



**Tender No: CDACP/LnB-NASSCOM-CLASSROOMS/21-22/339, date: 07 January
2022**

C-DAC, Pune invites On-Line bids for carrying out Interior/Civil work, Electrical and Allied HVAC work for Creation of Infrastructure on turn-key basis at C-DAC, IP Building, Pune.

Prospective Bidders may download the Tender Document from www.cdac.in/ <https://eprocure.gov.in/eprocure/app>. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission' before uploading the bids through <https://eprocure.gov.in/eprocure/app> as per terms and conditions given in the Tender Document. The Tender document fee of Rs. 1,500/- (non-refundable) and EMD undertaking needs to be submitted.

Centre for Development of Advanced Computing
A Scientific Society of Ministry of Electronics & Information Technology,
Government of India
Innovation Park, Panchavati, Pashan Road, PUNE- 411008.
Tel: +91-20-25503676/675
mmg@cdac.in



TENDER SCHEDULE

Tender No **CDACP/LnB-NASSCOM-CLASSROOMS/21-22/339**

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| Name of the Institute | Centre for Development of Advanced Computing, Innovation Park, Panchavati, Pashan Road, PUNE 411008. |
| Place of Work & Supply, Installation, Testing & Commissioning, Support etc. | Centre For Development of Advanced Computing, IP Building, PUNE 411008 |
| Date of Release of Tender | 07 January 2022 |
| Date of pre-bid meeting | ONLINE – 14 January 2022 at 11.30 hrs. The bidder should submit their queries(if any) before one day of date of pre-bid meeting. |
| Last date of submission of bids | 28 th January , 2022, 18.00 Hrs |
| Date of opening of Technical bids | 31 st January, 2022 , 11.00 Hrs |
| Place of opening of technical bids | C-DAC, Pune 411008. |
| Tender Fee | Rs.1500/-, payable by a Demand Draft or on-line. |
| Bank Details for submitting Tender Fee online | Branch Name: BANK OF INDIA BRANCH ADDRESS: Pashan Road Branch, Pune Maharashtra: 411008, IFSC CODE: BKID0000516 ACCOUNT NUMBER: 051610110002660 TENDER FEE CAN BE SUBMITTED ONLINE IN ABOVE BANK OR THROUGH DD AS PER DETAILS GIVEN BELOW |

Instruction for Online Bid Submission:

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates.

REGISTRATION:

- Bidders are required to enrol on the e-Procurement module of the Central Public Procurement Portal (url: <https://eprocure.gov.in/eprocure/app>).
- As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India with their profile.
- Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others, which may lead to misuse.



- Bidder then logs into the site through the secured login by entering their user ID / password and the password of the DSC / e Token.

PREPARATION OF BIDS:

- Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents – including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 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 100dpi with black and white option.
- To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use 'My Space' area available to them to upload such documents. These documents may be directly submitted from the 'My Space' area while submitting a bid, and need not be uploaded repeatedly. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS:

- 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.
- The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission,
- The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- Upon the successful and timely submission of bids, the portal will give a successful bid submission message and a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

ASSISTANCE TO BIDDERS:

Any query relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24*7 CPP Portal Helpdesk on :- 0120-4200 462, 0120-4001 002, 0120-4001 005, 0120-6277 787,
e-mail for Technical - support-eproc@nic.in.



SECTION I: INVITATION FOR BIDS (IFB)

A. Introduction:

Centre for Development of Advanced Computing (C-DAC) - is a scientific society under the administrative control of Ministry of Electronics & Information Technology, Government of India.

To enhance the infrastructure, C-DAC invites the bids from eligible bidders for carrying out **Interior/Civil work, Electrical and Allied, HVAC work for Creation of Infrastructure at C-DAC, IP Building, Pune**, as per terms and conditions specified in this document. The detailed requirements and specifications are given in "Section – IV: Schedule of Requirements" of this document.

B. Contact information:

Mr. Satyabrata Mishra, PTO
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, PANCHAVATI, Pashan Road, PUNE 411008
Tel No.: +91-20-25503673 / 694 / 676
E-mail: mmg@cdac.in,

C. Two e-bids System:

The two e-bids system will be followed for this tender. In this system, bidder must submit their offer - online in separate packets as explained below:

Online e-Packet No. 1: "Technical e-Bid" shall contain following documents in .pdf format only:

- i. Covering letter, as per format given in **Annexure – A**.
- ii. Authority letter, as per format given in **Annexure – B**.
- iii. Scanned copy of Demand Draft / e-payment (preferable mode) receipt towards the payment of tender fee of Rs. 1500/- (Rupees One Thousand Five Hundred Only) drawn in favour of C-DAC payable at Pune. In case of payment by Demand Draft, the original DD must be submitted physically at the place of Opening of the Tender on or before the Due Date & Time of the Tender.
- iv. Undertaking as per format given in **Annexure – C**, towards Earnest Money Deposit.
- v. An undertaking as per format given in **Annexure – D**.
- vi. A copy of Certificate of Incorporation, Partnership Deed / Memorandum and Articles of Association / any other equivalent document as applicable to the bidder, showing date & place of incorporation and the nature of business activities,.
- vii. Copies of PAN and GST registration certificates.
- viii. Copies of audited balance sheets for last three financial years i.e. 2018-19, 2019-20 and 2020-21 or a certificate giving turn over details for said period, issued by a Chartered Accountant.
- ix. Duly filled Technical Bid (**as per Section – IV**) with proper seal and signature of the authorized person (with name, designation, email id & contact no.).



The authorized representative of the Bidder shall initial all pages of the Technical and Commercial Bids.

- x. The copies of contracts/works orders completed and the completion certificates issued by end client, in support of Eligibility Criterion stipulated at para No 4(e), Section- II of this document.
- xi. The copies of registered lease/rent agreement or electricity bill or corporation tax bill- as applicable, in the name of bidding firm or proprietor, in support of eligibility criterion No 4(f), of Section – II.
- xii. A photo copy of the commercial bid without prices **(prices blocked)** with line item break-up of items as you will use for raising the final invoice and the GST % of each item. C-DAC reserves the right to reject the bid if these details are not submitted along with the technical bid document.
- xiii. Certificate as per format given in **Annexure – E**.

Note: C-DAC reserves the right to reject the bid if any of the above-listed document/s is not submitted.

D. On-line ePacket 2: “Commercial eBid “ shall contain: (.xls format only)

The Commercial e-Bid was completed in all respects as per the format given in “**Section – V**” of this document.

Pre-bid Meeting:

The pre-bid meeting will be held On-Line as given in schedule to sort out/resolve queries raised by the prospective bidders regarding the scope, technical specifications, terms & conditions etc. The prospective bidders requiring any clarification of the bidding document may send their queries in writing through e-mail to mmg@cdac.in. C-DAC will respond to these queries during the pre-bid meeting. The queries/doubts/clarifications etc. must be sent at least two days before the date of the pre-bid meeting.. No further clarifications shall be entertained after the date and time of submission of queries.

The link for on-line meeting will be sent on e-mail, 30 minutes before the meeting.

Any modifications of the tender Documents, which may become necessary as a result of the Pre-Bid Conference, shall be made by C-DAC exclusively through a corrigendum and in writing and any such corrigendum shall be deemed to be incorporated into this tender document. However, in case of any such amendment, the bid submission date may be extended at the discretion of C-DAC. Any corrigendum/notification/ responses/replies issued by C-DAC, subsequent to issue of tender document, shall only be available/hosted on CPP Portal and on C-DAC web site.

Last Date of uploading of e-bids and opening of the Technical ebids – Online.

- Last date (DUE DATE) for uploading of e-bids through: www.eprocure.gov.in/eprocure/app - against the tender id, as per the ‘**TENDER SCHEDULE**’ above.
- Technical e-bids will be opened ‘Online’ through www.eprocure.gov.in/eprocure/app against the tender id, as per ‘**TENDER SCHEDULE**’
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Note: Please do not put "Commercial e-Bid" (prices quoted) in the technical bid packet. If the price quoted is submitted / leaked with technical ebid the tender will be rejected at the sole discretion of C-DAC.

Opening of commercial ebids

- Commercial e-bids of only those will be opened (**ONLINE**), who meet the eligibility criteria and comply with technical requirements stipulated in this document.
- The time, place and date of opening of commercial bids will be informed later.
- The bidder 's name, bid prices summary and other appropriate details will be displayed at the time of the opening of the commercial ebids.

(END OF SECTION I)



SECTION II: INSTRUCTIONS TO BIDDERS (ITB)

1. Locations for Supply, Installation & Warranty Support etc.:

Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008. INDIA.

2. Delivery Period:

The entire work including civil/Interior, electrical, HVAC works etc. should be completed within 120 days from the date of placing the work order, positively. Bidder should keep in mind that timely delivery is the essence of project.

3. Order Placement & Release of Payment:

The Work Order(s) and payments shall be released by:
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008. INDIA

4. Eligibility Criteria:

The bidders must comply with the eligibility criteria stipulated below.

- a. The bidder must submit the documents listed at para 2, Section – I of this document.
- b. The bidder should be an entity registered in India under appropriate Indian Laws. Certificate for the same need is to be submitted along with the bid.
- c. Copies of PAN and GST registration certificates.
- d. Bidder should have minimum average annual turnover of Rs.1.80 Crs for last three financial years (2018-19,2019-2020,2020-21).
- e. The bidder must have successfully completed at least One Similar Turnkey/Composite work of any Central/State Government Department, or PSU or Autonomous institution, costing not less than the amount equal to 1.50 Crore in last 5 Years.
("Similar work means- Turnkey/Composite Works comprising Interior/ Civil, Electrical & Allied, HVAC works "- Documentary evidence for similar turnkey experience is to be furnished of completed works in form of Work order/Satisfactory Work Completion Certificate. The work order should have been placed in the name of bidder directly by client)
- f. The Bidder shall have registered /branch office in Pune/ Mumbai area.
- g. The contractor must not be black listed / debarred from bidding by any Government Department, PSU or Autonomous institution, as on date of submission of bids. (Declaration to be submitted on letterhead)
- h. The bidder must quote for all the items as listed in **Section – V**.

Note: The bidder should submit the necessary and sufficient documents in support of eligibility criteria stipulated above.

5. CDAC reserves the right to call for additional supporting documentary proofs in support of eligibility criteria, if required.



6. Exemptions:

If in the view of bidder, any exemption / relaxation is applicable to them from any of the eligibility requirements, under any Rules / process/ Guidelines/ Directives of Government of India, bidder may submit their claim for the applicable exemption /relaxation, quoting the valid Rule/ process/ Guidelines/ Directives. In this case the bidder must submit necessary and sufficient documents along with the technical bid, in support of his claim. The decision about granting the exemption/ relaxation will be taken by the bid evaluation committee which is empowered to grant exemption/relaxation. The relevant and valid certificates in support of claim of exemption must be submitted.

The bidders should provide sufficient documentary evidence to support the eligibility criteria. C-DAC reserves the right to reject any bid not fulfilling the eligibility criteria.

7. Amendment to Bidding Documents

- At any time prior to the deadline for submission of bids, C-DAC may, for any reason, whether on its own initiative or in response to the clarification request by a prospective bidder, modify the bid document.
- The amendments to the tender documents, if any, will be notified by release of Corrigendum Notice on www.eprocure.gov.in/eprocure/app/ / www.cdac.in/tender against the tender id. The amendments/ modifications will be binding on the bidders.
- C-DAC reserves the right to vary the quantities up to $\pm 25\%$ - either before ordering or during implementation of work.
- C-DAC at its discretion may extend the deadline/Due Date for the uploading of ebids if it thinks necessary to do so or if the bid document undergoes changes during the bidding period, in order to give prospective bidders time to take into consideration the amendments while preparing their bids.

8. Preparation of e-Bids

- Documentary / Eligibility checklist as per **ANNEXURE - F** should be submitted and documents should be enclosed in the seriatim as mentioned in the checklist. Proper page numbers should also be mentioned in the attached technical document.
- The product offered should be in compliance with the OM NO. 6/18/2019-PPD & No.P-45021/112/2020-PP(BE-II)(E-43780) and OM & Order (Public Procurement No.1) ref. F.No.6/18/2019-PPD dated 23.07.2020 for the offered products as per **ANNEXURE-E**. Please submit the requisite details as per the certificate / undertaking (ANNEXURE – E) accordingly on your letterhead.
- A neat and clean e-Bids is expected to be uploaded in the form of pdf. Bidder should avoid, as far as possible, corrections, overwriting, erasures or postscripts in the bid documents.
- In case however, any corrections, overwriting, erasures or postscripts have to be made in the bids, they should be supported by dated signatures of the same authorized person signing the bid documents. However, bidder shall not be entitled to amend/ add/ delete/ correct the clauses mentioned in the entire tender document.
- The Bid documents shall be neatly arranged. They should not contain any terms and conditions, printed or otherwise, which are not applicable to the Bid. The conditional bid will be summarily rejected. Insertions, postscripts, additions and alterations shall not be recognized, unless confirmed by bidder's signature.

9. Earnest Money Deposit (EMD)

- The bidder must submit EMD / bid security declaration, **as given in Annexure-C**, subject to the conditions stipulated therein
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10. Period of validity of bids

- a) Bids shall be valid for minimum 120 days from the date of submission. A bid valid for a shorter period shall stand rejected.
- b) C-DAC may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. A bidder agreeing to the request for extension will not be permitted to modify his bid.
- c) C-DAC reserves the right to place the order within the mentioned validity period i.e. 120 days from the date of submission of bid.

11. Deadline for Submission of e-Bids

- Bids must be uploaded before the due date and time as mentioned in the tender document.
- C-DAC will not be responsible for any issues arising/pertaining with the eprocure.gov.in/e-procure/app portal for non-submission, failure in submission of e-bids online.
- C-DAC may extend this deadline/Due Date for uploading of bids by amending the bid documents and the same shall be suitably notified.

12. Late Bids

C-DAC shall not be responsible and liable for the delay in receiving the e-bid for whatsoever reason.

13. Bid Opening & Evaluation of e-Bids

- The bids will be examined based on eligibility criteria stipulated at Pt. 4 of Section – II to shortlist the eligible bidders.
- The technical bids of only the short-listed eligible bidders shall be evaluated based on technical specifications stipulated at Section – IV.
- The bidders whose technical bid is found to meet both the requirements as specified above will qualify for opening of the commercial bid and will be informed about the date and time of the opening of the commercial bid.
- The duly constituted Tender Evaluation Committee (TEC) shall evaluate the bids. The TEC shall be empowered to take appropriate decisions on minor deviations, if any.

14. Comparison of Bids

- Only the short-listed bids from the technical evaluation shall be considered for commercial comparison.

