

TENDER FOR DESIGN, FABRICATION, SUPPLY, ERECTION, VALIDATION & COMMISSIONING OF MICRO BIOLOGY LAB AT AKKULAM FACTORY, THIRUVANANTHAPURAM

IFB No: HLL/AFT/PROJECTS/2015-16/02/MICROLAB/05

DATE: 16.02.2016



एचएलएल लाइफकेयर लिमिटेड

HLL LIFECARE LIMITED

(भारत सरकार का उद्यम)

(A GOVT. OF INDIA ENTERPRISE)

आक्कुलम फैक्टरी , श्रीकार्यम पी ओ

AKKULAM FACTORY, SREEKARIYAM P.O

तिरुवनन्तपुरम -695017

THIRUVANANTHAPURAM - 695 017

फोन /Phone: +91 471 244 5930, Fax: +91 471 244 1383

Email: materialsft@lifecarehll.com

Web: www.lifecarehll.com

HLL LIFECARE LIMITED

(A GOVT. OF INDIA ENTERPRISE)

**AKKULAM FACTORY,
SREEKARIYAM P.O.,**

THIRUVANANTHAPURAM - 695 017

IFB NO : HLL/AFT/PROJECTS/2015-16/02/MICROLAB/05 Dt. 16.02.2016

DATE OF COMMENCEMENT OF SALE OF BIDDING DOCUMENT : 16.02.2016

LAST DATE FOR SALE OF BIDDING DOCUMENT : 08.03.2016, 14.30 HRS

LAST DATE AND TIME FOR RECEIPT OF BIDS : 08.03.2016, 15.00HRS
: 08.03.2016, 15.30 HRS

TIME AND DATE OF TECHNICAL OPENING OF BIDS

PLACE OF OPENING OF BIDS : HLL LIFECARE LIMITED
AKKULAM FACTORY,
SREEKARIYAM P.O.
THIRUVANANTHAPURAM - 695017.

ADDRESS FOR COMMUNICATION : THE JOINT GENERAL MANAGER
(MATERIALS),
HLL LIFECARE LIMITED,
AKKULAM FACTORY,
SREEKARIYAM P.O.
THIRUVANANTHAPURAM - 695017

HLL LIFECARE LIMITED
 (A GOVT. OF INDIA ENTERPRISE)
 AKKULAM FACTORY, SREEKARIYAM P.O.
 THIRUVANANTHAPURAM - 695 017

CONTENTS

SECTION NO.	DESCRIPTION	PAGE NO.
SECTION I	INVITATION FOR BIDDERS (IFB)	3-7
SECTION II	INSTRUCTION TO BIDDERS (ITB)	8-20
SECTION III	GENERAL CONDITIONS OF CONTRACT (GCC)	21-32
SECTION IV	SPECIAL CONDITIONS OF CONTRACT (SCC)	33-45
SECTION V	TECHNICAL SPECIFICATIONS	46-63
SECTION VI	GENERAL INFORMATIONS	64
SECTION VII	PERFORMANCE STATEMENT	65-72
SECTION VIII	FORMAT FOR REQUISITION FOR SITE VISIT	73
SECTION IX	PRICE SCHEDULE	74-105
SECTION X	CHECK LIST	106-107
SECTION XI	LAYOUTS	108-109

**SECTION I
INVITATION FOR BIDS (IFB)**

**HLL LIFECARE LIMITED
(A GOVT. OF INDIA ENTERPRISE)
AKKULAM FACTORY,
SREEKARIYAM P.O.
THIRUVANANTHAPURAM - 695 017**

INVITATION FOR BIDS (IFB)

IFB No.HLL/AFT/PROJECTS/2015-16/02/MICROLAB/05

Sealed and super scribed tenders under **Two Bid** systems are invited for the Design, Supply, Fabrication, Erection, Validation & Commissioning of Micro Biology Lab at HLL Lifecare Ltd, Akkulam Factory, Thiruvananthapuram

<u>S No</u>	<u>Name of the Item</u>	<u>EMD</u>	<u>Last Date& Time of Submission of Bids</u>	<u>Date & Time of Opening of Technical bids</u>
1.	Tender for Design, Fabrication, Supply, Erection, and Validation & Commissioning of MICRO BIOLOGY LAB on turnkey basis at HLL Akkulam Factory.	Rs.1,00,000.00 in the form of DD from a nationalized bank payable at Thiruvananthapuram	08 th MARCH 2016 at 15.00 hrs	08 th MARCH 2016 at 15.30 hrs

The detailed Tender Notice and tender documents can also be downloaded from our website www.lifecarehll.com. Amendments if any to this tender notice will be published only in HLL website.

JOINT GENERAL MANAGER (MATERIALS),
HLL LIFECARE LIMITED,
AKKULAM FACTORY,
SREEKARIYAM P.O.
THIRUVANANTHAPURAM - 695017
Ph No: +91 471 2445930
Fax No: +91 471 2445935
Email: materialsft@lifecarehll.com

1. QUALIFICATION CRITERIA

- a. Minimum 5 years experience in the relevant field.
- b. Bidders should have constructed and installed at least 3 No. of similar clean rooms with individual values of at least Rs. 30 lakhs, during the past 5 years.
- c. The average annual turnover of the bidder should be above Rs. 75 Lacs proven by audited accounts of three immediate previous financial years and they should produce proof for the same.
- d. It is mandatory that **bidders must necessarily** visit the site and study the requirements before submitting the bid. The site visit should be completed before 02.03.2016. Format for applying for site visit is as per attached Section- VIII and should be submitted on or before 02.03.2016.

Note:-

- i. The bidder should furnish the information on past installations in the Pro-forma given under Section - VII.
 - ii. The bidder should furnish Registration Certificate and Certificate of Incorporation.
 - iii. Bidders shall invariably furnish documentary evidence such as Completion certificate (Client's Certificate) along with work order/Installation report in support of the satisfactory completion of the project as specified above.
 - iv. The Bidder shall furnish data to support that he has the financial and production capacity to perform the contract and complete the supplies within the stipulated delivery period.
 - v. Latest solvency certificate obtained from a Nationalized/Scheduled Bank, for an amount not less than Rs 75 Lacs. The certificate is to be dated not earlier than one month from the date of submission of the tender.
 - vi. The bidder should furnish the copy of Audited balance sheet in proof of financial strength.
 - vii. Conditional Bid will be summarily rejected
2. Interested eligible Bidders may obtain further information from the office of the **Joint General Manager (Materials), HLL Lifecare Ltd, Akkulam Factory, Thiruvananthapuram - 695 017.** (Phone No: 0471-2445930, email: materialsft@lifecarehll.com)
3. A complete set of bidding documents may be purchased by any interested

eligible bidder from the above office from 10.00 Hrs to 16.00 Hrs on any working day on submission of a written application to the above office and remitting a non-refundable fee of Rs. 2100 /- (including taxes) in the form of DD from a nationalized bank drawn in favor of HLL Lifecare Limited, payable at Thiruvananthapuram.

4. The Tender Document can also be downloaded from our Website www.lifecarehll.com and cost of the Tender Document as mentioned above should be furnished in the form of Demand Draft in favor of M/s HLL Lifecare Limited payable at Thiruvananthapuram, along with Technical Bid. In case of non-submission of DD along with bid, the bid shall be summarily rejected.
5. Interested eligible bidders may submit their bidding documents at the office of the **Joint General Manager (Materials), HLL Lifecare Ltd, Akkulam Factory, Sreekariyam.P.O, Thiruvananthapuram -695 017** on or before the specified date and time.
6. All bids must be accompanied by the items/documents specified herein and must be delivered to the Joint General Manager (Materials) on or before 08.03.2016, 15.00 Hrs. The bids (Technical Bids) will be opened on 08.03.2016 at 15.30 Hrs, in the presence of the bidders or their duly authorized personnel who wish to attend the bid opening on the specified date and time at HLL's office mentioned above. In the event of the date being declared a holiday for HLL, the due date for submission of bids and opening of bids will be the following working day at the same time.
7. **Completion Period:**

The complete MICRO BIOLOGY LAB should be successfully constructed, validated and commissioned within 4 months from the date of issue of Purchase order/L.O.I.

No credit will be given for earlier deliveries/completion of work.

The Micro Biology Lab should be erected, validated, commissioned and handed over to Purchaser strictly within the time stipulated. The completion period quoted should be inclusive of the time taken by the Supplier for submission of fabrication drawings, if any, sufficient days for Purchaser's approval/offering comments, sufficient notice to be given by Supplier for inspection/witnessing tests, time taken for booking of wagons, time taken for transportation to the site, fabrication,

erection, testing, validation, commissioning and handling over of the installation completely ready for operation.

8. Amendments

All amendments related to the tender shall be published only in HLL website www.lifecarehll.com

SECTION II
INSTRUCTION TO BIDDERS

INSTRUCTION TO BIDDERS

INTRODUCTION

1. Eligible Bidders

The Eligibility criteria for the bidders is as per Qualification criteria stipulated in the tender document as per IFB Section-I clause -I.

2. Cost of Bidding

2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid and HLL Lifecare Limited, Akkulam Factory, Thiruvananthapuram hereinafter referred to as "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

THE BIDDING DOCUMENTS

3. Contents of Bidding Documents

3.1 The goods required, bidding procedures and contract terms are prescribed in the Bidding documents. The Bidding documents include:

- a. Invitation for Bids (IFB)
- b. Instruction to Bidders (ITB)
- c. General Conditions of Contract (GCC)
- d. Special Conditions of Contract (SCC)
- e. Technical Specifications
- f. Performance statements
- g. Declaration
- h. Bid Form
- i. Price Schedule
- j. Check List
- k. Contract form

3.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required by the Bidding Documents or submission of a bid not substantially responsive to the Bidding Documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

4. CLARIFICATION OF BIDDING DOCUMENTS

4.1 A prospective Bidder requiring any clarification of the Bidding Documents may notify the Purchaser in writing at the Purchaser's mailing address indicated in the Invitation for Bids. The Purchaser will respond to any request for clarification of the Bidding Documents which it receives not later than 5 days prior to the deadline for submission of bids prescribed by the Purchaser. Purchaser's response (including an explanation of the query but without identifying the source of inquiry) will be communicated through our web site / email to all prospective Bidders who have received the bidding documents.

5. AMENDMENT OF BIDDING DOCUMENTS

5.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by an amendment.

5.2 Any subsequent amendments in the bid shall be notified only on HLL website.

5.3 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bid, the Purchaser may, at its discretion, extend the deadline for the submission of bids

PREPARATION OF BIDS

6. Language of Bid

6.1 The Bid prepared by the bidder and all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in the English language. Supporting documents and printed literature furnished by the Bidder may be written in another language provided; they are to be accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the English translation shall govern

7. DOCUMENTS COMPRISING THE BID

Following documents and forms are to be included in the technical bid and commercial bid respectively.

7.1 TECHNICAL

The technical bid shall consist of the following documents.

- a) EMD / Bid Security amount in the form of DD, drawn in favor of HLL Lifecare Limited, payable at Thiruvananthapuram. The EMD / Bid Security shall be refunded to the non-responsive bidders within 60 days from the date of opening of Bid.
- b) The tender document cost in the form of DD, if the document is downloaded from HLL website.
- c) The technical specifications enclosed along with the bid document shall be confirmed by signature of the bidder/authorized signatory of the bidding firm, in all pages and authorized by official seal. All information requested in the specifications, dimensional drawings, technical literature describing the make offered, material etc., as specified
- d) Duly attested copies of sales tax registration, and documents to prove the legal status, place of registration and principal place of business of the undertaking.
- e) Copy of Balance sheet for the past three financial years, duly certified by a chartered accountant
- f) Performance statement in the pro-forma under section VII
- g) Documentary evidence established in accordance with Qualification criteria that the Bidder is eligible to bid and is qualified to perform the contract if the bid is accepted;
- h) Documentary evidence established in accordance with ITB Clause 11 that the equipment and ancillary services to be supplied by the Bidder shall conform to the Bidding Documents
- i) Duly filled Check list as per section X
- j) All commercial aspects related to items that are mentioned in IFB

7.2 PRICE BID

- a) Duly filled Bid Form as per section IX
- b) Price schedule as per sections IX (a) & (b) respectively.

8. BID PRICES

8.1 **The bid is invited for** "Design, Fabrication, Supply, Erection, Validation and Commissioning of MICROBIOLOGY LAB" as per the specifications, Terms & Conditions as specified in the Bid Documents etc. The bidder shall give the total composite price separate for supply and installation but inclusive of all Levies & Taxes i.e. WCT, ESI, PF, Sales Tax & Excise, packing, forwarding, freight and insurance, Octroi/Entry Tax, etc. The offer shall be firm in Indian Rupees. No Foreign exchange will be made available by the purchaser.

8.2 The price quoted by the bidder shall remain firm during the entire period of contract and shall not be subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non - responsive and rejected.

8.3 The prices quoted by the bidder shall be in sufficient detail to enable the Purchaser to arrive at the price of equipment/system offered.

9. BID CURRENCIES

9.1 Bidders should quote in INR only.

10. DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATIONS

10.1 The bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications, to perform the Contract if its bid is accepted.

10.2 The documentary evidence of the Bidder's qualifications to perform the contract if the bid is accepted, shall be established to the Purchaser's satisfactions. The bidder should have the financial, technical and production capability necessary to perform the Contract and meets the criteria outlined in the qualification requirements specified in the tender. To this end, all bids submitted shall include the following information:

(a) The legal status, place of registration and principle place of business of the company or firm or partnership, etc;

(b) Details of experience and past performance of the bidder on items offered and on those of similar nature within the past five years and details of current contracts in hand and other commitments as per proforma given in Section VII.

11. Documents establishing equipment and its parts and accessories conformity to bidding documents

11.1 Pursuant to ITB Clause10, the Bidder shall furnish, as part of its bid,

documents establishing the conformity to the bidding documents of all goods and services which the bidder proposes to supply under the contract.

11.2 The documentary evidence of conformity of the equipment and its parts and accessories and services to the bidding documents may be in the form of literature, drawings and data and shall consist of:

(a) A detailed description of the essential technical and performance characteristics of the MICROBIOLOGY LAB;

(b) An item-by-item commentary on the Purchaser's Technical compliance demonstrating substantial responsiveness of the equipment and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

11.3 For the purpose of the commentary to be furnished pursuant to ITB Clause 11.2 (b) above, the Bidder shall note that standards for workmanship, material and equipments and references to brand names or catalogue numbers, if any, designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive.

12. Period of Validity of Bids

12.1 Technical Bid & Price Bid shall be valid for minimum 120 days from the date opening of technical bid.

12.2 In exceptional circumstances, the Purchaser may solicit the bidders consent to an extension of the period of validity. The request and the responses thereto shall be made in writing.

13. Format and Signing of Bid

13.1 The bidder shall prepare one copy of the BID.

13.2 The bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. The letter of authorization shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for unamended printed literature, shall be initialed by the person or persons signing the bid.

13.3 Any interlineations, erasures or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

14. Sealing and Marking of bids

Separate bids shall be submitted for price bid and technical bids.

14.1 The bidders shall seal Technical bid and Price bid in separate inner envelopes, duly marking the envelopes as COVER A -"TECHNICAL BID" and COVER B- 'PRICE BID. The Bidders shall then place both the inner envelopes in an outer envelope. The name of the project for which the bid is made must be written on both the inner envelopes and the outer envelop.

14.2 The inner and outer envelopes shall be addressed to the Purchaser at the following address:

**Joint General Manager (Materials),
HLL Lifecare Limited,
Akkulam Factory,
Sreekariyam P.O,
Thiruvananthapuram -695017**

(a) The outer envelope shall bear the Invitation for bids (IFB) number, and a statement: "DO NOT OPEN BEFORE" 15.00 Hrs. on 08.03.2016"

(b) The outer and inner envelope shall also indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared "late".

(c) If the inner and outer envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the bid's misplacement or premature opening.

(d) Bids must be received by the Purchaser at the address specified not later than the date and time specified in the Invitation for Bids. In the event of the specified date for the submission of bids, being declared a holiday for the Purchaser, the bids will be received up to the appointed time on the next working day.

(e) The Purchaser may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents in which case all rights and obligations of the Purchaser and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

15. LATE BIDS

Any bid received by the Purchaser after the deadline for submission of bids prescribed by the Purchaser, will be rejected and returned unopened to the bidder.

