

CENTER OF INNOVATIVE AND APPLIED BIOPROCESSING (CIAB)

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



e-Tender Notice

**for the award of the Annual Operation & Maintenance
contract for the Heating, Ventilation, and Air-conditioning
(HVAC) system of NABI-CIAB, Knowledge City, Sector-81,
Mohali-Punjab, India**

TENDER NO: CIAB/7(73)/2023-24-Works

VOLUME-1

Tender Issued from: 29-09-2023

Last date of receipt of tender: 20-10-2023 up to 03:00 PM

Tender Opening date: 23-10-2023 @ 09:30 AM

CENTER OF INNOVATIVE AND APPLIED BIOPROCESSING (CIAB)

(Dept. of Biotechnology, Ministry of Science & Technology, Govt. of India) Knowledge City, Sector-81, Mohali (Punjab)
Website: www.ciab.res.in

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 Operation & Maintenance Contract of Heating, Ventilation, and Air-conditioning (HVAC) system of NABI-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 to 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 Operation and Maintenance of Heating, Ventilation and Air-conditioning (HVAC) system i/c Chillers of minimum capacity in total 1000TRs and accordingly Cooling Towers, Air Handling Units, FCUs, Cassette Units, Packaged AC system etc. in any Government (centre or state/ Autonomous bodies/PSU's) Institutional campus/University/Hospitals/Multi-storey Office buildings/Power Plants/Refineries/Manufacturing Plants & Industries/Research Centres and Laboratories/ Data Centres/Sport Stadiums/ or any other Govt. funded entity, Commercial Complexes, Industry or Organization.

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 the 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.

1.2.3 The Average Annual financial turnover of the firm should be at least 30% of the estimated cost during the last 03 consecutive financial years ending 31-03-2023. Copies of duly attested statement (for last 03years) by Chartered Accountant should be provided.

1.2.4 The bidder shall have Employees Provident Fund (EPF) enlistment and proof of the same shall be attached clearly showing the Provident Fund Code number.

1.2.5 The bidder shall have the Employee State Insurance Corporation (ESIC) enlistment and proof of the same shall be attached with the Technical bid.

1.2.6 The tenderer shall submit an affidavit on a non-judicial stamp paper of minimum Rupee Ten only duly attested by notary, certifying that **“information /documents/experience certificates enclosed by the bidder (Applicant) 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.**

1.2.7 The bidder shall submit the performance certificate of works as per format given in **Annexure-2** (In case the bidder has executed any contract/work or ongoing work at NABI-CIAB campus during the last 05 years). In case of non-satisfactory performance of any work executed or ongoing work at NABI-CIAB campus during last 05 years, the bid will not be considered for further evaluation.

The declaration on firm's letter head **‘No work executed at NABI-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-3**.

1.2.9 The Firm shall have valid Electrical contractor license duly issued by the licensing authority of any State Electricity Department or appropriate authority. The copy of the same shall be enclosed with the Technical bid.

2. The tenderer shall depute all the required manpower at CIAB Campus on direct company/firm payrolls basis through regular/permanent employment or through direct contract employment. No third-party manpower outsourcing or subcontracting of manpower is allowed in this contract. No third-party manpower outsourcing or subcontracting of manpower will be applied 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”.

3. 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.

4. The contract will be initially awarded for a period of one year however based on the satisfactory performance of the contractor and at the discretion of the Competent Authority, NABI-CIAB, it may be extended for a further period of 01 years (yearly basis) or lesser based on the requirement of CIAB. During the extended period of contract (if any), the increment in minimum wages of the deputed staff (if any) stipulated by the Govt. of India or any other statutory allowances approved by CA, NABI-CIAB shall be payable to

the contractor proportionately. The date of start of contract shall be from the first date of handing over of the site which will be reckoned in work award letter. Also, NABI-CIAB may reduce the scope of work or overall the contract period to less than one year with one month advance notice to the contractor if any, due to the administrative reasons.

Note: - The tender will be evaluated on composite rates (Total quoted tender value) basis, however in case if any, item rate quoted being non-reasonable, the successful bidder may be asked to provide justification and detailed rate analysis for the same.

5. The site for the work is available.

5 (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 20-10-2023).

(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, CIAB on all working days between 10:00 am to 5:00 pm.

6 (i) Tenders shall be accompanied with Earnest money of Rs. 1,86,500/-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.

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

1. Cover -1 marked as Technical Bid containing the following-

- a) Scanned copy of Earnest Money Deposit (EMD) of Rs. 1,86,500/-in the prescribed format.
- b) 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.
- c) Scanned copy of signed and stamped complete Tender documents i.e., Volume-1.

2. 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.

3. 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 20-10-2023 and will be opened on 23-10-2023 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

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 'D'. This guarantee shall be as Demand Draft of any scheduled bank/Pay order of any scheduled bank. 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.

7. The description of the work is as follows:

Annual Operation & Maintenance Contract of Heating, Ventilation and Air-conditioning (HVAC) system of NABI, 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 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 all materials, tools for electromagnetic equipment testing, safety belts, safety shoe, clothing & ladders etc for executing the work at his own cost (For Annx-1,2,3 and all other unless otherwise specifically mentioned/provided (by client) 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

13. The tender for the works shall remain open for acceptance for a period of one hundred eighty (180) 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.

14. 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.

15. 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.

16. 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.

17. 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.

18. 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.

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

20. 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.

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

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

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

24. 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.

25. 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.

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

Tender form-1
Center of innovative and Applied Bioprocessing (CIAB)
Item rate Tender & Contract for Works

- (i) Tender for the work of: **Annual Operation & Maintenance Contract of Heating, Ventilation and Air-conditioning (HVAC) system of NABI, Knowledge City, sector-81, Mohali-Punjab, India**
- (ii) To be submitted by 15:00 hours on 20-10-2023 to the Chief Executive Officer, CIAB
- (iii) To be opened at 9:30 hours on 23-10-2023 in the office of the Administrative Officer, CIAB

Tender Fee: Zero

Earnest Money Deposit: Rs. 1,86,500/-
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*: _____

*Not to be filled if tender is downloaded from website.