15. Award of Order

- C-DAC will award the order(s) to the eligible bidder whose technical bid has been accepted and determined as the **lowest** evaluated commercial bid (including GST) based on the price of the Commercial Bid. For comparison, the prices of all the items including the GST as quoted by the bidder (or applicable tariff rate whichever is lower) will be considered. **However, C-DAC reserves the right and has sole discretion to reject the lowest evaluated bid.**
- If more than one bidder happens to quote the same lowest price, C-DAC reserves the right to decide the criteria and further process for awarding the contract, decision of C-DAC shall be final for awarding the contract.
- Only, in case of conflict/confusion in taxes, C-DAC reserves the right to compare the bids on basic prices to find the lowest quoted bidder(L1).



- **Before placement of order, the successful bidder is required to submit a detailed Bill of Material, giving line-item prices and GST. C-DAC will place order based on this Bill of Material keeping the total price (including GST) quoted by the bidder unchanged.**

16. Purchaser's Right to amend / cancel

- C-DAC reserves the right to amend the eligibility criteria, commercial terms & conditions, Scope of Supply, technical specifications etc.
- C-DAC reserves the right to vary the quantities to the extent of +/- 20% of the quantities mentioned in the BOQ.
- C-DAC reserves the right to cancel the entire tender without assigning any reasons thereof.

17. Corrupt or Fraudulent Practices

- It is expected that the bidders who wish to bid for this project have highest standards of ethics.
- C-DAC will reject bid if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract;
- C-DAC may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the award / execution of contract.

18. Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity/ dispute in the interpretation of any of the clauses in this Tender Document, the interpretation of the clauses by Director General, C-DAC shall be final and binding on all parties.

(END OF SECTION II)



SECTION III: SPECIAL CONDITIONS OF CONTRACT (SCC)

1. Prices

1.1. The price quoted shall be considered firm and no price escalation will be permitted. (Except Govt levies/Taxes).

1.2. Bidder must offer in INR only.

1.3. The prices quoted must be “F.O.R.C-DAC, Pune” inclusive of Installation, testing, packing, forwarding, freight, insurance, loading/unloading and allied charges till destination site(s) whichever applicable.

1.4. Applicable GST Rate

- i. The prices including the taxes, duties, CESS etc. shall be considered for the purpose of comparison and deciding Lowest responsive bidder.
- ii. The quoted GST rate shall be the sole responsibility of the supplier. In case of any error/oversight of the bidder in quoting the rates of GST, CDAC, at its sole discretion, shall consider the rate quoted by the bidder OR the actual tariff rate; whichever is lower.
- iii. CDAC will place order with the rate quoted by the bidder or the tariff rate whichever is lower.
- iv. If the bidder has quoted lower percentage of GST than the actual tariff rate due to error, he will not be permitted to correct the error and it will be his/her sole responsibility. The burden of additional amount payable if any- due to difference in GST rates, will be to the bidders account and C-DAC will not pay any difference amount.
- v. **NOTE: CDAC is not eligible for any Concessional GST.**
- vi. If bidder fails to accept the Work Order (WO) / Purchase Order (PO) or fails to delivers the work as per the same, CDAC reserves the right to take action as stipulated in Undertaking as per ANNEXURE-C.

2. Performance Security:

The successful bidder will be required to furnish the Performance Security in the form of a Bank Guarantee in INR equivalent to 3% of the order value within 10 days of receipt of Work Order. The Performance Security can be submitted in the form of Demand Draft / Bank Guarantee / Online Payment RTGS/NEFT/IMPS drawn in favor of C-DAC payable at Pune. If submitted in the form of a Bank Guarantee, the Performance Security will be valid for the period till completion of work and will be returned upon completion of work of all items.

3. Completeness Responsibility:

The items which are over & above the scope of delivery specified in the Schedule of Requirements/BOQ but considered to be required for completion of project should be immediately brought to the notice of Engineer-In-Chief by the bidder. Any extra/substituted items should be executed only after approval from Engineer-In-Chief as per CPWD Guidelines.

4. Payments:

- a) On completion of 50 % of work, the contractor can submit a Running Account Bill for the amount of work completed. The payment against this RA bill including GST, will be released within 10 days of approval/certification of same by C-DAC.
- b) Remaining payment shall be released only after satisfactory completion of work and acceptance by CDAC.
- c) **Retention Money** of 5% will be deducted from each Running Bill and Final Bill, amounting to final capping of 5% of total bill value which will be retained at C-DAC



end till the completion of Defect liability period of one year from the date of successful completion of work and certification of Final Bill.(Extant GOI guidelines will be followed).The said retention money of 5% can be released in final bill subject to submission of Bank guarantee of equivalent amount with validity covering the defect liability period. The said retention money of 5% can be released in final bill subject to submission of Bank guarantee of equivalent amount with validity covering the defect liability period.

5. Penalty for delay

C-DAC reserves the right to levy penalty @ of 0.5 % of order value per week of delay beyond the schedule date of completion of work/ execution of the order successfully, subject to maximum of 5% of the order value. The delay in delivery, delay in site preparation, and delay in submission of required documents to C-DAC etc. will be considered for calculating penalties.

6. Jurisdiction:

The disputes, legal matters, court matters, if any shall be subject to Pune jurisdiction only.

7. Force Majeure:

C-DAC may consider relaxing the penalty and delivery requirements, as specified in this document, if and to the extent that, the delay in performance or other failure to perform its obligations under the contract is the result of an Force Majeure. Force Majeure is defined as an event of effect that cannot reasonably be anticipated such as acts of God (like earthquakes, floods, storms etc.), acts of states / state agencies, the direct and indirect consequences of wars (declared or undeclared), hostilities, national emergencies, civil commotion and strikes at successful Bidder's premises or any other act beyond control of the bidder.

8. Arbitration:

In case any dispute arises between the C-DAC and successful bidder with respect to this RFP, including its interpretation, implementation or alleged material breach of any of its provisions both the Parties hereto shall endeavour to settle such dispute amicably. If the Parties fail to bring about an amicable settlement within a period of 30 (thirty) days, dispute shall be referred to the sole arbitrator mutually appointed by both parties. If the sole arbitrator is not appointed mutually by both the parties then the District Court Pune shall have exclusive jurisdiction for appointment of sole arbitrator through court. Arbitration proceedings shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and Rules made there under, or any legislative amendment or modification made thereto. The venue of the arbitration shall be Pune. The language of arbitration shall be English. The common cost of the arbitration proceedings shall initially be borne equally by the Parties and finally by the Party against whom the award is passed. Any other costs or expenses incurred by a Party in relation to the arbitration proceedings shall ultimately be borne by the Party as the arbitrator may decide. Courts in Pune only shall have the exclusive jurisdiction to try, entertain and decide the matters which are not covered under the Arbitration and conciliation Act.

9. Limitation of Liability:

The liability of the supplier arising out of breach of any terms/conditions of the order and addendums/amendments thereto, misconduct, wilful default will be limited to the total contract value.



However, liability of the supplier in case of loss of human life(if any), injury/damage caused to the personnel/property for the reasons attributed to the supplier or to any person deployed by supplier at C-DAC - will be at actuals.

In no event shall Party, its officers, directors, or employees be liable for any form of incidental, consequential, indirect, special or punitive damages of any kind.

10. Indemnity:

The successful bidder shall indemnify, protect and save C-DAC from/against any claims, losses, costs, damages, expenses, action suits and other proceedings – if any, resulting from/arising out of violation of any Law /Rule by the Contractor, pertaining to the work being carried out against the work order, at C-DAC, Pune.

11. Assignment:

Selected bidder/ Party shall not assign, delegate or otherwise deal with any of its rights or obligation under this Contract without prior written permission of C-DAC.

However, the selected lowest bidder can sub-contract some of the work / part of the work to suitable vendor with intimation to C-DAC. However, the selected lowest bidder shall be responsible for the quantity, quality and deliverables of the ordered work.

12. Severability:

If any provision of this Contract is determined to be invalid or unenforceable, it will be deemed to be modified to the minimum extent necessary to be valid and enforceable. If it cannot be so modified, it will be deleted and the deletion will not affect the validity or enforceability of any other provision.

13. Right to change scope of work:

C-DAC reserves the right to increase or decrease the scope of work as per C-DAC requirement.

14. Bidder is required to appoint a Site Project Manager/ Supervisor responsible for coordinating and timely resolutions for all site issues related to Interior, Electrical, Fire, HVAC works.

15. Vendor is strictly advised/required to visit site prior to bid submission and understand existing site conditions.

(END OF SECTION III)



SECTION IV – SCHEDULE OF REQUIREMENT

TECHNICAL SPECIFICATION

A) Solid Core Flush door Double leaf:-

1. The factory made solid core flush door shutters in double leaves 35 mm thick, decorative type of exterior grade, conforming to I.S.:2202–1966(Revised)including approved face veneers on both sides, without glazing and venetians including mat finish stainless steel fixtures and fastening ,stoppers and finishing with french polishing/laminate fixing etc.(Excluding door frame)(Sample to be got approved from Engineer before use)Commercial Hard Wood shutter. The Vision Panel with clear glass of 300x 300mm dia to be provided in each door.
2. Adhesive used for bonding various components of flush door shutters namely, core, core frame, lipping, cross-bands, face veneers, plywood etc. and for bonding plywood shall conform to BWP type, phenol formaldehyde synthetic resin adhesive conforming to IS 848.
3. Samples of flush door shutters shall be subjected to the following tests:
(a) End Immersion Test(b) Knife Test(c) Glue Adhesion Test. One end of each sample shutter shall be tested for End Immersion Test. Two specimens of 150 x150 mm size shall be cut from the two corners at the other end of each sample shutter for carrying out Glue Adhesion Test. Knife Test shall be done on the remaining portion of each sample shutter.

B)PLASTERING

The following IS apply to this Section:

| I.S.No. | Subject |
|-----------|---|
| 1542-1977 | Specification for sand for plaster (First revision) |

Definitions

- a) The term 'Plastering' shall cover all type of rough or fair finished plastering, rendering, floating and setting coat or finishing coat, screed, etc., in cement mortar.
- (b) "Dubbing out" shall mean filling in hollows in the surface of wall and roughly leveling up irregular or out of Plumb surface prior to rendering.
- (c) "Rendering" or "rendering out" shall mean the plaster coat, which is applied following the "Dubbing out" or the final coat in case of one coat work.
- (d) "Floating coat" shall mean the second coat in a three coat plaster work, to bring the rendering coat to a true and even surface before the setting or finishing coat is applied.
- (e) 'Setting or Finishing coat' shall mean final coat in a two or three coat Plaster work.
- (f) "Thickness of Plaster" shall mean the minimum thickness at any point on a surface. This dose not include thickness of dubbing out.
- (g) The term "even and fair" as referred to finishing of the plastered surface shall mean a surface finished with a wooden float;
- (h) The term "even and smooth" as referred to finishing of the Plastered surface shall mean a surface leveled with wooden float and subsequently smoothed with a steel trowel.

14.5 Sand

Unless otherwise indicated, sand for plastering and pointing shall conform to IS 1542-1977, Specification for sand for Plaster. Sand shall consist. of natural sand, except where, crushed stone sand or crushed gravel sand or a combination of any of these are indicated. The sand

shall be hard, durable, clean and free from adherent coating and organic matter and shall not contain any appreciable amount of clay balls. Sand shall be obtained from approved sources.

14.5.1 Deleterious Materials:

Sand shall not contain any harmful impurities such as iron pyrites, alkalies, salts, coal, mica shade or similar laminated materials, soft fragments, sea shells and Organic impurities in such quantities as to affect adversely the hardening, the strength and the durability or the appearance of the Plaster or applied decoration or to cause corrosion of metal lathing or other metal in contact with Plaster. The maximum quantities of clay, fine silt, fine dust shall be not more than 5 per cent by weight. Origin impurities in the sand shall not exceed the following limit 'that the colour of the "liquid is low that indicated by comparison with the standard solution specified 6.2.2. of IS 2386 (Part II)-1963'.

14.5.2 The particle size grading of sand for plaster and pointing work shall be as under, unless otherwise specified to conform to the sample maintained by the GE for the purpose.

| IS Sieve designation | Percentage Passing by Weight |
|----------------------|------------------------------|
| 10mm | 100 |
| 4.75 mm | 95-100 |
| 2.36 mm | 95-100 |
| 1.18mm | 90-100 |
| 600 microns | 80-100 |
| 300 microns | 20-65 |
| 150 microns | 0-5 |

NOTE : Where the grading falls outside the limits of grading zones of sieves other than 600 micron IS sieve by a total amount not exceeding 5 percent, it shall be regarded as falling within the grading. This tolerance shall not be applied to percentage passing the 600 micron IS sieve or to percentage passing any other sieve size on the finer limit.

NOTE :-Sand whose grading falls outside the above limits shall be processed to comply with the standard by screening through a suitably sized sieve and/or blending with required quantities of suitable sizes of sand particles.

14.6 Aggregates

All aggregates other than sand shall conform to IS 383-1970, Specification for coarse and fine aggregates from natural sources for concrete. Refer Section 4-concrete.

14.7 Integral water Proofing Compound

Refer Section 4-Concrete.

14.8 Metal Lathing

Metal Lathing shall be of wire netting or expanded metal as indicated.

14.9 Lime Putty (Neeru)

Lime Putty shall be obtained by slaking fat lime with fresh water and sifting it. Putty shall be kept moist until used and the quantity prepared at a time shall not be more than that can be consumed in 7 days. .



14.10 Water

Water used for mixing and curing shall be clean, free from deleterious matter and also from unusual proportions of dissolved salts. Sea water or tidal actuary or brackish water shall not be used. Water fit for drinking is normally suitable.

WORKMANSHIP Scaffolding

Where possible, independent scaffolding shall be used to obviate the subsequent restoration of masonry in put log and other bricks in the work. Stage scaffolding shall be provided for ceiling plaster.

Preparation of Mortar for Plastering and Pointing Cement and Cement Lime Mortar:

These shall be prepared as described in Section 5-brickwork. These shall quantities as required and applied within 30 minutes of mixing. .

CEMENT

Unless otherwise indicated, Cement shall be Ordinary Portland cement, 43 grade conforming to IS 8112 of approved make/ brand. Use of any other grade of cement incase of extreme emergency shall be with the specific approval from the consultant and Engineer – in – Charge.

C) WALL CARE PUTTY

1. Provide wall care putty to the specification catered for in the bill of quantity. Approved make of putty shall only be used.
2. **Surface preparation:** Remove all loosely adhering material with a help of emery stone, putty blade or wire brush and clean water. The substrata should be clean, free from dust, grease loose materials. Dry and absorbent surface should be moistened with sufficient quantity of clean water. Mixing of putty shall be done with 33-35% clean water slowly mixing to make a paste till a uniform paste is formed.
3. **Application:** The first coat shall be applied on already moistened wall surface from bottom to upward direction uniformly with help of patty blade after drying of first coat of putty the surface will be gently rubbed with wet sponge or with putty blade in order to remove the loose particle. Allow the surface to dry for at least three hours before applying the second coat of putty after drying of second coat marks if any will be removed with the help of moist sponge or with the putty blade.

