

INSTITUTE FOR STEM CELL SCIENCE AND REGENERATIVE MEDICINE (inStem)
(Autonomous Institute of the Dept of Biotechnology, Government of India)
inStem, GKVK Campus, Bellary Road, Bengaluru-560065
Phone: 61948039/ 61948036.



Tender for

**“Support services for Round the Clock Operation &
Monitoring and General shift Maintenance of HVAC
System, inStem”**

**UNIT-RATE TENDER (OUTPUT ADMEASUREMENT - BASED ON PRICE
PER UNIT OF QUANTITY OF SERVICE) FOR NON-CONSULTANCY
SERVICES**

‘TECHNICAL BID’

HVAC ENGINEERING SECTION

2024

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inStem

NOTICE INVITING E-TENDER

GeM-Tender in Single stage Item Rate tenders in Two-Envelope System are invited on behalf of The Director, inStem from the eligible contractors who have executed similar nature and magnitude of services, in respect of the non-consultancy services as detailed below up to **1800 Hours on 27/11/2024.**

A. Details of Tender:

1. Website Url: Bidders are requested to participate to this tender through <https://gem.gov.in/> Bidders are advised to follow the instructions provided in the “Instructions to the participating bidders” in Section-I of the Tender.

2. **Name of the service:** “Support services for Round the Clock Operation & Monitoring and General shift Maintenance of HVAC System, inStem, Bengaluru”

3. Brief Details of Tender:

a.	Estimated cost (ECPT)	Rs.76.00 lacs (including GST@18%)
b.	Earnest Money Deposit	Rs.1,52,000/- (Firms registered as MSE are exempted and they are to submit Valid Registration Certificate).
c.	Contract Duration	One year wef 01 Jan 2025, however inStem reserves the right to extend the contract for one more year on the same terms & conditions subject to satisfactory performance of the contractor.
d.	Cost of tender document	NIL
e.	Tender processing fee	Nil
f.	GeM-tender uploading date and time	06/11/2024 @ 1800 Hrs
g.	Date of Tender Submission Closing	1800 Hours on 27/11/2024
h.	Opening of the Technical Bid	1830 Hours on 27/11/2024
i.	Date of Pre-bid Meeting	1500 Hours on 18/11/2024

4. The site of the work is located at GKVK Campus, Bellary road, Bengaluru, Karnataka.

5. The Technical Bid shall contain the following. The bid received without documentary evidence shall summarily be rejected:

a. Documentary evidence for Eligibility as per eligibility criteria.

- b. Other Information / document as indicated in NleT.
- c. Any other information, tenderer may like to submit reflecting their credentials.

6. **Eligibility Criteria**

The Bidder shall meet the following eligibility criteria and submit the documentary evidence in the technical bid. The bid received without documentary evidence shall summarily be rejected:

- a. Tenderer must be registered under appropriate authorities i.e. must be registered with Service Tax authorities/ Income Tax/ EPF/ ESI authorities/ PAN etc. and should submit the copies of valid registration details of the same.
- b. The bidder must have Electrical Contractor Class-I License or license required to render the tender services as per Act/ Rules promulgated by Government along with valid registration certificate.
- c. Copies of attested IT returns submission for the last three financial years.
- d. The bidder must have at least three years' experience (ending month of prior to the bid opening) of providing similar type of services to Central/ State Government/ PSUs/ Nationalized Banks/ Reputed Organizations and documentary proof of the same shall be furnished. Similar type of services includes contract executed for Operation & maintenance of HVAC system under work or services in single contract having at least capacity of 1000 TR or above, centralized HVAC system, for at least one year.
- e. The tenderer should submit copy of EPF and ESI Registration certificates issued by appropriate authority.
- f. Certificate of Registration for Goods Services Tax (GST).
- g. Bank Solvency certificate from any scheduled banks for a Minimum Value (40% of the ECPT) of Rs.30.4 lakhs OR Net worth certificate of minimum 10% of the estimated cost put to tender (Rs.7.6 Lakhs) issued by certified chartered accountant with UDIN. Date of solvency certificate shall not be more than one year from the last date for submission of tender.
- h. **Turnover**: Average annual financial turn over should be at least 30% of the estimated cost (i.e. Rs. 22.8 Lakhs) during the immediate last 3 consecutive financial year i.e. 2021-22, 2022-23, 2023-24.
- i. **Profit/Loss**: The bidder should not have incurred any loss (profit after tax should be positive) in more than one year during available last three consecutive balance sheet, duly audited and certified by the Chartered Accountant.

j. **Completion Certificates**: Similar type of service's satisfactory completion certificates as per eligibility shall be attached. The completion certificate should clearly indicate the scope of work and issuing authority.

k. Undertaking in Company's Letter head as under:

"I/ We undertake and confirm that we have not been blacklisted/ debarred by Government Organizations / Semi-Government Organizations of State or Central Government or Public Sector Undertakings or Autonomous bodies of State or Central Government. Further, I/We undertaken and confirm that eligible similar work(s)/ service(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 the inStem, then I/we shall be debarred for bidding in inStem works in future forever. Also, if such a violation comes to the notice of the institute before or after start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/ Performance Guarantee.

7. **Security Deposit**: A security deposit @ 3% of the contract value shall be provided by the Contractor within 15 days of awarding of Contract, failing which the entire amount shall be recovered in the first 4 months' running bill. Alternatively, a Bank Guarantee (format attached as FORM-D) from a Nationalized / Scheduled Bank for the equivalent value may be furnished for the period of agreement with 6 months grace period.

The Contractor shall pay any claim made by the Institute of any deficiency (both tangible and intangible) in service. Such amount may also be deducted from bills payable to the Contractor. It may be noted that the Institute shall have the right to forfeit the Security Deposit in full or part for any due/damages caused by the Contractor. If the Security Deposit or outstanding bills of the Contractor is found inadequate, then such monetary recoveries shall be effected from any amount payable to the Contractor against this or any other contract until the dues of the Institute are fully settled. If the claim of the Institute could not be met in this manner, the Contractor shall pay up all such claims if a demand is made by inStem.

The security deposit is refundable after expiry of the agreement subject, to (a) any claims on the Contractor, (b) after the Contractor certifies and confirms by submitting proof wherever possible as desired by Accounts Officer that the Contractor has paid bonus, all premium as PF/ESI, (c) that the contractor has submitted a statement to each of the employees who had worked under him, the moneys deposited as premium on ESI, Insurance, etc. The Institute reserves the right to deduct from the security deposit any amount for damages/deficiencies in service by the Contractor or to meet any statutory deficiencies. The security deposit does not carry any interest. The Institute shall have the absolute right to deduct from the security deposit and/or any amount payable to the Contractor and any damages as may be determined by the Institute Director, whose decision shall be final on account of any act or omission in the Contract, by the Contractor.

8. The Director, inStem does not bind himself/ herself to accept the lowest or any other tender and reserves the authority to reject any or all tenders without assigning any reason. All the tenders, in which any of the prescribed conditions are not fulfilled or incomplete, in any respect, are liable to be rejected.
9. **Bid Validity**: The offer submitted shall be valid for minimum 90 days from the date of the submission of the tender.
10. This Notice Inviting Tender (N.I.eT) shall form the part of the Contract Document.
11. The Director, inStem reserves the right to postpone the tender issue date, submission/ opening date and to accept or reject any or all tenders without assigning any reasons.
12. Tender completed in all respects shall be submitted as per the instructions given in the "Notice Inviting Tender" forming part of the tender document.
13. The successful tenderer, on the acceptance of his tender by the inStem shall within **Ten** days from the stipulated date of start of the work, shall sign the formal contract. The cost of stamp paper (as per prevailing Government Guidelines) for the agreement shall be borne by contractor as per the state stamp act.
14. Award of the service will be based on the bidder whose offers are found to be responsive and lowest. Evaluation shall be done as per Eligibility Criteria indicated in Sl.6 as 'pass' or 'fail' system. If two or more bidders quote the same price, inStem reserves the right to select the bidder who is having the highest single annual contract value of similar type of services with satisfactory completion certificate in last three years.
15. The Director, inStem reserves the right of accepting the whole or part of any tender and tenderer shall be bound to perform the same at the rate or amount quoted.
16. The GFR-2017 & Procurement Manual for Non-Consultancy services with all the amendments and schedule annexed with this tender shall be applicable and form the integral part of agreement.
17. The rates shall be quoted inclusive of all taxes for complete item service as such nothing extra shall be payable. Necessary Income tax shall be deducted as per rules in force.
18. As per Gol Guidelines, Service charges shall be quoted by the bidders with the minimum charges of 3.85% and maximum ceiling of 7%. Bids of bidders quoting low or high by deviating these limits may not be considered as per directives from Competent Authority.
19. The quoted rates shall not be less than the minimum wage fixed/ notified by the Government and shall include all statutory obligations. However, bids without any element of cost over and above such minimum wage (or below it) shall be treated as 'Nil' price quotation and would be rejected. Service charge shall include the Tools & Tackles to be provided as per list indicated in the tender.

20. EMD of unsuccessful bidders shall be returned, without interest, at the earliest, after the expiry of the final tender validity period but not later than 30 days after conclusion of the contract. EMD of the successful bidder should be returned after receipt of performance security as called for in the contract.

21. **Site Visit:** The bidder, at the Bidder's own responsibility and risk, is encouraged to visit at their own cost and examine the Site of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid an entering into a contract for the Services. For site visit and for any queries please contact: 080-61948095.

22. **Pre-bid Meeting:** All the bidders are requested to attend the pre-bid meeting without fail and send the queries at least 2 working days prior to scheduled date of the meeting in the email address of sreenathba@instem.res.in.

For and on behalf of
Institute for Stem Cell Science and
Regenerative Medicine

Sr Admin Officer-Purchase

SECTION - II
SCOPE & GENERAL CONDITIONS OF CONTRACT

1.1 The Contractor will, as per the contract conditions, provide services at Institute for Stem cell Science and Regenerative Medicine, GKVK Campus, Bellary Road, Bangalore – 560 065 and as per the details laid down in the following sections/annexure:

- a) Section III - Scope of work.
- b) Annexure – A - Personnel Deployment for support services
- c) Annexure – B - Material Deployment
- d) Section IV - Special Conditions of Contract
- e) Section – V - Standard Forms
- f) Section – VI - Price Bid

1.2 The details of number of tentative work force are required for carrying out the work by the Contractor is indicated in the Annexure “A”.

1.3 Once the Work Order is issued, the Contractor will receive instructions from an Engineer designated for this purpose (Engineer-in-Charge) or his authorized nominee and the Contractor hereby undertakes to abide by his/her any suggestions/instructions, etc. as regards services covered in this contract.

1.4 The work is to be carried out as required as per schedule of quantity. All other terms and conditions, work details etc. as mentioned in the tender document should be followed.

1.5 The work will be carried out in round the clock shift (24/7hrs) & general shift basis using the deputed man power as per directives from Engineer in-charge.

1.6 The scope of service requires the Service Provider is to provide non-consultancy Services by employing requisite man power in the inStem’s premises or the inStem designated premises. The Service Provider would be required to provide sufficient and qualified manpower, capable of supporting the functioning of the project/ department in a manner desired by inStem as per criteria mentioned in this document. The services shall be rendered as per the agreement signed between the parties. The services maybe required for one or more locations.

1.7 inStem will have the option to choose the desired manpower on the basis of type of function, educational qualification, work experience, skill categories as per their requirement. inStem will also provide additional details like duration of requirement, number of tentative manpower required etc. Service Providers will quote price as per the given service parameters, taxes, labour law compliance, profits/ overheads, cess etc.

1.8 The bid evaluated as responsive and lowest quote shall be awarded the contract.

Quality and scope of services

2.1 The Contractor shall appoint trained staff having a good bearing and maintain high standards of turn out, maintain adequate staff to ensure there is no hold up of any service for any reason whatsoever. Any deficiency in the number of staffs deployed will entail penal reduction from the compensation payable as decided by the Institute. The successful Contractor as soon as the agreement is signed shall submit a list of their workmen / supervisor/ others along with copy of appointment order issued to them including supporting document for necessary educational/ professional qualification. As and when there is a change in the staff posted, a revised list shall be submitted along with copy of appointment order issued to the new appointee / appointees, simultaneously.