16. MODIFICATION AND WITHDRAWAL OF BIDS

16.1 The bidder may modify or withdraw its bid after the bid submission, provided that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of bids.

16.2 The bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of ITB Clause 15. A withdrawal notice may also be sent by fax or email but followed by a signed confirmation copy, post-marked not later than the deadline for submission of bids.

16.3 No bid may be modified subsequent to the deadline for submission of bids.

16.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder in the Bid Document.

17. Opening of Bids by Purchaser

17.1 The Purchaser will open all the technical bids, in the presence of bidder's representatives who choose to attend, at 15.30 Hrs on 04.03.2016.

17.2 The bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids shall be opened at the appointed time and location on the next working day.

17.3 No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the bidder pursuant to ITB Clause 16.

17.4 The "Price Bid" (Cover B) will be opened after evaluation of "Technical bids" (Cover A) and the date and time of opening of price bid will be intimated to bidders whose bids are responsive and qualified by the Purchaser.

17.5 The purchaser will scrutinize the technical bid for compliance to the specifications and documentation requirement as per the bid document. Purchaser will depute its competent officers to the premises of the bidders qualified on the basis of technical scrutiny, for on-site evaluation of the claims made in the technical bid, if deemed appropriate on purchaser's sole discretion. The bidders will be short-listed on the basis of responsiveness of technical bid as well as report of on-site technical evaluation. The price bid of the bidders who are disqualified at the technical scrutiny and on-site evaluation will be returned un-opened. The on-site evaluation may include the inspection of the specimen model of the equipment. The short listed bidders will be informed about the time, date and venue of the price bid opening. The successful bidder shall be identified on the basis of lowest evaluated substantially responsive bid.

18. CLARIFICATION OF BIDS

18.1 During evaluation of bids, the Purchaser may, at its discretion, ask the bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted.

18.2 Given specification is indicative only. The bidder should visit the plant and enquire about the items and also make their own assessments before quoting of bids. Prior permission from HLL shall be taken for visiting the plant. No photographs will be allowed inside the plant. The purchaser will not be responsible for any wrong quotes due to inadequate information.

19. PRELIMINARY EXAMINATION

19.1 The Purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether the documents have been properly signed, and whether the bids are generally in order.

19.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the bidder does not accept the correction of the errors, its bid will be rejected.

19.3 The Purchaser may waive any minor informality or non-conformity or irregularity in a bid, which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any bidder.

19.4 The purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these clauses a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from or objections or reservations to critical provisions such as those concerning Warranty, Force Majeure, Applicable law and Taxes and Duties will be deemed to be material deviation. The purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

19.5 If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the bidder by correction of the non-conformity.

20. CONTACTING THE PURCHASER

20.1 No bidder shall contact the Purchaser on any matter relating to its bid, from the

time of the bid opening to the time the contract is awarded. If the bidder wishes to bring additional information to the notice of the purchaser it should do so in writing.

20.2 Any effort by a bidder to influence the purchaser in its decisions on bid evaluation, bid comparison, or selection may result in the rejection of the bidders bid.

21. POST QUALIFICATION

21.1 The determination will take into account the bidders financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the bidder's qualifications submitted by the bidder, pursuant to ITB Clause 11 as well as such other information as the Purchaser deems necessary and appropriate.

21.2 An affirmative determination will be a prerequisite for award of the contract to the bidder. A negative determination will result in rejection of the bidders bid, in which event the Purchaser will proceed to the next lowest evaluated bid to make a similar determination of that bidder's capabilities to perform satisfactorily.

22. AWARD CRITERIA

22.1 The Purchaser will award the contract to the successful bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid, provided further that the bidder is determined to be qualified to perform the contract satisfactorily.

23. PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

23.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders.

24. NOTIFICATION OF AWARD

24.1 Prior to the expiration of the period of bid validity, the Purchaser will notify the successful bidder in writing by registered letter or by fax or email to be confirmed, that its bid had been accepted.

24.2 The notification of award will constitute the formation of the contract

25. SIGNING OF CONTRACT AGREEMENT

25.1 The successful bidder has to sign a supply agreement on Kerala stamp paper worth Rs 100.00 the draft of which will be sent to the lowest responsive bidder, with a letter informing acceptance of bid. Within 21 days of receipt of the information regarding acceptance of the bid, the successful bidder shall sign the supply agreement and return it to the Purchaser.

26. SECURITY DEPOSIT

26.1 Simultaneously with the execution of the contract, successful bidder within 15 days of the receipt of notification of award shall furnish a Security Deposit in the form of a Demand Draft from a nationalised bank drawn in favour of HLL Lifecare limited payable at Thiruvananthapuram or a Bank Guarantee from a nationalised bank, for an amount equal to 5% of the total contract value as Security Deposit for his faithful execution of contract. The EMD of the successful bidders will be added to the security deposit amount and will be returned only at the end of the contract, which is after issue of final "Project completion and acceptance certificate" by HLL. The Security deposit should be valid until successful completion of the contract and acceptance of the project by the Purchaser and will be released after acceptance of the project by the Purchaser and against submission of Performance Guarantee in the form of cash deposit or bank guarantee by the Supplier. In case of a delay in the works the validity of security deposit shall be extended.

26.2 Failure of the successful Bidder to accept the notification of award or submission of security deposit within the timeframe shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD, in which even the Purchaser may make the award to the next lowest evaluated bidder or call for new bids.

27. Delays in Design, Manufacture, Supply, Installation, Validation and Commissioning of MICROBIOLOGY LAB

27.1 Delivery, Installation, Validation and Commissioning of the equipment and its parts and accessories shall be made by the Supplier within the stipulated delivery date as specified in the purchase order / work order / contract, from the date of placing the date of Order. If at any time during performance of the Contract, the Supplier should encounter conditions impeding timely Delivery, Installation, Validation and Commissioning of the **MICROBIOLOGY LAB**, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without penalty.

27.2 A delay by the Supplier in the performance of its Delivery, Installation, Validation and Commissioning obligations shall render the Supplier liable to the imposition of penalty pursuant to agreement, unless an extension of time is agreed upon pursuant to agreement without the application of liquidated damages.

27.3 If the Supplier fails to deliver any or all of the equipment or its parts or perform the Services within the time period(s) specified in the Purchase Order, the purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as Liquidated Damages, a sum equivalent to the percentage specified in Clause 9 of SCC.

28. PAYMENT TERMS

28.1 Payment terms is as follows

28.1.1 Payment terms for supply

1. 90% of the order value against supply of all items and actual inspection at HLL site. Pro-rata payment can also be effected based on actual quantities supplied.
2. 10% will be retained as Retention Money which shall be released against a Performance Bank Guarantee valid for a period of one year (defect security period) from the date of the issue of final "Project completion and acceptance certificate" issued by HLL. after one year from the date of taking over of site against a Performance Bank Guarantee for an amount equivalent to 10% of order value from a scheduled bank with validity of one year from date of taking over of site.

28.1.2 Payment terms for Installation

1. 100% against satisfactory commissioning of the project certified by HLL authorities.

28.2 Test Reports (wherever applicable) are to be forwarded along with the original invoices.

28.3 Payment shall be made in Indian Rupee.

28.4 All other Statutory levies, such as Taxes, duties, KVAT, VAT, WCT, IT, ST & PF, ESI of the work men etc (are inclusive) will be deducted from bill, as applicable.

28.5 Bidders shall have necessary registration under Kerala VAT and shall produce necessary non liability certificate from KVAT for non deduction of WCT, if any applicable under KVAT.

28.6 Normally the Purchaser will not entertain any advance payment. However, the bidder can indicate advance payment in the payment terms, if required. If such advance payment is considered acceptable by the purchaser, the bid will be evaluated by calculating interest earned for the advance payments at prevailing rate of interest on working capital for the purchaser up to the supply of equipment at purchaser's site or any other clause indicated in payment terms. Moreover such advance payment, will be released against submission of a Bank guarantee, on a specific format given by the supplier, from a nationalized/scheduled bank for like amount valid up to the supply of equipment at purchaser's site. The advance if any paid and interest will be adjusted against the payment against delivery.

Purchaser will not entertain the presentation of documents through Bank.

29. Completion period.

The successful bidder has to design, supply, manufacture, validate & commission the Equipment within 4 **months** from the date of issue of work order/Letter of Indent.

30. Forfeiture of EMD

30.1 Failure of the successful Bidder to accept the notification of award or submission of security deposit within the timeframe shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD, in which even the Purchaser may make the award to the next lowest evaluated bidder or call for new bids.

31.2 The EMD may be forfeited:

- (a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bidding Document; or
- (b) In case of the successful Bidder, if the Bidder fails:
 - (i) to sign the Contract
 - (ii) to furnish security deposit

**SECTION III
GENERAL CONDITIONS OF CONTRACT**

TABLE OF CLAUSES

Sl No	Description	Page No.
1.	DEFINITIONS	23
2.	APPLICATION	23
3.	STANDARDS	24
4.	USE OF CONTRACT DOCUMENTS AND INFORMATION	24
5.	PATENT RIGHTS	24
6.	INSPECTION AND TESTS	24
7.	PACKING	25
8.	DELIVERY AND DOCUMENTS	25
9.	INSURANCE	25
10.	INCIDENTAL SERVICES	27
11.	WARRANTY	28
12.	PERFORMANCE GUARANTEE	28
13.	PRICES	29
14.	CHANGE ORDERS	29
15.	CONTRACT AMENDMENTS	30
16.	ASSIGNMENT	30
17.	SUBCONTRACTS	30
18.	LIQUIDATED DAMAGES	30
19.	TERMINATION BY DEFAULT	30
20.	FORCE MAJEURE	31
21.	TERMINATION FOR INSOLVENCY	31
22.	RESOLUTION OF DISPUTES	31
23.	GOVERNING LANGUAGE	32
24.	APPLICABLE LAW	32
25.	NOTICES	32
26.	TAXES AND DUTIES	32
27.	ESCALATION	32

GENERAL CONDITIONS OF CONTRACT

1. DEFINITIONS

1.1 In this contract the following terms shall be interpreted as indicated:

(a) "The Contract" means the agreement entered into between the Purchaser and the Supplier as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein;

(b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations;

(c) "The Goods" means all the products, equipment, machinery, and/or other materials which the Supplier is required to supply to the Purchaser under the Contract;

(d) "Services" means services ancillary to the supply of the Goods, such as transportation and insurance, and other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the contract;

(e) "GCC" means the General Conditions of Contract contained in this section.

(f) "SCC" means the Special Conditions of Contract.

(g) "The Purchaser" means the Organization purchasing the Goods, as named in SCC;

(h) "The Supplier" means the individual or firm supplying the Goods under this Contract;

(i) "Day" means calendar day.

(j) "Delivery period" means the period applicable up to the completion of supply; installation and testing by the supplier at the required location mentioned in purchase order and accepted by the Purchaser.

2. APPLICATION

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

3. STANDARDS

The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

4. USE OF CONTRACT DOCUMENTS AND INFORMATION

4.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.

4.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated in GCC Clause 4.1 except for purposes of performing the Contract.

4.3 Any document, other than the Contract itself, enumerated in GCC clause 4.1 shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the supplier's performance under the Contract if so required by the Purchaser.

5. PATENT RIGHTS

The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

6. INSPECTION AND TESTS

6.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract at no extra cost of the Purchaser. The Special conditions of Contract and/or the Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing of the identity of any representatives retained for these purposes.

6.2 The inspections and test may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery and/or at the Goods final destination. Where

conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance including access to drawings and production data - shall be furnished to the inspectors at no charge to the Purchaser.

6.3 Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject them and the Supplier shall either replace the rejected Goods or make all alternations necessary to meet specification requirements free of cost to the Purchaser.

6.4 The Purchasers right to inspect, test and, where necessary, reject the Goods' arrival in at site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods dispatched.

7. PACKING

7.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods final destination and the absence of heavy handling facilities at all points in transit.

7.2 The packing, marking and documentation, within and outside, shall comply strictly with such special requirements as shall be provided in the agreement / purchase order including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser.

8 DELIVERY AND DOCUMENTS

Delivery, Installation, Testing and Commissioning of the MICRO BIOLOGY LAB shall be made by the Supplier in accordance with the terms specified in the purchase order by the Purchaser. The details of dispatching and/or other documents to be furnished by the supplier are specified in the purchase order, if any.

9. INSURANCE

The Supplier shall at his own expense carry and maintain insurance with reputed insurance companies to the satisfaction of the Purchaser as under:

i) Insurance of works:

The Supplier shall take full responsibility for loss, damage and care of plant and works until it is delivered to site, constructed, erected, commissioned and taken over by Purchaser. Without limiting such responsibility, the supplier shall in the interest of the work insure the plant and work for their full value plus ten percent until they have been taken over. Such insurance shall cover the equipments and works against loss, damage or destruction by fire, earthquake, theft or any other cause, throughout the duration of the contract period or extended contract period.

ii) Insurance of employees:

The Supplier shall accept full and exclusive liability for the compliance of all obligations and responsibilities imposed by the Employees State Insurance Act, 1948 and its amendments and any liability or penalty which may be imposed by the Central, State or Local Authorities due to the reason of violation by the supplier or sub-supplier of the Employees State Insurance Act, 1948 and its amendments. The Supplier shall agree to fulfil the requirement of the Employees State Insurance Corporation and maintain the declaration forms and all such forms, which may be, required in respect of the supplier's, sub-supplier's employees who are employed in the work provided for or those covered by E.S.I.C. from time to time under the agreement. The Purchaser shall retain such sum as may be necessary from the total contract value until the supplier shall furnish satisfactory proof that all contributions as required by the Employees State Insurance Act, 1948 and its amendments have been paid by him.

iii) Workmen's Compensation:

Insurance shall be affected for all the Supplier's employees engaged for this contract. The Supplier shall also carry and maintain all other insurance, which may be required under any law or regulations from time to time. He should also carry and maintain any other insurance, which may be required by the Purchaser.

iv) Transit Insurance:

The cost of transit insurance relating to the items to be transported by the supplier to the site of work shall be borne by the supplier and the quoted price shall be inclusive of this cost.

v) Loss or damage and Indemnity Agreement:

The supplier shall be responsible during the progress of work as well as guarantee period for any liability imposed by law for any damage to work or any part thereof or

to any of the material or other things including those of Purchaser used in performing the work or for injury to any person or persons or for any property damaged in or outside the site. The supplier shall indemnify and hold the Purchaser harmless against all liabilities, claims, loss or injury, including costs, expenses and attorney's fees incurred in the defence of same, arising from any allegation whether groundless or not, of damage or injury to any person or property resulting from the performance of the work or from any material used in the work or from any condition of the work or work site or from any cause whatsoever during the progress and maintenance of the work.

vi) Third party insurance:

Before commencing the execution of the works the Supplier, but without limiting his obligations and responsibilities, shall insure against his liability for any material or physical damage, loss or injury which may occur to any property, including that of the Purchaser, or to any person, including any representative of the Purchaser, by or arising out of the execution of works or in the work being carried out by the Purchaser, by or arising out of the provision of clause 5 (v) here of. Such insurance shall be affected with an insurer and in terms approved by the Purchaser.

vii) The Supplier shall take **Supplier's All Risks Insurance** policy, jointly in the name of HLL Lifecare Limited and the Supplier and the insurance should be valid till the satisfactory completion of the work. The copy of the policy shall be deposited with HLL before commencing the work.

10. INCIDENTAL SERVICES

The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) Performance or supervision of the on-site assembly and/or start-up of the supplied goods
- (b) Furnishing of tools required for assembly and/or maintenance of the supplied goods;
- (c) Furnishing of detailed operations and maintenance manual
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

(e) Training of the Purchaser's Personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.

11. WARRANTY

11.1 The Supplier warrants that the Goods supplied under this Contract are of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The supplier further warrants that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in conditions obtaining in the country of final destination

11.2 This warranty shall remain valid for minimum **ONE YEAR**, as applicable, after the Goods or any portion thereof as the case may be, have been delivered to and accepted/ installed & commissioned at the final destination indicated in the Contract.

11.3 The Purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.

11.4 Upon receipt of such notice, the Supplier shall, within the period specified in SCC, and with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the Purchaser

11.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, within a reasonable period, the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the contract.

