should the Successful e-tenderer refuse or neglect to comply with such request, the Museum/Centre through the Engineer may employ other workmen to open up the same. If the work has been covered up in contravention of Engineer's instructions, or if on being opened up, be found not in accordance with the drawings and specifications or the instructions of the Engineer, the expenses of opening up and covering it up again, whether done by the Successful e-tenderer or such other workmen

shall be borne by or be recoverable from the Successful e-tenderer or may be deducted from any money due or which may become due to the Successful e-tenderer or from the amount held as retention money. If the work has not been covered up in contravention of such instructions, and be found in accordance with said drawings and specifications or instructions, the expenses aforesaid shall be borne by the Museum/Centre and shall be added to the contract sum provided always that in the case of foundations or of any other urgent work so opened up and requiring immediate attention, the Engineer shall within seven days after receipt of written notice from the Successful e-tenderer that the Work has been so opened, make or cause to make the inspection thereof and at the expiration of such time if such inspection shall not so have been made, the Successful e-tenderer may cover the same and shall not be required to open it up again, except at the expense of the Museum/Centre.

22. WORK IN SUBSOIL WATER/RAIN WATER/WATER

If during execution of work, sub-soil water is met with, or water enters the working space due to rains or any other cause, the Successful e-tenderer shall do dewatering using pumps or manual labour and also carry out additional work consequent thereupon, including shoring, strutting, work in liquid mud, sludge etc. without extra payment.

23. HEIGHTS

Successful e-tenderer's rates shall include lifts upto all heights given in drawings or as required during execution. They should satisfy themselves for correctness and allow for variation if necessary. Nothing extra will be paid for additional lifts except where special items for lifts exist in schedule. E-tenderer shall include in his e-tender rates allowance for works at extra heights required for double or multiple staging, tall centering, scaffolding etc. for all items including extra labour if any. If any deviation from the contract drawings in respect of height is noticed by the e-tenderer in any subsequent working drawing issued to him during continuance of the works that must be brought to the notice of the Engineer (in writing) sufficiently before commencing execution of the work. The decision of the Engineer as to whether this will be an extra item or not or whether the Successful e-tenderer is entitled to get any extra payment or not for execution of this extra height will be final and binding.

24. SCAFFOLDING, CENTERING & SHUTTERING

The Successful e-tenderer shall use external scaffolding to ensure true line in vertical and horizontal planes. Centering, shuttering and scaffolding required for execution of this work may vary from single floor height to multifloor heights, which may require multiple staging, scaffolding, centering and shuttering. Since the payments will be made to the successful e-tenderer at net quoted rates, irrespective of the heights involved the e-tenderers must see and study the drawings carefully before e-tendering their rates.

25. GLAZING

If glass of required thickness is not available in the market the successful e-tenderer shall have to use next higher thickness available without any extra payment. Rate for glazing shall include for providing and fixing either clear or frosted glass as shown in drawings or as directed by the Engineer.

26. WOOD WORK

Sizes mentioned in schedule of quantity or in drawings are the finished sizes. Successful e-tenderer shall allow necessary increase in sizes for planning required. In case the sizes of wooden members fixed are less than the one shown in the drawing schedule of quantity allowing for tolerance, payment will be made for actual size used at site. The rate quoted shall also include the allowance for curved or tapered or any other shape of the wooden member.

Wherever the wooden member abuts against masonry/RCC work, all the unexposed surfaces of wood work shall be required to be treated with two coats of suitable ant termite paint. E-tenderer's rates shall include application of two coats of ant termite paint.

27. SITE CLEARANCE AND CLEAN UP

The Successful e-tenderer shall, from time to time clear away all debris and excess materials accumulated at the site.

After all fixtures, equipment and appliances have been installed and commissioned, they shall clean up the same and remove all plaster, paints, stains, stickers and other foreign matter of discolouration leaving the construction in ready to use condition.

On completion of all works they shall demolish all temporary storages put up by them, remove all surplus materials and leave the site in a broom clean condition.

28. RATES

The rates quoted by the Successful e-tenderer shall be paid at net rates. He should include in his rates allowance for increase or decrease in the prices due to market fluctuation. He shall not be entitled to any separate amount on account of GST, other taxes, labour cess or any other cess, duties, etc., which are in force or will be enforced or enhanced by Government or local bodies during contract period or after e-tendering. Accepted e-tender rates shall not be changed due to changes in wages of labour either.

29. QUANTITIES

All the quantities given in schedule of quantities are provisional.

The e-tenderers shall be deemed to have given Balanced Rates for each item, irrespective of the quantities given. Also irrespective of variation in quantities to any extent the e-tenderer shall be paid at accepted contract rates only. Museum/Centre reserves the right to increase or decrease quantities to any extent

30. ESCALATION CLAUSE

(This clause is deleted & not applicable for this tender)

31. SECURED ADVANCE

- (a) The Successful e-tenderer shall not be entitled to be paid for the materials brought to site, which remains unused or unfixed. The Engineer, with the concurrence of the Museum/Centre may pay an advance upto 85% of the cost of such material as calculated from the respective e-tender item. When in any certificate, of which the Successful e-tenderer has received payment the value of material at site has been included, such materials shall become the property of the Museum/Centre but the Successful e-tenderer shall be liable for any loss or damage to any such material. They shall furnish an indemnity bond in the prescribed form along with their claim for advance against materials brought to site for bonafide use in specific items under the schedule of quantities.
- (b) The secured advance so paid shall be adjusted in the running account bills as and when the materials are used subject to wastage.
- (c) If the specification or schedule of quantities of the work provided use of any special description of materials to be supplied by the Museum/Centre or it is required that the Successful e-tenderer shall use certain stores to be provided by the Museum/Centre, such materials and stores and the price to be charged therefore as hereinafter mentioned, being so far as practicable for the inconvenience of the Successful e-tenderer but not so as in any way to control the meaning or effect of this contract, the Successful e-tenderer may be supplied with such materials and stores as and when required from time to time to be used by him for the purpose of the Contract only, and the value of the full quantity of material and stores supplied at the rates specified in the said schedule appendix memorandum may be set off or deducted from any sum then due or thereafter to become due to the Successful e-tenderer under the contract or otherwise, or from the retention money or against the sale proceeds thereof, if the same is held up in Government Securities, the same or sufficient portion thereof being in this case sold for the purpose. All materials supplied to the Successful e-tenderer by the Museum/Centre shall remain absolute property of the Museum/Centre. The Successful e-tenderer shall be fully responsible for their storage and maintenance and shall not on any account remove those from the site of the work. The material shall at all times be open to inspection by the Engineer and/or the Museum/Centre. At the time of the completion of work or termination of the contract, or even earlier if so required by the museum/centre, the same shall be returned to them. The successful e-tenderer shall not be entitled to return any such material unless the same is, in the opinion of the Engineer of the Museum/Centre in perfectly good condition; and shall have no claim for compensation on account of any such materials so supplied to him as aforesaid being unused by him or for any wastage in or damage to any such materials.
- (d) Owing to restriction in obtaining certain materials from the market, the Museum/Centre may undertake to supply certain materials at specified rates as stated in the appendix. In case of delay in supply of these materials by the Museum/Centre, the Successful e-tenderer is required to keep himself in touch with the day to day position regarding the supply of such materials from the Museum/Centre and to adjust the progress of the work in a manner that his labour do not remain idle, nor thereby lodge any claim due to or arising out of delay in obtaining such materials. No claim whatsoever shall be entertained by the Museum/Centre on account of delays in supply of these materials.
- (e) The Successful e-tenderer shall ensure that only the required quantities of materials are got issued and the surplus quantities of materials, if in good condition, shall be taken by the Museum/Centre at the rates fixed in the Appendix.
- (f) Essentiality Certificates/Permits/Recommendation Letters for materials available at controlled rates etc. would be given by the Museum/Centre, if required by the successful e-tenderer. It will, however, be their responsibility to obtain materials against the certificates or otherwise, and no claim on this account or any extension of time for completion of works will be entertained by the Museum/Centre. The Successful e-tenderer shall use materials thus procured exclusively in this work and for misuse, if any, he shall be solely responsible.

32. RETENTION OF MONEY

This shall mean and be 10% of the total gross value of the work as paid for against this contract including the performance guarantee and the amount which shall be recovered from the running bills. In case of termination of contract, this retention money shall be forfeited and amount necessary to make up this amount shall be recovered from the money due to the successful tenderer under this contract, or any other contract. The successful tenderer can give retention money in approved format to the extent of 10% of the total cost of work awarded valid for a period equal to completion period plus two years (which will have to be suitably extended to cover defect liability period and extended period of contract whichever is later). Tenderers who have deposited earnest money/performance guarantee in Bank Draft along with the tender could get refund of earnest money deposited in cheque or Bank Draft or wire/Bank transfer after the for the 10% of the total cost is received and accepted by the Museum/Centre. The retention money will not be accepted in parts.

The successful tenderer shall have to extend the Bank Guarantee (if applicable) period, from time to time at least three weeks before the expiry of a Bank Guarantee to cover the defects liability period, reckoned from the date of virtual completion. In case they fail to extend the Bank Guarantee at least three weeks before its expiry, it shall be considered a breach of contract on the part of the successful tenderer and hence, the Museum/Centre shall be free to demand or encash the Guarantee money from the Bank. Provided all defects are removed and the retention money is not forfeited or has not become liable to be forfeited under this contract.

100% of the retention money without interest will be refunded to the successful e-tenderer after satisfactory completion of two year (Defect Liability Period) from the date of virtual completion of work and after the successful e-tenderer has rectified all the defects pointed out to him.

Note: - EMD and Performance Guarantee deposited in other modes than online transfer, has to be drawn or duly pledged in favour of the NATIONAL SCIENCE CENTRE payable at NEW DELHI.

33. AUTHORITIES, NOTICES AND PATENTS

The successful e-tenderer shall confirm to the provision of any Act of the Legislature relating to the works, the Regulations and Bye-Laws of any corporations and of any electric and other Companies and/or authorities with whose systems the structure is proposed to be connected, and shall, before making any variation from the drawings or specifications that may be necessitated by so conforming, give to the Engineer written notice, specifying the variation proposed to be made, and the reason for making it, and apply for instructions thereon. If compliance with this clause involves any extra work not included in this contract, he shall specify these items of work and the allowance or extra payment required on their account. In case he shall not, within seven days, received such instructions, shall proceed with the work, conforming to the provision and/or regulation of bye-laws in question.

The amount claimed as an extra or whether there is an extra or not shall be decided by the Engineer and will be subject to arbitration clause if so required.

The successful e-tenderer give all notices required by the said regulations or bye-laws to be given to any authority and pay to such authority or to any public office all fees that may be properly chargeable in respect of the works and lodge the receipts with the bill.

The successful e-tenderer shall indemnify the Museum/Centre against all claims in respect of patent rights, and shall defend all action arising from such claims and shall himself pay all royalties, licence fees, damages, cost and charges of all and every sort that may be legally incurred in respect thereof.

34. DEVIATIONS

The successful e-tenderer may when authorise and when directed, in writing by the Engineer with the approval of the Museum/Centre add or omit or vary the works shown upon the drawings, or described in the specifications, or included the bill of quantities, but they shall make no addition, omission or variation without such authorisation or direction. A verbal authority direction by the Engineer shall, if confirmed by him in writing within seven days, be deemed to have been given in writing.

