



## INDIAN INSTITUTE OF TECHNOLOGY DELHI

HAUZ KHAS, NEW DELHI – 110016

### NOTICE INVITING E-TENDER

IITD/WORKS (SP- 4612)/2024

Executive Engineer (Electrical Division-I), Indian Institute of Technology Delhi, Hauz Khas, New Delhi – 110016, Ph. No. 011-2654 8437 on behalf of Board of Governors invites online **Item Rate Tender** from the “**CPWD, MES, BSNL, Railways Enlisted Contractors of Composite Category in appropriate class and specialized agency**” for providing and installations of **modular UPS** as per details given below.

1	Name of work	:	<b>Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.</b>
2	NIT No.	:	<b>0449/112/IITD/EW/2023-24</b>
3	Estimated Cost (₹)	:	<b>1,22,20,584.00</b>
4	Earnest Money Deposit (₹)	:	<b>2,44,412.00 (No exemption allowed)</b>
5	Period of completion	:	<b>60 days</b>
6	Last date & time of bid submission	:	<b>Upto 03.00 PM of 26.04.2024</b>
7	Performance Bank Guarantee	:	<b>5 percent of the tendered amount</b>

The bid forms and other details may be downloaded from Central Public Procurement Portal (<http://eprocure.gov.in/eprocure/app>). Aspiring bidders who have not enrolled / registered in e-procurement should enrol / register themselves before participating through web site <http://eprocure.gov.in/eprocure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at “Instructions for online bid submission.”

Bidders can access quotation / tender documents on the website (for searching in the NIC site), kindly go to quotation search option and type ‘IIT’. Thereafter, click on “GO” button to view all IIT quotations. Select the appropriate quotation / tender and fill them with all relevant information and submit the completed Quotation / Tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given in the next page.

**No manual bids will be accepted. All bids (both Technical & Financial) should be submitted in the e-procurement portal.**

**Executive Engineer (ED-I)  
For & on behalf of BOG, IIT Delhi**



**Ch. Head : Renovation (Research Facility and Housing)/35.01.02(IOE)**  
**Work Code : (2021/006/0449)**

Copy to: -

1. Junior Engineer (E)
2. D.A. (Works Accounts)
3. D.R. (A/C)
4. A.R. (Store Purchase Section)
5. Notice Board
6. Website Administrator, IIT Delhi
7. Office copy

## INDEX

Sr. No.	Description	Page	
		From	To
1	Schedule of NIT	03	04
2	Instruction for online bid submission	04	07
3	Information & instruction to bidders	08	11
4	List of mandatory Document	12	12
5	IITD 6 Form	13	16
6	Integrity Pact	17	23
7	IITD – 7/8 Form	24	25
8	Proforma of Schedule	26	31
9	Commercial & Additional conditions	32	39
10	Additional Specification and Technical conditions	40	41
11	Technical condition & particulars Annexure H, X1, X2	42	52
12	Manufacturers' Authorization certificate	53	53
13	Declaration (Annexure – 1)	54	54
14	Bid Submission Check List	55	56
15	Schedule of Quantity	57	65



## SCHEDULE

1	Name of organisation	:	Indian Institute of Technology Delhi
2	Tender / Quotation type (open / limited / EOI / auction / single)	:	Open
3	Tender / Quotation category (services / goods / works)	:	Goods & Works
4	Type of Contract (work / supply / auction / service / buy / empanelment / sell)	:	Work & Supply
5	Form of contract (IITD – 7/8)	:	IITD – 8
6	Work Category (civil / electrical / fleet management / computer systems)	:	Electrical
7	Is multi-currency allowed?	:	No
8	Date of publishing / issue / start	:	16.04.2024 at 03.00 PM
9	Document download start date	:	16.04.2024 at 03.00 PM
10	Document download end date	:	26.04.2024 upto 03.00 PM
11	Date & time of pre-bid meeting	:	Not Applicable
12	Venue of pre-bid meeting	:	Not Applicable
13	Last date & time of uploading of bids	:	Upto 03.00 PM of 26.04.2024
14	Date & time of opening of Technical bids	:	29.04.2024 at 11.00 AM
15	Tender fee	:	Free of cost
16	Earnest Money Deposit (EMD)	:	<b>Rs.2,44,412.00</b> <b>To be paid through RTGS / NEFT.</b> IIT Delhi Bank details are as under: Name of Bank A/C: IITD Revenue A/C SBI A/C No. – <b>10773572622</b> Name of Bank: <b>State Bank of India</b> , IIT Delhi, Hauz Khas, New Delhi – 110016 IFSC Code: <b>SBIN0001077</b> MICR Code: <b>110002156</b> Swift No.: SBININBB547 This is mandatory that UTR number is provided in the online quotation / bid (Refer UTR column in the Declaration sheet at Annexure – 1) <b>OR</b> In the form of Banker's Cheque or Demand Draft or FDR of scheduled bank in favour of <b>Registrar, IIT Delhi</b> (scanned copy of the same to be uploaded with the bid, date of issue shall be within the NIT period)
17	No. of bids / covers (1 / 2 / 3 / 4)	:	<b>2</b>



18	Address for communication	:	Executive Engineer (ED-I), Works Department, IIT Delhi, Hauz Khas, New Delhi - 110016
19	Contact No.	:	011 2654 8437
20	e-mail address	:	<a href="mailto:aashish@admin.iitd.ac.in">aashish@admin.iitd.ac.in</a> ;

## INSTRUCTIONS FOR ONLINE BID SUBMISSION

As per the directives of Department of Expenditure, this quotation / tender document has been published on the Central Public Procurement Portal (URL: <http://eprocure.gov.in/eprocure/app>). The bidders are required to submit softcopies of their bids electronically on the CPP portal, using valid Digital Signature Certificates (DSC). 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 <http://eprocure.gov.in/eprocure/app>

### REGISTRATION

1. Bidders are required to enrol on the e-procurement module of the Central Public Procurement portal (URL: <http://eprocure.gov.in/eprocure/app>) by clicking on the link, "click here to enrol". Enrolment on the CPP portal is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique user name and assign a password for their accounts.
3. Bidders are advised to register their valid e-mail address and mobile number 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 2 or class 3 certificates with signing key usage) issued by any certifying authority recognised 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 bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.



- 
6. Bidder then logs into the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken.

### **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 tender ID, organisation 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 organisation 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. The 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 other, 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.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bids. Please note the number of covers in which the bid documents have to be submitted. Any deviations from these may lead to rejection of the bids.
3. 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 & white option.
4. 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’s 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 “on-line” to pay the tender fee / EMD as applicable and enter details of the instrument. Whenever, EMD / Tender fees is sought, bidders need to pay the tender fee and EMD separately on-line through RTGS (Refer to Schedule, Page no. 3)
4. A standard BOQ Format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BOQ file, open it and complete the white coloured [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 online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

OR

In some cases financial bids can be submitted in PDF format as well (in lieu of BOQ).

5. 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.
6. 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 unauthorised persons 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.
7. The uploaded tender documents become readable only after the tender opening by the authorised bid openers.
8. 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.
9. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.



---

## ASSISTANCE TO BIDDERS

1. Any queries relating to tender document and the terms and conditions contained therein should be addressed to the tender inviting authority for a tender or the relevant contact person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to CPP portal in general may be directed to the 24 x 7 CPP Portal Help Desk. The contact number of the helpdesk is 18002337315.

## GENERAL INSTRUCTIONS TO THE BIDDERS

1. The tenders will be received online through portal <https://eprocure.gov.in/eprocure/app>. In the technical bids, the bidders are required to upload all the documents in PDF format.
2. Possession of a valid class II / III Digital Signature Certificate (DSC) in the form of smart card / e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorised certifying agencies, details of which are available in the website <https://eprocure.gov.in/eprocure/app> under the link "Information about DSC".
3. Tenderers are advised to follow the instructions provided in the "Instructions to the tenderer" for the e-submission of the bids online through the Central Public Procurement Portal for e-procurement at <https://eprocure.gov.in/eprocure/app>.



## INFORMATION & INSTRUCTION TO BIDDERS FOR E-TENDERING

Executive Engineer (ED-I), Indian Institute of Technology Delhi, Hauz Khas, New Delhi – 110016, Ph. No. 011-2654 8437 on behalf of Board of Governors invites online **Item Rate Tender** from the “**CPWD, MES, BSNL, Railways Enlisted Contractors of Composite Category** in appropriate class and specialized agency” as per details given below:

Sr. No.	NIT No.	Name of Work & Location	Estimated cost put to bid (₹)	Earnest money (₹)	Period of completion	Last date & time of submission of bid	Time & date of opening of Technical Bid	Time & date of opening of Financial Bid
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	0449/112/IITD/EW/2023-24	Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.	1,22,20,584.00	2,44,412.00	60 days	Upto 03.00 PM of 26.04.2024	29.04.2024 at 11.00 AM	To be decided after assessing Technical Bids

- The bidder whose bid is accepted shall be required to submit a performance guarantee of 5 percent of the tendered amount in the form of Bank Guarantee or FDR from a nationalised / scheduled bank within the period specified in Schedule F. in case the bidder fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the bidder shall be forfeited automatically without any notice to the bidder. The Performance Guarantee shall initially be kept valid upto the stipulated date of completion plus sixty days beyond that.
- Contractors who fulfil the following requirements shall be eligible to apply. Joint ventures are not accepted.
  - Should have satisfactorily completed the works as mentioned below during the last Seven years ending **previous day of last date of submission of bids**.





- 
- i. **Three** similar works each costing not less than **Rs.43,38,000.00**, or **two** similar works each costing not less than **Rs.65,06,000.00**, or one similar work costing not less than **Rs.86,75,000.00** (all figures rounded to nearest thousand)
  - ii. **Earnest money** of Rs. 2,44,412.00 to be deposited either online or scanned copy of Banker's Cheque or Demand Draft or FDR as indicated in the Schedule at pg 3.
3. The value of executed work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of submission of financial bid.
  4. **Similar work means Supply Installation Testing and commissioning of 60 kVA or above capacity Modular live swappable UPS with associated E&M works.**
  5. Work means work done with some Central Government Department / State Government Department/ Central Autonomous Body / State Autonomous Body / Central Public Sector Undertaking / State Public Sector Undertaking / City Development Authority / Municipal Corporation of City formed under any Act by Central / State Government and published in Central / State Gazette.
  6. Completion certificates are required to be got issued by an officer not below the rank of Executive Engineer of similar works completed by the Firm. The work experience certificates submitted by the bidders shall clearly indicate that:
    - a. The similar work executed shall be **as per '4' above**
    - b. The completed cost of the work
    - c. Actual date of completion of the work
  7. IITD is committed to follow the principle of transparency, equity and competitiveness in public procurement. Before submission of bid, **each bidder should sign integrity pact at respective places** and submit the bid. **If duly signed integrity pact is not submitted by bidder, such bid shall not be considered.**
  8. **The intending bidder must read the terms and conditions [both commercial & Additional] & IITD - 6 carefully** which will be the part of the Contract. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
  9. Information and Instructions for bidders posted on website shall form part of bid document.
  10. 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 website e-procure.gov.in free of cost.
  11. But the bid can only be submitted after depositing requisite EMD as specified in the "Schedule".
  12. Copy of all mandatory documents as desired in the NIT shall be scanned and up-loaded to the e-Tendering website within the period of bid submission. However, certified / original copy of all the scanned and up-loaded documents shall have to be submitted by the lowest bidder only within a week physically in the office of e-tendering authority.



