



Center of Innovative and Applied Bioprocessing (CIAB)

Sector-81, Knowledge City, PO Manauli,
S.A.S Nagar, Mohali 140306, Punjab, India

नवोन्मेषी एवं अनुप्रयुक्त जैव - प्रसंस्करण केंद्र (सी० आई० ऐ० बी०)

A National Institute under the Department of Biotechnology (Govt. of India)



CIAB/7(73)/2018-works

2nd November 2022

CORRIGENDUM

Annual Maintenance contract of Heating, Ventilation and Air-conditioning (HVAC) system (Low side) and HT/PLC controlled LT Panels, DG panels and Dry type transformer (630 KVA) of CIAB campus, Knowledge City, Sector-81, Mohali-Punjab, India

Attention is invited to the Open Tender ref no. CIAB/7(73)/2018-Works for the award of Annual Maintenance contract of Heating, Ventilation and Air-conditioning (HVAC) system (Low side) and HT/PLC controlled LT Panels, DG panels and Dry type transformer (630 KVA) of CIAB campus, Knowledge City, Sector-81, Mohali-Punjab, India, the following details are:-

	As per Tender Technical Criteria	Revised Tender Technical Criteria
CIAB/7(73)/2018-Works	<ol style="list-style-type: none">1. Tender receipt date: 02.11.2022 up to 15:00 hrs2. Tender opening date: 03.11.2022 at 15:30 hrs	<ol style="list-style-type: none">1. Extended Tender receipt date: 16.11.2022 at 15:00 hrs2. Extended Tender opening date: 17.11.2022 at 15:30 hrs

The remaining specifications and terms & conditions of the tender are remains same. The Chief Executive Officer, CIAB reserves the right to accept or reject any offer without assigning any reason.

S/d

Administrative Officer

CENTER OF INNOVATIVE AND APPLIED BIOPROCESSING (CIAB)

**Department of Biotechnology,
Ministry of Science & Technology
(Govt. of India)**



e- Tender Notice

for the award of Annual Maintenance contract of Heating, Ventilation and Air-conditioning (HVAC) system (Low side) and HT/PLC controlled LT Panels, DG panels and Dry type transformer (630 KVA) of CIAB campus, Knowledge City, Sector-81, Mohali-Punjab, India

TENDER NO: CIAB/7(73)/2018-Works

VOLUME-1

Tender Issued from: 12-10-2022

Last date of receipt of tender: 02-11-2022 upto 3:00pm

Tender Opening date: 03-11-2022 @ 9:30am

Center of innovative and Applied Bioprocessing (CIAB)

E-NOTICE INVITING TENDER (NIT)

1.0 Item Rate e-Tenders in two parts [Part(A)-Technical Bid & Part(B)-Financial/Price Bid] are invited on the behalf of Chief Executive Officer, CIAB from the specialized agencies/firms who have executed similar works with some Central Govt. department/State Govt. Department/Central Autonomous body/State Autonomous Body/Central PSU/State PSU/Central Govt. undertaking/State Govt. Undertaking/ City Development Authority/Municipal Corporation of City//Reputed Private Companies & Organizations for carrying out the **Annual Maintenance Contract of HVAC systems (Low side) and HT/PLC controlled LT Panels, DG panels and Dry type transformer (630 KVA) at CIAB campus, Knowledge City, sector-81, Mohali-Punjab, India**

1.2 Technical Eligibility Criteria for Bidders-

1.2.1 Experience of having successfully completed following type of works during the last 07 years ending previous day of last date of submission of tenders.

Three similar completed works costing not less than the amount equal to 40% of estimated cost put to tender

or

Two similar completed works, costing not less than the amount equal 60% of the estimated cost put to tender

or

One similar completed work of aggregate cost not less than the amount equal to 80% of the estimated cost put to tender.

Similar work shall mean the work of **Annual Maintenance Contract as composite work of HVAC systems of not less than 240Tonnage and HT/PLC controlled LT Panels, DG panels and Transformer (630 KVA) in 11/33 KV substation** in any reputed Institutional campus/University/Hospitals/Multistory Office buildings/Commercial Complexes/ Power Plants/Refineries/Manufacturing Plants & Industries/Research Centers and Laboratories/ Date Centre/Sport Stadiums/Any other Industry or Organization. Bidder shall be a Registered/Licensed Specialized Contractor from CPWD/MES/DRDO/PSU/RAILWAYS etc. having minimum experience of 5 years in providing Comprehensive AMC of LOW SIDE HVAC system and Electrical inventory at 11/33 KV substation.

Department reserves the right to ask contractor for detailed schedule of quantities (BOQ) authenticated by concerned Government department to ascertain the scope of work done, in case, there is any doubt. Contractor shall fully co-ordinate in providing such documents/details.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the last date of submission of bid.

Note - The Tenderer shall produce definite proof from the appropriate authority, which shall be to the satisfaction of the Competent Authority, of having satisfactorily completed similar works of magnitude specified above. Completion Certificates/proofs need to be enclosed.

1.2.2 The Agency/firm must have valid GST Registration No. The proof for the same shall be enclosed with the bid.

- 1.2.2 Average annual financial turnover should be at least 50% of the estimated cost put to tender during the immediate last three consecutive financial years. Copies of duly attested statement (for last 03years) by Chartered Accountant should be provided.
- 1.2.3 The bidder should not have incurred any loss (profit after tax should be positive) in more than two years during available last three consecutive balance sheet, duly audited and certified by the Chartered Accountant.
- 1.2.4 The Firm shall have valid Class 'A' Electrical contractor license for minimum voltage level of 11kV duly issued by the licensing authority of Electricity Department. The copy of the same shall be enclosed with the Technical bid.
- 1.2.5 Bidder shall have Registered Office for Service operations in TriCity / Punjab /Haryana /NCR and proof of same must be submitted with Bid.
- 1.2.6 Bidder should have an in house web based application/Centralized Call log management system for complaint logging, tracking and monitoring with the functionality of call logging, tracking and monitoring.
- 1.2.7 The bidder shall submit the performance certificate of works as per format given in **Annexure-1** (In case the bidder has executed any contract/work or ongoing work at CIAB during the last 05years). In case of non-satisfactory performance of any work executed or ongoing work at CIAB during last 05 years, the bid will not be considered for further evaluation.

The declaration on firm's letter head '**No work executed at CIAB during last 05 years**' be submitted if the firm has not executed any work in CIAB for last 05 years.

- 1.2.8 The bidder shall submit the mandatory site visit certificate as per the format given in **Annexure-2**.
- 1.2.9 The tenderer shall submit an affidavit on a non-judicial stamp paper of Rupees Hundred only duly attested by notary, certifying that "information /documents/experience certificates enclosed by the bidder (Name of contractor) along with this tender are genuine and also the bidder (applicant) shall not have any objection in case CIAB verifies them from the issuing authority. Original copy of the documents shall also be produced to CIAB for their verification on demand. In case, the information /documents /certificates are not found genuine the agency (applicant) shall be debarred for 05 years from participating in any tender of CIAB in future. Further, the agency (applicant) confirms that we have not been blacklisted by any of their clients.

Note:

- i). No third-party or subcontracting is allowed in this contract. If at any stage of tender evaluation or during execution of contract, the above information/undertaking given is found false or incorrect then the contract will be terminated with immediate effect with the approval of Competent Authority, CIAB and the contractor shall be debarred for 05 years from participating in any tender of CIAB in future".
- ii. Agreement shall be drawn with the successful tenderer on prescribed format by the Competent Authority. Tenderer shall quote his rates as per various terms and conditions laid down in the tender document.

ii. The contract will be initially awarded for a period of 01 year however based on the satisfactory performance of the contractor and at the discretion of the Competent Authority, CIAB, it may be extended for a further period of 01 year or lesser based on the requirement of CIAB at the same rates. The date of start of contract shall be as defined in schedule 'C' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.

2. The site for the work is available.

3. (i) Tender documents can be downloaded directly from the CIAB website www.ciab.res.in or E-Central public procurement portal <https://eprocure.gov.in/eprocure/app> (up to 12-10-2022).

(ii) Tender forms, NIT, schedule of items and all the Tender documents consisting of all the set of terms & conditions of contract to be complied with by the contractor whose tender may be accepted and other necessary documents can be seen in the office of Assistant Executive Engineer-Electrical, CIAB on all working days between 10:00 am to 5:00pm.

4.(i)Tenders shall be accompanied with tender cost of **Rs.590/-** only in the form of Demand Draft in favour of "Center of Innovative and Applied Bioprocessing, Mohali" payable at Mohali.

(ii) Tenders shall be accompanied with Earnest money of **Rs.37,000/- only** in the form of Receipt Treasury Challan/Deposit at Call receipt of a scheduled bank/fixed deposit receipt of a scheduled bank/demand draft of a scheduled bank issued in favour of "Center of Innovative and Applied Bioprocessing" payable at Mohali.

(iii) **Submission of Tender-** The tender shall be submitted/uploaded as e-tender only in the following covers as detailed below:

A) Cover -1 marked as Technical Bid containing the following-

- a) Scanned copy of Demand Draft of Rs.590/-only as cost of tender documents or cash receipt in case of tender fee submitted to CIAB office in cash.
- b) Scanned copy of Earnest Money Deposit (EMD) of **Rs.37,000/- only** in the prescribed format.
- c) Scanned copy of documents related to Technical eligibility criteria 1.2 i.e., Completion certificates/proofs of the similar works completed and all other required documents as mentioned in the Technical Eligibility criteria 1.2.1 to 1.2.9.
- d) Scanned copy of signed and stamped complete Tender documents i.e., Volume-1.

B. Envelope-2 marked as Financial/Price Bid containing the following-

- a) This shall contain the price for the execution of the works specified as per Volume-2 of the tender document.

c. The above documents shall be uploaded by the bidder on E-Central public procurement portal <https://eprocure.gov.in/eprocure/app> by 3:00 PM on 02-11-2022 and will be opened on 03-11-2022 by CIAB at 9:30 AM.

**Note: - a) Documents to be uploaded in PDF format only (Price Bid in Excel format only).
b) The original payment instrument like Demand Draft of any Nationalized Bank against Earnest Money and Cost of Tender document should be sent to the address- Center of Innovative and Applied Bioprocessing, Sector-81, Knowledge City, PO- Manauli, SAS Nagar, Mohali 140306, and Punjab by post/speed post/courier/by hand before due date & time of receipt of tenders, failing which the tenders will not be considered for further evaluation.**

NOTE-2: In case of non-submission/incorrect submission of any of the above-mentioned documents/details by the bidder or in case of non-compliance of any of the technical eligibility criteria by the bidder, their bid shall not be considered for further evaluation or shall be considered ineligible.

REGARDING TENDER FEE AND EMD EXEMPTION

Only Tender Fee and EMD exemption is allowed for Micro & Small Enterprises (MSEs) who are registered with District Industries Centers(DICs)/Khadi & Village Industries Commission(KVIC)/ Khadi & Village Industries Board(KVIB)/ National Small Industries Corporation (NSIC)/MSEs registered under Udyog Aadhar Memorandum(UAM)/Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro, Small and Medium Enterprises(MoMSME) but relevant certificates of registration need to be enclosed by the bidder along with the Technical bid, claiming for exemption. Also, the bidders/MSEs claiming for exemption of Tender fee and EMD shall submit the duly signed and stamped hard copies of necessary registration certificates on or before the last date of submission of tenders, failing which their tenders will not be considered for further evaluation.

5. The contractor whose tender is accepted, will be required to furnish performance guarantee of 3% (Three Percent) of the tendered amount within the period specified in Schedule 'C'. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'C' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.

6. The description of the work is as follows:

Annual Maintenance contract of Heating, Ventilation and Air-conditioning (HVAC) system (Low side) and HT/PLC controlled LT Panels, DG panels and Dry type transformer (630 KVA) of CIAB campus, Knowledge City, Sector-81, Mohali-Punjab, India

Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the type of system (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed.

The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

7. The Competent Authority does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of

any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.

8. Canvassing whether directly or indirectly, in connection with tenderers is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

9. The Competent Authority reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.

10. The contractor shall not be permitted to tender for works in the CIAB, Mohali if his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Gazetted officer in the CIAB, Mohali or in the Ministry of Science & Technology, Govt. of India. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

11. No Engineer of gazette rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.

12. The tender for the works shall remain open for acceptance for a period of ninety (90) days from the date of opening of tenders/Ninety days from the date of opening of financial bid in case tenders are invited on 2/3 envelop system (strike out as the case may be) if any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the department shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the retendering process of the work.