No claim for an extra shall be allowed unless it shall have been executed under the provisions of Clause 33 or by the authority of the Engineer with the concurrence of the Museum/Centre as therein mentioned. Any such extra if herein referred to, as an authorised extra shall be governed by Clause 35. No variation i.e. additions or substitutions shall vitiate the contract.

35. PRICE FOR DEVIATIONS

Deviations shall be valued at the net rates contained in the E-tenderers' original e-tender or where the same may not apply direct at rates analogous to the prices therein contained. If the altered, additional or substituted work included any class of work for which no rate is specified in the contract, then the Successful e-tenderer shall within seven days of the date of receipt of the order to carry out the work, inform the Engineer with a copy to the Museum/Centre the rate which he intends to charge for such class of work with proper analysis. In the event of his not doing so, within a reasonable time before the commencement of such work, he shall not be entitled to any allowance or payment in respect of any such extra work. When such notice has been duly given, the Engineer with the consent of the Museum/Centre may agree to such a rate but if the Engineer does not agree to this rate, the Engineer may cancel his order to carry out such class of work and arrange for it to be carried out departmentally or through any other agency or in such a manner as he may consider advisable or he may decide that the Successful e-tenderer shall carry out such items of work and in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him according to such rate or rates as shall be fixed by the Engineer which will, however be subject to the Arbitration Clause.

However, in respect of the rates for extra/new items, if there are any, the opinion of the Engineer as to whether it is an extra item or not, and if so, what rates should be paid shall be final and binding on the successful e-tenderer shall be derived from contract items so far as applicable and the rates which cannot be derived from contract will be fixed on the basis of actual cost of materials and labour, plus 15% as successful e-tenderers' overheads and profits on all trades except on the cost of materials supplied departmentally.

Successful e-tenderer shall not claim any idle and remobilization charge for interim delay due to late decision by the Museum/Centre. Such legitimate interim delays shall however be considered for extension of time, if any.

Furthermore, they shall submit analysis of rates with justifications for claiming extra on any deviation item at least 45 days prior to the probable date of execution of the referred item.

36. MEASUREMENTS

In case of dispute between the successful e-tenderer and the Museum/Centre as to under which item a particular work is to be measured the decision of the Engineer shall be final and binding on both the parties to the contract. If for any items, the mode of measurements

is not specified the decision of the Engineer about the mode of measurement shall be final and binding on both the parties to the contract.

37. PREPARATION OF RUNNING AND FINAL BILLS

Minimum value of work for interim certificate shall be 10% of the tendered value (or less at discretion of the Museum/Centre) but not more than one running bill, in a month, if paid separately.

75% advance bill against work done but unmeasured and adjustable fully in the next running bill may be certified by the Engineer, at his discretion in the interest of the work.

The Engineer or his representative shall take measurements in presence of Successful e-tenderer's representative and record them in the Measurement Book from time to time and shall prepare abstract for running and final bill, including recovery statements. The bill abstract shall be prepared on standard CPWD form on the basis of abstract of quantities prepared by the Engineer in triplicate. The Successful e-tenderer should sign the bill and Measurement Book with the remark "Measurement and bill accepted". However, in the final bill, the successful e-tenderer shall have to certify – "The bill is accepted in full and final settlement of all claims and demands against this work".

In case a large amount is blocked in the final bill pending technical/audit check, advance upto the extent of 75% of net final bill amount may be paid to the successful e-tenderer, with the approval of the Engineer at his direction even after the completion date is over.

The recovery from Running Account Bills for the materials issued by the Museum/Centre shall be made on the basis of the quantity consumed in the work as assessed by the Engineer, giving a due allowance for wastage. The Successful e-tenderer shall submit once a month a statement showing the materials received, consumed and the balanced carried over to the subsequent month so that a watch could be maintained on the material.

38. CERTIFICATES AND PAYMENTS

- (a) The Engineer may from time to time intimate in writing to the Successful e-tenderer that he requires the works to be measured and they shall attend or send qualified agent to assist the Engineer or the Engineer's representative in taking such measurements, and calculations and to furnish all particulars or to give all assistance required by the Engineer. Should they not attend or neglect or omit to send such agent then the measurement taken by the Engineer or approved by him shall be taken to be correct measurements of the work unless objected to within one month of their being recorded in the measurement book or books. Such measurements shall be taken in accordance with the mode of measurements mentioned in the specifications.
- (b) The Successful e-tenderer or his agents may at the time of measurement take such notes of measurements as they may require.
- (c) The Engineer or his authorised representative will issue on the basis of necessary measurement interim valuation certificates to the Successful e-tenderer in respect of items of work, rates for which exist in the priced schedule of quantities or have been subsequently agreed upon between the parties, and shall send the measurement books and the valuation certificates to the Museum/Centre. The Successful e-tenderer shall be entitled under these certificates of the Engineer to payments, within 15 days from the date of each certificate, unless objected as provided in sub-clauses (a) & (b) at the rate of maximum 90% of the value of work so executed and the balance being retained towards retention money. The engineer shall issue such certificates within fifteen days of notice from the Successful e-tenderer provided measurements have been taken and the value of the work done since last payment exceeds the amount stated in the appendix and not more than one certificate is required in a fortnight, provided always that the issue by the Engineer of any certificate during the progress of the work or after their completion shall not have any effect as a certificate of satisfaction or relieve the Successful e-tenderer from his liability under Clause 20 and 21. Provided all defects are removed and the retention money is not forfeited or has not become liable to be forfeited under this contract, 100 % of the amount under retention money shall be refunded without interest after two year of defect liability period is over from the date of virtual completion of the works or the final bill is passed for payment whichever is later.
- (d) All intermediate payments shall be recorded as payments by way of advance against the final payment only and not as payment for work actually done and completed. The final bill shall be submitted by the Successful e-tenderer within 3 months of the date fixed for completion of the work. The measurement of the work taken by the Engineer or his representatives after one week's notice to the Successful e-tenderer shall be final and binding on him unless objected to within one month of their being recorded in the measurement books.
- (e) The Museum/Centre may in consultation with the Engineer, but absolutely at his discretion, make an advance payment on account, which will be merged in the next intermediate payment, based on measurements.
- (f) Advance for materials brought to site: The Successful e-tenderer shall execute a bond in favour of the Museum/Centre in the prescribed format attached hereto for each advance or intermediate payment received by him. If the Successful e-tenderer commits any default in the terms of the said bond and he fails to pay the bond amount, the Museum/Centre shall have the power to:
 - (i) Seize and utilise the said materials or any part thereof for the completion of the works.

- (ii) Remove and sell by public auction the materials seized or any part thereof, and out of the proceeds of the sale, retain all sums repayable to the Museum/Centre together with interest thereon at the rate prescribed by Govt. of India from time to time for capital outlays.
 - (iii) Deduct all or any part of moneys owing from out of the retention money or any other sum or sums due to the Successful e-tenderer under this agreement.
- (g) The Successful e-tenderer agrees that before final payment shall be made on the contract, he will sign and deliver to the Museum/Centre either in the measurement books or otherwise as required, a valid release and discharge certificate from any and all claims and demands whatever from the Museum/Centre for all matters arising out of or connected with the contract.

39. TIME AND DAMAGES FOR NON-COMPLETION OF WORK IN TIME

- (a) All the construction works shall progress strictly as per the enclosed CPM/PERT/BAR CHART. If however, the Successful e-tenderer desires some minor modifications in the same he may apply to the Museum/Centre within mobilisation time and before execution of the agreement indicating the reasons for which changes are required. The Museum/Centre may after scrutiny, agree to the modifications suggested if the reasons cited by the successful e-tenderer are considered valid. The decision of the Museum/Centre in this respect will be final and binding. The modifications, if any, are to be incorporated in the CPM/PERT/BAR CHART and this will form a part of the agreement.
- (b) The starting time specified for carrying out of the work as entered in the CPM/PERT/BAR CHART shall be reckoned from the date of issue of the Letter of Intent. The date of completion or such date as is duly extended under Clause 40 shall be strictly observed by the Successful e-tenderer. The work shall, throughout the stipulated period of the contract, be proceeded with all diligence (Time being deemed to be the essence of this Contract) by the successful e-tenderer strictly according to the CPM/PERT/BAR CHART which is a part of this agreement.
- (c) At any stage during the execution of the work if the work lags behind the target indicated in the CPM/PERT/BAR CHART for reasons directly attributable to the Successful e-tenderer, he shall be liable to pay as agreed liquidated damages equivalent to half percent of the total cost of work awarded every week for the period the work lags behind the CPM/PERT/BAR CHART subject to a maximum of 10% of the total value of work, awarded or gross value of work done, whichever is greater.
- (d) In the event of Successful e-tenderer's inability to complete the construction work by the scheduled date of completion, the Museum/Centre shall have the right to terminate the contract as per Clause 42 or allow the successful e-tenderer to continue and complete the work within specific date. In the latter case, during the period of continuation, the successful e-tenderer shall pay as agreed liquidated damage equivalent to one per cent of the total cost of work awarded for every week that the work remains unfinished subject to a maximum of 10% of the total value of work awarded or gross value of work done, whichever is greater.

40. EXTENSION OF TIME

If the successful e-tenderer shall desire an extension of time for completion of the work on the grounds of his having been unavoidably hindered in its execution and for reasons not attributable to him on the following grounds:-

- (a) by reason of any exceptionally inclement weather like Cyclone, severe flood etc., normal monsoon shall not be considered a valid reason for extension of time,
- (b) by reason of proceedings taken or threatened by, or legal disputes with adjoining or neighbouring owners,
- (c) due to delay in the work of other agencies or tradesman engaged or nominated by the museum/centre: if such delay is directly responsible for delay in execution of this work,
- (d) by reason of any general strike or lockout affecting the building made, strike or any kind of labour trouble in successful e-tenderer's own organisation shall not be a valid reason for extension,
- (e) in the event of delay in execution of work wholly attributable to delay in supply of drawings by Architect or Museum/Centre in spite of request from the successful e-tenderer well in advance, he shall apply in writing to the Engineer within seven days of the date of the hindrance on account of which he desires such extensions as aforesaid and the engineer, with the consent of the Museum/Centre may if reasonable ground be shown therefore allow such extension of time, if any, be necessary or proper,
- (f) in case of the total value of the work exceeds the total value of the e-tender owing to deviation in quantities or extra items, the successful e-tenderer will be entitled to ask for extension of time in proportion to the increased value of work. Increase in value of work due to escalation as per Clause 30 shall not be a valid reason for extension of time.
- (g) No extension of time shall be given to the successful e-tenderer for non supply or delay in supply of cement and/or steel as per Clause 56. The successful e-tenderer hereby agrees that extension of time requested for by him and granted by the Museum/Centre shall be treated as an extension of time allowed to them without any claim for compensation or damages for any reasons whatsoever including those for which the extension is granted.

If an extension of time is granted by the Museum/Centre for reasons of delay either attributable or not attributable to the successful e-tenderer as indicated above then it shall be without any escalation.

