Notice Inviting Tender

Name of work :- Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi.

Sub Head :- Manufacture, Supply , Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air- Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.

1. **Laboratory Furniture : Rs.1,03,73,977/-**
2. **Civil work : Rs. 35,29,012/-**
3. **Electrical work : Rs. 37,34,110/-**

Total :Rs.1,76,37,099/-

(WORKS DEPARTMENT)

INDIAN INSTITUTE OF TECHNOLOGY DELHI

HAUZ KHAS, NEW DELHI

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

INDIAN INSTITUTE OF TECHNOLOGY DELHI HAUZ KHAS, NEW DELHI-110016

INDEX

Name of work: - Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi.

Sub-Head : Manufacture, Supply, Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air-Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.

It is certified that this document contains three parts i.e. Part A, Part B & Part C containing page no. **1 to 95.**

Assistant Executive Engineer (AC Division) **Assistant Engineer (Civil)**

NIT approved for Rs. 1,76,37,099/- (Rupees One Core Seventy-Six Lakh Thirty-Seven Thousand Ninety-Nine only)

Executive Engineer (CD-I) **Institute Engineer**

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INDIAN INSTITUTE OF TECHNOLOGY DELHI
HAUZ KHAS, NEW DELHI-110016

Notice Inviting e -Tender

The Executive Engineer (CD-I), IIT DELHI, HAUZ KHAS, New Delhi-16 (**Phone No 011-26596851**) on behalf of Board of Governors invite online **Item Rate Tender** from the **manufacturers of Laboratory Furniture (Only OEM of Laboratory Furniture are allowed to participate in the Bid)** the following work:

NIT No.	:	**55/IITD/EE(CD-I)/2025-26**
Name of Work	:	**Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi..**
Sub-Head	:	Manufacture, Supply , Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air- Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.
Estimated cost	:	**Rs. 1,76,37,099/-**
Earnest Money	:	**Rs. 3,52,742/-**
Performance Guarantee	:	**5% of Tendered value**
Security Deposit	:	**2.5% of Tendered Value**
Period for completion	:	**06 Months**
Last date & time for submission of bids	:	**11/08/2025 upto15.00 Hrs.**
Date & Time of opening of Bids	:	**12/08/2025 at 15.00 Hrs.**

The bid forms and other details can be obtained from the website **www.iitd.ac.in or e-Procure.gov.in** free of cost**.** For more clarification you may visit on above website.

Executive Engineer (CD-I),
For & on Behalf of BOG, IIT Delhi

Budget Head:- 35.02.10
Work Code:- (2021/007/0498)
Copy to: -

1. Institute Engineer
2. Executive Engineer (CD-I) and A.E.E. (AC Division) for information.
3. D.A. (Works Accounts)
4. D.R. (A/Cs) – for opening of uploaded documents **on 12/08/2025 at 15:00 Hrs.** in the office of D.R. Store
5. Notice Boards.
6. Office Copy
7. Web site Administrator, I.I.T.D.

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

PART 'A'

INDIAN INSTITUTE OF TECHNOLOGY DELHI
HAUZ KHAS: NEW DELHI – 110016
IITD/WORKS (SP-5075)/2025

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR e-TENDERING (Tender Notice)

The Executive Engineer (CD-I), IIT DELHI, HAUZ KHAS, New Delhi-16 (Phone No 011- 26596851) on behalf of Board of Governors invite online **Item Rate Tender** from the **manufacturers of Laboratory Furniture (Only OEM of Laboratory Furniture are allowed to participate in the Bid)** the following work:

SL. No.	NIT No.	Name of Work	Estimated Cost (in Rs.)	Earnest Money (in Rs.)	Tender Fees (in Rs.)	Time for Completion
1	55/IITD/EE(CD-I)/2025-26	**Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi.** **Sub-Head:-** Manufacture, Supply , Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air- Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.	1,76,37,099/-	3,52,742/- (To be returned after deposition of P.G)	Nil	06 Months

Last date and time of submission of financial & Technical bid : 11/08/2025 upto 15:00 Hrs. (on line)

Date and time of opening of Technical bid : 12/08/2025 at 15:00 Hrs. (office of D.R Store) Price bids of eligible bidders as per NIT shall be opened at a later date after scrutiny of Technical bids.

1. The successful bidders shall be required to submit a performance guarantee of **5%** of the tendered amount in the form of Bank Guarantee or F.D.R. from a Nationalized/Scheduled Bank within **15 days** of issue of letter of intent before award of work. In case of failure by the Contractor to supply the performance guarantee within the specified period, full earnest money will be forfeited, and the tender shall be treated as void. The performance guarantee shall be initially valid up to the date of completion plus 180 (One Eighty) days beyond that.

2. Contractors who fulfill the following requirements shall be eligible to apply. **Joint ventures are not accepted.**

i) Firms/Contractors must have completed satisfactorily one similar work of value not less than **Rs. 1,41,09,700/-or** two similar works each of value not less than **Rs. 1,05,82,300/-**or three similar works each of value not less than **Rs. 70,54,900/-** during the last 7 years ending on previous day of last date of submission of bid.

ii) **Earnest money of Rs. 3,52,742/-**in the form of Banker's cheque or Demand draft or fixed deposit receipt of a schedule bank drawn in favour of **Registrar, I.I.T. Delhi**. No relaxation in EMD will be allowed for MSMEs and MSEs as per CPWD Manual.

iii) **The bidder/ OEM of the lab furniture should be an active member with SEFA (Scientific Equipment's Furniture Association) Documentary evidence to be submitted along with the Testing certificate of SEFA 8M and SEFA 10 has to be submitted.**

3. Similar work means Composite work consisting of **Supply and Installation of Lab furniture work including fume hoods along with associated E&M works etc.**

4. The intending bidder must read the terms and conditions of IITD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.

5. Information and Instructions for bidders posted on website shall form part of bid document.

6. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website http://eprocure.gov.in/eprocure/app.in free of cost.

7. Completion certificates issued by an officer not below the rank of Executive Engineer of similar works completed by the Agency.

8. **Work means only work under Government/ Central Public Sector Undertaking / State Public Sector Undertaking/ Central Autonomous bodies/ State Autonomous bodies/ City Development Authority/ Municipal Cooperation of City formed under any act by Central/ State Government and published in Central/ State Gazette.**

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

10. IITD is committed to follow the principle of transparency, equity, and competitiveness in public procurement. Before submission of bid each bidder should sign integrity pact at respective places and submit the bid, if duly signed integrity pact is not submitted by bidder such bid shall not be considered.

11. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website

12. The intending bidder must have valid class-III digital signature to submit the bid.

13. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.

14. Contractors can upload documents in the form of JPG format and PDF format.

15. Contractor must ensure to quote rate of each item, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).

16. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.

17. In e-Tendering the intending bidder can quote his rates in figures only. The rates in words against amount of each item and total is generated automatically. Therefore, the rate quoted by the bidder in figures will be taken as final.

18. The bid can only be submitted after uploading the mandatory scanned documents such as Demand Draft or Pay order or Banker`s Cheque or Deposit at call Receipt or Fixed Deposit Receipts and towards cost of EMD in favor of **Registrar IIT Delhi** to be deposited with http://eprocure.gov.in/eprocure/app / NEFT facility.

19. The physical EMD of the scanned copy of EMD uploaded shall be deposited by the lowest tenderer within a week after opening of financial bid failing which the tender shall be rejected.

20. The following undertaking in this regard shall be up-loaded by the intending bidders: **"the physical EMD shall be deposited by me / us with the Authority inviting the tender, in case I/ we become the lowest tenderer, within a week of the opening of financial bid, otherwise, department may reject the tender and also take action to debar me / us from tendering in any form in IIT Delhi"**

21. **Copy of enlistment order / OEM details and certificate of work experience and other documents as specified in the Press Notice / web notice shall be scanned and up-loaded to the e-Tendering website within the period of bid submission. However, certified / original copy of all the scanned and up-loaded documents as specified in press notice web / notice shall have to be submitted by the lowest bidder only along with physical EMD of the scanned copy of EMD uploaded within a week physically in the office of e-tendering authority and it shall be sole responsibility of lowest bidder.**

22. **Online bid documents submitted by intending bidders shall be opened only of those bidders, who has deposited EMD and other documents scanned and uploaded are found in order.**

23. When bids are invited in two /three stages systems and if it is desired to submit revised financial bid it shall be mandatory to submit revised financial bid. If not submitted then the bid submitted earlier shall become invalid – Not applicable.

24. **The bid submitted shall become invalid if:**

a. The bidder is found ineligible if he fails to upload the list of **documents from S. No. 1 to 11 on tender** notice page 6 & 7.
b. The bidder does not upload all the documents (including GST registration) as stipulated in the bid document including the undertaking about deposition of physical EMD of the scanned copy of EMD uploaded etc.
c. If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest tenderer in the office of tender opening authority.
d. The lowest bidder does not deposit physical EMD within a week of opening of tender.
e. The Bidder does not upload ESI & EPF Registration.

25. Bid validity shall be **75 days** from the last date of submission of bid.

26. The rate of bidders shall be considered inclusive of GST.

List of Documents to be scanned and uploaded within the period of bid submission:

1. Demand Draft/Pay order or Banker`s Cheque /Deposit at Call Receipt/FDR of any Scheduled Bank against EMD/ online submission.
2. Enlistment / OEM details , if applicable in this tender, as per NIT Form 6 Tender notice.
3. Certificate of work experience.
4. Certificate of Registration for GST and acknowledgement of up to date filed return of GST.
5. **Affidavit on Rs.100/- Non judicial Stamp as per Notice Inviting Tender Condition 1.3 at page 8 of NIT. (Stamp Paper shall be purchased/ notarized between date of publishing and last date of submission of bids beside this NIT/Tender ID and name of work must be mentioned on the affidavit).**
6. Acceptance to execute INTEGRITY PACT.
7. Undertaking as per **'Sl. No. 20 on page No. 6'** on firm's letter head.
   The physical EMD shall be deposited by me / us with the Authority inviting the tender, in case I / we become the lowest tenderer, within a week of the opening of financial bid, otherwise, department may reject the tender and also take action to debar me / us from tendering in any form in IIT Delhi.
8. ESI & EPF registration.
9. FORM "F" (Duly filled with all required details).
10. In case of Partnership firm if all the papers of tender not signed by all the partners than a power of attorney authorizing the person who has signed the tender paper must be uploaded with the tender documents.

11. **The bidder/ OEM of the lab furniture should be an active member with SEFA (Scientific Equipment's Furniture Association) Documentary evidence to be submitted along with the Testing certificate of SEFA 8M and SEFA 10 has to be submitted.**
12. Annexure-I (duly filled & signed by the bidders)
13. Annexure-II (duly filled & signed by the bidders)
14. Annexure-III (duly filled & signed by the bidders)

Note: - All Documents mentioned above at S. No. 1 to 11 are mandatory for technically qualifying and documents mentioned 12 to 14 are not mandatory.

Executive Engineer (CD-I),
For & on Behalf of BOG, IIT Delhi
Hauz Khas, New Delhi-110016

Copy to: -

1. **Institute Engineer**
2. **Executive Engineer (CD-I) and A.E.E. (AC Division) for information.**
3. **A.R. (Works Accounts)**
4. **D.R. (A/Cs) – for opening of tenders on 12/08/2025 at 15:00 Hrs. in the office of D.R. Store**
5. **Notice Boards.**
6. **Office Copy**
7. **Web site Administrator, I.I.T.D**
8. **NIT :- Publicity on Website on Institute as well as on CPP portal http://eprocure.gov.in may be ensured as per instruction issued.**
9. E**-tendering Web.** http://eprocure.gov.in/eprocure/app or wwww.iitd.ac.in

INDIAN INSTITUTE OF TECHNOLOGY DELHI
HAUZ KHAS: NEW DELHI – 110016
IITD-6 FOR e-TENDERING ANDTERM&CONDITIONS

Item rate tenders are invited on behalf of Board of Governors from the **manufacturers of Laboratory Furniture**, as per NIT Form 6 Tender notice.

1. The enlistment of the contractors should be valid on the last date of submission of tenders. In case the last date of submission of tender is extended, the enlistment of contractor should be valid on the original date of submission of tender.

1.1 The work is estimated to cost **as per tender notice.** This estimate, however, is given merely as a rough guide.

1.2 Details of criteria for eligibility As Indicated in "INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR e- TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE"

1.3 To become eligible for issue of tender, the tenderer shall have to furnish an affidavit as under: -

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

2. Agreement shall be drawn with the successful bidders on prescribed Form No. IITD – 7/8 (or other Standard Form as mentioned) which is available as a Govt. of India Publication. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.

3. The time allowed for carrying out the work will be **as per tender notice** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.

4. The site for the work is available.

5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen from the web Site http://eprocure.gov.in/eprocure/appor iitd.ac.in or e-procure.gov **free** of cost.

6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of tender as notified.

7. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of tender as notified.