D) PAINTING

1. All paints & allied materials shall be of quality not inferior to that required by the relevant IS specification. Paints, etc. shall be ready mixed. The colour & tints of paints , unless indicated shall be as approved by the EIC.
2. The contractor shall inform the EIC, well before he places bulk order for the materials ,the names of the brands & manufactures of paints he proposes to use in the works & submit samples thereof & obtain prior written. approval of the EIC.
3. The whole of the materials required for the painting work shall be obtained direct from, approved manufacturers or their authorized agents & shall be brought to the site in makers, drums, k gs, etc. with seals unbroken.
4. **Compatibility of paints :** Before considering the application of undercoats, it shall be made sure that those selected are compatible with each other. The primer, filler, undercoating & finishing paints shall be of paints made by the same manufacturer.
5. **Storage of paints:**All containers of paints, thinners & allied materials shall preferably be stored in well ventilated room free from excessive heat, sparks or flame or direct rays of sun. The containers of paint shall be kept covered or properly fitted with lid & shall be kept open except while using. Materials, which have become stale or fat due



- to improper & long storage shall not be used or mixed with usable stuff.
6. **Painting Work-Generally** :The type of paint & allied material to be the number of coats to be applied, the preparatory treatment appropriate to the surface & any special process or treatment to be adopted shall be as indicated.
 7. Where more than one coat is indicated, each coat shall be approved, in writing, by EIC before the next coat is applied.
 8. No painting work shall be carried out in wet & very humid weather when there is danger of dew or weather is otherwise unfavorable. No painting or any other process likely to be damaged by dust shall be carried out in windy weather.
 9. Painting except the priming coat shall be taken in hand after all other builder's work is finished
 10. The paint in the drum shall be thoroughly mixed prior to application. The materials shall be mixed, prepared & applied strictly in accordance with the instructions or recommendations 'of the manufacturers except where otherwise directed by the EIC. The paints shall be mixed periodically during brushing.
 11. **Addition of Thinners**:Thinners (such as mineral turpentine) shall not be added to paints on the feeling that the consistency of the paint supplied by the manufacturer is too thick. If the paint has been manufactured to conform to the specifications, the paint shall have the correct consistency & shall not require further dilution. If there is any doubt, the viscosity of the paint may be checked. If a slight adjustment of viscosity is necessary thinner, recommended by the manufacturer shall be used after prior approval of EIC. The surface must be thoroughly dry & clean before painting work is proceeded with at all stages or processes of work. All dust, dirt, rust, & grease shall be removed before painting is started. Painting shall follow immediately after pre-cleaning or pre-treatment; any contamination which may occur in the intervening period shall be removed. Every individual coat shall be properly applied, reasonably level smooth & free from runs & holidays (minute uncovered areas).
 12. **Drying Time** : For paint film to perform in unison, each coat of paint shall be allowed to dry sufficiently but not excessively before a subsequent coat is applied. Manufacturers' instructions for drying time shall be adhered to properly
 13. **Flattening down** : Cutting of primer & undercoat shall be done to provide a key for subsequent coats. The primer coat, with or without putty, shall be dry cut & the undercoat with or without putty for spot work, shall be wet cut with waterproof emery paper No. 220/240. In the case of under coatings without putty, surface prior to finishing coat, shall be wet cut with waterproof emery paper No. 280/320. The surface shall be dry, clean & free from dust before subsequent coat is applied.
 14. **Appearance**: The painted surface shall have a clean uniformly colored appearance. No hair marks from the brush or clogging of paint puddles in the corner of panels, angles of moulding etc. shall be left on the work.
 15. **Colour** :Correct colour matching shall be judged against a sample having the same type of surface as that to which the paint has been applied. In painting doors & windows, the putty round the glass panes shall also be painted but care shall be taken to ensure that no paint, stains, etc. are left on the glass. Tops of shutters & surfaces in similar hidden locations shall not be left out in painting. .
 16. **Scaffolding** :The scaffolding as required shall be erected for proper execution of work. If the work can be done safely with a ladder or jhoola these may be permitted in the place of scaffolding.
 17. **Brushing of painting** :Clean pliable brushes free from loose bristles shall be used. Paints shall not show objectionable pulling under the brush. The brush shall be such that the paint does not show lapping streaks & works satisfactorily under it. Cleaning of paint containers shall be done only with paint thinners, which are compatible with the paint to be filled.

18. **Brush Application:** While applying the paint, the brush shall be held at an angle of approximately 45 degree to the vertical surface & several light strokes applied in the area to be painted., so as to first transfer the paint to the surface. During painting, the brush shall also be turned around 180 degree in order to ensure that the paint on both the faces of bristles is utilized completely. The paints are then spread with gentle pressure so as to hide the surface & produce a uniform coating. Ensure that the ends & not the sides of the bristles come in contact with the surface during painting. The paint shall be applied; first using vertical strokes until the surface are covered, & then brushed crosswise for complete coverage with light strokes, so as to smooth out laps & brush marks, & finally laid off with vertical strokes.
19. **Plastic Emulsion Paint and Enamel Paint:** Plastic (Acrylic) Emulsion Paint and Enamel Paint: Plastic emulsion painting will be of approved brand of paint and colour conforming to IS: 5411-1991 & will be applied over a coat of primer (including preparation of wall surface). Painting for the doors will be carried out with synthetic enamel paint of approved brand and colour over one coat of primer, all of relevant IS specifications 4511-1993.

E) MINERAL FIBRE CEILING TILE

a. 15 mm Mineral Fibre ceiling Tile

i. Material

Ceiling tiles shall be made of mineral fibre of dimension 595x595mm with 15 mm thickness humidity resistance 99% Thermal conductivity $K = 0.052-0.057$ w/mK colour white, fire performance UK Class 0/Class 1 (BS 476 pt -6&7) suitable for green building application (GRIHA Criteria 17 & 29 SWAGRIHA 12) with recycled content not less than 30 % and light reflectance not less than 85%. NRC of 0.55 to 0.6. The tile and grid should carry a limited warranty of one year against sag.

LIST OF APPROVED MAKE/VENDOR

| Sl.No. | Item | Approved / Recommended Make |
|---------------|---|---|
| 1 | Cement | Ultra Tech, ACC, Century, Grasim, Ambuja |
| 2 | False Ceiling | Armstrong, AMF, Indian Gypsum Board,USG India |
| 3 | Door Closer | Hardwin, Everite, Dorma, Godrej |
| 4 | Paints/Distemper | Asian Paints, Berger, ICI |
| 5 | White cement | JK ,Birla etc. |
| 6 | Stud Anchors , chemical adhesives for rebar fixing | HILTI ,FISHER, or any approved |
| 7 | Glass for partition | Modi, Asahi, Saint gobain |
| 8 | Plywood | Century, Kit ply, Green ply |
| 9 | Rock Wool Insulation | UP TWIGA or Equivalent |
| 10 | Gypsum board | India Gypsum ,Gyproc |
| 11 | Flush Door | Century ,Indian Plywood, Kit ply, Green ply |
| 12 | PVC Carpet | Krishna Vinyle, Rikvin, Armstrong, FORBO Switzerland, LG Floors |
| 13 | Furniture-Linear Modular Work Station for both staff area and classrooms , Staff &faculty Chair | Godrej, Euro Caustic, Neel Kamal, Steelcase, Feather light ,Bluebell or equivalent as per approval of client. |



| | | |
|----|--------------------|--|
| 14 | Laminates | Marino or Equivalent as approved by client ,(matching with rest of interior.) |
| 15 | Tiles | Kajaria / Johnson /Somany or Equivalent as approved by client |
| 16 | Any other Material | With approval of Client |

Technical Specifications for HVAC Work-Ducts Modifications/Additions & Cassette/Split type air conditioners

(Note:-In case of any omission/conflict, CPWD GENERAL SPECIFICATIONS for HEATING, VENTILATION & AIR-CONDITIONING (HVAC) WORKS (2017) will be referred)

Scope:

- 1) Supply, installation as per scope given below, testing and commissioning of cassette type air conditioners including remote, mounting brackets for outdoor and indoor units as given in BOQ.
- 2) Supplier shall bring all tools and tackles required for installation, testing & Commissioning of air conditioner units.
- 3) Down rods with all accessories like washer, bolts etc. for mounting indoor unit of cassette type air conditioners shall be supplied and installed by the bidder and the cost of the same shall be included in the quoted price.
- 4) Hangers required for routing the drain pipe from indoor unit to outdoor unit shall be supplied by the bidder and the cost of the same shall be included in the quoted price.
- 5) Hangers required for routing the Copper tube, cable from indoor unit to outdoor unit shall be supplied by the bidder and the cost of the same shall be included in the quoted price.
- 6) All drilling works required for successful installation of air conditioner units shall be done by the supplier.
- 7) Mounting brackets (as per BOQ) required for installing outdoor unit and indoor unit shall be supplied by the supplier and the cost of these shall be included in quoted price.
- 9) Gas charging if required shall be done by the supplier at the site at free of cost for successful commissioning.
- 10) Installation of the air conditioners shall be carried out using proper tools and procedures as per manufacturer guide lines.
- 11) O&M manual shall be supplied for each set of air conditioner.

The bidder shall send technical catalogue of the air conditioners which they are offering along with offer. Technical catalogue shall contain all technical details, model no., dimensions, weight and GA drawing.

Installation of air conditioners:

1. Supplier shall carry out modifications required in false ceiling for installing air conditioner unit and it shall be fixed back as it is existing.

2. Indoor unit of cassette type air conditioners is to be mounted on mild steel channel provided (by supplier) above false ceiling. Making holes on steel channel as per the requirement for mounting indoor unit shall be done by the supplier.
3. All connections from indoor unit to outdoor unit like copper tube, copper cable connections etc. shall be done by the bidder.
4. Bidder shall take proper care while removing and fixing back false ceiling. If any damage is observed during installation, same is to be rectified/replaced upto the satisfaction of C-DAC.
5. All tools required for installing air conditioner unit shall be brought by the bidder.

Testing to be done after Installation:

1. Compressor current and cooling temperature shall be tested
2. Air conditioners will be switched ON and cooling effect will be checked
3. Air conditioners will be switched ON/OFF 10 times in one hour recommended procedures.
4. Water drain shall be checked by flowing water.
5. Remote operation checking.

Acceptance:

Acceptance shall be based on the testing, performance and satisfactory working of Air Conditioners.

Guarantee:

Material supplied shall be guaranteed against any manufacturing defect or trouble free performance for a period of 12 Months for complete unit and 5 Years on Compressor from the date of commissioning. During this guarantee period of one year servicing shall be carried out at free of cost as per manufacturer standard.

LIST OF APPROVED MAKE/VENDOR

| Sl.No. | Item | Approved / Recommended Make |
|--------|---------------------------------|---|
| 1 | Cassette/Split AC | Daikin ,Blue star, Carrier ,Mitsubishi, Hitachi, LG |
| 2 | Structural steel | SAIL, Jindal, Tata |
| 3 | CPVC Pipes | Prince,Finolex,,Jain, Kisan |
| 4 | Ducting | SAIL, Jindal, Tata |
| 5 | Insulation | UP TWIGA or Equivalent |
| 6 | Diffuser/Grilles/Registers/VCD | Cosmos or Equivalent as approved by client |
| 7 | Actuator | Belimo or Equivalent as approved by client |
| 8 | Temperature and Presuure Gauges | H.Guru or Equivalent as approved by client |
| 9 | Any other Material | With approval of Client |



TECHNICAL SPECIFICATION FOR ELECTRICAL AND ALLIED WORK

1. GENERAL REQUIREMENTS (SCOPE OF ELECTRICAL INSTALLATION WORKS).

(Note:-In case of any omission/conflict, CPWD General Specifications for Electrical Works Part -VI Fire Detection and Alarm System – 2018 will be referred)

The general character and the scope of work to be carried out under this contract is Illustrated in Specifications and BOQ. The Contractor shall carry out and complete the said work under this contract in every respect in conformity with the contract documents and with the direction of and to the satisfaction of the Owner's site representative.

The Contractor shall furnish all labor, materials and equipment (except those to be supplied by the owner) as listed under Bill of Quantities and specified otherwise, transportation and incidental necessary for supply, installation, testing and commissioning of the complete system as described in the Specifications and as shown on the drawings.

This also includes any material, equipment, appliances and incidental work not specifically mentioned herein or noted on the Drawings/Documents as being furnished or installed, but which are necessary and customary to be performed under this contract.

The Contractor shall Prepare the execution drawings and as built-in- drawings.

Minor civil works like drilling and punching holes and openings in concrete floors, slabs, chasing of brick walls, fabrication of supporting structures, drainage of water from cable trenches, cleaning and clearing of all debris due to electrical installation.

Coordination with other contractors with regard to installation of items in Electrical Contractors scope.

The extent of work services under the contract includes all items shown on the drawings, indicated in companion with specifications, notwithstanding the fact that such items have been omitted from the price schedule. All equipments and services which are required to complete the intent of the contract shall also be deemed to be within the scope of the contract.

Training to Owner's Staff.

COMPLIANCE WITH STANDARDS.

STANDARDS:

Comply with the requirements of all relevant Indian Standards (IS) or equivalent British Standards (BS) regarding equipment manufacture, design and installation whether or not these are specifically mentioned in the Specification.

ALTERNATIVE STANDARDS:

International Standards (ISO) or (IEC) which are equivalent to the appropriate Indian Standard (IS) may be used. Other standards may be offered as an alternative only if submitted for approval along with the equipment manufacturer's written assurance that they are equal to BS, ISO or IEC Standards.

DISCREPANCIES:

In the event of a discrepancy between the Specification and any IS or BS or other



approved standard request clarification in writing from the Engineer.

CODE, REGULATIONS AND STANDARDS

The installation shall conform in all respects to Indian Standard Code of Practice for Electrical Wiring Installation I.S.732-1982. It shall also be in conformity with the current Indian Electricity Rules Safety Codes and the Regulations and requirements of the Local Electrical Supply Authority.

Wherever this specification calls for a higher standard of materials and/or workmanship then those required by any of the above regulations, this specification shall take precedence over the said regulations and standards.

In general, the materials, equipments and workmanship not covered by the above shall conform to the following Indian Standards(latest),unless otherwise called for. Nothing in the enclosed specification shall be construed to relieve the contractor of this responsibility.

ASSOCIATED SERVICES WORKS.

The Contractor shall co-ordinate his Working Drawings with required co-ordination of all other works simultaneously going on at site.

TESTS:

1. Carry out all tests, adjustments and commissioning described in this Specification in order to give an effective working installation to the satisfaction of the Engineer. The work package contractor shall establish a database of all tests and test results and ensure that this is kept up to date. A record of the test results/ progress shall be recorded at each site meeting.
2. Adequate notice shall be given to allow the engineer to study, assess and review any test procedures to be witnessed. The minimum notice required shall be forty eight (48) hours.
3. The contractor shall submit a full method statement indicating the tests, and testing procedures to be carried out/ witnessed etc. Details of all instrumentation used shall be recorded.
4. The original test sheet of all tests witnessed by the Engineer must be signed and witnessed by the engineer and a copy of the test sheet handed over to the engineer immediately following the test(s).Any unsigned test record shall be rejected by the engineer and the specific equipment/ plant item retested. Any cost associated with this retesting shall be borne by the work package contractor.