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 (180) 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. 1,86,500/-is hereby forwarded in demand draft of a scheduled bank. 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:

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 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. 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 Demand Draft of any scheduled bank/Pay order of any scheduled bank in accordance with the prescribed form.
10. 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.
11. 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 tax component 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.

12. The contractor shall give a list of both gazetted and non-gazetted CIAB employees related to him (if any).
13. 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.
14. The applicable 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.
15. 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.
16. The Contractor will be required to take labour license from the licensing authority for the deployment of manpower at CIAB campus and will submit the copy of same to the Engineer-In charge after the award of work.
17. CIAB shall be at liberty to terminate the contract by issuing a month's notice to the contractor without assigning any reason what so ever. As regards unsatisfactory performance or noncompliance with any of the terms and conditions of the contract by the contractor, CIAB shall have the right to terminate the contract forthwith without notice & rearrange the balance work through other agencies at the risk and cost of the contractor & under such circumstances, the security deposit/performance guarantee paid by the contractor shall stand forfeited.

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 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-In-charge** 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

7. The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

Discrepancies and Adjustment of Errors

8. 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.
- 8.1 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.

8.2 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.

8.3 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.

8.4 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

9. 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.

10. No payment for the work done will be made unless contract is signed by the contractor.

UNIFORM

11.(i) The employees/manpower deployed by the agency shall have neat/clean/washed uniforms with visible identification badge along with ID cards to be carried by the persons at all times during duty hours at CIAB. All the O & M staff shall wear safety shoes in compulsory during duty hours.

(ii) The contractor shall be responsible for proper maintenance of decorum, punctuality, discipline and work output. The personnel so deployed will be in proper neat & clean uniform. Provision of uniform (02 no's set per annum) etc. to be made to deployed staff shall be the responsibility of the contractor. Nothing extra shall be paid on this account.

PAYMENT OF WAGES

1. The contractor shall pay to all the Operation & Maintenance (O&M) staff deployed at CIAB, the latest applicable minimum rates of wages as prescribed by Ministry of Labour & Employment, Govt. of India for Area- B (Chandigarh/Mohali) for Construction or Maintenance works. The Senior Supervisor will be entitled for fixed wages of Rs. 1128.40/- per day exclusive of applicable monthly PF and ESIC or contractor's profit or any other applicable levies etc, sa has been duly approved by Competent Authority NABI-CIAB. During contract period (1st year), any revision in wages (as per Govt. of India) shall be payable to the O & M staff by the contractor only, without any additional cost implication to CIAB. However, during the extended period of contract (if any), any further increment in minimum wages of the deputed staff (if any) stipulated by the Govt. of India shall be payable to the contractor proportionately by CIAB. The wages shall be payable to the O&M staff in

accordance with their respective category/domain of work i.e., highly skilled/skilled/semi-skilled/unskilled or any other allowances for special conditions as approved by competent authority of CIAB etc. The monthly payment /salary to all the O&M staff deployed at CIAB shall be made by the contractor by the end of first week i.e., 07th of every month. The disbursement of salaries to all the O&M staff shall be made in their respective bank accounts only and no cash payment shall be made to the workers/staff. In delay of disbursement of salary per day 0.1% penalty will be deducted contractor monthly bill.

2. The payment for EPF and ESIC Scheme on behalf of employer i.e., CIAB shall be deposited by successful bidder. Also, other perks such as leave wages (Paid leave as per factory act 1948), bonus i.e. (as per bonus act 1965) etc. shall be payable to the workers. No extra to be paid by Employer for this in bidder quoted amount. Also all gazette holiday approved by GOI shall be given to them, if any worker joins the duty during holiday or working more than normal duty hours, overtime shall be given as per norms (extra wages should be given at twice the ordinary rate) without any implication to employer.
3. Employer should ensure all employee's covered under Group insurance policy of sum insured of Rs. 5, 00,000/- per person.

CLAUSES OF CONTRACT

CLAUSE 1

Performance Guarantee

The contractor shall submit an irrevocable Performance Guarantee of 3% (Three 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 'F' 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 Demand Draft of any scheduled bank 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.

(i) The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest. However, in case of contracts involving maintenance of building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned year wise proportionately.

(ii) The Engineer-in-Charge shall not make a claim under the performance guarantee except for amounts to which the owner 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 owner 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.

(iii) 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.

(iv) On substantial Completion of any work which has been completed to such an extent that the intended purpose of the work is met and ready to use, then a provisional Completion certificate shall be recorded by the Engineer-in-Charge. The provisional certificate shall have appended with a list of outstanding balance item of work that need to be completed in accordance with the provisions of the contract. This provisional completion certificate shall be recorded by the concerned Engineer-In-charge with the approval of Superintending Engineer /Project Manager / Chief Engineer/Chief Project Manager, if required. After recording of the provisional Completion Certificate for the work by the competent authority, the 80 % of performance guarantee shall be returned to the contractor, without any interest. However, in case of contracts involving Maintenance of building and services /any other work after construction of same building and services/ other work, then 40% of performance guarantee

shall be returned to the contractor, without any interest after recording the provisional Completion certificate.

CLAUSE 2

Compensation for Delay

If the contractor fails to maintain the required progress or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the authority specified in schedule 'F' (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day/month (as applicable) that the progress remains below that specified in Clause 5 or that the work remains incomplete. This will also apply to items or group of items for which a separate period of completion has been specified.

(i) Compensation @ point five percent (0.5%) per week of delay for delay of work to be computed on day basis provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% of the Tendered Value of work or of the Tendered Value of the item or group of items of work for which a separate period of completion is originally given.

CLAUSE 3

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:

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.

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.

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.