8. If it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the tender submitted earlier shall become invalid.

9. Earnest Money in the form of Demand Draft or Pay order or Banker`s Cheque or Deposit at Call Receipt (drawn in favour of Registrar IIT Delhi, Hauz Khas, New Delhi) as specified of any Scheduled/ Nationalized Bank and shall be scanned & uploaded to the e- tendering website within the period of tender submission or through RTGS/ NEFT with UTR details and original should be deposited by lowest bidder within a week after the opening of financial bid in office of **Executive Engineer (CD-I), IIT Delhi, Hauz Khas, New Delhi.**

A part of earnest money is acceptable in the form of bank guarantee also. In such case, 50% of earnest money or Rs. 20 lakh, whichever is less, will have to be deposited in shape prescribed above, and balance in shape of Bank Guarantee of any scheduled bank which is to be scanned and uploaded by the intending bidders.

Interested contractor who wish to participate in the bid has also to make following payments in the form of Demand Draft/Pay order or Banker's Cheque of any Scheduled Bank and to be scanned and uploaded to the e-Tendering website within the period of bid submission : http://eprocure.gov.in/eprocure/app.

10. The bid submitted shall become invalid if:
    a. The bidder is found ineligible if he fails to upload the list of documents from S. No 1 to 11 on tender notice page 6 & 7.
    b. The bidder does not upload all the documents (including GST registration) as stipulated in the bid document including the deposition about physical EMD of the scanned copy of EMD uploaded etc.
    c. If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest tenderer in the office of tender opening authority.
    d. The lowest bidder does not deposit physical EMD within a week of opening of tender.
    e. The Bidder does not upload ESI & EPF Registration.

11. The time & date of submission & opening of financial bid of contractors qualifying the **criteria as per Tender Notice** shall be communicated to them at a later date.

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

13. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

14. The competent authority on behalf of the Board of Governors does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.

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

16. The competent authority on behalf of Board of Governors reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.

17. The contractor shall not be permitted to tender for works in the IITD responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and

who are near relatives to any gazetted officer in the Central Public Works Department or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

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

19. The tender for the works shall remain open for acceptance for a period of **Seventy Five (75)** days from last date of submission of bid, if any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the retendering process of the work.

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

    a) The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

    b) Standard IITD Form – 8 or other Standard IITD Form as mentioned.

21. In case any discrepancy is noticed between the documents as uploaded at the time of submission of the bid online and hard copies as submitted physically in the office of Executive Engineer, then the bid submitted shall become invalid.

Executive Engineer (CD-I)
IIT Delhi, Hauz Khas
New Delhi - 110016

NOTICE INVITING TENDER

INDIAN INSTITUTE OF TECHNOLOGY DELHI

HAUZ KHAS, NEW DELHI-110016

Terms & Conditions

Indian Institute of Technology Delhi is in the process of purchasing following item(s) as per details as given as under.

Details of the item	**As per Tender Notice**
Earnest Money Deposit to be submitted	**Rs. 3,52,742/-**
Warranty	**As per Tender Notice, NIT & IITD form 8**
Performance security	**As per Tender Notice, NIT & IITD form 8**

Tender Documents may be downloaded from Central Public Procurement Portal http://eprocure.gov.in/eprocure/app.Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website http://eprocure.gov.in/eprocure/app . The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission '.

Tenderers can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type 'IIT'. Thereafter, Click on "GO" button to view all IIT Delhi tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website http://eprocure.gov.in/eprocure/app as per the schedule given in the next page.

No manual bids will be accepted. All quotes (both Technical and Financial should be submitted in the E-procurement portal).

Schedule

Name of Organization		Indian Institute of Technology, Delhi
Tender Type (Open/Limited/EOI/Auction/Single)		Open
Tender Category (Services/Goods/works)		Works
Type/Form of Contract (Work/Supply/ Auction/Service/Buy/Empanelment/ Sell)		Works
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems)		Laboratory Furniture and associated civil & electrical Works.
Source of Fund (Institute/Project)		**35.02.10 (2021/007/0498)**
Is Multi Currency Allowed		No
Date of Issue/Publishing		01/08/2025 (15.00 Hrs)
Document Download/Sale Start Date		01/08/2025 (15.00 Hrs)
Document Download/Sale End Date		11/08/2025 (15.00 Hrs)
Date for Pre-Bid Conference		**Nil**
Venue of Pre-Bid Conference		---
Last Date and Time for Uploading of Bids		11/08/2025 (15.00 Hrs)
Date and Time of Opening of Technical Bids		12/08/2025 (15.00 Hrs)
Tender Fee	**Nil**	(To be paid through RTGS/NEFT. IIT Delhi Bank details are as under: Name of the Bank A/C : Registrar IIT Delhi SBI A/C No. 10773572622 Name of the Bank : State Bank of India, IIT Delhi, Hauz Khas, New Delhi-110016 IFSC Code : SBIN0001077 MICR Code 110002156 Swift No. : SBININBB547 (This is mandatory that UTR Number is provided in the on-line quotation/bid. (Kindly refer to the UTR Column of the Declaration Sheet at Annexure-II)**or as per NIT/ Tender notice**
EMD	**Rs. 3,52,742/-**	
No. of Covers (1/2/3/4)		**02**
Bid Validity days (180/120/90/75/60/30)		**75 days (From the last date of Submission of bid)**
Address for Communication		**Office of the Executive Engineer (CD-I), Room No. AD-117A, Academic Building, IIT Delhi, Hauz Khas, New Delhi-110016**
Contact No.		**011-26596851**
Fax No.		**Nil**
Email Address		eeplg@iitd.ac.in, a26897@admin.iitd.ac.in,

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

Instructions for Online Bid Submission:

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL:http://eprocure.gov.in/eprocure/app). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: http://eprocure.gov.in/eprocure/app

REGISTRATION

1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL:http://eprocure.gov.in/eprocure/app) by clicking on the link "Click here to Enroll". Enrolment on the CPP Portal is free of charge.
2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
6) Bidder then logs in to the site through the secured log-in by entering their userID / password and the password of the DSC / eToken.

SEARCHING FOR TENDER DOCUMENTS

1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.

4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

1) Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e., on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

2) The bidder must digitally sign and upload the required bid documents one by one as indicated in the tender document.

3) The bidder has to select the payment option as "on-line" to pay the tender fee / EMD as applicable and enter details of the instrument. Whenever, EMD / Tender fees is sought, bidders need to pay the tender fee and EMD separately on-line through RTGS/NEFT (Refer to Schedule, Page No.12).

4) A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

OR

In some cases Financial Bids can be submitted in PDF format as well (in lieu of BOQ).

5) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

6) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.

7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

8) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

9) Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

ASSISTANCE TO BIDDERS

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 233 7315.

General Instructions to the Bidders

1) The tenders will be received online through portal http://eprocure.gov.in/eprocure/app . In the Technical Bids, the bidders are required to upload all the documents in .pdf format.

2) Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through https://eprocure.gov.in/eprocure/app. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site https://eprocure.gov.in/eprocure/app under the link "Information about DSC".

3) Tenderer are advised to follow the instructions provided in the 'Instructions to the Tenderer for the e- submission of the bids online through the Central Public Procurement Portal for e-Procurement at https://eprocure.gov.in/eprocure/app.

Terms & Conditions Details

S.No.	Specification
1.	**Due date**: The tender must be submitted on-line before the due date. The offers received after the due date and time will not be considered. No manual bids will be considered.
2.	**Preparation of Bids**: The offer/bid should be submitted in two bid systems (i.e.) Technical bid and financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. Financial bid should indicate item wise price for the items mentioned in the technical bid in the given format i.e BOQ_XXXX. OR Financial Bids to be submitted in Excel. The Technical bid and the financial bid should be submitted Online.
3.	**EMD (if applicable)**: **As per NIT**
4.	**Refund of EMD :- As per NIT**
5.	**Opening of the tender**: **As per Tender Notice, NIT & IITD form 8**
6.	**Acceptance/ Rejection of bids:** The competent authority of IIT Delhi reserves the right to reject any or all offers without assigning any reason.
7.	**Pre-qualification criteria: - Mentioned in Tender notice**
8.	**Performance Security**:-**Mentioned in Tender notice**
9.	**Force Majeure :- As per IITD form 8**
10.	**Risk & Cost Clause** : **As per IITD form 8**
11.	**Delivery and Documents: As per Tender Notice & NIT & IITD form 8**
12.	**Delayed delivery: As per Tender Notice & NIT & IITD form 8**
13.	**Prices**: **As per Tender Notice & NIT & IITD form 8**
14.	**Progress of Work** :**As per Tender Notice & NIT & IITD form 8**
15.	**Inspection and Tests: As per Tender Notice & NIT & IITD form 8**
16.	**Resolution of Disputes**: **As per Tender Notice & NIT & IITD form 8**
17.	**Applicable Law: As per Tender Notice & NIT & IITD form 8**
18.	**Supplier Integrity : As per Tender Notice & NIT & IITD form 8**
19.	**Training : As per Tender Notice & NIT & IITD form 8**
20.	**Installation & Demonstration : As per Tender Notice & NIT & IITD form 8**

21.	**Incidental services: As per Tender Notice & NIT & IITD form 8**
22.	**Defect liability Period** : **As per Tender Notice & NIT & IITD form 8**
23.	**Governing Language : As per Tender Notice & NIT & IITD form 8**
24.	**Applicable Law : As per Tender Notice & NIT & IITD form 8**
25.	**Notices : As per Tender Notice & NIT & IITD form 8**
26.	**Taxes : As per Tender Notice & NIT & IITD form 8**
27.	**Termination for Default : As per Tender Notice & NIT & IITD form 8**
28.	**Disputes and Jurisdiction**: **As per Tender Notice & NIT & IITD form 8**
29.	**Completion certificate**: **As per Tender Notice & NIT & IITD form 8**

Bid Submission

Online Bid Submission:

The Online bids (complete in all respect) must be uploaded online in two Envelops as explained below:-

Bid Document – 1 (Following documents to be provided as single PDF file)			
Sl. No.	**Documents**	**Content**	**File Types**
1.	Technical Bid	Compliance Sheet as per Annexure – I	.PDF
2.		Organization Declaration Sheet as per Annexure – II	.PDF
3.		List of organizations/ clients where the same products have been supplied (in last two years) along with their contact number(s). (Annexure-III)	.PDF
4.		Technical supporting documents in support as per Page-6 and 7of NIT	.PDF
Bid Document – 2			
Sl. No.	**TYPES**	**Content**	
1.	Financial Bid	Price bid should be submitted in Excel format.	.xls

I.I.T.D- 6 FOR e-TENDERING	I.I.T.D

INDIAN INSTITUTE OF TECHNOLOGY, DELHI
HAUZ KHAS, NEW DELHI -
110016 NOTICE INVITING
TENDER

Item rate tenders are invited on behalf of The Board of Governors, I.I.T. Delhi, Hauz Khas, New Delhi16- from the **manufacturers of Laboratory Furniture** dealing with **Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi.**

Sub-Head: - Manufacture, Supply , Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air- Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.

1. The enlistment of the contractors should be valid on the last date of submission of tenders. In case only the last date of submission of tender is extended, the enlistment of contractor should be valid on the original date of submission of tenders.

1.1 The work is estimated to cost Rs**. 1,76,37,099/-** This estimate, however, is given merely as a rough guide.

1.1.1 The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate Division which will deal with all matters relating to the invitation of bids.

For composite bid, besides indicating the combined estimated cost put to tender, should clearly indicates the estimated cost of each component separately. The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.

1.2 Intending bidder is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below: -

Criteria of eligibility for submission of bid documents.

1.2.1 Criteria of eligibility for CPWD as well as non-CPWD contractors.

Three similar works each of value not less than 40% of estimated cost or two similar work each of value not less than 60% of estimated cost or one similar work of value not less than 80% of estimated cost (value of work as mentioned in tender notice) during last 7 years ending on previous day of last day of submission of bids.

The value of executed works shall be brought to the current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated during the last s7 years ending on previous day of last day of submission of bids.

1.2.2 To become eligible for issue of bid, the bidders shall have to furnish an affidavit as under:

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

1.2.3 The bidder/ OEM of the lab furniture should be an active member of SEFA (Scientific Equipment's Furniture Association). Documentary evidence to be submitted along with the Testing certificate of SEFA 8M and SEFA 10 has to be submitted.

2. Agreement shall be drawn with the successful bidders on prescribed Form No. I.I.T.D 7/8 which is available as I.I.T.D. Publication. Bidders shall quote their rates as per various terms and conditions of the said form which will form part of the agreement.

3. The time allowed for carrying out the work will be **as per Tender Notice** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

4. **The site for the work is available.**

5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen from the web Site www.iitd.ac.in or e-procure.gov.in free of cost.

6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of tender as notified.

7. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of tender as notified.

8. If it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the tender submitted earlier shall become invalid.

9. Copy of Enlistment Order and certificate of work experience and other documents as specified in the press notice / web notice shall be scanned and uploaded to the tender website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in press notice / web notice shall have to be submitted by the lowest bidder in the office of tendering authority.

10. Online bid documents submitted by intending bidders shall be opened only of those bidders, who has deposited tender online fees with and earnest money deposit and other documents scanned and uploaded are found in order. The bid submitted shall become invalid &Tender fees shall not be refunded if:

    (i) The bidder is found ineligible.