WORKMANSHIP:

Carry out all installations in a neat and workmanlike manner to the satisfaction of the Engineer.

WORKING DRAWINGS:

Provide drawings as described in this Specification.

INSTRUCTION MANUALS:

Provide manuals as described in this Specification.



SUPERVISION.

Provide, throughout the whole period in which installation work is being carried out, a suitably qualified site supervision to oversee the complete installation work.

SAMPLES.

Provide samples of any materials to be used on site as and when requested by the Engineer.

Note that the Engineer may require the samples to be subjected to tests to ensure compliance with British Standard and other relevant specifications. The cost of such tests shall be borne by the Contractor. Adequate time shall be given in order to allow the Engineer to study, assess and review any sample offered.

STANDARDS AND CODE OF PRACTICE: -

The work shall be carried out as per the enclosed Specifications of work and the construction drawings to be issued from time to time. These specifications shall be read in conjunction with National Building Code, National Electrical Code 1985, Relevant Codes of Practices and Standards as issued by ISI and Indian Electricity Rules, CPWD specifications for electrical works (all with the latest amendments). The installation shall conform in all respects to Indian Standard code of Practices. Following BIS codes shall be referred –

- a) National Electrical Code
- b) IS: 694 – 1977: PVC insulated cables for working voltage up to and including 1100 volts
- c) IS: 732 -1989: Electrical wiring installation
- d) IS: 1225 -1938: Installation and Maintenance of power Cables up to and including 33 KV Rating
- e) IS: 1554: PVC insulated heavy-duty electrical cables.
- f) IS: 1860: Installation operation and maintenance of passenger and goods elevator.
- g) IS: 2309 -1989: Protection of building and allied structures against lightning.
- h) IS: 3043 -1987: Earthing
- i) IS: 3646 (Part-1) -1992: Interior Illumination
- j) IS: 3661 (Part-2) -1967: Current rating for cable
- k) IS: 3661 (Part-5) -1968: Current rating for cable
- l) IS: 5216 (Part-1) -1982: Recommendations on safety procedures and practices in electrical work.
- m) IS: 7098 (1 & 2): XLPE insulated cables
- n) IS: 10028 (Part-1) -1985: selection, Installation and Maintenance of Transformers
- o) IS: 10118 (Part-1) -1982: Selection, Installation and Maintenance of switchgear and Control gear

APPROVED MAKES: -

| ITEM | Approved / Recommended Make |
|---|---|
| MCCB/MCB/DB | Schnieder/ Hager/ SIEMENS/ MDS/C&S /ABB |
| TPN Switches & HRC Fuses | Schnieder/ Hager/ SIEMENS/ MDS/C&S /ABB |
| MCBs / Isolators & Distribution Board | Schnieder/ Hager/ SIEMENS/ MDS/C&S /ABB |
| Cables | Polycab / Finolex /RR/ Havells /Universal/Asian/ Gloster |
| PVC insulated copper conductor wire | MK/ Polycab/ Finolex/RR |
| Lighting Fixtures (LED) | Philips/GE/ Wipro |
| DBs | SIEMENS / Schneider/ Legrand/ Hager/ MDS |
| Modular Switches & Modular Plugs/ Sockets/RJ-45 Ports | Roma/ MK/ CG/ Schneider/Legrand |
| Fire Alarm Control Panel & Smoke Detectors | Secutron / Notifier / Edward / Bosch / Cooper/ Siemens / Morley/Ravel/Apollo |
| FRLS Armoured Cable | Finolex / Neolex / Polycab / KEI / Ravin / Thermoflex / RPG / RR Kabel / Lapp |
| PA System/Speaker | BOSCH /AHUJA |
| ACCESS CONTROL SYSTEM | Honey well, Cisco, Siemens, Technocrat, eSSL |
| Cassette/Split Air Conditioner | Daikin , Blue Star, Carrier , Hitachi, Mitsubishi |
| LT Main Panel/Sub Panels | CPRI approved Panel Manufacturer |
| Gas Release Panel | Ravel or Equivalent as approved by client |
| Smoke Detectors/RI/Hooters/MCP | Siemens /Apollo/Ravel/Honeywell / Morley |
| Data /Telephone cable, Fibre cable | D-link, Commescope or Equivalent as approved by client |
| Any other Material | With approval of Client |

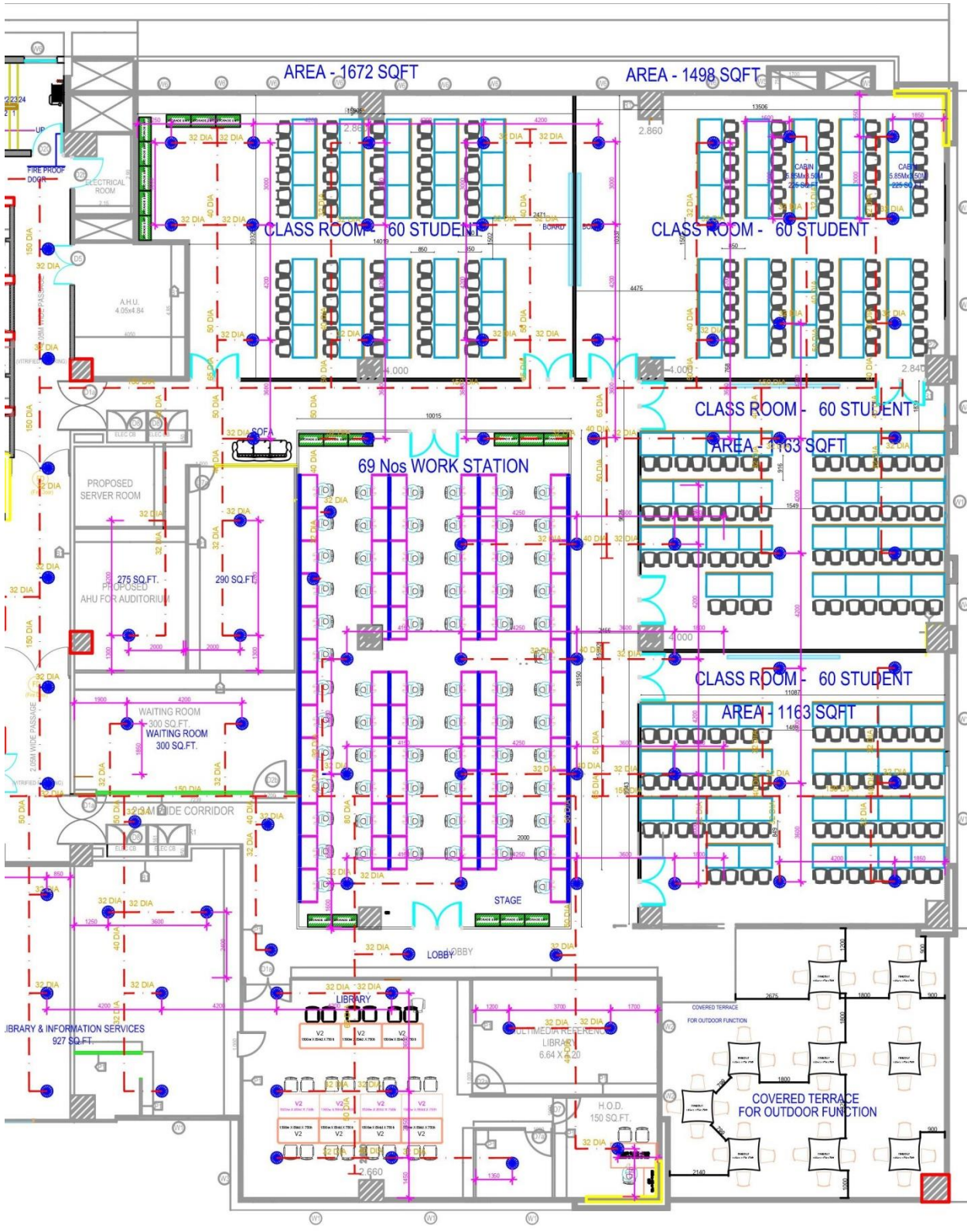
EXECUTION & HANDING OVER AND TAKING OVER OF WORKS / EQUIPMENT / SYSTEMS.

1. **The successful Bidder has to submit all working/shop drawings such as Furniture Drawings (Linear Modular Tables, Chairs), False-Ceiling Drawings, Electrical Drawings, Raceway Drawings, Reflected Ceiling Plan, Lighting Drawings, HVAC/Ducts/Diffusers Drawings along with CFM calculation and Fire Drawings before starting execution of works. After execution, three (03) sheets of As-Built Drawings has to be submitted for all above mentioned.**
2. The Contractor shall hand over and the Owner shall take over the works/equipment's/systems covered under this contract only after they have been completely installed, tested and commissioned in all respects by the Contractor to the entire satisfaction of the Owner. And all relevant test forms/certificates operation and maintenance manual's, as built drawings, etc. Incomplete/partly commissioned works/equipment/system will not be taken

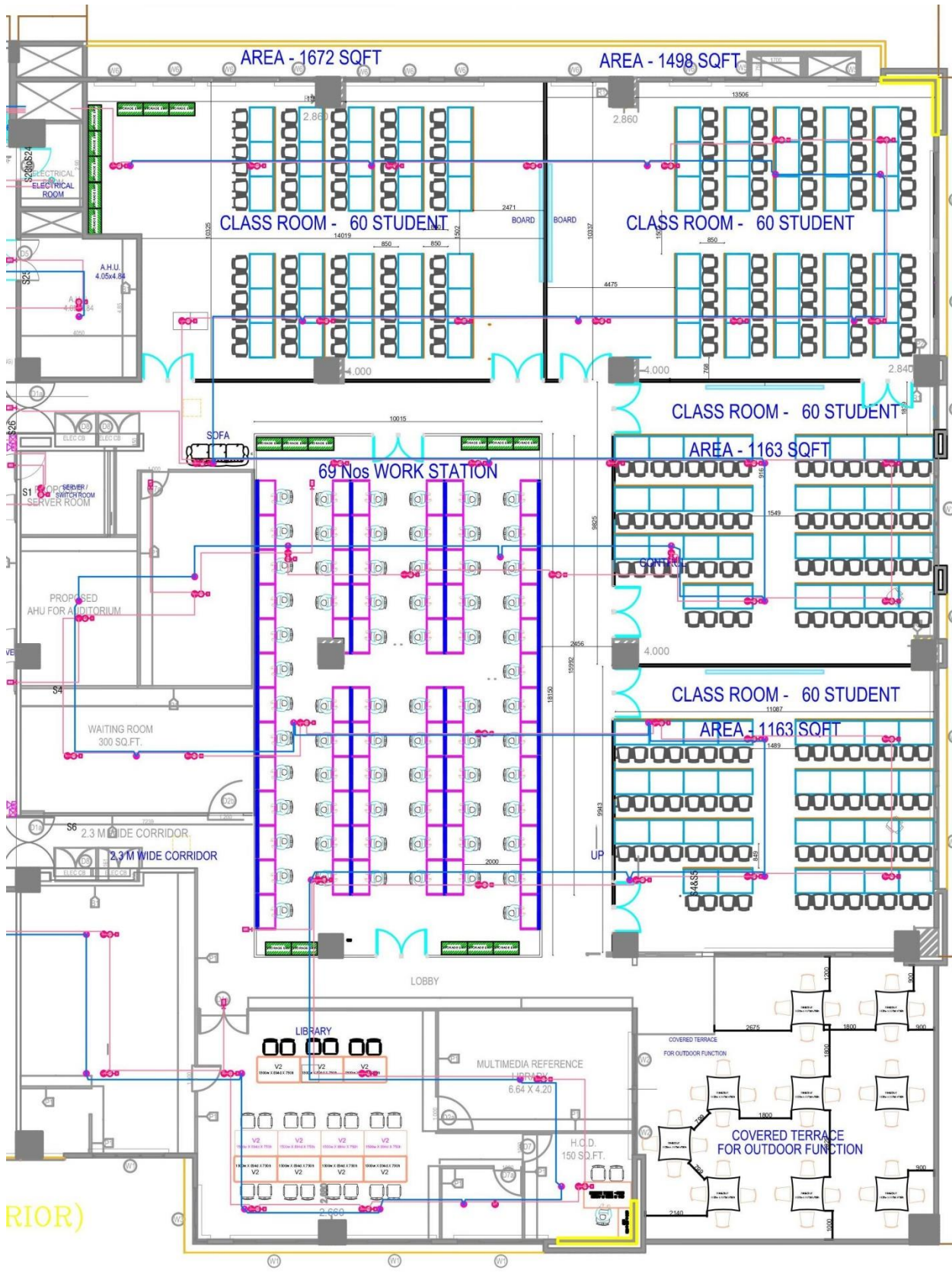


over by the Owner. **The warranty of equipment is for one year after successful installation certified by CDAC.**

FIRE PROTECTION SPRINKLER SYSTEM DRAWING



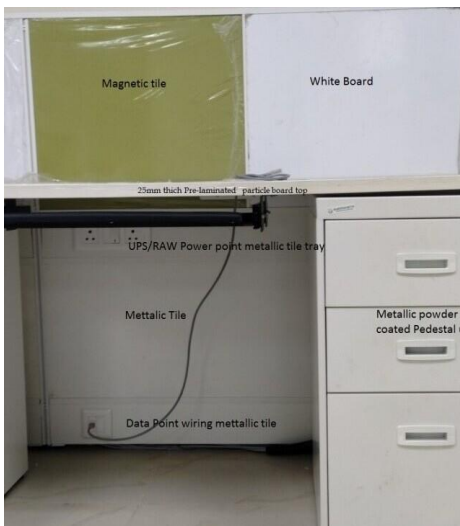
FIRE ALARM SYSTEM DRAWING



Conceptual Gain storage unit (2100 H x 500W x 500D) photos



Conceptual Workstation photo



(END OF SECTION IV)