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.

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.

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.

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.

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.

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.

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

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:

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 and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Government

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.

CLAUSE 4

Contractor liable to pay Compensation even if action not taken under Clause 3

In any case in which any of the powers conferred upon the Competent Authority by Clause-3 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 5

Time and Extension for Delay

The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time period as mentioned in schedule 'F' 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.

If the work(s) be delayed by: -

- Force majeure, or
- Abnormally bad weather, rains or
- Serious loss or damage by fire, or
- Civil commotion, local commotion of workmen, strike or lockout, affecting any of the Trades employed on the work.
- Delay on the part of other contractors or tradesmen engaged by owner in executing work not forming part of the Contract, or
- Non-availability of stores material, which are the responsibility of owner to supply or
- Non-availability or break down of tools and Plant to be supplied or supplied by Government or
- 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 'F' but shall nevertheless use constantly his best endeavors 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.

The contractor shall have no claim of damages for extension of time granted or rescheduling of milestone/s for events listed in sub clause 5.2.

Clause 6, 7, 8 Deleted

Clause 8A

Contractor to keep Site Clean

When the annual repairs and maintenance of works are carried out, the splashes and droppings from white washing, color washing, painting etc., on walls, floor, windows, etc. shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done: without waiting for the actual completion of all the other items of work in the contract. 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 9, 9A Deleted

CLAUSE 10A

Materials to be provided by the Contractor

The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the owner. The contractor shall, at his own expense and without delay, supply to the Engineer-in- Charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the Contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in- Charge furnish proof, to the satisfaction of the Engineer-in-Charge that the materials so comply. The Engineer-in-Charge shall within thirty days of supply of samples or within such further period as he may require intimate to the Contractor in writing whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the Engineer-in-Charge for his approval, fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specifications, approval of the Engineer-in-Charge shall be issued after the test results are received.

The Contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by the Engineer-in-Charge. The Contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-Charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in-Charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer in-Charge or his authorized representative shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles or machinery are

being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access.

The Engineer-in-Charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-in-Charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-Charge shall also have full powers to require other proper materials to be substituted thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the Contractor. The contractor shall at his own expense, provide a material testing lab at the site for conducting routine field tests. The lab shall be equipped at least with the testing equipment as specified in schedule F.

Clause 10B, 10C, 10CC, 10D Deleted

Clause 11 Deleted

Clause 12 Deleted

CLAUSE 13

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

If at any time after acceptance of the tender or during the progress of work, the purpose or object for which the work is being done changes due to any supervening cause and as a result of which the work has to be abandoned or reduced in scope the Engineer-in-Charge shall give notice in writing to that effect to the contractor stating the decision as well as the cause for such decision 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 and, in addition, a reasonable amount 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;

- (i) Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks.
- (ii) Government shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work) provided, however Government shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by Government, cost of such materials as detailed by Engineer-in-Charge shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.
- (iii) Reasonable compensation for transfer of T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.
- (iv) Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary.

The contractor shall, if required by the Engineer-in-Charge, furnish to him, books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to

enable him to certify the reasonable amount payable under this condition. The reasonable amount of items on (i), (iv) and (v) above shall not be in excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by the Government as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, the Engineer-in-Charge shall be entitled to recover or be credited With any outstanding balances due from the contractor for advance paid in respect of any tool, plants and materials and any other sums which at the date of termination were recoverable by the Government from the contractor under the terms of the contract. In the event of action being taken under Clause 13 to reduce the scope of work, the contractor may furnish fresh Performance Guarantee on the same conditions, in the same manner and at the same rate for the balance tendered amount and initially valid up to the extended date of completion or stipulated date of completion if no extension has been granted plus minimum 60 days beyond that. Wherever such a fresh Performance Guarantee is furnished by the contractor the Engineer-in-Charge may return the previous Performance Guarantee.

Clause 14

Carrying out part work at risk & cost of contractor

If contractor:

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 7 days in this respect from the Engineer-in-Charge; or

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 7 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 3 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:

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

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 15

Suspension of Work

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:

on account of any default on the part of the contractor or;

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

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:

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;

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.

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 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 16 Deleted

Clause 17 Deleted

Clause 18

Contractor to Supply Tools & Plants etc.

The contractor shall provide at his own cost all spares for items under comprehensive maintenance contract, materials, machinery, tools & plants as specified in schedule F. In addition to this, appliances, 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 portion thereof.

Clause 18 A Deleted

Clause 18 B

Ensuring Payment and Amenities to Workers if Contractor fails

In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, Government is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules under Clause 19H or under the C.P.W.D. Contractor's Labour Regulations, or under the Rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by C.P.W.D. Contractors, Government will recover from the contractor, the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to the rights of the Government under subsection(2) of Section 20, and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, Government shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by Government to the contractor whether under this contract or otherwise Government shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of Section 21, of the said Act, except on the written request of the contractor and upon his giving to the Government full security for all costs for which Government might become liable in contesting such claim.

CLAUSE 19

Labour Laws to be complied by the Contractor

The contractor shall obtain a valid licence under the Contract Labour (R&A) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, before the commencement of the work, and continue to have a valid license until the completion of the work, if required as per labour law. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996. Any failure to fulfil these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

CLAUSE 19A

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

CLAUSE 19 B

Payment of wages:

(i) The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

(ii) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.

(iii) In respect of all labour directly or indirectly employed in the works for performance of the

contractor's part of this contract, the contractor shall comply with or cause to be complied with the Central Public Works Department contractor's Labour Regulations made by Government from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions unauthorized made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

(iv) (a) The Engineer-in-Charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfilment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.

(b) Under the provision of Minimum Wages (Central) Rules, 1950, the contractor is bound to allow to the labours directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.

(v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made thereunder from time to time.

(vi) The contractor shall indemnify CIAB against payments to be made under and for the observance of the laws aforesaid and any other law, Labour Regulations without prejudice to his right to claim indemnity from his sub-contractors.