    (ii) The bidder does not upload all the documents as stipulated in the bid documents.

    (iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest tenderer in the office of tender opening authority.

11. The contractor whose bid is accepted will be required to furnish **a performance guarantee of 5% (Five Percent)** of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/

Demand Draft of any scheduled bank/Pay order of any Scheduled Bank (in case guarantee amount is less than Rs.1,00,000/-) or Government Securities or Fixed Deposit Receipts or irrevocable Bank Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.

12. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and subsoil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

13. The competent authority on behalf of the Board of Governors does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.

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

15. The competent authority on behalf of Board of Governors reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.

16. The contractor shall not be permitted to bid for works in the IITD responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the IIT Delhi. Any breach of this condition by the contractor would render him liable to be debarred from bidding process in future in IIT Delhi.

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

18. The tender for the works shall remain open for acceptance for a period of **Seventy Five (75)** days from last date of submission of bid, if any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money

as aforesaid. Further the tenderer shall not be allowed to participate in the retendering process of the work.

19. This notice inviting bid shall form a part of the contract document. The successful bidder / contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-

a. The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

b. Standard IITD Form –7/8 or other Standard IITD Form as mentioned.

20. In case any discrepancy is noticed between the documents as uploaded at the time of submission of the bid online and hard copies as submitted physically in the office of Executive Engineer, then the bid submitted shall become invalid and the IIT Delhi shall without prejudice to any other right or remedy, the bidder shall debarred for tendering in IIT Delhi for a period of one year.

21. **For Composite Bid**

21.1 The **Executive Engineer [CD-I]** shall be Engineer-in-charge of the major component and will call the bids for the composite work, Earnest Money will be fixed with respect of the combined estimate cost put to tender for the composite bid.

21.2 The bid document will include the following three components: -

Part A- IITD-6, IITD-7 including schedule A to F for the major component of the work. Standard General Conditions of contract for CPWD 2023 as corrected/modified up to date.

Part B – General/Specific conditions, specifications and schedule of quantities applicable to major component of the work.

Part C: - Schedule A to F for minor components of the work I.E. (Institute Engineer/EE in-charge of major component shall also be competent authority under clause 2 and clause 5 as mentioned as schedule A to F to major components), General/ specific conditions, specifications, and schedule of quantities applicable to minor component(s) of the work.

21.3 The bidder must associate himself with experienced agencies of the appropriate class eligible for bid for each of the minor components individually.

21.4 The eligible bidders shall quote rates for all items of major component as well as for all items of minor component of work.

21.5 After acceptance of the bid by Component authority, the EE [CD-I] of the work shall issue letter of award on behalf of the Board of Governors, IIT Delhi, After the work is awarded, the main contractor will have to enter into agreement with EE [CD-I] and has to sign two or more copies of agreement.

21.6 Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.

21.7 Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works. The Earnest Money will become part of security deposit of the major component of work.

21.8 The main contractor has to associate agencies for specialized / Minor component(s) conforming to eligibility criteria as defined in the bid document and has to submit details of such agency(s) to Engineer-in-Charge/EE(CD-I) of relevant component(s) within prescribed time. The name of the agency(s) to be associated shall be approved by the Engineer-in-Charge of relevant component(s).

21.9 In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in Charge of relevant specialized component(s). The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case the Engineer-in-Charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.

21.10 The main contractor must enter into MoU with agency(s) associated by him for execution of the specialized component(s), in case the main contractor does not have the capability to execute the Specialized / Minor components of the work. Copy of such MoU shall be submitted to **EE (CD-I)** in charge of each relevant component as well as to EE-in-charge of major component. In case of change of associate contractor, the main agency(s) has to enter into MoU/agreement with the new contractor associated by him.

21.11 Running payment for the major component shall be processed by EE (CD-I).

21.12 **The composite work shall be treated as completed when all the components of the work are complete and certified. The completion certificate of the composite work shall be recorded by Engineers-in-charge/EE (CD-I) of major component after record of completion certificate of all other components.**

21.13 **The final bill of the whole work shall be finalized and paid by the EE(CD-I) of major component.**

INTEGRITY PACT e-TENDERING	I.I.T.D

To,

……..,

……..,

……..

Subject: - Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi.

Sub-Head:- Manufacture, Supply , Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air- Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.

NIT No. :- 55/IITD/EE(CD-I)/2025-26

Dear Sir,

It is here by declared that I.I.T.D is committed to follow the principle of transparency, equity, and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer / bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the I.I.T.D.

Yours faithfully

Executive Engineer (CD-I)

ACCEPTANCE TO EXECUTE INTEGRITY PACT	I.I.T.D

(To be signed by bidder and upload the scanned copy)

To,
Executive Engineer (CD-I)
IIT Delhi, Hauz Khas,
New Delhi – 110016.

Subject: - Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi.

Sub-Head:- Manufacture, Supply , Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air- Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.

Dear Sir,

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

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

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by I.I.T.D. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

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

Yours faithfully

(Duly authorized signatory of the Bidder)

INTEGRITY PACT e-TENDERING	I.I.T.D

To be signed by the bidder and same signatory competent / authorized to

sign the relevant contract on behalf of I.I.T.D.

INTEGRITY AGREEMENT

This Integrity Agreement is made at ..... on this ..... day of..... 20.....

BETWEEN

The Board of Governors, I.I.T. Delhi, Hauz Khas, New Delhi – 16, represented through **Executive Engineer (CD-I)** IIT Delhi.

....., (Hereinafter referred as the (Address of Division)

'**Principal/Owner**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....(Name and Address of the
Individual/firm/Company) t h r o u g h .....(Hereinafter referred to as the (Details of duly authorized signatory) "**Bidder/Contractor**" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No. .....) (Hereinafter referred to as "**Tender/Bid**") and intends to award, under laid down organizational procedure, contract for

…….....

(Name of work) hereinafter referred to as the "**Contract**".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

INTEGRITY PACT e-TENDERING	I.I.T.D

Now, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

   (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

   (b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

   (c) The Principal/Owner shall endeavour to exclude from the Tender process any person whose conduct in the past has been of biased nature.

2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of **fraud or corruption or Coercion or Collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

   a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

   b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.\

c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice **means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests**.

5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action, or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. **Such exclusion may be forever or for a limited period as decided by the Principal/Owner**.

2) **Forfeiture of EMD/Performance Guarantee/Security Deposit**: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

3) **Criminal Liability**: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.

2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.

3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.

2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 09 Months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, I.I.T.D.

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal/Owner, who has floated the Tender.

2) Changes and supplements need to be made in writing. Side agreements have not been made.

3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.

4) Should one or several provisions of this Pact turn out to be invalid the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.

5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal/Owner)

.....
(For and on behalf of Bidder/Contractor)

WITNESSES:

1. .....

(signature, name and address)

2. .....
(signature, name and address)

Place:
Date:

BANK GUARANTEE BOND	I.I.T. D

Form of Earnest Money Deposit / Bank Guarantee Bond

WHEREAS, contractor.. ……..(Name of contractor) (hereinafter called "the contractor") has submitted his tender dated (date) for the construction of(name of work) (hereinafter called "the Tender")

KNOW ALL PEOPLE by these presents that we .....(name of bank) having our registered office at.....(hereinafter called "the Bank") are bound unto.....
(Name and division of Executive Engineer) (hereinafter called "the Engineer-in-Charge") in the sum of Rs. ..... (Rs. in words.....) for which payment well and truly to be made to the said Engineer-in-Charge the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this .....day of ..... 20....
THE CONDITIONS of this obligation are:

(1) If after tender opening the Contractor withdraws, his tender during the period of validity of tender (including extended validity of tender) specified in the Form of Tender;

(2) If the contractor having been notified of the acceptance of his tender by the Engineer-in-Charge:

(a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to contractor, if required;

OR

(b) fails or refuses to furnish the Performance Guarantee, in accordance with the provisions of tender document and Instructions to contractor,

OR

(c) fails or refuses to start the work, in accordance with the provisions of the contract and Instructions to contractor,

OR

(d) Fails or refuses to submit fresh Bank Guarantee of an equal amount of this Bank Guarantee, against Security Deposit after award of contract.

We undertake to pay to the Engineer-in-Charge either up to the above amount or part thereof upon receipt of his first written demand, without the Engineer-in-Charge having to substantiates his demand, provided that in his demand the Engineer-in-Charge will note that the amount claimed by his is due to him owing to the occurrence of one or any of the above conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force upto and including the date*..... after the deadline for
submission of tender as such deadline is stated in the Instructions to contractor or as it may be extended by the Engineer-in-Charge, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE .....

SIGNATURE OF THE BANK

WITNESS.....SEAL

(SIGNATURE, NAME AND ADDRESS)

*Date to be worked out on the basis of validity period of 6 months from last date of receipt of tender.

PERFORMANCE GUARANTEE

(i) The contractor shall submit an irrevocable Performance Guarantee of 5% (Five Percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance. This period can be further extended by the Engineer-in-Charge up to a maximum period as specified in schedule 'F' on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the Engineer-in-Charge. This guarantee shall be in the form of Cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at Call receipt of any scheduled bank/Banker's Cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay Order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the form annexed hereto. In case a fixed deposit receipt of any Bank is furnished by the contractor to the Government as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Government to make good the deficit.

(ii) The **Performance Guarantee shall be initially valid up to the stipulated date of completion plus 180 Days** beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest.

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

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

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

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

FORM "F"

STRUCTURE & ORGANISATION

1. Name & Address of the bidder
2. Telephone no./ Telex no./ Fax no.
3. Legal status of the bidder (attach copies of original document defining the legal status)

a. An Individual

b. A proprietary firm

c. A firm in partnership

d. A limited company or Corporation

4. Particulars of registration with various Government Bodies (attach attested photocopy) Organization/ Place of registration and Registration No.

   1.

   2.

   3.

5. Name and tiles of Directors & Officers with designation to be concerned with this work

   .....!

6. Designation of individuals authorized to act for the organization… !
7. Has the bidder or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion?

   If so, give name of the project and reasons for abandonment

   .....!

8. Has the bidder or any constituent partner in case of partnership firm, ever been debarred/ blacklisted for tendering in any organization at any time? If so, give details

   .....

9. Past work experience in IIT Delhi will be considered in deciding the Technical bid… !

Signature of Bidder(S)

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

ANNEXURE-I
COMPLIANCE SHEET

TECHNICAL SPECIFICATION:

S.No.	Technical Bid Requirement As per Tender Notice & NIT & IITD form 8	Compliance Y/N
1	Demand Draft/Pay order or Banker`s Cheque /Deposit at Call Receipt/FDR of any Scheduled Bank against EMD.	
2	Enlistment / OEM details, if applicable in this tender, as per NIT Form 6 Tender notice.	
3	Certificate of work experience.	
4	Certificate of Registration for GST and acknowledgement of up to date filed return of GST.	
5	**Affidavit on Rs.100/- Non judicial Stamp as per Notice Inviting Tender Condition 1.3 at page 8 of NIT. (Stamp Paper shall be purchased/ notarized between date of publishing and last date of submission of bids beside this NIT/Tender ID and name of work must be mentioned on the affidavit).**	
6	Acceptance to execute INTEGRITY PACT.	
7	Undertaking as per **page-6/ Sl. No. 20'** on firm's letter head. **"the physical EMD shall be deposited by me / us with the Authority inviting the tender, in case I / we become the lowest tenderer, within a week of the opening of financial bid, otherwise, department may reject the tender and also take action to debar me / us from tendering in any form in IIT Delhi"**	
8	ESI & EPF registration.	
9	FORM "F" (Duly filled with all required details).	
10	In case of Partnership firm if all the papers of tender not signed by all the partners than a power of attorney authorizing the person who has signed the tender paper must be uploaded with the tender documents.	
11	**The bidder/ OEM of furniture should be an active member with SEFA (Scientific Equipment's Furniture Association) Documentary evidence to be submitted along with the Testing certificate of SEFA 8M and SEFA 10 has to be submitted.**	
12	Annexure-1 (Dully Filled & signed by the bidders)	
13	Annexure 2 (Dully Filled & signed by the bidders)	
14	Annexure 3 (Dully Filled & signed by the bidders)	
15	Any other documents given in NIT	

I have also enclosed all relevant documents in support of my claims, (as above) in the following pages.

Signature of Bidder

Name:_____

Designation:_____

Organization Name: _____

Contact No. : _____

ANNEXURE-II

<< Organization Letter Head >>
DECLARATION SHEET

We,_____hereby certify that all the information and data furnished by our organization with regard to this tender specification are true and complete to the best of our knowledge. I have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.
This is certified that our organization has been registered as per Tender Notice & NIT & IITD form 8Tender.We further certified that our organization meets all the conditions of eligibility criteria laid down in this tender document.

We, further specifically certify that our organization has not been Black Listed/De Listed or put to any Holiday by any Institutional Agency/ Govt. Department/ Public Sector Undertaking in the last three years.	NAME & ADDRESS of the Vendor/ Manufacturer / Agent
1. Phone	
2. Fax	
3. E-mail	
4. Contact Person Name	
5. Mobile Number	
6. GST Number	
7. PAN Number	
8.(In case of on-line payment of EMD) UTR No. (For EMD)	

(Signature of the Tenderer)

Name:

Seal of the Company

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

Annexure-III

List of Govt. Organization/Deptt.