SECTION V - Price Schedule: (Un-priced Bid)

| BOQ FOR 3RD FLOOR NORTH WING | | | | | | |
|------------------------------|---|--------|--------|------------|-------|--------------|
| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
| | INTERIOR & FURNISHING WORKS | | | | | |
| 1 | Providing first class Burnt Brick masonry with conventional /I.S. type bricks in cement mortar 1:4 including scaffolding, racking out joints pointing in C.M. 1:3 and watering in pillars of rectangular or square shape as shown on the drawing or as directed etc. Complete. | Cu. M. | 15.75 | | | |
| 2 | Providing rough cast cement plaster externally in two coats to concrete, brick or stone masonry surfaces in all positions with base coat of 12 to 15 mm thick in C.M. 1:4 and rough cast treatment 12mm thick in proportion 1:1 1/2:3 including scaffolding and fourteen days curing complete. | Sq. M. | 97.36 | | | |
| 3 | Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources). The rate shall be inclusive of required reinf.steel, shuttering etc. | Cu. M. | 0.21 | | | |
| 4 | Providing and applying BIRLA putty of average thickness 1 mm or more than 1mm as required to make surface smooth, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete. | Sq. M. | 97.36 | | | |
| 5 | Providing and applying plastic emulsion (luster) paint of approved quality, colour and shade to old and new surfaces with one coat of primer and two coats plastic emulsion (luster) paint including scaffolding, preparing the surface. etc. complete. | Sq. M. | 472.50 | | | |
| 6 | Solid Core Flush door Double leaf- Providing and fixing factory made solid core flush door shutters in double leaves 35 mm thick, decorative type of exterior grade 1.5mm laminate on both side,as per detailed drawings ,conforming to I.S.:2202-1966(Revised)including approved face veneers on both sides, without glazing and venetians including mat finish stainless steel fixtures and fastening ,stoppers and finishing with french polishing etc.(Excluding door frame)(Sample to be got approved from Engineer before use)Commercial Hard Wood shutter. The Vision Panel with clear glass of 300x300mm dia to be provided in each door. (Note -For Distribution panel area door vision panel should not be provided) | Sq. M. | 50.54 | | | |
| 7 | Providing and fixing Jungle (hard) wood of approved species joists and girders in timber floor of single,double or framed type including scaffolding if necessary and one primer coat etc. complete. | Cum | 0.42 | | | |
| 8 | Providing and fixing Hydraulic door closers | Nos | 20.00 | | | |
| 9 | Providing & Fixing in position, Acoustical Panelling made from 12mm w p Plywood & 1.5mm laminate on both side , 50x50mm teak wood of 600x600c to c having teak wood supports from wall of required length, in front of 1000 Gsm synthetic wool 50mm thick with chicken mesh on wall side, including cost of required Cut-Outs, decorative mouldings/ finishing-items / pain & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects. including all materials labour, finishing etc complete. Laminate to be of Merino(Micro line) range. (Note-From FFL to bottom of slab ht is 3.43 m. The laminate to be considered only upto false ceiling height from FFL) | Sq. M. | 295.00 | | | |
| 10 | Providing & Fixing in position Acoustical Panelling , partly laminated partly glaze (finished in laminate on both the sides for part area and toughened glass 12mm thk. as per design fixed onto the partition with 12 mm thk tw beading with PU paint matching in color and finish to the laminate) Acoustical Panelling made from 12mm w p Plywood & 1.5mm laminate on both side, 50x50mm teak wood of 600x600c to c having teak wood supports from wall of required length, in front of 1000 Gsm synthetic wool 50mm thick with chicken mesh on wall side, including cost of required Cut-Outs, decorative mouldings/ finishing-items / pain & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects. including all materials labour, finishing etc complete. Laminate to be of Merino(Micro line) range.(Note-From FFL to bottom of slab ht is 3.43 m. The laminate to be considered only upto false ceiling height from FFL) | Sq. M. | 204.00 | | | |
| 11 | Column cladding with teak wood frame, finished in laminate Fluorescent. The t.w. frame 2" x 1 1/2" @ 1'6"x1'6" grid covered with 6mm comm. Plywood on the outer side (no plywood required on inside partion). The approved colour fluroscent laminate matching with existing laminate colour of minimum 1 mm thickness shall be used. | Sq. M. | 91.98 | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST (%) | Amount (Rs.) |
|--------|--|--------|--------|------------|---------|--------------|
| 12 | Providing and Fixing Vertical Blinds of approved Make and shade of 100mm regular fabric with powder coated aluminium channel with telting PVC chain & bottom weight plate with all necessary fixtures and fitting etc. complete. (Sample to be final by Engineer In-charge prior execution of work) | Sq. M. | 64.70 | | | |
| 13 | Providing and fixing 12mm toughned glass door with required fixtures and fittings etc completed | Sq. M. | 7.94 | | | |
| 14 | Providing and laying vitrified mirror/glossy finish tiles decorative type having size 590mm to 605mm x590 mm to 605mm of 8 to10 mm thickness and confirming to IS.15622-2006 (groupBla) of approved make, shade and pattern for flooring in required position laid on a bed of 1:4 cement mortar including neat cement float, filling .including grouting the joints with white cement and matching pigments , curing and clearing etc. complete etc. complete. | Sq. M. | 525.00 | | | |
| 15 | Removing wooden or A.C. partition including frame work and stack-ing the materials as with all leads, lifts etc. complete | Sq. M. | 59.79 | | | |
| 16 | Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead | Sq. M. | 4.41 | | | |
| 17 | Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge | Sq. M. | 43.85 | | | |
| 18 | Cutting and Removing cement tiles or vitrified tiles or marble or polished shahabad floor or dado with out bed concrete as per project quirement including removal of cement mortor, stacking the materials as directed with all leads, lifts etc. complete | Sq. M. | 525.00 | | | |
| 19 | Demolishing brick work in cement mortar manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. | Cu. M | 2.16 | | | |
| 20 | Providing and fixing in position Gypsum board false ceiling with 12.5 mm thick Gypsum boards, screwed/fixd to the under structure of suspended G.I. Grid constructed and suspended from the main ceiling consisting of ceiling sections of size 25 x 50 mm maximum center to center distance of 600 millimeter perimeter channel and intermediate channels at maximum center to center distance 1200 millimeter galvanized grid should be fixed to reinforced cement concrete slab. The gypsum board should be fixed to galvanized iron grid with necessary screws. The boards should be taped and filled from underside to give smooth, seamless ceiling. The rate should include necessary additional ceiling sections and intermediate channels. Additional intermediate channels should be fixed to strap hangers for additional support to prevent strapping at every 1200 millimeter item to be completed in all respect including necessary sleeves for ducts finishing of joints cut outs, painting including labour, material, lifts etc. all complete. | Sq. M. | 452.75 | | | |
| 21 | Supply & fixing of acoustical mineral fiber board (Dune-ML-RH-99) false ceiling of Armstrong/AMF or equivalent make system with 15 mm Silhouette (BR) grid quick hook suspension system having main tee 3000mm long x 38 mm web height x 15mm wide silhouette (BR) sections. The main runner is to be fixed with 4mm thick pre-stretched GI wire with soffit clear & GI Rawl plug inserted on the main roof to be fixed at 1200 mm c/c. The last hanger at the end of each main runner should not be grater than 450 mm from the adjacent wall. The main runner will be at the distance of 1200 mm c/c. The 1200 mm x 38 mm x 15 mm silhouette (BR) wide cross tee sections, having an integrally formed hook nose with precise butt cut joint end is to be fit in between the main tee at a distance of 600 mm to make a module of 1200mm x 600mm. Another cross tee having an integrally formed hook nose with precise butt cut joint end of size 600 mm x 38mm x 15mm is to be fitted at 1200 mm sections parallel to main tee at 600mm centre to make a square grid of 600 mm x 600 mm. All base frame material should be made of good quality galvanized steel. It should have a capping of material coated with baked polyester paint. The shadow molding perimeter angle white coloured secured at 450 mm c/c is to run all along the peripheral, Prime Dune, RH-99 per painted tiles, microlook, 15 mm thick suitable for 600mm x 600mm grid to be placed on grid. Tiles should have NRC of 0.50, STC of 34 dB, having light reflection of 85% or more & thermal conductivity K-0.052-0.057W/sq.m/ degrees centigrade. The fire rating of tile should be class 0 for fire propagation & class I for spread of flames as per BS 476 & having humidity resistance of 99% RH. The board should have a density of 240-260 kg/Cubic meter. The rate should include for cutout for AC grills, fire sprinkler & light fixtures, additional members if required is to be provided into the grid system. The work has to be done as per the direction of Engineer-in- | Sq. M. | 793.28 | | | |
| 34 | FIRE RATED DOUBLE DOOR as per IS 3614 Part2 & BS476 Part 20 & 22, tested to UL10 Cand conforming to NFPA80, testedat NTL / CBRI / ARAI - Double leaf 2 hour fire rated Entrance door frame and leaves shall be made from galvanized steel 46mm thick fully flush, door shell in specially designed honeycomb structure for reinforcements & 1 hour fire rated vision glass of size 300 mm X 300 mm. Door will be primed with zinc-phosphate stoving primer and finished with epoxy paint as required, complete with all accessories like door closer, handle, lock etc. All door shall be provisioned with GI frame required . | Sq. M | 3.31 | | | |
| | Work station and aligned work | | | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
|-------------------------------------|---|--------|--------|------------|-------|--------------|
| 22 | <p>Modular Linear Workstation of Size 1200(L)X600(W): Supply and installation of above workstations with minimum 70 mm thick 1200 mm high panels as partition (Sample Drawings are attached). With combination of two separate metal raceways for data and power at bottom, two intermediate fabric blocks, top tile - white board, fabric magnetic. The 25mm thick Pre-laminated particle board support for top resting at both end of workstation shall be provided. The table should be complete with suitable keyboard holder tray. The cutouts for 6 Module for power and 2 Module for network point has to be there. The cable grommets should be there on table top for routing of power and data cables. The sample shop drawing has to be approved by client before delivery.</p> <p>Note:- 1)Material of table top:- Work top should be made of 25mm thick Pre-laminated particle board. 2)Material for tiles for top: Fabric magnetic (over GI sheet) plus white board 3)Material of bottom tile: Metal tile (GI Sheet) 4)Plain edge banded with 2mm PVC tape 5)Frame of the workstation: Powder coated extruded Aluminium sections</p> | No. | 69.00 | | | |
| 23 | <p>Supply and installation of Top supporting pedestal with flat metal front of total size 390w x 585d x 700 ht, 3dr = 2 box + 1 file, central locking. Note - 1)The top supporting pedestal should be from the same OEM of modular workstation. 2)The material of pedestal shall be CRCA / GI sheet of minimum 0.6mm thickness in power coated finish as per approved colour.</p> | No. | 69.00 | | | |
| 24 | <p>Providing and fixing Motion Mid back office chair with suitable caster wheels, Contact-Tilt Mechanism, Seat Height Adjustable, Adjustable arm rest, Mesh back fabric, lumbar back support. Finish colour -Black. PU foam cushion seat.</p> <p>Note - 1)The chair should be from the same OEM of modular workstation 2) The chair is required with cushion seat assembly consists of seat base moulded in glass-filled polyamide moulded in HR Polyurethane foam density 45 ± 2kg/m³</p> | No. | 69.00 | | | |
| 25 | <p>Providing & fixing Gain storage unit -2100 H x 500W x 500D and Gain overhead unit 650H x 500W x 500D with metal door, Lock & key. The gain storage unit should be power coated, colour of powder coating should be as approved by client.. Make-Godrej or equivalent make as approved by client.</p> | No. | 20.00 | | | |
| Class rooms and aligned work | | | | | | |
| 26 | <p>Providing and fixing Platform inside classroom of Siz 4.5m x 1.2m x .3m (height) with 18mm plywood (supported by plywood vertical support in-between as required etc. complete)laid over it as directed by Engineer-in-charge</p> | Sq. M. | 22.68 | | | |
| 27 | <p>Providing and fixing White board of size-8' x 4' with an heavy duty aluminium frame of size for class room</p> | No. | 4.00 | | | |
| 28 | <p>Modular Linear Workstation of Size 1200(L)X850(W): Supply and installation of above workstations with minimum 70 mm thick 950 mm high panels as partition (Sample Drawings are attached). With combination of two separate metal raceways for data and power at bottom, two intermediate fabric blocks, top tile - fabric tackable, white board, fabric magnetic. The table should be complete with suitable keyboard holder tray. The cutouts for 6 Module for power and 2 Module for network point has to be there. The cable grommets should be there on table top for routing of power and data cables. The 25mm thick Pre-laminated particle board support for top resting at both end of workstation shall be provided. The sample shop drawing has to be approved by client before delivery.</p> <p>Note:- 1)Material of table top:- Work top should be made of 25mm thick Pre-laminated particle board. 2)Material for tiles for top: Fabric magnetic (over GI sheet) plus white board 3)Material of bottom tile: Metal tile (GI Sheet) 4)Plain edge banded with 2mm PVC tape 5)Frame of the workstation: Powder coated extruded Aluminium sections</p> | No. | 120.00 | | | |
| 29 | <p>Providing and fixing Motion Mid back office chair with suitable caster wheels, Contact-Tilt Mechanism, Seat Height Adjustable, Adjustable arm rest, Mesh back fabric, lumbar back support. Finish colour -Black. PU foam cushion seat. Note -The chair should be from the same OEM of modular workstation</p> | No. | 4.00 | | | |
| 30 | <p>Providing & fixing Student chair -Made up of round pipe with na Black powder coating. The seat and back support with cushion with standard fabric. The seating cushion 2 inch and back support width 1 inch cushion. Sample to be approved by CDAC engineer before delivery.</p> | No. | 240.00 | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
|---|---|------|-------|------------|-------|--------------|
| 32 | Providing and fixing ,Modular conference room table -Godrej Talk Conference table or equivalent ,seating capacity 8 seater laminate finish, Colour -brown. -The leg shall be Nickle chrome plated. -Sufficient Access flap to have easy access to the plug points. -Inclusive of Pop Box(Power & Data point) -Table should have Concealed wire management system under the table. Make-Godrej or equivalent make as approved by client. Sample drawings to be approved before delivery. | Nos | 2.00 | | | |
| 33 | Providing and fixing Motion Mid back office chair with suitable caster wheels, Contact-Tilt Mechanism , Seat Height Adjustable, Adjustable arm rest, Mesh back fabric, lumbar back support. Finish colour -Black. PU foam cushion seat. Note -The chair should be from the same OEM of modular workstation | Nos | 16.00 | | | |
| INTERIOR & FURNISHING WORKS TOTAL | | | | | | |
| II ELECTRICAL ,FIRE ,PA AND ALLIED WORKS | | | | | | |
| A MAIN LT PANEL /DB'S | | | | | | |
| 1 | Suply and installation of suitable ways Main Distribution Panel, Metal type, Double Door (As approved by client / consultant / architect), RAW+AC+ Lighting Panel or UPS Panel , surface / flush mounted on wall , with digital metering Phase wise (Voltage & current)on Panel ,Copper Bus bar,LED Indicators, all accessories completed ,interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant) | | | | | |
| | (Note :- DB size & type selection shall be done with reference to the total number of modules / poles available in the DB which shall be suitable for housing of below mentioned switchgears & components forming a complete set.) | | | | | |
| a | 1 no., 160A, FP MCCB, "C" curve type 25kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)as incomer | | | | | |
| b | 14 nos, 63A, 4P, MCB, "C" curve type +03 Nos.16 Amp SP-MCB and 5Nos,10Amp MCB as outgoings | | | | | |
| | Full Set as above | Nos | 2.00 | | | |
| 2 | Suply and installation of 6-way, TPN, Metal type, Double Door (As approved by client / consultant / architect), Raw/Light/AC/UPS OUTGOING SUB -DB, surface / flush mounted on wall, interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant) | | | | | |
| | (Note :- DB size & type selection shall be done with reference to the total number of modules / poles available in the DB which shall be suitable for housing of below mentioned switchgears & components forming a complete set.) | | | | | |
| a | 1 no., 63A, FP MCB, "C" curve type as incomer | | | | | |
| b | 18nos, 16/25/32A, SP, MCB, "C" curve type as outgoings | | | | | |
| | Full Set as above | Nos | 18.00 | | | |
| 3 | Suply and installation of 8-way, VTPN, Metal type, with Plain / Transperant Door (As approved by client / consultant / architect), UPS Power Distribution Board (UPS MainDB-to UPS room DB) (for desks), surface / flush mounted on wall, interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant) | | | | | |
| a | 1 no.,100A, MCCB, "C/D" curve type 25kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)as incomeras | | | | | |
| b | 8 nos, 63A,TP, MCB, "C/D" curve type as outgoings | | | | | |
| | Full Set as above | Nos | 1.00 | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
|----------|---|------|--------|------------|-------|--------------|
| 4 | Suply and installation of 8-way,SPN, Metal type, Double Door (As approved by client / consultant / architect) UPS /Raw Power Distribution Board, surface / flush mounted on wall, interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant),I/C-32 A DP MCB,6 Numbers 10/16 AMP SP MCB as Outgoings | Nos | 2.00 | | | |
| 5 | Supply & Installation of 25/32A, DP, MCB, box with 20A, metal clad / modular plug-socket including power circuit of (4/6 sq.mmX3core) copper flexible wires directly taken from the relevant Raw/AC DB through PVC conduits for room CASSETTE /SPLIT A/C including all necessary hardware & accessories, etc. (Schneider / Hager / Legrand / Siemens / L&T make) | Nos | 12.00 | | | |
| B | CABLES/MAINS | | | | | |
| 1 | Supply & Installation of 1100V grade armoured cable having sector / circular shaped aluminium / copper conductor PVC insulated cores, laid up, PVC tape wrapped inner sheathed, GI strip / wire armoured and overall extruded PVC sheathed conforming to IS: 1554, laid on wall / ceiling using GI clamps & spacers as per route shown at site and further as directed by Consultant at site in the following sizes :- (Make - Polycab / Finolex / RR / Havells) | | | | | |
| | NOTE :- All Armoured cables shall be provided with temporary labelling at every 5mtrs & then finally with metal identification tags showing the size & the location from/to the respective Panel / DB, at both the ends.The rate should include terminations at both ends with suitable lugs and glands as applicable | | | | | |
| a | 4C x 10 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire(RAW/LIGHT/UPSDB) | Mtrs | 580.00 | | | |
| b | 4C x 16 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire (AC DB) | Mtrs | 220.00 | | | |
| c | 3C x 6 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire(UPS DB) | Mtrs | 25.00 | | | |
| d | 4C x 50 Sq.mm Aluminium Armoured cable with 2 runs of 12 SWG GI bare wire (Main Panel /DB) | Mtrs | 90.00 | | | |
| | TOTAL of SECTION (B) | | | | | |
| C | WORKSTATION UPS POWER WIRING | | | | | |
| 1 | Supply & Installation of concealed / resessed UPS point wiring using 600V 3R (P+N+E) x 1.5 Sq.mm copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through already laid PVC raceway on walls and through table partition including 3R (P+N+E) x 2.5 Sq.mm circuit wires from the relevant DB and also including 2.5 sqmm green color copper earth wire and approved make modular type switch plate, switches, MS concealed back box, etc. as required & as approved by the consultant. <u>(The item rate shall include Lighting / Raw / UPS Power Circuit wiring from relevent DB to the switch board with 3Rx2.5 Sq.mm wires & from switch board to next switch board OR to the first light point / primary point / full point)</u> | | | | | |
| | NOTE :- 1. Only PVC insulated wire shall be used; 2. Conduit carrying circuit wiring should not carry point wiring and Conduit carrying point wiring should not carry submain/circuit wiring; 3. Flexible conduits & Elbows are not allowed; 4. The wires from ceiling junction to light points / light fixture shall be drawn in flexible PVC conduit with adptor & cover for junction box & crimp type lugs at both the ends alongwith necessary hardware & accessories, etc. as required; 5. Proper ferrules, lugs, must be used in all cabling and wiring on both load / source end; 6. Each switch board must be provided with respective ferrules representing the respective DB, Phase & Circuit numbers; 7. Looping of Neutral / Earth wire between two separate Primary / Full Points is strictly not allowed; 8. Looping of Neutral / Earth wire between two separate circuits on similar or other phase is strictly not allowed; 9. Ferruling / numbering / tagging to wires with circuit number & db name for all lighting & raw / ups power shall be strictly followed at both DB & switch board / switch socket boards ends. | | | | | |
| | Supply & Installation of primary point wiring for UPS or stabilized power plug points on workstations / table for computers using 3C X 2.5 Sq.mm copper conductor PVC sheathed white color flexible cable pulled through already laid Surface PVC Box raceway and table/workstation partition raceways and taken upto table top using PVC rigid or flexible conduits run within wooden/metal partitions. Each point consisting of 2 nos of 5A , 3 pin sockets above table top/bottom & 1 No., 15A Switch above table top, wired together forming one point. The earth wire of 3 core flexible cable to be of yellow-green color only. (3 no.s desks served by one circuit from DB) | Nos | 80.00 | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
|----------|--|------|--------|------------|-------|--------------|
| | Supply & Installation of Secondary point wiring for UPS or stabilized power plug points on workstations / table for computers using 3C X 1.5 Sq. mm copper conductor PVC sheathed white color flexible cable pulled through already laid table partition raceways and taken upto table top using PVC rigid or flexible conduits run within wooden/metal partitions. Each point consisting of 2 nos of 5A , 3 pin sockets above table top/bottom & 1 No., 10/15A Switch above table top, wired together forming one point. The earth wire of 3 core flexible cable to be of yellow-green color only. (Maximum 4 nos desks to be looped from each primary UPS point from first desk as per instruction for staff area and Maximum two point to be looped from each primary UPS point from first desk for all classrooms) | Nos | 142.00 | | | |