(vii) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.

(viii) Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.

(ix) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

Clause 19C

In respect of all labour directly or indirectly 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 C.P.W.D. Safety Code framed from time to time 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 as decided by the authority mentioned in Schedule F 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 19D

The contractor shall submit by the 4th and 19th of every month, to the Engineer-in-Charge, a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively:-

- (1) The number of labourers employed by him on the work,
- (2) Their working hours,
- (3) The wages paid to them,
- (4) The accidents that occurred during the said for night showing the circumstances under which they happened and the extent of damage and injury caused by them, and
- (5) The number of female workers who have been allowed maternity benefit according to Clause 19F and the amount paid to them.

Failing which the contractor shall be liable to pay to Government, a sum as decided by the authority mentioned in Schedule F for each default or materially incorrect statement. The decision of the Divisional Officer shall be final in deducting from

Clause 19E

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by the contractors.

Clause 19F, 19G, 19H, 19I, 19J and 19K Deleted**Clause 19L****Contribution of EPF and ESI**

The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. The Employment of skilled/semi-skilled workers Contribution of EPF and ESI verification of deployment Labour will be done through biometric attendance system or any other suitable method by the Engineer in Charge.

Clause 20**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 21**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 President of India 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 22 Deleted

Clause 23

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 24 Deleted

Clause 25

Settlement of Disputes & Arbitration

All disputes, differences, claims and questions whatsoever arising, shall be referred to Arbitration which shall be conducted in accordance with the provisions of the Indian Arbitration and Conciliation Act 1996 or any statutory modification thereof. The arbitrator shall be appointed by Competent Authority, CIAB & arbitration shall take place at Mohali only. If any fees are payable to the arbitrator, these shall be paid equally by both the parties.

Clause 26 Deleted

Clause 27 Deleted

Clause 28 Deleted

Clause 29, 29A Deleted

Clause 30 Deleted

Clause 31 Deleted

Clause 32 Deleted

Clause 33

Levy/Taxes payable by Contractor

- (i) GST, Building and other Construction Workers Welfare Cess or any other tax, levy or Cess in respect of input for or output by this contract shall be payable by the contractor and Government shall not entertain any claim whatsoever in this respect except as provided under Clause 34.
- (ii) The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities. 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

Clause 34 Deleted

Clause 35

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-In-charge on behalf of the Chief Executive Officer, CIAB shall have the option of terminating the contract without compensation to the contractor.

Clause 36

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 37

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 38 Deleted

Clause 39 Deleted

Clause 40 Deleted

Clause 41 Deleted

OTHER CONDITIONS

- 1. The safety precautions/provisions if required to be followed as per CPWD Safety Code mentioned in CPWD General Condition of Contract 2020**
- 2. Model Rules for the Protection of Health and Sanitary Arrangements for Workers to be followed by Contractor as per CPWD General Condition of Contract 2020.**
- 3. Contractor to be followed C.P.W.D. Contractor's Labour Regulations as per CPWD General Condition of Contract 2020.**

SCHEDULE-A

SCOPE OF WORK

ABOUT THE WORK:

National Agri-Food Biotechnology Institute (NABI) and the Center of Innovative and Applied Bioprocessing (CIAB) are two Central Autonomous Institutes under the Department of Biotechnology, Ministry of Science and Technology, Govt. of India. Both the NABI & CIAB are co-located in a single campus called NABI-CIAB Campus which is newly developed within 50 acres (NABI-35acre & CIAB-15 acre) in Knowledge City, sector-81, Mohali-Punjab, India. The details of the different buildings/facilities to be maintained by the contractor at the NABI-CIAB Campus are given as below:

S. No	Name of Building	No. of Floors
1	NABI Laboratory & Office	G+3
2	Guest House	G+2
3	Research Scholar's Hostel	G+8
4	Animal House	G only
5	Utility-1 (HVAC Plant Room)	G+ Basement
6	Community Centre	G
7	Health Fitness Centre	G
8	Director Bungalows-02Nos.	G+1
9	Greenhouse facility-02Nos.	G
10	CIAB laboratory inclusive of Admin Block.	G+3

Note: - Bidder may visit the site and check all the buildings, areas, infrastructure etc. before quoting their rates.

The NABI & CIAB intends to award the Annual Operation and Maintenance contract of Heating, Ventilation and Air-conditioning (HVAC) system to some specialized agency for the following inventory at NABI-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 NABI

Sr. no.	Item name & Description	Location	Rating/ Capacity	Unit	Qty.	Make	Type of AMC
1	Main HVAC Power Panel	Utility-1/ HVAC Plant room	1.1kV	Set	1	SPC	CAMC
2	Primary chilled water pumps	Utility-1/ HVAC Plant room	15 HP	Nos.	3	Armstrong	CAMC
3	Secondary chilled water pumps with VFDs	Utility-1/ HVAC Plant room	30 HP	Nos.	3	Armstrong	CAMC
4	Hot water pumps with VFDs	Utility-1/ HVAC Plant room	5 HP	Nos.	3	Armstrong	CAMC
5	Condenser water pumps	Utility-1/ HVAC Plant room	30 HP	Nos.	3	Armstrong	CAMC
6	Cooling Tower	Utility-1/ Terrace	400 TR	Nos.	3	Bell	CAMC
7	HOT Generator water	Utility-1/ HVAC Plant room	200kW	Nos.	2	Emerald	CAMC
8	Air Handling Unit (AHU) with starter panel	LAB Bldg.	3500cfm	Nos.	1	WAVES	CAMC
9	Air Handling Unit (AHU) with starter panel	LAB Bldg.	14000cfm	Nos.	1	WAVES	CAMC
10	Air Handling Unit (AHU) with starter panel	LAB Bldg.	15500cfm	Nos.	1	WAVES	CAMC
11	Air Handling Unit (AHU) with starter panel	LAB Bldg.	5000cfm	Nos.	1	WAVES	CAMC
12	Air Handling Unit (AHU) with starter panel	LAB Bldg.	3000cfm	Nos.	1	WAVES	CAMC
13	Air Handling Unit (AHU) with starter panel	LAB Bldg.	4600cfm	Nos.	1	WAVES	CAMC
14	Air Handling Unit (AHU) with starter panel	LAB Bldg.	3500cfm	Nos.	1	WAVES	CAMC