41. SUSPENSION OF WORK BY THE SUCCESSFUL E-TENDERER

If the successful e-tenderer suspends the works without obtaining extension of time or in the opinion of the Engineer neglects or fails to proceed with due diligence in executing his part of the contract or if he makes default more than once in the manner mentioned in Clause 20 above the Museum/Centre or the Engineer shall have power to give notice in writing to the successful e-tenderer requiring that the works be proceeded with reasonable speed and output must be commensurate with the CPM/PERT/BAR CHART. Such notice shall specify the act of default on the part of the successful e-tenderer. After such notice has been given the Successful e-tenderer shall not be at liberty to remove from the site of work or from any ground continuous thereto any plant or materials belonging to him which had been placed thereon for the purpose of the work, and the Museum/Centre shall have a lien upon all such plants and materials to subsist from the date of such notice being given, until the notice have been complied with. Provided always that such lien shall not under any circumstances subsist after the expiration of thirty-one days from the date of such notice being given, unless the Museum/Centre has entered upon and taken possession of the works and site and of all such plants and materials until the works have been completed under the power hereinafter conferred upon it. If the Museum/Centre exercises the above power it may engage any other agency to complete the works or finish the works departmentally and exclude the successful e-tenderer, his agents and servants from entry upon or access to the same except that the successful e-tenderer or any one person appointed in writing by him and accepted by the Museum/Centre may have access at all reasonable times during the progress of works to inspect, survey and measure the works. Such written appointments marked with Museum/Centre's consent or a copy thereof shall be delivered to the Engineer before the person so appointed comes to the works. The Museum/Centre shall take such steps as, in the opinion of the Engineer may be reasonable and necessary for completing the works without undue delay & expense, using for that purpose the plants and materials above mentioned, in so far as they are suitable and adopted to such use. Upon the completion of the works the Engineer shall certify the amount of expenses properly incurred, consequent on the incidental to the default of the successful e-tenderer as aforesaid, in completing the works by other persons. Should the amount so certified as the expenses properly incurred, including Museum/Centre's overhead if the works were carried out departmentally, be less than the amount which would have been due to the Successful e-tenderer upon the completion of the works by him, the difference shall be paid to the Successful e-tenderer by the Museum/Centre. Should the amount of the former exceed the later, the difference shall be paid by the Successful e-tenderer to the Museum/Centre. The Museum/Centre shall not be liable to make any further payment or compensation to the Successful e-tenderer for or on account of the proper use of the plants for the completion of the works under provisions hereinbefore contained other than such payment as is included in the contract price. After the works have been so completed by person other than the successful e-tenderer under the provisions hereinafter contained, the Museum/Centre shall give notice to the Successful e-tenderer of such completion and may require him from time to time, before and after such completion, to remove his plants and likewise all such materials as aforesaid as may not have been used in the completion of the works, from the site. If such plants and materials are not removed within such reasonable time, the Museum/Centre may remove and sell the same, holding the proceeds, less the cost of the removal and sell, to the credit of the successful e-tenderer. The Museum/Centre shall not be responsible for any loss sustained by the successful e-tenderer from the sale of plants in the event of the successful e-tenderer not removing it after notice, or for any damage thereto or deterioration thereof in any event.

42. DETERMINATION OF CONTRACT BY THE MUSEUM/CENTRE

If the successful e-tenderer goes into liquidation, whether voluntary or compulsory or shall make an assignment or a composition for the benefit of the greater part, or shall enter into a Deed of Agreement with its creditors or if the Receiver of the Successful e-tenderer shall be unable, within fourteen days after notice to him requiring him to do so, to show to the reasonable satisfaction of the Museum/Centre that he is liable to carry out and fulfil the contract and if so required by the Museum/Centre to give reasonable security therefore or if the successful e-tenderer shall suffer execution to be issued or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors or the Successful e-tenderer or shall assign, charge or encumber this charge or encumber this contract thereunder or shall neglect or shall fail to proceed to perform all or any of the act, matters or things by the contract, to be observed and performed by the successful e-tenderer for three clear days after written notice shall have been given the successful e-tenderer in manner, matter hereinafter mentioned, requiring the successful e-tenderer to observe perform the same or shall use improper material or workmanship in carrying on the works or shall in the opinion of the Engineer not exercised such due progress as stipulated in the enclosed CPM/PERT/BAR CHART forming part of this contract which would enable the works to be completed within the time agreed upon or shall abandon the contract, then, and in any of said cases, the Museum/Centre may notwithstanding any previous waiver, determine the contract by a notice in writing in which case the retention money (including the earnest money and the initial security deposit) and whether paid in one sum or deducted by instalment shall stand forfeited and be absolutely at the disposal of the Museum/Centre. The Successful e-tenderer shall have no claim or compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made advances on account of or with a view to the execution of the work or the performance of the contract. The successful e-tenderer shall not be entitled to recover or be paid any sum for any work actually performed under the contract unless and until the Engineer will have certified in writing the performance of such work and the value of work payable in respect thereof and the successful e-tenderer shall only be entitled to be paid the value so certified. The certificate of the Engineer shall be based on measurements taken by him or under his supervision and with due notice to the Successful e-tenderer and on rates in the priced schedule or as subsequently communicated by the Engineer with the approval of the Museum/Centre, under this agreement except for arithmetical errors, shall be final and conclusive. The Successful e-tenderer must remove his plant, materials, scaffolding etc. from the site within 10 days (ten days) of the receipt of the notice from the Museum/Centre after which they will vest in the Museum/Centre who may, dispose them off as per Clause 41 by sale or auction on account of and at the risk of the successful e-tenderer who will have no claim for loss or compensation on this account.

43. TERMINATION OF CONTRACT BY SUCCESSFUL E-TENDERER

If payment of the amount payable by the Museum/Centre under the certificate of interim payment issued by the Engineer in accordance with clause 38 shall be in arrears and unpaid for sixty days after notice in writing requiring payment of the amount shall have been given by the Successful e-tenderer to the Museum/Centre in manner hereinafter mentioned or if works be stopped for six months under the order of the Museum/Centre for any reason not connected with any default on the part of the Successful e-tenderer or by any injunction or other order of any court of law made for any reasons not connected with any such default on the part of the successful e-tenderer then and in any of the said cases the successful e-tenderer shall be at liberty to terminate the contract by notice in writing to the Museum/Centre and he shall be entitled to recover from the Museum/Centre payment for all works executed and for useful materials (but not plants) purchased for the purpose of the contract and is brought to the site. In arriving at the amount of such payment, the net rates contained in the successful e-tenderer's e-tender shall be followed, or where the same may not apply, rates proportional to the prices therein contained. Rates for materials may be determined by the Engineer on actual vouchers produced by the successful e-tenderer and/or prevailing market rates at the discretion of the Engineer. The Successful e-tenderer shall not be entitled to recover or be paid any sum for any work actually performed under the contract, unless and until the Engineer has certified in writing the performance of such work and the value payable in respect thereof and the successful e-tenderer shall only be entitled, to be paid the value so certified. The certificate of the Engineer shall be based on measurements taken by him or under his supervision after due notice to the successful e-tenderer and shall be final and conclusive except for arithmetical errors. The successful e-tenderer must remove his plant, materials, scaffolding etc. from the site within ten days or such time as may be extended by the Museum/Centre in writing, from the receipt of the notice from the Museum/Centre after which they will vest in the Museum/Centre who may dispose them off as per Clause 42 by sale or auction on account of and at the risk of the successful e-tenderer who will have no claim for loss or compensation on this account.

44. ARBITRATION

- (a) Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, design, drawing, and instructions hereinbefore mentioned and so to any question, claim right, matter or thing whatsoever, in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution of the same whether arising during the progress of the work or after the completion or abandonment thereof but excluding disputes on material and workmanship as per Clause 17 & 18 which is binding on both parties, shall be referred to the sole arbitration of a person nominated by the Director General, National Council of Science Museums and if the former is unable or unwilling to act to the sole arbitration, of some other person appointed by the Director General, NCSM willing to act as such arbitrator. The submission shall be deemed to be submission to Arbitration under the meaning of the Arbitration & Reconciliation Act, 1996 or any statutory modification or re-enactment thereof for the time being in force. The award of arbitrator so appointed shall be final, conclusive and binding on all parties to this contract.
- (b) It is agreed that the Successful e-tenderer shall not delay the carrying out of the work by reasons of any reference to arbitration and shall proceed with the work with all due diligence and shall, until the decision of arbitration, abide by the decision of the Engineer duly conveyed to him.
- (c) The Arbitrator(s) may from time to time with the consent of the parties, extend the time for making and publishing the award.

45. COMPENSATION

All sums payable by way of compensation or liquidated damage under any of these conditions shall be considered as reasonable compensation to be applied to the use of Museum/Centre without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

46. WORK ON HOLIDAYS

Successful e-tenderer shall not carry out work on any Government holidays except with the permission of the Engineer. The contract period will be inclusive of such holidays.

47. WORK SUPERVISOR AND FOREMAN

The Successful e-tenderer shall keep a qualified and experienced Engineer for supervision of works to ensure best quality work. He shall also give all necessary personal superintendence during the execution of the works and as long thereafter as the Engineer may consider necessary until the expiration of the 'Defect Liability Period' stated in Clause 20 above. The Successful e-tenderer shall also during the whole time, the works are in progress, employ competent Foreman approved by the Engineer whose qualification must conform to the requirements specified by the Engineer. In special cases he shall be constantly in attendance of the building while the men are at work. Any directions, explanations, instruction or notices given by the Engineer to such Foreman shall be held to be given to the Successful e-tenderer.

48. DISMISSAL OF WORKMEN ETC.

The Successful e-tenderer shall on the request of the Engineer immediately dismiss from the works any person employed thereon who may, in the opinion of the Engineer be unsuitable or incompetent or who may in the opinion of the Museum/Centre or the Engineer misconduct himself and such person shall not be again employed or allowed on the works without the written permission of the Engineer and/or the Museum/Centre.

49. ASSIGNMENT OR SUBLETTING OR BRIBES

- (a) This contract shall not be assigned or sublet without the written approval of the Museum/Centre. If the Successful e-tenderer shall assign or sublet this contract, or attempts to do so or become insolvent or commence insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, pre-requisite award, reward or advantage pecuniary or otherwise, shall either directly or indirectly be given, promised or offered by the Successful e-tenderer, any of his servants or agents to any officer of the Museum/Centre or to person who shall become in any way directly or indirectly interested in the Contract, the Museum/Centre may thereupon by notice in writing rescind the contract and the retention money of the Successful e-tenderer shall thereupon stand forfeited and be absolutely at the disposal of the Museum/Centre, and the same consequences shall ensure as if the contract had been rescinded under Clause 42 thereof and (in addition) the Successful e-tenderer shall not be entitled to recover or to be paid for any work therefore actually performed under the contract.
- (b) The whole of the works including the contract shall be executed by the Successful e-tenderer and he/they shall not directly or indirectly transfer or assign or underlet the contract or any part, share or interest therein nor shall he take a new partner without the written consent of the Museum/Centre and no subletting shall relieve the Successful e-tenderer from the full and entire responsibility of the contract or from active superintendence of the works during the progress.

50. OTHER PERSON ENGAGED BY MUSEUM/CENTRE

The Museum/Centre reserves the right to use the premises and any portion of the site for the execution of any work not included in this contract, which he may desire to have carried out by other persons, and the successful e-tenderer shall allow all reasonable facilities for the execution of such work, but is not required to provide any plant or materials for the execution of such works except by special arrangement with the Museum/Centre.