2.2 It is normally understood and agreed between both the parties that Institute will not be responsible or be liable for any laws that are in force / that may come into force from time to time in respect of personnel engaged by the Contractor and he will be solely responsible for the terms and conditions of their services, safety, health, statutory requirement, etc.

2.3 The Contractor shall depute such officers and supervisors as proposed by him, who shall be available on site to supervise the Contract employees and interact on daily/weekly basis with Engineer-in-Charge regarding delivering the specified services.

2.4 It is understood and agreed that the Contractor will be held responsible for any disciplinary matters arising out of their employees and the Contractor will take appropriate disciplinary action against those employees found indulging in any act of indiscipline in Center's premises or in connection with the services referred to herein. The Contractor will immediately replace any employee found to be unfit in any manner immediately or on receipt of advice from any authorized person in inStem.

2.5 The Contractor shall maintain proper and detailed record for the job carried out by their employees and shall also maintain all records and returns as necessary for carrying out the work smoothly and as provided under the Contract Labour Act, Minimum Wages Act, ESI Act, PF Act, etc, as relevant and applicable from time to time.

2.6 The Contractor shall be solely responsible to comply with all legal and statutory requirements that arise out of this agreement and in respect of the employees engaged by the Contractor in fulfillment of the contractual obligations stated herein. It is understood and agreed that the Contractor will provide suitable uniforms with company insignia, badges/ID cards with photos and safety equipment and shoes to their employees. It is Contractor's responsibility to have them periodically checked medically so as to ensure that medically fit staff only is deployed for the work.

2.7 The Contract employees should be covered under all statutory requirements like ESI, PF, ELI, etc. by the Contractor and the Contractor shall comply with all the formalities in this regard. Copy of challan and Schedule of Contract Employees for payment of ESI/PF/ELI, etc. will be furnished by the contractor along with the monthly running bill. If any particular categories (Technical Assistant, supervisors etc.) are above ESI limit, then equivalent **insurance** certificate should be taken on individual name and proof of the same should be submitted to department for reimbursement.

2.8 The contractor should pay to their personnel well above minimum wages, as fixed under Minimum Wages Act prescribed by the Chief Labour Commissioner (Central) as per orders amended time to time, circulated by Office of the Chief Labour Commissioner (C), New Delhi, Government of India. Any breach of this condition will be liable for termination of the contract and the same would be dealt with accordingly. Particular categories (Technical Assistant, supervisors etc.) whose wages is not included in the said order, their minimum starting salary is fixed in the Annexure A and it shall be hiked in proportionate whenever the VDA is hiked by the Chief Labour Commissioner (avg of all category). **However, increase in wages & VDA with proportionate increase in ESI, EPF and GST will be reimbursed.**

2.9 The Institute will have the right to inspect/call for books/registers, documents in relation to all matters referred to, in this tender or agreed later on. The Institute will also have all rights to make recoveries from the compensation, if any that any statutory agency imposes upon the Institute due to the Contractor's non-compliance with statutory obligations.

2.10 The contractor shall maintain a muster role, wages register of all men employed by them and all other documents and submit it to the Institute on the 1st of every month for the previous month **or** as necessary for inspection. The Contractor shall provide all facilities for inspection /books / personnel on demand by inStem or any Statutory Authority.

2.11 The contractor should provide PF A/c number, ESI Card and Photo Identity Card to the personnel posted at inStem. This should be done **immediately** but not later than one month from the date of signing joint agreement.

2.12 If job is not fully completed as per work order, deduction will be made accordingly.

2.13 If a particular worker is absent without notice, another person should be deployed in his place within 2 days. If replacement is not made, a deduction should be made on proportionate to total working days in that month + 25% of minimum wages to that category as penalty.

2.14 It may also be ensured that the Contractors maintain the following Registers in respect of the work orders placed on them so that the same may be produced to the Labour Enforcement Officer for inspection when the same is called for:

(a) Attendance Register, (b) Register of Wages, (c) Register of Deductions, (d) Register of Overtime, (e) Register of Fines, (g) Wage Slip, (h) Register of Persons Employed.

2.15 It is clearly understood and agreed upon that neither the Contractor nor Contract employees shall have any claim on employment with Institute at any point of time nor this arrangement is purely between the Contractor and the Institute for specific services for the period specified.

2.16 The successful Contractor shall indemnify/deemed to have indemnified the Institute for all claims/losses arising out of this tender. The Contractor is deemed to have indemnified the Institute against any claim by any authority once the work order is awarded. In the event the Institute has to pay any individual, statutory body or any agency for reasons directly or indirectly attributable to this tender, the Contractor shall only pay such claim/damages and even if the Institute is called upon to pay, such damages/penalties and or cost shall be recovered from the contractor's dues /amount payable or shall be paid by the Contractor on demand from inStem.

2.17 The Contractor shall follow all rules as may be existing or may be framed from time to time at inStem on all aspects covering this tender. Material movement, entry/exit of personnel, identity card, safety, etc. shall be according to procedures existing in inStem as amended from time to time.

2.18 **The spares required for maintenance will be supplied by the department.** Any misuse or failure of devices/ equipment due to negligence shall be recovered from the Contractor. Suitable explanation shall be called from the contractor and decision of Engineer in-charge is final in this regard.

3. Tenure & Termination

3.1 The period of contract is for 1 year (12 months). **The Institute reserves the right to extend the contract for one more year on the same terms and conditions.** The Institute reserves the right to terminate the Contract during the pendency of the Contract period if the performance is found unsatisfactory.

3.2 Except as provided in Clause 3.6 below, the Contract could be terminated by either side by giving one month's notice in writing. If the notice period is not given or if a shorter notice is given by the Contractor, the entire security deposit would be forfeited. Any other costs and / or damages incurred by the Institute to maintain the services contracted to the Contractor, on account of such short notice will be deducted from the dues payable to the Contractor, or shall be paid by the Contractor on demand if such dues fall short of such costs.

3.3 In the case of failure to complete the contract in terms of such contracts within

the contract period specified in the tender and incorporated in the contract and if such work is got done by the Institute from any party at a higher rate the Contractor shall be liable to pay the Institute the difference between existing rate and the rate of the new Contract.

3.4 Risk Clause: Notwithstanding the other terms therein, the Institute at its option will be entitled to terminate the contract and to avail service from elsewhere at the risk and cost of contractor either the whole of the contract or any part which the contractor has failed to perform in the opinion of the Institute within the time stipulated or if the same performance is not available, the best and the nearest available substitute thereof. The contractor shall be liable for any loss which the Institute may sustain by reason of such risk in addition to penalty.

3.5 Insolvency and breach of contract: The Institute may, at any time, by notice in writing summarily terminate the contract without compensation to the Contractor in any of the following events:

- (a)** If the Contractor being an individual or a firm if any partner in the contractor's firm shall be adjudged insolvent or shall have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition under any insolvency act for the time being in force or make any conveyance or assignment of his effects or enter into an arrangement or composition with his creditors or suspend payment, or if the firm be dissolved under the Partnership Act, or
- (b)** If the contractor being a company shall pass a resolution or the court shall make an order for the liquidation of its affairs or a receiver or manager on behalf of the debenture holders shall be appointed or circumstance shall have arisen which entitle the court or debenture holders to appoint a receiver or manager, or
- (c)** If the contractor commits any breach of contract not herein specifically provided always that such determination shall not prejudice any right of action or remedy which shall have then accrued or shall accrue thereafter to the Institute provided also that the contractor shall be liable to pay the Institute for any extra expenditure he is thereby put to but shall not be entitled to any gain on re-tender.
- (d)** In the event of inadequate or unsatisfactory performance of duties by the Contractor, the Institute shall have the right to bring to the notice of the Contractor the default (s) on their part and the Contractor shall ensure that the said default (s) is / are not repeated and/or are duly remedied, within a period of three days from the receipt of the said notice. Failing such remedial action, or in the event of the said default (s)'s being inadequately corrected, the Institute shall have the right to immediately terminate the agreement.

3.6 Notwithstanding any other clause herein, if there is any act or omission by the Contractor or the Contract employees which jeopardizes the safety / security of the Institute including, but not limited to:

- a) Theft or pilferage of property of inStem
- b) Fire, flooding, breakage or damage
- c) Violence or physical attack on the Campus
- d) Any act or incident which may prove detrimental to the interests of inStem - the contract would be terminated without any notice. Further, the Contractor would be levied penalties, as appropriate by the deemed authority. The decision of the Institute Director shall be final in such matters.

4. Payment Terms:

4.1 The contractor shall submit bills after the completion of every calendar month and normally payment will be released within 15 working days from the date of submission of bill if the bill is complete and correct in all respects. All payments will be made after deduction of taxes and duties at source as applicable from time to time.

4.2 The monthly bills submitted by the contractor shall be only for actual salary, Washing Allowance, PF, ESI, ELI, G.S.T, uniform content and margin. If failure to submit the proof, then the contractor will not be entitled for any of the above benefits, Recovery of proportionate amount shall be made in the bill payments.

4.3 The monthly payment will be released on production of documentary evidence of PF, ESI and ELI for the deployed work force under this contract.

4.4 **Bonus:** The quoted amount is inclusive of Bonus, which shall be payable by the contractor to his contract employees once in a year before Deepawali or when a contract employee's service is discontinued. The amount of bonus payable is 8.33 % subject to maximum of Rs. 6997/- per annum. This amount is to be paid to the employee who has the wages not exceeding Rs.21,000/month.

4.5 The monthly running bill of the Contractor will become payable at the end of each month on submission of a monthly claim to the Accounts Officer, and on due certification by the Officer-in-Charge of satisfactory services against the claim. The Contractor's payment will be released only after disbursing the salary to contract employees every month.

4.6 The Engineer-in-Charge is authorized to deduct any amounts as determined by the Institute Director from the amounts due to the Contractor for any deficiency in services, provided by the Contractor.

4.7 Payments to the contract employees shall be disbursed by the 7th of the succeeding month. If 7th happens to be a holiday, payments shall be made the previous working day. The Contractor shall notify all his employees / workers of this date in their appointment order, and follow this very strictly, whether the Institute has paid the Contractor's bill or not.

4.8 PBG will not be returned till clearance certificate from labour officer is obtained by Contractor. However, if there is genuine difficulty to obtain a clearance certificate, Engineer-in-Charge will make a reference to Labour Officer before releasing PBG. If no reply is received within a reasonable period, say 1 month from the date of such reference then Engineer-In-Charge may make his decision to release based on his discretion.

4.9 Since, Services Contract, it is important for the Contractor to note that the service charges quoted shall be inclusive of all overheads & profit and shall remain valid for the period of the agreement, i.e. 1 year from the date of Work Order or 2 years if the contract is extended. However, increase in VDA with proportionate increase in ESI, EPF and GST will be reimbursed by the Institute.

4.10 The Contractor shall pay any claim made by the Institute for any deficiency (both tangible and intangible) in service. Such amount may also be deducted from bills payable to the Contractor. It may be noted that the Institute shall have the right to forfeit the PBG in full or part for any due/damages caused by the Contractor. If the Security Deposit or outstanding bills of the Contractor is found inadequate, then such monetary recoveries shall be effected from any amount payable to the Contractor against this or any other contract until the dues of the Institute are fully settled. If the claim of the Institute could not be met in this manner, the Contractor shall pay up all such claims if a demand is made by inStem.

4.11 Contractor is to mandatorily to produce monthly the following document.

- a. Proof of monthly wages payment made to the deployed work force/ bank transfer statement
- b. PF, ESI and ELI challan
- c. Bonus disbursement statement
- d. Proof of Increase in wages statement if any
- e. Proof of GST payment

5. Safety, Security and Insurance

5.1 The Contractor shall follow all security rules of the Institute and instructions received from time to time regarding personnel identity cards, material movement, etc, of the Contractor.

5.2 During the pendency of the agreement, the contractor shall be liable fully to compensate all concerned for any loss, damage of construction of works, construction, plant & machinery, person, property, etc. including third party risks arising due to causes attributable to the agreement. The decision of the Institute Director will be final & will be binding on both parties.

The contractor shall take Employees Liability Insurance of prescribed value for their employees. It must be adequately covered all employees/workers under Workmen Compensation Act, 1928 as amended from time to time. Before starting the work, the Contractor shall produce the original insurance policy and the license of the workers where applicable to the Institute.