13. Online bid documents submitted by intending bidders shall be opened only of those bidders, who has deposited requisite EMD / attached scanned copy and other documents scanned and uploaded are found in order.
14. Those contractors not registered on the website mentioned above, are required to get registered beforehand. Bidders should refer "Instruction for Online Bid Submission" given earlier for further assistance.
15. When bids are invited in two / three stages systems and if it is desired to submit revised financial bid it shall be mandatory to submit revised financial bid. If not submitted, then the bid submitted earlier shall become invalid.
16. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
17. Contractors must ensure to quote rate of each item.
18. The following undertaking in this regard shall be up-loaded by the intending bidders: **"the physical EMD shall be deposited by me / us with the Authority inviting the tender, in case I / we become the lowest tenderer, within a week of the opening of financial bid, otherwise, department may reject the tender and also take action to debar me /us from tendering in any form in IIT Delhi."**
19. **Copy of enlistment order and certificate of work experience and other documents as specified in the Press Notice / web notice shall be scanned and up-loaded to the e-Tendering website within the period of bid submission. However, certified / original copy of all the scanned and up-loaded documents as specified in press notice web / notice shall have to be submitted by the lowest bidder only along with physical EMD of the scanned copy of EMD uploaded within a week physically in the office of e-tendering authority and it shall be sole responsibility of lowest bidder.**
20. **Online bid documents submitted by intending bidders shall be opened only of those bidders, who has deposited EMD, and other documents scanned and uploaded are found in order.**
21. **The bid submitted shall become invalid if:**
  - a. The bidder is found ineligible.
  - b. The bidder does not upload all the documents (including GSTIN registration) as stipulated in the bid document including the undertaking / declaration if any.
  - c. EMD not deposited as specified.
  - d. Not registered with EPFO & ESIC.
22. The UPS Manufacturer shall comply with BIS standards, duly certified by designated labs / certifying agencies.
23. The experience of successful completion of similar works shall be as per CPWD Works Manual/ SoP.
24. The Manufacturer shall furnish an undertaking regarding availability of spares for the entire life of the UPS i.e. 10 to 15 years.



- 
25. The complete UPS installation including its components, safety device, various types of controls etc., testing, inspection, operation & maintenance shall conform to relevant Codes / Standard / Code of practices / Guidelines / Safety Rules / Inspection Manual (s) / Rule issued by Bureau of Indian Standards, as amended up to date.
  26. Quality Standards shall conform to I S 16242 (Part-1): 2014 and IEC 62040-1: 2008 as amended.
  27. The eligible tenderers quote rates for various items of major components of work. The lowest tenderer is decided based on the quoted rates in respect of all schedules attached in tender documents. It is obligatory on the part of the main contractor to sign the tender document for all the components.



---

## List of Mandatory Documents to be scanned and uploaded within the period of bid submission:

1. Annexure – I duly filled in and duly mentioning UTR No. for EMD deposition or Banker's Cheque or Demand Draft or FDR number with date of issue and got signed
2. Proof of EMD deposit / Scanned copy of DD submission (favouring 'Registrar, IIT Delhi').

*The following undertaking on firm's letter head shall be uploaded by the bidder / scanned copy of DD/FDR is uploaded by the bidder: "The exact physical EMD (as uploaded) shall be deposited by me / us with the authority inviting tender, in case I/we become the lowest tenderer, within a week of the opening of financial bid, otherwise, IITD may reject the tender and also take actions to debar me/ us from tendering in any form in IIT Delhi".*

3. Certificate of work experience as desired (vide clause 4 above)
4. Certificate of GST Registration of the State in which the work is to be taken up, if already obtained by the bidder. If the bidder has not obtained GST registration in the State in which the work is to be taken up, or as required by GST authorities then in such a case the bidder shall scan and upload following undertaking alongwith other bid documents.  
*"if work is awarded to me, I/we shall obtain GST registration certificate of the State, in which work is to be taken up within one month from the date of receipt of award letter or before release of any payment by IIT Delhi, whichever is earlier, failing which I/we shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by IIT Delhi or GST department in this regard."*
5. Affidavit as per provision of the clause 1.1.2 of IITD-6 [To be submitted on stamp paper]
6. Acceptance to execute INTEGRITY PACT [see integrity pact]
7. IITD 7 / 8 duly signed
8. EPFO & ESIC Registration proof
9. Valid Electrical Licence
10. Technical Compliance sheet (Annexure – H) duly filled in and signed with on OEM Letter Head along with manufacturing, servicing and performance certification required.
11. Certificate X1 (**that the OEM is complying with BIS standards**) duly certified by designated labs / certifying agencies
12. An undertaking on OEM letter head regarding availability of spares for the entire life of the UPS i.e. Annexure X2
13. Tender specific, Bid specific Authorization Letter from the OEM of the UPS System is required. NIT No. / Tender No. Shall be invariably written on the Authorization Letter from the issuing Manufacturer. Manufacturer Authorization certificate duly filled in and signed on OEM Letter Head i.e. Annexure C.
14. Any other document as specified in the NIT.

*[N.B. -- As per CPWD Works Manual 2019, "MSME firms registered in NSIC under PP policy are exempted from payment of EMD for supply of goods and services only" Hence, there is **no applicability of EMD exemption** for this work. BID without EMD will summarily be rejected]*

**Executive Engineer [ED-I]  
For & on Behalf of BOG, IIT Delhi**



**INDIAN INSTITUTE OF TECHNOLOGY DELHI**  
**NOTICE INVITING E-TENDER**

- 1.0** Item rate tenders are invited on behalf of The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 110016 from “**CPWD, MES, BSNL, Railways Enlisted Contractors of Composite Category in appropriate class and specialized agency**” as per details given below for the work of **Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.**
- 1.1** The work is estimated to cost **Rs.1,22,20,584.00**. This estimate, however, is given merely as a rough guide.
- 1.1.1** **Criteria of eligibility for submission of bid documents: Conditions for intending bidders / contractors:**
- 1.1.1.1** **Three** similar works each costing not less than **Rs.43,38,000.00**, or **two** similar works each costing not less than **Rs.65,06,000.00**, or one similar work costing not less than **Rs.86,75,000.00** in last 7 years ending previous day of last date of submission of bids. The value of executed work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of submission of financial bid.
- 1.1.2** **To become eligible for issue of bid, the bidders shall have to furnish an affidavit as under: -** “I / We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I / we shall be debarred for bidding in IIT Delhi in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee (Scanned copy to be uploaded at the time of submission of bid)”.
- 2.0** Agreement shall be drawn with the successful bidders on prescribed Form No. IITD 7/8 which is available as IIT Delhi Publication. Bidders shall quote their rates as per various terms and conditions of the said form which will form part of the agreement.
- 3.0** The time allowed for carrying out the work will be **60 days** from the date of start as defined in schedule ‘F’ or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.
- 4.0** The site for the work is available.
- 5.0** 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 except Standard General Conditions of Contract Form can be seen from the web Site **e-procure.gov.in**.
- 6.0** After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of tender as notified.
- 7.0** While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of tender as notified.
- 8.0** If it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted, then the tender submitted earlier shall become invalid.



- 9.0 Earnest Money as specified to be paid through RTGS / NEFT. IIT Delhi Bank details are as under: Name of the Bank A/C: IITD Revenue Account; SBI A/C No.: 10773572622; Name of the Bank: State Bank of India, IIT Delhi, Hauz Khas, New Delhi-110016; IFSC Code: SBIN0001077; MICR Code: 110002156; Swift No.: SBININBB547 (This is mandatory that UTR Number is provided in the on-line quotation/bid. Kindly refer to the UTR Column of the Declaration Sheet at Annexure-1). **OR** In the form of Banker's Cheque or Demand Draft or FDR of scheduled bank in favour of **Registrar, IIT Delhi** (scanned copy of the same to be uploaded with the bid, date of issue shall be within the NIT period) Interested contractor who wish to participate in the bid has to ensure payment of EMD within the period of bid submission.
- 9.1 Copy of all 'mandatory documents' and other documents as specified in the press notice shall be scanned and uploaded to the e-tendering website within the period of bid submission. **However, certified copy of all the scanned and uploaded documents alongwith original EMD (of scanned copy) as specified in press notice shall have to be submitted by the lowest bidder only within a week physically in the office of tender opening authority.**
- 10.0 The bid submitted shall become invalid, if:
- 10.1 The bidder is found ineligible.
- 10.2 The bidder does not upload all the documents (including GSTIN Registration) as stipulated in the bid document.
- 10.3 EMD not deposited online or not submitted as specified
- 10.4 If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted **physically by the lowest bidder** in the office of the bid opening authority.
- 11.0 The contractor whose bid is accepted will be required to furnish **performance guarantee of 5% (Five Percent)** of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of Deposit at Call receipt of any scheduled bank / Banker's cheque of any scheduled bank/ Demand Draft of any scheduled bank/Pay order of any Scheduled Bank (in case guarantee amount is less than Rs.1,00,000/-) or Government Securities or Fixed Deposit Receipts or irrevocable Bank Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. **The earnest money deposited alongwith bid shall be returned after receiving the aforesaid performance guarantee.**
- 12.0 Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and subsoil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work



- to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.
- 13.0 The competent authority on behalf of the Board of Governors does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
- 14.0 Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
- 15.0 The competent authority on behalf of the Board of Governors reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
- 16.0 The contractor shall not be permitted to bid for works in the IITD responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Gazetted officer in the IIT Delhi. Any breach of this condition by the contractor would render him liable to be debarred from bidding process in future in IIT Delhi.
- 17.0 No Engineer of Gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract liable to be cancelled, if, either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.
- 18.0 The bid for the works shall remain open for acceptance for a period of **ninety days from the date of opening of financial bids**, if any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the IIT Delhi shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the re-bidding process of the work.
- 19.0 This notice inviting bid shall form a part of the contract document. The successful bidder / contractor, on acceptance of his bid by the Accepting Authority shall **within fifteen days** from the stipulated date of start of the work, sign the contract consisting of:-
- 19.1 The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
- 19.2 Standard IITD Form –7/8 or other Standard IITD Form as applicable.