11.6 Manufacturers warranty of the equipment/electrical items, if any shall be passed on to HLL

12. PERFORMANCE GUARANTEE

The Supplier shall fully guarantee that all the equipment supplied will perform in accordance with the specifications and will be free of all defects in design, material and workmanship. Should any equipment not performing as intended or should the design, material or workmanship prove defective within guarantee period the equipment shall, upon notification of deficiency or defect, be promptly corrected by the Supplier to the

satisfaction of Purchaser without delay and at no extra cost. If the Supplier fails to take proper corrective action to replace or repair the deficiency within a reasonable time of Purchaser's notification to this effect, the Purchaser shall be free to take such corrective action at the Supplier's risk and cost.

Even if Inspection and/or tests are fully carried out by Purchaser or their representatives, the Supplier is not absolved to any degree of his responsibility to ensure that all equipment and materials supplied comply strictly with the requirements as per specifications given in the order, and the Purchaser shall be free to point out any defect till the guarantee period is over.

Simultaneously with the successful completion of the contract, supplier shall furnish a Performance guarantee in the form of a Demand Draft or a Bank Guarantee in the HLL's prescribed format from a nationalised bank or from balance payment to be paid to the supplier as per contract, acceptable to the purchaser, for an amount equal to 10% of the total price on the value of the contract as Deposit for his faithful execution of Performance Guarantee. The Performance guarantee should be valid for the Guarantee Period.

13. PRICES

13.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any prices adjustments authorized in the special Conditions of Contract or in the Purchaser's request for bid validity extensions, as the case may be.

14. CHANGE ORDERS

14.1 The Purchaser may at any time by written order given to the Supplier, make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipping or packing
- (c) the services to be provided by the Supplier.

14.2 If any such changes cause an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of

the Supplier's receipt of the Purchaser's change order.

15. CONTRACT AMENDMENTS

Subject to GCC Clause 14, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

16. ASSIGNMENT

The Supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the Purchaser's prior written consent.

17. SUBCONTRACTS

The supplier shall notify the Purchaser in writing of all subcontracts awarded under the contract if not already specified in his bid. Such notification, in his original bid or later, shall not relieve the Supplier from any liability or obligation under the contract.

18. LIQUIDATED DAMAGES

If the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC, up to a maximum deduction of the percentage specified in the SCC if any. Once the maximum is reached, the Purchaser may consider termination of the Contract.

19. TERMINATION BY DEFAULT

19.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, terminate the Contract in whole or part;

- (a) If the Supplier fails to deliver any or all of the goods within the time period(s) specified in the Contract, or within any extension thereof granted by the Purchaser, or
- (b) If the Supplier fails to perform any other obligation(s) under the contract.

19.2 In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the

Purchaser for any excess costs for such similar Goods. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

20. FORCE MAJEURE

20.1 For purposes of this Clause "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

20.2 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

21. TERMINATION FOR INSOLVENCY

21.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

22. RESOLUTION OF DISPUTES

22.1 The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

If, after thirty (30) days from the commencement of such informal negotiations, the Purchaser and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in the Special Conditions of Contract. These mechanisms may include, but or not limited to, conciliation mediated by a third Party, adjudication in an agreed national forum, and national arbitration.

22.2 The jurisdiction of any disputes, suits and proceeding arising out of the tender shall be only in the court of Thiruvananthapuram.

23. GOVERNING LANGUAGE

The contract shall be written in English language. English language version of the Contract shall govern its interpretation. All correspondence and documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

24. APPLICABLE LAW

The Contract shall be interpreted in accordance with the laws of the Union of India.

25. NOTICES

25.1 Any notice given by one party to the other pursuant to this Contract shall be sent to other party in writing or by fax or email and confirmed in writing to the other Party's address specified in Special Conditions of Contract

25.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

26. TAXES AND DUTIES

26.1 Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi etc., incurred until Delivery, Installation, Testing and Commissioning of the contract to the Purchaser.

27. ESCALATION

The rates quoted by the Supplier in the contract documents shall be final and shall not be subjected to any change due to the increase in labour wages or inflation in the cost of materials or any other price variations due to any reason during the stipulated time period of the contract or during the extended time period of completion.

SECTION IV

SPECIAL CONDITIONS OF CONTRACT

TABLE OF CLAUSES

Sl No	Description	Page No.
1.	DEFINITIONS	35
2.	INSPECTION AND TESTS	35
3.	INSURANCE	35
4.	INCIDENTAL SERVICES	35
5.	WARRANTY	35
6.	EARNEST MONEY DEPOSIT	36
7.	PRICES	36
8.	SUBCONTRACTS	36
9.	LIQUIDATED DAMAGES	37
10.	RESOLUTION OF DISPUTES	37
11.	INSTALLATION, VALIDATION& COMMISSIONING	37
12.	OPERATIONAL ACCEPTANCE	38
13.	TRAINING	38
14.	VARIATION IN DRAWING AND SPECIFICATIONS	38
15.	FABRICATION SHEDULE	38
16.	PROGRESS REPORT	38
17.	STAFF AND WORJERS	39
18.	CO-OPERATION WITH OTHER AGENCIES AT SITE	39
19.	SAFETY OF ADJOINING PROPERTIES	39
20.	EXECUTION OF WORK	40
21.	LIABILITIES FOR DEFECTS AND RECTIFICATION	41
22.	CARE OF WORKS	41
23.	LABOUR LAWS AND SAFETY REGULATIONS	41
24.	SAFETY CODE	42
25.	DETAILS OF WORK EXECUTION	43
26.	SUPPLIERS SCOPE OF SUPPLY	44
27.	RECOVERY FROM THE SUPPLIER	44
28.	SPECIAL INSTRUCTION	44
29.	SECRECY	45

SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of contract. The Corresponding clause number of the General Conditions is indicated in parentheses.

1. DEFINITIONS (GCC Clause 1)

The Purchaser is HLL Lifecare Limited, Akkulam Factory, Thiruvananthapuram.

2. INSPECTION AND TESTS (GCC Clause 6)

2.1 The Purchaser or its representative shall inspect and/or test any or all the equipment to confirm their conformity to the Contract specifications, prior to dispatch from the manufacturer's premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the equipment on receipt at destination.

2.2 If the equipment fails to meet the laid down specifications the supplier shall take immediate steps to remedy the deficiency or replace the defective equipment/it parts to the satisfaction of the Purchaser.

3. INSURANCE (GCC Clause 9)

3.1 For delivery of materials at site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the equipment from "Warehouse to Warehouse" (Final destinations) on "All Risks" basis including War Risks and Strike if applicable.

4. INCIDENTAL SERVICE (GCC Clause 10)

4.1 The following services covered under GCC Clause 10 shall be furnished and the cost shall be included in the contract price:

- (a) Transportation, safe storage and handling of consignment off site.
- (b) On site assembly if any of the supplied equipment, installation, testing and Commissioning of the equipment.
- (c) Furnishing 3 No of detailed operations and maintenance manual for each appropriate unit of supplied equipment;

5. WARRANTY (GCC Clause 11)

Substitute GCC Clause 11.2 by the following:-

5.1 This warranty shall remain valid for minimum ONE year after Installation,

Validation and Commissioning and handing over of the MICROBIOLOGY LAB or any portion thereof as the case may be, have been accepted by HLL Lifecare Limited as indicated in the contract.

5.2 Any major repair pointed out by the Purchaser within the warranty period shall be rectified by the Supplier from the date of intimation within a period of 3 calendar days and commission the equipment to the satisfaction of the Purchaser. Failing which the Purchaser has the right to levy penalty on the basis of less incurred on the Supplier per day or part thereof for the equipment until the equipment are repaired and commissioned to the satisfaction of the Purchaser.

5.3 The Supplier shall, in addition, comply with the performance and/ or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion either:

Make such changes, modifications, and/or additions to the equipment or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 2:

6. Earnest Money deposit (EMD)

6.1 Technical Bid should accompany a DD drawn in favour of M/s.HLL LIFECARE LIMITED, and payable at Thiruvananthapuram for a sum of Rs.1,00,000/- towards Earnest Money Deposit. Failing which the Tender will be rejected.

6.2 E.M.D. from unsuccessful bidders will be duly returned

6.3 In the case of successful bidder, the Earnest Money will be returned after signing the contract, and submission of Security Deposit, which they will have to offer for the faithful execution of the contract.

6.4 SSI/MSME units interested in availing exemption from payment of Tender Fee & EMD should submit a valid copy of their registration certificate issued by the concerned DIC or NSIC. But the Party has to provide Security deposit if Tender is awarded to them.

7. PRICES (GCC Clause 13)

Substitute Clause 13.1 of the GCC with the following:

Prices payable to the Supplier as stated in the Contract shall not be subject to adjustment during performance of the Contract.

8. SUB CONTRACT (GCC Clause 17)

Add at the end of sub-clause 17.1 the following:

Sub-contract shall be only for bought-out items and sub-assemblies.

9. LIQUIDATED DAMAGES (GCC Clause 18)

For delays: Substitute GCC Clause 18.1 by the following:

If the Supplier fails to deliver any or all of the equipment or perform of services within the time period(s) specified in the Contract, the purchaser shall without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.5 percent of the value of order per week of delay subject to a maximum deduction of 5.0%. Once the maximum is reached, the Purchaser may consider termination of the Contract.

10. RESOLUTION OF DISPUTES (GCC Clause 22)

Add as GCC Clauses 22.1 and 22.2 the following:

10.1 The dispute resolution mechanism to be applied pursuant to GCC Clause 22 shall be as follows:

(a) In the case of a dispute or difference arising between the Purchaser and a Supplier relating to any matter arising out of or connected with this agreement, such dispute or difference shall be settled in accordance with the Arbitration and Conciliation Act 1996. The Arbitral Tribunal shall consist of 2 Arbitrators, nominated by the Institute of Engineers (India) and appointed by the Purchaser.

10.2 The venue of arbitration shall be the place from where the Contract is issued (i.e.) Thiruvananthapuram

11. INSTALLATION, VALIDATION & COMMISSIONING

Design, Manufacture, Supply, Installation, Validation and Commissioning of MICROBIOLOGY LAB shall be completed by the supplier in accordance with the terms and technical specifications made by the purchaser.

12. OPERATIONAL ACCEPTANCE:

(a) **Performance Test:** The performance test shall be conducted by the supplier during the commissioning of the facilities to ascertain whether the facilities can attain the functional guarantees.

- (b) **Operational Acceptance:** Operational Acceptance shall occur in respect of the facilities when the performance test has been successfully completed and the functional performances are met.

13. TRAINING

The bidder shall provide training for maintenance staff of the purchaser free of cost where required.

The bidder shall provide all training material and documents.

Conduct of training of the purchaser's personnel shall be on-site.

14. VARIATION IN DRAWINGS AND SPECIFICATIONS

The Purchaser has the right to change the drawings regarding dimensions but specification remaining the same. However such changes shall not entitle the supplier for any compensation, claim regarding the change in scope of work.

15. FABRICATION SCHEDULE

The Supplier shall furnish to Purchaser, a PERT/BAR CHART, within 7 days of receipt of the Order. The PERT/BAR Chart, should give all important milestones such as ordering of material, completion of procurement, release of drawings, phased fabrication/manufacture, inspection/tests at Supplier's works, despatch, start and completion of erection at site (wherever applicable) etc. Purchaser has the right to depute their representative to the Supplier's works to check his adherence to such chart. If any of the initial or intermediary milestones gets delayed for any reasons, the Supplier shall adjust the subsequent milestones in such a way that the final date for delivery/handing over of the equipment as per the Order is not affected.

16. PROGRESS REPORT

During execution of the contract, the supplier shall furnish bi-weekly progress reports to the Purchaser indicating the progress achieved during the week and the total progress up to the last week as against scheduled and anticipated completion dates in respect of key phases of the work. The Supplier shall also furnish any other information in order to ascertain progress, if called for by the Purchaser.

17. STAFF AND WORKERS

The supplier shall depute qualified engineers for execution of the project. The technical staff employed by the supplier shall be responsible for the quality and workmanship of the work as per the satisfaction of the Purchaser. The Supplier's supervisory staff should follow the instructions given by Purchaser / Consultant or his authorized representative. If any of the Supplier's staff members is incapable or in-experienced, in the opinion of the Purchaser, then he should be removed immediately and the supplier should do suitable substitution.

If the workers or the supervising staff of the supplier are involved in riotous or illegal activities to such an extent that it becomes necessary to hand over the matter to the police then the supplier would be solely responsible for the case and all the expenses incurred in the legal proceedings shall be borne by the supplier.

18. CO-OPERATION WITH OTHER AGENCIES AT SITE

The Supplier or his authorized representatives must work in close co-operation with the agencies executing other works forming the part of the project and also with the representatives of the Purchaser for the execution of works which are not included in the contract. Supplier shall permit free access and generally afford reasonable facilities to other agencies or departmental workmen etc.

The Supplier's quoted amount/rate shall be deemed to cater for all the above contingencies and nothing extra shall be admissible on this account.

Supplier should keep his working site clean and the materials brought for work shall be kept in a properly stacked / stored way. The work site should be swept at the end of each working day after removal of debris / left over materials. The Supplier has to take full care so as not to spoil or damage other Supplier's/ Purchaser's job / material.

19. SAFETY OF ADJOINING PROPERTIES

The Supplier or his authorised representatives should conduct all the operations necessary for the execution of works in such a manner that no inconvenience / damage is caused to the properties of other persons & Purchaser.

20. EXECUTION OF WORK

General: All the works shall be executed in accordance with the detailed drawings, specifications and instructions to be given by the Purchaser or mentioned in the contract document.

Drawings:

The drawings given in the tender document are only for reference purposes. The bidder has to inspect the site and submit the bid accordingly. The drawings given in the tender document are as per our present requirement. The supplier has to discuss with purchaser for the exact requirement to prepare the working drawing by him.

Inadequate/substandard works and materials:

- i) If any material used by the Supplier is found unsuitable or of sub-standard quality after testing, then the Supplier shall remove those faulty materials immediately as per the instructions of the Purchaser.
- ii) If any work executed by the Supplier is found to be of bad workmanship or not as per the drawings, then the same is to be dismantled and re-executed by the Supplier without claiming any extra payment or extension in time period.

Default of Supplier in compliance:

If the supplier or his authorized representative fails to follow the instructions given by the Purchaser regarding any of the works, then the same shall be got executed by other persons employed by the Purchaser and the expenses incurred shall be borne by the Supplier.

Discrepancies between instructions:

If any discrepancy occurs between the various instructions conveyed to Supplier or his authorized representative or if any misunderstanding arises between the Supplier's staff and Purchaser's staff, the supplier shall report the matter immediately to the Purchaser. The decisions of Purchaser shall be final and binding. Moreover, no claims for losses due to discrepancies between instructions, doubts or misunderstandings shall be admissible.

Change in specifications:

If there is any variation in specification or any change in make of item, then it has got to be approved from the Purchaser prior to installation or execution.

Work not specified in the specification:

If, for any work, no specification has been given in the tender document, then the work will be executed as per the IS specifications, and if the work is not covered by IS specifications, then it should be executed as per standard engineering practice, subject to the approval of the Purchaser.

Work not specified with the scope:

If any work which is not mentioned in the scope but necessary for the successful completion of work, then it should be executed by the supplier without any additional amount.

21. LIABILITIES FOR DEFECTS AND RECTIFICATIONS

If it shall appear to the Purchaser that any work has been executed with imperfect or unskilled workman or with materials of any inferior description, or of quality inferior to that contracted for, or otherwise not in accordance with the contract, the Supplier shall on demand in writing from the Purchaser or his representative specifying the work, materials or articles complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct that work so specified and provide other proper and suitable materials or articles at his own charges and cost, and in the event of failure to do so within a period to be specified by the Purchaser or his demand aforesaid, the Purchaser may on expiry of notice period rectify or remove, re-execute the work at the risk of Supplier and the cost shall be recovered from the Supplier. The decision of the Purchaser as to any question arising under this clause shall be final and conclusive.

22. CARE OF WORKS

From the commencement to the completion of works, the Supplier shall take full responsibility for the care of all works including all temporary works and in case any damage or loss occurs then the supplier shall at his own cost repair and make good the same so that on completion of the work, the same shall be in good order in every respect in accordance with the contract and to the satisfaction of the Purchaser.