13. This Notice Inviting Tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting/Competent Authority shall within 15 days from the stipulated date of start of the work, sign the contract agreement consisting of:-

- a) The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
- b) Tender form-1.

14. No price preference to any corporate society/Registered society, Govt. Public Sector undertakings / bodies shall be given and tenders shall be exclusively dealt with on merit.

15. The contractor shall comply with the provisions of the Apprentices Act 1961, Minimum wages Act 1948, Workmen's compensation Act 1923, contract labour (Regulation and Abolition Act 1970), payment of wages Act 1938, Employer's liability Act 1938, Maternity Benefits Act 1961, Employee's State Insurance Act, 1948, Employees Provident Funds and Miscellaneous Provisions Act, 1952 and the Industrial disputes Act 1947 as applicable and the rules and regulations issued there under and by the local Administration/ Authorities from time to time as well all provisions of law applicable to workmen. Failure to do so shall amount to breach of the contract and the Competent Authority may at his discretion terminate the contract. The Contractor shall also be liable for any pecuniary liability arising on account of violation by him of

any of the said Acts and shall indemnify the Institute on that account. Institute will not be liable for any act or omission on the part of the contractor in so far as any violation of any of the aforementioned acts.

16. Each tenderer shall submit only one tender; either by him or as partners in a joint venture. A tenderer who submits or participates in more than one tender will be disqualified.

17. Unless otherwise stated, the contract shall be for the whole work as described in the "Schedule of Items" and the drawings. The contractor shall be bound to complete the whole work as described in the schedule of items of works and the drawings, including additional items, if any, as per drawings and instructions. The issuance of certificate of completion as issued by the Engineer-in-Charge shall be mandatory and will be conclusive proof of completion of work.

18. Interpretations, corrections and changes to the Tenders Documents shall be made by Addendum, if required by the Institute.

19. Each Tenderer shall ascertain prior to submitting his Tender that he has received all Addenda issued and he shall so acknowledge their receipt in his Tender.

20. The provisions in the Tender documents shall govern over the contents of the above paragraphs if in contradiction or variation.

21. All pages of the Tender should be page numbered and indexed.

22. It is the responsibility of tenderer to go through the tender document to ensure furnishing all required documents in addition to above, if any.

23. The authorized signatory of the tenderer must sign the tender duly stamped at appropriate places and initial all the remaining pages of the tender along with the stamp.

24. A tender, which does not fulfill any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.

25. Only bidding through e-tendering on CPP portal (**E-Central public procurement portal <https://eprocure.gov.in/eprocure/app>**) shall be accepted.

Center of innovative and Applied Bioprocessing (CIAB)

Item rate Tender & Contract for Works

- (i) Tender for the work of: **Annual Maintenance contract of Heating, Ventilation and Air-conditioning (HVAC) system (Low side) and HT/PLC controlled LT Panels, DG panels and Dry type transformer (630 KVA) of CIAB campus, Knowledge City, Sector-81, Mohali-Punjab, India**
- (ii) To be submitted by 15:00 hours on 02-11-2022 to the Chief Executive Officer, CIAB
- (iii) To be opened at 9:30 hours on 03-11-2022 in the office of the Administrative Officer, CIAB

Tender Fee: Rs.590 /- only (Non-refundable)

Earnest Money Deposit: Rs.37, 000/- only

Performance Guarantee: @ 3% of Tendered value

Place of opening of tender document: Center of Innovative and Applied Bioprocessing, Knowledge City, sector-81, Mohali-Punjab

Issued to*: _____

Signature of officer issuing the documents*: _____

Designation*: _____

Date of Issue*: _____

TENDER

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

I/We hereby tender for the execution of the work specified for the Institute within the time specified in Schedule 'C' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in General Rules and Directions and in Clauses of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

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

A sum of **Rs.37,000/- only** is hereby forwarded in cash/receipt treasury challan/deposit at call receipt of a scheduled bank/fixed deposit receipt of scheduled bank/demand draft of a scheduled bank/bank guarantee issued by a scheduled bank as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the Chief Executive Officer, CIAB or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as

specified, I/We agree that the Chief Executive Officer, CIAB or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in the Institute in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

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

Dated:

Signature of Contractor

Witness:

Postal Address

Address:

Occupation:

GENERAL RULES & DIRECTIONS

1. All work proposed for execution by contract will be notified in a form of invitation to tender posted on website as the case may be.

This form will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the amount of the security deposit and Performance guarantee to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills. Copy of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power-of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act, 1952.
3. Receipts for payment made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.
4. Any person who submits a tender shall fill up the usual printed form, stating at what rate he is willing to undertake each item of the work. Tenders, which propose any alteration in the work

specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort including conditional rebates, will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.

The rate(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paisa and considering more than fifty paisa as rupee one.

In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors may be asked to submit sealed revised offer quoting rate of each item of the schedule of quantity for all sub sections/sub heads as the case may be, but the revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of revised offer.

If the revised tendered amount (worked out on the basis of quoted rate of individual items) of two or more contractors received in revised offer is again found to be equal, then the lowest tender, among such contractors, shall be decided by draw of lots in the presence of Administrative Officer, Engineer in-charge of major & minor component(s) and the lowest contractors those have quoted equal amount of their tenders.

In case of any such lowest contractor in his revised offer quotes rate of any item more than their respective original rate quoted already at the time of submission of tender, then such revised offer shall be treated invalid. Such case of revised offer of the lowest contractor or case of refusal to submit revised offer by the lowest contractor shall be treated as withdrawal of his tender before acceptance and 50% of his earnest money shall be forfeited.

In case all the lowest contractors those have same tendered amount (as a result of their quoted rate of individual items), refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each lowest contractors.

Contractor, whose earnest money is forfeited because of non-submission of revised offer, or quoting higher revised rate(s) of any item(s) than their respective original rate quoted already at the time of submission of his bid shall not be allowed to participate in the retendering process of the work.

5. In the case of Item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount. In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the contractor has included the cost of this/these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.
6. All rates shall be quoted on the tender form. The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs.

2.15 P' and in case of words, the word, 'Rupees' should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be upto two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.

7. The Bidder/Contractor Firm should possess all the necessary clearance from all the Govt. authorities/departments for the related work as well as the regulatory affairs.
8. The Chief Executive officer, CIAB shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
9. Use of correcting fluid, anywhere in tender document is not permitted. Such tender is liable for rejection.
10. The Contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule 'C'. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form.
11. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated in writing to the Engineer-in-Charge.
12. GST, turnover tax or any other tax applicable in respect of this contract shall be payable by the Contractor and Institute will not entertain any claim whatsoever in respect of the same. The bidder shall give the total composite price inclusive of all Central & State's levies and taxes i.e. GST, Excise duty, Turnover Tax, Works Contract Tax etc applicable to this work.

If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the Government of India and does not any time become payable by the contractor to the State Government, Local authorities in respect of any material used by the contractor in the works, then in such a case, it shall be lawful to the Government of India and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.
13. The contractor shall give a list of both gazetted and non-gazetted CIAB employees related to him (if any).
14. The tender for the work shall not be witnessed by a contractor or contractors who himself/ themselves has/have tendered or who may and has/have tendered for the same work. Failure to observe this condition would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.
15. The statutory deductions such as TDS etc. shall be deducted at source as per prevailing percentage/rates/rules as amended from time to time by Central/State Govt.
16. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of the contract and the Competent Authority may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

CONDITIONS OF CONTRACT

Definitions

1. The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between competent authority on behalf of the CIAB and the contractor, together with the document referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by Engineer-in-charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.
2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-
 - a) The expression **works** or **work** shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
 - b) The **site** shall mean the land/ or other places like building etc. on into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
 - c) The **contractor** shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such, individual, firm or company.
 - d) The Competent Authority shall mean the **Chief Executive Officer, CIAB**
 - e) **Institute/Department** shall mean the Center of innovative and Applied Bioprocessing (CIAB), Mohali.
 - f) **Administration** shall mean the administration of CIAB, Mohali.
 - g) **Local authority** shall mean the Municipal Corporation of Mohali and shall also deemed to include any other body, State Govt. Department or department of the administration.
 - h) **Accepting Authority** shall mean the authority mentioned in Schedule 'C'.
 - i) **Engineer-Incharge** shall mean the Assistant Executive Engineer-Electrical
 - j) **Schedule(s)** referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers.
 - k) **District Specifications** means the specifications followed by the State Government in the area where the work is to be executed.
 - l) **Tendered value** means the value of the entire work as stipulated in the letter of award.
 - m) **Date of commencement of work:** The date of commencement of work shall be the date of start as specified in schedule 'C' or the first date of handing over of the site, whichever is later, in accordance with the phasing if any, as indicated in the tender document.
 - n) **Excepted Risk** are risks due to riots (other than those on account of contractor's Employees), war (whether declared or not) invasion, act of foreign enemies, hostilities,

civil war, rebellion revolution, insurrection, military or usurped power, any acts of Government, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by owner of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to owner's faulty design of works.

- o) **Market Rate** shall be the rate as decided by the Engineer-in-Charge on the basis of the cost of materials and labour as per market at the site where the work is to be executed plus the percentage to cover all overheads and profits.

Scope & Performance

3. Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.
4. Headings and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
5. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.

Works to be carried out

6. The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Scope of Work (Schedule- A & Schedule-D) shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

Sufficiency of Tender

Sufficiency of tender:

The contractor shall be deemed to have satisfied himself before bidding as to the correctness and sufficiency of his bid for the works and of the rates and prices quoted in the Bill of Quantities which rates and prices shall except as otherwise provided, cover all his obligations under the Contract and everything necessary for the proper completion and maintenance of the works, if required contractor shall obtain clearances from concerned local authorities at his cost. The cost of any item for which contractor has failed to enter rate shall be deemed to be covered by other rates entered in the Bill of Quantities. The Contractor shall also co-ordinate with any other agency working in the same project, compare plans, specifications and the time schedules and so arrange his work that there will be no interference. CIAB shall entertain no claim on this account.

The rates quoted by the contractor shall also take into account the cost of the following:-

- a) Income tax deductions:
Appropriate deductions as per relevant Income Tax Rules applicable at the time shall be made from bills submitted by the contractor.
- b) Rates to be inclusive of all labour, material etc.
The rates for all items, unless clearly specified otherwise, cover all costs for proper execution of work including labour, material, hire charges of machinery etc. and any other inputs involved during execution of the works.
- C) Water and Electric Supply: CIAB will provide required supply of water and electric power to the contractor at the designated point. Any further extension from that source shall be organized by the contractor at his own expense.

Discrepancies and Adjustment of Errors

- 7. The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to General Conditions.
 - 7.1 In the case of discrepancy between the schedule of work, the Specifications and/or the Drawings, the following order of preference shall be observed:-
 - a) Description of Schedule of Quantities.
 - b) Particular Specification and Special Condition, if any.
 - c) Drawings.
 - d) CPWD Specifications and Manufacturer specifications with upto date amendments.
 - e) Indian Standard Specifications of B.I.S.
 - 7.2 If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.
 - 7.3 Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.
 - 7.4 In case of any conflict/discrepancy on any specification or item to be executed or any other issue related to the contract, the CPWD guidelines and GFR (General Financial Rules) shall be referred to for the same with further recommendations and approvals of the Competent Authority.

Signing of Contract

- 8. The successful tenderer/contractor, on acceptance of his tender by the Accepting/Competent Authority shall within 15 days from the stipulated date of start of the work, sign the contract agreement consisting of:-
 - a) The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
 - b) Tender form-1.
- 9. No payment for the work done will be made unless contract is signed by the contractor.

CLAUSES OF CONTRACT

CLAUSE 1

(i) The contractor shall submit an irrevocable Performance Guarantee of **3% (3 percent)** of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified from the date of issue of letter of acceptance. This period can be further extended by the Competent Authority up to a maximum period as specified in schedule 'C' on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the Engineer-in-Charge. This guarantee shall be in the form of Cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at Call receipt of any scheduled bank/Banker's Cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay Order of any scheduled bank (in case guarantee amount is less than Rs.1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the form annexed hereto. In case a fixed deposit receipt of any Bank is furnished by the contractor to the Government as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Government to make good the deficit.

(ii) The Performance Guarantee shall be initially valid up to the completion of contract period plus 60 days beyond that. In case the contract period gets extended, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of contract. After the recording of the satisfactory service completion certificate by the Engineer-Incharge and on completion of contract, the performance guarantee shall be returned to the contractor, without any interest.