- 
- 20.0** In case any discrepancy is noticed between the documents as uploaded at the time of submission of the bid online and hard copies as to be submitted physically in IIT Delhi, if so desired by the accepting authority, then the bid submitted shall become invalid and the IIT Delhi shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the bidding process of the work.





---

## **INTEGRITY PACT**

To

.....,  
.....,  
.....

Sub: NIT No. **0449/112/IITD/EW/2023-24** for the work of **“Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.”**

Dear Sir,

It is hereby declared that IIT Delhi (IITD) is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the Integrity Agreement, which is an integral part of the tender/bid documents, failing which the tender/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the IITD.

Yours faithfully,

Executive Engineer[ED-I]



**TO BE SUBMITTED DULY SIGNED BY THE BIDDER ALONGWITH BID DOCUMENTS]**

To

**Executive Engineer (ED-I),**  
IIT Delhi, Hauz Khas,  
New Delhi – 110016

Subject: Submission of Bid for the work of **“Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.”**

Dear Sir,

I / We acknowledge that IIT Delhi is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I / We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I / We will sign the enclosed integrity Agreement, which is an integral part of tender / bid documents, failing which I / We will stand disqualified from the tendering process. I / We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I / We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by IITD. I / We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I / We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, IITD shall have unqualified, absolute and unfettered right to disqualify the tenderer /bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully,

(Duly signed by authorized signatory of the Bidder)

C ... Nil    I ..... Nil    O ..... Nil



[To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of IITD]

### INTEGRITY AGREEMENT

This Integrity Agreement is made at ..... on this ..... day of..... 20.....

#### BETWEEN

The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 16 represented through **Executive Engineer (ED-I)**, IIT Delhi

....., (Hereinafter referred as the '**Principal/Owner**', (Address of Division)

'**Principal/Owner**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

#### AND

..... (Name and Address of the Individual/firm/Company)

Through..... (Hereinafter referred (Details of duly authorized signatory)

to as the "**Bidder/Contractor**" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

#### PREAMBLE

WHEREAS the Principal / Owner has floated the Tender (NIT No. **0449/112/IITD/EW/2023-24**) (hereinafter referred to as "**Tender/Bid**") and intends to award, under laid down organizational procedure, contract for "**Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.**" (Name of work) hereinafter referred to as the "**Contract**".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s) AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

-----  
C ... Nil    I ..... Nil    O ..... Nil



---

## **ARTICLE 1: COMMITMENT OF THE PRINCIPAL / OWNER**

1. The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
  - 1.1. No employee of the Principal / Owner, personally or through any of his / her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
    - 1.1.1. The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
    - 1.1.2. The Principal/Owner shall Endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
2. If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PoC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

## **ARTICLE 2: COMMITMENT OF THE BIDDER(S) / CONTRACTOR(S)**

1. It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of **fraud or corruption or coercion or collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
2. The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
  - 2.1. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
  - 2.2. The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
  - 2.3. The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC/PoC Act. Further the Bidder(s) / Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal / Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  - 2.4. The Bidder(s) / Contractor(s) of foreign origin shall disclose the names and addresses of agents / representatives in India, if any. Similarly Bidder(s) / Contractor(s) of Indian Nationality shall



disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

- 2.5. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
3. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
4. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practices **means a wilful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**
5. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

### **ARTICLE 3: CONSEQUENCES OF BREACH**

Without prejudice to any rights that may be available to the Principal / Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1. If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. **Such exclusion may be forever or for a limited period as decided by the Principal/Owner.**
2. **Forfeiture of EMD/Performance Guarantee/Security Deposit:** If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
3. **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal / Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.



---

#### **ARTICLE 4: PREVIOUS TRANSGRESSION**

1. The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
3. If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

#### **ARTICLE 5: EQUAL TREATMENT OF ALL BIDDERS/CONTRACTORS/SUBCONTRACTORS**

1. The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.
2. The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
3. The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

#### **ARTICLE 6: DURATION OF THE PACT**

1. This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 6 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.
2. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority of IIT Delhi.

#### **ARTICLE 7: OTHER PROVISIONS**

1. This Pact is subject to Indian Law, place of performance and jurisdiction is the Head Quarters of the Division of the Principal/Owner, who has floated the Tender.
2. Changes and supplements need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by Board Resolution.
4. Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
5. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance



with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

**ARTICLE 8: LEGAL AND PRIOR RIGHTS**

- 1. All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....  
(For and on behalf of Principal / Owner)

.....  
(For and on behalf of Bidder / Contractor)

WITNESSES:

1. ....  
(signature, name and address)

2. ....  
(signature, name and address)

Place:

Dated:



**IITD - 7/8**

**INDIAN INSTITUTE OF TECHNOLOGY DELHI**  
HAUZ KHAS, NEW DELHI - 110016

**Percentage Rate Tender / Item Rate Tender & Contract for Works**

Tender for the work of “Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.”

1. To be submitted online by **Upto 03.00 PM of 26.04.2024**
2. To be opened on **29.04.2024 at 11.00 AM** online

**e-TENDER**

I / We have read and examined the Notice Inviting Tender, schedule, A, B, C, D, E & F, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, Clauses of Contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I / We hereby tender for the execution of the work specified for the Board of Governors, IIT Delhi within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for ninety (90) days from the due date of its opening / ninety days from the date of opening of financial bid in case tenders are invited on 2/3 envelop system (**strike out as the case may be**) and not to make any modification in its terms and conditions.

A sum of **Rs.2,44,412.00** is hereby deposited in IIT Delhi Revenue Account No. 10773572622 as earnest money / D.D. for Rs. 2,44,412.00 has been uploaded with bid. (Strike out whichever is applicable. If I / We, fail to furnish the prescribed performance guarantee within prescribed period I / We agree that the said The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 16 or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I / We fail to commence the work as specified, I / We agree that The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 16 or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I / We agree that in case of forfeiture of Earnest Money & Performance Guarantee as aforesaid I / We shall be debarred for participation in the re-tendering process of the work.

I / We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I / We shall be debarred for tendering in IIT Delhi in future forever. Also, if such a





violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

I / We hereby declare that I / We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I / We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated:

Signature of Contractor

Witness:

Postal Address

Address:

Occupation:

**ACCEPTANCE**

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 110016 for a sum of (Rupees.....).

The letters referred to below shall form part of this contract agreement:-

- (a)
- (b)
- (c)

For & on behalf of Board of Governors, IIT Delhi

Signature .....

Dated:

Designation .....

C ... Nil I ..... Nil O ..... Nil



## PROFORMA OF SCHEDULES

### SCHEDULE "A"

Schedule of Quantities (enclosed)

### SCHEDULE "B"

Schedule of materials to be issued to the contractor

Sr. No.	Description of item	Quantity	Rates in figures & words at which the materials will be charged from the contractor	Place of issue
(1)	(2)	(3)	(4)	(5)
	--- NIL ---			

### SCHEDULE "C"

Tools and Plants to be hired to the contractor

Sr. No.	Description	Hire charges per day	Place of issue
(1)	(2)	(3)	(4)
	--- NIL ---		

### SCHEDULE "D"

Extra schedule for specific requirements / documents for the work, if any.

----- **NIL** -----

### SCHEDULE "E"

Reference to General Conditions of Contract

1	Reference to general conditions of Contract	:	GCC for maintenance work 2023 for CPWD work along with correction slip / amendment issued upto last date of submission of bid.
2	Name of work	:	Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.
3	Estimated cost of work (Rs.)	:	1,22,20,584.00



4	Earnest Money (Rs.)	:	2,44,412.00
5	Performance Guarantee	:	5 percent of tendered value
6	Security Deposit	:	2.5 percent of tendered value

## SCHEDULE "F"

### GENERAL RULES & DIRECTIONS:

Officer inviting tender	:	Executive Engineer (ED-I)
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3	:	<b>See below</b>

### DEFINITIONS:

2 (V)	Engineer-in-charge	:	Executive Engineer (ED-I)
2 (viii)	Accepting authority	:	Institute Engineer
2 (x)	Percentage on cost of materials and labour to cover all overheads and profits	:	20 percent
2 (xi)	Standard Schedule of Rates	:	Market, DSR & PAR of CPWD
2 (xii)	Department	:	Estate & Works, IIT Delhi
9 (ii)	Reference to General condition of contract	:	GCC for maintenance work 2023 for CPWD works along with correction on slips/ amendment issued up to last date of Submission of bid.

### CLAUSE 1

i)	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance	:	15 days
ii)	Maximum allowable extension beyond the period provided in (i) above with late fees @0.1% per day of performance guarantee	:	10 days

### CLAUSE 2

C ... Nil    I ..... Nil    O ..... Nil



(i)	Authority for fixing compensation under Clause 2	:	Institute Engineer
-----	--	---	--------------------

**CLAUSE 2A**

(i)	Whether Clause 2A shall be applicable	:	No
-----	---------------------------------------	---	----

**CLAUSE 5**

(i)	Number of days from the date of issue of letter of acceptance for reckoning date of start	:	10 days
-----	---	---	---------

**TABLE OF MILE STONE(S):**

Sr. No.	Description of Milestone (physical)	Time allowed in days (from date of start)	Amount to be with-held in case of non-achievement of milestone
(1)	(2)	(3)	(4)
1	1/8 <sup>th</sup> (of the whole work)	1/4 <sup>th</sup> (of whole work)	1% of tendered value of work
2	3/8 <sup>th</sup> (of whole work)	1/2 <sup>nd</sup> (of whole work)	1% of tendered value of work
3	3/4 <sup>th</sup> (of whole work)	3/4 <sup>th</sup> (of whole work)	1% of tendered value of work
4	Full	Full	1% of tendered value of work

<b>Time allowed for execution of work</b>	:	60 days
---	---	---------

<b>Authority to decide:</b>	<b>Extension of time</b>	:	<b>Institute Engineer</b>
	<b>Rescheduling of milestones</b>	:	<b>Institute Engineer</b>

**CLAUSE 6A**

Clause applicable – (6A)	:	6 A
--------------------------	---	-----

**CLAUSE 7**



Gross work to be done together with net payment / adjustment of advances for materials collected, if any, since the last such payment for being eligible to interim payment	:	50 Lakhs
---	---	----------

**CLAUSE 10A**

List of testing equipment to be provided by the contractor at site lab					
1	NIL	2	NIL	3	NIL
4	NIL	5	NIL	6	NIL

**CLAUSE 10B (ii)**

Whether Clause 10 B (ii) shall be applicable (Yes / No)	:	No
---	---	----

**CLAUSE 10 C**

Component of labour expressed as percent of value of work	:	15 Percent
---	---	------------