List of Government Organizations for whom the Bidder has undertaken such work As per Tender Notice & NIT & IITD form 8		
Name of the organization	**Name of Contact Person**	**Contact No.**

Signature of Bidder

Name:_____

Designation:_____

Organization Name: _____

Contact No. : _____

I.I.T.D – 7/8 e-TENDERING	I.I.T.D

PART-B

INDIAN INSTITUTE OF TECHNOLOGY DELHI
HAUZ KHAS, NEW DELHI - 110016
Item Rate Tender & Contract for Composite Work

Tender for the work of: **Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi..**

Sub-Head:- Manufacture, Supply , Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air- Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.

To be submitted by **as per tender notice** to

……

(i) To be opened in presence of bidders who may be present at **as per tender notice** ……in the office of **D.R. (Store)**

Issued to …….

Signature of officer issuing the documents ……..……

Designation.……..……

Date of Issue …….

TENDER

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

I/We hereby tender for the execution of the work specified for the The Board of Governors, I.I.T. Delhi, Hauz Khas, New Delhi - 16 within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for **Seventy-Five (75)** days from last date of submission of bid.

A sum of as per tender notice is hereby forwarded in Banker Cheque or Demand Draft or Fixed Deposit receipt of a schedule bank drawn in favour of Registrar IIT Delhi as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period. I/We agree that the said The Board of Governors, I.I.T. Delhi, Hauz Khas, New Delhi - 16 or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that The Board of Governors, I.I.T. Delhi, Hauz Khas, New Delhi - 16 or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the performance guarantee absolutely, Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid. I/We shall be debarred for participation in the re-tendering process of the work.

I.I.T.D – 7/8 e-TENDERING	I.I.T.D

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

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

Dated:

Signature of Contractor

Witness:

Postal Address

Address:

Occupation:

I.I.T.D – 7/8 e-TENDERING	I.I.T.D

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of The Board of Governors, I.I.T. Delhi, Hauz Khas, New Delhi - 16 for a sum of

(Rupees… .....).

The letters referred to below shall form part of this contract agreement: -

(a)

(b)

(c)

For & on behalf of the Board of Governors, IIT Delhi Signature

……..

Dated:

Designation …….

SCHEDULES (A to F)
(For Laboratory Furniture and associated civil & electrical Works.)

SCHEDULE 'A'

Schedule of quantities as attached.

SCHEDULE 'B'

Schedule of materials to be issued to the contractor.

S.No.	Description of item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of issue
1	2	3	4	5
----------NIL----------				

SCHEDULE 'C'

Tools and plants to be hired to the contractor.

S.No.	Description	Hire charges per day	Place of Issue
1	2	3	4
----------NIL----------			

SCHEDULE 'D'

Extra schedule for specific requirement/document for the work, if any.	Nil.

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

SCHEDULE 'E'

Reference to General Conditions of contract	:	GCC for Maintenance work 2023 for CPWD works along with correction on slips/ amendments issued up to last date of submission of bid.
Name of Work	:	**Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi.** **Sub-Head**:- Manufacture, Supply , Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air-Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.
Estimated cost of work:	:	**Rs. 1,76,37,099/-**
Earnest Money:	:	**Rs. 3,52,742/-**
Performance Guarantee	:	5% of tendered Value
Security deposit	:	2.5 % of tendered value

SCHEDULE 'F'

GENERAL RULES & DIRECTIONS:

1. Officer inviting tender	:	Executive Engineer [CD-I]
2. Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.5	:	Clause 12

Definitions:

2(i)	Engineer-in-Charge	:	For Civil Work Executive Engineer [CD-I] For E&M Work AEE in-charge AC Division
2(ii)	Accepting Authority	:	S.E./ Institute Engineer
2(iii)	Percentage on cost of materials and Labour to cover all overheads and profits:	:	15%

2(iv)	Standard Schedule of Rates:	:	DSR 2023 for Civil works with correction factor 0.973 on DSR items , cost index @ 3% & Non-schedule items on Market Rate and with upto-date correction slip on date of submission of bid. DSR 2022 for E & M works with up-to-date correction slip on date of submission of bid + Market Rate items & 0.973 GST factor.
2(v)	Department	:	Works department at I.I.T Delhi.

2(vi) Standard IITD Form & CPWD GCC for Maintenance work 2023, modified & corrected up to last date of submission of bid.

Clause 1

(i)	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance	:	15 days
(ii)	Maximum allowable extension with late fee @ 0.1 % per day of Performance guarantee amount beyond the period provided in (i) above,	:	07 days

Clause 2

Authority for fixing compensation under Delay:	:	Institute Engineer

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start:	:	10 days or earlier as per direction of Engineer-in-charge

MILE STONE CHART

Sl. No.	Description of mile stone (financial terms)	Period for completion from date of start in days/months	Withheld amount for non- achievement of mile stone.
1	Submission & Approval of shop drawings.	15 days	1% of the Tender Amount
2	Supply of furniture of 04 labs. (50% of total labs)	90 days	1% of the Tender Amount
3	Supply of furniture of 04 labs. (Remaining 50% of total labs)	120 days	1% of the Tender Amount
4	Supply and Installation of furniture of 100% of labs.	180 days	1% of the Tender Amount

Allowed for execution of work : **06 Months**

Authority to decide:

(i) Extension of Time : Institute Engineer

(ii) Rescheduling of milestones : Institute Engineer

(iii) Shifting of Date of start in case of Delay in handing over of site : Institute Engineer

Clause (6) : Applicable (Computerized MB)

Clause 7

Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment: : Minimum Rs. 30 Lakhs

Clause -7A : **Applicable as per Institute Policy**

No running account bill shall be paid for the work till the applicable labour licences, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge.

Clause 10A

List of testing equipment to be provided by the contractor at site lab : **Not Applicable**

Clause 10B : **Applicable**

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

Clause 10C

Component of labour expressed as percent of value of work:. 25% for Civil Work

15% for Electrical Work

Clause 10CA : Not Applicable

S. No.	Material Covered under this clause	Nearest Materials (other than cement, reinforcement bars and the structural steel) for which All India Wholesale Price Index to be followed	Base Price of all Materials covered under clause 10 CA* (July 2025)
1.	Cement	**Not Applicable**	
2.	Cement		
3.	Reinforcement bars		
4.	Structural steel		

Clause 10CC

Clause 10 CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column

Not Applicable

Clause 11

Specifications to be followed for execution of work : **CPWD specifications (Civil) 2019 Vol. I and Vol. II** with upto date correction slips. **CPWD Specification 2023 for Electrical works** with up-to-date correction slips and manufacturers Specifications up to the last date of bid submission / uploading of tender.

Laboratory Furniture work:

Specifications as specified at page no. 54 to 70 of the NIT

Clause 12

Type of work **Original work / upgradation works**

12.2 & 12.5	Deviation limit beyond which clauses 12.2 & 12.5 shall apply for building work	:	100%
12.5 (I)	Deviation Limit beyond which clauses 12.2 & 12.5 shall applicable for foundation work (Except items mentioned in earthwork subhead of DSR and related items)	:	100%
12.5 (II)	Deviation Limit for Items in earth work subhead of DSR and related items		100%

Clause 16

Competent Authority for deciding reduced rates : Institute Engineer

Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site : As per requirement

Clause 25

Constitution of Dispute Redressal Committee (DRC)	
Chairman	NIL
Member	
Member	

Note: The above constitution of Dispute Redressal Committee is subject to change, for which necessary notification shall be issued by the competent authority of the department, if required.

Clause 32

Requirement of Technical Staff(s) & Recovery Rate

Cost of Work (Rs. In Crore)	**Requirement of Technical Staff**		**Minimum Experience (Years)**	**Designation of Technical Staff**	**Rate at which recovery shall be made from the Contractor in the event of not fulfilling provision of clause 32**
	Qualification	Number			
More than 1.5 Cr. To 5 Cr.	Graduate Engineer or Diploma Engineer	1+1	2 or 5 respectively	Project planning/ quality/ Site/billing Engineer	Rs. 15,000/- per month per person

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.

Diploma Holder with a minimum of 10 years relevant experience with a reputed construction company can be treated at par with graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50 % of requirement of degree Engineer.

Clause 38

i)	Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2023 with up-to-date correction printed by C.P.W.D.	
ii)	Variations permissible on theoretical quantities	
a)	Cement:	
	For works with estimated cost put to tender not more than Rs.5 lakh.	3% plus/minus. (Three percent)
	For works with estimated cost put to tender more than Rs.5 lakh	2% plus/minus. (Two percent)
b)	Bitumen all works.	2.5% plus & only & nil on minus side
c)	Steel Reinforcement and structural steel sections for each diameter, section and category	2% plus/minus (Two percent)
d)	All other materials	
e)	Schedule for determining theoretical consumption of Brick work on the basis of DSR 2023	

SPECIAL CONDITIONS

1.0 Non-Judicial stamp paper worth Rs. 100/- (Hundred Rupees only) will be submitted by the contractor which will have to be signed as token of acceptance.

2.0 No T & P will be supplied by the Institute and the contractor will have to make his own arrangement.

3.0 The contractors are advised to get acquitted with the proposed work including specifications & its site and additional conditions carefully before quoting. No claim of any sort shall be entertained or account of any site conditions and ignorance of specifications & additional conditions. The work shall be carried out as per the availability of site.

4.0 The work shall be carried out as per CPWD specifications for civil and electrical work with up – to date correction slips unless otherwise specified in the nomenclature of individual item or in the specification, additional conditions where specifications are silent, the decision of Engineer-in-Charge shall be final and binding on contractor.

5.0 The rates quoted by the contractor shall be taken as net and nothing extra shall be paid on any account i.e Royalty, Cartage, GST & stacking of material required at places etc. The rates for different items of work shall apply for Heights & Depths, Leads & Lifts unless otherwise specified in the agreement or specifications applicable in the agreement.

6.0 Any damage done by the contractor to any existing item / any part of the building during the course of execution of work shall be made good by at his own cost.

7.0 Articles manufactured by the reputed firms as per approved make list and as approved by Engineer-in-charge shall only be used at work.

8.0 The sample of material required in the work brought at site shall be submitted prior technical specification of individual item and got approval of material from Engineer –in-Charge before use in execution of work.

9.0 The sample of material required for Testing shall be provided at free of cost by the contractor. All other expenditure to be incurred for taking sample, conveyance, packing and testing charges etc. shall be borne by the contractor.

10.0 The contractor shall submit a detailed program of work within **03 days** of the date of award of work. The Engineer – in- Charge can modify the program and the contractors have to work accordingly.

11.0 The contractor shall make his own arrangement for getting the permission with respect to trucks from the Traffic Police.

12.0 No payment shall be made to contractor for any damage caused by the rain, snowfall or any other natural causes what so ever during the execution of work.

13.0 Some restrictions may be imposed by the security staff at Sonipat Campus of IIT Delhi etc. on the working and or movement of labour & material. **No labour camp/ huts shall be allowed in Sonipat campus of IIT Delhi. The contractor shall make his own arrangement for labour huts outside the campus.** However, constructions of cement godown and Chowkidar's hut in the Campus shall be permitted. The contractor shall be bound to follow all such restrictions/ instructions and nothing shall be payable on this account.

14.0 The contractor shall be fully responsible for the safe custody of the material issued or brought at site by him for doing the work.

15.0 The Malba / Garbage generated at site due to construction activities shall be removed from the site immediately & shall be disposed off by the contractor to the approved dumping site of MCD and all statutory approvals from local bodies shall be a sole responsibility of contractor.

16.0 The contractor shall clean the site thoroughly of scaffolding materials, rubbish, equipment's left out of his work & dress the site around the building to the complete satisfaction of the Engineer-in-Charge before the work is treated as completed.

17.0 Contractor has to quote against the item of schedule of credit of material. The contractor cannot quote either minus rate or Zero rate for these items.

18.0 Income tax and other taxes as applicable shall be deducted from the bills of contractor.

19.0 1% labour cess or as applicable will be deducted from the bills of contractor.

20.0 **Water charges @1% and Electricity charges @0.50% of gross work done shall be deducted from bills of contractor if electricity and water provided by Sonipat Campus of IIT Delhi.**

21.0 Agency must take proper safety major during the execution of work.

22.0 **GCC form 7/8 shall form part of NIT and the bidder shall go through CPWD GCC 2023 for construction work before quoting rates and the same shall be deemed to be accepted by the bidder if he participates in the tender.**

23.0 ESI & EPF shall be reimbursed as per norms on production of original receipt of ESI & EPF from contractor specific to this work.

24.0 The contractor shall submit the programmer of execution of work as per clause 5 of GCC of IIT form 7/8 of NIT including list of workers to be deployed by contractor for this work.

25.0 The contractor shall be responsible for keeping site free of any kind of mosquito breeding. If it is found that breeding is taking place the entire responsibility shall be of contractor to bear challan etc. done by local bodies.