Sr. no.	Item name & Description	Location	Rating/ Capacity	Unit	Qty.	Make	Type of AMC
15	Air Handling Unit (AHU) with starter panel	LAB Bldg.	5000cfm	Nos.	2	WAVES	CAMC
16	Air Handling Unit (AHU) with starter panel	LAB Bldg.	14000cfm	Nos.	1	WAVES	CAMC
17	Air Handling Unit (AHU) with starter panel	LAB Bldg.	21500cfm	Nos.	1	WAVES	CAMC
18	Air Handling Unit (AHU) with starter panel	LAB Bldg.	15000cfm	Nos.	1	WAVES	CAMC
19	Air Handling Unit (AHU) with starter panel	LAB Bldg.	4800cfm	Nos.	1	WAVES	CAMC
20	Air Handling Unit (AHU) with starter panel	LAB Bldg.	16500cfm	Nos.	1	WAVES	CAMC
21	Air Handling Unit (AHU) with starter panel	LAB Bldg.	19500cfm	Nos.	1	WAVES	CAMC
22	Air Handling Unit (AHU) with starter panel	LAB Bldg.	11000cfm	Nos.	1	WAVES	CAMC
23	Air Handling Unit (AHU) with starter panel	LAB Bldg.	3500cfm	Nos.	1	WAVES	CAMC
24	Air Handling Unit (AHU) with starter panel	LAB Bldg.	4500cfm	Nos.	1	WAVES	CAMC
25	Air Handling Unit (AHU) with starter panel	LAB Bldg.	5000cfm	Nos.	1	WAVES	CAMC
26	Air Handling Unit (AHU) with starter panel	LAB Bldg.	1500cfm	Nos.	1	WAVES	CAMC
27	Air Handling Unit (AHU) with starter panel	LAB Bldg.	1300cfm	Nos.	1	WAVES	CAMC
28	Air Handling Unit (AHU) with starter panel	LAB Bldg.	4800cfm	Nos.	1	WAVES	CAMC

Sr. no.	Item name & Description	Location	Rating/ Capacity	Unit	Qty.	Make	Type of AMC
29	Air Handling Unit (AHU) with starter panel	LAB Bldg.	20500cfm	Nos.	1	WAVES	CAMC
30	Air Handling Unit (AHU) with starter panel	LAB Bldg.	12000cfm	Nos.	1	WAVES	CAMC
31	Air Handling Unit (AHU) with starter panel	LAB Bldg.	6000cfm	Nos.	1	WAVES	CAMC
32	Air Handling Unit (AHU) with starter panel	LAB Bldg.	15500cfm	Nos.	1	WAVES	CAMC
33	Air Handling Unit (AHU) with starter panel	LAB Bldg.	3500cfm	Nos.	1	WAVES	CAMC
34	Air Handling Unit (AHU) with starter panel	LAB Bldg.	4500cfm	Nos.	1	WAVES	CAMC
35	Air Handling Unit (AHU) with starter panel	LAB Bldg.	5000cfm	Nos.	1	WAVES	CAMC
36	Air Handling Unit (AHU) with starter panel	LAB Bldg.	2600cfm	Nos.	1	WAVES	CAMC
37	Air Handling Unit (AHU) with starter panel	LAB Bldg.	5500cfm	Nos.	1	WAVES	CAMC
38	Air Handling Unit (AHU) with starter panel	LAB Bldg.	21500cfm	Nos.	1	WAVES	CAMC
39	Air Handling Unit (AHU) with starter panel	LAB Bldg.	24000cfm	Nos.	1	WAVES	CAMC
40	Air Handling Unit (AHU) with starter panel	LAB Bldg.	3500cfm	Nos.	1	WAVES	CAMC
41	Air Handling Unit (AHU) with starter panel	LAB Bldg.	5000cfm	Nos.	1	WAVES	CAMC
42	Air Handling Unit (AHU) with starter panel	LAB Bldg.	5200cfm	Nos.	1	WAVES	CAMC

Sr. no.	Item name & Description	Location	Rating/ Capacity	Unit	Qty.	Make	Type of AMC
43	Air Handling Unit (AHU) with starter panel	LAB Bldg.	11600cfm	Nos.	1	WAVES	CAMC
44	Air Handling Unit (AHU) with starter panel	LAB Bldg.	12800cfm	Nos.	1	WAVES	CAMC
45	Air Handling Unit (AHU) with starter panel	LAB Bldg.	6100cfm	Nos.	1	WAVES	CAMC
46	Air Handling Unit (AHU) with starter panel	LAB Bldg.	4700cfm	Nos.	1	WAVES	CAMC
47	Air Handling Unit (AHU) with starter panel	LAB Bldg.	3000cfm	Nos.	1	WAVES	CAMC
48	Air Handling Unit (AHU) with starter panel	LAB Bldg.	3200cfm	Nos.	3	WAVES	CAMC
49	Air Handling Unit (AHU) with starter panel	LAB Bldg.	1400cfm	Nos.	1	WAVES	CAMC
50	Air Handling Unit (AHU) with starter panel	LAB Bldg.	3000cfm	Nos.	1	WAVES	CAMC
51	Air Handling Unit (AHU) with starter panel	LAB Bldg.	2500cfm	Nos.	1	WAVES	CAMC
52	Fan Coil Unit (FCU) with Thermostat	LAB Bldg.	1 TR	Nos.	1	Waves	CAMC
53	Fan Coil Unit (FCU) with Thermostat	LAB Bldg.	1 TR	Nos.	1	Waves	CAMC
54	Fan Coil Unit (FCU) with Thermostat	LAB Bldg.	1 TR	Nos.	1	Waves	CAMC
55	Fan Coil Unit (FCU) with Thermostat	LAB Bldg.	2.5 TR	Nos.	1	Waves	CAMC
56	Fan Coil Unit (FCU) with Thermostat	LAB Bldg.	4TR	Nos.	2	Waves	CAMC
57	Fan Coil Unit (FCU) with Thermostat	LAB Bldg.	4TR	Nos.	2	Waves	CAMC
58	Fan Coil Unit (FCU) with Thermostat	LAB Bldg.	4TR	Nos.	2	Waves	CAMC

