



NATIONAL CENTRE FOR EARTH SCIENCE STUDIES
(Ministry of Earth Sciences, Govt. of India)
P.B. No. 7250, Akkulam, Thiruvananthapuram -695011, Kerala.
Website: <https://www.ncess.gov.in/>

Renovation of room for installation of wet labs (for clean chemistry) associated with Class 10000 clean lab

Director, National Centre for Earth Science Studies, invites e-tenders from eligible contractors of CPWD and State PWDs, MES, Railways, Irrigation Department, KWA for the above work, in NCESS campus, Thiruvananthapuram.

Type of Tender	E-TENDER (OPEN)
E-Tender No.	EAM/MIS/041f/2019/NCESS
Item Description	Renovation of room for installation of wet labs (for clean chemistry) associated with Class 10000 clean lab
Tender Type	Two Bid System: Tender should be submitted on the schedule to tender. (i) Techno-Commercial Bid and (ii) Financial Bid The Financial bid will be opened only of those firms, who will be found technically qualified after evaluation of their technical bids.
Mode of Submission	Online Mode
E-Tender Date	31.03.2021
Pre-Bid Meeting	07.04.2021 (Wednesday) 10Am in Director's conference room , FF Administrative block
Last date of submission of E-Tender	26.04.2021 (Monday) before 3pm
Date & Time of Opening of Techno- Commercial bid	27.04.2021 (Tuesday) at 3.30pm
Date & Time of Opening of Financial Bid	Will be announced later
Estimated Value	Rs.1465282.26 (Rupees Fourteen Lakhs Sixty Five Thousand Two Hundred Eighty Two and Paise Twenty Six only)

TERMS AND CONDITIONS

1. The tenderer should see the document for details of the tender conditions and pre-qualification criteria in their own interest, in the website.
2. The Director, NCESS reserves the right to accept or reject all or any of the quotations.
3. The successful tenderer should execute an agreement with NCESS on a stamp paper worth Rs.200/-.
4. All statutory dues compliance legal and labour requirements and remittance are to be remitted by the contractor. TDS will be deducted as per rules.
5. A copy of pan card and ID proof details of contractor should also be provided. The contractor to whom the work is awarded should have valid income tax PAN number. Statutory deduction of Income Tax will be made from the bill.
6. Payment will be made against the bills, duly verified and certified by NCESS. Payment will be made only through PFMS/bank transfer.
7. No increase of rates or extension of time for work completion will be allowed.
8. No advance payment or part payment will be made.
9. It is mandatory to produce PAN and GST number.
10. The Estimated Value is inclusive of tax.

Senior Manager

IMPORTANT NOTE:

1. A copy of the CPWD/ PWD/ MES/ Railways/ Irrigation Department/ KWA valid license duly attested should be enclosed.
2. The bid document can be seen and downloaded from website <https://www.ncess.gov.in/>
3. The tender form and schedule in excel (BOQ) format should be downloaded and submitted through the e-procurement website - <https://eprocure.gov.in/eprocure/app>.
4. The other required forms (Annexure 1 to 5) should be submitted in PDF format by 'logging on' in the website <https://eprocure.gov.in/eprocure/app>.

Renovation of room for installation of wet labs (for clean chemistry) associated with Class 10000 clean lab