26.0 GST shall be considered as inclusive in quoted rate of agency.

27.0 It would be the responsibility of the contractor to arrange all permissions / approvals from all local bodies/statutory bodies for garbage dumping in the yard, and nothing extra shall be paid on account of this by the Institute.

28.0 The work shall be executed as per the architectural drawings and instructions of the Engineer-In-Charge / Architect shall be strictly adhered.

29.0 Electrical work will be executed only through the agency that has having valid electrical license, and a copy of the valid electrical license will be submitted before the start of work.

30.0 Original warranty certificate for Audiovisual work, fire alarm and detection system, CCTV, and LED lighting fixtures will be submitted by the agency before the final bill to the Engineer in charge.

31.0 The following Specialized works shall be carried out by specialized agencies/ agency on their own if they have experience of

a) 3 similar works of 40 % value of specialized work component of tendered amount.
b) 2 similar works of 60 % value of specialized work component of tendered amount.
c) 1 similar work of 80 % value of specialized work component of tendered amount.

32.0 **Specialized work / Associate Works**:

The bidder should either meet the eligibility conditions for the work as above or otherwise he will have to associate with an agency meeting the eligibility requirements for specialized works after award of work and must submit details of such agency(s) conforming eligibility conditions as defined in the bid document to the Engineer in charge before taking up specific component. The names of the agency(s) to be associated shall be approved by the competent authority of IIT Delhi. The contractor of the appropriate class shall have to associate other agency(s) for execution of each of the work(s), which fulfils the eligibility criteria as defined after taking prior approval. The Composite Contractor and the associated specialized agencies shall give the required affidavit to confirm their association. Tender accepting authority may approve a change of sub agency in case it is required during the currency of contract. However, the composite category contractor shall also be eligible to carry out any or all these works without associating with any specialized agency provided: -

A. He fulfills the prescribed eligibility criteria respectively for these work(s).

OR

He directly procures the equipment of approved make from manufacturers and gets it installed from authorized agency / service provider of the manufacturer or specialized agency as per criteria mentioned.

The main contractor, if does not fulfil the criteria himself, shall have to associate with specialized agency fulfilling the following eligibility criteria having successfully completed during last seven years ending up to previous day of last date of submission of tender as given below with completion certificate issued by an officer not below the rank of Executive Engineer or Equivalent duly attested. The Completion certificate should contain the name of the

contractor with address, Name of work and location, date of start of work, actual date of completion, amount of work done, satisfactory performance etc.

The following works are considered as specialized work

S.No.	Specialized works /Item of works	Criteria of associate agencies
1	Civil Work	The associate agency should have successfully completed works, as mentioned under during the last 7 years ending previous day of last date of submission of tender. (i) Three similar work each costing not less than Rs.14,11,700/- or (ii)Two similar works each costing not less than Rs. 21,17,500/- or (iii) One similar work costing not less than Rs.28,23,300 /-. The value of executed similar work shall be brought to the current costing level by enhancing the actual value of work at a simple rate of 7% per annum calculated from the date of completion to the previous day of last day of submission of bids. (Specialized similar work shall means "Renovation / Addition / Alteration / Rehabilitation / New Construction of Building (Civil Work only.)"
2	Electrical Work	The associate agency should have successfully completed works, as mentioned under during the last 7 years ending previous day of last date of submission of tender. (i) Three similar work each costing not less than Rs.14,93,700/- or (ii)Two similar works each costing not less than Rs.22,40,500/- or (iii) One similar work costing not less than Rs.29,87,300/-. The value of executed similar work shall be brought to the current costing level by enhancing the actual value of work at a simple rate of 7% per annum calculated from the date of completion to the previous day of last day of submission of bids. (Specialized similar work shall means "Providing and fixing of Electrical Installation work.)"
Similar work for point no. 1 and 2 above means, the works done under Government/ Central Public Sector Undertaking / State Public Sector Undertaking / Central Autonomous bodies / State Autonomous bodies / City Development Authority / Municipal Cooperation of City formed under any act by Central / State Government and published in Central / State Gazette.		

Additional conditions

1. The agency may be asked to arrange a Factory visit of the manufacturer for the Engineer-in-charge and two other representatives to verify the genuineness of the product at any stage of the order.

2. The agency has to provide a copy of the invoices to the department at the time of supply of furniture and the department shall be at liberty of verifying the authenticity and genuineness from the manufacturer. The laboratory / modular furniture shall have to be supplied and fixed in position as per the architectural drawings, requirement of the client department and as per the direction of Engineer-in-charge. Nothing extra shall be paid for providing & fixing/placing furniture.

3. The agency shall have to furnish a certificate from the manufacturer's head office / Branch Office mentioning that the materials have been supplied by them for the particular work. The manufacturer has to certify after verifying the material at the site, if the department desires so. The department will be at liberty of asking for documentary evidence in support of the manufacturer material, to verify the authenticity and genuineness.

4. The bidder shall provide a warranty of one year against the manufacturing defects and undertake repair and replacement of the defective part from the date of completion of the work.

5. The contractor has to set up a mock-up of furniture with a colour scheme immediately after the award of work or before the supply of actual furniture which will be finalized by IIT Delhi authorities.

6. The original warranty certificate from the OEM of the furniture will be obtained by the agency and the same will be handed over to the Engineer-In-Charge or his representative. The final bill will only be cleared up after submitting the original warranty certificate from OEM.

7. The order of preference in case of any discrepancy found in furniture items may be read as the following: -

a. Description of Schedule of quantities.

b. Particulars Specification and Special Condition, if any.

c. Drawings

d. CPWD Specifications.

e. Indian Standard Specifications of BIS

8. No claim for idle establishment & labour, machinery & equipment, tools & Plants, and the like for any reason whatsoever, shall be admissible.

9. The department shall not bear responsibility for lack of knowledge of site conditions and the consequences thereof. The information and site data mentioned herein and elsewhere in the tender documents are being furnished for general information and guidance only. The Engineer in charge in no case shall be held responsible for the accuracy thereof or any interpretation / or conclusions drawn therefrom by the contractor.

10. The contractor shall comply with all the preventive and protective environmental steps as stated in the MoEF guidelines, 2010.

11. The Contractor shall use vehicles having pollution under control certificate. The emissions can be reduced by a large extent by reducing the speed of a vehicle to 20 kmph. Speed bumps shall be used to ensure speed reduction. In cases where speed reduction cannot effectively reduce fugitive dust, the contractor shall divert traffic to nearby paved areas.

12. There shall be no concretization of the trees within one meter of their circumference.

13. The contractor shall arrange and manage the staff, labour and T&P as per the requirement of site conditions. No compensation shall be payable to the contractor or his staff, labour remaining idle due to hindrance in the work or for any business loss, etc. in case of any stoppage of work or delay caused in the start or during progress of work due to any reason whatsoever and there are likely chances of the hindrances in the work. The contractor shall plan the work accordingly. Necessary recovery shall be made for not deploying technical staff as per G.C.C. (General condition of contract).

14. The contractor shall under no circumstances close any road or passage to traffic without the approval of concerned agency and the Engineer-in-charge.

15. Work shall be carried out in such a manner, so as not to interfere with, or effect, retard or disturb the progress of any other on-going work in the adjoining areas, being executed by any other agency. Proper care should be taken to prevent damage to the overhead/underground electricity/gas/telephone/water & sewer line/other service lines etc. if any damages occur necessary restoration and implications will be the sole responsibility of contractor. Any claim arises due to above reasons will be borne by contractor.

16. The contractor shall execute the work carefully and safely without any damage to the other structure/ equipment or injury to workman. He shall be fully responsible for any accident/casualty, theft etc. during the execution of this work till its completion.

17. **Prevention of Nuisance and Pollution Control**: - The contractor shall take all necessary precautions measures to prevent any nuisance or inconvenience the owners, tenants or occupiers of adjacent properties and the public in general and to prevent any damage to such properties from pollutants like smoke, dust noise etc. The contractor shall use such methodology and equipment so as cause minimum environmental pollution of any kind during the execution of work and minimum hindrance road users and to occupants of the adjacent properties or other services running adjacent/near the vicinity of work. The contractor shall make good at his own cost and to the satisfaction of the Engineer-in-charge, any damage to road, paths, cross drainage works, or public or private property whatsoever caused during the execution of the work or by vehicle /traffic brought thereon by the contractor, without any reservation, entirely to the satisfaction of Engineer-in-charge.

18. The contractor shall take all adequate safety measures to ensure the safety of all workmen. It shall be the responsibility of the contractor to provide all safety equipment's such as gum boots, safety helmets, safety belts, slings, gloves, mask oxygen cylinder, life jackets etc. to all workmen to avoid any mishap at site during the execution of the work. The contractor shall be held solely responsible in case of any mishap at site.

19. The contractor shall submit a certificate before start of work, that "I am well versed with all safety rules, and I will own all the responsibility in case of any mishappening during the execution of work".

20. It shall be the responsibility of the contractor not to cause any damage to existing pipeline/water line/sewer line/telephone line/electric wire line or any such feature in the drain, if any. In case any such feature is noticed by the contractor during the execution of the work the same shall be brought to the notice of the Engineer-in-charge in writing along with evidence.

21. Labour Laws: It shall be the responsibility of the contractor to always follow clause 19 and its sub- clauses during the execution- of the work under this contract.

22. Safety Code: It shall be responsibility of the contractor to follow Safety Code as per General Condition of Contract and take all safety measures & precaution to prevent any accident /mishap at site during the execution of work by providing all safety equipment's to the workmen. In case of any accident at site, the contractor shall be directly held responsible for the same.

23. The special conditions to comply with the directives of Hon'ble NGT and issued vide O.M. No. DG/SE/CM/CIN/Misc./02 shall also form the part of this contract and shall have to be strictly adhered to by the contractor during execution of work for which no extra payment shall be admissible.

24. SITE CLEARANCE: After physical completion of the work, the site shall be cleared off all the malba, construction material, tools and plants, labour huts, cement store or any other temporary construction raised by the contractor during the execution of work, at his own cost. No extra payment shall be made the contractor for clearance of the site.

25. It will be the responsibility of the contractor to ensure that no mosquito breeding at site takes place. In case any mosquito breeding is found at site, a penalty deemed fit shall be imposed on the contractor.

26. For electrical work the material shall be of ISI certification, conforming to relevant IS, IEC standards. The materials shall be got approved from EIC before the start of the work.

27. A tolerance of plus or minus (+/-) 20mm is acceptable with respect to the Length, Width and Height of BoQ items related to the lab furniture only.

28. PP Sink size 600mm (L)X400mm (D)X450mm (H) with tolerance of (+/-) 50mm in all the dimensions as per manufacturer/ OEM specification.

29. PP Sink size 800mm (L)X460mm (D)X320mm (H) with tolerance of (+/-) 50 in all the dimensions as per manufacturer/ OEM specification.

30. The make of all times to be used shall be got approved by the Engineer-in-charge prior to execution. All times shall be BIS certified to ensure higher quality standards.

31. **Office general furniture which is not manufactured by OEM and shall be supplied by bidder as per following guidelines & certifications ISO 9001:2008, ISO 14001:2004, ISO 18001:2007, ISO 45001 BIFMA Level-I/BIFMA Level-II (Bureau of Industrial Furniture Manufacturer's Association), Green Guard (UL), Green Pro, Indian Design Mark and AIOTA for ergonomically design of Office Furniture & storage furniture certificate.**

FORM OF WATER PROOFING WORKS GUARANTEE BOND ON STAMP PAPER

This agreement made this……..day of two thousand …
.....
between
M/s……(hereinafter called the Guarantor of the one part) and the
BOG IIT Delhi (hereinafter called the Govt. of the other part).

Whereas this agreement is supplementary to the contract (hereinafter called the Contract) dated….....made between the Guarantor of the one part and Govt. of the other part, whereby the contractor, inter alia, undertook to render the buildings and structures in the said contract recited completely water and leak proof.

And whereas the Guarantor agreed to give a guarantee to the effect that the said structure will remain waterproof for **Five years** to be reckoned from the date after the maintenance period prescribed in the contract expires.

During this period of guarantee the Guarantor shall make good all defects and for that matter, shall replace at his risk and cost such members as may be damaged by water and in case of any other defect being found he shall render the building waterproof at his cost to the satisfaction of the Engineer-in- Charge and shall commence the works of such rectification within seven days from the date of issuing notice from the Engineer-in-Charge calling upon him to rectify the defects failing which the work shall be got done by the Department by some other contractor at the Guarantor's cost and risk and in the latter case the decision of the Engineer-in-charge as to the cost, recoverable from the Guarantor shall be final and binding.

If the Guarantor fails to execute the waterproofing or commits breaches hereunder then the Guarantor will indemnify the principal and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part of the Guarantor in performance and observance of this supplemental agreement. As to the amount of loss and/or damage and/or cost incurred by the Government the decision of the Engineer-in-charge will be final and binding on the parties.

In witness whereof of these presents have been executed by the Obligor…
.....
and
by……. For and on behalf of the BOG IIT Delhi on the day, month and year first above written.

SIGNED, SEALED and delivered by OBLIGOR in
presence of- 1.
2.

SIGNED for and on behalf of BOG IIT Delhi by..... in the presence of-
1.
2.