23. LABOUR LAWS AND SAFETY REGULATIONS**Labour Laws:**

- i) Labourers below the age of 18 years shall not be employed on the work.
- ii) The supplier shall not pay less than what is specified by the law to labourers engaged by him on the work.
- iii) The supplier shall, at his own expenses, comply with all labour laws and the Purchaser shall not be responsible for any recovery/penalty imposed by the respective authorities for violating the labour laws.
- iv) If the supplier is covered under the Contract Labour (Regulation & Abolition) Act, he shall obtain a license from the licensing authority (i.e. the Office of

Labour Commissioner), by payment of the necessary prescribed fee and deposit, if any, before starting the work.

v) The supplier shall furnish to the Purchaser, the details of the workers employed on the works.

vi) The supplier shall comply with the provisions of the existing rules and regulations relating to labour laws.

vii) The Purchaser shall on a report having been made by an inspecting officer as defined in Contract Labour (Regulation and Abolition) Act, 1980, have the power to deduct from the amount due to the supplier any sum required or estimated to be required for making good the losses suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, or if deductions made from his or their wages which are not justified by the terms of contract or non-observance of the said regulations.

Minor Accident on Duty:

For cases of minor accident on duty not covered under compensation by insurance, the supplier shall have to compensate the affected person by reimbursing these medical expenses against submission of actual expenditure document. The absence from duty, if takes place, due to such accident shall be considered as special leave and full payment shall have to be made for duration of such absence.

Provident Fund:

It shall be solely the Supplier's responsibility to complete all provident fund formalities as per statutory regulations.

24. SAFETY CODE:

Safety and Protection:

The supplier shall adhere to safe construction practice and guard against hazardous and unsafe working conditions. While carrying out the work, the supplier should provide for;

i) Safety of personnel engaged in the construction.

ii) Protection and safety of works and materials during their progress.

iii) Sanitary and hygienic conditions of working and living for his workers, as required by the Purchaser.

Use of Safety Gadgets:

The Supplier shall have to ensure availability and use of all desired safety gadgets like safety shoes, belts, helmets, goggles, hand gloves etc.

Unsafe working condition:

If any activity is found to be progressing without proper and complete safety measures (including use of safety gadgets) being implemented, the supplier may be asked to stop the work unless he fulfils the desired safety norms. Such delays shall not be allowed to be considered for extension in duration of the allotted time period.

First Aid:

The supplier shall provide first aid facilities for his employees and those of his sub-SUPPLIERS. The requisite first aid box and medicines should always be available at work site.

Supplier's Barricades:

The supplier shall erect and maintain barricades required in connection with his Operations to guard or protect: -

- i) Excavations
- ii) Hoisting Areas
- iii) Areas adjudged hazardous by the Supplier's or Purchaser's representatives.
- iv) Charged electrical panels.
- v) Purchaser's existing property liable to get damaged by supplier's operation.

Preservation of peace:

The supplier shall take precautions to prevent any riotous or unlawful behaviour by his workers, for the preservation of peace and protection of inhabitants and the security of property in the neighbourhood of the work.

25. DETAILS OF WORK EXECUTION

- i) The work shall be done in such a manner so as to clear work front availability for other agencies working at site.
- ii) Finish of work shall be as per drawings & details given by Purchaser.
- iii) In general the complete work is to be done as per Indian Standard and esthetical norms as specified and detailed in Tender.

26. SUPPLIER'S SCOPE OF SUPPLY

All materials required for executing the jobs specified in the Schedule of Items, inclusive of all tools, tackles, scaffolding, consumables & testing equipments shall be procured and supplied by the supplier at his own cost except for any items specified as Purchaser supplied.

27. RECOVERY FROM THE SUPPLIER

- i) If the supplier or his employees damage or destroy the property of the Purchaser, then the same shall be replaced/refunded by the supplier; otherwise the expenses may be recovered from his bill or security deposit.
- ii) All compensation & recoveries to be made as per terms of the contract shall be deducted from the supplier's bill or security deposit.
- iii) Forfeiture of Security Deposit: Whenever any claim against the supplier is to be recovered then the same may be made from the security deposit. If the supplier abandons the work or leaves the work incomplete, then the Purchaser has the right to forfeit the security deposit.

28. SPECIAL INSTRUCTIONS

- a) All materials to be used in execution of project shall be of first class quality; I.S.I. marked and shall be approved by Purchaser before its application.
- b) The supplier shall be paying all testing charges required for testing of materials and samples as and when taken by Purchaser. The Supplier shall arrange necessary labour and transportation to facilitate testing of samples/materials. Frequency of testing materials/samples shall be as per related I.S. codes.
- c) The work should be carried out in truly professional manner, neatly finished with proper line, level and plumb. Cleanliness and finishing of the job is of utmost importance. Hence the job should be done most carefully with best workmanship. For all finishing jobs samples should be approved from the purchaser/consultant before completely executing the work.
- d) The Purchaser should be immediately informed for any discrepancy in drawings, specifications and instructions in the execution of job, before actual execution of particular item having discrepancy.
- e) Any item found to be having been executed with poor workmanship or materials of inferior quality then the supplier shall have to rectify /reconstruct the work as specified by Purchaser. No extra charge will be admissible in such case. If SUPPLIERS fails to do so, the Purchaser reserves the right to

rectify/reconstruct the work through some other agency at the expenses of supplier.

- f) The schedule of activities as submitted by the supplier shall have to be strictly adhered to. Regular progress reports shall have to be submitted by the supplier giving all details for monitoring of the schedule.
- h) Special care is to be taken for cleanliness of the site. After the end of day's work, the site should be cleaned immediately.
- i) The supplier shall have to co-operate with the agencies executing other works in the same area.
- j) While executing the work, the supplier shall ensure safety and security of the property of the Purchaser so as to avoid theft etc.

29. SECRECY

The purchaser is the sole owner of the technology, equipment specification and drawings given along with the bidding document and to be given to the supplier. The details given to bidders and supplier should be kept confidential and should not be used for any other purpose or should not be used or transferred to third party. The supplier has to sign a secrecy agreement with purchaser.

30. VARIATION OF QUANTITIES AT THE TIME OF AWARD

- 30.1 At the time of awarding the contract, the purchaser reserves the right to increase or decrease the quantity of goods and services mentioned in the schedule (s) in the "Price bid" without any change in the unit price and other terms & conditions quoted by the tenderer.
- 30.2 If the quantity has not been increased at the time of the awarding the contract, the purchaser reserves the right to increase the quantity of goods and services mentioned in the contract without any change in the unit price and other terms & conditions mentioned in the contract, during the currency of the contract period

SECTION V
TECHNICAL SPECIFICATIONS

GENERAL

SCOPE OF WORK

1. Double skin wall paneling and false ceiling with GI sheet and PUF insulation for Class 10000 clean room area
2. GI Doors for Class 10000 area and comfort a/c area
3. Air conditioning system with DX chillers, ducting, terminal filters and other accessories for class 10000 clean room area
4. Complete Electrical work with light accessories and fire detectors inside class 10000 clean room area
5. Comfort a/c (indoor as well as outdoor units) for specified areas as per layout
6. Double skin wall paneling with GI sheet and PUF insulation for partitions in all other areas except class 10000 areas
7. Epoxy wall painting and Epoxy ceiling painting for all other areas except class 1000 clean room area
8. All covings inside clean room and outside the clean room

1. SITE CONDITIONS

- | | | |
|-------------------|---|--------------------------------|
| i. Temperature | : | Maximum 38 Deg.C. |
| Minimum 18 Deg.C. | | |
| ii. Humidity | : | 65%-95% |
| iii. Rainfall | : | Around 3000mm per annum. |
| iv. Altitude | : | Less than 500 meters from MSL. |

2. ELECTRIC SUPPLY PARTICULARS

- | | | |
|----------------------|---|----------------------|
| i. Nominal voltage | : | 415 Volts. |
| ii. Frequency | : | 50 Hertz. |
| iii. Number of wires | : | 3 phase and Neutral. |
| iv. Neutral earthing | : | Solidly earthed. |

3. STANDARDS

The installation and components thereon shall conform to the requirements of following specifications:-

- i. ISO 14644 2004/Schedule M: Clean rooms & associated controlled environments.
- ii. NBC : National Building Code.

4. DRAWINGS

Following drawings will be the part of this tender:-

1. General Layout Drawing

Drawing attached is only for reference purpose, the contractors are instructed to visit the site and submit their bid based on the actual site condition. Contractor shall prepare all working drawings including ducting and supporting steel work for the execution. And drawings if any required by statutory bodies and obtain necessary approvals. All such working drawings to be approved by the client / consultant.

5. BILL OF QUANTITIES

The quantities mentioned in the bill of quantities are for the guidance of the bidder to quote. The client/consultant do not in any way guarantee that the actual work will exactly correspond to the quantities now indicated. It shall be the contractor's responsibility to procure only requisite quantity. The client reserves the right to add/delete any portion of the work within the project scope.

6. TESTING & VALIDATION

- i. Contractor shall do all necessary steps to integrate the proposed systems and components to the existing central system like chilled water line, plumbing line, FDA & building management system
- ii. All equipments and materials included in contractor's scope of design & supply shall be tested as per the relevant standards before delivery and necessary test certificates shall be submitted.
- iii. All pre-commissioning tests shall be carried out after the installation is completed, and results shall be recorded.
- iv. Contractor should carry out validation as per relevant standards, cGMP practices and Schedule-M guide lines and validation report along with as built drawings shall be submitted.

- v. Client will depute a third party inspection agency in addition to the validation covered in contractor's scope of work for undertaking various relevant tests to ascertain clean room standards. If found defective during such inspection / Validation, contractor should carry out all corrective.
- vi. Any rectification if found required may be carried out without any additional cost.

7. HANDING / TAKING OVER

The installation shall deem to have completed and taken over by the client when:-

- i. Entire installation is physically tested in the presence of client / Consultant and results are satisfactory.
- ii. Obtaining final approval from statutory bodies including rectification of any defects pointed out during the third party inspection.
- iii. Contractor submits set of 'AS BUILT' drawings covering layouts and Wiring diagram for the scope of work covered.
- iv. Contractor carries out all performance test & validation with satisfactory results and submits all reports and completion certificates.
- v. The defect liability period will start once contractor has completed all formalities and commissioned the facility.
- vi. The installation and accessories shall be guaranteed for satisfactory operation for a period 12 months from the date of handing over. Any defects noticed during this period shall be rectified free of cost.

8. INTERIOR PARTITIONS AND WORKS

SCOPE

This part covers Requirements and Specifications for the clean room components associated with proposed class 10000 clean room facilities and associated comfort a/c rooms.

Contractor shall deploy a full time supervisor with sufficient experience in the similar kind of project. The installation shall be carried out in accordance with good engineering practices available, latest Indian and International standards and specific requirements covered as below:-

CEILING PANELS

This shall be walkable type made with two skins of Pre painted Galvanized iron (PPGI) over an frame work sandwiched with PUF at the Micro biology Lab and Associated Change rooms and Corridors. Other areas there shall be no ceiling panels. Other details shall be as per bill of quantities and drawing.

This shall be installed using proper supporting system installed from the existing RCC ceiling slab. Suitable cutouts shall be provided for installing luminaries and entering various service lines. Edges at cutout shall be duly finished.

WALL PANELS

This shall be made with two skins of PPGI over an frame work sandwiched with PUF. Other details shall be as per bill of quantities and drawing

Thickness of wall panels is as per drawings and bill of quantities. For 100mm wall panels return air duct made out of 20G aluminum shall be provided inside. This shall be connected to the main return air duct above ceiling.

Wall panels shall have a male edge one side and female edge on other side. This when two panels joined forms a sturdy interlock. Further the joints shall be finished with silicon sealant.

DOOR FRAME

Doors are fabricated from galvanized iron sheets duly powder coated. Maximum tolerance shall be 1 mm.

Thickness of the sheet shall be min 1.2 mm. The frame may be supplied in knock down form with joints. This shall be able to assemble at site easily using nut and bolts.

Hinge plates shall be recessed and manufactured with 5mm thick sheet and this shall be suitable for flush mounting for the hinges.

Reinforcement pads shall be used for fixing the automatic door closer.

SHUTTERS

Shutters are fabricated from galvanized iron sheets duly powder coated. Maximum tolerance shall be 1 mm.

This shall be 46 mm in thickness and made with 0.8 mm thick GI sheet. Core material shall be Fire retardant self extinguishing type EPS.

Hinges shall be 3mm thick and this shall be concealed type. All fasteners used shall be of machine screws.

Reinforcement pads shall be used for fixing the automatic door closer.

HVAC SYSTEM

1. SCOPE

This part covers Requirements and Specifications for the clean room components associated with proposed class 10000 clean room facility for Micro Biology Lab area (Sterility). The installation shall be carried out in accordance with good engineering practices (cGMP) available, latest Indian and International standards and specific requirements covered as below:-

2. INSIDE CONDITIONS REQUIRED

- i. Air Flow type - Mixed
- ii. Maximum Air Change/Hr - 60/Hr (For Class 10000 Clean Room) .
- iii. Fresh Air - 20%
- iv. Type of Filter - HEPA
- v. Overall Efficiency - 99.97% @ 0.3 micron.
- vi. Location of HEPA Filter - At & Terminal filter
- vii. Supply Air - From TOP.
- viii. Return Air - Through risers in wall panels.
- ix. Inside temperature - 22 +/- 2 Deg.C

3. AIR HANDLING UNITS

Indoor and Outdoor units shall be as specified in BoQ

4. VARIABLE SPEED DRIVE

- i. This shall be wall mounting type suitable for speed control of the AHU Fan.
- ii. An alpha Numeric control panel with LCD display shall be provided which can display and control minimum parameters as follows:- Local/Remote Indication, Direction of rotation, Set speed, Actual Speed, Output current, Real time clock.
- iii. It shall be able to program various function parameters for different performance characteristics on a real time axis. There shall be suitable "swinging DC chokes" for reducing harmonics on available load conditions. Max THD shall not be more than 25%.

- iv. Suitable RFI filters shall be provided.
- v. There shall be in built user friendly fault diagnostic feature.
- vi. RS 485 port with built in modbus and sensor less vector control for better motor performance.
- vii. 2 No. built in PID controllers for any external device control like motorized damper or valve.
- viii. The equipment shall be supplied with necessary software & operating manual.

5. DUCTING

- i. Aluminium sheets conforming to IS:737-1955.
- ii. The ducting shall be tested for any kind of leakages.
- iii. All ducting shall be applied with food grade RTV sealant on joints.
- iv. All duct work shall be with Aluminum only and cross section shall be rectangular.
 - v. Duct routing should be straight with minimum deviations as far as possible.
 - vi. Minimum thickness of the ducting shall be 24 gauges.
 - vii. Sheet metal work shall be with good quality workmanship using right engineering practices.
 - viii. Contractor shall prepare all working drawings and duct routing layout.
 - ix. Approval from the HLL shall be obtained before commencing the work.
 - x. Extract panels with inbuilt ducts are envisaged for return air from the clean room.
 - xi. This extract panel will get connected to the return air duct network above false ceiling and finally to the AHU.
 - xii. Acoustic lining shall be provided to the duct work near the AHU/TFA to minimize the fan noise being transmitted through the duct work.
 - xiii. It is essential to provide straightening vanes wherever there is a duct collar joint for a proper balancing of air distribution.
 - xiv. When there is change in duct size in a continuous run transformation duct pieces have to be used. Normal slope shall be one in seven.
 - xv. Elbows shall have radius ratio 1.5 and maximum aspect ratio not more than six.
 - xvi. Aspect ratio of rectangular duct should be within 4.
 - xvii. In case of shorter elbows or sharp bends multiple turning vanes has to be used.
 - xviii. Branch duct from a main duct (after an elbow) should be away at least 7.5 times of the elbow width.
 - xix. Ducts with thermal insulation shall be suspended from the roof slab using GI hi - tech support system with threaded rods and slotted strips.

- xx. Cost of above supports shall be included in the item under duct in the BOQ.