1. Registered contractors of PWD/Kerala Water Authority / Kerala State Electricity Board or Central Public works Department or MES or Railway for the work may submit the tenders.
2. The rate should be quoted in the specified BOQ file in excel format. The quoted rate shall be inclusive of all the operations contemplated in the specifications and tender schedules including all incidental work necessary for such operations such as scaffolding, etc. "The rates quoted shall be inclusive of GST".
3. NCESS does not undertake to construct or make available any approach road or other means of approach to the proposed work site and the bidder shall get acquainted with the available means of approaches to the proposed site and quote for the various items. NCESS shall not be liable for any claim raised later on the plea of non-availability or non-access to the site.
4. The contractor will examine the site condition and satisfy themselves of the availability of materials at nearby places, difficulties which may arise during execution etc. before submitting bids for the work.
5. The period for execution of the work will be 45 days. Both NCESS and the firm can cancel the contract by giving one-month notice. If the cancellation is done by the firm or it is done by NCESS due to lack of proper service or misconduct on the part of the firm, the EMD/performance guarantee/security deposit will be forfeited.
6. **Liquidity Damage Clause:** In case of any damages and delay in completion of the work, liquidated damages at the rate of 0.5% of the work order per day of delay or part thereof, subject to a maximum of 5% of the work order shall be recovered from the vendor's bill/invoice.
7. The Selected bidder shall remit a performance guarantee equal to 5% of the contract amount to NCESS account.
8. He/she shall execute an agreement for the work in NCESS. Execution of agreement for works shall be made within 21 days from the date of receipt of Work Order.
9. In case of failure to execute the agreement within the above period, the offer of contract shall be cancelled, and suitable action will be taken.
10. The Contractor shall take over charge of the site within 10 days after execution of agreement and commence the work. If any loss to NCESS results in as a result of such measure due to the default of the bidder to pay the requisite deposit, sign contracts or take possession of the work, the same will be recovered from him.
11. The conditions stated herein are binding upon the contractor and shall be constructed as a preliminary Agreement between the successful bidder and NCESS.
12. The acceptance of the tender vests with the NCESS who does not undertake to accept the lowest or any particular tender.
13. Tenders not submitted in specified forms or submitted incomplete in any respect will be rejected.
14. Any further information necessary can be obtained at the office of the undersigned on all working days during office hours.
15. The work should be completed in all respects within 45 days from the date of execution of agreement.
16. The execution of an extra item of work and payment thereon will be based on the condition that there shall be an order in writing to execute the extra item of work duly signed by Director, NCESS before its commencement.
17. The Director or other sanctioning authority reserves the right to reject any tender or all the tenders without assigning any reason therefore.

18. Testing the quality of the materials will be done by the contractor at his cost.
19. The quality of materials used by the contractor should be ensured by the NCESS officers
20. The bidders should declare that they are not related to any employee of the NCESS who is in charge of or having control of the work. Relationship in this will be restricted to their father, mother, son, daughter, brother, sister, direct uncle, nephew, father-in-law, brother-in-law, mother-in-law, sister-in-law and first cousin of the officer concerned. If the above condition is found to have been contravened, the performance guarantee/security deposit will be forfeited and the contract entered into will stand cancelled.
21. The contractor will provide his own tools and store sheds to store his own materials and will be entirely responsible for the proper use and safe custody of the latter and also for any loss, damage, and theft, mishandling weathering or any cause whatsoever.
22. The responsibility for safe custody of materials at worksite and during transit will be vested with the contractor.
23. The contractor shall be responsible for the safety of the labour employed by him and he shall be liable to pay the necessary compensation in case of accidents.
24. The contractor will also be liable to abide by the fair wage clause condition.
25. The contractor shall be liable for all damages caused to public amenities such as Electric wires, Telephone cables, water mains and private property which should be repaired and restored with least delay.
26. The work should be executed with utmost caution and manholes, rain water collecting pit, gully trap and sewage lines should not be damaged.
27. The contractor shall make his own arrangements to extricate himself from any legal action instructed against him by other agencies.
28. Time is the essence of the contract. Undue and avoidable delay in the execution of the work will render the contractor liable to penalty.
29. Director reserves the right to terminate the contract at risk and cost of the contractor at any time in case of bad work, slow progress or violation of rules in other ways.
30. The contractor shall employ engineering personnel, one Engineering Diploma Holder.
31. Tenders which are not in conformity with this tender notice are liable to rejection.
32. This tender notice with the conditions stated herein will form part of the contract documents.
33. The entries in the tender schedule issued by the NCESS in no way to be corrected by the bidders and if the bidders have to note anything, they should note the same as a foot note in the bottom of the page. If any correction is made by the tenderer in the tender schedule, the tenders are likely to be rejected.
34. In the case of the percentage rate contract, the overall percentage rate quoted by the contractor shall not be varied on any account whatever and it shall hold good for all items done irrespective of variations in quantities. The contractor is bound to complete the work within the stipulated period as per the agreement.