| D | WALL PVC-RACEWAYS | | | | | |
| 1 | Supply and laying PVC Raceways with cover, & two cable compartment for UPS Power Circuit Cable and Data cables | | | | | |
| 1.1 | 75 x 75 x 1.6mm thick PVC Raceways with cover | Mtrs | 25.00 | | | |
| E | LIGHTING POINTS IN ROOM, | | | | | |
| | Supply & Installation of concealed / resseded / surface light point / fan point / call bell point wiring using 600V FRLS grade 3R (P+N+E) x 1.5 Sq.mm copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through heavy gauge PVC conduits laid concealed over false ceiling or in wall chases or on the ceiling in case of an open ceiling including 3R (P+N+E) x 2.5 Sq.mm circuit wires from the relevant DB and also including 2.5 sq.mm green color copper earth wire and approved make modular type switch plate, switches, MS concealed back box, etc. as required & as approved by the consultant. (Each circuit shall not feed more than 8 points OR 800 watts as per following configuration.) <u>(The item rate shall include Lighting / Raw / UPS Power Circuit wiring from relevant DB to the switch board with 3Rx2.5 Sq.mm FRLS wires & from switch board to next switch board OR to the first light point / primary point / full point)</u> | | | | | |
| 1.1 | Primary light points including the cost of 5A switch | nos | 49.00 | | | |
| 1.2 | Secondary light points looped from the above point(maximum 3 points looped from one primary) | Nos | 137.00 | | | |
| 1.3 | Supply & Installation of (26-32W) (2' X 2') full lit panel type LED Light fixture., CRI >80, The fitting shall be suitable for grid / plain ceiling type & surface mounted / to be hanged from the ceiling at the height approved by architect. (CGL , PHILIPS WIPRO , GE or equivalent category & model as approved by client / architect / consultant.) | Nos | 160.00 | | | |
| 1.4 | Supply & Installation of (12 W) LED Spotlight/Down light flush mounted Light fixture. (CGL , PHILIPS WIPRO , GE or equivalent category & model as approved by client / architect / consultant.) | nos | 30.00 | | | |
| F | DATA NETWORKING | | | | | |
| 1 | Supply & Installation of Modular Data point including approved make Cat - 6 UTP cable through already laid trenches, and new flexible conduit in table partion ,RJ45 information outlet face plate, etc. with Termination, Testing and Documentation of UTP Points complete as required.(D-Link or equivalent) | Nos. | 210.00 | | | |
| 2 | Supply & installation of 24 Port 1 Gbps(Minimum) Unmanage switch including crimping complete in all respect etc. with both ports for Ethernet and Fibre Uplinking(D-Link or equivalent) | Nos. | 13.00 | | | |
| 3 | Supply & installation of 24 port jack panel in existing network rack(D-Link or equivalent) | Nos. | 13.00 | | | |
| 4 | Supply of mounting patch cord (3 feet') | Nos. | 210.00 | | | |
| 5 | Supply of mounting patch cord (7 feet') | Nos. | 210.00 | | | |
| 6 | Supply & Installation of 12 U floor/wall mounted network rack including all necessary hardware, accessories, etc. | Nos. | 7.00 | | | |
| 7 | Supply & Installation of 42U floor mounted network rack including all necessary hardware, accessories, etc. | Nos. | 1.00 | | | |
| 8 | Supply & laying of approved make Cat - 6 UTP cable through PVC conduits, with Termination, Testing and Documentation complete as required for uplinking(D-Link or equivalent) | Mtr | 28.00 | | | |
| 9 | Supply & laying of approved make LC to LC Duplex MMF OM3(50/125) Fibre Patch Cord through PVC conduits, with Termination, Testing and Documentation complete as required for uplinking (Commescope or equivalent) | Mtr | 255.00 | | | |
| G | PA SYSTEM | | | | | |
| 1 | SITC of Speaker wire(copper) (through PVC conduit) from amplifier upto speaker | Mtr | 500.00 | | | |
| 2 | SITC OF Speaker 6 watt (make-BOSCH / AHUJA) or equivalent make | Nos | 63.00 | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
|---|--|------|--------|------------|-------|--------------|
| 3 | Supply, Installation & Testing of Amplifier ,60 watt, for Classroom Address System suitable to operate on 230V A.C. / 12V D.C. supply with two low impedance microphone input, tone control, protection circuit complete for the speakers output lines. (Ahuja / approved equivalent make) | Nos | 4.00 | | | |
| 4 | A compact & reliable single channel VHF Wireless Microphone AWM-520VL. It features a tie-clip microphone with a VHF high band body-pack transmitter and a sensitive noise squelch receiver. Single channel VHF wireless microphone available in six different frequencies. Electret condenser unidirectional microphone. Transmitter has an ON/OFF switch and a LED for ON indication. Stylish table-top receiver with a telescopic antenna & noise squelch circuitry. Power ON/OFF switch and output volume control on the front panel. 1/4" (6.3mm) phone jack for audio output on the rear panel of the receiver. Microphone operates with 1A-9V battery. Receiver operates on 9V DC through an AC adaptor, supplied along with the microphone. | Nos | 4.00 | | | |
| H FIRE ALARM SYSTEMS | | | | | | |
| 1.1 | Supply, installation, testing and commissioning of Response indicator for all existing detectors located above false ceiling (The above ceiling detectors are already installed. The integration of RI with detector and existing repeater/ main fire panel is in vendor scope). | Nos | 53.00 | | | |
| 1.2 | Supply, installation, testing and commissioning of Analogue Addressable Photo-Electrical detector with programmable for timed automatic sensitivity selection with base, junction box and other accessories as required and detectors shall be UL listed.(OSD) below False ceiling(Note-The repeater /main fire panel is already installed. The programming of detectors and its integration with existing fire panel is in vendor scope) | Nos | 53.00 | | | |
| 1.3 | Supply, installation, testing and commissioning of Analogue Addressable Fault isolator module capable of monitoring shorted loop circuit and automatically restore communication when shorted conditions are corrected. | Nos | 3.00 | | | |
| 1.4 | Supply, installation, testing and commissioning of Addressable Control Relay Module | Nos | 3.00 | | | |
| 1.5 | Fixing of existing installed UL Listed Sprinkler Flexible drop pipes made of Corrugated SS Tubing to with stand 16 Bar pressure connected with Pendant type 15mm dia CP gunmetal / brass sprinkler head with all necessary required support accessories with false ceiling framing work. (Note -All the necessary fitting like rosette plate, support, nut bolt etc in vendor scope)-1000 mm long | Nos | 81.00 | | | |
| 1.6 | Supply, installation, testing and commissioning of Addressable Single action Manual pull station having an integrally mounted addressable module that monitors and reports contact status. | Nos | 8.00 | | | |
| 1.7 | SITC OF Hooter -addressable digital type with required Hooter operating voltage 12V/24V/220 volt, wiring And allied required accessories. | Nos | 2.00 | | | |
| 1.8 | SITC OF FRLS Fire CABLE 2 X 1.5 Cu armoured cable | Mtr | 795.00 | | | |
| FIRE SUPPRESSION SYSTEM for HUB Room | | | | | | |
| 1.9 | Designing, supply, installation, testing & commissioning of CCOE certified 34/40 L capacity. Seamless cylinders with valve assembly & protection cap, pressure gauge, Safety burst disc and with low pressure supervisory switch for NOVEC 1230 gas installed on cylinder valve with Cylinder Pressure Operated Head with Hose & accessories, install on the Cylinder Valve cylinder support arrangements etc. complete.. Make: Kidde or equivalent | Nos | 1.00 | | | |
| 2 | Supply of OEM Factory Filled NOVEC 1230 Gas. | Kg | 34.00 | | | |
| 2.1 | Supply, installation, testing & commissioning of 24 VDC- 2.0 amps, Resettable Electrical cum Mechanical actuator for NOVEC 1230 Cylinder with Cylinder Support Assembly, floor mounted, Flexible rubber discharge hose, with braided reinforcement Make: Kidde or equivalent | Job | 1.00 | | | |
| 2.2 | Designing, supply, laying & fixing/ installation of the NOVEC 1230 piping will be, as per flow calculations, Sch 40, ASTM - A-106 Gr. B with seamless 3000 psi Socket weld fittings, Discharge nozzles, rigid angle supports, 2 coats of zinc primer & 3 coats of P.O red paint. The equipments should be ISI Marked and Indian Seamless. | Job | 1.00 | | | |
| 2.3 | Supply, Installation, Testing & Commissioning of Two zone gas release panel with all requisite mounting accessories and it should be able integrate with other related and BMS System. The Panel should be Complete with Red Colour Housing, Power supply, required Battery charger & 30 min battery backup | No | 1.00 | | | |
| 2.4 | Supply, Installation, Testing & Commissioning of Manual Abort Stations with DPDT Relay, The Abort will be monitored simultaneously by Fire Alarm System | No | 1.00 | | | |
| 2.5 | Supply, installation, testing & commissioning of Manual Release Stations with DPDT Relay, The Release switch will be monitored simultaneously by Fire Alarm System. | No | 1.00 | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
|----------|--|------|--------|------------|-------|--------------|
| 2.6 | Supply, installation, testing & commissioning of Sign Board with Marking "Gas Discharge. Do Not Enter". Should Operate on 24 V DC, Driven Through Gas Release Panel / CM (for use outside room) Supply, installation, testing & commissioning of Sign Board with Marking "Gas Discharge. Do Not Enter". Should Operate on 24 V DC, Driven Through Gas Release Panel / CM (for use outside room) | No | 1.00 | | | |
| 2.7 | Supply, installation, testing & commissioning of Cylinder Discharge Pressure Switch, Shall be installed on the NOVEC 1230 piping. | No | 1.00 | | | |
| I | LCD Projector | | | | | |
| 1.1 | SITC of LCD Projector with ceiling mounting stand ,Contrast Ratio:15,000:1,Light Output of 3,300 lumens, HDMI & USB Ports, EPSON-EB series or equivalent as approved by client | Nos | 5.00 | | | |
| 1.2 | SITC of HDMI Cable as approved by client for projectors | Mtr | 80.00 | | | |
| J | TRENCHING/FLOOR-RACEWAYS | | | | | |
| 1 | Supply and laying Raceways / Conduits (for under floor trenches / On trays) on existing flooring. Raceways / conduits shall be fixed to the flooring with GI clamps for finished levels as per the site conditions or through partitions with all accessories. The rate shall include preparation of trenches of required sizes by carefully removing the malwa on existing floor for laying Raceways/conduits for power, data, telephone cables etc. The depth of the trenches shall be at least 2 inches from the finished floor level or upto RCC of the slab. The rate shall include the cost of the Raceways/conduits. The rate shall also include the activity of clearing the debris generated from the preparation of trenches | | | | | |
| 1.1 | 300 x 40 x 1.6mm thick GI Raceways | Mtrs | 275.00 | | | |
| 1.2 | 150 x 40 x 1.6mm thick GI Raceways | Mtrs | 105.00 | | | |
| 2 | Supply & Installation of floor junction boxes without top cover for above raceways, of following sizes , fabricated out of M.S. sheets, fully powder coated with provision for removable M.S. / S.S. screwed cover plates on all four sides for blocking the entry into the junction box. All the junction boxes to be (with stud) 'properly earth - bonded with the raceways pipe using 12 SWG Copper bare wire as directed at site. | | | | | |
| 2.1 | Junction Box of size (200mm x 200mm x 50mm x 2.5mm thick) | Nos | 10.00 | | | |
| 2.2 | Junction Box of size (350mm x 350mm x 50mm x 2.5mm thick) | Nos | 102.00 | | | |
| 3 | Supply & Installation of suitable sizes 2mm thick removable cover plate screwed on all four sides of M.S. sheet, fully powder coated, for blocking the entry into the floor junction box for following sizes of junction boxes with rounded corners as per the instruction given & sample approved by the client / architect / consultant at site. Cover plate shall have required no.s of 1' dia knockouts for flexible conduit outlets as per the requirement. | | | | | |
| 3.1 | for Junction Box of size (200mm x 200mm x 50mm x 2.5mm thick) | Nos | 10.00 | | | |
| 3.2 | Junction Box of size (350mm x 350mm x 50mm x 2.5mm thick) | Nos | 102.00 | | | |
| 4 | Supplying & fixing of 2mm thick G.I. Perforated type cable Trays of Asian /Profab Engieers approved make. The cable tray shall be fixed to the ceiling / wall with MS angle support with 35mmx2mm thick GI slotted 'C' channel patti at an interval of 1 meter or the MS angle iron fabricated support depending upon the location. The rate shall include the cost of Supports, hardware & accessories, etc. complete as required. | | | | | |
| 5 | Cable Tray :- 75 mm wide x 50 mm height x 2mm thick. | Mtrs | 45.00 | | | |
| K | VOICE/TELEPHONE NETWORKING | | | | | |
| 1 | Supply & Installation of Telephone /Voice point including approved make Cat - 6 UTP cable through already laid trenches / conduits, RJ45 information outlet, in single face plate, in workstation partition wall etc. with Termination, Testing and Documentation of UTP Points complete as required. | Nos. | 119.00 | | | |
| 2 | Supply, installation, testing and commissioning of indoor type telephone 200 pair Main Distribution Frame (MDF) / Box with Krone modules with suitable S.S. frame for mounting tag module, cable, wires and incorporated in 16 SWG MS box with proper lockable cover. The box should be fixed on wall with suitable fasteners including painting & earthing. This also includes fixing the cable, distribution chart sufficient space for the cables, wires etc.to be provided in the box | Nos. | 1.00 | | | |
| 3 | Supply & Installation of and commissioning of indoor type telephone 50 pair MDF with Krone module including all hardware & accessorial, etc. complete as required. with suitable S.S. frame for mounting tag module, cable, wires and incorporated in 16 SWG MS box with proper lockable cover. The box should be fixed on wall with suitable fasteners including painting & earthing. This also includes fixing the cable, distribution chart sufficient space for the cables, wires etc.to be provided in the box | Nos. | 6.00 | | | |
| 4 | Supply & Laying of 20 pair telephone cable through heavy guage pvc conduit including all necessary hardware & accessories, etc. | Rmt | 250.00 | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
|------------|--|-----------|--------|------------|-------|--------------|
| | TOTAL FOR ELECTRICAL ,FIRE ,PA AND ALLIED WORKS | | | | | |
| III | HVACWORK | | | | | |
| 1 | SITC of Chilled Water piping Insulation with 16 mm thick nitrile rubber insulation covered with 28 Swg aluminium sheet from existing Main Header to existing AHU | Lot | 1.00 | | | |
| 2 | SITC of Temperature/Pressure Guage | | | | | |
| a) | SITC of Temperature Guage | Nos | 6.00 | | | |
| b) | SITC of Pressure Guage | Nos | 6.00 | | | |
| 3 | Supplying, Fixing, testing and commissioning of fire dampers in supply air duct/main branch and return air path as and where required of required sizes i/c control wiring the damper shall be motorized and spring return so as to close the damper in the event of power failure automatically and open the same in case of power being restored. The spring return action shall be inbuilt mechanism and not externally mounted. The damper shall also be closed in the event of fire signal complete as required and as per specifications. | | | | | |
| a) | Actuator (Make -Belimo) | Nos | 6.00 | | | |
| 4 | Repairing ,Testing & commissioning of Existing AHU with existng installed valves Station , controller & VFD (The working of AHU on VFD is in vendor scope) | Nos | 3.00 | | | |
| 5 | Supply, installation, balancing and commissioning of fabricated at site GSS sheet metal rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per approved drawings and specifications of following sheet thickness complete as required.(Note- The new ducting connection is to taken by preparation of cutout in the existing ducting. All necessary cutting, duct joint gasket, nutbolt etc shall in vendor scope) (The neck size of the SA diffuser selection & Floor/AHU CFM balancing is in vendor scope) | | | | | |
| a) | Thickness 0.63 mm sheet (24 Guage) | Sqm | 356.50 | | | |
| 6 | Supply, installation, testing and commissioning of GI volume control duct damper complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc, as per specifications.(Note-The VCD is to be installed/fixed inside existing ducting. All necessary cutting, duct joint gasket, nut bolt etc shall be in vendor scope) | Sqm | 2.33 | | | |
| 7 | Supplying, fixing testing commissioning of supply air diffusers of powder coated aluminium with aluminium volume control dampers with anti smudge ring & removable core. | Sqm | 13.07 | | | |
| 8 | Supplying, fixing testing commissioning of Return air diffusers of powder coated aluminium without volume control dampers with anti smudge ring & removable core. | Sqm | 11.09 | | | |
| 9 | Supplying & fixing of powder coated extruded aluminium Return Air Grills with louvers but without volume control dampers complete as required. | Sqm | 2.90 | | | |
| 10 | Supplying & fixing of powder coated extruded aluminium Supply Air Grills with aluminium volume control dampers as per specifications. | Sqm | 5.41 | | | |
| 11 | Supply, Installation and Testing of Bird Screens with GI wire mesh to be installed at the suction of fresh air/discharge of Exhaust air . | Sqm | 2.00 | | | |
| 12 | SITC of Hard PVC drain piping for AHU's with Plumbing Grade PVC pipe, with PE insulation & finished with PVC tape | | | | | |
| a) | 32 mm | RM | 5.00 | | | |
| b) | 25mm | RM T | 5.00 | | | |
| 13 | Supply and fixing of acoustic lining of supply air duct and plenum with 25 mm thick resin bonded glass wool having density of 32 kg/m ³ , with 25 mm X 25 mm GI section of 1.25 mm thick, at 600 mm centre to centre covered with Reinforced Plastic tissue paper and 0.5 mm thick perforated aluminium sheet fixed to inside surface of ducts with cadmium plated nuts, bolts, stick pins, CPRX compound etc. complete as required and as per specifications.(Glass covered with factory laminated Aluminium foil, stuck to the duct with Bitumen & finished with 2 "wide PVC Tape and bounded to the duct using Nylon binding strap at every 1 mtr.) | SqM | 392.15 | | | |
| 14 | Acoustic insulation of duct with 12 MM thick CR-300 rigid board (Fiber Glass) covered with RP Tissue & 30 G perforated Aluminium cladding. | Sq Mtr | 53.46 | | | |
| 15 | HI WALL SPLIT AC | | | | | |
| | SPLIT AC UNITS | | | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
|-----------|---|--------|-------|------------|-------|--------------|
| | Supply, Installation, Testing & commissioning of split type airconditioning units, each comprising of an outdoor and single indoor unit, Condensing unit shall be complete with hermetically sealed semi-hermetical/rotary compressor, air cooled condensor with fan. Evaporating unit shall consist of a fan section with amicably balanced centrifugal fans driven by FHP.or multiwired copper cooling coil with aluminium fans,thermostatic expansion valves etc.osures shaall be fabricated as specified.The evaporating unit shall be piped with synthetic fibre filters,insulated drain pan,safety controls,thermostat all complete insist. The enclosure shall be factory painted to a smooth finish.The quoted price shall be inclusive of full of refrigerants gas, vibration isolation pads etc.Refrigerant shall be R-32/R410A/R407C.A. Single phase Non-ductable split units with Rotary compressor :Rating - 3 Star, single unit with single high wall non-ductable indoor unit with rotary compressor with corded remote controller & associated cable. | | | | | |
| | a)Capacity 2 TR | Nos | 2.00 | | | |
| 16 | SPLIT AC UNITS | | | | | |
| | REFREGERENT PIPING:- | | | | | |
| a) | Supply, installation, Testing & Commissionin of copper piping complete with copper fittings & charge of refrigerant gas for the above units, Piping associated with split units to be insulated with 13 mm thick closed cell neric insulation in tubing form as required. Piping shall be laid over duly panted sotted angles trays fixed with GI pipes. Quoted price shall be inclusive of UV protection pant for all exposed pipes of approved make. Pair of Soft refrigerant piping for split packages with rotary compressor. Price shal l be comprise of copper power cabling from indoor to outdoor unit as required. | RFT | 99.00 | | | |
| 17 | DRAIN PUMP | | | | | |
| | Supply,Installation, Testing & Commissioning of On Line Type Condensate drain pump for Hi-wall units complete with water level sensor and accessories as required. Quoted price shall be inclusive of controller, NRVs & water sensors and associated wiring etc. to make installation complete.Drain pump shall be suitable for operation on 220+6%volts50 Hz 1phase AC power supply.Drain pumps shall automatically On/Off based on water level. Drain pump for Hi- wall split units | Nos | 2.00 | | | |
| 18 | CONDENSATE DRAIN PIPING | | | | | |
| | Suppy, Installation Testing and Commissioning of Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain fittings, including fixing the pipes with pipes clamps at 1.00 m spacings. Thi includes joints of pipes & fittings with one step CPVC solvent cement and testig of joints complete as per direction of Engineer in Charge. Supporting arrangement in accordance with the approved shop drawings and spacification. Pipes shall be insulated with 9mm thick closed cell elastometric insulation in tubing form. Pipes shall be of following Sizes: | | | | | |
| a | 40 mm dia | RM | 10.00 | | | |
| b | 25 mm dia | RM | 10.00 | | | |
| 19 | ACOUSTIC LINING OF AHU ROOMS | | | | | |
| a | Supplying, fixing acoustic lining on wall and ceiling of AHU rooms with 50mm thick, density 32 kg/cu.m resin bonded glass fiber insulation friction fixed in 610mm x 610 mm frame work made of 25X50X50X50X25 mm made out of 0.6mm thick GI sheet U shaped channel and covered with reinforced fiber glass tissue and finished with 0.80 mm perforated aluminium sheet etc. complete as required and as per specifications.(Quoted price shall be inclusive of GSS channel, metal screws, washers ,fibre glass tissue,perforated sheet etc. as required for complete installation.) Approved make- UP Twiga /Owens Corning | Sqm | 72.26 | | | |
| a | 50mm thick | | | | | |
| 20 | Installation of Motorised Fire Dampers with Linkage & dead weights / spring etc (Fire damper will be provided by C-DAC .All related work i.e fixing, wiring etc is in vendor scope) | Sq Mtr | 1.00 | | | |
| 21 | CASSETTE AC WORK FOR CLASSROOM | | | | | |
| | FOR CLASS ROOM -Supply of Cassette AC of 3TR (2star non inverter model) with One year Comprehensive warranty. | No | 8.00 | | | |
| 22 | FOR CLASS ROOM -Supply of Cassette AC of 1.5TR (2star non inverter model) with One year Comprehensive warranty. | No | 2.00 | | | |
| 23 | LOW SIDE | | | | | |
| a | Indoor and outdoor unit Installation, testing, commissioning charges | Nos | 10.00 | | | |