6. AIR FILTERS

- i. Multilevel air filtering is envisaged such as pre filter, fine filter and HEPA filter for the class 10000 application.
- ii. Pre filter will be required to filter out particle size upto 10 micron and fine filter will filter out 3 micron particles.
- iii. Filters may be made out of micro layer fiber glass and asbestos and it should be fire and moisture resistant type. This should be of cleanable type.
- iv. Normal pressure drop when pre filters are clean is around 6mm.
- v. The efficiency level shall be 99.9 % for 5micron particles.
- vi. All filters are located inside AHU / TFA unit and considered as a single entity.
- vii. Rate quoted for AHU / TFA unit shall include necessary filters as specified.
- viii. Terminal HEPA filters are to be located at the Microbiology Lab(Q-9), Corridor(Q-8), Change room-2, Gents & Ladies(Q-7) as per the attached drawings and should have an efficiency of 99.99% for 0.3 micron particles. Pressure drop may be around 50mm.
- ix. Filters have to be fitted properly so that no leakage or by-pass may be present.
- x. Neoprene gaskets are used to seal the space between filter frame and filter housing.
- xi. Filters have to be installed only after cleaning the entire system properly.
- xii. HEPA filter distribution is as follows

Sl. No	Location	Dimension	Qty
1	Micro Biology Lab	610X610X300	6
2	Corridor	300X300X300	2
3	Changeroom-2 Gents	300X300X300	1
4	Change room-2 Ladies	300X300X300	1

7. Insulation

- i. Supply Air duct : 19mm thick chemically cross linked Closed cell polyethylene foam insulation material.
- ii. Return Air duct : 13mm thick chemically cross linked Closed cell polyethylene foam insulation material.

8. Terminal Filter boxes

Double skin insulated terminal filter housing made of SS304 shall be used for housing HEPA filter. This housing shall be provided with swirl diffuser.

9. Return Air Risers

Return air risers are proposed to be constructed in integral with modular panels. Riser shall be provided with suitable return air grille and volume control damper.

10. Filters Proposed

- i. Coarse Filter - 10 Micron - 60 - 80% efficiency (Synthetic Washable)
- ii. Fine Filter-5 Micron - 99% efficiency (Synthetic Washable)
- iii. Secondary Filter - 0.3 Micron - 99.995% efficiency

(The above Filtration Level & efficiency is just for broad understanding, however all the filters have different range of efficiencies at different particle sizes and therefore for exact details refer to reputed filter manufacturer's catalogue)

11. Design Responsibility

The design of the entire HVAC System is the sole responsibility of the contractor. Therefore, Contractor is supposed to design the system and check the operating parameters, capacities of equipment etc. thoroughly before submitting the offer. The contractor will be responsible to demonstrate the system performance as per the intent. The preliminary design calculations have been carried out to facilitate the contractor to quote. However, if contractor feels that the capacity of the system indicated is not adequate, the contractor may submit the calculations for their appraisal.

ELECTRICAL SYSTEM

1. SCOPE

This part covers Requirements and Specifications for the Electrical works associated with the proposed the New Micro biology Lab area. The installation shall be carried out in accordance with good engineering practices available, latest Indian and International standards and specific requirements covered as below:-

2. SPECIFIC REQUIREMENTS

- i. Electrical contractor shall have a valid license of appropriate class depending upon the size/capacity of the installation from the Kerala state Electricity licensing Board.
- ii. Electrical contractor shall deploy a full time supervisor with valid supervisory license at site.
- iii. Contractor shall work in coordination with other agencies involved in the project.
- iv. All necessary documents including the drawings for approval from CEIG & KSEB to be prepared by the contractor. No additional claim will be entertained for this part of the work.
- v. Any item if found necessary for the smooth completion of the job may be included separately in the offer by the bidder.
- vi. Deviations if any shall be indicated clearly as a deviation statement.

3. SWITCH BOARDS

- i. Location of the Switchboards shall be finalized and installed in consultation with the officials of HLL.
- ii. Minimum clearance of 1.5 meters shall be maintained in front of the switchboard.
- iii. Switchboards shall be aligned, leveled and grouted/bolted securely to prevent any displacement.
- iv. Earth bus of the switchboard shall be connected to the main earthing grid.
- v. Uncut gland plates supplied along the switchboard shall be properly cut for glanding the cables.
- vi. Feeder designation shall be clearly painted / labeled on respective feeders.
- vii. Minimum operating height shall be 45Cms and Maximum shall be 180Cms.

4. CABLES

- i. Cables shall be visually inspected before commencing the installation.
- ii. Megger test has to be carried out for each feeder cable after glanding and results shall be recorded.
- iii. The LT power cable PVC insulated PVC sheathed shall be of the Aluminum conductor and lower sizes shall be of copper conductor.
- iv. Sharp bends and kinks shall be avoided in the installation. Bending radius shall not be less than 12 times the diameter of the cable.
- v. Cable shall be laid one beside the other and not on top of each other. Adequate extra lengths shall be provided near all the terminations.
- vi. Identification tags made out of Aluminum bearing cable number and size shall be provided at either ends and at every 30mts of intervals.
- vii. Cable glands shall be single compression SIBG type made out of extruded brass and cadmium plated.

- viii. End termination shall be of crimping type Al on the conductor type. Cable glands shall have earth tag and it shall be securely connected to the earthing system

5. EARTHING

- i. The material for earthing shall be electrolytic grade bare copper.
- ii. The end connection shall be of bolted type with suitable crimping type terminal lugs.
- iii. All equipment receiving three-phase connection shall have double earthing and single-phase equipment shall have single earthing.
- iv. All cable glands shall be earthed using earth tag/ copper clamps and suitable size bare copper conductor.
- v. All non - current carrying metal parts shall be connected to the earthing system.
- vi. Wherever joints or tap off are required, that area to be properly tinned.
- vii. Lap joints in the conductors shall be with 50mm overlap.
- viii. All hardware shall be GI.

6. MCBs, RCCBs, & MCB DBs

- i. Factory assembled MCB DBs as per BOQ / SLD shall be wall mounting type.
- ii. Suitable steel frame work if required shall be provided for installation where number of MCBDBs is more than one.
- iii. Suitable fabricated wire ways shall be assembled between DBs on the above framework for easy wiring and cable dressing.
- iv. Body earthing (Double) to the main grid shall be strictly ensured.
- v. MCBs of proper rating as per SLD/wire size shall be arranged on the DIN rail.
- vi. All circuits shall be neatly terminated to the corresponding terminals and proper dressing inside the DB shall be carried out.
- vii. Circuit identification ferrules to be provided for each conductors of a circuit.
- viii. Separate neutral and earth bus shall be provided and respective conductors of each circuit shall be connected to the above bus.
- ix. Circuit identification, feeder identification and cable size shall be suitably marked on the DB after the installation.
- x. ELCBs shall be of 30mA sensitivity and this shall be 4P or 2P as the case may be. Usage of higher sensitivity ELCBs are not recommended.
- xi. MCB rating based on wire/conductor size shall be as follows:-

- 1.0/1.5 Sq.mm - 6A
- 2.5 Sq. mm - 10A
- 4.0 Sq. mm - 16A
- 6.0 Sq. mm - 20A

7. CONDUITS

- i. Unless otherwise specified all conduits for concealed and surface wiring shall be of PVC black colour (M) duty.
- ii. All accessories used shall be compatible each other.
- iii. Maximum number of wires that can be drawn through a specified size of conduit is as follows:-

Size Cross of Conduit in mm	Sectional Area in Sq.mm			
	20	25	32	38
1.5	5	10	14	
2.5	5	8	12	
4.0	3	8	10	
6.0	2	5	8	

- iv. Conductors carrying different supply voltage shall be drawn through separate conduits.
- v. Only bends shall be used wherever conduits take right angle deviation and no Elbows are permitted.
- vi. All unused entries in the conduiting shall be blocked with thermo coal packing so that cement mortar will not get into the conduiting during the concreting.
- vii. Fish wires shall be drawn through conduiting before concreting.
- viii. Chipping using chisels shall be avoided to maximum extend.
- xii. Conduits shall be properly clamped at every 60cms.
- xiii. For surface wiring, conduits shall be fixed by heavy gauge saddles to suitable wood/pvc plug duly inserted in the wall etc, with GI screws

8. WIRING

- i. Installation shall be divided into different circuits.
- ii. Each circuits shall comprise of three conductors viz Phase, Neutral and earth.
- iii. Phase and Neutral conductors shall be PVC insulated copper wire of size as specified.
- iv. Earth conductor shall be generally of bare copper conductor/Green color PVC insulated wire of size as specified.
- v. Earth conductor size shall be of same size that of Phase conductor.
- vi. Minimum size of wiring shall be 1.5 Sq.mm.

- vii. MCB rating for each circuit shall be as per wire/conductor size and specified else where.
- viii. Generally circuits are classified as 'Lighting' 'Power' and 'UPS'.
- ix. Each circuit shall be connected to the respective DB (Lighting/Power/UPS)
- x. Maximum number of wires that can be drawn through a conduit is as specified.
- xi. Colour code shall be followed as far as possible and properly ferruled with yellow colour ferrules.
- xii. Wiring from MCB DB to light switch boxes/socket location shall be termed as circuit wiring.
- xiii. Wiring from switchbox to light/fan point shall be termed as point wiring.
- xiv. Looping of Neutral and Earth conductor is permitted in point wiring.
- xv. Number of points in each circuit is depends on the capacity/rating of the circuit.

9. LIGHT SWITCHES & BOXES

- i. This shall be generally of modular type. Metal boxes are preferred over PVC.
- ii. Switchboxes shall be recess mounted in the wall.
- iii. Required knock outs only shall be opened for conduit entry.
- iv. Extra care shall be ensured while installation so that 'plumb' and 'level' shall be properly maintained.
- v. Front edge of the switchbox shall be in line with finished surface of the wall.
- vi. Switch boxes shall be earthed using the earth conductor of respective circuit wiring.
- vii. Height (from FFL) of Light switches shall be 125cms or as specified in the drawings.
- viii. Switchboxes shall be generally located 15cms from the edge of any door/window or as per the aesthetic requirement as the case may be.
- ix. Only one circuit shall be terminated in one switchbox. If more number of circuits are required at one location separate switchboxes shall be installed side by side.
- x. At least one blank space shall be provided in each switchbox.
- xi. Switches shall be provided only on the phase conductor never on a neutral conductor.
- xii. Telephone/ Antenna/Data sockets shall be installed in separate switchboxes.
- xiii. Circuit identification with suitable permanent marking shall be provided on each switch box.

10. LUMINAIRES

- i. Type of luminaire shall be as specified in the bill of quantities. This shall be complete with suitable type of lamps and control gear.
- ii. All ballasts for the fluorescent lamps shall be Electronic (HF) type.
- iii. Only Philips/Osram make high efficiency or equivalent fluorescent lamps shall be used this shall be with 3250 lumens output for 4ft luminaires.

- iv. Surface mounting Luminaires shall be directly installed to the ceiling / wall using GI anchor fasteners
- v. Recess mounting luminaire shall be installed using suitable arrangements like suspension chains from ceiling slab and weight of the luminaire shall not be transferred to the false ceiling grid.
- vi. For installation where false ceiling is employed, it is preferred to have a common supporting system for conduits and luminaires.
- vii. Threaded type of suspension system is preferred over steel bracket
- viii. Earthing of the Luminaire body using respective earth conductor of point wiring shall be ensured.
- ix. Steel reinforced Flexible conduits with glands shall be used for wiring (between ceiling junction box and luminaire) for recess mounting type.

11. FIRE DETECTION AND ALARM SYSTEM

A. DETECTORS

- i. Type :
 - : Photoelectric type.
 - : Rate of rise Heat Detectors.
- ii. Manual Call Point
- iii. Nominal Voltage : 24 V DC
- iv. Sensitivity : 0.67 to 3.77 obsc /ft.
- v. Temperature : 0 to 45 Deg. C
- vi. Humidity : 0 to 90 % non condensing.
- vii. Drift Compensation : Automatic about 1% / Ft.
- viii. Diagnostics : Self.
- ix. Reset time : 1Sec.
- x. Standby current : 70 micro A. (aprox)
- xi. LED Flash interval : about 10 Sec.
- xii. Alarm LED view : 360 Degree
- xiii. Insects screen : 0.508mm
- xiv. Temp. Rate of rise : >105 Deg F & 15 Deg F / Min.
- xv. Air Velocity : Suitable for up to 1500 FPM.
- xvi. Shade : Off white.
- xvii. Protections : Against Transient surges.
 - : Polarity reversal.
 - : EMI & RF suppression.
- xviii. General Requirement : Hermetically sealed solid state.
 - : Plug in type with Common base.
 - : Suitable for ceiling mounting.
 - : Field replaceable sensing chamber.
 - : Removable insect screen & Cover.
 - : Shield against dust & insect.
 - : Flashing LED while system healthy.
 - : Steady glowing LED at Alarm.

: Clean Me feature is desirable.

B. INSTALLATION

- i. Conduiting shall be surface type and shall be 16G black enameled MS for the FDA system. Minimum size shall be 20mm.
- ii. Only threaded type of installation shall be carried out. Thread sealing compound shall be used.
- iii. No elbows are permitted but long radius bends.
- iv. Fire red shade shall be applied for FDA conduiting.
- v. Wiring shall be of flame retardant low smoke type, 660volts grade, PVC insulated shielded, flexible twin core with multistrand copper conductor.
- vi. Cross sectional area shall be not less than 1.5 Sq.mm. – for FDA system.
- vii. All passive components shall be interconnected using above conductor to form a closed loop.
- viii. Power supply for the hooter shall be through a separate network originating from the control panel.
- ix. Photoelectric type smoke detectors are proposed below false ceiling.
- x. Rate of rise type detectors are for the auto clave area.
- xi. Response indicators shall be provided for the detectors above false ceiling.
- xii. This shall be located in the false ceiling to merge with reflected ceiling layout.
- xiii. Type 'A' wiring to be adopted in which return wire through a separate conduit shall be brought back to the FDA control panel.
- xiv. This return wiring shall be at least 30cms from loop conduiting.
- xv. All testing as per relevant standard shall be carried out.

The detectors & MCPs shall be connected and synchronized to the existing control panel already installed at the building.

APPROVED LIST OF VENDORS / SCHEDULE OF MAKES

SI No.	Items	Acceptable Makes
1	Air Handling Units (Indoor & Outdoor)	Bluestar / Carrier / York
2	Magnehelic Gauges	DWYER / Waree.
3	Aluminium Sheets	Jindal/HINDALCO
4	Valves	
a	Butterfly Valves	Audco/Honeywell/Advance/SKS
b	Non Return Valave	Advance/Honeywell/Danfoss
c	Balancing Valaves	Honeywell
d	Automatic Balancing Valve	Flowcon/ T A Hydronics/ Danfoss/ Honeywell
e	GM Gate Valve	GG/Leader
f	Ball Valve	BDK / AUDCO/GG/AUTOMATRIX
5	Insulation	Supreme/Trocellen
6	Air Washer	Zeco/Caryaire/Roots Cooling Systems
7	Motors	Siemens/Bharat Bijee/Kirloskar/CG
8	Filters(Pre&Fine)	Thermadyne/Pyramid/Airtech/Chempharm/AAF
9	Filters(HEPA)	Chempharm/Thermadyne/Airtech/Pyramid/AAF
10	Duct Dampers	Caryaire/Ravistar/Airflow

11	Cables	RR/Finolex/LAP
12	Cable Gland	Denson/Comex/HEX
13	Lug	Dowells/Jaison/Multi
14	PVC Insulated copper wires	RR/Finolex/LAP/V Guard
15	Line Type Fuse	GE/Siemens/Havells
16	Terminal Block	Connectwell/Wago
17	Voltmeter/Ammeter/Energy Meter	Automatic Electric/Meco/Rishab/Conzerve
18	Indicating Lamps	Siemens/Teknik/Culter/Hammer/Jaibal aji
19	Selector Switches	Siemens/Kaycee
20	Switchgear	Siemens
21	MCB/MCBDB	Legrand/ABB/SCHNEIDER/SIEMENS
22	Modular Switches	Legrand
23	Industrial Plung & Socket	Legrand
24	Luminaire&Lamps	Philips/WIPRO/CG
25	FDA Control Panel	Honeywell/Hochiki
26	Detectors	Honeywell/Hochiki
27	Pump	IIT Bell&Gossett/Ground foss/Armstrong
28	Filter Cleaning Station	Air Tech/Pilani Envirotech/Whirlwing/ S A Air System
29	Return Air Motorised Dampers	Caryaire/Ravistar/Airflow
30	Fresh Air intake louvers	Caryaire/Ravistar/Airflow
31	Variable Frequency Drive	Allen Bradley

32	Conduit	BHARATH/VIP
33	Switches	Legrand
34	Air-conditioners Split	Bluestar / Voltas / Carrier
35	Voltage Stabilizers	V-Guard

SECTION VI GENERAL INFORMATIONS

(Please attach detailed pro-forma incorporating the information given below)

BID NO.....