SPECIAL CONDITIONS

1. All works shall be done in conformity with the specification and condition in the contract in force in NCESS. The rates quoted shall be inclusive once covering all the operation contemplated in the specification and tender schedule and all incidental work necessary for such operations such as form work, scaffolding and finally clearing away all rubbish, surplus materials, plants etc. The rates quoted shall be inclusive of all tax.
2. The rates quoted by the contractor for the various items shall be inclusive of all tools and plants required for the proper execution of work and all other incidental charges and separate claim for these will not be entertained under any circumstances.
3. The quantities shown in the schedule are only approximate and are subject to variations and the contractor is bound to do additional quantities of work if found necessary at his quoted rates up to 25% above estimate quantities.
4. The contractor has to quote for the specification and unit noted in the schedule. No correction of specification unit or quantity is admissible and if they make any correction in the specification, etc., the same will be rejected. If they have to note anything, they shall note the same as a foot note at the bottom of the page.
5. The contractor should produce the declaration in the form attached.

6. The contractor is bound to carry out items of works which are not expressly or impliedly described in the tender schedule, plans, specifications and agreement but which are found necessary for the proper completion of the work during execution.
7. It will be the responsibility of the contractor to obtain necessary land for stacking the materials for arranging the work.
8. Metal of the required sizes alone should be brought to the site of the work. Metal should be stacked on one side of the road only and in such a way as not to cause any hazards to traffic.
9. Sand supplied should be clean, sharp and gritty to the touch, free from clay and other impurities and obtained from running water courses.
11. The moulds, shuttering etc., required for the works should be made by the contractor and got approved by the NCESS officers at site before use.
12. The contractor alone is responsible for the safety of his labourers and damages.
13. It shall be the contractor's responsibility to protect the public and his employees against accident from any cause during execution of the work
14. The contractor shall be liable for any loss caused to the NCESS on account of the above work including any that may arise due to no-fulfillment of the contract.
15. The work shall be completed in all respects and also at the rate of progress within the time limit and stipulations in the Notice inviting tender, failing which the contractor is liable to be fined.
16. Defects, if any noticed within 12 months from the date of completion of the work, it will be got rectified by the contractor, in default of which this will be attended by the department and the cost made good from the contractor.
17. All sums due to the NCESS under or by virtue of this contract shall be recoverable first from the security furnished by the contract and if the same is found insufficient, such deficit amount shall be recoverable under the provisions of the Revenue Recovery Act.
18. The contractor agrees that before final payment shall be made on the contract, he will sign and deliver to the Director, NCESS in the measurement book a valid release and discharge from any and all claims and demands whatsoever for all matters arising out or connected with the contract, provided that nothing in this clause shall discharge or release the contractor from his liabilities under the contract. The final measurements, if any, of NCESS shall be final, conclusive and binding on the contractor.
19. The tender notice and form of notice inviting tender shall form part of the Agreement.
20. All other conditions and specifications of contract are the same as those current in NCESS.
21. From the bill, 2.5% of the bill amount will be deducted as security deposit. The security deposit of Contractors for work will be refunded after one year from the date of completion of works as certified by the agreement authority.
22. Conditional bids will be summarily rejected and EMD forfeited. Also each bidder shall furnish a certificate to the effect that no condition is enclosed along with the bid.
23. Indian Standard Specifications shall be followed in case of all the materials used, workman ship and other condition and requirements of the contract.
24. Director, NCESS will have full powers to engage other workmen on the premises to execute fittings or carryout works not included in the contract and the contractor shall afford reasonable facility for the same.
25. No claim will be entertained by the NCESS on account of any increase in railway or road freight cost of all building materials and other materials like petrol, diesels, lubricants etc. and for any increase in the wages of labour increase in rates of sale tax etc. during the course of construction.
26. Any defects which may appear within 12 months from the completion of the work shall be made good by the contractor at his own cost.
27. The dismantled materials if any should be disposed of to the site marked from the office in the presence of the staff of EA&M section of NCESS.
28. On completion of the work, the contractor shall clear away and remove from the site all construction surplus materials debris and temporary works of every kind and leave the whole of the site and working area in clear condition to the satisfaction of NCESS. In the event of the failure of the contractor to comply with those directions within seven days after receipt of a notice to that effect from NCESS, such clearness may be made by the NCESS at the expense of the contractor.
29. The work shall be executed only through licensed workers.