(iii) The Engineer-in-Charge shall not make a claim under the performance guarantee except for amounts to which the CIAB is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:

(a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee.

(b) Failure by the contractor to pay CIAB any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in-Charge.

iv) In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the Competent Authority.

CLAUSE 2

When Contract can be Determined

Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases:

(i) If the contractor having been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or

otherwise improper or unworkman like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.

(ii) If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer-in-Charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer-in-Charge.

(iii) If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-Charge.

(iv) If the contractor persistently neglects to carry out his obligations under the contract and/ or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-Charge.

(v) If the contractor shall offer or give or agree to give to any person in Government service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for Government.

(vi) If the contractor shall enter into a contract with Government in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-in-Charge.

(vii) If the contractor had secured the contract with Government as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits breach of Integrity Agreement.

(viii) If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.

(ix) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.

(x) If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.

(xi) If the contractor assigns, transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer -in-Charge.

When the contractor has made himself liable for action under any of the cases aforesaid, the Competent Authority shall have powers:

(a) To determine the contract as aforesaid (of which termination notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination, the Security Deposit already recovered(if any) and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Government

(b) After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work.

In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

NOTE: In addition to above terms and conditions, In case of non-performance of contractor (including delay in execution of work/services or incompleteness of work/services as per the scope of contract) as per contract terms, conditions and clauses, the contract can be determined/terminated (with the approval of Competent Authority, CIAB) with one month notice to the contractor.

CLAUSE 2A

In case, the work cannot be started due to reasons not within the control of the contractor within one month of award of work, either party may close the contract. In case contractor wants to close the contract, he shall give notice to the department stating the failure on the part of department. In such eventuality, the Performance Guarantee of the contractor shall be refunded within following time limits:

- (i) If the Tendered value of work is up to Rs. 45 lac: 15 days.
- (ii) If the Tendered value of work is more than Rs. 45 lac and up to Rs. 2.5 Crore: 21 days.
- (iii) If the Tendered value of work exceeds Rs. 2.5 Crore: 30 days.

CLAUSE 3

Contractor liable to pay Compensation even if action not taken under Clause 2

In any case in which any of the powers conferred upon the Competent Authority by Clause-2 thereof, shall have become exercisable and the same are not exercised, the non-exercise hereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer-in-Charge putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession of (or at the sole discretion of the Engineer-in-Charge which shall be final and binding on the contractor) use as on hire (the amount of the hire money being also in the final determination of the Engineer-in-Charge) all or any tools, plant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor and intended to be used for the execution of the work/or any part thereof, paying or allowing for the same in account at the contract rates, or, in the case of these not being applicable, at current market rates to be certified by the Engineer-in-Charge, whose certificate thereof shall be final, and binding on the contractor, clerk of the works, foreman or other authorized agent to remove such tools, plant,

materials, or stores from the premises (within a time to be specified in such notice) in the event of the contractor failing to comply with any such requisition, the Engineer-in-Charge may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and his risk in all respects and the certificate of the Engineer-in-Charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.

CLAUSE 4

Time and Extension for Delay

The time allowed for start of the work as specified in the Schedule 'C' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the work shall commence from such time period as mentioned in Schedule 'C' or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, Government shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the performance guarantee absolutely.

4.1 Preventive maintenance Chart

The Contractor shall prepare an Preventive maintenance chart for the execution of allotted work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the program within the stipulated period or earlier and submit the same for approval of the Engineer-in-Charge within 10 days of the issue of letter of acceptance/award for the contract. The work has to be completed in stages as indicated in the Milestones and the program should be prepared in such a manner to achieve these Milestones as indicated therein or earlier.

The program chart should include the following: -

- a) Descriptive note explaining sequence of various activities.
- b) Network (PERT / CPM / BAR CHART) which will indicate resources in terms of manpower and specialized equipment for every important stage.

If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved program referred above, the contractor shall produce a revised program showing the modifications to the approved program by additional inputs to ensure completion of the work within the stipulated time. The submission of revised program or approval by the Engineer-in-Charge of such program or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-Charge to take action against the contractor as per terms and conditions of the agreement.

4.2

If the work(s) be delayed by:-

- (i) Force majeure, or
- (ii) Abnormally bad weather, rains or
- (iii) Serious loss or damage by fire, or
- (iv) Civil commotion, local commotion of workmen, strike or lockout, affecting any of the Trades employed on the work, or
- (v) Delay on the part of other contractors or tradesmen engaged by owner in executing work not forming part of the Contract, or
- (vi) Non-availability of stores material , which are the responsibility of owner to supply or
- (vii) Non-availability or break down of tools and Plant to be supplied or supplied by Government, or

(viii) Any other cause which, is beyond the Contractor's control.

Then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the authority as indicated in Schedule 'C' but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.

4.3 Request for rescheduling of Mile stones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form to the authority as indicated in Schedule 'C'. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.

4.4 In any such case the authority as indicated in Schedule 'C' may give a fair and reasonable extension of time and reschedule the mile stones for completion of work. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule 'C' in writing, within 4 weeks of the date of receipt of such request respectively. Non-application by the contractor for extension of time/ rescheduling of the milestones shall not be a bar for giving a fair and reasonable extension/ rescheduling of the milestones by the authority as indicated in Schedule 'C' and this shall be binding on the contractor.

CLAUSE 5

Contractor to Keep Site Clean

After the work is carried out by the contractor, the contractor shall remove the wastage, debris etc. from the site completely arising out during the execution of the work. In case the contractor fails to comply with the requirements of this clause, the Engineer-in-Charge shall have the right to get this work done at the cost of the contractor either departmentally or through any other agency. Before taking such action, the Engineer-in-Charge shall give ten days notice in writing to the contractor.

CLAUSE 6

Payment Terms

The Contractor shall submit the Quarterly bills/Invoices to the Engineer-Incharge within First fifteen days on completion of quarter along with copy of service report carried during the quarter. Based on the satisfactory monthly service completion certificate given by Engineer-In-charge, the Quarterly bill payment to the contractor shall be released within 10 working days from the receipt of bill. The payment shall be made after deducting any amounts due from the contractor by way of mobilization advance, taxes, security deposit, penalties/ recoveries if any etc.

6.2 For any deficiency or defective service, an amount proportionate to the rates quoted by the contractor as given in his Price Bid shall be deducted from the Quarterly payment made to the contractor. The decision of Engineer-in-charge/competent authority of CIAB shall be final in this regard.

6.3 Due payment after completion of each Quarter after making any recoveries etc. towards taxes, duties & non-performance as described elsewhere in the bid documents shall be made to the contractor. No payment to the contractor shall be released till the contractor submits the bill for the work done by him. The bills shall be paid quarterly. CIAB will make all endeavors to release the due payment within 10 days of receipt of certified bill from the contractor.

- 6.4 Proportionate payment shall be deducted from the contractor's bill if any work is found to be not done/is incomplete or is unsatisfactory, as adjudged by the Engineer-in-charge. In case of any difference of opinion between the engineer in charge and the contractor, regarding the non-performance or unsatisfactory performance of work, the matter will be referred to the Chief Executive Officer, CIAB whose decision on the matter shall be final. CIAB may also, at their discretion get such defective/deficiency work done at the risk & cost of the contractor and recover the actual amount spent plus 20% of actual spent amount including all actual CIAB establishment charges, from the contractor's bills. Repeated lapses in doing the work satisfactorily shall result in rescinding the contract as described in clause 4.

CLAUSE 7

Payment of Contractor's Bills to Banks

Payments due to the contractor shall be made to his bank, registered financial, co-operative or thrift societies or recognized financial institutions instead of direct to him provided that the contractor furnishes to the Engineer-in-Charge (1) an authorization in the form of a legally valid document such as a power of attorney conferring authority on the bank; registered financial, co-operative or thrift societies or recognized financial institutions to receive payments and (2) his own acceptance of the correctness of the amount made out as being due to him by Government or his signature on the bill or other claim preferred against Government before settlement by the Engineer-in-Charge of the account or claim by payment to the bank, registered financial, co-operative or thrift societies or recognized financial institutions. While the receipt given by such banks; registered financial, co-operative or thrift societies or recognized financial institutions shall constitute a full and sufficient discharge for the payment, the contractor shall whenever possible present his bills duly receipted and discharged through his bank, registered financial, co-operative or thrift societies or recognized financial institutions. Nothing herein contained shall operate to create in favour of the bank; registered financial, co-operative or thrift societies or recognized financial institutions any rights or equities vis a vis the President of India.

CLAUSE 8

Deviations/ Variations Extent and Pricing

The Engineer-in-Charge after approval from Competent Authority shall have power

- i) Execute any extra item which was not initially considered in tender or could not be envisaged during estimation. The contractor shall be paid for same item based on DSR rates or market rate in case item is not available in DSR. In case of market rate, contractor has to submit analysis of rate in CPWD DAR format along with quotation/back up documents.
- ii) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and
- (iii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

8.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered be extended, if requested by the contractor, as follows:

- (i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus

(ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

8.2 A. For Project and original works:

Deviation, Extra Items and Pricing

In the case of extra item(s) (items that are completely new, and are in addition to the items contained in the contract), the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis, for the work and the engineer-in-charge shall within prescribed time limit of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

B. For Maintenance works including works of up gradation, aesthetic, special repair, addition/alteration:

In the case of Extra Item(s) being the schedule items (Delhi Schedule of Rates items), these shall be paid as per the schedule rate plus cost index (at the time of tender) plus/minus percentage above/ below quoted contract amount. Payment of Extra items in case of non-schedule items (Non-DSR items) shall be made as per the prevailing market rate.

Deviation, Substituted Items, Pricing

A. For Project and original works:

In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para.

(a) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted). (b) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

B. For Maintenance works including works of up gradation, aesthetic, special repair, addition/alteration:

Deviation, Deviated Quantities, Pricing

A. For Project and original works:

In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in schedule C, the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities, the Engineer-in-Charge shall within prescribed time limit of receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

B. For Maintenance works including works of up gradation, aesthetic, special repair, addition/alteration:

In the case of contract items, which exceed the limits laid down in schedule C, the contractor shall be paid rates specified in the schedule of quantities.

The prescribed time limits for finalising rates for Extra Item(s), Substitute Item(s) and Deviated Quantities of contract items are as under:

- (i) If the Tendered value of work is up to Rs. 45 lac : 30 days.
- (ii) If the Tendered value of work is more than Rs 45 lac and up to Rs. 2.5 Crore : 45 days.
- (iii) If the Tendered value of work exceeds Rs. 2.5 Crore : 60 days.

8.3 A. For Project and original works:

The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Schedule C, and the Engineer-in-Charge shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.

B. For Maintenance works including works of upgradation, aesthetic, special repair, addition/alteration:

8.4 The contractor shall send to the Engineer-in-Charge once every three months, an up to date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Engineer-in-Charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Competent Authority may authorise consideration of such claims on merits.

8.5 For the purpose of operation of Schedule "C", the following works shall be treated as works relating to foundation unless & otherwise defined in the contract:

- (i) For Buildings : All works up to 1.2 metres above ground level or up to floor 1 level whichever is lower.
- (ii) For abutments, piers and well staining : All works up to 1.2 m above the bed level.
- (iii) For retaining walls, wing walls, compound walls, chimneys, over head reservoirs/ tanks and other elevated structures : All works up to 1.2 metres above the ground level.
- (iv) For reservoirs/tanks (other than overhead reservoirs/tanks) : All works up to 1.2 metres above the ground level.
- (v) For basement: All works up to 1.2 m above ground level or up to floor 1 level whichever is lower.
- (vi) For Roads, all items of excavation and filling including treatment of sub base.

8.6

Any operation incidental for testing to or necessarily has to be in contemplation of tenderer while filing tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

CLAUSE 9

Foreclosure of contract due to Abandonment or Reduction in Scope of Work

If at any time after acceptance of the tender Competent Authority shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Engineer-in-Charge shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works. The contractor shall be paid at contract rates, full amount for works executed at site as certified by the Engineer-in-Charge for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the foreclosure;

CLAUSE 10

Carrying out part work at risk & cost of contractor

If contractor:

(i) At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 07 days in this respect from the Engineer-in-Charge; or

(ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 04 days even after a notice in writing is given in that behalf by the Engineer-in-Charge; or Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge. The Engineer- in-Charge without invoking action under clause 2 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to:

(a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or

(b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

The Engineer- in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by Government because of action under this clause shall not exceed 10% of the tendered value of the work.

In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor.