Blanks to be filled by ***Contractor/EE(CD-I)***

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

BID SUBMISSION

ONLINE BID SUBMISSION

The Online bids (complete in all respect) must be uploaded online in **two** Envelops as explained below: -

Envelope – 1 (Following documents to be provided as single PDF file)			
Sl. No.	**Documents**	**Content**	**File Types**
1.	Technical Bid	Demand Draft/Pay order or Banker`s Cheque /Deposit at Call Receipt/FDR of any Scheduled Bank against EMD.	.PDF
2.		Enlistment / Registration order of contractor, if applicable in this tender, as per NIT Form 6 Tender notice.	.PDF
3.		Certificate of work experience.	.PDF
4.		Certificate of Registration of GST and acknowledgment of up-to-date field return of GST.	.PDF
5.		**Affidavit on Rs.100/- Non judicial Stamp as per Notice Inviting Tender Condition 1.3 at page 8 of NIT. (Stamp Paper shall be purchased/ notarized between date of publishing and last date of submission of bids beside this NIT/Tender ID and name of work must be mentioned on the affidavit).**	.PDF
6.		Acceptance to execute INTEGRITY PACT.	.PDF
7.		Undertaking as per on firm's letter head. **"the physical EMD shall be deposited by me / us with the Authority inviting the tender, in case I / we become the lowest tenderer, within a week of the opening of financial bid, otherwise, department may reject the tender and also take action to debar me / us from tendering in any form in IIT Delhi"**	.PDF
8.		ESI and EPF Registration.	PDF
9.		FORM "F" (Duly filled with all required details	.PDF
10		In case of Partnership firm if all the papers of tender not signed by all the partners than a power of attorney authorizing the person who has signed the tender paper must be uploaded with the tender documents.	PDF
11		**The bidder/ OEM of the lab furniture should be an active member with SEFA (Scientific Equipment's Furniture Association) Documentary evidence to be submitted along with the Testing certificate of SEFA 8M and SEFA 10 has to be submitted**	PDF
12		Annexure-I (duly filled & signed by the bidders)	PDF
13		Annexure-II (duly filled & signed by the bidders)	PDF
14		Annexure-III (duly filled & signed by the bidders)	PDF
15		Any other documents specified in NIT	PDF
Envelope – 2			
Sl. No.	TYPES	Content	
1.	Financial Bid	Price bid should be submitted in BOQ format.	.Xls

All above documents shall be as per Tender Notice.

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

Part - C
PARTICULAR SPECIFICATIONS
LAB FURNITURE

DESCRIPTION OF WORK

SUMMARY AND SCOPE

The scope includes supply, installation, testing and commissioning of Plinth base type lab furniture with storage, worktop, leg space / knee space, electrical switches and sockets, sinks and faucets, gas / water valves, anti-vibration tables, and accessories as mentioned in schedule of quantity and attached drawings. Section Includes:

a. Furnish all cabinets and casework, including tops, ledges, supporting structures, and miscellaneous items of equipment as listed in these specifications and schedule of quantity, equipment schedules, and drawings including delivery to the building, set in place, level, and scribe to walls and floors as required. Furnish and install all filler panels, knee space panels and scribes as shown on drawings.

b. Furnish and deliver all utility service outlet accessory fittings, electrical receptacles and switches as listed in these specifications, schedule of quantity, equipment schedules, and drawings, as mounted on the laboratory furniture. All plumbing and electrical fittings, not preinstalled in equipment, shall be packaged separately and properly marked for delivery to the appropriate contractor.

c. Furnish and deliver, for installation by the mechanical contractor, all laboratory sinks, cup sinks or drains, drain troughs, overflows and sink outlets with integral tailpieces, which occur above the floor, and where these items are part of the equipment or listed in these specifications, schedule of quantity, equipment schedules, and drawings. All tail pieces shall be furnished less the couplings required to connect them to the drain piping system All the connections from the sink coupling to the drain point will be done by the contractor.

d. Furnish service strip supports where specified, and set in place, service tunnels, service turrets, supporting structures and reagent racks of the type shown on the drawings.

e. Remove of all debris, dirt and rubbish accumulated as a result of the installation of the laboratory furniture to an onsite container provided by others, leaving the premises broom clean and orderly.

1. BASIS OF WORK

Laboratory Furniture as the standard of construction for steel laboratory furniture. The construction standards of this product line shall provide the basis for quality and functional installation.

2. **FLOOR MOUNTED FURNITURE SYSTEM**:

CABINET STYLE:
Steel: Cabinet bodies, drawer bodies, shelves, drawer heads and door assemblies shall be fabricated from Cold Rolled Cold Annealed Steel (CRCA).

2.1. DRAWER AND DOOR STYLE:
Overlay – Square Edge.

Drawer and door, when closed, shall rest against face of cabinet shell, creating a ~ 19mm overlay front with ~3 mm reveal. The outer drawer and door head shall have a channel formation on all four sides to eliminate sharp raw edges of steel. The top front corners of the door shall be welded and ground smooth. Cabinet shall be available with 5-knuckle, semi-concealed or concealed hinges and optional pulls.

2.2.MATERIALS

A. General Requirements:

It is the intent of this specification to provide a high-quality steel cabinet specifically designed for the laboratory environment.

B. Steel:

Cold Rolled Steel:
Cold rolled sheet steel shall be prime grade 2.7mm, 2mm, 1.5mm, 1.2mm and 1.0 mm Thick as per I.S. Standard; roller levelled, and shall be treated at the mill to be free of scale, ragged edges, deep scratches or other injurious effects.

C. Glass:

Glass used for framed sliding and swinging doors must be 3 mm float glass. Glass used for unframed sliding doors must be 6 mm float glass. Glass used in fume hoods or other hazardous locations must be 5.5 mm laminated safety float glass, except the glass shielding fluorescent lights in fume hoods must be tempered glass to provide greater resistance to heat and impact.

D. Drawer and Door Pulls:

Drawer and door pulls shall be mounted on 100 mm centres, offering a comfortable hand grip, and be securely fastened to doors and drawers. The pull shall be of modern design, offering a comfortable handgrip, and be securely fastened to doors and drawers with screws. All pulls shall be satin finish aluminium, with a clear lacquer finish. Two pulls shall be required on all drawers over 600 mm long. The use of plastic pulls (moulded or extruded), or a design not compatible with usage by the handicapped, will not be acceptable.

E. Hinges:

Overlay 5-Knuckle Hinges:

5-KnuckleHingesHinges shall be made of Type 304 stainless steel, 0.9 mm thick and 64 mm high, with a brushed satin finish, and shall be the institutional type with a five-knuckle bullet-type barrel. Hinges shall be attached to both the door and case with two screws through each leaf. Welding of hinges to the door or case will not be accepted. Doors under 915 mm in height shall be hung on one pair of hinges, and doors over 915 mm in height shall be hung on three hinges.

F. Drawer Slide:
Heavy-duty, full extension, soft-close, self-closing, zinc-plated, ball bearing slides, rated for 45 kg loads.

G. Locks
Disk Tumbler:
Locks when shown or called for shall be a 5-disc tumbler with heavy duty interchangeable cylinder. Exposed lock noses shall be dull nickel (satin) plated and stamped with identifying numbers. Locks shall have capacity for 2000 primary key changes and Master Keyed one level with the potential of different, non-interchangeable Master Key groups.

H. Positive Catch:

A two-piece heavy-duty cam action positive catch. Main body of the catch shall be confined within an integral cabinet top or divider rail, while latching post shall be mounted on the hinge side of door. Polyethylene roller type catches are acceptable.

I. Shelf Adjustment Clips:

Shelf adjustment clips shall be ED (Electrophoretic deposition) coated steel. Use of a leg shoe, which does not conceal levelling device, will not be acceptable.

J. Sink Supports:

Sink supports shall be the hanger type, suspended from the end panels of the sink cabinet by four 6 mm diameter rods, threaded at the bottom end and offset at the top to hang from two full-depth reinforcements, welded to the top of the end panels. Two 19 mm × 38 mm channels, made from 2.7 mm thick steel, shall be hung on the threaded rods to provide an adjustable sink cradle for supporting sinks.

K. Support Struts:

Support struts shall consist of two 1.5 mm thick channel uprights, fastened at the top and bottom by two adjustable 2.7 mm thick "U"-shaped spreaders, each 38 mm wide and of length as required, formed from galvanized steel.

Struts shall be furnished to support drain troughs and to support worktops at plumbing spaces under fume hood superstructures or other heavy loads. Support struts can be furnished with hangers at extra cost, when specified, to support mechanical service piping and drain lines.

L. Universal Sockets

General control switches shall be of a 5A rating and shall be of approved make/type suitable for flush mounting. Switches shall have either integral mounting plates or white PVC/Perspex of min. 4.5 mm thick. Physical properties of switches i.e., the creepage distance shall needs to be truly comply with clearances and distances as per IS 3854 IS 60529 & IS 11000. All sockets of 5A and 15A ratings shall be of flush mounting type with combined control switches of the same rating as that of the sockets. All sockets' outlets shall be of 3/5 pin type. The switch, plug socket or regulator boxes shall be made of GI/sheet steel of minimum 16 SWG on all sides except in the front. Depth of boxes shall not be less than 75 mm and suitably increased where fan regulators are mounted in flush pattern. The boxes shall be provided with suitable earthing studs. Wherever required switches/fittings shall be fixed on metal strip, which in turn are welded to the box.

2.3.CONSTRUCTION

Steel Base Cabinet Construction:

1. General:

a. The steel furniture shall be of modern design and shall be constructed in accordance with the best practices of the Scientific Laboratory Equipment Industry. First class quality casework shall be insured using proper machinery, tools, dies, fixtures and skilled workmanship to meet the intended quality and quantity for the project.

b. All cabinet bodies shall be flush front construction with intersection of vertical and horizontal case members, such as end panels, top rails, bottoms and vertical posts in same plane without overlap. Exterior corners shall be spot welded with heavy back up reinforcements.

c. Each cabinet shall be complete so that units can be relocated at any subsequent time without requiring field application of finished ends or other such parts.

d. Case openings of Inset style cabinets shall be rabbeted on all four sides for both hinged and sliding doors to provide a dust resistant case.

e. All cabinets shall have a cleanable smooth interior. Bottoms shall be formed down on sides and back to create easily cleanable corners with no burrs or sharp edges.

f. Cabinets shall be designed using a standardized grid pattern to allow reconfiguration of doors and drawers.

2. Steel Gauges:

Thickness of steel used in construction of cases shall be 1.2mm except as follows:

a. Levelling bolt reinforcements 2.7 mm.

b. Case and drawer suspension channels, 1.9mm

c. Top and intermediate front horizontal rails, apron rails, hinge reinforcements, and reinforcement gussets 1.5mm.

d. Drawer assemblies, door assemblies, bottom, bottom back rail, toe space rail, and adjustable shelves, 1.0 mm.

3. Base Cabinets:

a. End uprights shall be formed into not less than an L-formation at the top, bottom, and back, and a 25 mm wide front C-formation. A pilaster shall be added to the inside front of the upright for cabinet and hinge reinforcement and shall be perforated for the support of drawer channels, intermediate rails, hinge screws, and shelf adjustment holes.

b. A 22 mm high top horizontal rail shall interlock with the flange at the top of the end panels for strength but shall be flush with the face of the unit. Top rails not flush with the face of end uprights shall not be acceptable.

c. Intermediate rails shall be provided between doors and drawers but shall not be provided between drawers unless made necessary by locks in drawers. Intermediate rails shall be recessed behind doors and drawer fronts and designed so that security panels may be added as required.

d. Intermediate vertical uprights shall be furnished to enclose cupboards when used in a unit in combination with a half width bank of drawers.

e. The cabinet bottom shall be formed from one piece of steel (except in corner units) and shall be formed down on the sides and back to create a square edge transition, welded to the cabinet end panels.

f. The front edge shall include a C-formation to form a 22 mm high bottom front rail, which shall be flush with the face of the end uprights. Cabinet bottom front rails not flush with the face of end uprights shall not be acceptable.

g. Toe space rail shall extend up and forward to engage the bottom panel, forming a smooth-surfaced, fully enclosed toe space, 75 mm deep × 100 mm high.

h. Back construction shall be one piece with integral channel formed for maximum strength and welded to back of top and bottom flanges of end uprights.

i. Each bottom corner of base cabinets shall have a 10 mm diameter (M10) levelling bolt, 64 mm long, capable of supporting a load of 225 kg. Access to the levelling bolts shall be through plug buttons in the cabinet bottom. Access through the toe space or levelling bolts requiring special tools for adjustment shall not be acceptable.

j. Adjustable shelves shall be formed down 19 mm, returned back 22 mm, and up 6 mm into a channel formation at the front and rear, and formed down 19 mm at each end. Shelves over 1065 mm in length shall be further reinforced with a channel formation welded to the underside of the shelf.

Shelves shall be adjustable in increments not greater than 25 mm.

Steel door assembly (two-piece) for solid panel swinging doors shall consist of an inner and outer door pan.

The outer door pan shall be formed on all four sides. The corners on the pull side of the outer door pan shall be welded and ground smooth to eliminate exposure of sharp steel edges at these critical points.