DATE OF OPENING.....

NAME OF THE BIDDER:.....

1. Name & Full address of the Manufacturer

- | | | |
|------------|---------------|-----------------------|
| (a) PAN No | (b). ECC Code | (c) IEC if applicable |
| (d) CST No | (e) TIN No | (f) Any other details |

2. (a) Telephone No.: Office/Factory/Works

(b) Fax No.: Office/Factory/Works

(c) e-mail address:

3. Location of the manufacturing factory

4. Details of the process of manufacturer in the factory

5. Details of staff proposed to be employed for this work

6. Whether materials are tested to any standard specification? If so, copies of specifications & original test certificates should be submitted.

7. Valid Electrical License No.(with validity period)

Signature and Seal of the Bidder

SECTION VII

PROFORMA FOR PERFORMANCE STATEMENT

DETAILS OF MAJOR INSTALLATIONS OF SIMILAR CLEAN ROOMS
SUCCESSFULLY COMMISSIONED BY THE TENDERER AS PRIME
CONTRACTOR DURING THE LAST 5 YEARS

Bid No. HLL/AFT/PROJECTS/2015-16/02/MICROLAB/05

Name of the firm:

Order placed by (Full Address of Purchaser)	Order No. And Date	Description	Value of order	Date of Completion	Remarks indicating reasons for delay, if any

Signature and Seal of the Bidder

SECTION VII (a)

ANNEXURE - I

DETAILS OF ONGOING SIMILAR INSTALLATIONS			
Sl. No.	Name of Client with full address, telephone numbers and nature of work	Project details	Value of works (in lakhs)

Signature and Seal of the Bidder

SECTION VII (a)

ANNEXURE - II

FINANCIAL DETAILS				
Financial Data	12-13	13-14	14-15	Average annual Turn Over
Annual Turnover				

Gross Profit/Loss:

Whether attached the relevant Pages of Balance sheet and

Profit and Loss A/c duly certified By Chartered Accountant

Signature and Seal of the Bidder

SECTION VII (a)

ANNEXURE-III

DETAILS OF ORGANIZATION

Sl. No	Name & Postal Address	Date of Birth	Qualification	Total experience in years	Name of organization served showing position held and period of service in each position
1. 2	A.ENGINEERING PERSONNELS				
3. 4					
5. 6					
1. 2	<u>B.MANAGEMENT (NON TECHNICAL)</u>				

Attach an organization chart and resumes of all key technical persons for this project with their consent letters to work for this project.

Signature and Seal of the Bidder

SECTION VII (a)

ANNEXURE IV

BIDDER'S EQUIPMENTS

LIST OF EQUIPMENTS

SL.NO	EQUIPMENTS	NO.AVAILABLE	NO.PROPOSED TO BE DEPLOYED IN THIS PROJECT

Signature and Seal of the Bidder

SECTION VII (a)

ANNEXURE V

CERTIFICATE

I / we hereby certify that the information given with this bidding document is correct. If, at any stage, it is found to be incorrect, I / we understand that the contract will be liable to be terminated and action could be taken against me/us by the Company for damages.

Signature and Seal of the Bidder

(To be submitted in the letter pad of the firm indicating full name and address, telephone & fax numbers etc.)

SECTION VII (b)**HLL LIFECARE LIMITED****Akkulam Factory****THIRUVANANTHAPURAM-695017**

HLL/AFT/PROJECTS/2015-16/02/MICROLAB/05

INDEMINITY CLAUSE

If the supplier fails to execute the order within the time prescribed for the **Design, Fabrication, Supply, Erection, Validation and Commissioning of Micro Biology Laboratory** ordered or violates or infringes the existing rates as agreed to as mentioned in the supply order, the supplier shall and will indemnify the company against all loses or damages whatsoever to be incurred or sustained including the legal cost or expenses incurred by the company by reason of non-delivery of Micro Biology Laboratory at agreed quantity and rate with in the time specified in the supply order. The company will initiate legal action if the supplier fails to execute the supply order as per the schedule in the supply order for the actual loss suffered. No quantity tolerance will be permitted in this regard unless otherwise prior approval is taken by the company before dispatching any excess quantity supplied which shall be returned back on freight to pay basis at the risk of the supplier. Responsiveness of the Bid shall be at the discretion of HLL.

The supplier shall have no right to change the quantity stipulated in the supply order.

Bid pronounced Non Responsive by HLL shall be summarily rejected.

The decision of HLL will be final and no correspondence of this shall be entertained.

We have read and understood the above conditions and agree to abide by the same.

PLACE:

DATE:

NAME AND SIGNATURE OF THE APPLICANT
(WITH OFFICE SEAL)

SECTION VII (c)

HLL LIFECARE LIMITED

Akkulam Factory

THIRUVANANTHAPURAM-695017

HLL/AFT/PROJECTS/2015-16/02/MICROLAB/05

DECLARATION

We confirm having read and understood all the specifications, instructions, forms, terms and conditions and other requirements of the above tender (both expressed and implied) in full and that we agree to abide by all without any deviation.

SEAL OF THE APPLICANT

SIGNATURE

NAME AND ADDRESS OF APPLICANT

SECTION - VIII**FORMAT FOR REQUISITION FOR SITE VISIT**

TENDER NAME - Design, Fabrication, Supply, Erection, Validation & Commissioning of Micro Biology Lab at HLL LIFECARE LIMITED AKKULAM FACTORY, THIRUVANANTHAPURAM

IFB NO - HLL/AFT/PROJECTS/2015-16/02/MICROLAB/05

DATE OF TENDER -

DATE OF VISIT -

PURPOSE OF VISIT - *SITE STUDY FOR PARTICIPATION IN TENDER*

NAME OF ORGANIZATION -

ADDRESS FOR COMMUNICATION (REGISTERED OFFICE) -

PHONE:

FAX:

E-MAIL:

PARTICULARS OF REPRESENTATIVES

Sl No	Name	Designation
1.		
2.		

SECTION -X
PRICE BID

SECTION IX

PRICE BID FORM

Date :.....

IFB NO: HLL/ AFT/PROJECTS/2015-16/02/MICROLAB/05

To:

**HLL Lifecare Limited,
Akkulam Factory,
Sreekariam P.O.
Thiruvananthapuram - 17**

Dear Sir

Having examined the Bidding Documents including Addenda No....., the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver.....(Description of Goods and Services) in conformity with the said Bidding Documents for the sum of..... (Total Bid amount in Words and Figures) or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this bid.

We agree to abide by price per unit mentioned in price schedule, for the bid validity period specified in the bid document and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

Until a formal final contract is prepared and executed between us, this bid, together with your written acceptance of the bid and your notification of award, shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any bid you may receive.

We confirm that we comply with the eligibility requirements as per ITB Clause 1 of the bidding documents.

Dated this day of 20

(signature)

(in the capacity of) _____

Duly authorized to sign Bid for and on behalf of _____

SECTION -IX (A)
PRICE SCHEDULE FOR SUPPLY

BILL OF QUANTITIES -

SUPPLY OF MODULAR WALLS, CEILING PANELS AND
EPOXY WORKS

SL NO	Description	Unit of Measurement (UOM)	Qty	Supply					
				Base Rate	ED (specify applicable ED)	Taxes (Specify applicable taxes such as CST/VA T.etc.)	Work Contract Tax	FOR HLL RATE (inclusive of ED & applicable taxes)	Amount
1	SUPPLY OF MODULAR PARTITIONS Self supporting wall provided in modular units consisting of external skin in Pre painted Galvanized Iron (PPGI) which will be 0.6mm thick, with protective film to prevent surface damage during shipping and installation. Color will be selected by Purchaser.								
1.1	Panel Thickness: 50mm	Sqm	210						
1.2	Panel Thickness: 100mm Movable wall includes: a) PUF insulation 40 Kg/m ³ b) GI frame work. c) Silicon sealant (Clear, White, Winsil Gray)	Sqm	90						
2	SUPPLY OF FALSE CEILING								
2.1	False ceiling panels are designed to fit within each other and suspended by threaded tension bars with adjustable turnbuckles fastened to the overhead support at fixed intervals, Standard Ceiling Panels are 50 mm thick and have a composite construction of two skins of PPGI over an frame work with a sealed and insulated interior. Color will be selected by Purchaser. Type :- Walkable Panel Thickness: 50mm (PPGI) Ceiling includes a) PUF insulation 40 Kg/m ³ b) Sheet Thickness 0.6mm c) GI frame work.	Sqm	35						

	d) Special load bearing Aluminum connecting profile between ceiling panels at provide the precision 3-4 mm seal gap to bottom and inbuilt hanging arrangement at top.				
	e) Silicon sealant (Clear, White, Winsil Gray)				
3	SUPPLY OF COVINGS AND WALL CONNECTIONS				
3.1	Extruded Aluminum Powder Coated /Anodized R60 clip on type covings for Wall to Wall double skin Panels.	Rmt	355		
3.2	Aluminum Powder Coated / Anodized 3 D internal Corner Piece	No	80		
3.3	Standard Epoxy floor covings of R50	Rmt	75		
3.4	Standard Gypsum covings of R50 between roof ceiling and wall panels	Rmt	50		
4	SUPPLY OF CLEAN ROOM DOORS				
	Doors are designed to fit flush into the wall panel system on both sides and are supplied in different dimensions. Doors are fabricated from galvanised iron sheets duly powder coated. Shutter has sheet thickness of 0.8mm and the frame of 1.2mm. Standard 50 mm panel has frame width of 50 mm and shutter width of 46mm. Doors are available in various sizes as per the requirement of the client. The following accessories are a part of the door:				
	Shutter Thickness: 46 mm thick				
	Stainless steel hinges				
	Stainless Steel 'D' type of handles on pull side				
	Stainless steel push plates on push side.				
	Dorma/geze make standard arm door closure (TS-68)				
	View panel along with self adhesive tape and silicon sealant				
	Filler material : Puff				
	Door clear Opening Size				
4.1	Single Door (Size: 1000x 2100) D2	No	4		
4.2	Single Door (Size: 750 x 2100) D1	No	15		
4.3	6mm thick View glass set (Size: 1000 x 1000)	No	3		
5	Supply of Riser	No	10		
6	Supply of Ceiling Cutout	No	34		
7	Supply of Emergency Exit breakable glass	No	2		
8	Supply of Pass Box				

8.1	Dynamic pass box 1/4 HP Blower motor 2 No. of Prefilter 5 Micron 1 No. of Hepa filter miniplate 0.399micron 0 to 25wg Magnehelic guage for pressure indicator C TYPE HANDLE PROVIDED Perforated sheet provide for return air Both side provide door in design inside double door toughened double body with viewing window double body type glass in made out from SS 304 18 swg prime sheet window Finish in Matt Polish Air Pressure must be 60 ACH 600(L)x600(W)x 600(D) mm	No	2		
8.2	450(L)x450(w)x450(d)	No	2		
9	Supply of GI sheet & necessary frame structure for Closing under side beam level gap with powder coated	Sq.m	10		
10	Epoxy Flooring Providing epoxy self leveling flooring systems of average 3mm thickness, with priming coat in proposed PEB at terrace floor , with self levelling epoxy manufactured by M/s BASF/MRF/SIKA/ERDEX/Cipy/Grand polycoat Construction Chemicals India Pvt. Ltd, or equivalent approved, over cementitious substrate, after cleaning the surface free from all loose particles, laitance, patching of small patches, nicks etc, with Epoxy putty, applying Epoxy primer, in the coverage rate recommended by manufacturer, and thereafter spreading 4 component self leveling epoxy compound, at a coverage rate recommended by manufacturer, tooling and finishing to gloss/matt finish, as directed by engineer in charge, including all materials and labor with two years warrantee against materials and application defects.	Sq.m	175		
11	Epoxy wall painting Providing epoxy coating to walls and beams, to an average thickness of 500 microns, with MASTERTOP 1120 t manufactured by M/s BASF Construction Chemicals India Pvt. Ltd, or equivalent approved, after applying	Sq.m	80		

	cement based putty to the parent sound surface, finishing and thereafter applying one primer coat and two body coats of Mastertop 1120 T, after demolshing the existing wall paint in the enter surface of damaged area, including all materials, labour etc, with 2 years quarantee against materials and application defects. Color of paint will be selected by Purchaser.				
12	Epoxy painting of ceiling Providing epoxy coating to ceiling, to an average thickness of 500 microns, with MASTERTOP 1120 t manufactured by M/s BASF Construction Chemicals India Pvt. Ltd, or equivalent approved, after applying cement based putty to the parent sound surface, finishing and thereafter applying one primer coat and two body coats of Mastertop 1120 T, after demolshing the existing wall paint in the enter surface of damaged area, including all materials, labour etc, with 2 years quarantee against materials and application defects. Color of paint will be selected by Purchaser.	Sq.m	250		
	GRAND TOTAL				

Seal and Signature of the bidder

BILL OF QUANTITIES - SUPPLY OF HVAC SYSTEM

SL NO	Description	Unit of Measurement (UOM)	Qty	Supply						
				Base Rate	ED (specify applicable ED)	Taxes (specify applicable taxes such as CST/VA T.etc.)	Work Contract Tax	FOR HLL RATE (inclusive of ED & applicable taxes)	Amount	
1	Supply of 5.5 TR Capacity Air cooled scroll condensing Outdoor unit Condensing unit with hermetic scroll compressors and eco friendly R 407 C refrigerant.									
1.1	Capacity - 5.5 TR Scroll Outdoor Condensing Unit	1	No							
2	Supply of Floor mounted DIDW Air Air Handling Unit with 40mm thick Thermal Break Profile with powder coated outer of double skin of 0.6 mm thick and 0.6 mm inner thick. The AHU coil shall be DX type cooling coil and energy efficient motor..The Air Handling Units with combination pre filter ,Fine filter and hepa filter in the unit.									
2.1	Capacity : 2000 cfm with 100 mm TSP (5.5 TR), 6RD	1	No							
3	Copper Piping With Accessories									
3.1	Supply of Hard drawn Copper pipe as per below mentioned sizes. The suction & liquid line shall be insulated with 9 mm thick Sleeveless nitrile rubber insulation and the approximate distance between the Indoor unit & Outdoor unit horizontal length shall be 10 mtrs and vertical length shall be approximately 4 mtrs below Indoor unit. The cost power cabling between indoor to outdoor unit & Control panel also have to be included in this section.									
a	1 3/8" dia Suction line & 7/8" dia liquid line pipe	Rmt	20							
b	Drier Core	Nos.	1							
c	Refrigerant R407C First Charge	Kgs	7							
d	Shut Off Valve Set	Nos.	1							

e	Liquid Line Moisture Indicator	Nos.	1		
f	Expansion Valve	Nos.	1		
4	SUPPLY OF AIR DISTRIBUTION SYSTEM				
	Supply of Aluminum Ducting material				
	Aluminum ducting with all accessories like Bends, Tees, Reducer, expander, Turning vanes etc. with RTV sealant				
4.1	20 G	80	Sqm		
4.2	22 G	80	Sqm		
5	SUPPLY OF THERMAL INSULATION MATERIAL				
5.1	Supply of Al.Foil faced Thermal insulation on ducts of 13mm thick closed cell nitrile rubber	50	Sqm		
5.2	Supply of acoustic insulation for supply air ducts with 10mm thick open cell nitrile rubber.	30	Sqm		
6	SUPPLY OF TERMINAL BOXES WITH FILTER				
	Filter box in 20 swg MS powder coated suitable for following with gear operated VCD for supply air with 0.3 Micron HEPA filters with Aluminium powder coated perforated sheet				
6.1	610 x 610 x 300	6	No		
6.2	300 x 300 x 300	4	No		
7	SUPPLY OF RETURN AIR RISERS				
7.1	Powder coated riser complete with aluminum powder coated perforated sheet & filter for return air riser with volume control dampers.	15	Sqm		
8	SUPPLY OF Diffuser/ Grill/ Damper				
8.1	Supply air Diffusers in extruded aluminum construction with Volume control Damper.	3	Sqm		
8.2	Supply air Diffusers in extruded aluminum construction without Volume control Damper	3	Sqm		
8.3	Extruded Aluminium Volume control dampers Low leakage type aero foil blade sections 100mm wide opposite blade operation ,blade linkage with operating gear fully enclosed and stainless steel side seal gaskets.	1	Sqm		