The certificate of the Engineer-in-Charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the department are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

Any excess expenditure incurred or to be incurred by Government in completing the part work/part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by Government as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to Government in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract.

In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.

CLAUSE 11

Suspension of Work

(i) The contractor shall, on receipt of the order in writing of the Competent Authority, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in-Charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons:

(a) on account of any default on the part of the contractor or;

(b) for proper execution of the works or part thereof for reasons other than the default of the contractor; or

(c) for safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer in-Charge.

(ii) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:

(a) the contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25%, for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and;

(b) If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Engineer-in-Charge may consider reasonable in respect of salaries and/or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by

details to the Engineer-in- Charge within fifteen days of the expiry of the period of 30 days.

(iii) If the works or part thereof is suspended on the orders of the Engineer-in-Charge for more than three months at a time, except when suspension is ordered for reason (a) in subpara

(i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-Charge requiring permission within fifteen days from receipt by the Engineer in-Charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by owner or where it affects whole of the works, as an abandonment of the works by owner, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer-in-Charge. In the event of the contractor treating the suspension as an abandonment of the contract by owner, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in-Charge may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within 30 days of the expiry of the period of 3 months.

CLAUSE 12

12.1 Action in case Work not done as per Schedule of Scope of Work

All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-In-charge, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself. If it shall appear to the Engineer-in-charge, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within 02 months of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in- Charge in his demand aforesaid, then the contractor shall be liable to pay compensation/penalty at the same rate as under conditions of the contract (for non-completion/non-performance of the work in time) for this default.

In such case the Engineer-in-Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the authority specified in schedule 'C' may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Competent Authority to be conveyed in writing in respect of the same will be final and binding on the contractor.

12.2 PENALTY

(i) The contractor shall maintain the systems/services as per the scope of work defined in Schedule-A & D. In case of non-performance of the agency as per the scope of work and negligence of the duties as per the contract or delay in execution of work/services, penalty @ 0.5% per week or small amount for such negligence/delay shall be imposed on the contractor, to be calculated on per day basis as per the annual charges agreed to the agency. The same shall be recoverable from the quarterly bills payable to the agency. Also, if the contractor fails to perform their duties as per the contract agreement, the CIAB will be at liberty to get the same done from some external agency on the risk and cost of the contractor.

(ii) Also, if any machinery/system gets damaged due to the wrong operation & Maintenance/negligence on the part of the contractor, the actual cost of repair of that system shall be recoverable from the contractor.

CLAUSE 13

Contractor Liable for Damages, defects during contract period

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work during the contract period or within 02 months after a certificate final or otherwise of its completion shall have been given by the Engineer in-Charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-Charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit/performance guarantee or the proceeds of sale thereof or of a sufficient portion thereof.

CLAUSE 14

Contractor to Supply Tools, Tackles, ladders, Transport, Machinery etc.

The contractor shall provide at his own cost all materials (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-Charge's stores), machinery, tools & plants as specified in schedule C. In addition to this, appliances, Instruments, implements, other plants, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-Charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/or from his security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.

CLAUSE 15

Labour Laws to be complied by the Contractor

Not applicable

CLAUSE 15A

No labour below the age of fourteen years shall be employed on the work.

CLAUSE 15 B

Payment of wages:

Not applicable

CLAUSE 15C

In respect of all labour employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety provisions as per Safety Code given in tender and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay a penalty of Rs.2000/- for each default and in addition, the Engineer -in- Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

CLAUSE 16

Minimum Wages Act to be complied with

The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed thereunder and other labour laws affecting contract labour that may be brought into force from time to time.

CLAUSE 17

Work not to be sublet. Action in case of insolvency

The contract shall not be assigned or sublet without the written approval of the Engineer- in - Charge. And if the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of Government in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer in- Charge on behalf of the CEO shall have power to adopt the course specified in Clause 3 hereof in the interest of Government and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

CLAUSE 18

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

CLAUSE 19

Changes in firm's Constitution to be intimated

Where the contractor is a partnership firm, the previous approval in writing of the Engineer in-Charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern, such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 21.

CLAUSE 20

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in-Charge who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

CLAUSE 21

Settlement of Disputes & Arbitration

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

- (i) If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the owner on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, the contractor may file for arbitration. The arbitrator shall be appointed by Competent Authority, CIAB & arbitration shall take place at Mohali under arbitration act.
- ii) The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory modifications or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.
- iii) It is also a term of the contract that if any fees are payable to the arbitrator, these shall be paid equally by both the parties.

CLAUSE 22

Contractor to indemnify owner against Patent Rights

The contractor shall fully indemnify and keep indemnified the owner against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against owner in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise therefrom, provided that the contractor shall not be liable

to indemnify the owner if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge in this behalf.

CLAUSE 23

Lumpsum Provisions in Tender

When the estimate on which a tender is made includes lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer-in-Charge payable of measurement, the Engineer-in-Charge may at his discretion pay the lump-sum amount entered in the estimate, and the certificate in writing of the Engineer-in-Charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.

CLAUSE 24

Action where no Specifications are specified

In the case of any class of work for which there is no such specifications, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per CPWD specifications, if not available then as per Original Equipment Manufacturer(OEM) specs and then as per District Specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-Charge.

CLAUSE 25

Withholding and lien in respect of sum due from contractor

(i) Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, the Engineer-in-Charge or the owner shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Engineer in- Charge or the owner shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a lien over the same pending finalisation or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the Engineer-in-Charge or the owner shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Engineer-in-Charge of the owner or any contracting person through the Engineer-in- Charge pending finalization of adjudication of any such claim. It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer-in-Charge or owner will be kept withheld or retained as such by the Engineer-in-Charge or owner till the claim arising out of or under the contract is determined by the arbitrator(if the contract is governed by the arbitration clause) by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership firm or a limited company, the Engineer-in-Charge or the owner shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/limited company as the case may be, whether in his individual capacity or otherwise.

(ii) owner shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after

payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over-payment and it shall be lawful for owner to recover the same from him in the manner prescribed in sub-clause (i) of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by owner to the contractor, without any interest thereon whatsoever.

CLAUSE 26

Hire of Plant, Instruments & Machinery

The contractor shall arrange at his own expense all tools, plant, Instruments, ladders, machinery and equipment (hereinafter referred to as T&P) required for execution of the work.

CLAUSE 27

Employment of Technical Staff and employees

Contractors Superintendence, Supervision, Technical Staff & Employees

The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

CLAUSE 28

Termination of Contract on death of contractor

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Engineer-Incharge on behalf of the Chief Executive Officer, CIAB shall have the option of terminating the contract without compensation to the contractor. However, the due wages payable to deployed staff for the duty days shall be paid by CIAB.

CLAUSE 29

If relative working in department then the contractor not allowed to tender

The contractor shall not be permitted to tender for works if officials responsible for award and execution of contracts. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Officer in CIAB. Any breach of this condition by the contractor would render him debarred from tendering.

NOTE: By the term "near relatives" is meant wife, husband, parents and grandparents, children and grandchildren, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

CLAUSE 30

No Gazetted Engineer to work as Contractor within one year of retirement

No engineer of gazetted rank or other gazetted officer employed in CIAB engineering division or administrative duties shall work as a contractor or employee of a contractor for a period of one year after his retirement from CIAB service without the previous permission of Competent Authority at CIAB in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission

of Competent Authority at CIAB as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

CLAUSE 31

Execution of work.

31.1 The contractor shall execute the whole and every part of the work in the most professional and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the agreement, site requirements & instructions of the Engineer-in-Charge. The contractor shall comply with the provisions of the contract and with the care and diligence & execute and maintain the installations and provide all labour and materials, tools and plants in so far as necessary for providing these or as inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of maintenance.

31.2 The contractor is required to obtain approval of Engineer –in-charge in respect of Periodical preventive maintenance schedule for all the assets in the complex under the scope of this contract, within 15 days from the date of letter of award.

31.3 The contractor is required to submit the copy of the Service report of OEMs or their authorized agency (if any) or agency approved by CIAB (as the case may be) after attending defect/preventive maintenance as per schedule of OEMs or the schedule approved by CIAB for the installations for maintenance of which OEMs has not been defined in the tender documents.

31.4 The Engineer-in-Charge shall have power: -

- To make alteration in, omissions from, additions to, or substitutions for the original instructions that may appear to him to be necessary or advisable during the progress of the work, and
- i) To omit a part of the works in case of non- availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work or on assessed rates.

31.5 Rates for altered or substituted or additional work or extra item shall be determined as follows;

- a) If the rate for altered or substituted item of work is specified in the schedule of quantities; the contractor shall carry out the altered or substituted items at the same rate. In the case of composite tenders, where two or more schedules of quantities may form part of the contract, the applicable rate shall be taken from the schedule of quantities of that particular part in which the deviation is involved, failing that at the lowest applicable rate for the same item of work in the other schedules of quantities.
- b) If the rate for any altered or substituted item of work is not specified in the schedule of quantities, the rate for that item shall be derived from the rate for the nearest similar item specified therein. In case of composite tenders where two or more schedule of quantities form part of the contract, the rate shall be derived from the nearest similar item in the schedule of quantities of the particular part of works in which the deviation is involved failing that from the lowest of the nearest similar items in other schedule of quantities.

- c) If the rate for any additional or substituted item of work cannot be determined in the manner specified above, the contractor shall, within 15 days of the date of receipt of the order to carry out the said work, inform the Engineer-in-Charge of the rate which he proposes to claim for such item of work, supported by analysis of the rate claimed, and the Engineer-in-Charge shall, within one month thereafter, after giving due consideration to the rate claimed by the contractor, determine the rate on the basis of market rate(s). In the event of the contractor failing to inform the Engineer-in-Charge within the stipulated period of time, the rate which he proposes to claim, the rate for such item shall be determined by the Engineer-in-Charge on the basis of market rate(s).

CLAUSE 32

No compensation for alteration or restrictions of work to be carried out

If at any time after the commencement of the work, CIAB shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works thereof as specified in the tender to be carried out, the Engineer-in-Charge shall give notice in writing of fact to the contractor who shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of the full amount of the work not having been carried out, neither shall he have any claim for compensation by reason of any alternations having been made in the original specifications, drawings, designs and instructions which shall involve any curtailment of the work as originally contemplated.

CLAUSE 33

LABOUR LICENSE

The Contractor will take labour license from the licensing authority (if applicable to this contract) for the deployment of manpower at CIAB campus and will submit the copy of same to the Engineer-Incharge after the award of work.

CLAUSE 34

INDEMNITY REGARDING DAMAGE TO PERSONS AND PROPERTY:

The Contractor shall, except if and so far as the Contract provides otherwise, indemnify CIAB (through Indemnity bond on format approved by CIAB, before commencement of work) against all losses and claims whatsoever in respect of injuries or death to any person, whether CIAB or Contractor's employee or a third party, or loss / damage to any property whether of CIAB, Contractor or third party, which may arise out of or in consequence of the execution and maintenance of the works related to this contract. This indemnity shall be against all claims proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto.

CLAUSE 35

OTHER INDEMNITY

The contractor shall also indemnify CIAB (through Indemnity bond on format approved by CIAB, before commencement of work/release of first bill) against any fine/penalty/ prosecution levied by any government authority for any violation of environment laws, safety norms, labour laws (like workmen compensation Act etc. in respect of workers engaged by the contractor),

PF laws, health laws etc. which may occur in the process of carrying out of this work or at later stage. It will be the contractor's responsibility to ensure that relevant rules & regulations are fulfilled by him.

CLAUSE 36

INSURANCE:

The contractor is required to seek Insurance policy against injury or death of his own employees or any third party which may result out of execution of this contract. FM agency is liable to replace /repair CIAB property/equipment in the event of fault /damage etc. due to the fault of FM agency. FM agency shall be solely responsible for losses suffered by CIAB in the event of fault /damage etc. to the CIAB property.

CLAUSE 37

Apprentices Act provisions to be complied with

The contractor shall comply with the provisions of the Apprentices Act, 1961 and the rules and orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of the contract and the owner may, in his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

CLAUSE 38

Force Majeure

Neither Contractor nor Owner (CIAB) shall be considered in default in performance of their obligations if such performance is prevented or delayed by events such as but not limited to war, hostilities, revolution, riots, civil commotion, strikes, lock-outs, conflagrations, epidemics, accidents, fire, storms, floods, droughts, earthquakes or ordinances or any act of God or for any other cause beyond the reasonable control of the party affected or prevented or delayed. However, a notice is required to be given within 30 (thirty) days from the happening of the event with complete details, to the other party to the contract, if it is not possible to serve the notice, within the shortest possible period without delay.