FAIR WAGE

1. The contractor shall pay not less than fair wages to labourers engaged by him on the work:
2. Director shall have the right to deduct from the moneys due to the contractor and any sum required of estimated to be required for making good the loss suffered by a worker or workers by reasons of nonfulfillment of the conditions of the contract for the benefit of the works, nonpayment of wages which are not justified by their terms of the contract or non-observance of the regulations.
3. The regulation aforesaid shall be deemed to be a part of this contractor and breach thereof shall be a breach of this contract.
4. On the occurrence of an accident which results in the death of any of the workmen employed by the contractor or which is so serious as to be likely to result in the death of any such workmen, the contractor shall within 24 hours of the happening of such accidents, intimate in writing to Director NCESS, the fact of such accident.
5. In the event of an accident in respect of which compensation needs to be paid, the contractor should pay the sum of money.

GENERAL FORMS TO BE SUBMITTED BY THE TENDERER

Annexure-1

1. The rates quoted by a Contractor for the Work shall include the cost of.
 - a) All labour and supervision thereof all materials, tools implements and plants of every description, ladders, cordage, Tackle etc. as well as the provision of safe and-substantial scaffolding required for the proper execution of the work in conformity with the specifications for the various items of work;
 - b) Providing and maintaining all temporary fences, shelters, lights watchmen and danger signals and such other precautions as are necessary for the protection of the work or materials as well as to protect the public and those connected with the work from accidents at the site of, or on account of the work.
 - c) All sheds, mortar mills and mixing platform of every kind required for the proper execution of the work according to the specification;
 - d) All fees and royalties of materials and Finally clearing away of all rubbish, surplus materials plant etc. on completion of the work and dressing and leveling off and restoring the site to a tidy condition prior to handing over the work to NCESS, its maintenance until so taken over.
2. The Contractor shall be bound to bear the expense of defense of any action or law proceedings that may be brought by persons for any injury sustained owing to neglect of above precautions in connection with the execution of the work, and to pay any damages and cost which may be awarded in consequence.
3. The Contractor shall also help himself out of any difficulties of penalties arising from Interference, with private property in execution of the contract.
4. Unless otherwise specifically provided for the contracts, the contractor shall at his own cost keep all portions of the work free from water and in a neat and sanitary condition.

Signature of Tenderer

Date.....

ACCEPTANCE OF TENDER TERMS AND CONDITIONS

To

The Director
National Centre for Earth Science Studies
Thiruvananthapuram

Sir,

I/We do hereby agree to execute the works enumerated in the Schedule accompanying in accordance with the terms in your tender notification **dated 31.03.2021**, and specifications and conditions of contract in force in NCESS.

I/We further agree to complete the whole work in **45 days** from the date of execution of agreement and maintain the minimum rate of progress specified in the Tender Schedule.

I/We do agree to accept and carry out such portions of the work included in my/our tender as may be allotted to me/us if the work be not given to me / us.

I/We agree to keep the tender open for acceptance for **120 days** from the due date of submission thereof and not make my modifications in its items and conditions which are not acceptable to NCESS.

Yours faithfully,

(Usual Signature of Tenderer)

Full Name

Nationality

Place of Residence

Date of Submission

FORM OF DECLARATION

I _____ do hereby declare that none of my relations as per the list given in Section 6 and Schedule 1A of the Companies Act, 1956 is in charge of the above work or are having control over it.