| Sr. No | Description | Unit | Qty | Rate (Rs.) | GST % | Amount (Rs.) |
|------------------------|--|----------|--------|------------|-------|--------------|
| b | REFREGERENT PIPING,POWER/CONTROL CABLING FOR CASSETTE AC:- Supply, Installation, Testing & Commissionin of copper piping complete with copper fittings & charge of refrigerant gas for the above units(including drilling through wall). Piping associated with Cassette AC units shall be insulated with 13 mm thick closed cell elastomeric insulation .Quoted price shall be inclusive of UV protection paint for all exposed pipes.Price shall be comprise of copper power cabling from indoor to outdoor unit as required. | Rft | 577.28 | | | |
| c | CONDENSATE DRAIN PIPING- Supply, Installation Testing and Commissioning of 25 mm dia. Chlorinated Polyvinyl Chloride (CPVC) pipes, including all CPVC plain fittings, including fixing the pipes with pipes clamps at 1.00 m spacings. This includes joints of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Supporting arrangement in accordance with the approved shop drawings and specification. Pipes shall be insulated with 9mm thick closed cell elastomeric insulation in tubing form. | Rft | 337.84 | | | |
| d | MS FRAME FOR ODU OF SPLIT & CASSETTE AC'S- Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. (MS base frame duly applied with red-oxide primer & followed by black enamel paint for mounting of outdoor units.) | | | | | |
| | In gratings, frames, guard bar, ladder, railings, brackets,gates and similar works | Kg | 600.00 | | | |
| 24 | Dismantling of existing ducting and handing over /stacking the material at the location (inside building premises) as directed by Engineer incharge | Lumsu mp | 1.00 | | | |
| 25 | Installlation ,testing,commissioning of existing dismantled duct as directed by Engineer incharge | Sqm | 50.00 | | | |
| HVAC WORK TOTAL | | | | | | |

(Note:- Vendor is strictly advised/required to visit site prior to bid submission and understand existing site conditions.)