As soon as the cause of Force Majeure has been removed the party whose ability to perform its obligations has been affected, shall notify the other of such cessation and the actual delay incurred in such affected activity adducing necessary evidence in support thereof.

From the date of occurrence of a case of Force Majeure, obligations of the party affected shall be suspended during the continuance of any inability so caused. With the cause itself and the inability resulting therefrom having been removed, the agreed time of completion of the respective obligations under this agreement shall stand extended by a period equal to the period of delay occasioned by such events.

Should one or both parties be prevented from fulfilling the contractual obligations by a state of Force Majeure lasting to a period of 6 months or more, the two parties shall consult each other to decide regarding the future execution of this agreement.

CLAUSE 39

Applicable Law

The contract shall be governed by and interpreted in accordance with the laws of India for the time being in force.

SAFETY CODE

1. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical.)
2. Scaffolding of staging more than 3.6 m (12ft.) above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm. (3ft.) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends there of with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6 m (12ft.) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm. (3ft.)
5. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m. (30ft.) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. (11½") for ladder upto and including 3 m. (10 ft.) in length. For longer ladders, this width should be increased at least $\frac{1}{4}$ " for each additional 30 cm. (1 foot) of length. Uniform step spacing of not more than 30 cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit; action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.
6. All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.
7. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned:- The following safety equipment shall invariably be provided.
 - (i) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
 - (ii) Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective goggles.
 - (iii) Those engaged in welding works shall be provided with welder's protective eye shields.
 - (iv) Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
 - (v) When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated atleast for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measure

are adhered to :-

- (a) Entry for workers into the line shall not be allowed except under supervision of higher officer.
 - (b) At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.
 - (c) Before entry, presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.
 - (d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.
 - (e) Safety belt with rope should be provided to the workers. While working inside the manholes, such rope should be handled by two men standing outside to enable him to be pulled out during emergency.
 - (f) The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.
 - (g) No smoking or open flames shall be allowed near the blocked manhole being cleaned.
 - (h) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.
 - (i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in-Charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.
 - (j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.
 - (k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 metres away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.
 - (l) The workers engaged for cleaning the manholes/sewers should be properly trained before allowing to work in the manhole.
 - (m) The workers shall be provided with Gumboots or non sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.
 - (n) Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.
 - (o) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.
 - (p) The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard in an individual case will be final.
 - (vi) The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precaution should be taken:-
 - (a) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
 - (b) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scrapped.
 - (c) Overalls shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.
8. An additional clause (viii)(i) of Central Public Works Department Safety Code (iv) the Contractor shall not employ women and men below the age of 18 on the work of painting with product containing lead in any form, wherever men above the age of 18 are employed on the work of lead painting, the following principles must be observed for such use :
- (i) White lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.
 - (ii) Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.

- (iii) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
- (iv) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
- (v) Overall shall be worn by working painters during the whole of working period.
- (vi) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.
- (vii) Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical officer.
- (viii) Medical examination may be done further in such cases.
- (ix) Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.

9. When the work is done near any place where there is risk of drowning, all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.

10. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions:-

- (a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.
- (b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
- (c) Every crane driver or hoisting appliance operator, shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.
- (d) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
- (e) In case of departmental machines, the safe working load shall be notified by the Electrical Engineer in- Charge. As regards contractor's machines the contractors shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings any machinery to site of work and get it verified by the Electrical Engineer concerned.

10. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

11. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

12.. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.

13. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer or Engineer-in-Charge of the department or their representatives.

14. Contractor shall indemnify CIAB from the disputes arising out of injuries of its workers or loss of life to its workers, material during the whole duration of contract agreement.

15. Notwithstanding the above clauses from (1) to (16), there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

Note: - The above safety precautions/provisions along with any other as may be required to execute the work shall be provided by contractor free of cost.

SCHEDULE-A

SCOPE OF WORK

ABOUT THE WORK:

Center of Innovative and Applied Bioprocessing (CIAB) is a Central Autonomous Institute under Department of Biotechnology, Ministry of Science and Technology, Govt. of India. CIAB is co-located with NABI in a single campus called NABI-CIAB campus which is newly developed in Knowledge City, sector-81, Mohali-Punjab, India. The details of the different buildings/facilities to be maintained by the contractor at CIAB campus are given as below:

S. No	Name of Building	No. of Floors
1	Utility-1 (HVAC Plant Room)	G+ Basement
2	CIAB laboratory inclusive of Admin Block	G+3
3.	Utility-1	G+ Basement

Note:- The bidder shall mandatory visit the site and check all the buildings, areas, infrastructure etc. before quoting their rates.

CIAB intends to award the Annual Operation and Maintenance contract of Heating Ventilation and Air-conditioning (HVAC) system and Integrated Building Management system (IBMS) to some specialized agency for the following inventory at CIAB campus:

NOTE: CAMC stands for Comprehensive Annual Operation & Maintenance Contract and AMC stands for Non-Comprehensive Annual Operation & Maintenance contract.

LIST OF HVAC SYSTEM INVENTORY OF CIAB

A. Items for CAMC

S.N	Item Description	Location	Rating/ capacity	Make	Quantity (in Nos.)	Type of CAMC/AMC
1	Primary pump	Utility-1/ HVAC Plant Room	320 GPM	Armstrong	3	CAMC
2	Secondary pump with VFD	Utility-1/ HVAC Plant Room	435 GPM	Armstrong	3	CAMC
3	Hot water pump with VFD	Utility-1/ HVAC Plant Room	75 GPM	Armstrong	3	CAMC
4	Condenser water pump	Utility-1/ HVAC Plant Room	480 GPM	Armstrong	3	CAMC
5	Hot water Generator	Utility-1/ HVAC Plant Room	200 KW	EMERALD	1	CAMC
6	MAIN HVAC ELECT PANEL IN PLANT ROOM/CIAB building	Utility-1		Precision Systems Ltd	1	CAMC
7	VFD CONTROL CARD & LCP PANEL REP/REPLACEMENT	Various locations of CIAB		ABB	11	CAMC
8	Chilled water line makeup pump	Terrace of CIAB LAB Bldg.	3HP	Lowara	1	CAMC
9	AHU with starter panel	LAB-1 F.F	10555 CFM	Waves	1	CAMC
10	AHU with starter panel	LAB-2 F.F	10555 CFM	Waves	1	CAMC
11	AHU with starter panel	LAB-1 S.F	10554 CFM	Waves	1	CAMC
12	AHU with starter panel	LAB-2 S.F	10554 CFM	Waves	1	CAMC
13	AHU with starter panel	LAB-1 T.F	10776 CFM	Waves	1	CAMC
14	AHU with starter panel	LAB-2 T.F	10776 CFM	Waves	1	CAMC
15	AHU with starter panel	RECEPTION G.F	3500 CFM	Waves	1	CAMC
16	AHU with starter panel	PROCESSING AREA	18000 CFM	Waves	1	CAMC
17	AHU with starter panel	PROCESSING AREA	1800 CFM	Waves	1	CAMC
18	Cassette Units	CIAB building	1.0 TR	Carrier	1	CAMC
19	Cassette Units	CIAB Lab Building	1.5 TR	Carrier	54	CAMC
20	Cassette Units	CIAB Lab Building	2.0 TR	Carrier	21	CAMC

21	Cassette Units	CIAB Lab Building	2.5 TR	Carrier	23	CAMC
22	Fan coil Units with Thermostat	CIAB Lab Building	2.0 TR	Waves	11	CAMC
23	Cooling tower	Utility 1 Plant Rooftop	120 TR	Bell	3	CAMC
24	Hot water line make up pump	CIAB building Rooftop	3 HP	Lowara	1	CAMC
25	AHU with starter panel	GMP lab G.F	6528 CFM	Waves	1	AMC
26	AHU with starter panel	GMP lab G.F	6487 CFM	Waves	1	AMC
27	AHU with starter panel	GMP lab G.F	7156 CFM	Waves	1	AMC
28	AHU with starter panel	GMP lab G.F	3686 CFM	Waves	1	AMC
29	AHU with starter panel	GMP lab G.F	6675 CFM	Waves	1	AMC
30	AHU with starter panel	TFA	950 CFM	Waves	1	AMC
31	AHU with starter panel	TFA	1700 CFM	Waves	1	AMC
32	AHU with starter panel	ADMIN	1000 CFM	Waves	1	AMC
33	AHU with starter panel	TOILET VENTILATION	2200 CFM	Waves	1	AMC
34	LFU	LF1 LF2	-	Waves	2	AMC
35	Exhaust Fan AHU with starter panel	Top Terrace CIAB bldg.	2000 CFM	Cool tech	1	AMC
36	Exhaust Fan AHU with starter panel	Terrace 1F	2000 CFM	Cool tech	1	AMC
37	AHU (Only fresh Air supply fan) with starter panel	Terrace 1F	2800 CFM	Cool tech	1	AMC
38	Exhaust Fan AHU with starter panel	2nd Floor Terrace CIAB bldg.	4000 CFM	Waves	3	AMC
39	Exhaust Fan AHU with starter panel	Top Terrace CIAB bldg.	9000 CFM	Waves	1	AMC
40	Exhaust Fan AHU with starter panel	Terrace 1F	6000 CFM	Ravi Aircon	1	AMC
41	Split ACs with outdoor condensing units	Utilities	2.0 TR/1.5 Ton	Toshiba/Blue star	9	AMC

Note: (i)The 03 in nos. YEWS 120 TR YORK make chillers of CIAB are already under Comprehensive maintenance contract with the OEM..

(ii)The Centralized Integrated Building Management System (IBMS) of Honeywell (Trend) make is installed at CIAB for the monitoring and operation of above-mentioned HVAC Inventory/system.

The above is the detail list of Major Inventories/Machineries installed within the CIAB campus which are required to be operated and Maintained by the agency but not limited to this only.

SCHEDULE OF SERVICES TO BE PROVIDED BY THE CONTRACTOR FOR HVAC INVENTORY OF CIAB:

- 1) The agency shall be fully responsible to maintain all the HVAC systems/services/inventories installed at CIAB campus as per the Maintenance schedule recommended by the respective Original Equipment Manufacturer (OEMs) of different systems and as per the instructions of Engineer-Incharge i/c regular cleaning and day to day maintenance of all the HVAC machineries installed inside CIAB campus.
- 2) The agency shall depute site in-charge/supervisor for effectively scheduling of routine/preventive maintenance activities of HVAC inventory, scheduling for rectification for day to day complaints, breakdown/fault rectification works etc.
- 3) In case of minor defects/complaints and in case of emergent situations, the agency shall rectify the defects on immediate basis but within a maximum of 24hrs. time period. In case of other defects, the same shall be rectified by the contractor within a maximum of 72hrs. time period.
- 4) In case of servicing/Preventive Maintenance of any Inventory/Machinery as per the due schedule, the agency shall be fully responsible to carry out the servicing/Preventive Maintenance as per the due schedule specified by respective OEMs or as instructed by the Engineer-Incharge.
- 5) In case of Main HVAC Power panel and AHU starter panels which are covered under CAMC, the contractor shall be fully responsible for repair/replacement of all Variable Frequency Drives (VFDs), Air-Circuit Breakers (ACBs), MCCBs, MCBs, Relays, contactors, terminals, indication lamps, control wiring, start/stop push buttons, Energy meters, VAF meters, display control card of cassette units etc. in case of any fault/breakdown and make the system fully functional.
- 6) In case of Chilled water pumps, Hot water pumps, condenser water pumps, pressure make up water pumps which are covered under CAMC, the contractor shall be fully responsible for repair/replacement of all Variable Frequency Drives(VFDs), motors, pumps, electrical terminals etc. in case of any fault/breakdown and make the system fully functional.
- 7) In case of cooling towers (CTs) which are covered under CAMC, the contractor shall be fully responsible for repair/replacement of CT fan motors, PVC fills, Manual/Butterfly valves etc. in case of any fault/breakdown and make the system fully functional.
- 8) In HVAC Plant room, the contractor shall be fully responsible for timely cleaning/servicing of strainers and replacement of gaskets/mesh etc. complete as per the site requirement.
- 9) The contractor shall be fully responsible for repair/replacement of manual/butterfly valves in Chilled water line, Hot water line, condenser water line etc. in case of any fault and make the system fully functional.
- 10) The contractor shall be fully responsible for repair/replacement of faulty temperature and pressure gauges wherever required in the Chilled water and Hot water line of complete HVAC system.
- 11) In case of Hot water generators which are covered under CAMC, the contractor shall be fully responsible for repair/replacement of any or all of the faulty spare parts in case of any breakdown to make the system fully functional.
- 12) In case of AHUs which are covered under CAMC, the contractor shall be fully responsible for repair/replacement of blowers, motors, belts, Pre and Fine filters etc. complete as per the site requirement.
- 13) In case of AHUs which are covered under CAMC as well as AMC, the contractor shall also be fully responsible for any repair/leakage rectification/blockage rectification in

cooling coil as well as heating coil in case of any fault and make the system fully functional.