6. Miscellaneous

6.1 The work mentioned in the schedule is only indicative. The Institute reserves the right to increase or decrease the quantum of work. The contractor shall execute the work on the same terms and conditions and rates throughout the period of agreement.

6.2 The contractor or his supervisor shall meet the designated Officer of the Institute every day to receive the details of issues / complaints to be attended and after attending to these complaints, a report on the same has to be submitted to the concerned Officer.

7. Dispute and Resolution

7.1 Any dispute or differences that may arise between the parties shall be referred to the sole arbitration of the Institute Director or his nominees and the Contractor shall have no right to object to the appointment of the Director or his nominee as the sole arbitrator. The decision of the arbitrator shall be final and binding on the parties. The venue for arbitration shall be Bangalore and no other place. The provisions of the Arbitration and Conciliation act, 1996 as / amended from time to time shall apply. The courts in Bangalore shall have exclusive jurisdiction to deal with any or all disputes between the parties.

8. Primacy of Documents

The tender documents, subsequent communication exchanged and the work order as well as all annexure shall be part and parcel of this agreement. If there is any discrepancy between the above documents, the statement in the following documents will apply with primacy for communications issued after the work order, any pre-order correspondence as accepted jointly, followed by work order, tender documents and annexure thereof, i.e. tender documents and annexures have least primary, if any clause or detail there has been superseded by communication after

the opening of bids if jointly accepted, work order or subsequent communication to the Contractor.

9. Amendments to Work Order / Agreement:

Any amendment to the Work Order/agreement shall be valid only if both parties have agreed to such amendment(s) in writing duly authenticated by authorized personnel of both parties. During service delivery period some conditions may occur when the Buyer and/ or Service Provider may require to amend the Agreement, some of such conditions may be as followed-

9.1 Amendment of the Contract after event of Force Majeure: In case of occurrence of any exceptional event/ circumstance which has affected either party directly to perform the agreed services, the agreement can be amended. However, cause, evidence and nature of such effect shall be notified to the other party.

9.2 Amendment in statutory variations: All statutory variations leading to increase in the cost of the contract will be debited to the buyer accounts.

9.3 Amendment of the Contract as per both parties' consent: Amendment of the Contract shall be done as per mutual consent of both parties; no party shall be made liable to pay/ get any compensation for agreement amendment. However, the variation put together shall not reduce or exceed 25% of contract value

1.9

Section - III

SCOPE OF WORK

The inStem has about 2,70,000 Sqft of Laboratory space, 16400 Sqft of Service block space and about 32,000 Sqft of Dining and recreation space and associated HVAC System. **The Scope of works include [but not restricted to] the following.**

The essence of this contract is to achieve ‘**Zero Breakdown**’ and timely servicing of all equipment & system. All efforts are to be made with up to date maintenance in achieving this, by using predictive and pro-active maintenance techniques at times, and, by strictly adhering to preventive maintenance practices and schedules. Contractors who have carried out similar works as per eligibility criteria with good track records shall be considered for engagement.

The detailed scope of work is as follows;

1. Operation and monitoring of Chillers & its MCC panels– 4 No’s (3 Water cooled + 1 Air Cooled).
2. Operation, monitoring and maintenance of Primary Pumps (4 No’s), Secondary pumps (4 No’s) & Condenser Pumps (3 No’s).
3. Operation, monitoring and maintenance of Cooling Towers (3 No’s).
4. Operation, monitoring and maintenance of Air Handling Units (AHU’s) – 120 No’s.
5. Operation, monitoring and maintenance of Exhaust Fan System (EFS’s) – 40 No’s.
6. Operation, monitoring and maintenance of Fan Filter Unit (FFU’s) – 16 No’s.
7. Operation, monitoring and maintenance of Fresh Air Unit (FAU’s) – 14 No’s.
8. Operation, monitoring and maintenance of Variable Refrigerant Volume (VRV) ODU of capacity 6 HP to 10 HP – 9 No’s.
9. Operation, monitoring and maintenance of Variable Refrigerant Volume (VRV) IDU of capacity 0.5 TR to 3 TR – 35 No’s.
10. Operation, monitoring and maintenance of DX Cassette Unit of capacity 0.5 TR to 3 TR - 6 No’s.
11. Operation, monitoring and maintenance of DX Split Unit of capacity 0.5 TR to 2 TR - 12 No’s.
12. Operation, monitoring and maintenance of Cold Room Units of capacity 2 TR - 29 No’s.
13. Operation, monitoring and maintenance of Chilled Water FCU’s, Hi-wall Split Units & Cassettes Units of capacity 0.5 TR to 10 TR - 20 No’s.

14. Operation, monitoring and maintenance of Green House - 2 No's.
15. Operation, monitoring and maintenance of BMS system, Field devices and Direct Digital Control (DDC) Panel - 120 No's.
16. Chilled water lines and valves of various sizes.
17. Operation, monitoring and maintenance Electrical panels of AHU's – 120 No's.
18. Operation, monitoring and maintenance toilet exhaust fan – 20 No's.
19. Operation, monitoring and maintenance deep freezers – 2 No's.
20. Cleaning/replacement of Diffusers, Grilles, Pre-filters, Fine filters, Bag filters, HEPA filter, BIBO filters as and when required – 700 No's.
21. EMERGENCY Areas: Operation, general maintenance and continuous monitoring / checking of all HVAC & related electrical parameters pertaining to Bio-safety lab, Cluster facility, Cryo facility, MS facility, Collection facility, Stem Cell facility, Cold Room's and Animal house. All classified emergency and critical loads to be monitored (with corrective action) round the clock as instructed and running condition of each to be logged in necessary logbooks and register/online sheet.
22. Operation and maintenance of HVAC systems in Dining & recreation Hub.
23. Documentation.
24. Any addition or alterations made in the system during the tenure of this contract (whether by the AMC contractor or any other firm or by inStem), have to be maintained by the contractor.
25. All small fabrication works, repairs, servicing of machines / equipment / parts therein shall have to be carried out by the contractor within specified time. Contractor shall never say 'no' to any of the requirement of inStem, which is in the area of AMC's technical services, as found reasonable to be entrusted onto the contractor by Engineer In charge (HVAC). Reasonable amount shall be paid against bills for such works as certified by Engineer In charge (HVAC).
26. While carrying out any of the works, if the dust is generated / the same flies and settles in the surrounding area, the same (dust) should be thoroughly cleaned. Vacuum cleaner and wiping materials shall be used in cleaning. If any marking, scars are seen, the same to be cleanly wiped off. All attempts to be made in avoiding dust / dirt / markings etc., while working.
27. Providing all kinds of labour and the expertise required to attend to the above work is included in the scope of work. However, consumable, workshop expenses, new addition and alteration work will be paid extra as per actual rate or agreed rate as applicable.

Brief

Daily Operation / routine monitoring, scheduled preventive maintenance (servicing), breakdown maintenance of all the Air-conditioning system in the campus working on chilled water supply, using all necessary spares. The system has Air handling units (AHU), Fan coil units (FCU), VFDs, BMS system (operation only), humidification and de-humidification systems, control system, air distribution system with air-ducts, dampers, grills, diffusers, chilled water lines, drain system etc. installed and working at various labs & facilities.

Round the clock Chiller operation 4X330TR screw chillers at plant room of service block of inStem.

Following is the indicative detail of the existing system;

Operation and Maintenance of AC systems in inStem:

Double skin AHU completes with centrifugal fan, motorized dampers, pre-filters section with synthetic fiber filters, multi deep chilled water coil, stainless steel drain pan, high efficiency EFF-I squirrel cage motor, mist generator, strip heaters with all controls & accessories. AHU complete with all adaptive control such as air stat, safety stat, humidistat, geyser stat etc.

Periodic filters cleaning & minor related works to be carried out.

Details of HVAC Works:

Daily operation / monitoring on round the clock basis, scheduled annual preventive / routine & predictive maintenance, breakdown maintenance including repair / replacement of all spare parts and consumables of entire existing AC system in the campus working on chilled water. The system has chilled water supply & return lines, AHU / FCU, air supply & return ducts, grills, diffusers, dampers, electrical panels, VFDs, BMS (operation only), humidification and de-humidification systems, control & protection systems. Work shall be carried out by continuous deployment of competent, experienced & trained staff members at site. This is a continuous mode operation & maintenance. All emergencies at all times to be attended without fail.

The AHU / FCU units which are to be maintained will be consisting of Cooling coils (heat exchangers), blowers, motors, heaters, 2 way mixing valves, humidistats, thermostats, pressure & temperature gauges, pulleys, V-belts, flexible hoses, hose clamps, hydraulic hoses with fixtures, water flow control valves, fasteners with all accessories, pre-filters, micron class filters, canvas, thermo coal & foam insulation, tar sheet, control transformer, fuse units, contactor, TOLR, push-buttons, connectors, control units & control schemes, drain system, plenum area, etc. complete set.

The chilled water lines, related control valves & accessories are also to be maintained. Problems anywhere in entire network of chilled water supply & return

lines like air locks, line blocks, leakages etc. are to be attended & rectified by the contractor, to bring the system to normalcy.

All the air ducts, diffusers, dampers, grills, flow control valves, air filters etc. in the system are to be cleaned & maintained periodically.

ADDITION & ALTERATION WORKS: All the addition and alteration jobs in the air conditioning system shall be carried out by the maintenance contractor at the agreement rates. If the prices are not available in the agreement, the same shall be paid at departmentally estimated rates (based on market rates). Rate analysis shall be produced by the contractor whenever asked by the department.

All fabrication works, repairs, servicing of machines / equipment / parts therein (or arrangement for the same) within the purview (entire AC system) of this contract, shall have to be carried out by the contractor within specified time.

If the contractor fails to carry out the assigned or entrusted work, the department shall get the work done by engaging any other agency and twice the cost incurred shall be recovered from the AMC contractor.

The entire existing AC system (working on chilled water) and ventilation / exhaust systems are covered under the scope of this AMC. Any additions and alterations made in the system (whether by the contractor or by any other agency or by NCBS), upto an extent of 10% of existing installed AHU & FCU capacities are covered under the scope of this contract for operation & maintenance.

Special Conditions:

1. All works to be carried out in accordance with relevant Indian Standards and as per Indian Electricity rule as amended. The contractor has to obtain necessary clearance from Electrical Inspectorate. Panel, Fittings, Equipment's, Systems etc., all the components, accessories, Sub-Assembly, assemblies etc. Which are attachments or parts needed for the purpose. Any other work which are incidental or part of the above, but not specifically spelt out will also be included in the scope.
2. For carrying out above job the contractor has to make his own arrangements for tools, tackles and measuring equipment, measuring meters, safety and protective devices for carrying out the work.
3. Contractors should deploy staff having experience in handling such chiller plant trouble shooting situations and have ability to rectify.
4. As the work involved is quite specialized and continuous monitoring is required, absenteeism of the contractor's employees will not be tolerated. **The Engineer-in-Charge (HVAC Engineer) is authorized to make penal deductions in the**

bills for the absenteeism and non-compliance of the work. The contractor will ensure proper supervision all the time. In case of deficiency penalty will be imposed.

5. All the labours and expertise are included in the scope of work. No extra payment will be made for carrying out routine breakdown and preventive maintenances.
6. It is presumed that contractor will deploy suitable supervisors, highly skilled and skilled manpower as required for round the clock operation of 330 TR water- & air-cooled chillers.
7. All the breakdown calls should be attended immediately, in case frequency / work demands more manpower, Contractor will arrange additional manpower so as not to disturb the research activities at no extra cost.
8. Contractor will ensure consistency of work and work force, correct trouble shooting, good workmen ship follow all safety procedures and will make all necessary efforts to maintain healthy environments and reliable services.
9. **It is purely contractor's responsibility to get his staff acquainted with the site condition, operation and maintenance procedure, Equipment detail, Safety devices, Scope of work etc.**
10. Contractor shall depute adequate number of staff to carry out routine work, remodeling/retrofit project work, preventive and breakdown maintenance so as not disturb research activity.

Scheduling

In a broad manner, the work can be scheduled as follows:

Daily

- Operate the HVAC system (both high and low side) continuously on a round-the-clock basis, following a three-shift system.
- Address any reported complaints promptly, troubleshooting and rectifying issues immediately.
- Continuously monitor the AC systems of important and critical facilities, taking corrective actions immediately to prevent disruptions.
- Inspect the AC system before any scheduled seminars, lectures, meetings, or interviews on campus, ensuring it functions normally.