The inner door pan shall be flanged on all four sides, with hinge reinforcements welded in place. The door assembly shall be 19 mm thick and shall contain sound-deadening material. Door assemblies shall be painted prior to assembly and punched to allow attachment of pulls. The inner pan shall be indented to allow field installation of locks when required.

k. Doors shall be readily removable and hinges easily replaceable. Hinges shall be applied to the cabinet and door with screws. Welding of hinges to either cabinet or door will not be acceptable.

4. Drawer Assemblies:
Drawer bodies shall be made in one-piece construction, including the bottom, two sides, back, and front. They shall be fully coved at the interior bottom on all four sides for easy cleaning. The top front of the inner drawer body shall be offset to interlock with the channel formation in the drawer head, providing a 19 mm thick drawer head.

Knee space panels, where shown or specified, shall be made of 0.8 mm thick steel, finished the same as the casework cabinets, and shall be easily removable for access to mechanical service areas.

2.4. PERFORMANCE REQUIREMENTS

A. Steel Casework Construction Performance:

1. Base cabinets shall be constructed to support at least a uniformly distributed load of 976 kg/m² of cabinet top area, including the working surface, without objectionable distortion or interference with door and drawer operation.

2. Base cabinet levelling bolts shall support 227 kg per corner, at a 38 mm projection of the levelling bolt below the cabinet bottom.

3. Each adjustable and fixed shelf that is 1220 mm or shorter in length shall support an evenly distributed load of 195 kg/m², up to a maximum of 91 kg, with nominal temporary deflection but without permanent set. adjustable and fixed shelf 4 feet or shorter in length shall support an evenly distributed load of 40 pounds per square foot up to a maximum of 200 pounds, with nominal temporary deflection, but without permanent set.

4. Full Extension soft-close, self-closing ball bearing zinc-plated drawer slide shall be rated for 45 kg load capacity.

5. Swinging doors on floor-mounted inset-style casework shall support 91 kg suspended at a point 305 mm from the hinged side, with the door swung through an arc of 160 degrees. The weight load test shall allow only temporary deflection, without permanent distortion or twist.The door shall operate freely after the test and shall return to a flat plane in the closed position.

B. Steel Paint System Finish and Performance Specification:

1. After Cold Rolled Steel and Textured Steel component parts have been completely welded together and before finishing, they shall be given a pre-paint treatment to provide excellent adhesion of the finish system to the steel and to aid in the prevention of corrosion. Physical and chemical cleaning of the steel shall be accomplished by washing with an alkaline cleaner, followed by a spray treatment with a complex metallic phosphate solution to provide a uniform fine grained crystalline phosphate surface that shall provide both an excellent bond for the finish and enhance the protection provided by the finish against humidity and corrosive chemicals.

2. After the phosphate treatment, the steel shall be dried and all steel surfaces shall be coated with a

chemical and corrosion-resistant, environmentally friendly, electro statically applied powder coat finish. All components shall be individually painted, ensuring that no area is vulnerable to corrosion due to lack of paint coverage. The coating shall then be cured by baking at elevated temperatures to provide maximum properties of corrosion and wear resistance. The thickness of the epoxy powder coating should be between 80 and 100 micron.

3. The completed finished system in standard colours shall meet the performance test requirements specified under PERFORMANCE TEST RESULTS.

C. Performance Test Results (Chemical Spot Tests):

a. Testing Procedure:

Chemical Spot tests for non-volatile chemicals shall be made by applying 5 drops of each reagent to the surface to be tested and covering with a 32 mm diameter watch glass. watch glass, convex side down to confine the reagent. Spot tests of volatile chemicals shall be tested by placing a cotton ball saturated with reagent on the surface to be tested and covering with an inverted 2-ounce wide mouth bottle to retard evaporation. All spot tests shall be conducted in such a manner that the test surface is kept wet throughout the entire test period, and at a temperature of 77° ±3° F. For both methods, leave the reagents on the panel for a period of one hour. At the end of the test period, the reagents shall be flushed from the surface with water, and the surface scrubbed with a soft bristle brush under running water, rinsed and dried. Volatile solvent test areas shall be cleaned with a cotton swab soaked in the solvent used on the test area. Immediately prior to evaluation, 16 to 24 hours after the reagents are removed, the test surface shall be scrubbed with a damp paper towel and dried with paper towels.

b. Test Evaluation:

Evaluation shall be based on the following rating system.

Level 0 – No detectable change.

Level 1 – Slight change in colour or gloss.

Level 2 – Slight surface etching or severe staining.

Level 3 – Pitting, cratering, swelling, or erosion of coating. Obvious and significant deterioration.

After testing, the panel shall show no more than three (3) Level 3 conditions.

c. Test Reagents:

Test No.	Chemical Reagent	Test Method
1.	Acetate, Amyl	Cotton ball & bottle
2.	Acetate, Ethyl	Cotton ball & bottle
3.	Acetic Acid, 98%	Watch glass
4.	Acetone	Cotton ball & bottle
5.	Acid Dichromate, 5%	Watch glass
6.	Alcohol, Butyl	Cotton ball & bottle
7.	Alcohol, Ethyl	Cotton ball & bottle
8.	Alcohol, Methyl	Cotton ball & bottle
9.	Ammonium Hydroxide, 28%	Watch glass
10.	Benzene	Cotton ball & bottle
11.	Carbon Tetrachloride	Cotton ball & bottle
12.	Chloroform	Cotton ball & bottle
13.	Chromic Acid, 60%	Watch glass
14.	Cresol	Cotton ball & bottle
15.	Dichlor Acetic Acid	Cotton ball & bottle
16.	Dimethylformanide	Cotton ball & bottle
17.	Dioxane	Cotton ball & bottle

18.	Ethyl Ether	Cotton ball & bottle
19.	Formaldehyde, 37%	Cotton ball & bottle
20.	Formic Acid, 90%	Watch glass
21.	Furfural	Cotton ball & bottle
22.	Gasoline	Cotton ball & bottle
23.	Hydrochloric Acid, 37%	Watch glass
24.	Hydrofluoric Acid, 48%	Watch glass
25.	Hydrogen Peroxide, 3%	Watch glass
26.	Iodine, Tincture of	Watch glass
27.	Methyl Ethyl Ketone	Cotton ball & bottle
28.	Methylene Cloride	Cotton ball & bottle
29.	Mono Chlorobenzene	Cotton ball & bottle
30.	Naphthalene	Cotton ball & bottle
31.	Nitric Acid, 20%	Watch glass
32.	Nitric Acid, 30%	Watch glass
33.	Nitric Acid, 70%	Watch glass
34.	Phenol, 90%	Cotton ball & bottle
35.	Phosphoric Acid, 85%	Watch glass
36.	Silver Nitrate, Saturated	Watch glass
37.	Sodium Hydroxide, 10%	Watch glass
38.	Sodium Hydroxide, 20%	Watch glass
39.	Sodium Hydroxide, 40%	Watch glass
40.	Sodium Hydroxide, Flake	Watch glass
41.	Sodium Sulfide, Saturated	Watch glass
42.	Sulfuric Acid, 33%	Watch glass
43.	Sulfuric Acid, 77%	Watch glass
44.	Sulfuric Acid, 96%	Watch glass
45.	Sulfuric Acid, 77% and Nitric Acid, 70%, equal parts	Watch glass
46.	Toluene	Cotton ball & bottle
47.	Trichloroethylene	Cotton ball & bottle
48.	Xylene	Cotton ball & bottle
49.	Zinc Chloride, Saturated	Watch glass

* Where concentrations are indicated, percentages are by weight.

d. Performance Test Results (Heat Resistance):
Hot water (190° F - 205° F) shall be allowed to trickle (with a steady stream at a rate not less than 6 ounces per minute) on the finished surface, which shall be set at an angle of 45° from horizontal, for a period of five minutes. After cooling and wiping dry, the finish shall show no visible effect from the hot water treatment.

e. Performance Test Results (Impact Resistance):
A one-pound ball (approximately 50mm diameter) shall be dropped from a distance of 300 mm onto the finished surface of steel panel supported underneath by a solid surface. There shall be no evidence of cracks or checks in the finish due to impact upon close eye-ball examination.

f. Performance Test Results (Bending Test):
1.2 mm thick steel strip, finished as specified, when bent 180° over a 13 mm diameter mandrel, shall show no peeling or flaking of the finish.

g. Performance Test Results (Adhesion):
Ninety or more squares of the test sample shall remain coated after the scratch adhesion test. Two sets of eleven parallel lines, 1.6 mm apart, shall be cut with a razor blade to intersect at right

angles, thus forming a grid of 100 squares. The cuts shall be made just deep enough to go through the coating, but not into the substrate. They shall then be brushed lightly with a soft brush. Examine under 1075 lux (equivalent to 100 foot-candles) of illumination.
Note: This test is based on ASTM D2197-68, Standard Method of Test for Adhesion of Organic Coatings.

h. Performance Test Results (Hardness):

The test sample shall have a hardness of 4-H using the pencil hardness test. Pencils, regardless of their brand are valued in this way: 8-H is the hardest, and next in order of diminishing hardness are 7-H, 6-H, 5-H, 4-H, 3-H, 2-H, F, HB, B (soft), 2-B, 3-B, 4-B, 5-B (which is the softest). The pencils shall be sharpened on emery paper to a wide sharp edge. Pencils of increasing hardness shall be pushed across the paint film in a chisel-like manner until one is found that will cut or scratch the film. The pencil used before that one-that is, the hardest pencil that will not rupture the film-is then used to express or designate the hardness.

i. Upper Cabinet Construction (Wall Units):

1. Upper cabinets shall have a completely finished interior, same as the exterior, and shall be designed so that no mounting hardware is visible when installed.
2. End uprights shall be formed at front, bottom, and back to provide maximum strength and rigidity. Front edge of end upright shall be 19 mm wide. A pilaster shall be added to the inside front of the upright for cabinet and hinge reinforcement and shall be perforated for hinge screws and shelf adjustment holes.
3. Cabinet tops shall be formed with a 22 mm high C formation at the front edge and turned down at the back to engage a wall hanging rail.
4. Cabinet flush bottoms shall be formed with a 22 mm high C formation at the front edge.
5. Cabinet false bottoms shall be formed down on all four edges and shall be removable.
6. Cabinet backs shall be welded to the top, bottom, and ends.
7. Backs shall be perforated for shelf adjustment holes, which shall be enclosed by end uprights.
8. Adjustable shelves shall be:
   - Formed down 19 mm,
   - Returned back 22 mm,
   - Then up 6 mm into a channel formation at front and rear,
   - Also formed down 19 mm at each end.
   - Shelves over 1067 mm (42 inches) long shall be further reinforced with a welded channel underneath.
   - Shelves shall be adjustable on not more than 25 mm increments.
9. Glazed doors shall be 19 mm thick and consist of an inner and outer door pan welded together to form a single unit:
   - Outer door pan: 1.2 mm (18 gauge) steel, formed into a channel or flanged shape on all four sides, pierced and formed to create a 76 mm wide frame with beveled edge around the glass opening.
   - Inner door pan: 1.2 mm steel, flanged on all four sides, pierced for the glass opening.
   - Glass: Secured with rubber or vinyl gasket around entire edge.
   - Doors shall be glazed with 3 mm float glass.

10. Swinging doors under 914 mm (36") high shall be hung on one pair of hinges. Doors over 914 mm shall be hung on three hinges.

j. Steel Full Height Cabinet Construction (Tall Units):

1. Full height storage cabinets shall have a completely finished interior same as exterior.

   End Uprights shall be formed at the front, bottom, and back to provide maximum strength and rigidity. The front fascia of the upright shall be 32 mm wide, with the inside edge formed into a channel measuring 13 mm × 10 mm. A full-height box reinforcement shall be fitted within the channel, and shall be formed to provide a recessed strike for the door and additional cabinet reinforcement. The back side of this reinforcement shall be perforated with shelf adjustment holes spaced at not more than 25 mm centers. The back of the upright shall be formed into a 64 mm deep profile. A 1.6 mm thick hinge reinforcement shall be welded to the inner side of the front uprights.

2. Cabinet tops shall be formed into a channel shape at front with flange at rear and sides for electro-welding cabinet top to cabinet back and ends. Front fascia channel shall be strengthened with electro-weld reinforcements.

3. Cabinet Bottoms for storage cabinets shall be formed down on the sides and back to create a square edge transition welded to the cabinet end panels, and the front edge shall be offset to create a seamless door recess rabbet for dust stop. Cabinet bottoms shall be formed to provide a flush 25 mm face rail with a return flange to give a 14 mm deep × 127 mm high toe space. All cabinets shall have a cleanable smooth interior.

4. Toe space rails shall interlock in back of bottom rail and with end panel to provide a welding plate, and shall extend to the floor with a flange turned back and up for support.

5. Cabinet backs shall be welded to the top, bottom and ends. Backs shall be perforated for shelf adjustment holes on not more than 1" centres. Holes shall be enclosed by a formation in cabinet back and enclosed by end uprights.