- 14) In case of AHUs which are covered under AMC, the contractor shall be fully responsible for repair/replacement of blowers, motors, belts, Pre and Fine filters etc. complete as per the site requirement. However the spare parts for the same will be provided by CIAB.
- 15) In case of FCUs which are covered under CAMC, the contractor shall be fully responsible for any repair/leakage rectification/blockage rectification in cooling coil in case of any fault and make the system fully functional. The contractor shall also repair/replace the filters, thermostat, manual/butterfly valves etc. in case of any fault and shall make the system fully functional.
- 16) In case of Exhaust Fan AHU Unit, Inline fans and Axial Flow fans which are covered under AMC, the contractor shall be fully responsible for repair/rewinding of fan motors. The contractor shall also be fully responsible for repair of fan starter panels etc. however any other spares if required for making the system functional shall be arranged by CIAB.
- 17) The contractor shall be responsible for timely greasing/Preventive Maintenance of all motors, pumps etc. of HVAC system installed at CIAB.
- 18) The contractor shall also be responsible for repair of Pan Type humidifiers installed in Green house and Glass house in case of any fault and shall make the system fully functional.
- 19) In case of split ACs, the agency shall be fully responsible for repair/replacement of all defective spares i/c compressors, PCBs, Fan motors, Filters, other parts etc. to make the unit fully functional.
- 20) Regarding Integrated Building Management system (IBMS), only operation and routine/preventive maintenance is required (i.e., Non-Comprehensive AMC in scope of work) for this IBMS system including software trouble shooting, programming etc. However, in case of any spares/material requirement, the same shall be arranged by CIAB on it's own or shall be payable to the contractor separately.
- 21) All the tools/tackles/ladders etc. required for carrying out the Annual Operation & maintenance contract shall be arranged by agency on it's own.
- 22) The agency shall depute it's manpower for required chemical dosing in Chilled water line and condenser water line circuits of CIAB however the chemical for the same will be provided by CIAB.
- 23) The Preventive Maintenance of the specialized machineries i.e., Chillers shall be arranged by CIAB through OEM or their authorized agency however the O & M contractor will support & depute it's manpower with the OEM/OEA during the same. The day to day maintenance of these machines shall be done by the O&M staff deputed by the contractor at CIAB campus.
- 24) The agency shall also be fully responsible for the regular training of it's deployed Manpower for successful Operation & Maintenance of the HVAC system of CIAB.
- 25) The agency shall also be fully responsible for coordinating with the other Operation & maintenance agencies working inside CIAB campus related to Electric Power supply etc. for smooth operation of the HVAC system.

GENERAL PREVENTIVE MAINTENANCE SCHEDULE

PART- I

1. Monthly checking and recording of airflow through the filters and diffusers. Necessary corrective actions to be taken if found any abnormality.
2. Periodic cleaning of filters for HVAC system as mentioned below.

SI No	Type of Filter	Cleaning Frequency
1	Pre Filter	Monthly
2	Micro Filter	Do
3	Fresh Air Filter	Do
4	Return filter	Do
5	Hepa Filter	Quarterly

PART II - CHECKLIST FOR MONTHLY MAINTENANCE

1. Disconnect the power supply to the AHU and place "under maintenance" board for the same.
2. Clean the AHU with lint free cloth.
3. Grease the bearings of the blower and motor if required.
4. Check the motor terminals for tightness, rectify if required
5. Clean the drain tray of cooling coil.
6. Tighten the base bolts of the blower, motor & Pumps etc.
7. Check the V- belt for tightness, rectify if required.
8. Check for leakage, if any, rectify the same.
9. Reconnect the power supply and take trials to ascertain proper working.
10. Run the blower and check for leakages through the doors and duct joints of AHU.
11. Check dampers for smooth operation and check their locking arrangements.
12. Cleaning of oil filter of compressor
13. Cleaning of suction line strainer or compressor / AHU
14. Checking of correctness and calibration of all safety and automatic controls
15. Cleaning of contactors of Chiller plant if required.
16. Record all the observation on Preventive Maintenance Check list.

Services on Cassette units in addition to breakdown/fault

1. Check air flow
2. Clean filters
3. Check and clear condensate drains
4. Check electrical connections and display controls
5. Check general condition of indoor
6. Check condition of coils.
7. Check for mould and mildew

PART III – CHECKLIST FOR QUARTERLY (EVERY 03MONTHS) MAINTENANCE

1. Disconnect the power supply by switching off the isolator / MCCB at panel and put under maintenance board.
2. Check the main and control wiring of the panel for loose connections, tighten as required. Clean contacts of starters and selector switch with Corrosion Rust Cleaner (CRC 2-26).
3. Open the blower section of AHU and clean the blower fan.
4. Clean the cooling coil externally with jet water spray.
5. Clean the drain tray of cooling coil.
6. Paint the AHUs rusted parts, if required.
7. Check the doors for proper closing / opening rectify if required.
8. Checking of all pumps, bearing, impeller, coupling and lubricating accordingly with suitable grease / oil as per requirement

9. Checking of all parameters (discharge oil pressure, suction oil pressure & difference oil pressure) of chiller plant as per OEM manual
10. Replacement of Belts of AHUs & balancing of air change velocity (CFM) in various laboratories.
11. Cleaning of air purge valves fitted in the water line
12. Chemical dosing to water used in HVAC system (as per specification of OEM)
13. Checking of bearing clearances
14. Replacement of gland packing of pumps & water line valves.
15. Maintenance of all electrical contractors, starters and switches of local panes (i-e panels related to HVAC & BMS).
16. Checking & tightening of cable / isolator / contactor etc. connectors and if required same are to be replaced.
17. Record all the observations on the Preventive Maintenance Checklist.

B: Scope of Works for the LT/HT panels and Dry Type transformers

The contractor shall have to take up both preventive as well as break down maintenance jobs. The Engineer-in charge will give instructions regarding jobs to be carried out as and when requirement arises at the site. The Contractor shall have to carry out the jobs in consultation with Engineer-in-charge and have to be completed in all respect to the entire satisfaction of Engineer-in-charge, such as “Scheduled checking/servicing/overhauling of the panels/machines as per instructions of Engineer and maintenance schedules indicated in this tender document or recommended by manufacturers of the machine as the case may be & attending the faults in the machines wherever these go out of order or work inefficiently”.

In other words: The scope of work includes repair/ replacement/ overhauling of all the parts of the machines, which become defective, inefficient or get damaged during working. The decision of competent authority regarding repair/ replacement/ overhauling of any part of the machine will be final and binding on the contractor. All the consumable and non-consumable required for equipment listed in **schedule of quantities (List of equipment)** shall be obeyed by the contractor during execution of the contract period. Repairing/ leakage attend of any unit is to be done by the contractor. Manpower, material (only consumable), tools and tackles etc. required are in the scope of the contractor. If service of Helper or unskilled worker is required for above job, it is in the scope of the contractor. **The spares of Authorized make or as approved by Engineer in charge to be arranged by the contractor however the cost shall be borne by the CIAB.** All other related electrical jobs are in the scope of contractor. The scope of works for which bids have been invited will broadly be as per spectrum of services detailed in this document.

However, bidders are advised to personally visit the site and assess the actual quantum of work before submission of bids.

1.0 Spectrum of services:

Electro Mechanical Equipment for which Maintenance Services are needed are detailed at Clause 8 below. However, this list is only indicative and under each item, any other services which may be relevant and necessary shall be provided by the contractor. Bidder would assess the actual quantum of work by visiting the site and bid accordingly.

1.1 All the electrical & mechanical services of the laboratory spaces (electrical power) are to be maintained as per the requirement of CIAB. The requirement will broadly be to keep the equipment in good and efficient working condition at all the time, follow the preventive

maintenance and periodical overhaul schedule & procedures as listed in the manuals / literature of the OEM, ensure safety of the equipment and personnel using it.

1.2 The contractor shall attend to any maintenance problems and rectify the defects within the time limit set against different classification of rectification work as stipulated below:

- a) **Minor/Medium rectification works- within 24 hours** of notification to the contractor by CIAB such as, but not limited to,
 - i. Repair / replacement of misc. electrical / mechanical faults, misc. repair/rectification works including cleaning of contacts, contact points, earthing points & filters etc.
 - ii. Replacement of eyelets, socket, lugs & gaskets etc. in panels.

- (c) **Major rectification works/capital repair- within 72 hours** of notification to the contractor by CIAB such as replacement of certain non-stocked spare parts (not locally available in Mohali/Chandigarh etc.) which require the justification for 72 hours work schedule.

However, in case of any doubt in classification of rectification work, contractor can give technical justification and ask for extra time for approval of Engineer in charge who will have power to grant such extra time/change the classification of rectification work depending upon the correct technical justification and a reasonability of time scheduling for such extension/change of classification of a particular rectification work.

1.3 In case the contractor fails to rectify the defect(s) after handing over assets installed in CIAB in time limit mentioned in clause-3.2 CIAB reserves the right to get the defect(s) rectified at risk and cost of the contractor without further notice and be recovered from the quarterly bills of the contractor,

1.4 In case of unserviceability / dysfunction of the equipment for a period longer than as stated at above Penalty as detailed below shall also be imposed on the contractor and the amount will be recovered from their respective monthly bills.

NOTE: In exceptional cases, competent authority of CIAB may consider to extend the time limit mentioned above. The decision of competent authority shall be final and binding on the contractor in respect of category of rectification of defects. However, all complaints will be attended promptly and the time limit set for each category is the maximum time limit.

2.0 A snag list of the installations covered in the present scope of work shall be prepared jointly by successful bidders & CIAB so as to complete the defect-rectification work well before the actual contract period is over.

However, nothing shall be paid extra for preparation of snag list and preparation of snag list will not be considered as date of start. In case contractor is asked in writing to arrange rectification of any defect at the time of accepting the work order of AMC, the cost of rectification shall be reimbursed to him on actual basis.

Note-1: Any damage to the installations during the currency of contract will be made good by the contractor without extra cost to CIAB. Further, contractor would also indemnify CIAB for the damages caused due to negligence in imparting the services.

Note-2: Successful bidder shall submit copy of agreements with specialized agencies/associates of repute duly approved by CIAB including with OEMs agencies at the time of start of work as mentioned in above sub-clauses of clause-3.0.

3.0 Responsibility of the contractor at end of the contract period:

- a. All equipment taken for maintenance during the contract period shall be handed over back to CIAB in good working condition.
- b. Any equipment taken outside for repair from CIAB Campus shall be handed over in good working condition well before the end date of contract
- c. Passes issued by CIAB to the contractor' employees if any shall be handed over to CIAB representative.
- d. In case any equipment not handed over to CIAB in good working condition, then CIAB would get them repaired/procured on its own from other sources at the risk & cost of the contractor and the cost incurred shall be deducted from any payment due to him/security deposit.

5.1 All the employees of the contractor shall be in proper neat & clean uniform (including shoes) and will behave courteously, disciplined and professional manner maintaining absolute integrity during their service hour in CIAB Campus. The employees of the contractor shall display their photo ID cards duly issued and signed by the contractor while attending to the complaint in CIAB Campus.

4.0 FREQUENCY OF MAINTENANCE

The bidder shall carry out the maintenance services at the frequency detailed in **maintenance schedule** & as per guide line of OEM maintenance manual. Agencies have to attend to break-down service as and when required. The frequency may be increased depending up on requirement at site. As a whole it is to ensure that the equipments are well maintained at all the time. The work will be carried out at suitable timings to ensure that CIAB office work is not disturbed.

Note-1: The date of servicing carried out and next due date of servicing in respect of systems shall be neatly painted on assets in small fonts for effective monitoring as per direction of Engineer-in-charge.

Note-2: The contractor is required to submit preventive periodical maintenance schedule for approval by Engineer-in-charge at the time of starting the work after attending the scheduled/routine maintenance, contractor will submit service report (s) of OEMs as and when preventive periodical maintenance of any installation becomes due/ is carried out.