51. OTHER AGENCIES AND PROVISIONAL SUMS

- (a) The Successful e-tenderer is to afford all reasonable facilities to all other agencies, sub-agencies, specialists, merchants, tradesman and others who may at any time be appointed by the Engineer with the consent of the Museum/Centre for executing any work or supplying any goods relating to the constructions, servicing, equipping or furnishing of the building under construction or in the compound. In case of delay in completion of his work due to other agencies' work, the Successful e-tenderer shall only have a right to ask for extension of time but no other claim on this or any other account shall be entertained by the Museum/Centre.
- (b) If any provisional sum is included in the bill of quantities, they are to be deducted wholly if not required or in part the Museum/Centre reserves to itself the right to appoint any agency to do the work allowed for in provisional sums and the successful e-tenderer shall not have any right to claim any profits on this account.

52. LABOUR WAGES AND REGULATIONS

Notwithstanding any contained in the conditions of this contract the Successful e-tenderer shall comply with the provision of the contract labour (Regulation & Abolition) Act 1970 and various rules framed thereunder by different State Government, in respect of all labourers directly or indirectly employed by the Successful e-tenderer in the works through labour contracts or otherwise the Successful e-tenderer shall be considered as "Principal Employer".

The Successful e-tenderer agrees to grant Provident Fund benefits in accordance with Employees Provident Fund Act 1962 and Scheme thereunder to his workers The successful e-tenderer shall pay not less than "fair wages" to labourers engaged by him on the work. No labour below the age of fourteen years shall be employed. The successful e-tenderer shall at his own expense provide or arrange for provision of footwear for any labour doing cement mixing work.

53. INSURANCE FOR DAMAGE TO PERSON AND PROPERTY

- (a) The Successful e-tenderer shall be responsible for all injury to persons, animals or things and for all damages to property, structural and decorative, whether such injury or damage arise from carelessness or accident or in any way connected therewith. This clause shall be held to include, inter alia, any damage due to causes as aforesaid to buildings (whether immediately adjacent or otherwise) and to roads, streets, footpaths, bridges or ways as well as all damage caused to the buildings and works forming the subject of this contract by the inclemency of weather. The Successful e-tenderer indemnifies the Museum/Centre and holds him harmless in respect of all expenses arising from such injury or damage to person or property aforesaid and also in respect of any claim made in respect of injury or damages consequent upon such claim.
- (b) The successful e-tenderer shall reinstate all damage of every sort mentioned in this clause, so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good and otherwise satisfy all claims for damage as aforesaid to the property or third parties.
- (c) The Successful e-tenderer also indemnifies the Museum/Centre against all claim which may be made upon the Museum/Centre during the currency of this contract by any employee or representative of an Employee of the agency, or any sub-agency, employed by him, for any injury to or loss of life or such employees, or for compensation payable under any law for the time being in force to any workman or to the representative of any deceased or incapacitated workmen.
- (d) The Successful e-tenderer also indemnifies the Museum/Centre in respect of any costs, charges and/or expenses, including legal costs as between Solicitor and client, occurring out of any award of compensation and/or damages consequent upon such claims.
- (e) The Museum/Centre shall be at liberty and is hereby empowered to deduct the amount of any damages, compensation cost, charges and/or expenses

- (f) arising or ascertaining from or in respect of any such claim and/or damages as aforesaid from any sum, or sums due to, or become due to the Successful e-tenderer.

54. NOTICE

Notice for the Museum/Centre, the Engineer or the Successful e-tenderer may be served personally or sent by registered post addressed to the office of the Museum/Centre or the last known place of business of the Engineer and the Successful e-tenderer or in the case of the successful e-tenderer also be being left on the works. Any notice sent by registered post shall be deemed to be served at the time when in the ordinary course of post it would be delivered.

55. APPOINTMENT OF APPRENTICES AS PER APPRENTICES ACT

The Successful e-tenderer shall during the currency of the contract when called upon by the Engineer engage and also ensure engagement by sub-agencies and other employed by the successful e-tenderer with the works such number of apprentices in categories mentioned below and for such periods as may be required by the Engineer. The Successful e-tenderer shall train them as required under the Apprentices Act 1961 and the Rules made thereunder and shall be responsible for all obligations of the Museum/Centre under the said act including the liability to make payments to apprentices as required under the said Act.

~~(a) In Respect of Civil works~~

- | | | |
|-------|-----------------------|--|
| (i) | Brick Layer | : One apprentice for every 7 person engaged in this category |
| (ii) | Building Construction | : One apprentice for every 7 person engaged in this category |
| (iii) | Carpenter | : One apprentice for every 7 person engaged in this category |
| (iv) | Surveyor | : One apprentice for every 14 person engaged in this category |

~~(b) In respect of Sanitary and Water Supply~~

- | | | |
|--|---------|---|
| | Plumber | : One apprentice for every 2 person engaged in this category |
|--|---------|---|

(c) In respect of Electrical Works

- | | | |
|--|---------|--|
| | Wireman | : One apprentice for every 7 person engaged in this category |
|--|---------|--|

The Successful e-tenderer shall comply with the provision of Apprentices Act 1961 and Rules and Orders issued hereunder from time to time.

If the Successful e-tenderer fails to do so, his failure will be deemed to be a breach of contract and the Museum/Centre reserves the right to cancel the contract. The Successful e-tenderer also shall be liable to any pecuniary liability arising on account of any violation by him of the provisions of the Act.

~~56. CEMENT & STEEL (for civil works only)
(This clause is deleted & not applicable for this tender)~~

~~57. REGARDING WEIGHT OF MATERIALS SUPPLIED BY THE MUSEUM/CENTRE (for civil works only)
(This clause is deleted & not applicable for this tender)~~

~~58. RETURN OF STEEL (for civil works only)
(This clause is deleted & not applicable for this tender)~~

~~59. CEMENT CONSUMPTION (for civil works only)
(This clause is deleted & not applicable for this tender)~~

~~60. CONCEALED R.C.C. BEAMS/LINTELS (for civil works only)
If in R.C.C. slab extra bars or steel cage is provided to act as a lintel or beam over an opening, the same will be measured as slab and not as beam/lintel. In case of R.C.C. wall, extra bars or steel cage is provided to act as a lintel or beam over an opening, the same will be measured as wall and not as lintel/beam. R.C.C. column integrated in shear wall shall be measured as wall if of same thickness, and as R.C.C. column if its thickness is more than that of shear wall.~~

~~61. PROJECTION (for civil works only)
Slab projection from the face of wall/column shall be measured under item R.C.C. work in slabs and not under item R.C.C. work in ehajjas.~~

62. ~~DRIP-GROOVE (for civil works only)~~
The successful tenderer shall provide drip groove at all ends of slabs/lintels/beams, if required, to protect rain water from entering inside the boundary of the structure, within quoted rates of R.C.C. work.
63. ~~PLASTERING ON RCC SURFACE (for civil works only)~~
Wherever R.C.C. surface are to be plastered to bring it in line with the brick and/or stone wall plaster of the same mix, payment for such plaster, will be made under the item of plastering only irrespective of the fact whether there is any increase due to odd or even surface of brick or stone work below and/or adjoining it.
64. ~~M.S. REINFORCEMENT (for civil works only)~~
Rate quoted for placing in position and fabrication of mild steel/ribbed or/TMT steel reinforcements should include for straightening and cleaning including removing the rust of the bars at works site, cutting, cranking, hooking hoisting at required levels, cost of providing binding wire of 18 to 20 SWG etc. complete and no separate payment will be made on this account. Payment for reinforcement, however, to be considered on the basis of measurement as per drawing plus standard laps actually provided at site, plus chairs and spacing bars allowed by the Engineer.
65. ~~BRICK WORK (for civil works only)~~
Rates shall include for tapering of bricks over column footings, over walls, steps, etc. and for exposed brickwork, or any other work. Rate for brick work also includes work in pillars and small horizontal courses.
66. ~~BRICK WORK(S) HEIGHTS/DEPTHS (for civil works only)~~
The height or width of foundation steps and superstructures will be measured as per actuals. The successful tenderer shall use suitable bricks and adjust the thickness of mortar joints to make up the width or heights as per drawings, with due regard to size of brick available.
67. ~~EARTHWORK~~
The measurements of earthwork in trenches for foundation, sewer lines etc. shall be made according to the section of trenches shown on the drawing. The successful tenderer shall include in his rate excavating for stepping and slopping back, working space for workmen as found necessary on account of condition of soil. Excavation so made in excess shall not be measured & paid for.

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BHAIRON MARG, NEW DELHI-110001

Ref. No.NSCD/18011/E-TENDER 40 / 2025-26

Annexure – ‘A’

(Format for Declarations & Undertaking to be typed on bidder agency’s letterhead and to be submitted in Part –I (TECHNICAL ENVELOPE) of the e-tender document)

DECLARATION -1

This is to certify that neither I/we/any of us is in anyway related to any employee in the National Council of Science Museums, Kolkata, or any of its constituent units.

Date:

(Signature of the tenderer)
with company seal/rubber stamp

Place:

DECLARATION -2

I/We hereby declare that I/we have not quoted any extra condition along with the Part-II (FINANCIAL ENVELOPE) of the e-tender & my quoted rate is inclusive of applicable GST.

Date:

(Signature of the tenderer)
with company seal/rubber stamp

Place:

UNDERTAKING

This is to certify that I/We have carefully gone through the drawings/specifications, etc. given in the e-tender document & have clearly understood the site working conditions, time schedule given and have accordingly quoted my balanced rates after going through all details.

I/we hereby give an undertaking that I/we shall carryout the work strictly as per the given specifications, and shall complete the same within the stipulated time frame.

I/we also undertake that the EMD amount payable shall be either transferred online or the physical EMD instrument shall be deposited by me/us at the office of the National Council of Science Museums inviting the e-tender before the bid opening date, otherwise National Council of Science Museums may reject the bid and also take action to withdraw my/our enlistment or debar me/us from further participation in tenders of NCSM or its constituent units.

Date:

Place:

(Signature of the tenderer)
with company seal/rubber stamp

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Annexure-B

(To be submitted on Agency's Letter Head in the Portal and hard copy to the TIA)

Ref no.:

Date:

DECLARATION

We, M/s., hereby solemnly declare as follows, in respect of
the Ref. No. :-

- a) That, we have downloaded all the documents from CPP e-Procurement Portal of NIC and all the uploaded information / statements are true to the best of our knowledge.
- b) That, our firm is not involved in any **Litigation or Arbitration** with NCSM or any of its constituent units during the last 05 (five) years.

Yours faithfully,

Date:

(Signature of the tenderer)
With company seal/rubber stamp

Place:

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Annexure- C

(All Particulars/ information should be given in the following format with complete details)

1. Name of the Agency :
2. Full Postal Address :
3. Telephone Number :
4. Fax No./E-mail Address :
5. Whether proprietorship or partnership :
6. Names and professional qualifications of the proprietor or of partners :
7. Description of similar type of works carried out in last **5 years in Govt. / Semi-Govt./ Autonomous Organizations /PSUs and/or Reputed Institutions. (Attach copy of the Work Order & Completion Certificate of similar nature of work of requisite magnitude issued by appropriate Authority in pdf. format)** :
 - a) Client :
 - b) Name of the work :
 - c) Cost of work :
 - d) Period of completion :
 - e) Staff employed :
8. Present assignments if any (Attach supporting documents in pdf format) :
9. List of mechanical/Electrical equipment owned by the firm :

10. PAN card No. :
(Attach Copy in pdf format)

11 GST No

12 Electrical Licence for L.T /HT work

13 Contractor Licence Registration No. :
(Attach Copy in pdf format)

Certified that the information furnished above are true to the best of my/our knowledge. It is hereby declared that I/we will abide by the decision of National Science Centre New Delhi regarding selection of eligible firms for opening of Financial Bid.