**CLAUSE 10 CA (Not Applicable)**

Materials covered under this clause	Nearest materials (other than cement, reinforcement bars & structural steel) for which All India Wholesale Price index to be followed	Base Price of all the materials covered under clause 10 CA*
1 NIL		
2 NIL		
3 NIL		
4 NIL		

\*base price of all materials covered under clause 10 CA is to be mentioned at the time of approval of NIT

**CLAUSE 10CC (Not Applicable)**

Clause 10 CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column	:	00 months
Schedule of component of other Materials, Labour, P.O.L. etc. for price escalation.		
Component of Civil (except materials covered under clause 10 CA) / Electrical construction materials - expressed as percent of total value of work	:	$X_m =$ percent



Component of labour - expressed as percent of total value of work	:	<b>Y =</b>	<b>percent</b>
Component of P.O.L. – expressed as percent of total value of work	:	<b>Z=</b>	<b>percent</b>

### CLAUSE 11

Specification to be followed for execution of work	:	CPWD General Specifications for Electrical Works (Part I & II) and other relevant Parts as amended upto date
--	---	--

### CLAUSE 12

12.2 & 12.3	Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work	:	100%
12.3 A	Type of work	:	Maintenance works including works of up-gradation, aesthetic, special repair, addition / alteration
12.5	Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work	:	100%

### CLAUSE 16

Competent authority for deciding reduced rates	:	Executive Engineer
--	---	--------------------

### CLAUSE 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site					
1	NIL	2	NIL	3	NIL
4	NIL	5	NIL	6	NIL

### CLAUSE 19 C

Authority to decide penalty for each default	:	Engineer-in-charge
--	---	--------------------

### CLAUSE 19 D

Authority to decide penalty for each default	:	Engineer-in-charge
--	---	--------------------

### CLAUSE 19 G

Authority to decide penalty for each default	:	Engineer-in-charge
--	---	--------------------

### CLAUSE 19 K

Authority to decide penalty for each default	:	Not applicable
--	---	----------------



**CLAUSE 25**

**Constitution of Dispute Redressal Committee (DRC)**

Conciliator	:	Associate Dean Infra
Arbitrator Appointing Authority	:	Director
Place of Arbitration	:	IIT Delhi

**CLAUSE 32**

**Requirement of Technical Representative (s) and recovery rate**

Sr. No.	Minimum qualification of Technical Representative	Discipline	Designation (Principal Technical / Technical representative)	Minimum experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36 (i)	
						Figures	Words
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Graduate Engineer or Diploma Engineer	Electrical or Electrical & Electronics	Technical Representative	2 years for Graduate and 5 years for Diploma	1	15000	Rupees Fifteen Thousand per month per person

Assistant Engineers retired from Govt. / IIT Delhi services that are holding Diploma will be treated at par with Graduate Engineers.



---

## **COMMERCIAL AND ADDITIONAL CONDITIONS**

### **1. GENERAL**

- 1.1. This specification covers manufacture, testing as may be necessary before dispatch, delivery at site, all preparatory work, assembly and installation, commissioning, putting into operation of UPS.
- 1.2. Location: Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.
- 1.3. The work shall be executed as per CPWD General Specifications for Electrical Works Part-I (Int.) 2013, Part-II (Ext.) 1994, Part-IV (Sub St.) 2013, as amended up to date, relevant I.E. Rules, BIS/IEC and as per directions of Engineer-in-Charge. These additional specifications/conditions are to be read in conjunction with above and in case of variations; specifications given in these additional conditions shall apply. However, nothing extra shall be paid on account of these additional specification and conditions, as the same are to be read along with schedule of quantities for the work.
- 1.4. The tenderer should in his own interest visit the site and get familiarize with the site conditions before tendering.
- 1.5. No T&P shall be issued by the Department and nothing extra shall be paid on account of this.
- 1.6. On completion of work the contractor shall test the installation and produce test certificate in accordance with the CPWD specification failing which a recovery @ 2.5% of Estimated cost subject to a ceiling of Rs. 15000/- shall be made from the bill of the contractor.

### **2. COMMERCIAL CONDITIONS:**

- 2.1. **Type of contract:** The work to be awarded by this tender shall be treated as **indivisible works contract**.
- 2.2. **Submission and opening of Tenders:**
  - 2.2.1. The tender is in two parts:
    - 2.2.1.1. Part-I -Technical cum Un-priced commercial Bid
    - 2.2.1.2. Part-II-Price Bid
- 2.3. The tender shall be submitted online, duly completed as per NIT conditions within period of bid submission.
- 2.4. The tenderers are advised not to deviate from the technical specifications / item, commercial terms and conditions of NIT like terms of payment, guarantee, arbitration clause, escalation etc.
- 2.5. Technical cum un-priced commercial bid only shall be opened on the due date and time in the presence of tenderers or their authorized representative who wish to remain present.
- 2.6. Scrutiny/evaluation of the technical-cum-commercial bid shall be done by the department. In case, it is found that the technical-cum-commercial bid of a tenderer is not in line with NIT





specifications/requirements and/or contains too many deviations, the department reserves the right to reject the technical bid of such firms(s) without making any reference to the tenderer(s).

- 2.7. Necessary clarifications required by the department shall have to be furnished by the tenderer within the time given by the department for the same. The tenderer will have to depute his representative to discuss with the officer(s) of the department as and when so desired. In case, in the opinion of the department a tenderer is taking undue long time in furnishing the desired clarifications, his bid will be rejected without making any reference.
- 2.8. After obtaining clarification from all the tenders, the department will intimate the tenders whose technical cum commercial bids are acceptable.
- 2.9. The price bids of only those tenderers shall be opened whose technical bids are found to be technically acceptable. The time and date of opening of price bid shall be fixed after the technical cum unpriced commercial bid is accepted and intimated to them by post/Fax/e-mail.
- 2.10. The department reserves the right to reject any or all the price bids and call for fresh prices/tenders as the case may be without assigning any reason.

### 3. TERMS OF PAYMENTS

- 3.1. The following percentage of contact rates for the various items included in the contact shall be payable against the stage of work shown herein.
- 3.2. 75% after initial inspection and delivery at site in good condition on pro-rata basis.
- 3.3. 15% after completion of installation in all respects.
- 3.4. Balance 10% will be paid after testing, commissioning, trial run and handing over to the department for beneficial use.

### 4. SECURITY DEPOSIT

- 4.1. Security Deposit shall be deducted from each running bill and final bill to the extent of 2.5% of the gross amount payable. **The security deposit shall be released on the expiry of guarantee period stipulated in the contract.**

### 5. PERFORMANCE GUARANTEE

- 5.1.1. The successful tenderer shall submit an irrevocable performance guarantee of 5% of the tendered amount in addition to other deposit mentioned elsewhere in the contract for his proper performance of the contract agreement within 15 days of issue of letter of acceptance of tender. This guarantee shall be in the form of Demand Draft/Pay order of irrevocable bank guarantee bond of any schedule bank or the State Bank of India in the specified perform a of Government Security, fixed deposit receipt pledged in favour of **Registrar, IIT Delhi** or as specified in the letter of acceptance of tender. The performance guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond. This bank guarantee shall be kept valid till the recording of completion certificate for the work by the competent authority.
- 5.1.2. 50% of the performance guarantee shall be refunded to the contractor soon after the completion



of the work and recording of the completion certificate.

- 5.1.3. And rest 50% of the Performance Guarantee shall be retained and shall be released after completion of 1 years of Guarantee period.
  - 5.1.4. If part is not replaced/repair within 15 working days from the date of lodge of complaint intimated via mail, what's app or by official letter to the agency then at contractor's risk and cost the work will be done.
- 5.2. Income tax, GST, labour cess & other statutory deduction etc. shall be made at source as per the prevalent laws. The deduction of Security Deposit, Income Tax, etc., shall be done after calculation for the above due payment as per clause 3 above and net payment shall reduce accordingly.

## 6. RATES

- 6.1. The rates quoted by the tenderer, shall be firm and inclusive of all taxes (including works GST & labour cess), duties, levies, etc. and all charges for packing forwarding, insurance, freight and delivery, installation, testing and commissioning etc. at site including temporary construction of storage, risks overhead charges, general liabilities/ obligations and clearance from UPS Inspector. However, the fee if any, for the inspections shall be borne by the Department.
- 6.2. The contractor must engage OEM to carry out maintenance as per manufacturer's standards for a period of (1 + 5) years from the date of handing over. Nothing extra shall be paid on this account on the 1<sup>st</sup> year.
- 6.3. Reserved price for dismantled materials is fixed as indicated in BOQ. Bidder cannot quote below that rate.

## 7. COMPLETENESS OF TENDER

- 7.1. All sundry equipment's, fitting, unit assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections and all other items which are useful and necessary for efficient assembly and installation of equipment and components of the work shall be deemed to have been included in the tender irrespective of the fact whether such items are specially mentioned in the tender documents or not.

## 8. STORAGE AND CUSTODY OF MATERIAL

- 8.1. The agency has to make his own arrangement for storage. No separate storage accommodation shall be provided by the department Watch and ward of the storage and their safe custody shall be responsibility till the final taking over of the installation by the department.

## 9. CARE OF THE BUILDING

- 9.1. Care shall be taken by the contractor while handling and installing the various equipment and components of the work to avoid damage to the building. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste material arising out of the installation from the site of work.

## 10. COMPLETION PERIOD



- 10.1. The completion period indicated in the tender documents is for the entire work of planning, designing, approval of drawings etc, arrangement of materials & equipment's, delivery at site including transportation, installation, testing, commissioning and handing over of the entire system to the satisfaction of the Engineer-in-charge.

## **11. GUARANTEE**

- 11.1. All equipment's shall be guaranteed for a period of 12 months from the date of taking over the installation by the department against unsatisfactory performance and / or breakdown due to defective design, workmanship or material. The equipment or component, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost to the satisfaction of the Engineer-in- Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of Engineer-in-Charge in this regard shall be final & binding on the contractor.
- 11.2. The contractor shall ensure adequate and prompt complaint handling during defect liability period without any cost. Personnel and spares shall be arranged by the contractor when required. The OEM sponsored initial checks and maintenance shall be ensured according to the manufacturer manual for operation and maintenance.
- 11.3. **The tenderer shall guarantee among other things, the following:**
- 11.3.1. **Quality, strength and performance of the material used as per manufacturer's standards.**
- 11.3.2. **Safe mechanical and electrical stress on all part under all specified conditions of operation.**
- 11.3.3. **Satisfactory operation during the maintenance period.**

## **12. POWER SUPPLY**

- 12.1. It is clarified that electricity will be provided from the existing connection near building and necessary arrangement for tapping and termination of supply will be done by the contractor. The charges for electricity may be recovered from the running account bill of the contractor as per the bill raised by IIT Delhi authorities.