5.0 OTHER REQUIREMENTS TO BE FULFILLED BY THE BIDDER:

5.1 All coordination in respect of legal obligations of CIAB for this Contract in terms of any accident/ incident /inspection, Govt. department's viz. PSPCL or Other local authority like: Pollution control board, Central Electricity Authority etc. shall be carried out by the contractor. However, contractor will provide / furnish such information to Engineer-in-charge as may be required during investigations.

5.2 Bidder should in his technical bid provide detail of the manpower and equipment, bidder proposes to be used/ deployed by him/ those to render the Services covered in these Tender documents.

5.3 Bidder has to provide a list of spares which are to be replaced / required on a regular basis for necessary action at CIAB.

5.4 An undertaking for supply of spares for various assemblies (components) & subassemblies of manufacturer obtaining a clearance from various OEMs shall be submitted.

6.0 LIST OF ELECTRICAL EQUIPMENT: ONLY FOR ANNUAL MAINTENANCE CONTRACT (NON COMPREHENSIVE)

S.NO	PANEL	PANEL DESCRIPTION	LOCATION	QTY
1.	HT PANEL (Precision system Control, India)	Incomer- 630 amps electrically operated trip free type vacuum circuit breaker: 1Nos Outgoing- 630	UTILITY 1 HT ROOM	1
2.	630KVA TRANSFORMER (Universal, UPT Spares and service)	630 kva 3 phase, 11/ 0.415 Kv indoor dry type Transformer, HT side cable termination box suitable for 11 Kv, 3c x 240 sq.mm XLPE cable and LT terminal box suitable for termination of 4 nos. 3.5C 185sq mm Al. XLPE cable	Utility 1 transformer room	2
3.	MAIN LT PANEL (Precision system Control, India)	<p><u>Section- 1</u> Incomer- a) 2 Nos 1000A FP Outgoing – A) 630A TPN MCCB -1NOS. B) 630A FP MCCB- 1 NOS. C) 400A FP MCCB -1NOS. D) 250A FP MCCB-2 NOS. E) 125A FP MCCB -1 NOS.</p> <p><u>BUSCOPLER-</u> 1 NOS 1000A FP, 50 KA (Icu= Ics= Icw) ELECTICALLY OPERATED HORIZONTAL DRAWOUT TYPE ACB WITH MICROPROCESSOR RELEASE FOR O/L, S/C E/F PROTECTION & RS-485 PORT FOR COMMUNICATION</p> <p><u>SECTION-2</u> 2NOS 1000A FP A) 800A FP EDO ACB: 1 NOS. B) 630A TPN MCCB: 1NOS C) 630A FP MCCB: 2 NOS</p>		

		D) 400A FP MCCB: 1NOS. E) 250FP MCCB : 1NOS		
4	DG SYNCRONIZATION PANEL (Precision system Control, India)	Incomer breaker as per DG set rating & 2 nos. 1000A Breaker feeder also with necessary control wiring	UTILITY 1 LT ROOM AREA	1
5	225 KVAR CAPACITOR PANEL (Precision system Control, India)	<u>Incomer-</u> a) 630A TPN MCCB – 1NOS. <u>Busbar</u> a) 630A 4 pole heat shrinkable sleeved tinned copper busbar (100% neutral) -1 set Outgoing- a) 50 KVAR Capacitor with 125A TP MCCB , 16 Ka thermal magnetic release auto manual push button , ON/off indicating lamp, thermistor module – 2 set b) 25 KVAR Capacitor with 63 A TP MCB, 10 kA, ON/OFF indicating lamp, thyristor module – 3 sets	UTILITY 1 LT ROOM AREA	1
5	225 KVAR CAPACITOR PANEL (Precision system Control, India)	<u>Incomer-</u> a) 630A	UTILITY 1 LT ROOM AREA	1
6	Normal power panel (Precision system Control, India)	<u>Incomer –</u> a) 1 no. 800A FP, 50 kA (Icu=Ics=Icw), electrically operated horizontal draw out type ACB with microprocessor release for O/L S/C E/F protection & RS- 485 port for communication. <u>Busbar-</u> a) 800A, 4 pole heat shrinkable sleeved tinned copper busbar (100% neutral) - 1set Outgoing- a) 630A FP MCCB;_1 NOS b) 400A FP MCCB: 1 NOS. c) 63A FP MCB: 22NOS. d) 40A FP MCB: 4NOS. e) 32A FP MCB: 1NOS. f) 25A FP MCB: 3 NOS.	CIAB building ground floor wing Y utility room	1

8	Lighting panel	<p><u>Incomer-</u></p> <p>a) 125A FP MCCB: 1 NOS.</p> <p><u>Busbar -</u></p> <p>a) 125A, 4 pole heat shrinkable sleeved tinned copper busbar (100% neutral) - 1set Outgoing -</p> <p>a) 100A FP MCCB: 1 NOS b) 63A FP MCCB: 2 NOS. c) 40A FP MCB: 11NOS. d) 25A FP MCB: 1NOS.</p>	CIAB building ground floor wing Y utility room	1
9	Main UPS Panel	<p><u>Incomer-</u></p> <p>a) 630A FP MCCB: 1 NOS</p> <p><u>Busbar-</u></p> <p>a) 630A, 4 pole heat shrinkable sleeved tinned copper busbar (100% neutral) – 3 set Outgoing- a) 400A FP MCCB: 3 NOS b) 250A FP MCCB: 1 NOS. c) 25A FP MCB: 1NOS.</p>	CIAB building ground floor wing Y utility room	1
10	Sub Normal Power Panel	<p><u>Incomer-</u></p> <p>a) 630A FP MCCB: 1 NOS</p> <p><u>Busbar-</u></p> <p>a) 630A, 4 pole heat shrinkable sleeved tinned copper busbar (100% neutral) – 1 set Outgoing- a) 160A FP MCCB: 7 NOS</p>	CIAB building ground floor wing Y front of FHC shaft	1
11	SUB UPS PANEL	<p><u>Incomer-</u></p> <p>a) 400A FP MCCB: 1 NOS</p> <p><u>Busbar-</u></p> <p>a) 630A, 4 pole heat shrinkable sleeved tinned copper busbar (100% neutral) – 1 set Outgoing- a) 125A FP MCCB: 4 NOS b) 250A FP MCCB: 2 NOS. c) 25A FP MCB: 1NOS.</p>	CIAB building bioprocessing area	1
12	UPS power distribution panel	<p><u>Incomer-</u></p> <p>a) 630A FP MCCB: 1 NOS</p> <p><u>Busbar-</u></p> <p>a) 630A, 4 pole heat shrinkable sleeved tinned copper busbar (100% neutral) – 3 set Outgoing- a) 400A FP MCCB: 1 NOS</p>	CIAB building 2 nd floor utility room	1

		b) 63A FP MCCB: 20 NOS. c) 40A FP MCB: 2NOS. d) 32A FP MCB: 1NOS.		
13	HVAC Panel	<u>Incomer-</u> a) 250A FP MCCB: 1 NOS <u>Busbar-</u> a) 250A, 4 pole heat shrinkable sleeved tinned copper busbar (100% neutral) – 3 set Outgoing- a) 100A FP MCCB: 1 NOS b) 63A FP MCCB: 20 NOS. c) 40A FP MCB: 2NOS. d) 25A FP MCB: 1NOS. e) 16A FP MCB: 1 NOS.	One at Chiller plant Utility 1 and 2 nd at CIAB building 3 RD floor utility room	2

Note:

- a. The contractor has to repair / replace items which are absolutely required for operation & maintenance of equipment's in working condition. Repairing /replacing works shall be informed to the authority and same shall be obtained approval prior to commencement of work.

MAINTENANCE SCHEDULE

Contractor has to carry out monthly, quarterly & seasonally as per guide line of OEM manual & as per schedule.

Transformers

Monthly:

- a) Check winding temperatures, check for abnormalities & recording them.
- b) Observe and record Load (amperes) and Voltage. Check against rated figure.
- c) Visual check for overheating if any at terminal connections (Red hots) and observation for any unusual internal noise. This check is must in each shift.
- d) Cleaning of bushings, inspect for any cracks or chippings of the Porcelain and checking of tightness of clamps and jumpers.
- e) Measurement of IR values of transformer with suitable megger according to the rating of the transformer. Recording of the values specifying the temperature at which measurements are taken
- f) Cleaning / dusting out of coils from the compartment.
- g) Checking of temperature alarms by shorting contacts & checking its accuracy.

Quarterly:

- a) Testing of surge relays, master trip relay etc. trips for correct operation.
- b) Checking of all connections on the transformer for tightness such as bushings, earth connection.
- c) Calibration & testing of all protection devices and indicators.
- d) Measurement of magnetizing current at normal tap and extreme taps.
- e) Measurement of winding resistance.

f) Test such as: OCC, Short ckt, vector group test, load test & Ratio test etc. shall be carried out.

g) IR value of incomer cable.

Circuit Breakers

Monthly:

- a) Visual inspection:
 - a) Air cleaning with blower.
 - b) Cleaning of circuit breaker body and bushings.
 - c) Auxiliary contacts cleaning.
 - d) Tightening of nuts and bolts.
 - e) Checking breaker Operation (Local/Remote operation).
 - f) Check anti-condensation protection.
 - g) Check of motor control
 - h) Checking and sealing of cable entry holes.
 - i) Use of anti-corrosion spray where required.
 - j) Oiling and greasing of all moving parts.
 - k) Functional check of trip circuit.
 - l) Checking ON/OFF Timings of Circuit breaker poles.
 - m) Complete servicing, lubricating and greasing of all moving parts.

Quarterly:

- a) Visual inspection:
- b) Air cleaning with blower.
- c) Measurement of contact resistance and contact gap.
- d) Operation of control and Auxiliary circuits.
- e) Recharge time of operating mechanism after specified sequence.
- f) Checks on specific operations.
- g) Inspection and operation of control circuit.
- h) Measurement of Humidity if necessary.
- i) Touch up painting wherever required.
- j) Checking contact resistance of Breaker main contacts.
- k) Checking of circuit breaker position level by using spirit level indicator.
- l) Mechanism checking and lubrication to all moving parts.
- m) IR values of Power and Control Circuits.
- n) Operating circuits power consumption during operations.
- o) Verification of correct rated operating sequence.
- p) Checking and adjustment of Track alignment and Interlocking mechanism.

Isolator

Quarterly:

- a) Check for tightness of nuts and bolts, drive tube locknuts, drive lever and Phase coupling plan bolts etc.,
- b) Open the disconnected and earthing switch and inspect the contacts. (Wipe the contact surface with solvent).
- c) Check for contact surface coating/wearing. After maintenance and inspection, smear the contact surface lightly coated with contact lubricant (petroleum jelly).
- d) Check for split pins in clevis replace the same if damaged.

- e) Lubricate all clevis pins.
- f) Check contact gap, if found inadequate replace contact spring.

Control & Relay Panels

- a) Check for any tripping chattering in the electrical parts, abnormal noise, overheating in the panels.
- b) Check whether indication lamps, annunciator lights, bell, buzzers and hooter are working.
- c) Check all terminal cubicles for healthy contacts, minor repairs/services/cleaning etc.
- d) Observe the annunciation window, and there is any alarm then consults the concerned authority.
- e) Check panel for proper closing.
- f) Cleaning of relay cases of dirt etc.
- g) Cleaning the panels, relay covers, blowing dust from inner side of panels.
- h) Voltage of DC supply.
- i) Physical checks of all wiring & connections.
- j) Check for the proper working of all ammeters, voltmeters, relays, contactors malfunction etc.
- k) Clean the panels from inside with the help of the blower/ vacuum cleaners.
- l) Check all the cables for overheating, tightness of the glands, lugs & crimping.
- m) Check the fuse-link & fuse holders.
- n) Check the control wiring of the panel along with the controls for the proper functioning and tripping at the preset parameters.
- o) Tightening of all earthing connections.
- p) Check the operation of MCB, relays, Etc.,
- q) Testing and calibration of relays.

LT Panel

Monthly:

- a) Visual inspection
- b) Check whether indication lamps, selector switch, TNC & all meters are working.
- c) Checking and ensuring the closing of all the panel doors etc.,
- d) Check whether all relays, are functioning properly.
- e) Checking and sealing of cable entry holes.
- f) Checking of D.C. supply & control switchgear.
- g) Checking of Indication lamps, replacement if required.
- h) Checking of Indication Meter and rectification/replacement if, required.
- i) Checking/replacement of fuses if required.
- j) Checking of Bus bar connection, Tightening of nut bolts, cleaning of bus bar if, required.
- k) Cleaning and tightening of bus bar in the bus bar chamber.
- l) Tightening of all earthing connections.
- m) Checking and sealing of cable entry holes.
- n) Cleaning of the inside and outside panels using blowers and vacuum cleaner.
- o) Checking of D.C. supply & control switchgear.