- Adjust the system to achieve the required temperature and relative humidity (RH) levels as needed by the user, including releasing air locks or blocks in the system.
- Implement specific instructions for operating the AC systems at designated times.
- Conduct general inspections of the AC system, rectifying any abnormalities that are found.
- Regularly record and analyze temperature and humidity readings to ensure the system is maintaining the desired environmental conditions.
- Regularly check the pressure levels in the pump system, ensuring they are within the recommended range for both high and low sides.
- Regularly check the water levels of cooling tower sump & make-up water tanks.
- Perform planned or scheduled preventive maintenance.
- Update all relevant documents, logs, and history records.
- Report the day's work and progress to the Engineer-in-charge.

MONTHLY

- Check air filters for dust and debris buildup, cleaning or replacing them to maintain proper airflow and indoor air quality.
- Verify that thermostat settings are correct for the season and that the unit is operating efficiently.
- Inspect all supply and return vents and registers for obstructions or dust buildup, cleaning them to ensure proper airflow.
- Update and review system logs, noting any changes in performance or potential issues for further investigation.
- Check the condensate drain for blockages or signs of algae growth, and clean it to prevent water damage and ensure proper drainage.
- Checking the performance of important AHUs (like Animal house, Cluster, Biosafe lab, Lecture halls, Seminar halls)

QUARTERLY (OR ONCE IN 4 MONTHS, AS APPLICABLE)

- Inspect connection for any water leaks in the coil and connection. Check the tightness of hose, fittings & tighten if necessary. There should not be any flooding of water from the AHU.
- Perform a thorough cleaning of evaporator and condenser coils to remove any accumulated dirt, dust, or debris that could hinder heat exchange efficiency.
- Check belts and pulleys for wear, tension, and alignment, replacing or

tightening them as needed to prevent system strain.

- Measure and adjust refrigerant levels, ensuring they meet manufacturer specifications to maintain system efficiency and prevent overloading.
- Conduct a detailed inspection of the ductwork for leaks, loose connections, or damage, and seal any gaps to improve airflow and energy efficiency.
- Check and clean drain pan, condensate drain pipe and floor drains to ensure no choking and flooding.
- Check all electrical connections for tightness, signs of corrosion, or wear, and repair or tighten them as needed.
- Observe the system during a full operational cycle, listening for unusual noises, checking for proper cycling, and ensuring the system is running smoothly.
- Inspect the conditions & operation of temperature and pressure gauges for proper function.
- Check the operation of dampers and actuators, ensuring they open and close smoothly and seal properly.
- Check for proper operation of the associated measuring, control and safety device like thermostat, humidistat, 2-way actuating valves, differential pressure switch, differential pressure transmitter etc. Reset if required.
- Measure and verify airflow throughout the system, ensuring that it meets the specified requirements.
- Check pump couplings for wear and proper alignment, and replace if necessary to ensure efficient power transmission.
- Check air filters for dust and debris buildup, cleaning or replacing them to maintain proper airflow and indoor air quality.
- Check heater bank condition and rectify if any problem exists.
- Ensure that all safety controls, including limit switches and pressure relief/drain valves, are functioning correctly.
- Check the insulation on chilled water/refrigerant lines for damage or wear, replacing it if necessary to maintain efficiency.
- Clean the inlet water strainer of individual AHU's, pumps and chilled water header line, if installed.
- Drain, clean, and disinfect the cooling tower basin to remove sludge, algae, and other contaminants.
- Recording the values of setpoint & actual reading of temperature & RH levels maintained in each lab / facility / area.
- Necessary documentation.

YEARLY

- Overall servicing of the unit, cleaning, reduction of noise level, checking of mechanical assemblies, nitrile/foam insulation over the pipes.

- Perform de-scaling of the copper tubes in the cooling coil (water circuit) using methods recommended by the manufacturer and in accordance with general industry standards. Follow the procedural details enclosed to ensure proper execution and effectiveness of the de-scaling process.
- Perform a deep cleaning of evaporator coils to remove any accumulated dirt, debris, or scale that could impair system efficiency.
- Check refrigerant levels and perform a detailed analysis for any signs of contamination or degradation, topping off or replacing refrigerant as needed.
- Test all thermostats and sensors for accuracy, recalibrating or replacing them as needed to ensure precise control of temperature and humidity.
- If applicable, inspect and test fire dampers to ensure they close properly in the event of a fire, meeting all safety regulations.
- Conduct a comprehensive indoor air quality assessment, checking for pollutants, mold, or other contaminants, and take corrective action if needed.
- Analyze the system's performance over the year, considering energy consumption, repair frequency, and user comfort. Use this analysis to plan for any needed upgrades or replacements.
- Inspect the cooling tower fan assembly, including the motor, fan blades, and bearings, for wear, alignment, and balance.
- Inspect all pump seals and gaskets for wear or deterioration, replacing them to prevent leaks.
- Verify the alignment of the pump and motor shafts, adjusting if necessary to prevent undue stress on the components.
- Perform a thorough inspection of the cooling tower's structure, including the basin, fill material, and casing, for signs of corrosion, scaling, or damage.
- Inspect cooling tower nozzles, spray heads, and distribution arms to ensure they are not clogged and are distributing water evenly across the fill.
- Inspect and balance the air and water flow within the system, adjusting as necessary to ensure optimal performance.
- Measure the insulation resistance (IR) values of motors and heater banks, ensuring they are within acceptable limits. Take corrective action if necessary.
- Check and calibrate temperature and pressure gauges on the supply and return chilled water lines. Replace gauges if they are faulty or out of calibration.
- Conduct a thorough inspection of all electrical switchgear and controls. Ensure that all electrical systems are checked by competent personnel in accordance with relevant Indian Standards and the Electricity Act of 1910. Cleaning of ducting system having diffusers, grills, dampers etc.
- Record all relevant parameters before and after servicing, maintaining accurate documentation. Submit a detailed checklist for review and future reference.

Upkeeping:

- If it is required to clean the cooling coil by water jet, the same has to be done by removing the cooling coil with all precautionary measures & taking it to a convenient place for full cleaning of water & air circuits. Coil to be cleaned with suitable chemical & water jet. This work is to be done carefully without damaging the AHU & the coil. This is also included in the AMC scope at no extra cost.
- Coil, fins, filters etc. are to be thoroughly cleaned to achieve desired air and water flow rates.
- All the maintenance / servicing works should be carried out in such a way so that the equipment / unit can be used for its optimum performances. Any work which is found to be required for optimum performance of the system has to be done.
- Necessary care should be taken while carrying out all types of maintenance / servicing of equipment to avoid damages. Any damages of equipment / equipment parts during the services has to be replaced free of cost.

Maintenance of Air Handling Units (AHUs):

This procedure is to be carried out twice a year, or as needed. The following steps outline the detailed process for AHU maintenance:

1. Power Isolation and Safety Precautions:
 - Ensure that the power supply to the AHU is disconnected and switched off. Attach a caution board at the main power isolation switch to alert others.
 - Ensure that all necessary safety precautions are taken, including wearing personal protective equipment (PPE).
2. Pre-Maintenance System Checks:
 - Record pre-service system operating parameters, including airflow, supply air temperature (SAT), return air temperature (RAT) and electrical parameters (voltage, current, etc.).
 - Inspect the overall condition of the AHU, noting any visible signs of wear, damage, or malfunction.
3. Shut Off Valves:
 - Close the main valves (ball/butterfly valves) associated with the AHU to isolate the unit from the chilled water circuit.
4. Protection of Electrical Components:
 - Cover and protect all electrical components, including terminal boxes, motorized valves, pressure gauges, and sensors, to prevent water ingress during maintenance. Failure to do so may result in equipment damage, injury, or death, for which the contractor will be fully responsible.

5. Inspection and Cleaning of Air Filters:
 - Remove and inspect the air filters. If the filters are dirty or clogged, clean or replace them as necessary to ensure proper airflow and filtration.
6. Coil Cleaning:
 - Inspect the cooling and heating coils for dirt, debris, or scale buildup. Clean the coils using an appropriate coil cleaner as recommended by the manufacturer.
 - Use a soft brush to clean the coil fins, ensuring no bending or damage occurs. Maintain the integrity of the fins to allow for proper airflow.
 - Ensure that there is no air bypass around the coils, which could reduce the unit's efficiency.
7. Fan and Motor Inspection:
 - Inspect the fan assembly, including the fan blades, motor, and belts. Clean the components as needed and lubricate bearings to ensure smooth operation.
 - Check the alignment and tension of the belts. Adjust or replace them if necessary to prevent slippage and ensure efficient operation.
8. Heater Inspection:
 - Inspect all electrical connections to the heater elements. Ensure that connections are tight and free from corrosion to prevent electrical failures or inefficiencies.
 - Check all safety controls, such as high-limit switches and thermostats, to ensure they are working properly. Replace any faulty controls to prevent overheating or fire hazards.
 - Run the system to verify that the heater operates as expected. Measure the temperature rise to ensure it matches the design specifications.
9. Electrical System Check:
 - Perform a detailed inspection of the AHU's electrical components, including switchgear, controls, sensors, and wiring. Ensure that all connections are tight and free of corrosion.
 - Test the insulation resistance (IR) of motors and heater banks to verify that they meet safety standards.
 - Ensure that all electrical inspections are conducted by qualified personnel in accordance with relevant Indian Standards and the Electricity Act of 1910.
10. Ductwork and Damper Cleaning:
 - Inspect and clean the ductwork associated with the AHU, including diffusers, grills, and dampers. Remove any dust or debris that could obstruct airflow.

- Ensure that all dampers are functioning correctly and provide proper control over airflow.
11. Calibration of Instruments:
- Check and calibrate all temperature and pressure gauges on the supply and return lines. Replace any gauges that are faulty or out of calibration to ensure accurate monitoring.
 - Inspect and calibrate other sensors and controllers as necessary to maintain precise control of the system.
12. Reassembly and Post-Maintenance Checks:
- Reconnect all hoses, valves, and electrical connections. Restore power to the unit and gradually bring the system back online.
 - Take post-service operating parameter readings and compare them with the pre-service readings to ensure the unit is functioning at optimal efficiency.
13. Final Inspection and Area Cleanup:
- Conduct a final inspection to verify that all work has been completed correctly and that the AHU is operating as expected.
 - Ensure that the entire unit and the surrounding area are cleaned thoroughly, removing any debris, tools, or materials used during the maintenance.
14. Documentation and Reporting:
- Document all maintenance activities, including the parameters recorded before and after servicing. Submit a detailed checklist and report to the Engineer-in-Charge.
 - Obtain prior approval from the Engineer-in-Charge for any chemicals or solutions used during cleaning and maintenance.

Maintenance of Cooling Tower:

This procedure is to be carried out twice a year or as needed. Follow the steps below for comprehensive maintenance of cooling towers:

1. Power Isolation and Safety Precautions:
 - Ensure that the power supply to the cooling tower is disconnected and switched off. Place a caution board at the main power isolation switch to alert others.
 - Follow all necessary safety precautions, including wearing appropriate personal protective equipment (PPE).
2. Pre-Maintenance System Checks:
 - Record pre-service operating parameters, including water flow rates, temperature readings, and electrical parameters (voltage, current, etc.).

- Inspect the overall condition of the cooling tower, noting any visible signs of wear, damage, or malfunction.
3. Drain and Clean the Basin:
 - Drain the cooling tower basin completely. Remove any debris, sludge, or sediment that has accumulated in the basin.
 - Clean the basin using a suitable cleaning solution and ensure that all waste is properly disposed of.
 4. Inspect and Clean the Fill Material:
 - Inspect the fill material for clogging, scaling, or damage. Remove and clean the fill material using a non-corrosive cleaner as recommended by the manufacturer.
 - Replace any damaged or excessively worn fill material to ensure optimal heat transfer.
 5. Inspect and Clean the Drift Eliminators:
 - Check drift eliminators for proper installation and effectiveness in minimizing water loss. Clean the eliminators to remove any accumulated debris.
 - Replace any damaged or ineffective drift eliminators.
 6. Fan and Motor Maintenance:
 - Inspect the fan assembly, including fan blades, motor, and drive system. Clean the fan blades and check for any signs of wear or imbalance.
 - Lubricate motor bearings and check for proper alignment and tension of the fan drive belts. Replace any worn or damaged components.
 7. Inspect and Clean the Water Distribution System:
 - Inspect nozzles, spray heads, and distribution arms for clogs or blockages. Clean or replace these components as necessary to ensure even water distribution over the fill material.
 - Check for leaks in the water distribution system and repair any issues.
 8. Water Treatment Review:
 - Review and update the water treatment program to prevent scale formation, corrosion, and biological growth within the cooling tower.
 - Add or adjust chemical treatment as needed based on water quality analysis.
 9. Check Electrical Systems:
 - Perform a detailed inspection of electrical components, including wiring, control panels, and safety switches. Ensure that all connections are secure and free from corrosion.