I _____ do hereby distinctly and expressly declares and acknowledge that I have read the specifications therein and the NIT and do hereby admit that those conditions are binding on me and I shall abide by the terms and conditions as stipulated therein in respect of work.....

I _____ do hereby certify that no conditions are enclosed with the tender.

Place

Signature

Date

FORM OF NOMINATION

I _____ do hereby nominate and authorize Sri./Smt. _____

aged _____ years of _____ village _____ Taluk _____

District residing at _____

_____ to receive all any sum found due to me under the terms of contract (Agreement No. _____ dated _____ and details of contract in the event of my death before the amount has become payable or having become payable but has not been paid.

Signature :

Name :

Address :

In the presence of witness:

1. Name & Address

2. Name & Address

Signature

Signature

TENDER FORM**Renovation of room for installation of wet labs (for clean chemistry) associated with Class 10000 clean lab**

No	Details	To Be Filled by the Bidder
1	Name of Bidder	
2	Address of the Bidder	
3	Mobile number Telephone Number	
4	E mail ID (mandatory)	
5	PAN NO (copy should be enclosed)	
6	PWD/CPWD/BSNL/Railway/Irrigation/KWA Civil License Number (copy should be enclosed) Eligibility amount	
7	Experience of the Contractor (copy should be enclosed)	
8	Name of the Supervisor Mobile number of the supervisor	
9	GST no.	
10	Bank account no. IFSC code	

DECLARATION

1. The above facts are true to the best of my knowledge and I shall be held fully responsible for any wrong statement.
2. I have read the tender notice and understood the terms and conditions for this work as laid down by National Centre for Earth Science Studies, Trivandrum and I agree to abide the terms and conditions of the contract and also agree to undertake the work as per the description and as per rates quoted by me if my quotation is accepted.
3. Copy of PAN Card & PWD /CPWD license duly attested is enclosed.

Date

Name & Signature of the Tenderer

TECHNICAL SPECIFICATION AND COMPLIANCE SHEET

Sl. No.	Renovation of room for installation of wet labs (for clean chemistry) associated with Class 10000 clean lab	Comply/Not Comply
1	<p>Facility De finition: The WET LABS will be used for preparing samples for LOW BLANK geochemical and isotopic studies. Sample will be dissolved using STRONG INORGANIC ACIDS (Hf<HNO₃, HClO₄, HCl etc) and therefore, all the materials used inside the laboratory must be completely METAL FREE. This wet lab will be integrated with the existing Class 10000 clean lab to maintain ULTRA CLEAN ENVIRONMENT. The wet labs should be maintained at positive pressure with temperature and relative humidity in the ranges of 23± 2oC and <60% respectively. The air pressure inside the lab should be higher than the 1 atmospheric pressure but less than that maintained in the adjoining Class 10000 clean lab.</p> <p>General Layout The wet labs have to be built in three existing rooms with total built –up area of 70 Sq.m with internal height of room approximately 2.3 to 2.5 after providing false ceiling. However, the vendor pre-bid visit would be conducted for the assessment of the site specifications, modifications and cost estimation. All fittings should be non-metallic. There shall be one entry door for each wet lab. The plan for the three wet labs is attached.</p> <p>HVAC WORK Supply, Fabrication, installation and Erection and testing of Air Handling units (Double Skin): Air handling unit (should be 5000 cfm) made with Aluminum structure and minimum 40 mm thick PUF panels, thermal break profile, with 0.6mm GI sheet inner walls and 0.6mm pre-coated GI sheet exterior walls complete with mixing chamber, pre-filter section, fine filter section, cooling coil section, blower section. Pre-filters- 2 stage for 10 MICRON and 5 MICRON particles; cooling coil of appropriate capacity, 6 row, copper coil with aluminum fins with SS304 drain tray. Bypass damper and Variable Frequency Drive to be provided for adjusting AHU Motor speed during idle hours, evenings & week ends. Air from AHU for all three rooms and hence Positive pressure when compared to Corridor to be maintained.</p>	
2	<p>Ducting with Insulation: Supply, Fabrication, installation, Erection and testing of Hand fabricated Rectangular Ducts with insulation for Supply & Return air duct as per SMACNA standards in accordance with the approved shop drawings and as required by the specifications. The ducts using PVC/FRP inside the clean room. Fresh air duct outside the clean room can be GI. Complete exhaust duct will be FRP.</p>	
3	<p>Supply, Fabrication, installation, Erection and testing of Volume Control Dampers: Suitable dampers Powder /FRP coated to be installed in AHU to regulate the quantity of airflow-in supply and return air ducts.</p>	
4	<p>Supply, Fabrication, installation, Erection and testing of Fresh air intake Louvre: Appropriate Aluminum finish air intake louvre with volume control damper and 20-micron pre filter, By pass Damper and variable Frequency Drive to be provided for adjusting AHU Motor speed during idle hours, evenings & week ends.</p>	
5	<p>Supply, Fabrication, installation, Erection and testing of Fire Damper with actuator: Appropriate fire damper with actuator. In case of fire the fire alarm should close the actuator Actuators, Control Panel & Wiring. the damper and the AHU</p>	
6	<p>Supply, Fabrication, installation, Erection and testing of return air grille with VCD</p>	