The quoted prices should be including freight, insurance, loading, un-loading, handling and allied charges to be incurred till installation at site.

The rates (%) of GST for each line item shall be as given in un-priced commercial bid submitted along with the technical bid.

Only work/item details along with qty and units are mentioned above, all other information needs to be filled in the BOQ.

(End of Section – V)



ANNEXURE – A: COVERING LETTER

Date:

To:

**The Executive Director,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008 Maharashtra, INDIA**

Subject: Submission of bid for carrying out Interior/Civil work Electrical and Allied HVAC work for Creation of Infrastructure on turn-key basis

Dear Sir,

We, the undersigned, offer to carry out Interior/Civil work Electrical and Allied HVAC work for Creation of Infrastructure on turn-key basis in response to your Tender No. - **CDACP/LnB-NASSCOM-CLASSROOMS/21-22/339**. We hereby submit our proposal for same, comprising of Technical bid and the Financial Bid, through www.eprocure.gov.in

We hereby declare that all the information and statements made in this bid are true and we accept that any misinterpretation contained in it, may lead to our disqualification.

We undertake that the products offered are not nearing end-of-life / end-of-support five /three years down the line from the date of bidding, from OEM.

We undertake, that a Performance Security of 3% of the order value will be submitted in case C- DAC decides to place Order on us.

We hereby certify that my/ our firm has not been disqualified and / or blacklisted by any Office/ Department/ Undertaking of the State Government / Central Govt. of India, PSU/ Autonomous Body of Government of India, at the time of submission of this bid.

We agree to abide by all the terms and conditions of the tender document, including corrigenda. We would hold the terms of our bid valid for 120 days as stipulated in the tender document.

We understand you are not bound to accept any Proposal you receive.

The undersigned is authorized to sign this bid document. The authority letter to this effect is enclosed.

Yours sincerely,

Authorized Signatory:

Name and Title of Signatory:

e-mail:

Mobile No:



ANNEXURE – B: AUTHORITY LETTER

Date:

To:

**The Executive Director,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008 Maharashtra, INDIA**

Subject: Authority Letter

Reference: Tender No - **CDACP/LnB-NASSCOM-CLASSROOMS/21-22/339**

Dear Sir,

We, M/s _____ (Name of the bidder) having registered office at _____ (address of the bidder) herewith submit our bid against the said tender document.

Mr./Ms. _____ (Name and designation of the signatory), whose signature is appended below, is authorized to sign and submit the bid documents on our behalf against said RFP

Specimen Signature:

The undersigned is authorised to issue such authorisation on behalf of us.
For M/s _____ (Name of the bidder)

Signature and company seal

Name

Designation

Email

Mobile No.



Annexure – C: Undertaking for EMD

Date:

To:

The Director General,

Centre for Development of Advanced Computing (C-DAC)

Innovation Park, Panchavati, Pashan Road,

Pune - 411008 Maharashtra, INDIA

Subject: Undertaking as per GFR – 2017, Rule 170(iii)

Dear Sir,

We, the undersigned, offer to carry out **Interior/Civil work Electrical and Allied HVAC work for Creation of Infrastructure on turn-key basis** per tender at C-DAC Pune, in response to your Tender No - - **CDACP/LnB-NASSCOM-CLASSROOMS/21-22/339**.

We are hereby submitting our proposal for same, which includes Technical bid and the Financial Bid. As a part of eligibility requirement stipulated in said tender document, we hereby submit a declaration in lieu of Earnest Money Deposit (EMD), as given below:

1. Our bid shall remain valid for 120-days from the date of submission and that we will not withdraw or modify our bid during the validity period,
2. In case, we are declared as successful bidder and an order is placed on us, we will submit the acceptance in writing within 7 days of placement of order on us.
3. In case, we are declared as successful bidder and an order is placed on us, we undertake, to submit a Performance Security of 3% of the order value, as per terms stipulated in the tender.
4. In case, the bidder fails to accept the Work Order (WO) / Purchase Order (PO) or fails to supply the material as per the said Work Order (WO) / Purchase Order (PO).
5. In case of failure on our part to comply with any of the above said requirements, we are aware that we shall be declared as un-eligible for said tender and /or debarred from any **future bidding process of C-DAC for a period of minimum one year.**
6. The undersigned is authorized to sign this undertaking.

Yours sincerely,

Authorized Signatory:

Name and Title of Signatory:

e-mail:

Mobile No:



ANNEXURE D - PROFORMA OF SECURITY DEPOSIT BANK GUARANTEE

To,

**Centre for Development of Advanced Computing
Pune University Campus
Ganesh Khind, Pune – 411 007**

BANKS GUARANTEE NO:

DATE:

Dear Sir(S)

This has reference to the Purchase Order No. _____ Dated _____ been placed by Centre for Development of Advanced Computing(C-DAC), Pune on M/s _____ (Name & Address of vendor) for supply, installation, commissioning and warranty of _____ (description of items) at C-DAC/client's site.

The conditions of this order provide that the vendor shall,

1. Arrange to deliver the items listed in the said order to the consignee, as per details given in said order, and
2. Arrange for the comprehensive warranty service support towards the items supplied by vendor at sites anywhere in India, as per the warranty clause in said purchase order.

M/s (Name of Vendor) has accepted the said purchase order with the terms and conditions stipulated therein and have agreed to issue the performance bank guarantee on their part, towards promises and assurance of their contractual obligations vide the Supply Order No. _____ M/s. _____ (name of vendor) holds an account with us and has approached us and at their request and in consideration of the promises, we hereby furnish such guarantees as mentioned hereinafter.

C-DAC shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other undertaking of security in respect of the suppliers obligations and / or liabilities under or in connection with the said contract or to vary the terms vis-a – vis the supplier or the said contract or to grant time and or indulgence to the supplier or to reduce or to increase or otherwise vary the prices or the total contract value or to forebear from enforcement of all or any of the obligations of the supplier under the said contract and/or the remedies of C-DAC under any security (ies) now, or hereafter held by C-DAC and no such dealing(s) with the supplier or release or forbearance whatsoever shall have the effect of releasing the bank from its full liability of C-DAC hereunder or of prejudicing right of C-DAC against the bank.

This undertaking guarantee shall be a continuing undertaking guarantee and shall remain valid and irrevocable for all claims of C-DAC and liabilities of the supplier arising up to and until _____ (date)

This undertaking guarantee shall be in addition to any other undertaking or guarantee or security whatsoever the that C-DAC may now or at any time have in relation to its claims or the supplier's obligations/liabilities under and / or in connection with the said contract and C-DAC shall have the full authority to take recourse to or enforce this undertaking guarantee in preference to the other undertaking or security (ies) at its sole discretion and no failure on the part of C-DAC in enforcing or requiring enforcement of any other undertaking or security shall have the effect of releasing the bank from its full liability hereunder.



We _____ (Name of Bank) hereby agree and irrevocably undertake and promise that if in your (C-DAC's) opinion any default is made by M/s _____ (Name of Vendor) in performing any of the terms and /or conditions of the agreement or if in your opinion they commit any breach of the contract or there is any demand by you against M/s _____ (Name of Vendor), then on notice to us by you, we shall on demand and without demur and without reference to M/s _____ (Name of Vendor), pay you, in any manner in which you may direct, the amount of Rs. _____/- (Rupees _____ Only) or such portion thereof as may be demanded by you not exceeding the said sum and as you may from time to time require. Our liability to pay is not dependent or conditional on your proceeding against M/s _____ (Name of Vendor) and we shall be liable & obligated to pay the aforesaid amount as and when demanded by you merely on an intimation being given by you and even before any legal proceedings, if any, are taken against M/s _____ (Name of Vendor)

The Bank hereby waives all rights at any time inconsistent with the terms of this undertaking guarantee and the obligations of the bank in terms hereof shall not be anywise affected or suspended by reason of any dispute or disputes having been raised by the supplier (whether or not pending before any arbitrator, Tribunal or Court) or any denial of liability by the supplier or any order or any order or communication whatsoever by the supplier stopping or preventing or purporting to stop or prevent payment by the Bank to C-DAC hereunder.

The amount stated in any notice of demand addressed by C-DAC to the Bank as claimed by C-DAC from the supplier or as suffered or incurred by C-DAC on the account of any losses or damages or costs, charges and/or expenses shall as between the Bank and C-DAC be conclusive of the amount so claimed or liable to be paid to C-DAC or suffered or incurred by C-DAC, as the case may be and payable by the Bank to C-DAC in terms hereof.

You (C-DAC's) shall full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contact with the said M/s _____ (Name of Vendor) and to enforce or to forbear from endorsing any power or rights or by reason of time being given to the said M/s _____ (name of Vendor) which under law relating to the sureties would but for the provisions have the effect of releasing us.

You will have full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said M/s _____ (Name of Vendor) and to enforce or to forbear from endorsing any power or rights or by reason of time being given to the said M/s _____ (Name of Vendor) which under law relating to the sureties would but for the provisions have the effect of releasing us.

Your right to recover the said sum of Rs. _____/- (Rupees _____ only) from us in manner aforesaid will not be affected/ or suspended by reason of the fact that any dispute or disputes have been raised the said M/s _____ (Name of Vendor) and/ or that any dispute or disputes are pending before any officer, tribunal or court or Arbitrator.

The guarantee herein contained shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of the said M/s _____ (Name of Vendor) but shall in all respects and for all purposes be binding and operative until payment of all dues to C-DAC in respect of such liability or liabilities.



Our liability under this guarantee is restricted to Rs. _____/- (Rupees _____ Only). Our guarantee shall remain in force until unless a suit action to enforce a claim under guarantee is filed against us within six months from (which is date of expiry of guarantee) all your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under.

We have power to issue this guarantee in your favour under Memorandum and Articles of Association of our Bank and the undersigned has full power to do under the power of Attorney dated.

Notwithstanding anything contained herein:

- A. Our liability under this guarantee shall not exceed Rs _____ (in words)
- B. This bank guarantee shall be valid up to _____ & unless a suit for action to enforce a claim under guarantee is filed against us within six months from the date of expiry of guarantee. All your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there after i.e. after six months from the date of expiry of this Bank guarantee
- C. We are liable to pay the guaranteed amount or any parts thereof under this bank guarantee only and only if you serve upon us a written claim or demand or before _____
- D. The Bank guarantee will expire on (Min 37 months from the date of successful installations of the items in the order) _____

Granted by the Bank

(SEAL)

For (Name of Bank)
Yours faithfully,

SEAL OF THE BANK
Authorised Signatory



UNDERTAKING
(ON COMPANY'S LETTERHEAD)

To:
Executive Director,
Centre for Development of Advanced Computing,
Pune – 411 008

Ref: Tender Ref. No: CDACP/LnB-NASSCOM-CLASSROOMS/21-22/339

Dear Sir,

With reference to our bid submitted against said tender, we certify that,

a. we are not from a country sharing land border with India as defined in order No. F/No/6/18/2019-PPD dated 23 July 2020 issued by public procurement Division, Dept. of Expenditure, Ministry of Finance, GoI and

b. The OEMs of the products offered by us are not from a country sharing land border with India as defined in order No. F/No/6/18/2019-PPD dated 23 July 2020 issued by public procurement Division, Dept. of Expenditure, Ministry of Finance, GoI and

c. the goods offered by us comply with the provisions of said order.

d. We further certify that the goods being offered by us against referred tender, comply with the provisions of order No. P-45021/2/2017-PP (BE-II), dated 15.06.2017 and subsequent revisions dated 28.05.2018, 29.05.2019, 04.06.2020 and 16.09.2020, issued by Public Procurement Division, Department of Investment and Internal Trade, Ministry of Commerce, GoI, read with order number W-43/4/2019-IPHW- MeitY, dated 7th September, 2020 issued by IPWH division of MeitY, GoI.

e. We also certify that the value of local contents of the goods offered by us excluding installation & commissioning charges, service/ labour charges, warranty charges is ---- % of the value of all the goods offered.

The undersigned is authorized to issue this certificate.

For (Name of Bidder)

Authorized Signatory

Name & Designation:

Mobile No:

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**ANNEXURE – F****DOCUMENTARY / ELIGIBILITY CHECKLIST**

| Sr. No. | DOCUMENTARY / ELIGIBILITY | Details (if any) | Enclosed (Yes / No) | Page No. |
|---------|---|------------------|---------------------|----------|
| 1. | Checklist | | | |
| 2. | Tender Fees (Rs. 1,500/-) | RTGS/IMPS/DD No. | | |
| 3. | EMD Declaration (As per Annexure – C) | | | |
| 4. | Covering Letter | | | |
| 5. | Authorisation Letter | | | |
| 6. | The bidder should be an entity registered in India under appropriate Indian Laws. Certificate for the same need is to be submitted along with the bid. | | | |
| 7. | Copies of PAN and GST registration certificates. | PAN – GST - | | |
| 8. | Bidder should have minimum average turnover of Rs.1.80 Crs for last three financial years (2018-19,2019-2020,2020-21). (CA certificate in this regards along with supporting balance sheets documents be submitted) | | | |
| 9. | The bidder must have successfully completed at least One Similar Turnkey work of Central/State Government Department, PSU or Autonomous institution, costing not less than the amount equal to 1.50 Crore in last 5 Years. (“Similar work means-Turnkey/Composite Works comprising Interior/ Civil, Electrical & Allied, HVAC works “- Documentary evidence for similar turnkey experience is to be furnished of completed works in form of Work order/Satisfactory Work Completion Certificate. The work order should be in the name of bidder directly) | | | |
| 10. | The Bidder shall be a registered company/firm/Branch office (Address proof to be submitted along with registration certificate) in Pune/ Mumbai area (Attach Proof-Shop Act&other relevant documents) | | | |
| 11. | The contractor must not be black listed / debarred from bidding by any Government Department, PSU or Autonomous institution, as on date of submission of bids. (Declaration to be submitted on letterhead) | | | |
| 12. | Undertaking/ Declaration as per annexure E | | | |
| 13. | Agreeing for bid validity of 120 days from bid submission date. | | | |

(End of Document)