Place :

Date :

Signature of the Tenderer
with date & Seal

Note: Enclosures may be attached (in pdf format) if the space is found inadequate/ wherever required

1. Completion certificate along with performance Certificate, photograph (if available) and payment certified true copy or any other document evidencing value of completed value of work to be submitted, giving name of work, value of works, completion period etc. **The NCSM/Centres reserves the right to verify the submitted documents with original at any stage**
2. If the submitted experience certificates of satisfactorily completion are issued by the private client, then in support of the authentication of the submitted experience certificates, **notarized TDS Certificates / or a Chartered Accountants (duly indicating the Membership No. Date and Place of signing) Certificate stating the cost of the project issued by the concerned authorities for the subject work** may also be submitted along with the documents
3. Certified I.T. return along with audited balance sheet for the last 03 (three) years and copy of PAN Card should be submitted

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Annexure- D

INFORMATION ABOUT ONGOING WORKS:

Sl. No.	Details	Work -1	Work -2
1	Project name & Location			
2	Owner or client: (Name and Address, contact Number of Officer to whom reference can be made):			
3	Project details in brief:			
4	Stipulated start date			
5	Actual Start date			
6	Time period			
7	Stipulated completion date			
8	Present Status of work in Percentage completion:			
9	Work Order Value (in lakhs)			
10	Work done value (RA bill) of work (in lakhs):			
11	Type/nature of works details			
12	slow progress if any and Reasons for Delay, if any:			

Note:

1) Original or attested scanned copies of initial work order from client have to be uploaded.

2)The certificate shall mention Name of work, Work order value, duration, Client name & Address, Location of work, Stipulated start and completion date, Actual Start and Completion date, Reasons for Delay (if any), Nature of Work etc.

3)Attach Photographs of the projects.

4)Attach separate sheets, if required

I/We certify that above information furnished by me/us is true and correct to the best of my information and knowledge.

(Signature of the Applicant & date)
with company seal/rubber stamp

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Annexure-E

(Affidavit to be submitted by the Agency on a non-judicial stamp paper of value Rs. 50/- duly notarized, in the Portal as well as hard copy to the TIA)

AFFIDAVIT

Ref:

Date :

I/We.....,S/o.....

Resident of Contractor /
Partner or sole Proprietor (strikeout which is not applicable) of firm M/s..... do hereby
solemnly affirms and declare that our Individual / Firm / Companies is not blacklisted by any State / Central
Govt. Dept. Or any PSUs.

DEPONENT

Address:

Place :

Date :

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Annexure F

Transformer Specifications – As per the bill of quantity attached.

VCB Specification - As per the bill of quantity attached

DG Set - As per the bill of quantity attached

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Annexure-G

Special Terms and Condition:

To be noted by Contractors at the time of e-tendering.

1. **All test reports of VCB, transformer, Transformer oil & earthing, megger etc. should be submitted by the successful tenderer.**
2. **Tenderer should have valid HV& LV work license issued by state government.**
3. **All safety clearance from state government/ concerned departments should be in the scope of contractor before charging the equipments.**
4. All the damages, if any done to any existing facility/structures, the same has to be made good and brought back to its original state by the successful tenderer. No extra payment will be allowed for it.
5. All the safety provision required in the work is to be taken by the successful contractor. Successful Contractor should provide all the necessary safety equipment/accessories like Helmet, Safety Shoes, and Safety Belt etc. to its workmen during execution of works as the requirement. Compliances of all the labour laws, Insurance for the workmen/labour and/or third party insurance etc. shall be the sole responsibility of the successful contractor. The emergency power backup during night (if required) will be in the scope of Contractor.
6. The quoted rates shall be inclusive of all taxes & duty including GST, LW Cess, cost of all material & accessories for erection, connections, testing, commissioning; required labour including skilled manpower for execution and supervision of the work; tools, tackles, plant & machineries required for the work including their transportation; etc. All contingencies, breakage, wastage, sundries, scaffolding, etc. complete shall also be taken care of in the quoted rates.
7. The drawings attached are for tender purpose only and are subjected to change/modification as per design/site condition.

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NATIONAL SCIENCE CENTRE
(A Unit of National Council of Science Museums)
NEAR GATE NO. 4, PRAGATI MAIDAN,
BHAIRON MARG, NEW DELHI-110001

Ref. No: NSCD/18011/E-TENDER 40 / 2025-26

Annexure-H

BANK DETAILS OF NATIONAL SCIENCE CENTRE, DELHI

Name of the Account Holder	NATIONAL SCIENCE CENTRE, DELHI
Account No.	2417101004100
Bank Name	CANARA BANK
Bank Address	6, Bhagwan Das Road, New Delhi
IFSC Code	CNRB0002417
MICR Code	110015045
Type of Account	Saving Account
Branch Code	2417
GST No.	07AAAAN2541C1Z5

PROJECT :- Bill OF Quantity

S.No	Description	Unit	Qty	Rate		Amount	
				DSR Rate	NSI	DSR	NSI
	SUB HEAD - 1 : HT EQUIPMENT & TRANSFORMER						
	Make List: CROMPTON GREAVES/ ABB/ POWER STAR/ VOLTAMP						
1	P/ F MV Danger Notice Plate						
	Providing and fixing MV Danger Notice Plate of 200 mm x 150 mm, made of mild steel, at least 2 mm thick, and vitreous enamelled white on both sides and with inscription in single red colour on front side as required.	Each	2	289		578	
2	P/ F HT Danger Notice Plate						
	Providing and fixing HT danger notice plate of 250 mm x 200 mm, made of mild steel, at least 2 mm thick, and vitreous enamelled white on both sides and with inscription in single red colour on front side as required.	Each	2	314		627	
3	11 KV HT SWITCHBOARD (THREE PANEL) - INDOOR DUTY						
	Supply, installation , testing and commissioning of a Three panel (One Incomer + Two Outgoing) indoor duty totally enclosed sheet steel clad floor mounting, vermin proof, fully interlocked vertical isolation, extensible, horizontal draw out, air insulated, metal clad switchboard having double isolation features complete with circuits as detailed below. The switchboard would be complete with necessary PVC insulated copper busbars, small wiring, labels, cable eyes, cable termination to receive XLPE cables, foundation bolts and suitable for operation on 11 kV 3 phase, 50 cycle, earthed system with a rupturing capacity of 350 MVA .This HT panel must be extendable for future requirement in such a manner not to disrupt ongoing services at the point of use during extension.						

All Incoming and outgoing feeders shall have fault trip auxiliary contacts for wiring to annunciation fault trip indication panel							
One Incoming panel equipped with :							
1- Air insulated metal clad housing							
1- set of 3 phase PVC insulated copper busbars 630 amps rating							
6- single pole cluster type isolating contacts i.e. plug and switches							
1- Triple pole draw out truck mounted 11kV, 350 MVA, 630 Amps Vacuum Circuit Breaker fitted with arc control devices.							
6 NO/NC contacts for remote ON/OFF/TRIP status at BMS							
1- Trip free 230 V AC, motor charged spring release closing mechanism complete with necessary auxiliary switches, emergency hand trip device and mechanical 'OFF' & 'ON' indicator.							
1 - 24 Volt DC shunt trip coil							
1 set-Dual Core Current transformers of ratio 120/60/5A Class 5P10 and Class 0.5, 15 VA burden for protection & metering.							
1- 3 Phase horizontal draw out line potential transformer ratio 11 KV/ $\sqrt{3}$:110/ $\sqrt{3}$ Volt, class 0.5, 200 VA connected with H.V. and L.V. connections, H.V.fuses and LV MPCB of adequate rating to withstand fault level in PT circuit, isolating plugs for H.V. and L.V. connection.							
1- Strip heater to prevent absorption of moisture							
The instrument and relay panel fitted with :							
1- Square voltmeter of 96 x 96 mm scaled 0-15000 volt with 3 way and OFF selector switch.							
1- Square Ammeter of 96 x 96 mm scaled 0-200 amps with 3 way and OFF selector switch.							
1 no. energy analyser to measure voltage, current, power factor, frequency,kW/kVA, kWh, kVArh, kVAh,Real time,date with communication module.							
1 - no. circuit breaker control switch for electrical (T/N/C)							

1- Triple pole numerical I.D.M.T. overcurrent & earth fault relay with two outer elements connected for overcurrent protection and the middle element for earth fault protection overcurrent setting 50% - 200% Earth fault setting 20% - 80% (51 and 51N)						
1 - Electro mechanical Master trip relay (86)						
1 - Electro mechanical Anti pumping relay (94)						
1 - Trip Circuit supervision relay.						
1- set of Red/Green indicating lamps for close and open position						
1- Amber indicating lamp for auto trip						
1- clear indicating lamp for trip circuit healthy						
1- set of white indicating lamps one per phase						
1 - blue indicating lamp for spring charged						
1 - push button on front door for emergency trip						
1- Four window annunciation display to indicate fault trip of incoming and outgoing feeders including audio alarm hooter with accept push button, internal wiring, protection fuses etc. complete.						
1- cable box suitable for cable termination to receive 11 KV XLPE Cable 3 Core 300 sqmm.						
1 Set of Power Pack 220 Volt A.C. / 24 Volt D.C. complete & suitable as required for th complete item.						
TWO NOS OUTGOINGS- Two Nos. for Transformers Feeder equipped with:						
1- Air insulated metal clad housing						
1- set of 3 phase PVC insulated copper busbars 630 amps						
6- Single pole cluster type isolating contacts; i.e. plug and switches						
1- Triple pole drawout truck mounted 11 kV 350 MVA, 630 amps Vacuum circuit breaker fitted with arc control devices.						
1- Trip free 230 V AC, motor charged spring release closing mechanism complete with necessary auxiliary switches emergency hand trip device and mechanical 'OFF' and 'ON' indicator.						
6 NO/NC contacts for remote ON/OFF/TRIP status at BMS						
1 - 24 volts DC shunt trip coil						

3 - Dual Core Current transformers of ratio 60/5A Class 5P10 and Class 0.5, 15 VA burden for protection & metering.						
1- Strip heater to prevent absorption of moisture						
The instrument and relay panel fitted with						
1- Square Ammeter 96 mm x 96 mm scaled 0-35 amps with 3 way and OFF selector switch						
1- Triple pole numerical I.D.M.T. over current and earth fault relay, with two outer elements connected for over current and the middle element for earth fault protection over current setting 50% - 200% Earth fault setting 20% -80% and with instantaneous element on all 3 pole settings 500-2000% on over current and 200-800% on earth fault (51, 50, 51N & 50N)						
1 - Electro mechanical Master trip relay (86)						
1 - Electro mechanical Anti pumping relay (94)						
1 - Trip Circuit supervision relay.						
1 - set of electro mechanical auxiliary relay for OLTC						
1- set Electro mechanical auxiliary relay for transformer fault ALARM for winding temperature conditions						
1- set Electro mechanical auxiliary relay for transformer fault TRIP for winding temperature conditions						
1 - no. circuit breaker control switch for electrical (T/N/C)						
1- set of Red/Green indicating lamps for close and open position						
1- Amber indicating lamp for auto trip						
1- clear indicating lamp for trip circuit healthy						
1- set of white indicating lamps one per phase						
1 - blue indicating lamp for spring charged						
1- cable termination suitable for cable joint to receive 11 KV XLPE cable 3 core 300 sqmm.						
The switchboard shall be complete with all interconnections, label wiring, etc as required and as per direction						
Supplying,Installation,Testing & Commissioning Rate for 11 kV HT Panel as described above	Set	1		17,56,965		17,56,965