Sr. no.	Item name & Description	Location	Rating/ Capacity	Unit	Qty.	Make	Type of AMC
59	Smoke Extraction Fan with Starter panel	LAB Bldg.	6500CFM	Nos.	1	System Air	AMC
60	Smoke Extraction Fan with Starter panel	LAB Bldg.	4500 CFM	Nos.	1	System Air	AMC
61	Smoke Extraction Fan with Starter panel	LAB Bldg.	11000 CFM	Nos.	1	System Air	AMC
62	Smoke Extraction Fan with Starter panel	LAB Bldg.	12000 CFM	Nos.	1	System Air	AMC
63	Smoke Extraction Fan with Starter panel	LAB Bldg.	7500 CFM	Nos.	1	System Air	AMC
64	Smoke Extraction Fan with Starter panel	LAB Bldg.	14000 CFM	Nos.	1	System Air	AMC
65	Smoke Extraction Fan with Starter panel	LAB Bldg.	5500 CFM	Nos.	1	System Air	AMC
66	Smoke Extraction Fan with Starter panel	LAB Bldg.	14000 CFM	Nos.	1	System Air	AMC
67	Smoke Extraction Fan with Starter panel	LAB Bldg.	14000 CFM	Nos.	1	System Air	AMC
68	Smoke Extraction Fan with Starter panel	LAB Bldg.	13000 CFM	Nos.	1	System Air	AMC
69	Smoke Extraction Fan with Starter panel	LAB Bldg.	10000 CFM	Nos.	1	Waves	AMC
70	Smoke Extraction Fan with Starter panel	LAB Bldg.	6500 CFM	Nos.	1	System Air	AMC
71	Smoke Extraction Fan with Starter panel	LAB Bldg.	14000 CFM	Nos.	1	System Air	AMC
72	Smoke Extraction Fan with Starter panel	LAB Bldg.	14000 CFM	Nos.	1	System Air	AMC
73	Inline Fan	LAB Bldg.	800 CFM	Nos.	1	Osterberg	AMC
74	Inline Fan	LAB Bldg.	800 CFM	Nos.	1	Osterberg	AMC
75	Inline Fan	LAB Bldg.	750 CFM	Nos.	1	Osterberg	AMC
76	Axial Flow Fan with starter panel	LAB Bldg.	10000 CFM	Nos.	1	System Air	AMC
77	Axial Flow Fan with starter panel	LAB Bldg.	10000 CFM	Nos.	1	System Air	AMC
78	Axial Flow Fan with starter panel	LAB Bldg.	10000 CFM	Nos.	1	System Air	AMC
79	Axial Flow Fan with starter panel	LAB Bldg.	10000 CFM	Nos.	1	System Air	AMC

80	Axial Flow Fan with starter panel	LAB Bldg	11500 CFM	Nos.	1	System Air	AMC
Sr. no.	Item name & Description	Location	Rating/ Capacity	Unit	Qty.	Make	Type of AMC
81	Axial Flow Fan with starter panel	LAB Bldg	11500 CFM	Nos.	1	System Air	AMC
82	Axial Flow Fan with starter panel	LAB Bldg	11500 CFM	Nos.	1	System Air	AMC
83	Axial Flow Fan with starter panel	LAB Bldg	14000CFM	Nos.	1	System Air	AMC
84	Axial Flow Fan with starter panel	LAB Bldg	14000CFM	Nos.	1	System Air	AMC
85	Axial Flow Fan with starter panel	LAB Bldg	14000CFM	Nos.	1	System Air	AMC
86	Axial Flow Fan with starter panel	LAB Bldg	5500CFM	Nos.	1	System Air	AMC
87	Axial Flow Fan with starter panel	LAB Bldg	5500CFM	Nos.	1	System Air	AMC
88	Axial Flow Fan with starter panel	LAB Bldg	4000CFM	Nos.	1	System Air	AMC
89	Axial Flow Fan with starter panel	LAB Bldg	16000CFM	Nos.	1	System Air	AMC

90	Variable Air Volume (VAV) Terminal units with thermostat	LAB Bldg.		Nos.	154	Honeywell	CAMC
91	Air Handling Unit (AHU) with starter panel	Animal House	600cfm	Nos.	1	WAVES	CAMC
92	Air Handling Unit (AHU) with starter panel	Animal House	900cfm	Nos.	1	WAVES	CAMC
93	Air Handling Unit (AHU) with starter panel	Animal House	1300cfm	Nos.	1	WAVES	CAMC
94	Air Handling Unit (AHU) with starter panel	Animal House	300cfm	Nos.	1	WAVES	CAMC
95	Air Handling Unit (AHU) with starter panel	Animal House	1100cfm	Nos.	1	WAVES	CAMC
96	Air Handling Unit (AHU) with starter panel	Animal House	1100cfm	Nos.	1	WAVES	CAMC