## **13. DATA MANUAL AND DRAWING TO BE FURNISHED BY THE TENDERER**

- 13.1. With tender: The tenderer shall furnish along with the tender, detailed technical literature, pamphlets and performance data for appraisal and evaluation of the offer.
- 13.2. The successful tender should furnish well in advance three copies of detailed instruction and manuals of manufacturers for all items of equipment's regarding installation, adjustment operation and maintenance including preventative maintenance and troubleshooting together with all the relevant data sheets, spare parts catalogue etc. all in triplicate.



---

#### **14. EXTENT OF WORK**

- 14.1. The work shall comprise of entire labour including supervision and all material necessary to make a complete installation and such tests and adjustment and commissioning as may be required by the department. The term complete installation shall not only mean major items of the plant and equipments covered by the specification but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been mentioned in details in the tender documents in connection with this contract as this is a turnkey job.
- 14.1.1. Minor building works necessary for installation of equipment's, foundation making of opening in walls or in floors and restoring them to their original condition / finish and necessary grouting etc. as required.
- 14.1.2. All supports for cable and MS Channel for erection as are necessary.

#### **15. INSPECTION AND TESTING**

- 15.1. The material and equipments shall be offered for initial inspection at manufacturer's works. The contractor will intimate the date of testing of equipments at the manufacturer's work before dispatch. The successful tenderer shall give advance notice of minimum two weeks regarding the dates proposed for such test to the department representative to facilitate his presence during testing. The Engineer- in-charge may witness such testing. The cost of the Engineer visit to the factory will be borne by the Department. Equipments will be inspected at the manufacturer premises before dispatch to the site. Nothing extra shall be paid for initial inspection/testing at Manufacture Works.
- 15.2. Copies of all documents of routine and type test certificates of the equipment carried out at the manufactures premises shall be furnished to the Engineer-in- charge and consignee.
- 15.3. The installation shall be subject to necessary inspection during every stage of erection, by the Engineer In-charge or his authorized representative. The contractor shall provide all facilities and assistance for the purpose.
- 15.4. The completed installation shall be inspected and tested by the Engineer-in charge to ensure the functionality and performance level. Contractor shall arrange T&P as well as OEM's Engineer and Technical staff for this purpose. No extra payment shall be entertained on this account in the manner as will be laid down by department.
- 15.5. All instruments and facilities necessary for the tests shall be provided by the agency.

#### **16. VALIDITY**

- 16.1. Tenders shall be valid for acceptance for a period 90 days of days from the date of opening of price bid.

#### **17. COMPLIANCE WITH REGULATIONS AND INDIAN STANDARDS**



17.1. All works shall be carried out in accordance with relevant regulation both statutory and those specified by the Indian Standards related to the works covered by this specification in particular, the equipment and installation will comply with the following:

17.1.1. Factories Act

17.1.2. Indian Electricity Rules

17.1.3. B.I.S. & other standards as applicable

17.1.4. Workmen's compensation Act

17.1.5. Statutory norms prescribed by local bodies like fire department, CEA, Power Supply Co. etc.

17.1.6. After completion of the installation the same may be offered for inspection by the representatives of the Inspection Deptt of Delhi Govt. The contractor will extend all help including test facilities to the representatives of Inspector. The observation of Inspector will be attended by the contractor.

17.1.7. Nothing in this specification shall be construed to relieve the successful tender of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.

17.1.8. Successful tenderer shall arrange for compliance with statutory provisions of safety regulations and departmental requirements of safety codes in respect of labour employed on the work by the tenderer. Failure to provide such safety requirements would make the tenderer liable for penalty of Rs.200/- for each default. In addition, the department will be at liberty to make arrangement for safety requirements at the cost of tenderer and recover the cost thereof from him.

## 18. INDEMNITY

18.1. The successful tenderer shall at all times indemnify the department, consequent on this works contract. The successful tenderer shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipment's and ancillary equipment under the supervision of the successful tenderer in so far as the latter is responsible. The successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer on account of the above.

## 19. ERECTION TOOLS

19.1. No tools and tackles either for unloading or for shifting the equipment's for erection purposes would be made available by the department. The successful tender shall make his arrangement for all these facilities

## 20. COOPERATION WITH OTHER AGENCIES AND OCCUPANTS OF THE BUILDING



20.1. The successful tenderer shall co-ordinate with other working contractors, if any and other occupants of different offices / Labs, etc., and exchange freely all technical information so as to make the execution of this work / contract smooth. No remuneration should be claimed from the department for such technical cooperation. If any unreasonable hindrance is caused to other agencies and any completed portion of the work has to be dismantled and re-done for want of cooperation and coordination by the tenderer during the course of work, such expenditure incurred will be recovered from the successful tenderer if the restoration work to the original condition or specification of the dismantled portion of work was not under taken by the tenderer himself.

## **21. MOBILIZATION ADVANCE**

21.1. No mobilization advance shall be paid for this work

## **22. INSURANCE AND STORAGE**

22.1. All consignments are to be duly insured upto the destination from warehouse at the cost of the contractor. The insurance covers shall be valid till the equipment is handed over duly installed, tested and commissioned.

## **23. TRAINING**

23.1. The scope of work includes the on job technical training of two persons of department at site. Nothing extra shall be payable on this account.

## **24. MAINTENANCE**

24.1. Sufficient trained and experienced staff shall be made available to meet any exigency of work during the guarantee period of one year from the handing over of the installation.

24.2. The maintenance, routine as well as preventative for the first year from the date of taking over the installation as per manufactures recommendation shall be carried out free of cost.

24.3. A separate supplementary agreement shall be made with the successful tenderer for Sub Head II of Schedule of Work i.e. Comprehensive Maintenance for 5 years after guarantee period of 1 year. The payment for comprehensive maintenance shall be made quarterly after the end of each quarter.

## **25. INTERPRETING SPECIFICATION**

25.1. In interpreting the specification, the following order of decreasing importance shall be followed in case of contradictions:

25.1.1. Schedule of quantities

25.1.2. Technical Specification

25.1.3. Drawing (if any)

25.1.4. General Specification for Electrical Works of CPWD (relevant Parts)

25.1.5. Relevant BIS or other international code in case BIS code is not available.



**26. POLICY OF THE INSTITUTE**

- 26.1. Institute has a policy against **sexual harassment** and is committed to providing an environment free from **sexual harassment of women** at the workplace. Contractor shall have to abide by the policy of the Institute with due diligence. Any violation on the part of the contractor shall be dealt with the extant rules of the Institute.
- 27. The sample of material required for testing shall be provided by the contractor free of cost. Testing charges if any shall be borne by the IITD for satisfactory test results. However for unsatisfactory test reports or test results, testing charges shall be deducted from the bills of the contractor. The necessary expenditure to be incurred of taking sample, conveyance, packing etc. shall be borne by the contractor.**
- 28. Department may inspect the material at OEM factory.**



---

## **TECHNICAL CONDITIONS**

### **1. SCOPE**

The UPS system shall be manufactured at the Manufacturer Factory only and shall not be assembled type at any of the authorized panel builders / system houses. The Contractor shall furnish and install a three-phase continuous duty, true on-line, modular scalable live swappable uninterruptible power system, hereafter referred to as the UPS. The UPS SHOULD HAVE Expandable chassis (frame) of **60KVA/kw**. The UPS should have advanced IGBT rectifier & inverter system. The UPS shall operate in conjunction with the existing building electrical system to provide power conditioning, back-up and distribution for critical electrical loads of CSC, IIT Delhi. The UPS shall consist of, as required by the project, input/ Output panel, maintenance bypass, parallel card inbuilt and other features as described in this specification. The OEM should look into it for the smooth functioning of the UPS system. OEM HAS TO GIVE THE WARRANTY CERTIFICATE FOR HEALTHY FUNCTIONING FOR 1+5 YEARS OF UPS AND 2 YEARS FOR SMF BATTERIES RESPECTIVELY.

### **2. SUBMITTALS FOR APPROVAL**

- a) Modular UPS Technical Datasheet / Brochure
- b) Point wise Technical Compliance along-with supporting documents, certificates.
- c) Country of Origin certificate.
- d) Battery Bank Calculations.
- e) Manufacturers Service Set-up and Toll Free call centre number details.
- f) Escalation matrix for complaint management system from OEM
- g) AC Input: 380 /400/415 Volt 3 phase + neutral. Frequency range: 40-70 Hz.

### **3. UPS AC Output**

- a) Load Rating: 100% continuous load rating for any combination of linear and non-linear loads.
- b) Frequency Stability: Frequency regulation shall be  $\pm 0.1\%$  in Battery mode or in asynchronization condition.
- c) Not less than 150% of UPS rated output for load for 60 seconds and not less than 125 % of UPS rated output for ten minutes.
- d) Communication Interface: RS 485, USB, Modbus, 8 X SNMP
- e) Screen Control / Monitoring Screen: LCD Touch Screen.
- f) Protection: Minimum IP 21.

### **4. UPS IN PARALLEL CONFIGURATIONS**

UPS shall be capable of being paralleled to increase system power levels or to provide redundant power and minimum warranted for (1+5) years.

### **5. BATTERIES**

---

C ... Nil    I ..... Nil    O ..... Nil





- 
- a) Battery Type: Sealed Maintenance Free (SMF), minimum two-year warranted float service life at 25 degrees C.
  - b) Battery Back-up Time (Runtime): As per SOQ, Battery Calculations to be submitted to Engineer-in charge for approval.
  - c) Over-voltage Protection: If the UPS system's battery bus voltage exceeds the predetermined set point then the UPS will disable the charger and alarm a "check battery" condition
  - d) Battery Runtime Monitoring: UPS shall monitor batteries and provide status to end user of battery remaining capacity via front panel icon, remote communications, or both. Runtime calculations to be based on load demand and analysis of battery health.
  - e) Battery Health Monitoring: UPS shall periodically test and monitor battery health and provide warnings visually, audibly and/or remotely. Battery testing may also be user initiated via front panel or serial communications.

## 6. DISPLAY AND CONTROLS

Monitoring & Controlling: The ONLINE UPS is provided with a microprocessor based unit status display & controls section designed for convenient and reliable user operation. A system power flow diagram, a percentage load and battery time remaining display is provided as part of the monitoring and controls sections which depicts a single line diagram of the ONLINE UPS illuminated visual indicators is of the long life LED type. The push buttons permit the operator either to select options from a menu for display on the LCD winder or to change the value of some parameters. One push-button- alarm silence switch.