4	Supply, erection, testing and commissioning of 230V, single phase 2 wire AC to 24V DC Batteries charger (SMPS Based) with semiconductor/IGBT fullwave rectifier with auto /manual float cum boost facility complete with 24V DC, 120 AH sealed maintenance free batteries including one no. distribution board having 63 Amps DP MCCB as incomer and 12 Nos. 20/16A DP MCB's (D.C. duty) as outgoing complete as required and as directed by Engineer Incharge.	Set	1		58,510		58,510
5	DISTRIBUTION TRANSFORMERS						
	Supply, installation, testing and commissioning of following capacity (continuous loading) BEE 3 Star rated (Corresponding Level as per BIS amended upto date of receipt of tender) , 11/0.433 KV step down, 3 Phase, 50 Hz, Dyn 11 vector group, ONAN (Oil Natural Air Natural) copper wound transformer (Electrolytic grade 99.9% pure copper, Core made of first grade Cold Rolled Grain Oriented (CRGO) Core grade MOH or better, suitable for out door/indoor applications with On Load Tap Changer (OLTC) on HV side having AVR relay and Remote Tap Changer Control (RTCC) for automatic sensing of incoming voltage, automatic operation of OLTC and facility for remote and manual operation of OLTC HV side in range of +5% to -15% in steps of 2.5%, having cable end boxes on HV side suitable for 3x300 sqmm XLPE cable of 11 KV grade, including bus trunking arrangement on LV side including supplying and laying of copper conductor multicore control cable from transformer to HT breaker/panel for safety tripping, complete with all accessories and safety provisions as per relevant						

<p>IS Code including first filling of filtered dehydrated oil, i/c supplying and grouting of suitable M.S. Channel with all accessories and transformer shall be confirming to IS : 2026 (Part 1 to Part 5), IS : 1180 and duly ISI Marked and as per CPWD specifications complete in all respects etc as required at site. The maximum flux density in any part of the core and yoke at rated voltage and frequency shall be such that the flux density with + 12.5 percent combined voltage and frequency variation from rated voltage and frequency does not exceed 1.9 Tesla. The permissible temperature-rise shall not exceed 35 dg.C for oil and 40 dg. C up to 200 KVA and 40 dg.C for oil and 45 dg. C for above 200 KVA for winding. Inside of tank shall be painted with varnish or liquid resistant paint. For external surfaces one coat of thermo setting powder paint or one coat of epoxy primer followed by two coats of polyurethane base paint shall be used. IS: 1180 (Part 3) shall be referred to for paint</p>						
<p>thickness for normal to medium corrosive atmosphere. For highly polluted atmosphere and special application external paint work shall be as per direction of Engineer-in-Charge. Design ambient condition : a) air temperature 50 deg C, b) Relative Humidity 90 % Max, c) Seismic Zone as per location of site, d) Altitude as per location/site. Noise level Shall not exceed limits as per NEMA TR-1 with all accessories running measured as per IEC 551 / NEMA standard. The transformer should have QR code which should contain drawing, test report OEM manual, Geo- Tag of manufacturing location etc. Marking Each transformer shall be provided with rating plate made of anodized aluminum/ stainless steel material securely fixed on the outer body, easily accessible, as per IS: 1180 Part-3. The entries on the rating plate shall be indelibly marked.</p>						

	<p>Fitting and Accessories : The following fittings shall be provided:-</p> <p>a) Two earthing terminals with the earthing symbol b) Oil level gauge indicating oil level at minimum, 30°C and maximum operating temperature; c) Air release device (for non-sealed type transformers) d) Rating and terminal marking plates; e) Silica gel breather f) Drain-cum-sampling valve (¾" nominal size thread, IS 554) preferably steel with plug for three phase transformers; g) Thermometer pocket with cap; h) Oil filling holes having (1¼" nominal size thread) with cover (for sealed type transformers without conservator); i) Lifting lugs for the complete transformer as well as for core and winding assembly; j) Pressure relief device or explosion vent above 200 kVA; k) One filter valve on the upper side of the tank (for transformers above 200 kVA); l) Unidirectional flat rollers (for transformers above 200 kVA); m) Inspection hole (for transformers above 200 kVA); n) HV side neutral grounding strip (where one of the HV bushing terminal is connected to earth);</p>						
	<p>o) Buchholz relay for transformers above 800 kVA. p) Arcing horns or suitable rating lightning arrestors for HT side – 3 Nos. q) Bird guard; r) Oil temperature indicator and winding temperature indicators for transformers above 200 kVA with suitable tripping mechanism above permissible limit s) Jacking pads (for transformer above 1600 kVA); t) Additional Neutral separately brought out on bushing for earthing. u) Magnetic oil level gauge (for transformer above 1600 kVA) with low oil level alarm contact; v) Non return valve (for conducting pressure test); w) Pressure relief device or explosion vent x). Monogram Plate y) Inspection cover z). Detachable type radiators with top and bottom shutoff valve. aa) Oil Conservator with Oil level indicator, minimum level marking and drain plug for all transformers of capacity 50 KVA and above. bb) Necessary hardware, clamps, lugs etc. for termination on HV/MV etc. for all transformers.</p>						
5.1	500KVA	Set	1	-		8,42,193	

6	Supplying of following size of aluminum conductor, XLPE insulated armoured and over all PVC sheathed, 11 KV (E) grade earthed cable as per relevant IS code and technical specifications						
6.1	3C x 300 sq.mm. XLPE insulated Aluminium. Armored. Cable	RM	75		3,882		2,91,132
7	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.						
7.1	Above 120 sq. mm and upto 400 sq. mm.	RM	40	620		24,786	
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in metal/RCC/Hume pipe as required				-	-	
	Above 120 sq. mm and upto 400 sq. mm.	RM	20	144		2,878	
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in Open mesonary Duct as required				-	-	
	Above 120 sq. mm and upto 400 sq. mm.	RM	15	124		1,853	
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in metal/RCC/Hume pipe as required				-	-	
	Above 120 sq. mm and upto 400 sq. mm.	RM	20	144		2,878	
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in Open mesonary Duct as required				-	-	
	Above 120 sq. mm and upto 400 sq. mm.	RM	15	124		1,853	
8	supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required :						
8.1	300 sq. mm	Each	3	17,450		52,351	

9	Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required :						
9.1	300 sq. mm	Each	1	24,480		24,480	
10	P/ F RCC Hume Pipe						
	Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required.						
10.1	150 mm dia ID	RM	30	778		23,326	
10.2	300 mm dia ID	RM	30	1,224		36,729	
11	Supply of fire buckets 4 No. in each set duly filled with fine sand and fixed on an angle iron frame as per requirement of local authorities. Fire buckets shall be painted red from outside and white from inside with additional handle at the bottom and suitable for outdoor installation.	Sets	1		4,675		4,675
12	Supply and fixing on position the approved Single Line Diagram framed in 1000 x 800 mm size glass frame and installed in main switch room as directed by Engineer Incharge	Nos	1		2,262		2,262
13	Supply of First Aid box as directed by Engineer Incharge	No	1		5,353		5,353
14	Supply of tool kit with 1 pair 11 KV rubber hand gloves as directed by Engineer Incharge.	Sets	1		1,885		1,885
15	Supplying & fixing standard shock treatment charts in English & Hindi duly framed and covered with glass as directed by Engineer Incharge.	Nos	1		1,583		1,583
16	Providing Safety mat made of elastomeric polymers Material (Class B) 1.2 M wide with thickness 2.5 mm to withstand 12KV dielectric strength AS PER relevant IS Code	RM	10		1,885		18,850

17	Providing a mat made of elastomeric polymers Material (Class A)1.2 M wide with 2 mm thickness to withstand 1.1 KV dielectric strength AS PER relevant IS Code	RM	15		1,485		22,281
	TOTAL CARRIED TO SUMMARY SHEET FOR SUBHEAD I					10,14,531	21,63,496
	SUB HEAD -II :SUPPLY, INSTALLATION, TESTING AND COMMISIONING OF DG SET INCLUDING ALL ACCESSORIES						
	Make List: KIRLOSKAR/CAPTIVA/STERLING WILSON/SUDHIR/Mahindra/Cummins/Koel/Density						
1	Design, manufacture, supply, erection, testing & commissioning of following rating of DG Sets in Accoustic Enclosure, having self excited & self regulated 415 V, 3 Phase, 4-Wire, 50 Hz, 0.8 p.f. Alternator coupled with multi-cylinder, turbo-charged/ turbo-charged after cooled as called for, Diesel Engine capable to generate the power not less than the required BHP to achieve the alternator capacity as given below, with radiator Cooled, hospital type silencers and Electronic governer (G3 Governing System), DG set controller suitable for Auto Synchronization & Auto Load Sharing with microprocessor based Synchronization relay like Woodward/Dief/ Deepsea or equivalent including providing of Engine control panel, 24V batteries of suitable rating, battery-charger with battery leads, inbuilt oil fuel tank of capacity as per OEM standards and complete with all standard accessories & protection as required and as per specifications, including first filling of lube oil, fuel tank, providing common base plate, anti vibration pads, drip trays, foundation bolts, nuts, bolts, cable termination/adopter box sutiable to terminate upto 1 nos. of 3.5Cx150 sq.mm. XLPE cables as required for a complete installation including RCC/PCC foundation for DG set as per the structural detail for Dynamic Load submitted by the Vendor and approve by the Client. DG set should comply relevant Indian standards. DG shall have Remote Monitoring System.						