9	SUPPLY OF FIRE / SMOKE DAMPER				
9.1	Supply of GI 16g construction Fire Dampers with extended shaft for actuator mounting. The fire damper are rated for 90 minutes with fusible link designed to melt at 70°C.	1	Sqm		
9.2	Supply of fusible link for above fire dampers.	2	No		
10	Supply of condensate Drain piping 10 RMT per Air Handling unit				
10.1	Drain piping using water quality blue HDPE pipe with GI fittings 32mm with 6mm thick nitrile rubber insulation	20	mtr		
11	Remote push button stations				
11.1	Remote push button stations consisting of one no. ON and one no.OFF illuminated type push buttons housed in a MS box and having SS top cover plate	2	No.		
12	Thermostat	2	No		
E	MISCELLANEOUS ITEMS				
13	Magnahelic Guage in core areas with MS powder coated box with SS 304 Flush cover	6	No		
14	Magnahelic Guage for AHU across each filter	4	No		
15	M.S Angle work for support if required	Lump	KG		
	GRAND TOTAL				

Seal and Signature of the bidder

BILL OF QUANTITIES - SUPPLY OF ELECTRICAL ITEMS

SL NO	Item	Unit of Measurement (UOM)	Qty	Supply					
				Base Rate	ED (specify applicable ED)	Taxes (specify applicable taxes such as CST/VA T.etc.)	Work Contract Tax	FOR HLL RATE (inclusive of ED & applicable taxes)	Amount
1	Supply of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required.								
a	8 way (4 + 36), Double door (Main DB)	No	2.00						
2	Supply of Cable End Termination Box of sheet steel, dust protected, duly powder painted, suitable for surface mounting, vertical type, 8 Way TPN MCB	No	2.00						
3	Supply of following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)								
a	4 way (4 + 12), Single door (LDB)	No	1.00						
4	Supply of Cable End Termination Box of sheet steel, dust protected, duly powder painted, suitable for surface mounting, vertical type, 4 Way TPN MCB	No	1.00						
5	Supply of following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.								
a	63 amps (Main DB)	No	2.00						
6	Supply of following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections as required.								

a	40 amps (LDB)	No	1.00					
7	Supply of Single Pole (SP) MCB "C" Curve in the existing MCB DB complete with connections as required							
a	6 amps	No	16.00					
b	20 amps	No	16.00					
c	32 amps	No	4.00					
8	Supply of Triple Pole (TP) MCB "C" Curve in the existing MCB DB complete with connections as required							
a	20 amps	No	4.00					
b	32 amps	No	5.00					
c	40 amps	No	1.00					
9	Supply of single pole blanking plate in the existing MCB DB complete etc. as required.	No	20.00					
10	Wire for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required. (Two light points are controlled by ONE Switch & ONE 5/6 Amps Socket with ONE SWITCH)	No	40.00					
11	Supply of following size/ modules, GI / PVC box alongwith modular base & cover plate for modular switches in recess etc as required.							
a	2 Module	No	8.00					
b	3 Module	No	16.00					
c	4 Module	No	12.00					
d	6 Module	No	15.00					
e	8 Module	No	6.00					
12	Supply of following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.							
a	5/6 amps switch	No	40.00					
b	15/16 amp switch	No	5.00					
c	3 pin 5/6 amp socket outlet	No	15.00					
d	6 pin 15/16 amp socket outlet	No	5.00					
e	RJ 11 Telephone socket outlet	No	4.00					

f	RJ 45 CAT 6 Data Socket Outlet	No	4.00		
13	Supply of Single Door PVC Telephone Krone Junction Box for the termination of 10 Pair Telephone Cable with 10 pair Connection Module etc. as required.	No	1.00		
14	Supply of 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let as required.	No	10.00		
15	Supply of 20 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out as required.	No	4.00		
16	Wire for circuit/submain wiring along with earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in existing surface/recessed medium class PVC conduit as required.				
a	2X1.5 sq.mm + 1X1.5 sq.mm earth wire	mtr	500.00		
b	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	mtr	250.00		
c	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	mtr	250.00		
17	Supplying of following pair 0.5 sq mm FR PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.				
a	2 Pair	mtr	300.00		
b	10 Pair	mtr	50.00		
18	Supply of CAT 6 UTP Cable in the existing surface/ recessed steel/ PVC conduit as required.	mtr	100.00		
19	Supply of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
a	20 mm	mtr	250.00		
b	25 mm	mtr	300.00		
c	32 mm	mtr	200.00		
20	Supply of one number PVC insulated and PVC sheathed / XLPE Armoured power cable of 11 KV grade of following				

	size in the existing RCC/ HUME/ METAL pipe as required.				
a	2 X 1.5 sq. mm	mtr	50.00		
b	3 X 4 sq. mm	mtr	30.00		
c	4 X 6 sq.mm	mtr	30.00		
d	4 X 10 sq. mm (22mm)	mtr	20.00		
e	4 X 16 sq. mm (25mm)	mtr	50.00		
f	3 1/2 X 35 sq. mm (28mm)	mtr	100.00		
21	Supply of end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
a	2 X 1.5 sq. mm	No	6.00		
b	3 X 4 sq. mm	No	4.00		
c	4 X 6 sq.mm	No	4.00		
d	4 X 10 sq. mm	No	2.00		
e	4 X 16 sq. mm	No	2.00		
f	3 1/2 X 35 sq. mm	No	4.00		
22	Termination of one number PVC insulated Unarmoured 0.5 sq mm annealed copper conductor 10 Pair cable	No	2.00		
23	Termination of CAT 6 UTP Cable	No	8.00		
24	Supply of Copper Wire for Earthing				
a	6 SWG	Rmtr	250.00		
b	10 SWG	Rmtr	200.00		
25	Supply of pre wired Box type Light Fixture with 4 Feet 2 X 18/20 W LED Tube Light provided with opal polysterene diffuser as required	No	20.00		
26	Supply of pre wired Clean Room Light Fixture with 2 X 2 Feet LED Light fitting, 55 +/- 10 W (Recess Mounting) provided with opal polysterene diffuser as required	No	8.00		
27	Supply of pre wired Surface mounted, Circular Down Light, LED 5 /8 W as required	No	8.00		
28	Supply of pre wired Exhaust Fan, Industrial Type, 18", Single Phase,	No	2.00		
29	Supply of Aluminium/PVC Louvers for Industrial Type, 18" Exhaust Fan,	No	2.00		
30	Supply of pre wired Variable Frequency Drive suitable for 3 HP AHU Blower in powder coated sheet steel enclosure with ON & OFF Push Buttons, Indication Lamps for ON & OFF, Ventilation Fan and Air Inlet	No	1.00		

	Louver, etc.				
31	Supply of pre wired 1.5 Ton Split AC Unit having 5 Star Rating with suitable Stabilizer, etc. complete.	No	3.00		
32	Supply of Split AC Unit of capacity 3.00 TR and having 5 Star Rating with suitable Stabilizer, etc.	No	2.00		
33	Fire Detectors				
a	Photo electric type smoke detectors.	No	16.00		
b	Rate of rise type detectors for autoclave area.	No	2.00		
c	Fault Isolation module.	No	2.00		
d	Response Indicators.	No	18.00		
e	Manual call points with break glass.	No	2.00		
34	Supply of AHU Star / Delta starter Panel with cabling from starter panel to AHU Motor. The cabling considered shall be 10 rmt.	No	1.00		
	Grand Total				

Seal and Signature of the bidder

HLL LIFECARE LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)
TENDER FOR DESIGN, FABRICATION, SUPPLY, ERECTION, VALIDATION
AND COMMISSIONING OF MICRO BIOLOGY LABORATORY AT AKKULAM
FACTORY, THIRUVANANTHAPURAM

PRICE ABSTRACT SUPPLY

SI No	Description	Supply (in Rs.)
1	MODULAR PANEL, CEILING & EPOXY WORKS	
2	AIR CONDITIONING SYSTEM	
3	ELECTRICAL ITEMS	
4	GRAND TOTAL	

Seal and signature of the bidder

NOTE :

1. Price shall be inclusive of all Levies & Taxes i.e. Sales Tax, Work Contract Tax & Excise, packing, forwarding, freight and insurance etc. but excluding Octroi/Entry Tax which will be paid extra as per actuals, wherever applicable.
2. Price quoted should be based on the Make/Brand specified in the tender document. The bidders have to mention the Make/Brand proposed to use for the project.

SECTION IX (B)

PRICE SCHEDULE FOR INSTALLATION

**BILL OF QUANTITIES - INSTALLATION OF MODULAR PARTITIONS,
CEILING AND EPOXY WORKS**

SL NO	Item	Unit of Measurement (UOM)	Qty	Installation						
				Base Rate	Service tax (specify applicable Service Tax)	Work Contract Tax (specify applicable WCT)	ESI (specify applicable ESI)	PF (specify applicable PF)	FOR HLL RATE (inclusive of Service tax, WCT, ESI, PF & other applicable taxes)	Amount
1	Self supporting wall provided in modular units consisting of external skin in Pre painted Galvanized Iron (PPGI) which will be 0.6mm thick ,with protective film to prevent surface damage during shipping and installation. Color will be selected by Purchaser.									
1.1	Panel Thickness: 50mm	Sqm	210							
1.2	Panel Thickness: 100mm	Sqm	90							
	Movable wall includes:									
	a) PUF insulation 40 Kg/m ³									
	b) GI frame work.									
	c) Silicon sealant (Clear, White, Winsil Gray)									
2	FALSE CEILING									
2.1	False ceiling panels are designed to fit within each other and suspended by threaded tension bars with adjustable turnbuckles fastened to the overhead support at fixed intervals , Standard Ceiling Panels are 50 mm thick and have a composite construction of two skins of PPGI over an frame work with a sealed and insulated interior. Color will be selected by Purchaser.									
	Type :- Walkable									
	Panel Thickness: 50mm (PPGI)	Sqm	35							
	Ceiling includes									
	a) PUF insulation 40 Kg/m ³									
	b) Sheet Thickness 0.6mm									
	c) GI frame work.									
	d) Special load bearing Aluminium connecting profile between ceiling									

	panels at provide the precision 3-4 mm seal gap to bottom and inbuilt hanging arrangement at top.				
	e) Silicon sealant(Clear,White, Winsil Gray)				
3	COVINGS AND WALL CONNECTIONS				
3.1	Extruded Aluminium Powder Coated /Anodised R60 clip on type covings for Wall to Wall double skin Panels.	Rmt	355		
3.2	Aluminium Powder Coated / Anodised 3 D internal Corner Piece	No	80		
3.3	Standard Epoxy floor covings of R50	Rmt	75		
3.4	Standard Gypsum covings of R50 between roof ceiling and wall panels	Rmt	50		
4	CLEAN ROOM DOORS				
	Doors are designed to fit flush into the wall panel system on both sides and are supplied in different dimensions. Doors are fabricated from galvanised iron sheets duly powder coated. Shutter has sheet thickness of 0.8mm and the frame of 1.2mm. Standard 50 mm panel has frame width of 50 mm and shutter width of 46mm. Doors are available in various sizes as per the requirement of the client. The following accessories are a part of the door:				
	Shutter Thickness: 46 mm thick				
	Stainless steel hinges				
	Stainless Steel 'D' type of handles on pull side				
	Stainless steel push plates on push side.				
	Dorma/geze make standard arm door closure (TS-68)				
	View panel along with self adhesive tape and silicon sealant				
	Filler material : Puff				
	Door clear Opening Size				
4.1	Single Door (Size: 1000x 2100) D2	No	4		
4.2	Single Door (Size: 750 x 2100) D1	No	15		
4.3	6mm thick View glass set (Size: 1000 x 1000)	No	3		
5	Riser	No	10		

6	Ceiling Cutout	No	34		
7	Emergency Exit breakable glass	No	2		
8	Pass Box				
8.1	Dynamic pass box 1/4 HP Blower motor 2 No. of Prefilter 5 Micron 1 No. of Hepa filter miniplat 0.399micron 0 to 25wg Magnehelic guage for pressure indicator C TYPE HANDLE PROVIDED Perforated sheet provide for return air Both side provide door in design inside double door toughened double body with viewing window double body type glass in made out from SS 304 18 swg prime sheet window Finish in Matt Polish Air Pressure must be 60 ACH 600(L)x600(W)x 600(D) mm	No	2		
8.2	450(L)x450(w)x450(d)	No	2		
9	Using GI sheet & necessary frame structure for Closing under side beam level gap with powder coated	Sq.m	10		
10	Epoxy Flooring	Sq.m	175		
	Applying epoxy self leveling flooring systems of average 3mm thickness, with priming coat in proposed PEB at terrace floor , with self levelling epoxy manufactured by M/s BASF/MRF/SIKA/ERDEX/Cipy/G rand polycoat Construction Chemicals India Pvt. Ltd, or equivalent approved, over cementitious substrate, after cleaning the surface free from all loose particles, laitance, patching of small patches, nicks etc, with Epoxy putty, applying Epoxy primer, in the coverage rate recommended by manufacturer, and thereafter spreading 4 component self leveling epoxy compound, at a coverage rate recommended by manufacturer, tooling and finishing to gloss/matt finish, as directed by engineer in charge, including all materials and labor with two years warrantee against materials and application				

	defects.				
11	Epoxy wall painting	Sq.m	80		
	Applying epoxy coating to walls and beams, to an average thickness of 500 microns, with MASTERTOP 1120 t manufactured by M/s BASF Construction Chemicals India Pvt. Ltd, or equivalent approved, after applying cement based putty to the parent sound surface, finishing and thereafter applying one primer coat and two body coats of Mastertop 1120 T, after demolshing the existing wall paint in the enter surface of damaged area, including all materials, labour etc, with 2 years quarantee against materials and application defects. Color of paint will be selected by Purchaser.				
12	Epoxy painting of ceiling	Sq.m	250		
	Applying epoxy coating to ceiling, to an average thickness of 500 microns, with MASTERTOP 1120 t manufactured by M/s BASF Construction Chemicals India Pvt. Ltd, or equivalent approved, after applying cement based putty to the parent sound surface, finishing and thereafter applying one primer coat and two body coats of Mastertop 1120 T, after demolshing the existing wall paint in the enter surface of damaged area, including all materials, labour etc, with 2 years quarantee against materials and application defects. Color of paint will be selected by Purchaser.				
	GRAND TOTAL				

SEAL AND SIGNATURE OF THE BIDDER :

BILL OF QUANTITIES - INSTALLATION OF HVAC SYSTEM

SL NO	Item	Unit of Measurement (UOM)	Qty	Installation						
				Base Rate	Service tax (specify applicable Service Tax)	Work Contract Tax (specify applicable WCT)	ESI (specify applicable ESI)	PF (specify applicable PF)	FOR HLL RATE (inclusive of Service tax, WCT, ESI, PF & other applicable taxes)	Amount
1	Supply of 5.5 TR Capacity Air cooled scroll condensing Outdoor unit Condensing unit with hermetic scroll compressors and eco friendly R 407 C refrigerant.									
1.1	Capacity - 5.5 TR Scroll Outdoor Condensing Unit	1	No							
2	Supply of Floor mounted DIDW Air Handling Unit with 40mm thick Thermal Break Profile with powder coated outer of double skin of 0.6 mm thick and 0.6 mm inner thick. The AHU coil shall be DX type cooling coil and energy efficient motor. The Air Handling Units with combination pre filter ,Fine filter and hepa filter in the unit.									
2.1	Capacity : 2000 cfm with 100 mm TSP (5.5 TR), 6RD	1	No							
3	Copper Piping With Accessories									
3.1	Supply of Hard drawn Copper pipe as per below mentioned sizes. The suction & liquid line shall be insulated with 9 mm thick Sleeveless nitrile rubber insulation and the approximate distance between the Indoor unit & Outdoor unit horizontal length shall be 10 mtrs and vertical length shall be approximately 4 mtrs below Indoor unit. The cost power cabling between indoor to outdoor unit & Control panel also have to be included in this section.									
a	1 3/8" dia Suction line & 7/8" dia liquid line pipe	20	Rmt							
b	Drier Core	1	Nos.							
c	Refrigerant R407C First Charge	7	Kgs							
d	Shut Off Valve Set	1	Nos.							
e	Liquid Line Moisture Indicator	1	Nos.							