- Test the insulation resistance (IR) of the motor and other electrical components to ensure they meet safety standards.
 - Ensure that all electrical inspections are conducted by qualified personnel in accordance with relevant Indian Standards and the Electricity Act of 1910.
10. Inspect and Repair Structural Components:
- Inspect the structural components of the cooling tower, including the casing, supports, and framework, for signs of damage or corrosion. Repair or replace any damaged components as needed.
11. Reassemble and Post-Maintenance Checks:
- Reassemble all components of the cooling tower, ensuring that all connections and fasteners are secure.
 - Restore water flow and power to the system and gradually bring it back online. Take post-service operating parameter readings and compare them with pre-service readings to confirm that the system is operating efficiently.
12. Final Inspection and Area Cleanup:
- Conduct a final inspection to verify that all maintenance tasks have been completed correctly and that the cooling tower is functioning as expected.
 - Clean the work area thoroughly, removing any debris, tools, or materials used during the maintenance process.
13. Documentation and Reporting:
- Document all maintenance activities, including parameters recorded before and after servicing. Submit a detailed checklist and report to the Engineer-in-Charge.
 - Obtain prior approval from the Engineer-in-Charge for any chemicals or solutions used during cleaning and maintenance.

Maintenance of Direct Expansion (DX) Units:

This procedure is to be carried out once a year or as needed. Follow the steps below for comprehensive maintenance of DX units:

1. Power Isolation and Safety Precautions:
 - Ensure that the power supply to the DX unit is disconnected and switched off. Place a caution board at the main power isolation switch to alert others.
 - Follow all necessary safety precautions, including wearing appropriate personal protective equipment (PPE).

2. Pre-Maintenance System Checks:

- Record pre-service operating parameters, including refrigerant pressures, temperature readings, airflow, and electrical parameters (voltage, current, etc.).
 - Inspect the overall condition of the DX unit, noting any visible signs of wear, damage, or malfunction.
3. Inspect and Clean Air Filters:
- Remove and inspect air filters. Clean or replace filters as necessary to ensure proper airflow and maintain air quality.
 - Check filter condition regularly to prevent clogging and reduce strain on the unit.
4. Clean and Inspect Coils:
- Evaporator Coils: Inspect and clean the evaporator coils using a suitable coil cleaner. Remove any dirt, debris, or scale that could impede heat exchange.
 - Condenser Coils: Inspect and clean the condenser coils to ensure they are free of dirt and debris. Use a coil cleaner as recommended by the manufacturer.
5. Inspect and Clean the Drain Pan and Lines:
- Check the drain pan for any debris or standing water. Clean the pan and ensure that it is draining properly.
 - Inspect and clean the drain lines to prevent clogs and ensure proper water drainage.
6. Inspect and Service Fans and Motors:
- Inspect the fan/blower blades and motors. Clean the fan/blower blades and lubricate motor bearings as needed.
 - Check the alignment and tension of the fan drive belts. Adjust or replace belts if necessary.
7. Check Refrigerant Levels and System Leaks:
- Measure refrigerant levels and check for any signs of leaks in the system. Recharge refrigerant if necessary, and repair any detected leaks.
 - Use appropriate leak detection methods and ensure that the refrigerant charge is within the manufacturer's recommended levels.
8. Inspect Electrical Components:
- Perform a detailed inspection of all electrical components, including wiring, control panels, and safety switches. Ensure that all connections are secure and free from corrosion.
 - Test the insulation resistance (IR) of the compressor and other electrical components to ensure they meet safety standards.

- Ensure that all electrical inspections are conducted by qualified personnel in accordance with relevant Indian Standards and the Electricity Act of 1910.
9. Test and Calibrate Controls:
- Check and calibrate all controls, including thermostats, pressure switches, and temperature sensors. Ensure that they are functioning correctly and adjustment as needed.
 - Verify that control settings match the operational requirements of the DX unit.
10. Inspect and Clean System Components:
- Inspect all system components, including expansion valves, compressors, and piping, for signs of wear, damage, or leaks. Clean components as necessary.
 - Ensure that there are no obstructions or restrictions in the refrigerant lines.
11. Check Unit Efficiency and Performance:
- Evaluate the overall efficiency and performance of the DX unit. Measure airflow, temperature differentials, and system pressures to ensure optimal operation.
 - Compare performance data with pre-service readings to confirm that the unit is operating within manufacturer specifications.
12. Reassemble and Post-Maintenance Checks:
- Reassemble all components and ensure that all connections and fasteners are secure.
 - Restore power to the unit and gradually bring it back online. Take post-service operating parameter readings and compare them with pre-service readings to confirm that the system is operating efficiently.
13. Final Inspection and Area Cleanup:
- Conduct a final inspection to verify that all maintenance tasks have been completed correctly and that the DX unit is functioning as expected.
 - Clean the work area thoroughly, removing any debris, tools, or materials used during the maintenance process.
14. Documentation and Reporting:
- Document all maintenance activities, including parameters recorded before and after servicing. Submit a detailed checklist and report to the Engineer-in-Charge.
 - Obtain prior approval from the Engineer-in-Charge for any cleaning agents or materials used during maintenance.

Maintenance of Primary/Secondary/Condenser Pumps:

This procedure is to be carried out twice a year or as needed. Follow the steps below for comprehensive maintenance of DX units:

1. Inspect Pump Housing:

- Check the pump casing for any signs of wear, cracks, or leaks. Ensure that all bolts and connections are secure.

2. Check for Leaks:

- Inspect all seals and gaskets for leaks. Repair or replace any components showing signs of wear to prevent fluid loss.

3. Lubricate Bearings:

- Regularly lubricate the pump bearings to reduce friction and wear. Use the manufacturer-recommended lubricant and follow the specified schedule.

4. Inspect and Tighten Couplings:

- Check the alignment of the pump and motor coupling. Tighten any loose bolts and realign if necessary to avoid undue stress on the shaft.

5. Monitor for Unusual Noise and Vibrations:

- Listen for any unusual noises or vibrations during pump operation. Investigate and address the cause promptly to prevent damage.

6. Check Electrical Connections:

- Inspect the motor's electrical connections for any loose or corroded terminals. Tighten or clean connections as needed.

7. Clean and Inspect Impellers:

- Remove any debris from the impeller and check for signs of damage or imbalance. Replace or repair impellers if necessary.

8. Test Pump Performance:

- Measure the pump's flow rate and pressure to ensure it is operating within the designed parameters. Adjust settings or perform repairs if performance is suboptimal.

9. Inspect and Replace Worn Parts:

- Regularly inspect parts such as seals, O-rings, and belts for wear. Replace any worn components to maintain pump efficiency.

Fungus Cleaning Procedure for Walls, False Ceilings, and Ducts:

1. Ensure Safety Precautions:

- Disconnect or switch off any power supply in the area where cleaning will take place. Post a caution board at the main isolation point to prevent accidental power restoration during cleaning.
2. Wear Personal Protective Equipment (PPE):
 - Ensure all personnel involved in the cleaning process are equipped with appropriate PPE, including gloves, masks, goggles, and protective clothing, to prevent exposure to chemicals and mold spores.
 3. Ventilate the Area:
 - Properly ventilate the area by opening windows or using exhaust fans to dissipate fumes from the cleaning chemicals and to reduce the concentration of airborne spores.
 4. Prepare the Cleaning Solution:
 - Mix iso-propyl alcohol and sodium hypochlorite in a container, following the manufacturer's recommended proportions. Ensure the mixture is thoroughly combined and ready for use.
 5. Isolate the Contaminated Area:
 - Seal off the contaminated area using plastic sheeting or similar materials to prevent the spread of mold spores to other areas during the cleaning process.
 6. Apply the Cleaning Solution:
 - Use a sprayer or cloth to apply the prepared cleaning solution to the affected areas of the wall, false ceiling, and ducts. Ensure the solution is evenly distributed over the mold-affected surfaces.
 7. Allow Proper Dwell Time:
 - Let the cleaning solution sit on the surface for the time specified by the manufacturer to ensure effective mold and fungus removal.
 8. Scrub the Affected Areas:
 - Gently scrub the surfaces using a brush or non-abrasive cloth to remove the mold and fungus. Ensure that all visible signs of contamination are thoroughly cleaned.
 9. Rinse and Wipe Down:
 - After scrubbing, rinse the area with clean water if necessary, and wipe down the surfaces with a clean, dry cloth to remove any residue.
 10. Inspect for Mold Regrowth:
 - Carefully inspect the cleaned areas to ensure that all mold and fungus have been effectively removed. If any remains, repeat the cleaning process.

11. Dispose of Contaminated Materials:

- Safely dispose of any cleaning materials, cloths, and protective coverings that may have come into contact with the mold or cleaning chemicals. Use sealed bags to prevent the spread of mold spores.

12. Monitor Air Quality:

- After cleaning, monitor the air quality in the area for a period to ensure that mold spores have been adequately removed. Use air purifiers or dehumidifiers if necessary to maintain a clean environment.

13. Reassemble and Restore the Area:

- Once the cleaning is complete and the area is dry, remove any isolation barriers, reconnect systems, and restore the area to its original state.

14. Post-Cleaning Inspection:

- Conduct a thorough inspection of the cleaned area to ensure no damage has occurred to walls, ceilings, or ducts. Verify that all systems are functioning correctly.

15. Document the Cleaning Process:

- Keep a record of the cleaning process, including the chemicals used, the time taken, and any observations. This documentation is important for future reference and for compliance with safety regulations.

16. Clean the Surrounding Area:

- Ensure that the entire cleaned area and surrounding space are thoroughly cleaned and free from any debris, mold remnants, or chemical residues.

De-Scaling & Cleaning of Cooling Coils & Fins:

1. Power Supply Disconnection:

- Ensure the power supply to the unit is disconnected or switched off. Post a caution board at the main isolation point to prevent accidental power restoration.

2. Pre-Service System Readings:

- Take pre-service readings of the system's running parameters, including air flow, dry bulb (DB) and wet bulb (WB) temperatures, and electrical parameters.

3. Close Main Valves:

- Ensure that all main valves (such as ball or butterfly valves) associated with the unit are closed to isolate the cooling coil from the system.

4. Protect Electrical Components:

- Cover and secure electrical terminal boxes, motorized 2-way valves, pressure gauges, and other sensitive components to prevent water ingress. Failure to do so could result in serious injury, death, or damage to equipment, for which the contractor will be solely responsible.
5. Disconnect Hose Connections:
 - Loosen the hose clips and disconnect the hoses from the cooling coil to prepare for cleaning.
 6. Prepare Chemical Mixture:
 - Prepare the de-scaling chemical mixture according to the manufacturer's recommendations. Keep the mixture ready in a container or tank for circulation.
 7. Chemical Circulation:
 - Use a pressure pump to circulate the chemical mixture through the cooling coil for the specified duration recommended by the manufacturer. Ensure all necessary equipment (container, pump, fittings) is arranged beforehand.
 8. Flush with Fresh Water:
 - After circulating the chemical mixture, thoroughly flush the cooling coil with fresh water to remove any remaining chemicals before reconnecting the hoses.
 9. Clean Coil Fins:
 - Clean the coil fins using a fins cleaning chemical and a brush to remove sediments and dust particles. Ensure that the fins are not bent or damaged during the cleaning process.
 10. Ensure Proper Airflow:
 - Verify that there is no folding or blockage of coil fins that could impede proper airflow. Any bypass of airflow should be immediately attended to and rectified.
 11. Check Cooling Coil Filters:
 - Inspect the cooling coil filters to ensure they are in good and clean condition. If the filters are choked, clean or replace them as necessary.
 12. Reconnect and Test:
 - Reconnect all hoses and components, then take post-service running parameter readings to verify that the system is operating correctly.
 13. Clean Work Area:
 - After completing the work, ensure that the entire unit and surrounding area are thoroughly cleaned and free of any debris or chemical residues.