1.1	125 KVA (With Outdoor Acoustic Enclosure)	Sets	1		29,40,590		29,40,590
	EXHAUST PIPE & CHIMNEY						
2	Supply, installation, testing and commissioning of exhaust pipe fabricated out of 6 mm thick MS pipe Class C Heavy duty conforming to IS:3589 with all fixing accessories and hardwares.The work include necessary cladding of exhaust pipe work using 50 mm thick Loosely bound resin (LBR) mattress/ mineral wool/ Rockwool, density not less than 120 kg/m3 and aluminium cladding (0.6 mm thick) for the complete portion. The exhaust pipe work includes necessary supports, foundation etc. to avoid any load & stress on turbo charger / exhaust piping.The exhaust pipe shall be run along the existing wall of the building duly clamped/supported on independent structure for which, the design and Drawing for such structure shall be got approved from the Engineer-in-charge.						
2.1	125 mm dia	Mtrs	20		15,834		3,16,679
3	Design, supply, fabrication and erection of steel structure from channel /angle iron of suitable sizes to support the chimney /exhaust MS pipe duly taking into consideration of the wind load/pressure at the site etc. including the cost of civil foundations as required to support a maximum of 2 nos exhaust chimneys on the overhead platform complete as required. The structure shall be given primer coat and two coats of enamel painting.	Kgs	1000		134		1,34,212
4	SS Flexible Bellow 125 mm dia	Sets	2		12,818		25,636
5	Aluminium cladding for the residential silencers	Sets	1		11,310		11,310
	TOTAL CARRIED TO SUMMARY SHEET FOR SUBHEAD II					-	34,28,426
	SUB HEAD -III : LT PANELS						
	MAIN LT PANEL						

<p>Make List: EL POWER CONTROL SYSTEM /GLOBAL ELECTRICAL & CONTROL/SYNERGY ELECTRICALS/EXPERT ENGINEERS (Panel Builder)</p>							
<p>Make List: Legrand/Schinder/Siemens/L&T/A BB/Havells/Eaton (For Switchgears)</p>							
<p>Design, fabrication, assembly, wiring and supply of front operated dead front cubicle type compartmentalised as per Form 3B, rear access free standing, dust and vermin proof (IP 42 ingress protection) main switchboards suitable for use at 415 volts, 3 phase 4 wire 50 Hertz system suitable for a symmetrical fault level of 50 kA at 415 volts, fabricated from 2 mm thick CRCA MS sheets with hinged, gasketed (metal based neoprene) and lockable doors having structural reinforcement with suitable angle/channel/T/flat sections including 3 mm thick gland plates on top and bottom and including lifting hooks with sleeved TPN Aluminum Bus bars and GI earth strip of required size with 2 nos earthing terminals and including powder coated paint finish of approved shade (RAL 7032) over metal surface cleaned and treated with seven tank process complete with interconnections etc as per specifications, as required and as below. This main panel must be extendable for future requirement in such a manner not to disrupt ongoing services at the point of use during extension. All LT Panel shall conform to latest IS/IEC -61439 code. All Panel shall be complete with power & control wiring, danger & inscription plate, Lifting hooks etc.</p>							
<p>Each incoming / outgoing breaker shall have microprocessor release with adjustable over current, short circuit & earth fault protection with instantaneous as mentioned in specification. The Panel will be made as per detailed specifications & drawings forming part of this document. Fault level of panel shall be 50 KA.</p>							
<p>All the MCCB with adustable overload, short circuit & earth fault protection and above shall have microprocessor. The panel shall be manufactured as per BOQ, tech specification and drawing.</p>							

	(Note:The contractor may select the next higher fault rating of ACB/MCCB if it is not readily available ,without any extra cost ,as the figure indicated within the bracket are required maxmum fault level of the panel.)						
	NOTE: PANEL MUST BE AS PER IEC 61439 TYPE TESTED FROM ANY INDIA BASED TEST LABORATORY (CPRI/ERDA ETC) FOR ROTECTION AGAINST SHORT CIRCUIT/TEMPERATURE RISE/INTERNAL ARC/DEGREE OF PROTECTION) (PTTA PANEL UPTO 800A & TTA PANEL ABOVE 800A)						
1	MAIN LT PANEL						
	INCOMER FROM TRANSFORMER 1 (1 Nos. 750 KVA)						
	1 Nos. of 1250A 4P Manually operated Drawout type ACB with Ics=Icu=Icw 50KA having Mircroprocessor based releases for O/L, S/C & E/F.						
	1 Sets - digital multifunction meter (showing harmonics along with all other electrical parameters such as voltage current, Hz, KW, KWHr, PF.) with RS 485 port with matching cast resin CT's						
	1 Sets - 0-500V 96 sqmm Voltmeter with selector switch, 3 No. phase indicating LED lamp to show the incoming power with control SP MCB.						
	1 nos. indicating LED lamps for ACB On/Off/ Trip with protective SP MCB's.						
	1 Sets of CTs of the ratio 1250/5A for APFC Relay, burden 15 VA						
	1 Sets of CTs of the ratio 1250/5A with class 0.5 Accuracy for Metering, burden 15 VA						
	1 Nos. 1250/5A , 15 VA, 5P10 CT's for Protection						
	1 Nos. Under Voltage relay (59)						
	1 Nos. Over voltage relay(27)						
	Negative Phase protection Relay, reverse power relay						
	INCOMER FROM TRANSFORMER 1 (1 Nos. 500 KVA)						
	1 Nos. of 800A 4P Manually operated Drawout type ACB with Ics=Icu=Icw 50KA having Mircroprocessor based releases for O/L, S/C & E/F.						

1 Sets - digital multifunction meter (showing harmonics along with all other electrical parameters such as voltage current, Hz, KW, KWHR, PF.) with RS 485 port with matching cast resin CT's						
1 Sets - 0-500V 96 sqmm Voltmeter with selector switch, 3 No. phase indicating LED lamp to show the incoming power with control SP MCB.						
1 nos. indicating LED lamps for ACB On/Off/ Trip with protective SP MCB's.						
1 Sets of CTs of the ratio 800/5A for APFC Relay, burden 15 VA						
1 Sets of CTs of the ratio 800/5A with class 0.5 Accuracy for Metering, burden 15 VA						
1 Nos. 800/5A , 15 VA, 5P10 CT's for Protection						
1 Nos. Under Voltage relay (59)						
1 Nos. Over voltage relay(27)						
Negative Phase protection Relay, reverse power relay						
INCOMER FROM DG -1 (1 Nos. 320 KVA)						
1 Nos. of 630A 4P Manually operated Drawout type ACB with Ics=Icu=Icw 50KA having Microprocessor based releases for O/L, S/C & E/F.						
1 Sets - digital multifunction meter (showing harmonics along with all other electrical parameters such as voltage current, Hz, KW, KWHR, PF.) with RS 485 port with matching cast resin CT's						
1 Sets - 0-500V 96 sqmm Voltmeter with selector switch, 3 No. phase indicating LED lamp to show the incoming power with control SP MCB.						
1 Nos. indicating LED lamps for ACB On/Off/ Trip with protective SP MCB's.						
1 Sets of CTs of the ratio 630/5A for APFC Relay, burden 15 VA						
1 Sets of CTs of the ratio 630/5A with class 0.5 Accuracy for Metering, burden 15 VA						
1 Nos. 630/5A , 15 VA, 5P10 CT's for Protection						
1 Nos. Under Voltage relay (59)						
1 Nos. Over voltage relay(27)						

	Negative Phase protection Relay, reverse power relay						
	Reverse power relay						
	BUS COUPLER:-						
	2 Nos. of 800A 4P Manually operated Drawout type ACB with Ics=Icu=Icw 50KA having Microprocessor based releases for O/L, S/C & E/F.						
	3 Set of Breaker ON-OFF-TRIP, Spring charged indication Lamps as required.						
	Breaker Accessories						
	24 V DC Shunt trip Coil-1 Set						
	240 V AC under Voltage release-1 set						
	Auto - manual/ test selector switch-1 set						
	Breaker control switch-1 set						
	Auxilliary contacts required for necessary interlocking of breakers.						
	BUS BARS						
	1 Sets of 1600A TPN Aluminum bus bars with colour coded heat shrinkable PVC sleeves.						
	Auto - manual selector switch for individual breaker & PLC						
	Incomer terminal/Adapter box for bus duct & cable connection.						
	8 Channel temperature scanner for monitoring bearing and winding temperature for each DG set						
	Battery Charger 24 V, 20 A for each DG sets						
	16 window facia annunciator for each DG set						
	Auto - manual selector switch for individual breaker & PLC						
	Incomer terminal/Adapter box for bus duct & cable connection.						
	OUTGOINGS						
	2 Nos. 630A FP MCCB, 35 kA breaking capacity with microprocessor release and rotatry handle with adjustable settings, ON/OFF/ Trip indication lamp including control MCB's. with MFM						
	1 Nos. 400A FP MCCB, 35 kA breaking capacity with microprocessor release and rotatry handle with adjustable settings, ON/OFF/ Trip indication lamp including control MCB's. with MFM						

5 Nos. 250A FP MCCB, 35 kA breaking capacity with thermal release and rotary handle with adjustable settings, ON/ OFF/ Trip indication lamp including control MCB's. with MFM						
1 Nos. 200A FP MCCB, 35 kA breaking capacity with thermal release and rotary handle with adjustable settings, ON/ OFF/ Trip indication lamp including control MCB's. with MFM						
1 Nos. 160A FP MCCB, 25 kA breaking capacity with thermal release and rotary handle with adjustable settings, ON/ OFF/ Trip indication lamp including control MCB's. with MFM						
2 Nos. 100 A FP MCCB, 25 kA breaking capacity with thermal release and rotary handle with adjustable settings, ON/ OFF/ Trip indication lamp including control MCB's. with MFM						
Wiring and Supplying , installation of space heater, humidistat and control MCB's shall be provided all vertical sections.						
All Bus bar section/ backside panels have pad locking facility and hinged type door						
5 W LED Lamp, switch shall be provided in each vertical section						
Supplying,Receiving, fixing, testing & commissioning of Main LT Panel as described above	Set	1		31,37,08 1		31,37,081
Note: Incomers for Normal Supply, D.G. sets & Bus couplers shall be electrically & mechanically interlocked.						
Note:The Main LT Panel shall also include the following:						
(i) Necessary control and firing card with proper control wiring and lugs of the required rating to be provided.						
(ii) Heavy duty exhaust fans to be provided for cooling						
(iii) Each Incommer shall have Surge Protection Device.						
(iv) All outgoing feeders of Main LT Panel shall have BMS compatible Electronic Energy Meter and ON/OFF/TRIP indication Lamps						
(v) In case of PLC failure, Provision of manual operation for all incomer of Main LT Panel with on off selector switch.						

2	Capacitor Panel (175 KVAR)								
	<p>Supply, Installation, testing and commissioning of Automatic Power Factor Correction (APFC) panel, indoor type floor mounted free standing totally enclosed, extendable, IP42, of following capacity for 3 phase, 415 V + 10 %, 50 Hz AC System for Ambient temperature -5°C to +40°C, fabricated in compartmentalized designed made of CRCA sheet steel of 2.0mm thick for framework & covers, 3 mm thick for gland plate i/c cleaning & finishing complete with 9 tank process for powder coated of approved shade (RAL7032-Siemens gray or as approved by Engineer-in-Charge), having front section (switch gear and control accessories) and rear section capacitor and reactor, front and rear access, having suitable current carrying capacity, extensible TPN Aluminum alloy bus bar of high conductivity, DMC/SMC bus</p>								
	<p>bar supports, bottom base channel of MS Section, fabrication shall be done in transportable section, entire panel shall have common copper earth bar of minimum size of 25mm x 5mm with 2 nos. earth studs, the earth terminals provided on the body of capacitor bank shall also be bonded to the main capacitor panel earth bus with 2 nos. 8 SWG or 6 SWG GI earth wires/ equivalent size of copper conductor cable, forced ventilation for maintaining temperature rise not more than 5°C from ambient, interconnections, connections with 14% detuned reactor and heavy duty 525 V ISI marked Impregnated MPP(Metalized Polypropylene) Capacitor (IS 13340 Part -1 & 2) APFC Panel shall be in compliance with IS :16636 & CPWD Specifications etc. as per below details</p>								