f	Expansion Valve	1	Nos.		
4	AIR DISTRIBUTION SYSTEM				
	Aluminum DUCTING (Qty may vary on AHU location)				
	fabrication, installation and testing of Aluminium sheet metal ducts in accordance with the approved shop drawings complete with all accessories like valves, flanges, suspension rods. Anchor bolts, bolts & nuts, etc.,				
4.1	20 G	80	Sqm		
4.2	22 G	80	Sqm		
5	THERMAL INSULATION				
5.1	Installation of Al.Foil faced Thermal insulation on ducts of 13mm thick closed cell nitrile rubber	50	Sqm		
5.2	Installation of acoustic insulation for supply air ducts with 10mm thick open cell nitrile rubber.	30	Sqm		
6	Installation of Terminal Boxes With Filter				
	Filter box in 20 swg MS powder coated suitable for following with gear operated VCD for supply air with 0.3 Micron HEPA filters with Aluminium powder coated perforated sheet				
6.1	610 x 610 x 300	6			
6.2	300 x 300 x 300	4	No		
7	Installation of RETURN AIR RISERS				
7.1	Powder coated riser complete with aluminum powder coated perforated sheet & filter for return air riser with volume control dampers.	15	Sqm		
8	Installation of Diffuser / Grill / Damper				
8.1	Supply air Diffusers in extruded aluminum construction with Volume control Damper	3	Sqm		
8.2	Supply air Diffusers in extruded aluminum construction without Volume control Damper	3	Sqm		
8.3	Installation of Extruded Aluminium Volume control dampers Low leakage type aero foil blade sections 100mm wide opposite blade operation ,blade linkage with operating gear fully enclosed and stainless steel side seal gaskets.	1	Sqm		
9	Installation of FIRE / SMOKE				

	DAMPER				
9.1	Installation of GI 16g construction Fire Dampers with extended shaft for actuator mounting. The fire damper are rated for 90 minutes with fusible link designed to melt at 70°C.	1	Sqm		
9.2	Installation of fusible link for above fire dampers.	2	No		
10	Installation of condensate Drain piping 10 RMT per Air Handling unit				
9.1	Drain piping using water quality blue HDPE pipe with GI fittings 32mm with 6mm thick nitrile rubber insulation	15	Rmtr		
11	Installation of Remote push button stations				
11.1	Remote push button stations consisting of one no. ON and one no.OFF illuminated type push buttons housed in a MS box and having SS top cover plate	2	No.		
12	Thermostat	2	No		
E	MISCELLANEOUS ITEMS				
13	Magnahelic Guage in core areas with MS powder coated box with SS 304 Flush cover	6	No		
14	Magnahelic Guage for AHU across each filter	4	No		
15	M.S Angle work for support if required	Lump	KG		
16	TESTING, COMMISSIONING & VALIDATION charges				
16.1	DQ, IQ, OQ, & PQ with necessary drawings, data sheets, certificate & maintenance manual	1	Set		
16.2	Duct leak & Pressure test as per SMACNA	1	set		
16.3	1) Air balancing 2) Pressure balancing 3) Filter integrity test (DOP) 4) Particle count 5) Recovery test 6) Flow pattern test	1	Set		
	Total				
	GRAND TOTAL				

Seal and Signature of the bidder

BILL OF QUANTITIES - INSTALLATION OF ELECTRICAL ITEMS

SL NO	Item	Unit of Measurement (UOM)	Qty	Installation						
				Base Rate	Service tax (specify applicable Service Tax)	Work Contract Tax (specify applicable WCT)	ESI (specify applicable ESI)	PF (specify applicable PF)	FOR HLL RATE (inclusive of Service tax, WCT, ESI, PF & other applicable taxes)	Amount
1	Fixing of following ways surface/recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required.									
a	8 way (4 + 36), Double door (Main DB)	No	2.00							
2	Fixing of Cable End Termination Box of sheet steel, dust protected, duly powder painted, suitable for surface mounting, vertical type, 8 Way TPN MCB	No	2.00							
3	Fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)									
a	4 way (4 + 12), Single door (LDB)	No	1.00							
4	Fixing of Cable End Termination Box of sheet steel, dust protected, duly powder painted, suitable for surface mounting, vertical type, 4 Way TPN MCB	No	1.00							
5	Fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and									

	commissioning etc. as required.									
a	63 amps (Main DB)	No	2.00							
6	Fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.									
a	40 amps (LDB)	No	1.00							
7	Fixing Single Pole (SP) MCB "C" Curve in the existing MCB DB complete with connections, testing and commissioning etc. as required									
a	6 amps	No	16.00							
b	20 amps	No	16.00							
c	32 amps	No	4.00							
8	Fixing of Triple Pole (TP) MCB "C" Curve in the existing MCB DB complete with connections, testing and commissioning etc. as required									
a	20 amps	No	4.00							
b	32 amps	No	5.00							
c	40 amps	No	1.00							
9	Fixing of single pole blanking plate in the existing MCB DB complete etc. as required.	No	20.00							
10	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required. (Two light points are controlled by ONE Switch & ONE 5/6 Amps Socket with ONE SWITCH)	No	40.00							
11	Fixing of following size/ modules, GI / PVC box alongwith modular base & cover plate for modular switches in recess etc as required.									
a	2 Module	No	8.00							
b	3 Module	No	16.00							

c	4 Module	No	12.00		
d	6 Module	No	15.00		
e	8 Module	No	6.00		
12	Fixing of following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
a	5/6 amps switch	No	40.00		
b	15/16 amp switch	No	5.00		
c	3 pin 5/6 amp socket outlet	No	15.00		
d	6 pin 15/16 amp socket outlet	No	5.00		
e	RJ 11 Telephone socket outlet	No	4.00		
f	RJ 45 CAT 6 Data Socket Outlet	No	4.00		
13	Wall Mounting, Single Door PVC Telephone Krone Junction Box for the termination of 10 Pair Telephone Cable with 10 pair Connection Module etc. as required.	No	1.00		
14	Fixing of 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	No	10.00		
15	Fixing of 20 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	No	4.00		
16	Wiring for circuit/submain wiring along with earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in existing surface/recessed medium class PVC conduit as required.				
a	2X1.5 sq.mm + 1X1.5 sq.mm earth wire	Rmtr	500.00		
b	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmtr	250.00		

c	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmtr	250.00		
17	Drawing following pair 0.5 sq mm FR PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.				
a	2 Pair	Rmtr	300.00		
b	10 Pair	Rmtr	50.00		
18	Drawing CAT 6 UTP Cable in the existing surface/ recessed steel/ PVC conduit as required.	Rmtr	100.00		
19	Fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
a	20 mm	Rmtr	250.00		
b	25 mm	Rmtr	300.00		
c	32 mm	Rmtr	200.00		
20	Laying of one number PVC insulated and PVC sheathed / XLPE Armoured power cable of 11 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
a	2 X 1.5 sq. mm	Rmtr	50.00		
b	3 X 4 sq. mm	Rmtr	30.00		
c	4 X 6 sq.mm	Rmtr	30.00		
d	4 X 10 sq. mm (22mm)	Rmtr	20.00		
e	4 X 16 sq. mm (25mm)	Rmtr	50.00		
f	3 1/2 X 35 sq. mm (28mm)	Rmtr	100.00		
21	Making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
a	2 X 1.5 sq. mm	No	6.00		
b	3 X 4 sq. mm	No	4.00		
c	4 X 6 sq.mm	No	4.00		
d	4 X 10 sq. mm	No	2.00		
e	4 X 16 sq. mm	No	2.00		
f	3 1/2 X 35 sq. mm	No	4.00		
22	Termination of one number PVC insulated Unarmoured 0.5 sq mm annealed copper conductor 10 Pair	No	2.00		

	cable				
23	Termination of CAT 6 UTP Cable	No	8.00		
24	Laying Copper Wire for Earthing				
a	6 SWG	Rmtr	250.00		
b	10 SWG	Rmtr	200.00		
25	Fixing of pre wired Box type Light Fixture with 4 Feet 2 X 18/20 W LED Tube Light provided with opal polysterene diffuser as required complete.	No	20.00		
26	Fixing of pre wired Clean Room Light Fixture with 2 X 2 Feet LED Light fitting, 55 +/- 10 W (Recess Mounting) provided with opal polysterene diffuser as required complete	No	10.00		
27	Fixing of pre wired Surface mounted, Circular Down Light, LED 5 /8 W as required complete.	No	8.00		
28	Fixing of pre wired Exhaust Fan, Industrial Type, 18", Single Phase, complete.	No	2.00		
29	Fixing of Aluminium/PVC Louvers for Industrial Type, 18" Exhaust Fan, complete.	No	1.00		
30	Fixing of pre wired Variable Frequency Drive suitable for 3 HP AHU Blower in powder coated sheet steel enclosure with ON & OFF Push Buttons, Indication Lamps for ON & OFF, Ventilation Fan and Air Inlet Louver, etc. complete	No	1.00		
31	Fixing of pre wired 1.5 Ton Split AC Unit having 5 Star Rating with suitable Stabilizer, etc. complete. Outdoor Unit shall be suitably positioned at distance of 8 Mtrs away from Indoor Unit.	No	2.00		
32	Fixing of pre wired 3.0 Ton Casset Type AC Unit having 5 Star Rating with suitable Stabilizer, etc. complete.	No	1.00		
33	Preparation of Drawings and obtaining approvals from Statutory Authorities	LS	1.00		
34	Installation of Fire Detectors				
a	Photo electric type smoke detectors.	No	16.00		
b	Rate of rise type detectors for autoclave area.	No	2.00		
c	Fault Isolation module.	No	2.00		
d	Response Indicators.	No	18.00		

e	Manual call points with break glass.	No	2.00		
35	Installation, Testing and commissioning of AHU Star / Delta starter Panel with cabling from starter panel to AHU Motor. The cabling considered shall be 10 rmt.	No	1.00		
	Total				
	Grand Total				

Seal and Signature of the bidder

HLL LIFECARE LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)
TENDER FOR DESIGN, FABRICATION, SUPPLY, ERECTION, VALIDATION
AND COMMISSIONING OF MICRO BIOLOGY LABORATORY AT AKKULAM
FACTORY, THIRUVANANTHAPURAM

PRICE ABSTRACT INSTALLATION

SI No	Description	Installation (in Rs.)
1	MODULAR PANELS, CEILING AND EPOXY WORKS	
2	AIR CONDITIONING SYSTEM	
3	ELECTRICAL ITEMS	
4	GRAND TOTAL	

Seal and signature of the bidder

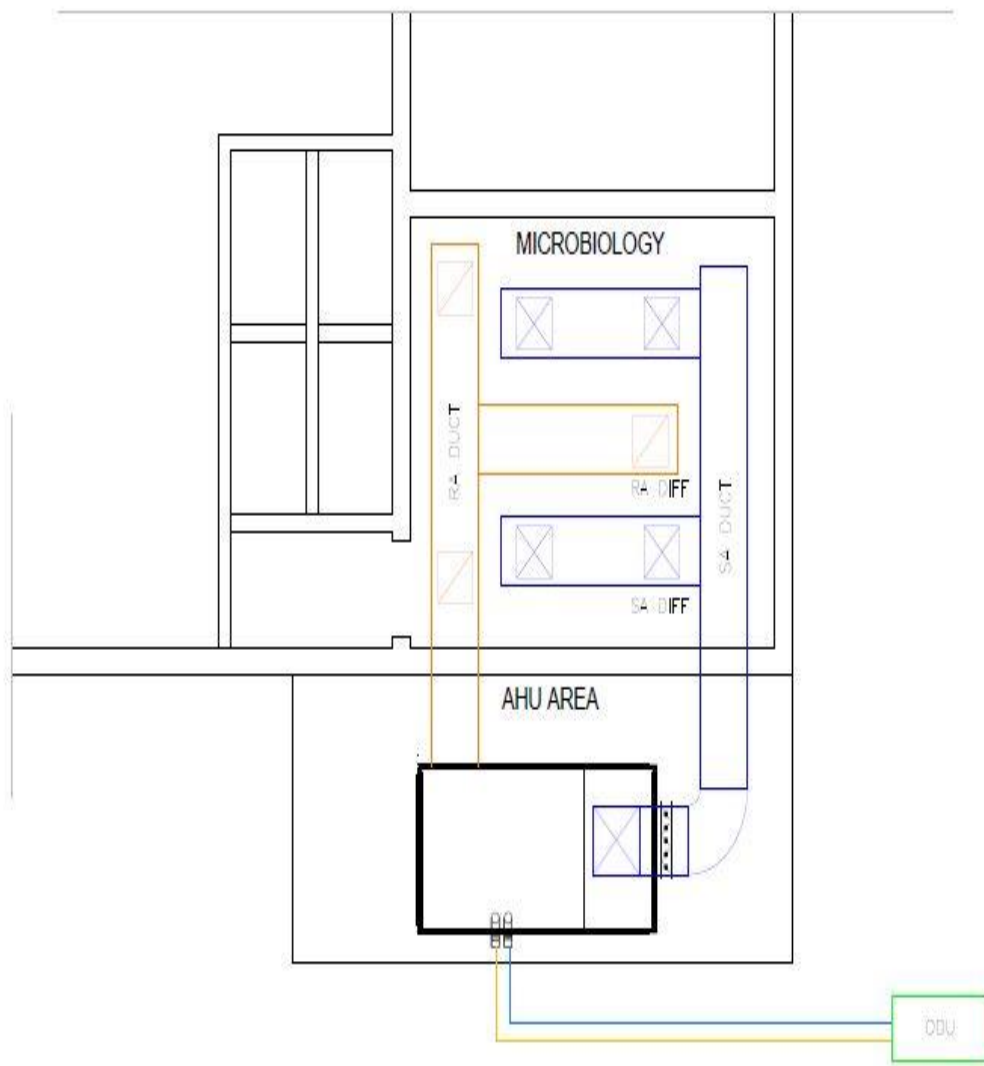
NOTE : Price shall be inclusive of all Levies & Taxes i.e. WCT, TDS, ESI,PF,ST. The proof of remittance of PF& ESI charges to be submitted to HLL, otherwise statutory levies such as ESI,PF,ST etc will be deducted from contractors bill as per rules.

SECTION XCHECK LIST

Sl. No.	Documents	Page No.	Remarks
1	Tender fee(in case of download)/EMD in the form of DD drawn in favor of HLL Lifecare Limited, Payable at Thiruvananthapuram		
2	Copy of Receipt of payment against the purchase of tender document/ DD against the purchase of tender document (in case purchased from HLL Office)		
3	Market standing certificate to prove that the bidder manufactures the quoted items for the past FIVE years		
4	Duly attested copy of sales tax registration certificate		
5	Duly attested copy of document to prove the legal status, place of registration and principal place of business of the undertaking		
6	Copy of Balance sheet for the past three financial years, duly certified by a chartered accountant		
7	Copy of Profit & Loss Account for three years certified by chartered accountant		
8	Duly filled proforma showing general informations as per section VI		
9	Proforma for Performance Statement (for a period of last FIVE years) as per Section VII		
10	Self attested statement showing financial capability necessary to perform the Contract		
11	Self attested statement showing technical and production capability necessary to perform the Contract as per Section VII		
12	Client's Certificate		
13	Product brochure literature, write up etc.		
14	Item-by-item commentary (compliance statement) on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of		

	the Technical Specifications		
15	The letter of authorization indicated by written power-of-attorney		
16	Documentary evidence of constitution of firm such as Memorandum of Articles, Partnership Deed, etc., with details of Name, Address, Tel. No., Fax No., E-mail Address of firm and the Managing Director / Partner / Proprietor		
17	Annual turnover statement for last three years certified by the Auditor		
18	List of items quoted (without prices)		
19	Copy of Format for Requisition of site visit		

SECTION XI - LAYOUTS



MICROBIOLOGY A/C LAYOUT