97	Air Handling Unit (AHU) with starter panel	Animal House	1100cfm	Nos.	1	WAVES	CAMC
Sr. no.	Item name & Description	Location	Rating/ Capacity	Unit	Qty.	Make	Type of AMC
98	Air Handling Unit (AHU) with starter panel	Animal House	300cfm	Nos.	1	WAVES	CAMC
99	Exhaust Fan AHU with starter panel	Animal House	900cfm	Nos.	1	WAVES	CAMC
100	Exhaust Fan AHU with starter panel	Animal House	300cfm	Nos.	1	WAVES	CAMC
101	Exhaust Fan AHU with starter panel	Animal House	300cfm	Nos.	1	WAVES	CAMC
102	Exhaust Fan AHU with starter panel	Animal House	900cfm	Nos.	1	WAVES	CAMC
103	Fan Coil Unit (FCU) with Thermostat	Animal House	1TR	Nos.	2	WAVES	CAMC
104	Variable Air Volume (VAV) Terminal units with thermostat	Animal House		Nos.	7	Honeywell	CAMC
105	Air Handling Unit (AHU) with thermostat	Green House	7200CFM	Nos.	4	ZECO	CAMC
106	Air Handling Unit (AHU) with Starter panel	Glass House	7600CFM	Nos.	1	ZECO	CAMC
107	Air Handling Unit (AHU) with Starter panel	Glass House	12000 CFM	Nos.	1	ZECO	CAMC
108	AHU Outdoor Unit	Glass House	8 Ton	Nos	2	Aircon	CAMC
109	AHU Outdoor Unit	Glass House	5.5 Ton	Nos	4	Carrier	CAMC
110	Pan Humidifiers Type	Green House	8kW	Nos.	4	Rapid Cool	CAMC
111	Pan Humidifiers Type	Glass House	3kW	Nos.	2	Emerald	CAMC
112	Chilled water line pressure make-up pump	LAB Bldg.	3HP	Nos.	1	Lowara	CAMC
113	Hot water line pressure make-up pump	LAB Bldg.	3HP	Nos.	1	Lowara	CAMC

Note: The 03Nos.x400Tr capacity YORK make Centrifugal Chillers, 04Nos.x8Tr capacity Blue Box make Precision Air-conditioning (PAC) units & 02Nos.x5Tr capacity Emerson make Precision Air-conditioning (PAC) units are already under Comprehensive Annual maintenance contract (CAMC) with the respective OEMs. Only operation and general maintenance is required for these inventories.

LIST OF HVAC SYSTEM INVENTORY OF CIAB

A. Items for CAMC

Sr. no.	Item name & 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

Note: The 03Nos.x120Tr capacity YORK make Screw type Chillers are already under Comprehensive Annual maintenance contract (CAMC) with the respective OEMs. Only operation and general maintenance is required for these inventories.

The above is the detail list of Major Inventories/Machineries installed within the NABI-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 NABI-CIAB:

- 1) The agency shall be fully responsible for round the clock (24hrsx365days) Operation and Maintenance of the systems/services/inventories detailed above and installed at NABI-CIAB Campus.
- 2) The agency shall depute the full manpower required for the Operation & Maintenance of HVAC system of NABI-CIAB Campus as per the site requirement. If required, additional manpower may also be deployed by the agency as per their assessment of the work without any extra cost to NABI-CIAB. The Manpower deputed by the agency shall be fully trained in Operation & maintenance of the systems/services installed at NABI-CIAB Campus.
- 3) Any relievers if required to maintain the required manpower at NABI-CIAB Campus shall be the responsibility of the agency, without any extra cost to NABI-CIAB.
- 4) The Minimum educational qualification of the Manpower to be deployed by the agency shall be as per the requirements mentioned in Annexure-1. However higher qualification is also acceptable but without any extra cost of NABI-CIAB.
- 5) The agency shall depute minimum one site in-charge/supervisor for effectively handling the deputed manpower, their duty schedules, scheduling of operation and routine/preventive maintenance activities of HVAC inventory, scheduling for rectification for day to day complaints, breakdown/fault rectification works etc.
- 6) The agency shall depute required manpower for 24x7 manned operation & maintenance of HVAC systems at HVAC Plant room, Utility-1 Bldg., NABI-CIAB.
- 7) The agency shall depute required manpower for 24x7 manned operation & maintenance of HVAC system of LAB Bldg., NABI-CIAB.
- 8) The agency shall prepare the building wise/area-wise manpower deployment schedule in consultation with the Engineer-In-charge and get it approved in principal from the Engineer-In-charge for deployment at NABI-CIAB Campus.
- 9) The agency shall regularly maintain the Log books of all the HVAC machinery/systems installed in the NABI-CIAB Campus i/c Main HVAC panel, Chillers, Cooling Towers, Primary Chilled water pumps, Secondary Chilled water pumps, Condenser water pumps, Hot Water Generators, Hot water pumps, Air Handling Units, Fan Coil Units etc. as per the format provided by Engineer-In-charge.
- 10) The agency shall be fully responsible to maintain all the HVAC systems/services/inventories installed at NABI-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-In-charge i/c regular cleaning and day to day maintenance of all the HVAC machineries installed inside NABI-CIAB campus.
- 11) The agency shall regularly check all the HVAC systems/services of NABI-CIAB Campus i/c checking of HVAC panels, Chillers, Pumps, Cooling Towers, AHUs, AHU Starter panels, Variable Frequency Drives (VFDs), Motors, AHU Motor belts, pulleys, Filters, Coils etc. as per the checking schedule provided by the Engineer-In-charge and will notify the defects found (if any) in the Defect register to be maintained by the agency as per the format provided by Engineer-In-charge.
- 12) The agency shall also attend the complaints notified by NABI-CIAB Campus staff in the complaint register.
- 13) 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.
- 14) In case of emergent situations, the agency shall be responsible for the Chilled/Hot water line leakage identification & rectification and related works i/c excavation of hard/soft soil area, backfilling etc. for which the agreed charges will be payable to the agency.