<p>(A) Incomers Suitable capacity MCCB Microprocessor base with O/C, S/C, E/L release of TPN 50KA breaking capacity ($I_{cs}=I_{cu}$), ON, OFF, Trip, R, Y, B - LED Indicating Lamp set along with required Instruments and accessories with extended rotary handle and door interlocking arrangement. Current rating of the Incomer in ampere shall be APFC Panel rating in KVAR x 1.4 x 1.5 or Nearest higher standards rating.</p>							
<p>(B) Instruments & Indications i) 3-Phase current sensing APFC microprocessor relay/controller , advance 8/12 stages (8 stages for capacity below 100 KVAR and 12 stages 100 KVAR & above) with Communication Ethernet/RS485/SNMPport open protocol for BMS integration as per approved by Engineering in charge and having display of Phase wise V, A, PF, Cos-Phi, Kw, KVA, KVAR, THD-V , THD-I, harmonics up to 31 level. 3 nos of dual core CT's accuracy class 1, 15VA at incomer of PCC Panel for APFC relay.</p>							
<p>ii) Auto Manual Selector switch, auxiliary contactors with timer for delay in manual mode. iii) Digital Multi function meter with LED Display for V, A, PF, KW,KVA, KVAR, THD-V & I, Frequency. iv) Suitable rating control transformer shall be provided for control and indication circuit.</p>							
<p>v) All components like control transformer, meter, relay and indicating lamp shall be protected by using suitable rating individual MCB's. vi) Wiring of the control circuit shall be done by using 2.5 sq mm, FRLS 1100 V grade, PVC insulated multi stranded copper control wire.</p>							
<p>(C) Bus Bars 1.3 Amp per Sq.mm, TPN, Electrolytic grade Aluminum bus bar of capacity 1.25 times of incomer rating as per CPWD specification.</p>							
<p>(D) Outgoings (APFC Section)</p>							

	Selection of the capacitors combinations shall be for continuous rating and each capacitor bank shall have suitable capacity Heavy Duty ISI Marked Capacitor, capacitor duty contactor, the capacitor shall be mounted on channel with base of perforated M S Powder coated sheet, connections inter connections etc. and other features as per CPWD Specifications and relevant IS Code having following:						
	(i) Capacitor bank ratings & stages shall be as per the technical specifications sheet of NIT.						
	(ii) Capacitor will be MPP self healing type with discharge resistor, pressure release mechanism.						
	(iii) Since Capacitor Voltage is 525 Volts, thus higher KVAR has to be considered to get rated output at 415 Volts.						
	(iv) 14% Detuned Reactor of class H insulation & 150% linearity in series with Capacitor.						
	(Note: Technical specifications sheet for selection of the capacitors combinations shall be provided by the NIT Approving Authority with due consideration of number of capacitors i.e. 1 KVAR, 2 KVAR, 3 KVAR, 5 KVAR, 10 KVAR.....for smooth correction).						
2.1	175 KVAR	Set	1	-		4,02,381	
3	MDB AUDITORIUM Panel						
	INCOMER						
	200 A FP Manual Change Over						
	1 No. 200 A FP MCCB, 35 kA breaking capacity with thermal release and adjustable setting and with rotary handle.						
	METERING & INDICATION						
	1 set of R,Y,B phase indicating lamps						
	Digital Multifunction meter for Voltage, Current & KW with selector switch. Each with 3nos. of 2A SP MCB & 3nos 200/5A CTs (200A/500V) rating						
	BUS-BAR						
	1 Set of 250A TPN Aluminium Bus Bar with colour coded PVC Sleeves						
	OUTGOINGS						
	1 Nos. 63A FP MCCB.						
	4 Nos. 63A FP MCB ,10KA.						

	2 Nos. 40A FP MCB ,10KA.						
	Supplying,Receiving, fixing, testing & commissioning of above described Panel	Set	1		1,60,149		1,60,149
4	MDB Panel						
	INCOMER						
	1 No. 630 Amp FP MCCB, 35 kA breaking capacity with microprocessor release and rotatry handle..						
	METERING & INDICATION						
	1 set of R,Y,B phase indicating lamps						
	Digital Multifunction meter for Voltage, Current & KW with selector switch. Each with 3nos. of 2A SP MCB & 3nos 630/5A CTs (630A/500V) rating						
	BUS-BAR						
	1 Set of 800A TPN Aluminium Bus Bar with colour coded PVC Sleeves						
	OUTGOINGS						
	7 Nos. 315 A FP MCCB, 35 kA breaking capacity with thermal release and adjustable setting and with rotary handle.						
	3 Nos. 200 A FP MCCB, 35 kA breaking capacity with thermal release and adjustable setting and with rotary handle.						
	Supplying,Receiving, fixing, testing & commissioning of above described Panel	Sets	2		4,21,711		8,43,421
	TOTAL CARRIED TO SUMMARY SHEET FOR SUBHEAD III					4,02,381	41,40,652
	SUB HEAD -IV : LT CABLES & CABLE TRAYS						
	Make List: AKG /GLOSTER/ RR KABLE/ KEI (FOR CABLES/WIRES)						
	Make List: AKG/STEEL KRAFT/POWERSUN/OBO (FOR CABLE TRAY)						
1	Laying of one number PVC Insulated and PVC shethed /XLPE power Cables of 1.1 KV grade of following size direct in ground including excavation,sand cushioning and protecting covering and refilling the trench etc as required.						
1.1	Up to 35 sq mm.	Metre	0	416		-	
1.2	Above 35 sq mm and up to 95 sq mm.	Metre	0	435		-	

1.3	Above 95 sq mm and up to 185 sq mm.	Metre	0	453	-	
1.4	Above 185 sq mm and up to 400 sq mm.	Metre	100	509	50,904	
2	Laying of one number PVC insulated & PVC sheathed/ XLPE Power cable of 1.1 KV grade of following size in the existing RCC/HUME/METAL pipe as required.					
2.1	Upto 35 sq.mm	RM	0	40	-	
2.2	Above 35 sq. mm and upto 95 sq. mm	RM	0	61	-	
2.3	Above 95 sq.mm and upto 185 sq.mm	RM	450	83	37,212	
2.4	Above 185 sq.mm and upto 400 sq.mm	RM	500	144	71,954	
3	DWC HDPE Pipe					
	Supply and laying of following DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. in the existing trench, complete as required.					
3.1	120 mm dia (OD-120 mm & ID-103 mm nominal	RM	100	266	26,634	
3.2	160 mm dia (OD-160 mm & ID-135 mm nominal	RM	50	388	19,384	
3.3	200 mm dia (OD-200 mm & ID-175 mm nominal	RM	50	589	29,426	
4	S/ F powder coated of approved shade MS Cable Trays					
	Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required..					
4.1	150 mm width X 50 mm depth X 1.6 mm thickness	Metre	50	649	32,433	
4.2	300 mm width X 50 mm depth X 1.6 mm thickness	Metre	50	834	41,722	
4.3	450 mm width X 62.5 mm depth X 2.0 mm thickness	Metre	40	1,314	52,580	
5	S/ F powder coated of approved shade MS Cable Tray Bends					

	Supplying and installing following size of perforated powder coated of approved shade M.S. cable tray bends with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.						
5.1	150 mm width X 50 mm depth X 1.6 mm thickness	Each	4	1,093		4,373	
5.2	300 mm width X 50 mm depth X 1.6 mm thickness	Each	4	1,544		6,177	
5.3	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2	2,662		5,325	
6	S/ F powder coated of approved shade MS Cable Tray Tee's						
	Supplying and installing following size of perforated powder coated of approved shade M.S. cable tray tee's with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.						
6.1	150 mm width X 50 mm depth X 1.6 mm thickness	Each	4	1,274		5,095	
6.2	300 mm width X 50 mm depth X 1.6 mm thickness	Each	4	1,834		7,337	
6.3	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	2	3,185		6,371	
7	S/ F powder coated of approved shade MS Cable Tray Cross Members						
	Supplying and installing following size of perforated powder coated of approved shade M.S. cable tray cross members with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.						
7.1	150 mm width X 50 mm depth X 1.6 mm thickness	Each	2	1,456		2,913	
7.2	300 mm width X 50 mm depth X 1.6 mm thickness	Each	2	2,125		4,251	
7.3	450 mm width X 62.5 mm depth X 2.0 mm thickness	Each	1	3,707		3,707	

10	Desmentalling and removal of Cable of various sizes from eixting LT Panel in basement panel room and removal of panel from LT room to Dump yard.	LS	1		10,000		10,000
	SUB HEAD -V : EARTHING SYSTEM						
	Make List: GENIUS PROTECTION SYSTEM/G.S. ELECTROCONROLS/JMV/ARC IMPULSE.						
1	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Sets	12	8,024		96,293	
2	Earthing with Cu. earth Plate 600mm x 600mm x 3mm thick including accessories, and providing masonry enclosure with cover plate (CI heavy duty) having locking arrangement and watering pipe of 2.7 mtr long etc. with charcoal or coke and salt) as required.	Sets	8	14,861		1,18,889	
3	Supplying, fixing, testing and commissioning of following bare Copper/ GI flat including all necessary fixing accessories and effecting connections.						
3.1	50 mm x 6 mm thick Cu flat	Metre	100		4,901		4,90,098
3.2	50 mm x 6 m thick GI flat	Metre	100		528		52,780
	TOTAL CARRIED TO SUMMARY SHEET FOR SUBHEAD V					2,15,182	5,52,878

Name of work: Electrical Work Delhi

S. No.	Description	Unit	Qty	rate	Amount
Part- I (Civil work)					
A)	Dismantling and Demolishing				

1	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer incharge.				
	All kinds of soil	Cum	14	177.5	2485.00
B-1	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., below plinth and up to floor five level, excluding the cost of centering, shuttering and finishing:				
i	1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size).	Cum	1.50	7780.30	11670.45
2	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
i	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	Cum	2	9045.75	18091.50
3	Centering and shuttering including strutting, propping etc. and removal of form for.				
i)	Foundations, footings, bases of columns, etc. for mass concrete.		5	392.15	1960.75
ii)	Suspended floors, roofs, landings, balconies and access platform.	Sqm	5	927.25	4636.25
4	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
i	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	250	107.85	26962.50
5	Brick work with common burnt clay modular bricks of class designation 7.5 in foundation and plinth in:				
	Cement mortar 1:4 (1 cement : 4 coarse sand)	Cum	6	6504.9	39029.40
6	12 mm cement plaster of mix :				
	1:4 (1 cement: 4 fine sand)	Sqm	20	347.05	6941.00
7	15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix :				
	1:3 (1 cement: 3 fine sand)	Sqm	20	494.3	9886.00

8	Providing and fixing Unplasticised Rigid PVC . (i) Single socketed pipes & required fittings and specials conforming to IS : 13592 Type B including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion complete as per direction of KF. (Note: 1. All the joints shall be leak proof .2. The centre line length of pipes shall be measured for the purpose of payment. 3.Floor trap and terminal guard only shall be measured separately for payment)				
ii)	110 mm diameter	Metre	6	270	1620.00
MS			100.00	180.00	18000.00
		Total of Section - A Rs.			141282.85

SUMMARY SHEET OF BOQ			
S.No.	Name of Work	TOTAL AMOUNT (IN RS.)	
		DSR	MR
1	SUB HEAD - I : HT EQUIPMENT & TRANSFORMER	10,14,531	21,63,496
2	SUB HEAD -II :SUPPLY, INSTALLATION, TESTING AND COMMISIONING OF DG SET INCLUDING ALL ACCESSORIES	0	34,28,426
3	SUB HEAD -III : LT PANELS	4,02,381	41,40,652
4	SUB HEAD -IV : LT CABLES & CABLE TRAYS	4,65,524	20,58,484
5	SUB HEAD -V : EARTHING SYSTEM	2,15,182	5,52,878
	TOTAL	20,97,618	1,23,43,936
	SUBTOTAL (DSR-2022, 2025 & MR)	1,44,41,554	
6	Civil Work Related to Upgradation	141283	
	Total	1,45,82,837	