NOTE:

- Any accidents occurred due to negligence / inexperience during work is purely the responsibility of the contractor
- Contractor should also ensure that water should not penetrate/leak inside the lab facility during executing of work.
- Prior approval should be obtained from Engineer-in-Charge for the chemical / solution being used for de-scaling. The chemical shall be recommended by manufacturer.
- Arrangement of pump, chemical tank, a small power distribution board with back up protection of MCB/Fuse/ELCB required for operation of motors pump sets is the responsibility of the contractor without extra cost

inStem

Indicative/ Tentative Personnel Deployment**Manpower Deployment:**

1. The contractor has to manage and execute all the works entrusted, through dedicated Asst Junior Engineers & supervisor by deploying the required manpower as under:

Sl	Category	Qualification	Minimum Wage	No of Personnel
a	Asst. Junior Engineer	BE in Elec/ Mech with 2+ years experience in HVAC field or Diploma in Elec/ Mech with 5+ experience in HVAC field.	Minimum wages of eqvt to BP+DA of L-5 of 7th CPC or above	02
b	Supervisor	BE in Elec/ Mech with 1+ year experience in HVAC field or Diploma in Elec/ Mech with 3+ experience in HVAC field.	Minimum wages of eqvt to BP+DA of L-4 of 7th CPC or above	01
c	Highly Skilled Technician	ITI with 6+ experience in HVAC field.	Rs.1035/ day	5
d	Skilled Technician	ITI with 4+ experience in HVAC field.	Rs.954/ day	4
e	Semi-skilled Technician	ITI with 2+ experience in HVAC field.	Rs.868/ day	2
f	Unskilled	SSLC & above/ ITI	Rs.783/ day	2
		Total		16

2. Shift schedule

Sr.No	Particulars	Shift timing
1	Night shift (3 rd - shift)	2200 hrs. to 0600 hrs.
2	Morning shift (1 st -shift)	0600 hrs. to 1400 hrs.
3	Evening shift (2 nd -shift)	1400 hrs. to 2200 hrs.
4	General shift	0900 hrs. to 1730 hrs.

Note: The timings * as mentioned above are actual duty hours excluding the lunch break of one hour. So, accordingly Nine hours working (including one hour for tea, lunch break) shall be considered as one man-day of working for measurement.

Night shift (3rd – shift) starts for a day from the previous day 2200 hrs.

3. From the deputed man power, shifts will be allotted as per requirement of the Institute by Engineer in-charge in rotation basis or nomination basis. All people should adhere to the allotted shifts.

4. All deployed work force should have sufficient experience in round the clock operation of water/air cooled chillers, pumps, cooling tower, AHU's, VRV units etc. and experience in maintenance of all HVAC related systems. The deployed manpower shall have necessary licenses required to execute the work as per scope mentioned in this document. Contractor will ensure consistency of work and work force, correct trouble shooting, good workmanship, follow all safety procedures and will make all necessary efforts to maintain healthy environment and reliable services.

5. If any of the staff member appointed by Contractor is found to be 'not competent', he has to be replaced by a right person within a stipulated time as instructed by HVAC Engineer- In-charge, inStem.

6. All the relevant documents pertaining to staff deployed, like copies of job appointment order with the contractor, address proof, photocopy of ID card etc., and other details as sought shall be provided to inStem, by the contractor under his responsibility for the correctness.

7. However, Personnel with higher Qualification with less experience than the requirement will also be considered after verifying the suitability. inStem reserves the right to verify the qualification and experience and accept or reject the persons based on the suitability for the job. All the original documents/certificates will be verified and copy of the document/certificates are to be produced to the Engineer in charge.

8. Wages of the staff deployed should not be less than as that mentioned in Minimum Wage Act applicable to the respective category/experience, as on date. The ESI, PF, bonus etc., labour law, other rules and norms requirement as found required for contracts of this nature should be met. The same details shall be submitted along with technical bid.

9. In no case, the contractor or his/her employees shall claim job / employment with inStem. No transport facility shall be provided for the contractor or his employees.
10. It is purely contractor's responsibility to get his staff acquainted/trained with the site conditions, operation and maintenance procedure, equipment detail, safety devices, scope of work etc.,
11. In case of delay, repetition of work, non-compliance, inadequate staff etc., penalty will be imposed as per the clause mentioned.
12. Contractor must visit the site, understand the site condition, type of work involved availability of specialized or general equipment's, tools etc., for carrying out works listed herein. You may contact HVAC Engineer or his nominee for this purpose.
13. Contractor should have class-I Government Electrical Contract License/ necessary registration as required to operate the contract as per existing provisions of law/ regulations, PF, ESIC, labour license and experience in similar field as mentioned in scope of work.
14. All works to be carried out in accordance with relevant Indian standards and as per Indian Electricity Rule as amended from time to time.
15. For carrying out above job the contractor has to make his own arrangements for men, tools, tackles, testing and measuring equipment, safety and protective gear/devices for carrying out the work.
16. As the work involved is quite specialized and continuous monitoring is required, absenteeism of the contractor's employees will not be tolerated. The HVAC Engineer is authorized to make appropriate deductions in the bills for the absenteeism and non-compliance of the work. The contractor will ensure proper supervision at all times. In case of deficiency penalty will be imposed.
17. Running of the system under abnormal condition or in risky circumstances will attract penalty.
18. Contractor will be responsible for any act of sabotage, misdeed, indiscipline, and negligence on the part of contractor or his employees. Penalty or legal action, as decided by Director, inStem shall be imposed on the contractor.
19. After the award of contract (Work order/LOI) within the stipulated time period the work has to be started. Within one-month period from the starting of

work, complete manpower has to be deployed, failing which penalties will be levied as mentioned above.

20. Every month all the persons have to complete the working shifts/days as per round the clock shift schedule/general shift working schedule prevailing at site as per the inStem assignment

21. In General, the deployed personnel shall be allowed with prior permission to take two days leave on monthly basis. However, for the leave days no payment will be paid.

22. However, in round the clock shifts no personnel shall be allowed to be absent. If any round the clock shift Operator is absent due to unavoidable circumstances, the contractor shall ensure arrangement of other trained shift personnel in that location without affecting the round the clock shift activities, with prior intimation to inStem Engineer in charge. Failing which the penalty will be levied.

23. During the period of contract if any deployed personnel had left/resigned, the contractor shall arrange suitable person within short period of time ie maximum of 10 working days, failing which penalties will be levied (beyond the stipulated period) as per the rates of respective category as detailed above.

24. Any accident due to negligence in following of safety procedures is purely at the responsibility of Contractor. Department is not responsible for any accidents/damages/death. Safety of all the staff of the Contractor is the sole responsibility of the Contractor.

25. Contractor shall submit staff pattern & general scheme to carry out the above work along with the bid.

Material Deployment

1. Contractor should provide two sets of Uniforms, 1 set of Shoes, safety and protection gear like goggles, helmet, Jerkins (02 Nos) to work in Cold Rooms, 15kV grade hand gloves, Identity cards etc., to the staffs deployed.

TOOLS & TACKLES:

2. All the tools required for carrying out the work stipulated in this document shall be provided by the contractor at site. **The cost of the same shall be included in the Service Charges.** Make of the tools should be Taparia & equivalent and electric eqpt shall be reputed make. But, the following minimums are a must at all times.

- i. Two screw drivers (one light duty & one heavy duty) with insulated handles.
- ii. Cutting plier, 500V grade with insulated handles – 04 Nos.
- iii. Live line tester, 500V – 04 Nos.
- iv. Clamp millimeter : 3 No's.
- v. Anemometer : 2 No's.
- vi. Digital thermo meters & one RH meter : 3 No's.
- vii. 500V megger/IR meter : 1 No.
- viii. Metal drilling machine include two set of star & hex bit (4 to 14 mm): 1 No.
- ix. Hammering drilling machine include two set of 6 to 16 mm bit: 1 No.
- x. Portable drilling machine include two set of star & hex bit of (6 to16mm): 2 No's and SS bit – 01 set.
- xi. Cutting machine: 1 No.
- xii. Vacuum Cleaner: 1 No.
- xiii. Air Blower: 2 No's.
- xiv. High pressure washer: 1 No.
- xv. Small water pump capacity 1 HP: 1 No.
- xvi. Heat blower: 1 No.
- xvii. Temperature adjustable soldering kit with soldering wire: 1 No.
- xviii. Glue gun with 10 no's of glue stick: 1 No.
- xix. One sets of 6 – 7 to 30 – 32 size (metric) double end open spanner.
- xx. One sets of 6 – 7 to 30 – 32 size (metric) double end ring spanner.
- xxi. Six nos. adjustable wrenches each (6-inch, 8-inch & 12-inch each two no.).
- xxii. Four set of Allen keys (2 set metric & 2 set inch).

- xxiii. Screw driver set (normal & star) - 2 sets
- xxiv. Hack saw cutting sets with spare blades – 1 no.
- xxv. Safety gloves – 4 set.
- xxvi. 0.5 to 16 sq.mm hand crimping tools – 2 No's.
- xxvii. Two set of box spanner 6 – 32 (one no.) & 4 - 14 (one no.)
- xxviii. Heavy duty screw driver 12 & 18 inch – 2 No's.
- xxix. Two Nos. of iron hammers (1lb & 2lb).
- xxx. Two Nos. of wooden/plastic mallet (0.5lb & 1lb).
- xxxi. Hydraulic rivet fixing tool – 1 No.
- xxxii. Pipe wrench small and large size each one no.1
- xxxiii. Body harness to work at heights – 2 Nos
- xxxiv. Cold Jackets with hood to work in cold rooms – 2 Nos.

3. Other tools & tackles which involve safety & security of personnel, as and when required, shall be arranged by contractor at no extra cost.

4. All these shall be suitably kept at site, with contractors own security arrangement at space allotted by the Institute. These items should always be available for work.

5. No work shall be partially or fully stopped for want of personnel or tools or instruments. If such an event occurs, the fine will be levied.

Section-IV

Special Conditions of Contract

Definitions

1. The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the Director, inStem or on behalf of Director, inStem and the Contractor, together with the documents referred to therein including these conditions, the specifications, design, drawings and instructions issued from time to time by the 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 required have the meanings, hereby respectively assigned to them.

i) The expression “services” or “work” shall unless there is something either in the subject or context repugnant to such construction, be construed and taken to mean the ‘non-consultancy support services’ by or by virtue of the contract contracted to be executed whether temporary or permanent and whether original, altered, substituted or additional.

ii) The “Site” shall mean the land / or other places on, into or through which work is to be executed under the contract, or any adjacent land, path or street which work is to be executed under the contract or any adjacent land, path or street through which may be allotted or used for the purpose of carrying out the contract.

iii) The “Contractor” shall mean the individual or firm or company, whether incorporated or not, undertaking the work and shall include the legal personal representatives of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignee of such individual or firm or firms or company.

iv) The “Director” means the Director, inStem, Bangalore and his successors.

v) The “Engineer-In-Charge” means the Officer or the appropriate competent authority declared by the Director, inStem and who shall supervise and be in charge of the work and who shall sign the contract on behalf of the Director.

vi) “inStem” shall mean the Institute’s Director.

vii) **Department/ Buyer** means inStem which invites tenders on behalf of Director/ inStem.

viii) **Tendered value** means the value of the entire services as stipulated in the letter of award.

ix) **Date of commencement of work:** The date of commencement of work shall be the date of start which shall be 01 Jan 2025 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.

x) **HVAC** means Heating, Ventilation, Air Conditioning

xi) **BMS** means Building Management System

2. Service Provider/ Contractor; while providing the services shall be compliant with all the applicable laws with respect to Buyer's organization, region or premises. Service Provider shall follow all the laws applicable for Buyer wrt all central labour laws under Ministry of Labour and Employment.

3. It is the responsibility of the Service Provider to provide manpower as per Buyer's requirement. The person deployed should not below the age of 18 years old.