## 7. The following in the scope of the work: (Free of cost within quoted rate)

- a) For commissioning related activities the tenderer shall have to connect, disconnect as deemed suitable for UPS connection / interconnection with suitable size copper conductor cable in conduit / trunking as per OEM recommendation/ requirement by the client department or as per instruction of the Engineer in Charge. For which no extra payment shall be paid.
- b) Necessary loop earthing wire shall be run along with the copper conductor cable/wire.
- c) The contractor must engage OEM to carry out One-year free comprehensive maintenance as per OEM standard, for which 10% of contract value may be withheld. It will be release after satisfactorily completion of comprehensive One year Comprehensive maintenance period.
- d) Work is of very urgent nature and to be completed within 01-month strict time frame.
- e) Necessary Type test certificates / relevant IEC / IS / UL certification for UPS and battery and each allied component shall be submitted by the successful bidder duly signed by the OEM / authorize agency.



## TECHNICAL PARTICULARS

## Annexure - H

[To be filled & submitted by the bidder along with bid duly typed for each UPS on OEM Letter Head.]

TECHNICAL DATA SHEET			
S.No	DESCRIPTION	SPECIFICATION	Compliance [Yes/No/ ]
	<b>Supply, Installation, Testing and Commissioning of 60 KVA/ KW Live Swappable Modular UPS Chassis having 60 KVA , double conversion with PWM Hi- Frequency technology. Modular Architecture with the possibility to have N+1 redundancy, Live-swappable modules, Common Static Switch. and SMF Battery for Approx. 30 Min. Battery Back up on 60 KVA Load with all other necessary Accessories</b> <b>UPS Frame: 60 KVA</b> <b>Module Capacity: 60 KVA / KW</b> <b>Topology: Online Double Conversion</b> <b>Input: Three phase, 415 V</b> <b>Output: Three Phase, 415 V 3-phase 4 wire</b> <b>SMF Battery for Approx. 30 Min. Battery Back up on 60 KVA Load</b> <b>Other Accessories :</b> >> Battery Interconnecting cable. >> Battery make : Quanta , EXIDE, Amaarraja, Amron >> SNMP & BMS CARD		
<b>1</b>	<b>General Specifications</b>		
<b>1.1</b>	UPS Chassis	<b>60 KVA UPS chassis Required</b>	
<b>1.2</b>	UPS Module	60 KVA/ KW, Module - 2 Nos. of 30 KVA Module	
<b>1.3</b>	UPS Topology	On line double conversion	
<b>1.4</b>	Architecture of the UPS	Modular, scalable, redundant based on 30kW Power Modules, Pluggable type within Single Frame	
<b>1.5</b>	UPS Module	Each Module must have Common Static Switch / Controller/ Rectifier/ Inverter/ Static Bypass/Charger	
<b>1.6</b>	In/Out phase Configuration	Three phase / Three Phase	
<b>1.7</b>	Switching Technology	3 level IGBT	
<b>1.8</b>	Neutral	Neutral Passing through	
<b>1.9</b>	Output wave form on mains run	Sinusoidal	



1.10	Output wave form on battery run	Sinusoidal	
1.11	Bypass type	Automatic, Distributed Type (Common Bypass not accepted)	
1.12	Maintenance Bypass Switch	Should be provided inbuilt	
1.13	Paralleling	Each Frame should be able to run in Parallel mode and share the load, even during Control communication failure between them	
1.14	Transfer time	~Zero	
2	<b>Input</b>		
2.1	Nominal Voltage	400V 3ph+N+PE	
2.2	Voltage range	-15% +15%	
2.3	Frequency	40 Hz - 70Hz (autosensing)	
2.4	THD in	< 3%	
2.5	Power Factor	> 0.99 at full load	
2.6	Phase Sequence Correction	UPS should work on Mains & charge the battery during any Phase Reversal at Input (It should not go to battery)	
3	<b>Outputwith mains (AC-AC)</b>		
3.1	Nominal voltage	380, 400, 415V 3ph+N+PE	
3.2	Nominal power	30 to 60KVA	
3.3	Active power	30 to 60KW	
3.4	Voltage variation (static)	± 1%	
3.5	THD v on nominal power (linear load)	< 1 %	
3.6	THDv on nominal power (non-linear load)	< 5 %	
3.7	Frequency	50 Hz +/- 0.1 % (autosensing or selectable)	
3.8	Frequency tolerance	± 0.1%	
3.9	Current Crest Factor	In accordance with IEC 62040-3	
3.10	Overload capability:		
A	60 sec - 150% load rate with no bypass intervention	Required	
B	10 min - 125% load rate with no bypass intervention	Required	



C	Short Circuit	65KA	
4	<b>Battery</b>		
4.1	Type	Lead Acid, sealed, free maintenance VRLA	
4.2	Minimum Required VAH	<b>57600</b> VAH with Each UPS) (12 V x Battery AH x Battery Qty.) for 30 Min. Battery backup	
4.3	Battery Breker / SFU Required	Required	
4.4	Nominal UPS Battery Voltage	+/- 264V to +/- 312V (44-52 blocks)	
4.5	Battery charger type	PWM hi efficiency, one in each power module	
4.6	Charging Cycle	Advanced 4-stage charging	
5	<b>Environmental specs</b>		
5.1	Noise level @ 1m	< 65 dBA at full load	
5.2	Working temperature range	from 0°C to +40°C	
5.3	Operating temperature range	from 0°C to +40°C	
5.4	Humidity range	0-95% not condensing	
5.5	Protection degree	IP21 minimum	
5.6	Environmental Certification required	Required	
6	<b>Mechanical an Miscellaneous</b>		
6.1	Display	Colour Touch Screen not less than 4 inches, status LED and mimic on display.	
6.2	Net Weight with out batteries	As per standard	
6.3	Dimensions (W x H x D)	As per standard	
6.4	Colour	RAL 9003 / 9017 or equivalent as per relevant IS / IEC	
6.5	Communication Interface	Network Management Card Included with Ethernet (SNMP) and Modbus. 8 Nos	
6.6	Input/Output connections	3Ph + N + PE	
6.7	Power Modules	Up to 2 modules (30KW each one)	



6.8	Standards	1. IS 16242 (Part-1): 2014 2. IEC 62040-1: 2008 3. UL Certified	
6.9	Certification	The Bidder must submit electricity cost saving for a span of 10 years for each UPS on Class-I output mode of operations as per IEC-62040-3	
6.10	Conformal Coating	Critical Component like PCB in UPS shall be conformal coated for protection against dust and other environmental harsh condition.	
6.11	UPS Load Test	The UPS shall have built in feature to test UPS at 100% load without the need of any external load bank.	
6.12	Service Life	AC / DC capacitor service life shall be minimum 10 years. If less than 10 years capacitor replacement cost must be borne by OEM / Authorized Agency	
6.13	Oscilloscope	The UPS shall be provided with oscilloscope for measuring and recording input/output voltage & current waveforms in the event of any abnormal or alarming situation arises. In case it is not available within the UPS, then two numbers of 3 Phase	



		Power Meters (one at Input & one at Output) shall be provided along with the UPS system which can capture the Waveforms Triggered during the failure event.	
7	User Interface (equipped with an innovative touch screen user-friendly graphic user interface; the UPS is capable of reading real-time data regarding working conditions, efficiency, consumption, load variations, as well as input / output power, current,		
7.1	Input	Current: RMS value Peak value Crest Factor Voltage: Ph-N RMS value Ph-Ph RMS value Bypass Line Voltage Power: Nominal (VA) Active (W) Power Factor Frequency	



7.2	Output	Current: RMS value Peak value Crest Factor Voltage: Ph-N RMS value Ph-Ph RMS value Power: Nominal (VA) Active (W) Power Factor Frequency Batteries: <ul style="list-style-type: none"> <li>• Voltage</li> <li>• Capacity</li> <li>• Current</li> <li>• History data</li> <li>• Residual Capacity</li> <li>• Charging status</li> </ul>	
7.3	Misc	<ul style="list-style-type: none"> <li>• Internal Temperature</li> <li>• Fan Fault Detection</li> <li>• Overall Battery Bank Voltage</li> </ul>	
7.4	Data Log	<ul style="list-style-type: none"> <li>• By-pass intervention</li> <li>• Overheats</li> <li>• Overloads</li> <li>• Battery interventions</li> <li>• Total discharge</li> <li>• Events (info, warning, critical)</li> <li>• Alarms</li> </ul>	•



<b>List of preferred makes for Electrical works</b>		
<b>S.No.</b>	<b>Materials</b>	<b>Acceptable Make</b>
1	MODULAR TYPE UPS	APC/ EATON/ Schiender / Vertiv/ Emerson/ Hitachi.
2	Battery	Exide/ Quanta/ Amarraja/ Amaron.
3	Earthing / SPD System	DEHN/ VNT/ J.Propster/ ABB
4	PVC insulated copper conductor cable	Havells/ Gloster/ Polycab/ RR Kabel/ KEI/ Universal.
5	FRLS PVC insulated wires / cables (ISI marked)	Havells/ Gloster/ Polycab/ RR Kabel/ KEI/ Universal.
6	PVC Conduit	BEC/ AKG/ NIC/ Precision
7	MS Conduit pipe (ISI Marked-ERW)	BEC/ AKG/ NIC/ Precision
8	Lugs/Ferrules	Dowells/Johnson
9	G.I. Pipe (ISI Marked)	Jindal / Tata / Prakash
11	Any other material	As approve by Engineer-in-Charge
12	Panel	Schneider/ Siemens/ ABB/ L&T TTA Panel.
13	Fire Fighting System	Siemens/ Ansul/ Ceasefire
14	Fire detection and Alarm System	Johnson Control(IFC)/ Notifier(UL)/ Bosch(UL)/ Mircom(UL)/ Fike(UL).

**Note: - Models of items of UPS & UPS panel and allied accessories should be got approved from the Engineer in charge well before placing any order to the OEM/its authorized dealer. The contractor/agency is required to submit all relevant test certificates documents and along with the proposal. The model along with sample should be approval by Engineer-in-charge before placing any order and supply of same to the site. The decision of Engineer-in-charge is binding in this regard and no variation is acceptable.**

**If any E&M items left in the preferred make list, then the agency has to submit the make of the material and in this regard the decision of Engineer-in- Charge shall be final and binding to the agency.**

**The materials to be used in the work shall be latest with upto date certification / calibration.**





**SPECIAL CONDITION FOR MAIN COMPOSITE CONTRACTOR FOR EXECUTION OF UPS.**

1.1. The responsibility of execution of work of UPS shall lie with Main composite Contractor only. He is required to furnish the documents/certificates in support of his experience to execute the mentioned E&M works given in Table-1 below after award of work. For Sl. No. 1, **The main agency must associate OEM of UPS to execute the mentioned E&M component/components of the work having requisite experience as per table-1.** In this connection, it is mentioned that the composite contractor and the **OEM of UPS** shall give required affidavit to confirm their association to the Engineer-in-charge. Tender accepting authority may approve change of sub-agency in case it is required during the currency of the contract.