7	Supply, Fabrication, installation, Erection and testing Control Panel with all Cable upto 40-meter, Distribution Board. The electrical connections should be complete with D B, MCBs, Wiring, Plug, Light switches etc, LAN points, Telephone points, Standard modular switches, Plug and sockets of 15/ 5 A with three socket each (with relevant Indian Standards.) etc should be installed at locations specified by the User.	
8	ESD EPOXY FLOORING CIVIL WORK Apply a coat of solvent free best quality approved epoxy primer and allowing it to become dry. Apply solvent free, roller applied epoxy of best quality and approved colour, epoxy coating (two coats or more coats) to 2 mm ESD and allow to full cure. Allow entire system to air cure for a period of 24 hours before putting to foot traffic etc including all labour, materials and conveyance charges etc as directed by Engineer in Charge including skirting for 75 mm height on wall. NOTE:- The thickness of Epoxy coating should be measured by using Elcometer 500 concrete coating thickness gauge and got approved by Engineer in Charge.	
9	Supply and installation of False Ceiling 60 mm Thick non-metallic. False ceiling with 3 mm high Pressure laminates on both sides smooth finish PUF density should be 40 Kg/Cu.M. The false ceiling should be aptly supported (non metallic support) from the RCC roof as directed by Engineer in Charge. It is made of non-metal. cost include of all cut outs for filters and lighting should be made in the false ceiling including all labour, materials, scaffolding charges etc complete.	
10	Finishing with Epoxy Paint (two or more coats) at all locations prepared and applied as per manufactures specification including appropriate priming coat, preparation of surface Cleaning of Existing walls and applying epoxy paint 2 coats upto 100 micron thickness including all labour, materials, scaffolding charges etc. complete.	
11	Supply, erection, testing and commissioning of clean room compatible light fittings recess mounting type 20/24 watts LED all as specified And/or directed etc., complete.	
12	Brickwork with common burnt clay F.P.S.(non modular) bricks of class designation 7.5 in Superr structure Cement mortar 1:6 (1 cement: 6 coarse sand)	
13	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length Second Class Teak Wood frame of 0.05 size 2.10 M X 0.10 M X 0.07 M including painting with ready mixed wax polish of approved brand & manufacture	
14	Providing and fixing wooden door (side towards the lab to be covered with acid proof laminate) with View panels (450 X 750 mm) (toughen glass) doors with hinges, non-metallic handle, powder coated door closer etc with all necessary fittings including all conveyance labour charges etc complete including painting with ready mixed wax polish of approved brand & manufacture	
15	Supplying and fixing wooden work table (Heavy top covered with acid proof laminate) of required size and shape as per users requirement and specifications for lab use.	
16	Supplying and fixing wooden storage racks covered with formica as directed by the user including all material, labour and conveyance charges etc complete as directed by the user.	
17	Supplying and fixing of Poly Propylene/ PVC/ Laboratory sink of size 600 I X 350 W X 225 mm with all necessary fittings (PP/PVC), drain out let (PP/PVC) etc complete as per User's requirement. The connections from tanks to the lab to be carried out using PVC/PP pipes	