4. The persons deployed should be efficient while handling the assigned work and complete the assigned work in given timelines. The Service Provider shall be responsible for any act of indiscipline on the part of the persons deployed. The Service Provider should have a legal status, it can be a registered Proprietorship Firm/ Partnership under Companies Act having legal entity with all statutory licenses/ registration for Tax Act etc.

5. The Service Provider shall ensure that all the relevant licenses/ registrations/ permissions which may be required for providing the services are valid during the entire period of the contract; failing to which shall attract the appropriate penalties. The documents relevant in this regard shall be provided by the Service Provider to the Buyer on demand.

6. Working shifts (includes day and night shift) if any, and daily working hours shall be as per directive from Engineer in-charge based on functioning requirement and should follow all the labour laws. In case of continuous work (24 hours), Service Provider shall be responsible to change the shifts and manpower in compliance with the labour law, maximum working hours, minimum wages, overtime and/ or any other conditions mentioned in the contract.

7. In case of services hired on annual basis and 5 working days, the manpower will be entitled to 08 days of casual leaves per year on pro-rata basis and in case of 6 working days, the manpower will be entitled to 12 days casual leave per year on pro-rata basis plus three national holidays. Beyond specified leaves as applicable, leave will be treated as leave without pay (LWP) for which necessary deduction will be made by the Buyer in the billed amount if no replacement is provided.

8. The Service Provider shall be required to keep the Buyer updated about the change of address, change of the Management etc. from time to time.
9. The Service Provider shall be solely responsible for the redressal of grievances/ resolution of disputes relating to persons deployed. The Buyer shall, in no way be responsible for settlement of such issues whatsoever.
10. After award of contract, if the Service Provider is found to be charging any amount from the manpower on its roll in any manner, the agreement shall be terminated immediately with forfeiture of Performance Security amount and also the Service Provider will be blacklisted. Any amount received from its manpower as registration or any fees by the Service Provider will be recovered from the pending bills and will be paid directly to the concerned manpower.
11. Any violation of contractual obligations by the Service Provider/ manpower shall attract penalties, before imposing a penalty, the Buyer will provide 3 days prior notice to the Service Provider to make its representation. The Service Provider confirms and agrees that penalty whenever becomes payable, shall be deducted by the Buyer from the payments due to the Service Provider.
12. In case the submission of monthly bills is delayed by the Service Provider beyond 15 days from the last day of the month in which the services have been provided, the entire liability towards payment of interest/penalty to the tax authorities shall be borne by the Service Provider
13. Service Provider shall adhere to the timeline given by Buyer for providing the required manpower on Buyer's premise/ designated premise. In case of non-availability of specifically demanded manpower; the Service Provider shall communicate the same to Buyer at least 10 days prior to the employment start date.

SERVICE ASSUMPTIONS

14. The Service Provider shall not sublet any part of the Contract. The Service Provider shall be responsible and liable to deliver the services as per the contract.
15. The manpower provided by the Service Provider shall not be deemed employees of the Buyer department hence the compliance of the applicable acts/ laws will be the sole responsibility of the Service Provider.
16. The Service Provider must assess all the proposed candidates of desired requirement on the parameters of educational qualification, work experience, skill assessment, pre-interviewing, short-listing and proposing to Buyer all pre-screened candidates
17. The Service Provider would be required to provide sufficient and qualified manpower, capable of supporting the functioning of the project/department in a manner desired by the Buyer. Any mismatch in demand and supply of the manpower such as number of employees, educational qualification, sectoral/ desired work experience etc. may lead to penalties and/or replacement of the resource with the matching skillset or profile desired by the Buyer.

18. The persons deployed by the Service Provider shall not claim nor shall be entitled to pay, perks and other facilities admissible to regular/ confirmed employees during the currency or after expiry of the Agreement.
19. No medical facilities or reimbursement or any sort of medical claims thereof in respect of employees provided by the Service Provider will be entertained by the Buyer.
20. The working hours and days of the outsourced manpower shall be as per the existing applicable rules of the Buyer.
21. The requirement of the manpower may increase or decrease during the period of initial contract also. In case of decrease in the requirement, the same will be informed to the Service Provider and additional manpower shall be withdrawn at the given time. If the requirement is increased, the Service Provider shall provide additional manpower on the same terms and conditions in reasonable time.
22. The persons deployed shall, during the course of their work be shall perform integrity to the Buyer and shall not disclose/ share any qualified documents and information which they are not supposed to divulge to Service Provider/ third parties. In view of this, they shall be required to sign the confidentiality clause and breach of this condition shall make the Service Provider as well as the person deployed liable for penal action under the applicable laws besides, action for breach of contract and termination of contract.
23. The Buyer shall have the right, within reason, to have any personnel removed who is considered to be undesirable with proper reasoning or otherwise and similarly the Service Provider reserves the right to remove any personnel with prior intimation to the Buyer in case of any emergencies.
24. The Service Provider shall nominate a coordinator/ Single Point of Contact (SPOC) who shall be responsible for regular interaction with the Buyer Department so that optimal services of the persons deployed could be availed without any disruption.
25. For all intents and purposes, the Service Provider shall be the "Employer" within the meaning of different Rules & Acts in respect of manpower so deployed. The persons deployed by the Service Provider shall not have any claim whatsoever like employer and employee relationship against the Buyer Department.
26. No deployed manpower shall be allowed to stay in the Buyer's premise/ designated premise unnecessarily after working hours without Buyer's permission.
27. Any damages/ losses caused by deployed manpower shall be borne by the Service Provider. The Buyer Department shall not be responsible for any financial loss or any injury to any person deployed by the Service Provider in the course of their performing the functions/duties or for payment towards any compensation.
28. The Total Price includes Minimum Wage, ESI, EPF, EDLI, Insurance, Other non-mandatory variables defined by the Buyer in the bid document, Admin Charge

and GST on the mentioned components. Service Provider will thus quote over and above the following components as a Service Charge and Special Allowance if any:

29. In case of any changes in the minimum wages as per the Applicable Laws during the Contract period, Buyer shall pay the Service Provider the difference in wage from the amount mentioned in the contract on pro rata basis.

30. The cost of the Contract shall be valid for initial contract period. No price escalation, other than minimum wages revision, shall be entertained by the Buyer during the period.

31. The Service Provider shall assure the payment to employees on the last working day of the month, payment of salary/ wages to the employees shall be made in their bank accounts only, no cash or kind payment shall be made. Any such incidents may lead to penalties on Service Provider

32. The claims in bills regarding Employees State Insurance, Provident Fund etc. shall be necessarily accompanied with the documentary proof pertaining to the concerned month bill. A requisite portion of the bill/whole of the bill amount will be held up till such proof is furnished, at the discretion of the Buyer.

BUYER'S OBLIGATIONS

33. The attendance of the manpower shall be entered in the register and/or in the Biometric attendance system provided by the Service Provider at the Buyer's premises. Biometric attendance is mandatory. If the contractor wants to use the biometric attendance machines of the buyer, the charges of Rs.30/ person/ month may be levied for the same by the buyer.

34. The Buyer shall provide work space (seating area, work desk, furniture etc.) for the manpower hired through Service Provider, Buyer shall also arrange necessary gate/ entry pass to Buyer's premise/ designated premise for the manpower.

- 35. Buyer shall directly or in consultation with the Service Provider provide the necessary training to the manpower for Buyer special tools, applications and machinery etc., if required.

36. Buyer shall provide, free of charge unimpeded access to all the infrastructure which is required to perform the Services. It may include use of stationery, printer, electricity, internet, Buyer special servers, data drives, tools and software etc. However, use of such infrastructure shall be limited for official purpose only.

37. The Buyer shall make necessary arrangements for use of basic facilities like water pots/ machines, cafeteria, washrooms etc. for manpower working at Buyer's premise/ designated premise.

PENALTIES AND FINE

38. Penalties and fine can be imposed on either party in case they have caused loss to other party, loss can be financial as well as reputational. These

losses may occur due to breach of contract/ agreement, faulty services, non/ delayed payment to the Service Provider for the services availed. Amount of penalties/ fine shall be settled/ recovered during next payments/ final settlements of the Service Provider.

Penalties are detailed below-

<u>Sl</u>	<u>Description</u>	<u>Penalty/ Fine</u>		
		1st Instance	2nd instance	3rd instance
a	Non-deployment of total manpower mentioned in the contract as per the date of joining	Up to 15 Days, @1 % per day of the total value and Beyond 15 days cancellation of the contract with cancellation charges @ 10% of the order value.	Up to 15 Days, @2 % per day of the total value and Beyond 15 days cancellation of the contract with cancellation charges @ 10% of the order value.	Cancellation of the contract with cancellation charges @ 10% of the order value
b	If employee is found disclosing any confidential information/ document to the Service Provider/ any third parties	Cancellation of the contract with cancellation charges @ 10% of the order value along with recovery of losses caused (if any) and legal action against the Service Provider depending on the gravity of the act	-	-
c	If the employee is found responsible for any theft, loss of material/ articles and damages	Immediate payment in actuals, equivalent to the value of the article theft/ lost/ damaged. Replacement of employee within 2 days	Immediate payment in actuals, equivalent to the value of the article theft/ lost/ damaged. Replacement of employee within 2 days/ cancellation of contract with cancellation charges @ 10% of the order value as decided by the buyer depending on the gravity of the act.	Cancellation of the contract with cancellation charges @ 10% of the order value

d	If the employee is found responsible for disobedience/ misconduct	Warning/ counselling of employee as decided by the Buyer depending on the gravity of the act	Warning/ counselling/ Immediate replacement of employee within 2 days as decided by the Buyer and Warning to Service Provider depending on the gravity of the act	Cancellation of the contract with cancellation charges @ 10% of the order value
e	If the employee is absent or takes leave for more than 2 days without informing or taking prior approval.	Substitute within 2 days failing which, @ 1 % per day of the total value (excluding service tax etc.) of the absent resources up to 15 days. Beyond 15 days, cancellation of the contract with cancellation charges @ 10% of the order value	Substitute within 2 days failing which, @ 3 % per day of the total value (excluding service tax etc.) of the absent resources up to 15 days. Beyond 15 days, cancellation of the contract with cancellation charges @ 10% of the order value	Cancellation of the contract with cancellation charges @ 10% of the order value
f	Found responsible for adopting illegal and foul methods or exercising any corrupt practice in collusion with any third party or officials at the workplace	Immediate replacement within 2 days/ cancellation of the contract with cancellation charges @ 10%, as decided by the buyer depending on the gravity of the act.	Cancellation of the contract with cancellation charges @ 10% of the order value	
g.	Delay in payments of take-home remuneration by the Service Provider and deposit of EPF and ESI (both employee and employer share)	Rs. 100 per day for each default, warning to Service Provider to deposit the said amount within 7 working days	Rs. 200 per day for each default, hold on all type of payments to Service Provider till the said amount is deposited to respective stakeholders and proof of same is submitted to Buyer	Cancellation of the contract with cancellation charges @ 10% of the order value

39. The employees/ workers employed shall be trained and experienced to handle the services as per the Scope of work mentioned in the Annexure 'A'. If such experienced hands are not available, either because the service is extremely specialized and only in-house training is possible, at least a certain percentage of employees/workers shall be experienced / trained who shall be able to impart training / expertise to others.

40. The Contractor shall provide the name and details of his work force. A list of all the names shall be submitted at the beginning of the contract, along with a copy of each appointment order and whenever there is a change. No personnel will be changed unless inStem has asked for it or without advance approval of inStem.

41. The Contractor shall ensure that no contract employees nor anyone from his side use inStem transport to come to the work spot or return. The Contractor shall use emergency services like medical help and emergency vehicles of inStem in the event of any accident or emergency to his employees, though all responsibility for such accidents and any injury / death and or loss / damage will fully rest with the Contractor.

42. At all point of time, there must be a minimum of 90% workers attendance per day. In any case there shall be 100% daily attendance is to be ensured. Any absence or shortage beyond this may be managed by giving over time; shortage or absenteeism beyond this percentage will be penalized including termination of the contract. Payment will however be restricted to actual number of people as physically provided in each month.

43. The Tenderer must indicate the deviation if any, with reasons thereof and only if such deviation (s) is/are part of the work order issued by inStem, will the deviation (s) become part of the agreement.