**The composite category contractor does not eligible directly to procure the equipment of approved make from manufacturer and get it installed from authorized agency/service provider of the manufacturer or specialized agency as per criteria mentioned in NIT.** If the main contractor does not have required experience in the works to be executed as specialized works for Sl.no.2 & 3, then they may associate Specialized Agency/Agencies to undertake the specialized component/components of the work having requisite experience for individual works as mentioned below:

Sl. No.	Sub head of work	Eligibility criteria –The agency should have successfully completed, works as mentioned during last seven years ending previous day of last date of submission of Bid.			Definition of similar work
		Three similar works each of value not less than(Rs.)	Two similar works each of value not less than(Rs.)	One similar work each of value Not less than(Rs.)	
1	<b>UPS System</b>	<b>27.09 Lakhs</b>	<b>40.63 Lakhs</b>	<b>54.17 Lakhs</b>	Supply, installation, Testing and commissioning of UPS works.
2	<b>Fire detection &amp; Alarm System</b>	<b>3.66 Lakhs</b>	<b>5.49 Lakhs</b>	<b>7.32 Lakhs</b>	Supply, installation, Testing and commissioning of Fire detection & Alarm System .
3	<b>Gas Based Fire fighting</b>	<b>5.17 Lakhs</b>	<b>7.75 Lakhs</b>	<b>10.33 Lakhs</b>	Supply, installation, Testing and commissioning of Fire fighting System.



---

	System				
<b>Note:</b> - All amounts rounded off to a convenient figure. The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the last date of submission of Bid.					

- 1.2. The new proposed addressable fire alarm system from the lowest bidder shall be seamlessly integrated with the existing system of new LH Complex, Multi Storied Building & R.I Park.
- 1.3. Certificate of compliance of UPS manufacturer to BIS standards duly certified by the manufacturer itself in notarized affidavit as per **Annexure-X1** in non-judicial stamp paper worth Rs. 200/-.
- 1.4. Undertaking from UPS manufacturer regarding availability of spares for the entire life of UPS i.e., for 10 years as per **Annexure-X2** as notarized affidavit in non-judicial stamp paper worth Rs. 200/-.
- 1.5. Certificate of compliance of the complete UPS installation including its components, safety devices, various type of controls, etc. testing, inspection, operation and maintenance conform to relevant codes, standards, code of practices, guidelines, safety rules, Inspection manual(s), rules issued by Bureau of Indian Standards, as amended upto date in notarized affidavit in stamp paper worth Rs. 200/-



ANNEXURE – X1

UNDERTAKING FROM UPS MANUFACTURER

(SELF CERTIFICATION IN CONFORMITY TO RELEVANT CODES AND STANDARDS ISSUED BY BIS)

We, M/s..... (with name of OEM for UPS and complete address) hereby certify that the entire UPS installation including components, safety devices, various types of controls etc., testing, inspection, operation & maintenance shall conform to relevant Codes, Standards, code of practices, guidelines, safety rules, inspection manual(s), rules issued by Bureau of Indian Standards, as amended up to the last date of receipt of tender as per the following list of BIS Standards.

1. IS 16242 (Part-1): 2014
2. IEC 62040-1: 2008
3. UL Certification

In addition to the above BIS Standards the entire UPS installation and its individual components shall comply to all other relevant codes / Standards as applicable.

For M/S.....

.....

(Authorized signatory of UPS manufacturer)

**Note: To be furnished on a 'Non-Judicial' stamp paper worth Rs. 200/-.**



ANNEXURE – X2

**UNDERTAKING FROM UPS MANUFACTURER**

**(To be submitted prior to the supply of UPS)**

We stand guarantee for availability of spares for the entire life of the UPS for a period of minimum .....years after completion of the installation or handing over of the UPS whichever is later.

(Note: period shall be up to 20 years and minimum 10 years)

For M/S .....,

.....

**(Authorized signatory of UPS manufacturer)**

**Note: To be furnished on a 'Non-Judicial' stamp paper worth Rs. 200/-**



**Manufacturers' Authorization certificate**

To,  
EE (ED-I),  
IIT, Delhi  
Hauz Khas-16.

Subject: - Manufacturers' Authorization certificate for NIT / Bid number:

Dear Sir:

We \_\_\_\_\_ OEM Name \_\_\_\_\_ having our registered office \_\_\_\_\_ who are established and reputed original equipment manufacturers (OEMs) having factories are {Addresses of manufacturing location} do hereby authorize.... Bidder name and address who is our {distributor / Channel Partner / retailer/other < please specify>} to bid, negotiate and conclude the contract with you against and aforementioned reference for the following hardware / Software manufacturer by us.

We also hereby declare that we will support fully for supply of all genuine spare components and software up gradation for the installed system for ten years from the date of commissioning of system and also attend any manufacturing defect for ten years on behalf of the bidder.

Yours faithfully,

For and on behalf of M/s (Authorized signatory)

Name, designation & contact n.

Email id: Address:

Seal

**Note: i) UPS system**



**ANNEXURE - 1**

**<< Organization Letter Head >>  
DECLARATION**

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

1	Name & Address of the bidder	:	
2	Phone	:	
3	E-mail	:	
4	Contact person name	:	
5	Mobile number	:	
6	GSTIN number	:	
7	PAN number	:	
8	UTR no. [if deposited online] for EMD	:	
9	DD / FDR / Banker's Cheque No. [if uploaded scanned copy] for EMD	:	
	<b>BANK DETAILS of Bidder</b>		
10	Bank name	:	
11	Branch address	:	
12	Branch telephone no.	:	
13	MICR Code of the bank	:	
14	IFSC code	:	
15	Bank Account no.	:	
16	Type of account	:	

We further declare that our organization has not been blacklisted / delisted or put to any holiday by any Institutional agency / Govt. Department / Public Sector Undertaking in the last three years.

(Signature & name of the bidder)  
Seal of the bidder



## **BID SUBMISSION CHECK LIST**

### **ONLINE BID SUBMISSION:**

The Online bids (complete in all respect) must be uploaded online in **two** Envelops as explained below:-

<b>Envelope – 1</b> (Following documents to be provided as single PDF file)			
Sl. No.	Documents	Content	File Types
1	<b>Technical Bid</b>  (Refer List of Mandatory Documents to be scanned and uploaded within the period of bid submission as given in the section INFORMATION & INSTRUCTION TO BIDDERS FOR E-TENDERING after Clause 24)	Annexure – I duly filled in and duly mentioning UTR No. for EMD deposition or Banker’s Cheque or Demand Draft or FDR number with date of issue and got signed	.PDF
2		Proof of EMD deposit / Scanned copy of DD submission (favouring ‘Registrar, IIT Delhi’).	.PDF
3		Certificate of work experience as desired	.PDF
4		Certificate of GST Registration & undertaking	.PDF
5		Affidavit as per provision of the clause 1.1.2 of IITD-6	.PDF
6		Acceptance to execute INTEGRITY PACT	.PDF
7		IITD 7 / 8 duly signed	.PDF
8		EPFO & ESIC Registration proof	.PDF
9		Valid Electrical Licence	.PDF
10		Technical Compliance sheet (Annexure – H) duly filled in and signed with on OEM Letter Head along with manufacturing, servicing and performance certification required.	.PDF
11		Certificate X1 ( <b>that the OEM is complying with BIS standards</b> ) duly certified by designated labs / certifying agencies	.PDF
12		An undertaking on OEM letter head regarding availability of spares for the entire life of the UPS i.e Annexure X2	.PDF
13		Manufacturers' Authorization certificate duly filled in and signed with on OEM Letter Head i.e Annexure C.	
14		Any other documents like product brochure, etc. as specified in the NIT	.PDF



---

<b>Envelope – 2</b>			
Sl. No.	TYPES	Content	
1.	<b>Financial Bid</b>	Price bid should be submitted in BOQ format.	.EXL

## **SCHEDULE OF QUANTITY**

Name of work: Replacement of 3 x 60 kVA Modular live swappable UPS in CSC at IIT Delhi.

---

C ... Nil    I ..... Nil    O ..... Nil





S. No.	Description of work	Qty	Unit	Rate	Amount
1	<b><u>Sub Head - I (under PLN fund)</u></b>				
	Supplying, installation, testing and commissioning of <b>3 x 60 kVA</b> Modular live swappable UPS with (N+1) configuration and each power cabinet shall be consisting of multiple numbers of Live swappable power modules with following specifications.				
	Location: CSC, IIT Delhi				
	Transformer less, IGBT Rectifier & IGBT Inverter Modular Scalable Live Swappable UPS System				
	UPS Modules must be of 30 KW Rating in each 60 KW power cabinet.				
	Input Voltage 380/400/415(Minimum) VAC, three-phase				
	Input Voltage Range 331 to 477 V				
	Input Frequency and tolerance (40 to 70Hz)				
	Input Total Harmonics Distortion <1% at 100% load				
	Input Power factor ≥0.99 at full load				
	Back feed protection				
	<b>Overload capability:</b> 150% for 1 minute (normal operation).				
	125% for 10 minutes (normal operation)				
	Overall UPS efficiency: Greater than 99 % i.e. > 97 % at 50% load				
	Output Voltage 380/400/415 (Minimum) VAC, 3 Phase.				
	Voltage Regulation /Stability ±1%				
	Output Power Factor: Unity				
Rated Frequency: 50 Hz +-0.1% free running					
Acoustic Noise (At 1 meter from UPS) at 100% load: Less than 75 dB					



Output Voltage distortion (THDv)(100% Load):Linear load: <1(%)
Non-Linear load: <5(%)
Max Input Short Circuit capacity : 65kA
Networking Protocol – SNMP, Modbus TCP/IP
Operating Temperature: 0 to 40 Deg C
Humidity 0 to <95%
The UPS shall be provided with Phase Sequence Correction at Input i.e., Incase of Phase reversal at Input, UPS shall continue to operate in Double Conversion Mode of operation without going to battery mode.
The UPS shall be provided with oscilloscope for measuring and recording input/output voltage & current waveforms in the event of any abnormal or alarming situation arises. In-case it is not available within the UPS, then two numbers of 3 Phase Power Meters (one at Input & one at Output) shall be provided along with the UPS system which can capture the Waveforms Triggered during the failure event.
AC/DC capacitor service life shall be minimum 10 years. If less than 10 years capacitors replacement cost must be borne by OEM/ authorised agency.
UPS shall have built-in feature to test UPS at 100% Load without the need of any external Load Bank.
In case this feature is not available within the UPS, Vendor shall provide an External Load Bank equal to UPS Capacity which will be kept at the site till the end of Warranty period.
The bidder must submit savings on electricity cost for a span on 10 years for each UPS on Class I output mode of operations as per IEC 62040-3 along with UPS type test report from NABL accredited lab w.r.t IEC 62040-3.