Quarterly:

- a) Checking & ensuring the closing of the wall panels/panel doors including the supply of necessary material if required.
- b) Cleaning of circuit breakers, lubricating the moving parts as per maintenance procedure

- c) Checking of alignment in racking mechanism of breakers for free and smooth movement of circuit breakers
- d) Checking of contact wearing of circuit breakers
- e) Checking of mechanical/ electrical interlocks, interlocks within the switchboard to ensure proper functioning of same
- f) Functional operations check of limit switches, auxiliary contacts Etc.,
- g) Visual inspection of earth connections and checking of tightness
- h) Measurement of insulation resistance value of circuit breakers
- i) Measurement of contact resistance of circuit breaker poles
- j) Measurement of circuit breaker closing and tripping time
- k) Functional operations check of circuit breaker
- l) During operation, any of the items found malfunctioning must be replaced.
- m) Measurement and recording of IR values for Main Bus bar.
- n) Checking of all terminations for tightness.
- o) Checking of CT, PT and Relays connections for tightness.
- p) Testing of all panel Relays and Meters, CT & PT.

CABLE NETWORK:

- a) Visual inspection of cables.
- b) Checking all cable terminals & joins for overhauling /loose connections and tightening, terminating, rejoining.
- c) Checking and recording of IR values of all cables with Megger of suitable range.

EARTHING SYSTEM:

- a) Watering and proper closing of earth pit chamber Checking of all earthing connections, joints and cleaning and tightening thereof.
- b) Checking and recording of earth resistance of all points, pits and taking corrective action to improve it, if required.
- c) Identification marking and updating the details of the indication board

PROTECTIVE RELAYS:

- a) Visual inspection and cleaning from outside.
 - a) Checking of each relay for its correct operation by secondary injection.
 - b) Cleaning of relay contacts by cleaning agent.
 - c) Calibration of relay.
 - d) Checking of current/voltage setting as per recommended setting.
 - e) Checking of time characteristic as per recommended setting.

11 KV HT Panels:

Monthly:

- a) Visual inspection
- b) Check whether indication lamps, selector switch, ammeter, MF meters Etc.,are working.
- c) Checking and ensuring the closing of all the panel doors etc.,

- d) Check whether all relays, are functioning properly.
- b) Checking of control scheme for healthiness.
- c) Visual Checking of Panel Meters.
- d) Checking of heater circuit & rectification if required.
- e) Checking handles and doors & rectification if required.
- f) Checking and sealing of cable entry holes.
- g) Tightening of all earthing connections.

Quarterly:

- a) Measurement and recording of IR values for Main Bus bar.
- b) Checking of all terminations for tightness.
- c) Checking of CT, PT and Relays connections for tightness.
- d) Testing of all panel Relays and Meters CT & PT.
- e) Measurement of insulation resistance value of circuit breaker.
- f) Measurement of breaker closing and tripping time.
- g) Vacuum test
- h) Measurement of contact resistance
- i) Checking of control circuit
- j) Visual inspection of earth connections and checking of tightness
- k) Checking of mechanical and electrical interlocks, interlocks within the switch board to ensure proper functioning of the same.
- l) Checking and sealing of cable entry holes

SCHEDULE-B

Reference to Conditions of Contract

Name of Work: **Annual Maintenance contract of Heating, Ventilation and Air-conditioning (HVAC) system (Low side) and HT/PLC controlled LT Panels, DG panels and transformers (630 KVA) of CIAB campus, Knowledge City, Sector-81, Mohali-Punjab, India**

- (i) Tender Fee : Rs.590/-only
- (ii) Earnest Money : **Rs.37,000/- only**
- (iii) Performance Guarantee : 3% of tendered value
- (iv) Date of Publication of Tender : 12-10-2022
- (v) Last date of receipt of tenders: 02-11-2022

SCHEDULE –C

GENERAL RULES & DIRECTIONS

Officer inviting Tender: **Administrative Officer**

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3.

See below

Definitions:

- | | |
|------------------------------|---------------------------------------|
| 1. Engineer-in-Charge | Assistant Engineer– Electrical |
| 2. Accepting Authority | Chief Executive Officer, CIAB |
| 3. Department..... | CIAB, Mohali |

Clause 1

(i) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance/award**15 days**

(ii) Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above**07 days***

Authority for fixing compensation as per contract**Chief Executive Officer, CIAB**

Clause 4

Number of days from the date of issue of letter of acceptance for reckoning date of start of work – **15 days**

Time allowed for execution of work. **12 months after reckoning date of start of work**

Authority to decide:

- | | |
|--|--------------------------------------|
| (i) Extension of time | Chief Executive Officer, CIAB |
| (ii) Rescheduling of mile stones | Chief Executive Officer, CIAB |

(ii) Shifting of date of start in case of delay in handing over of site..... **Chief Executive Officer, CIAB**

Clause 8

Type of work * **Annual Maintenance contract of Heating, Ventilation and Air-conditioning (HVAC) system (Low side) and HT/PLC controlled LT Panels, DG panels and transformers (630 KVA) of CIAB campus, Knowledge City, Sector-81, Mohali-Punjab, India**

8.2 & 8.3 Deviation Limit beyond which clauses

8.2 & 8.3 shall apply for building work**as per CPWD Works Manual 2019 with upto date amendments**

8.5 (i) Deviation Limit beyond which clauses 8.2 & 8.3 shall apply for foundation work (except items mentioned in earth work subhead in DSR and related items)..... **as per CPWD Works Manual 2019 with upto date Amendments**

(ii) Deviation Limit for items mentioned in earth work subhead of DSR and related items **as per CPWD Works Manual 2019 with upto date amendments**

Clause 12

Competent Authority for deciding reduced rates.
.....

**Chief Executive Officer,
CIAB**

Clause 14

Any machinery, Instruments, tools & plant, ladder etc. required during execution of allotted work shall be provided by contractor. No extra payment shall be paid to contractor for any machinery, Instruments, tool & plants etc.

Clause 27

Requirement of Technical Representative(s) and recovery Rate----- **As per requirements laid down in tender and as per CPWD Works Manual 2019 Or as amended from time to time by CPWD**

FORM OF PERFORMANCE BANK GUARANTEE

In consideration of the Chief Executive Officer, CIAB (hereinafter called "The Institute") having offered to accept the terms and conditions of the proposed agreement between.....and.....(hereinafter called "the said Contractor(s)") for the work..... (hereinafter called "the said agreement") having agreed to production of an irrevocable Bank Guarantee for Rs.(Rupees only) as a security/guarantee from the Contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

1. We, (hereinafter referred to as "the Bank") hereby undertake to pay to the Institute an amount not exceeding Rs. (Rupees..... Only) on demand by the Institute.
2. We,(indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demure, merely on a demand from the Institute stating that the amount claimed as required to meet the recoveries due or likely to be due from the said Contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. (Rupeesonly)
3. We, the said bank further undertake to pay the Institute any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.
4. We, (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Institute under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of the Institute certified that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

We, (indicate the name of the Bank) further agree with the Institute that the Institute shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Institute against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the Institute or any indulgence by the Institute to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
7. We, (indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Institute in writing.

8. This guarantee shall be valid up to satisfactory completion of work at site and as per successful completion of time schedule period given in tender document.....unless extended on demand by the Institute. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs..... (Rupees) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated theday offor.....(indicate the name of the Bank)

ANNEXURE-1

PROFORMA FOR PERFORMANCE CERTIFICATE

Name of the work - Annual Maintenance contract of Heating, Ventilation and Air-conditioning (HVAC) system (Low side) and HT/PLC controlled LT Panels, DG panels and transformers (630 KVA) of CIAB campus, Knowledge City, Sector-81, Mohali-Punjab, India

To Whomsoever it may concern

S.No	Name of work executed at CIAB during last 05years (if any)	Name of contractor who executed the work	Time Period of execution of contract (dates to be given)	Performance Level during execution of contract (Satisfactory/Not Satisfactory)

Name and Signature of Authorized person/Engineer-Incharge

Note: This Performance certificate should be on the **letter-head of CIAB** and should be signed by an authorised person of CIAB/Engineer-Incharge of the work executed. It should be enclosed by the Bidder with the tender documents.

ANNEXURE-2

MANDATORY SITE VISIT FORMAT

REF TENDER NO: CIAB/7(73)/2018-Works

NAME OF WORK: Annual Maintenance Contract of HVAC systems (Low side) and HT/PLC controlled LT Panels, DG panels and Dry type transformer (630 KVA) at CIAB campus, Knowledge City, sector-81, Mohali-Punjab, India

This is to certify that I/We (Name of Representative, Designation)(Name of contractor/firm with address) have visited the site onand are thoroughly aware of the work, technology/machinery installed at CIAB campus in relation to the above-mentioned work. We understand the execution site, guidelines, working hours etc. and shall adhere to the contract stipulations, terms, conditions and clauses. We, understand that, if any equipment/machinery, other parameters had been missed out by us during site visit, it shall be deemed to be included in our scope of work as per NIT terms and conditions.

Date of visit:

Signature of Firm's Representative who had visited the site

Name of Representative & Designation

Verified that Firm had visited the site on

Signature of Engineer-In-Charge on behalf of CIAB

Note: - Site visit is allowed only on working days (Monday to Friday: 9 am to 5 pm except on Holidays).

ANNEXURE-3

INDEMNITY BOND (VIOLATION OF LAWS, NORMS, ACCIDENTS, DAMAGES ETC.)

(On Non-Judicial Stamp Paper of Rs.100/-only)

Name of the work - Annual Maintenance Contract of HVAC systems (Low side) and HT/PLC controlled LT Panels, DG panels and Dry type transformer (630 KVA) at CIAB campus, Knowledge City, sector-81, Mohali-Punjab, India

KNOW all men by these presents that I/We _____ (Name of Contractor with address)do hereby execute Indemnity Bond in favour of Center of Innovative and Applied bioprocessing (CIAB) having their office at Knowledge City, Sector-81, Mohali and for the project Sector-81, Mohali under consideration.

On this day of2019

THIS DEED WITNESSETH AS FOLLOWS:

I/We, (Name of Contractor) hereby do indemnify and save harmless CIAB having their office at Knowledge City, Sector-81, Mohali from the following:-

1. Any third party claims, civil or criminal complaints/liabilities/material/life loss during site mishaps and other accidents such as snake bites etc or disputes and/or damages occurring or arising out of any mishaps at the site due to faulty work, negligence, faulty construction and/or for violating any law, rules and regulations in force, for the time being while executing/executed civil works by me/us.
2. Any damages, loss or expenses due to or resulting from any negligence or breach of duty on the part of me/us or any sub-Contractor/s if any, servants or agents.
3. Any claims by an employee of mine/ours or of sub-Contractors if any, under the workman compensation act and employers' Liability act, 1939 or any other law rules and regulations in force for the time being and any acts replacing and/or amending the same or any of the same as may be in force at the time and under any law in respect of injuries to persons or property arising out of and in the course of execution of the Contract work and/or arising out of and in the course of employment of any workman/employee.
4. Any act or omission of mine/ours or sub-Contractor/s if any, our/their servants or agent which may involve any loss, damage, liability, civil or criminal action.

IN WITNESS WHEREOF THE HAS SET HIS/THEIR HANDS ON THIS DAY OF

SIGNED AND DELIVERED BY THE AFORESAID

IN THE PRESENCE OF WITNESSES:

- 1.
- 2.

ANNEXURE-4
INTEGRITY PACT

Date:

To,

The Chief Executive Officer,
Center of innovative and Applied Bioprocessing,
Sector-81, Mohali-Punjab

Sub: Submission of Tender for the Annual Maintenance Contract of HVAC systems (Low side) and HT/PLC controlled LT Panels, DG panels and Dry type transformer (630 KVA) at CIAB campus, Knowledge City, sector-81, Mohali-Punjab, India

Dear Sir,

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

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

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

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

Yours faithfully,

(Duly authorized signatory of the Bidder)

NOTE: This Integrity pact shall be submitted by the bidder duly signed and stamped on their letter head. On award of work, the Integrity Agreement will be signed between CIAB and the successful bidder as per CPWD format.