44. The contract covers as per GFR-2017 provisions with latest amendments. So, it is fully responsibility of the contractor to follow all norms.

45. The requirement of Operation works will be in round the clock shift duty of 9 hours or normal general shift duty hours of 9 hours (including one-hour lunch break). However, for general shift activities, even after normal working hours or on holidays due to job exigency, some of the persons may be required to be at site to meet the requirements. The works carried out during extra hours, that is beyond normal duty hours, or on holidays should be suitably compensated by the contractor in consultation with Engineer in charge, and the decision of Engineer in charge will be the final.

46. Tenderer shall familiarize himself with the nature of jobs and responsibilities involved in this contract at his own cost before submitting the bid.

The contractor should have a good experience in the similar nature of Operation works Research laboratories or equivalent buildings/ services in the last One year and should produce a certificate along with the quote.

47. The number of works & priority of works to be carried out on day to day basis or round the clock shift basis will be decided by Engineer-in-charge/inStem official and Contractor shall arrange the sufficient manpower for execution of the jobs as said by Engineer-in-charge/ inStem official.

48. No advance payment for the above work will be payable to the contractor.

49. The contractor shall comply with the requirement of labour license, EPF, Insurance policy, GST, Income tax clearance certificate etc.

50. The contractor will have to make his own arrangement for accommodation & transportation arrangement for the deployed personnel under this contract, nearby the plant site area keeping in mind that their employees has to carry out activities on round the clock shifts as well as in General shifts. The inStem will not provide any type of accommodation/transportation to Contract personnel.

51. Each employee deployed by the contractor shall be provided with two sets of uniform (pant & shirt), one set of safety shoe on yearly basis by the contractor. The colour and design of the uniform shall be decided in consultation with the Engineer in charge. Hand gloves, body harness and other required safety appliances as required shall be provided by the contractor as and when required. The contractor shall ensure, wearing of uniforms and usage other safety appliances at all times at site. Non-wearing of uniforms & Non-conformance of safety rules and measures shall attract penalty of Rs.200 per day or as per the Rules/Procedures prevailing at inStem site, and the decision of Engineer in charge will be the final.

52. The contractor shall pay the wages in time to all the personnel engaged in this contract. Delayed payment of wages shall attract penalty and the decision of Engineer in charge will be the final.

SECTION – V

STANDARD FORMS & PROFORMA

FORM 'A' - Financial Information

1. **Financial Analysis** - Details to be furnished duly supported by figures in balance sheet/ profit and loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (copies to be scanned & uploaded).

Particulars	Financial Years		
	2021-22	2022-23	2023-24
i) Gross Annual Turnover on construction work			
ii) Profit / Loss (Standalone)			
iii) Certified by			

2. Financial arrangements for carrying out the proposed work.
3. The following certificates are to be submitted:
 - a. Profit & Loss account certified by CA & as submitted to Income Tax Department.
 - b. Solvency Certificate from Banker in the Form 'B'.

Signature of Chartered Accountant with seal

FORM "B"

FORM OF BANKER'S CERTIFICATE FROM A SCHEDULED BANK

This is to certify that to the best of our knowledge and information that M/s.

_____ (with address) a customer of
our Bank are / is respectable and can be treated as good for any engagement up to a
limit of Rs. _____
(Rupees _____).

This certificate is issued without any guarantee or responsibility on the Bank or
any of the officers.

(Signature)
For the Bank

Note:

- a. Bankers certificates should be on letter head of the Bank.
- b. In case of partnership firm, certificate should include names of all partners as recorded with the Bank.
- c. Date of solvency certificate shall not be more than one year from the last date for submission of tender.

FORM 'C'

STRUCTURE & ORGANISATION

1.	Name & Address of the applicant:		
2.	<u>Telephone No./Telex No./Fax No</u>		
3.	Legal status of the applicant (attach copies of original document defining the legal status) i. An individual ii. A proprietary firm iii. A Firm in Partnership iv. A limited company or Corporation		
4	Particulars of registration with various Government bodies (attach attested photocopy)	Place of registration	Registration No.
5	Names and Titles of Director & Officers with designation to be concerned with this work:		
6	Designation of individuals authorized to act for the organization		
7	Was the applicant ever required to suspend assignment for a period of more than six months continuously after you commenced the assignment? If so, give the name of the project and reasons of suspension of work.		
8	Has the applicant or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.		
9	Has the applicant, or any constituent partner in case of partnership firm, ever been debarred / black listed for tendering in any organization at any time? If so, give details.		
10	Has the applicant, or any constituent partner in case of partnership firm, ever been convicted by a court of law? If so, give details		
11	In which fields of Construction assignment, the applicant has specialization and interest?		
12	Any other information considered necessary but not included above.		

Signature of bidder with seal

FORM D
BANK GUARANTEE

(TO BE EXECUTED ON THE NON JUDICIAL STAMP OF VALUE NOT LESS THAN
Rs.200/- BOUGHT **IN THE NAME OF THE BANK**)

NAME & ADDRESS OF THE BANK _____

BANK GUARANTEE NO. _____

DATE OF EXPIRY: _____

LIMIT OF LIABILITY: _____

PO/WO NO. & DATE:

TO

INSTITUTE FOR STEM CELL SCIENCE AND REGENERATIVE MEDICINE
GKVK CAMPUS, BELLARY ROAD, BENGALURU -560065

Dear Sir,

1. In consideration of M/s. INSTITUTE FOR STEM CELL SCIENCE AND REGENERATIVE MEDICINE, (hereinafter called the Institute), having agreed to issue PO/WO to M/s. _____ (hereinafter referred to as the Vendor), for having awarded the Supply Contract/works Contract vide PO/WO No. _____ dt. _____ in favour M/s _____ having registered office at _____ (hereinafter referred to as the CONTRACTOR), for the execution of the works on terms and conditions set out in the PO/WO mentioned above as "CONTRACT" documents, valued at Rs. _____ (Rupees _____) the same having been accepted by the CONTRACTOR and the CONTRACTOR having agreed to provide a performance bank guarantee for the obligations/liabilities under the contract equivalent to Rs. _____ (Rupees _____), we hereby undertake to pay to the Company an amount not exceeding Rs. _____ (Rupees _____ only) on a mere demand made by the Company.
2. On a demand being made that the sum is due, the Bank shall pay without demur or contestation the amount covered by the guarantee and any demand by the Company that the money is due shall be conclusive and binding on the Bank.
3. It is hereby expressly agreed and affirmed that the Company shall have the fullest liberty to claim payment of the amount / amounts from time to time under this guarantee upto Rs. _____ and the guarantee shall not become invalid or infructuous because of the partial demand or demands made by the Company.
4. We _____ (Name of Bank), hereby agree that any claim due and arising under this guarantee shall be enforceable against our Bank's branch _____ (Mentioning the name & address of Branch) and they shall honour such demand in any case not later than next working day.
5. It is further agreed that any time given to the Customer or forbearance with regard to performance by the Customer shall in no way affect the liability of the Bank and this Bank Guarantee will be in full force.
6. It is also agreed that we, _____ Bank undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing.

Notwithstanding anything contained herein above, our liability under this Guarantee is restricted to _____ (Rupees_____).

This Guarantee shall remain valid up to _____. Unless a claim is writing is lodged with us within the above mentioned date i.e. on or before _____, all rights under this Guarantee shall be forfeited and we shall be released and discharged from all liabilities under this Guarantee.

We are liable to pay the Guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before_____.

Dated _____ day of _____ 2024

Important Note:

While purchasing the stamp paper,

The first party shall be the Bank.

The second party shall be “**Institute for Stem Cell Science and Regenerative Medicine**” (REMARK: NAME OF INSTITUTE SHALL BE TYPED IN FULL UPTO WHICH IT APPEARS ON THE STAMP PAPER)

The signature of the bank employee on all pages of the document along with the employee code may be ensured while submitting the PBG.

CHECKLIST FOR BANK GUARANTEES (BG) FOR EACH BG

Name of the Party submitting BG:

Name of the Bank issuing BG:

Branch issuing the BG:

BG No.: AND BG Date:

BG Value:

BG Validity/Expiry Date:

SL No.	Particulars	Yes/No
1	Is BG as per approved format	
2	Is the BG issued by the specified category of Banks (Scheduled Commercial Bank/Nationalized Bank etc. as specified in the contract)	
3	Is the BG executed on stamp paper of adequate value i.e., Rs.200 and obtained in the name of Bank issuing the BG?	
4	Is the date of sale of stamp paper prior to the date of the BG?	
5	Is BG referring to the relevant PO/WO/agreement/tender, if any,	
6	Does the BG bear the number, date and seal of the issuing Bank?	
7	Is the BG signed on all pages by the authorized bank officers along with name, designation & code number?	
8	Whether the BG validity period is as per the requirement?	
9	Whether issuing bank has confirmed that SFMS has been sent to the advising bank?	

CHECK-OFF LIST FOR SUBMISSION OF DOCUMENTS

<u>Sl</u>	<u>Document Description</u>	<u>Submitted</u>
<u>Technical Bid Envelope Upload</u>		
1.	Duly signed Technical Bid Tender Document	Yes/ No
2.	EMD - Rs.1,52,000/- (Firms registered as MSE are exempted and they are to submit Valid Registration Certificate) paid as per Nle-T.	Yes/ No
3.	Formal contracts and completion certificates of similar type of service	Yes/ No
4.	A proof to the effect of incorporation along with copy of PAN card & GST	Yes/ No
5.	Copy of ITCC of last 3 years or ITR of last 3 years	Yes/ No
6.	An undertaking in 'Letter Pad' stating not blacklisted by any of the Govt. Depts./Govt. Institutions etc.	Yes/ No
7.	Form-A, Financial Information	Yes/ No
8.	Form-B, Banker's Solvency Certificate or Net worth Certificate	Yes/ No
9.	Form-C, Organizational Structure	Yes/ No
10.	Form -D, If EMD is submitted as BG, then all activities mentioned in Check Off list ensured?	
<u>Price Bid Envelope</u>		
11.	Price Bid, duly filled in GeM Portal with care by considering Minimum Wages, Uniforms & safety gears, Service Charges (shall include Tools & Tackles), GST & Cess etc are submitted as per procedure	Yes/ No

Signature of bidder with seal

Section VI

Model Price Schedule

<u>Price Schedule</u>							
Name of Service/ Work: Non-Consultancy Support services for Round the Clock Operation & Monitoring and General shift Maintenance of HVAC System, inStem							
Bidder Name:							
<u>SI No</u>	<u>Item description</u>	<u>Qty</u>	<u>Units</u>	<u>Basic Rate in Rs</u>	<u>GST</u>	<u>Amount without Tax</u>	<u>Amount with Tax</u>
1.00	Direct Input Cost						
1.01	Asst Junior Engineer (02 Nos x 313 Days) @ minimum wages of eqvt to BP+DA of L-5 of 7 th CPC or above	626	Nos.				
1.02	Supervisor (01 No x 313 Days) @ minimum wages of eqvt to BP+DA of L-4 of 7 th CPC or above	313	Nos.				
1.03	Highly Skilled Technician (05 Nos x 313 Days) @Rs.1035/- of Minimum Wages	1565	Nos.				
1.04	Skilled Technician (04 Nos x 313 Days) @Rs.954/- of Minimum Wages	1252	Nos.				
1.05	Semi-Skilled Technician (02 Nos x 313 Days) @Rs.868/- of Minimum Wages	626	Nos.				
1.06	Unskilled (02 Nos x 313 Days) @Rs.783/- of Minimum Wages	626	Nos.				
1.07	Uniform cost (16 Nos x 12)	192	Nos.				
1.08	Washing Allowance (16 Nos x 12)	192	Nos.				
1.09	Bonus @ 8.33% (Rs.6997 x 02 Nos.)	2	Nos.				
	Total (A)						
2.00	Statutory Payments						

2.01	ESIC - Employer's Cont @3.25% or equivalent medical insurance (Rs.683 per person per month)	192	Nos.				
2.02	PF & ELI/DLI - Employer's Contribution @ 13.61% (Rs.2042 per person per month)	192	Nos.				
	Total (B)						
3.00	Service Charges on Total A+B (including transaction charges + tools & tackles) ---- (C)	1	Percentage (%)				
	Grand Total (A+B+C)						