- 15) 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.
- 16) 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.
- 17) 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.
- 18) 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.
- 19) 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.
- 20) 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.
- 21) 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.
- 22) 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.
- 23) 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.
- 24) 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 NABI-CIAB.
- 25) 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.
- 26) In case of Variable Air Volume (VAV) Terminal units which are covered under CAMC, the contractor shall be fully responsible for repair/replacement of complete VAV unit along with thermostat in case of any fault and shall make the system fully functional.
- 27) In case of AHUs of Green House and Glass House bldg. which are covered under CAMC, the contractor shall be fully responsible for repair/replacement of blowers, motors, belts, Pre and Fine filters, compressors, contactors, relays, PCBs, thermostats etc. in case of any fault and shall make the system fully functional.
- 28) In case of Smoke Extraction fans, 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 NABI-CIAB.

- 29) The contractor shall be responsible for timely greasing/Preventive Maintenance of all motors, pumps etc. of HVAC system installed at NABI-CIAB.
- 30) 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.
- 31) All the tools/tackles/ladders etc. required for carrying out the Annual Operation & maintenance contract shall be arranged by agency on its own.
- 32) The minor works i/c routine and preventive maintenance of approx. 50 Nos. of split ACs, any other works if required by NABI-CIAB shall be executed by the agency through it's already deputed manpower for which the spares/material will be provided by NABI-CIAB.
- 33) The agency shall depute it's manpower for required chemical dosing in Chilled water line and condenser water line circuits of NABI however the chemical for the same will be provided by NABI-CIAB.
- 34) The Preventive Maintenance of the specialized machineries i.e., Chillers and Precision Air-conditioning (PAC) units shall be arranged by NABI-CIAB through OEM or their authorized agency however the O & M contractor will support & depute its 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 NABI -CIAB campus.
- 35) The agency shall also be fully responsible for the regular training of its deployed Manpower for successful Operation & Maintenance of the HVAC system of NABI-CIAB.
- 36) The agency shall also be fully responsible for coordinating with the other Operation & maintenance agencies working inside NABI-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 dozing 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.

SCHEDULE-B

Reference to Conditions of Contract

Name of Work: **Annual Operation & Maintenance Contract of Heating, Ventilation and Air-conditioning (HVAC) system of NABI-CIAB Campus, Knowledge City, sector-81, Mohali Punjab, India**

- | | | |
|----|---------------------------------|------------------------|
| 1) | Tender Fee | : Zero |
| 2) | Earnest Money | : Rs.1,86,500/-only |
| 3) | Performance Guarantee | : 3% of tendered value |
| 4) | Date of Publication of Tender | : 29-09-2023 |
| 5) | Last date of receipt of tenders | : 20-10-2023 |

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 Executive Engineer-Electrical 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 **05 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**
12 months after reckoning date of start of work
Time allowed for execution of work.

Authority to decide: (i) Extension of time

.....

Chief Executive Officer, CIAB

(ii) Rescheduling of mile stones

.....

Chief Executive Officer, CIAB

(iii) Shifting of date of start in case of delay in handing over of site..... **Chief Executive**

Officer, CIAB

Clause 8

Type of work * **Annual Operation & Maintenance Contract of Heating, Ventilation and Air-conditioning (HVAC) system of NABI-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 2022**
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 2022 with upto date**
Amendments

(ii) Deviation Limit for items mentioned in earth

.....

work subhead of DSR and related items **as per CPWD Works Manual 2022 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 2022 Or
as amended from time to time
by CPWD

Schedule D

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. (Rupees only)

3. We, the said bank further undertakes 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).

6. We, (indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Institute in writing.

7. 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 the day offor..... (indicate the name of the Bank)

ANNEXURE-1**MINIMUM EDUCATIONAL QUALIFICATIONS & EXPERIENCE REQUIREMENT OF OPERATION & MAINTENANCE HVAC STAFF FOR NABI-CIAB CAMPUS**

S.No	Category	Nos. of manpower required	Educational Qualification	Desirable Experience
1	Senior Supervisor	01	ITI in Refrigeration & Air-conditioning Trade/Diploma in Mechanical Engineering	Minimum 07years (with ITI) or 05years (with Diploma) in Operation & Maintenance/Erection and Commissioning of HVAC system i/c Chillers, Cooling Towers, Pumps, AHUs, FCUs etc.
2	AC Technician	09	ITI in Refrigeration & Air-conditioning Trade/Diploma in Mechanical Engineering	Minimum 05years (with ITI) and 03years (with Diploma) in Operation & Maintenance/Erection and Commissioning of HVAC systems i/c Chillers, Cooling Towers, Pumps, AHUs, FCUs etc.
3	Helper	01	ITI in Refrigeration & Air-conditioning Trade/Diploma in Mechanical Engineering	Minimum 0 to 2 years of experience in the relevant trade

ANNEXURE-2

PROFORMA FOR PERFORMANCE CERTIFICATE

REF TENDER NO: CIAB/7(73)/2023-24-Works

NAME OF WORK: Annual Operation & Maintenance Contract of Heating, Ventilation and Air-conditioning (HVAC) system of NABI-CIAB Campus, Knowledge City, sector-81, Mohali Punjab, India

S.No	Name of work executed at NABI-CIAB during last 05 years (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 NABI/CIAB** and should be signed by an authorised person of NABI-CIAB/Engineer-In-charge of the work executed. It should be enclosed by the Bidder with the tender documents.

ANNEXURE-3
MANDATORY SITE VISIT FORMAT

REF TENDER NO: CIAB/7(73)/2023-24-Works

NAME OF WORK: Annual Operation & Maintenance Contract of Heating, Ventilation and Air-conditioning (HVAC) system of NABI-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 NABI-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-4

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

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

Name of the work - Annual Operation & Maintenance Contract of Heating, Ventilation and Air-conditioning (HVAC) system of NABI-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 institute having their office at Knowledge City, Sector-81, Mohali and for the project..... Sector-81, Mohali under consideration.

On this day of2023

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.