18	Providing and fixing Wall mounted Temperature and Relative Humidity equipment including all conveyance charges as directed by user	
19	Supplying and fixing Room Pressure gauge in the form of Manometric gauges for measuring and indicating change in room pressure, including all labour, material and conveyance charges etc complete as per User requirement.	
20	<p>Supplying and fixing fire detector alarm as per fire and safety standards including all labour, material and conveyance etc complete. Fire Detector And Alarm</p> <p>Specification includes Supply, Warranty, Installation, Testing and Commissioning and integration of the Fire Alarm System mainly consisting of the Fire Alarm Control Panel(FACP),loop driver cards, Repeater Panel, Detectors and associated Testing kit, for performing the major functions as below: i)Detection of fire in its incipient stage and give an audio-visual annunciation at specified locations/backup location with quick and exact identification of the fire location as well as operate auxiliary devices as programmed. ii) Supervise and monitor all Analogue addressable detectors for normal, trouble and alarm conditions. iii) Display information associated with the fire alarm condition, including type and location within the protected premises.</p> <p>Detectors: The detectors shall be Analogue Addressable type and suitable for connection to the control panel via a two-wire loop circuit (class A wiring).Its shall have dual alarm and power LED's, which shall flash under normal conditions, indicating that the detector is operational and in regular communication with the control panel. Both LED's shall be placed into steady illumination mode by the control panel, indicating that an alarm condition has been detected. An output connection shall also be provided in the base to connect an external remote alarm/response LED. Compatible Plug in type bases shall be supplied with all the detectors, MCPs, sounders etc. The bases shall be equipped with field terminals capable of securing field wire sizes up-to 1.5 sqmm. Fire Alarm Control Panel:The Networked Intelligent Addressable Fire Alarm Control Panel(FACP) shall consist of 3nos. of addressable Loop driver cards, Communication card for repeater panel located at around 500meter distance,TCP/IP Networkcard,240VACpowersupply input and in-built battery backup. The capacity of battery (AH) shall be selected so as to operate the Fire alarm system control panel, repeater panel, detectors and other components for 24 hours in stand by mode plus 30 mins. in alarm mode.</p> <p>1.TheFireAlarmControlPanelshallhaveoperator interface control and annunciation panel with a backlit liquid crystal display, individual colour coded system status LED's, and an alpha numeric key pad for the field programming and control of the fire alarm system. The FACP shall control and communicate with the addressable detectors, addressable modules, repeater panel, annunciators and other system controlled devices like Audio Alarm hooter, Fire Contact output and Alarm output</p>	
21	Installation of the existing Lamina flow 1 no 1500 LX600mm D X750 mmH and Lamina flow fume hoods 3 nos 1500 LX600 DX 750 H in wet labs as specified by the user	
22	12 mm cement plaster 1 :4 for Brick Masonary work	
23	Supplying and closing the existing window openings with 5.5 mm thick toughened glass panel including all fixtures, labour and conveyance charges etc complete	

24	<p>Providing and fixing Polyvinyl Chloride (PVC) pipes, all PVC plain fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer in Charge.</p> <p>20 mm nominal outer dia pipe</p> <p>Conditions</p> <p>1 Warranty: material and working warranty for 3 years</p> <p>2 The lab should be compatible to the present Class 10,000 clean lab at NCESS</p> <p>3 The supplier should have prior experience of making clean lab or a wet lab associated with clean lab (for clean chemistry) using high pressure laminates (HPL) at CSIR/DST/MoES/DOS National R & D institutes or IIT, IISER etc. The details of such works to be provided.</p> <p>4 The make, model and its detailed specification, list of items must be clearly specified.</p>	
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