<p>The UPS must have Inverter-on mode to deliver 99% efficiency along with Class-I output as per IEC 62040-3</p>				
<p>Dust filter &amp; Rodent Mesh shall be provided with each UPS Frame</p>				
<p>Built In Energy Meter shall be provided to display kWh consumption at input &amp; output.</p>				
<p>Conformal Coating: Critical components like PCBs in UPS shall be conformal coated for protection against dust and other environmental harsh conditions.</p>				
<p>Ingress Protection – IP 21 (inbuilt)</p>				
<p><b>Make :- APC/ EATON/ Schneider/ Vertiv/ Emerson/ Hitachi.</b></p>				
<p><b>The UPS battery shall be sized for 30 minutes backup at 0.9 load pf</b></p>				
<p>Battery Chemistry: SMF VRLA 100AH, 12 Volt - 48 Nos.</p>				
<p><b>Make:- Exide/ Quanta/ Amarraja/ Amaron.</b></p>				
<p>Battery Warranty :02 years</p>				
<p>Cycle life(@25°C,1C/1C,100%DOD) shall be ≥ 2500 Cycles</p>				
<p>Each battery cabinet shall feature a DC rated circuit breaker for control and protection. The circuit breaker within the battery cabinet shall only provide protection to the battery string within that battery cabinet.</p>				
<p>Battery rack (Customized as per site requirement), Battery interlinks, Battery to battery DC Cable, Battery MCCB, Battery terminal caps for extra safety shall be provided.</p>	3	Each		



2	<p>Design, Fabrication, Supplying, testing &amp; commissioning of front operated cubicle type compartmentalised, front access free standing, dust and vermin proof (IP 44) Switch board panel of 1400 x 1050 x 400 mm size suitable for use at 415 volt, 3 phase, 4 wire, 50 hertz system suitable for fault level of required value symmetrical at 415 volts, made out of 2mm thick CRCA MS sheet 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 lifting hooks and GI earth strip of required size with 2 nos. earthing terminal and powder coated paint finish of approved shade over metal surface cleaned and treated with seven tank process complete with frame duly erection in ground and interconnection with copper conductor etc. as specification, as complete as required confirming to IS8623:93 as below. (<b>Switchgear Make:- Schneider/ Seimens/ ABB/ L &amp; T.) (Panel manufacturer: CPRI Approved)</b></p>				
2.1	<p>i) 400 amp, 4P, 36KA, 50HZ, 415V, AC MCCB with Thermal magnetic release -- 01 Nos.  ii) 160 amp, 4P, 25KA, 50HZ, 415V, AC MCCB with Thermal magnetic release---03 Nos.  iii) Illuminated Lamp ---03 Nos.  iv) Earth Studs ---- 02 Nos.  v) Danger plate -----02 Nos.  vi) Spreder link-----04 Set.  vii) Rotary handle---- 04 Nos.  viii) 3 phase VAF Meter---01 Nos.  ix) 3 phase SPD type 1+2 ---01 Nos.  <b>Bus bar</b> : 400 amp TPN 415 Colour coded Copper Busbar.</p>	1	Each		



3	<p>Design, Fabrication, Supplying, testing &amp; commissioning of front operated cubicle type compartmentalised, front access free standing, dust and vermin proof (IP 44) Switch board panel of 1800 x 1200 x 350 mm size suitable for use at 415 volt, 3 phase, 4 wire, 50 hertz system suitable for fault level of required value symmetrical at 415 volts, made out of 2mm thick CRCA MS sheet 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 lifting hooks and GI earth strip of required size with 2 nos. earthing terminal and powder coated paint finish of approved shade over metal surface cleaned and treated with seven tank process complete with frame duly erection in ground and interconnection with copper conductor etc. as specification, as complete as required confirming to IS8623:93 as below. (<b>Switchgear Make:- Schneider/ Seimens/ ABB/ L &amp; T.</b>) (<b>Panel manufacturer: CPRI Approved</b>).</p>				
3.1	<p>i) 400 amp, 4P, 36KA, 50HZ, 415V, AC MCCB with Thermal magnetic release -- 01 Nos.  ii) 63 amp, 4P, 10KA, 50HZ, 415V, AC MCB-- -12 Nos.  iii) 63 amp, 2P, 10KA, 50HZ, 230V, AC MCB-- -66 Nos.  iv) Illuminated Lamp ---03 Nos.  v) Earth Studs ---- 02 Nos.  vi) Danger plate -----02 Nos.  vii) 3 phase VAF Meter---01 Nos.  <b>Bus bar</b> : 400 amp TPN 415 Colour coded Copper Busbar.</p>	1	Each		
4	<p>Supplying, installation, testing &amp; commissioning of Inverted Automatic Fire extinguisher MAP 90 based with telescoping wall mounting bracket of 9 Kg capacity. PED approved, discharge mechanism automatic QBD - 68 d Centigrade.</p>	6	Each		



5	Supplying, installation, testing & commissioning of 2 Kg, HFC-236 fa Clean agent micro flooding system with Zero Ozone Depletion Potential. Container along with valve assembly - LPCB certified to Standard LPS 1666:Issue 1.0 by LPCB for following type of enclosures : Enclosed, Open with Natural airflow & Open with Forced Airflow with 20 mtr HST tube with all accessories	3	Each		
6	Supplying, installing, testing and commissioning approved make Microprocessor based Multi-loop, Networkable Addressable <b>Fire Alarm Control Panel</b> with minimum 600 characters LCD display, <b>4000 trouble events including 1000 alarm log history events, Self Programmable alphanumeric keypad for programming.</b> The panel should be equipped with sufficient number of loops & each loop shall have a capacity of minimum 125 detectors & 125 other devices excluding 20% spare. The panel shall work in <b>degrade mode in case of CPU failure</b> , Products not having this feature may offer Redundant CPU. Four access levels, flash EPROM, 240 volts AC power supply, automatic battery charger, 24 volts sealed lead acid batteries sufficient for 24 hours normal working and 30 mins in alarm condition with <b>the charging capacity of 200AH</b> . The panel shall be capable of self programming <b>without any dependency on dongle</b> or programming software. Quoted rate shall include supply of necessary software & hardware for programming the panel with all necessary licence. Panel shall have <b>Modbus/Bacnet over IP protocol</b> for future integration with BMS. However, for present arrangement FA system will be standalone with 24x7 monitoring. <b>The panel shall be capable for remote accessibility on a mobile app through cloud platform/solution. Complied to meet UL864, 10th Edition and FM Approved.</b>				
6.1	Two Loop Panel	1	Job		



7	Supplying, installation, testing & commissioning of intelligent <b>addressable multi criteria</b> (Smoke + Heat + CO + IR) detector including suitable photo detector complete with base as required. (Acceptable Make:- Johnson Control (IFC)/ Notifier (UL) / Bosch (UL) / Mircom (UL) / Fike (UL).	8	Nos.		
8	Supplying, installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed temperature thermistor complete with base as required. <b>(Acceptable Make:- Johnson Control (IFC)/ Notifier (UL) / Bosch (UL) / Mircom (UL) / Fike (UL).</b>	20	Nos.		
9	Supplying, installation, testing & commissioning of <b>response indicator</b> on surface/recessed MS Box having two LED, metallic cover complete with all connections etc as required. <b>(Acceptable Make:- Johnson Control (IFC)/ Notifier (UL) / Bosch (UL) / Mircom (UL) / Fike (UL).</b>	5	Nos.		
10	Supplying & laying of 2x1.5 sqmm fire alarm armoured cable, 600/1000V rated with annealed copper conductor having XLPE insulation, steel wire armouring & FRLS outer sheath complete as required.	200	Mtr.		
11	Earthing with copper earth plate 600 mm X 600 mm X 3 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.	14	each		
12	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	600	metre		
13	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				



13.1	150 mm width X 50 mm depth X 1.6 mm thickness	50	Metre		
14	Supplying and laying of Solid stranded Copper Conductor, XLPE Insulated, Cores Laid Up, PVC Innersheathed, Unarmoured 1100 V Grade as per IS 7098 (Part 1) 1988 with upto Date Amendments. on wall surface as required.Upto 35 sq. mm (clamped with 1 mm thick saddle)[conforming to I.S-1554/1/8]. <b>(Make- Havells/ Gloster/ Polycab/ RR kabel/ KEI/ Universal).</b>				
14.1	1 X 35 sq. mm	400	Metre		
15	Supplying, installing, testing and commissioning Real-time monitoring of various critical parameters such as grid earth resistance, earth to neutral voltage, earth integrity and earth leakage current which are of paramount importance to maintain healthy electrical environment in different type of earthed installations viz. TN-S, TN-C-S, TT, TN-C, and IT.( If required system should share data on web and mobile application, wired and wireless connectivity showing real time data & history with diagnosis report with alarming function)( <b>Acceptable Make :- DEHN or equivalent</b> ).	1	each		
16	Dismantling and removal of existing UPS panel along with all accessories from the location including removal of cabling, stand, with other wires and accessories etc. complete as directed by the Engineer-in-charge.[Locations:- CSC, IIT Delhi]	2	nos.		
17	Dismantling and removal of existing UPS along with batteries from the location including removal of cabling, stand, control panel with other wires and accessories etc. complete as directed by the Engineer-in-charge.[Locations:- CSC, IIT Delhi]	3	nos.		
	<b>TOTAL</b>				
18	(-) Less credit for dismantled UPS panel along with its all accessories etc. (Reserve price is	2	Lot		





	Rs.50,000/- for each lifts. Bidder can't quote below the reserve price set)				
19	(-) Less credit for dismantled UPS along with its all accessories like batteries etc. (Reserve price is Rs.1,50,000/- for each lifts. Bidder can't quote below the reserve price set)	3	Lot		
	SUB TOTAL				
	<b>TOTAL OF SH - 1</b>				

Sub Head - II (AMC) [Under NPN fund]					
S. No.	Description of work	Qty		Rate	Amount
1	Comprehensive maintenance of 3X60 kVA UPS which include routine, preventive and breakdown maintenance for period of five years including repair / replacement of worn out items with minimum downtime and warranty & guarantee of repaired / replaced items after completion of one year guarantee period.[Locations:- CSC, IIT Delhi]				
	1st Year (Free of cost, being Defect Liability Period)	1	Job		
	2nd Year	1	Job		
	3rd Year	1	Job		
	4th Year	1	Job		
	5th Year	1	Job		
	6th Year	1	Job		
	<b>Sub Total</b>				
	<b>Total of SH - 2</b>				
	<b>Total of SH 1 &amp; 2</b>				

JE[E]

EE [EED-I]