6. Adjustable shelves shall be formed down 19 mm, returned back 22 mm, and up 6 mm into a channel formation at the front and rear; and formed down 19 mm at each end. Shelves over 1067 mm long shall be further reinforced with a channel formation electro-welded to the underside of the shelf. Shelves shall be adjustable in increments not exceeding 25 mm.

7. Glazed doors shall be 19 mm thick and consist of an inner and outer door pan welded together to form a single unit. The outer door pan shall be made from 1.2 mm thick (18 gauge) steel, formed into a channel or flanged shape on all four sides. It shall be pierced and formed to create a 76 mm wide frame with a beveled edge around the glass opening at the centre of the door. The inner door pan shall also be 1.2 mm thick (18 gauge) steel, flanged on all four sides, and pierced for a glass opening at the centre. The door glazing shall be secured with a rubber or vinyl gasket around the entire edge of the glass. Doors shall be glazed with 3 mm float glass.

8. Sliding doors shall be suspended from the top in a roll formed steel track welded to cabinet top and shall glide on nylon rollers. Track shall be so designed to prevent accidental removal of doors.

k. Steel Full Height Cabinet Construction: (Apron Storage Cabinet)

1. Full height storage cabinets shall have a completely finished interior same as exterior. Sliding doors shall be suspended from the top in a roll formed steel track welded to cabinet top and shall glide on nylon rollers. Track shall be so designed to prevent accidental removal of doors.

   End Uprights shall be formed at the front, bottom, and back to provide maximum strength and rigidity. The front fascia of the upright shall be 32 mm wide, with the inside edge formed into a channel of 13 mm × 10 mm.A full-height box reinforcement shall be fitted into the channel,

formed to provide a recessed strike for the door and to reinforce the cabinet. The backside of the reinforcement shall be perforated with shelf adjustment holes spaced not more than 25 mm apart.The back of the upright shall be formed in a 64 mm formation. 1.6 mm thick (16 gauge) hinge reinforcement shall be welded to the inner side of the front uprights.

2. Full height storage Cabinet tops shall be formed into a channel shape at front with flange at rear and sides for electro-welding cabinet top to cabinet back and ends. Front fascia channel shall be strengthened with electro-weld reinforcements.
3. Cabinet bottoms for storage cabinets shall be formed down on the sides and back to create a square edge transition welded to the cabinet end panels, and the front edge shall be offset to create a seamless door recess rabbet for dust stop. Cabinet bottoms shall be formed to provide a flush 25 mm face rail with a return flange to create a 14 mm deep × 127 mm high toe space. All cabinets shall have a cleanable, smooth interior.
4. Toe space rails shall interlock in back of bottom rail and with end panel to provide a welding plate, and shall extend to the floor with a flange turned back and up for support.
5. Cabinet backs shall be welded to the top, bottom and ends. Backs shall be perforated for shelf adjustment holes on not more than 25mm centres. Holes shall be enclosed by a formation in cabinet back and enclosed by end uprights.
6. Adjustable shelves shall be formed down 19 mm, returned back 22 mm, and up 6 mm into a channel formation at the front and rear; also formed down 19 mm at each end. Shelves over 1067 mm long shall be further reinforced with a channel formation electro-welded to the underside of the shelf. Shelves shall be adjustable on not more than 25 mm increments..
7. Solid panel doors shall consist of inner and outer pan formations mechanically assembled after painting. All full-height solid panel doors shall be further reinforced by a full-height channel formation welded to the inner pan. Doors shall be 19 mm thick and contain sound-deadening material.
8. These storage cabinet will have 2 nos shelves to keep shoes/gloves/head cover etc and horizontal bar for Hanging garments.

l. Granite Work Top:
The worktops shall be 18/19mm Jet black Granite of an even surface and the level. Tolerance less than 1 mm. The front edge of the granite shall be chamfered at an angle of 28 deg and smoothened. The back splash for the wall bench shall be granite 18/19mm thick material for an height of 100mm from the finished table top level.

m. Melamine laminated worktop:
Plastic laminate tops and back-splash shall be built up to a 1.6 mm thick plastic surface (of the colour and pattern selected), attached to the sub-top with a water-resistant adhesive. The substrate shall be of 640–720 kg/m³ medium density particle board to make a finished top thickness of 25 mm. All exposed edges shall be self-edge banded unless otherwise specified. All particle board edges and the underside of the top shall be sealed.

n. Polypropylene Moulded Sinks:
The sinks should be injection moulded from Poly propylene co-polymer resin. Polypropylene to have very high resistance to attack from a wide range of chemicals and the ability to withstand temperatures up to 100 deg C. The impact resistance should be high which will minimize damage during and after installation. The sinks should be with self-draining base and should be suitable for mounting on top or underside of the work benches. The sinks should be compatible to a vast number of acids, alkalis and reagents. The size of the sink is 600Lx450Dx315Hmm AND BOWL SIZE: 550Lx400Dx315Hmmmm. This sinks shall have bottle trap with reducing coupler of size

51x31mm and with 38mm polypropylene pipe of one foot length. All gaskets and O-rings are made from Nitrile.

o. Reagent Rack in Island Bench:

Reagent racks are designed to be fixed on top of the worktop. Each rack will have vertical uprights made of 1.2 mm thick CRCA steel, with dimensions as per boq. Each reagent rack will have 300 mm wide and 10 mm thick glass shelves, supported with appropriate shelf supports, and will be designed as a 2-tier system with a 300 mm vertical gap between each shelf.

An electrical raceway will be fixed between the two uprights, OR each upright will have a provision for fixing 2 Nos. electrical sockets with a switch, positioned between the bottom shelf and the worktop.

Each glass shelf will be provided with an SS316 stainless steel retaining rod on all sides.

p. Dual Purpose Eye Wash/Drench Hose Units:

Deck mounted eye wash/drench hose units shall be capable of use as a fixed eye wash with hands-free operation or as a drench hose. Units shall have two Gentle Spray outlet heads mounted parallel and angled forward, each with a self-regulating volume control, reticulated polyurethane filter and removable spray cover. Dust covers shall be hinged swing-away style and shall be permanently attached to the spray head with a stainless-steel pin. The valve shall be self-closing type with a stainless-steel squeeze handle and a locking clip to hold the valve open once activated. Units shall be furnished with a deck flange with a locator guide to hold the unit facing forward and an 8 ft. reinforced PVC hose.

q. Safety Shower:

Ceiling-mounted safety shower consisting of a 254 mm diameter orange ABS plastic shower head. 25 mm IPS (International Pipe Size) chrome-plated brass stay-open ball valve. Valve is US-made with chrome-plated brass ball and Teflon seals. Furnished with stainless steel actuating arm and 737 mm stainless steel pull rod. Water supply will be via 25 mm NPT female inlet and comes with an ANSI-compliant identification sign.

r. Slotted Angle Open Rack:

The construction of slotted angle racks shall consist of a rigid structure made of 4 nos. of 2 mm thick, 50 × 50 mm angles, with 6.5 mm diameter holes at 50 mm pitch. The unit shall be open on all four sides. The top and bottom of the unit shall be permanently closed, and in between there shall be 5 adjustable shelves. The height of the open rack shall be 2134 mm, depth 559 mm, and length options shall be 610 mm, 762 mm, and 914 mm. The load-bearing capacity of each shelf shall be 30 kg.

s. Anti-Vibration Tables:

Geometric Profile of Anti-Vibration Table	Anti- Vibration Table should have an overall Rectangular Working Surface of 760 x 560 mm and with a height of 940mm (37 inch).
Granite Geometric Profile	Granite geometry should be as per IS Standards IS 7327: 1991 where Granite will have dimension of 760 X 560 X 45 mm.
Thickness of Granite	Thickness of the Granite should as per IS Standards IS 7327: 1991 where depth shall be maintained for 45mm unless otherwise specified. Thickness of the worktop will be 80mm.
Surface Roughness	Surface Roughness of the Granite should be maintained between 7-10 Microns as per IS Standards IS 7327: 1991.
Rigidity	The Granite loaded area should not deflect below the remaining area by more than 1 micron/200N.
Tolerance	The Tolerance Limit for Granite should not exceed more than 10 micron as per IS Standards IS 7327: 1991.

Physical Properties (As per IS 7327:1991)	Density, ρ: 2500 kg/ m3 - 3000 kg/ m3 Tensile Breaking Stress: 7 – 35 N/mm2 Compression Breaking Stress: 100 – 300N/mm2 Porosity Coefficient: 1 – 1.5% Imbibition Coefficient: 1 – 3% Coeff. of linear thermal expansion: 2 to 5 X 10-6-K
Table Legs	Legs for the table should be made of Granite 559mm x 895mm & 45mm thick as per IS Standards IS : 4270 : 1992 and 50mm dia MS powder coated connecting rod (Tie bars) for Reinforcement
Anti-Vibration Pads	Rubber bushes should be provided below the AVT at 4 corners. Rubber bushes should be of circular type having a diameter 40mm & Height 35mm to with stand the vibration as per IS standard.
Fabrication & Welding	Fabrication of all structure should be in accordance with IS:800 (latest) unless otherwise specified, and in conformity with various clauses of this specification. Welding of the structure shall be as per IS:800 and IS:816.

Laboratory Service fixtures:
General

1. All laboratory service fixtures shall have the construction and shall meet the performance requirements set forth in this specification. Fixture types shall be as indicated in the fixture schedule or fixture details included in either the project drawings or these specifications.
2. All service fixtures shall be factory assembled (including the assembly of valves and shanks to turrets, flanges and other mounting accessories), and each fixture shall be individually factory tested. Fixtures shall be tested in the manner and at the pressures set forth below.
3. Except as otherwise indicated, faucet and valve handles shall be forged brass Nylon type and shall have a color-coded screw-on index disc. Color code requirements for indexing service fixtures shall follow DIN Standard 12920:1995.

   Finish.

4. Laboratory service fixtures and safety equipment shall be furnished with a powder coated finish to enhance the appearance of the fitting and to protect against corrosion. Coating material shall be a blend of epoxy and polyurethane. The hybrid blend shall ensure a finish coating with and optimum combination of chemical resistance, mar and abrasion resistance and resistance to fading under ultraviolet (UV) light.
5. Fittings inside fume hoods shall have an epoxy finish color-coded to match the fixture service index color. Coating material shall be free flowing epoxy powder with a particle size of 35-70 microns.

   Mar and Abrasion Resistance

6. Finishes shall have a pencil hardness of 2H to 4H with adhesion substantial enough to withstand both direct and reverse impacts of 160-inch pounds. Finish shall have excellent mar resistance and be capable of withstanding scuffing, marring and other ordinary wear.

Reparability

7. Finish shall be capable of surface repair in the event that a fixture is scratched, or a surface rupture occurs. The service fixture manufacturer shall have available an air-drying aerosol specially formulated to match the existing epoxy coating color, which may be applied in the field to repair coated surfaces.

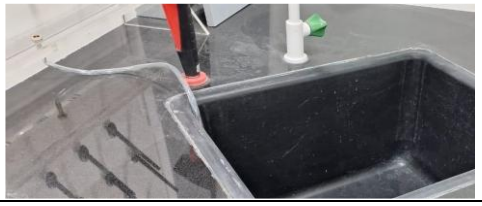
   Water Faucets and Valves

8. All faucets and valves for water service shall have a renewable unit containing all working components subject to wear, including a stainless-steel replaceable seat and an integral adjustable volume control (designated by the suffix “AC”). The renewable unit shall be interchangeable among all faucets and valves for water service. The renewable unit shall be broached for position locking in the valve body. The unit shall have a high durometer thermoplastic valve disc and a molded TFE stem packing. The unit shall be capable of being readily converted from compression to self-closing, and vice versa, without disturbing the faucet body.
9. Goosenecks shall have a separate outlet coupling with a 3/8" IPS female thread securely brazed to the gooseneck for attachment of serrated hose ends, aspirators and other outlet fittings. Rigid goosenecks shall have a 3/8" IPS male inlet thread and be threaded directly into the faucet body so as to be absolutely rigid. Swing goosenecks shall utilize a TFE packing with an externally adjustable packing nut.

10. Water faucets and valves shall be fully assembled and individually tested at 80 pounds per square inch (PSI) water pressure.
11. APPLICABLE CODES & STANDARDS
    i. SEFA 3 – Scientific Equipment and Furniture Association
    ii. SEFA 8 - Scientific Equipment and Furniture Association
    iii. NFPA 30 - National Fire Protection Association
    iv. NFPA-45 - National Fire Protection Association
    v. UL - Underwriters Laboratories
    vi. ASTM D552 – Bending Test

PROBABLE IMAGES OF ITEMS

Base Storage Cabinet	
Wall storage Cabinet	
Tall Storage Cabinet	

Apron storage Cabinet	
Knee Space	
PP sink	
Peg Board	

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

Service Pendent	
Anti Vibration Table	
H frame Table	

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

Open Rack	
Solvent Unit	
Chemical Storage	

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

Safety Station	
Sitting bench with Shoe Rack below	
Sitting Ht Finished Back	
SS Stool	
Lab Chair	

C ----NIL I--- NIL O--- NIL

EE (CD-I) AEE (AC Division) AE (C) JE (E)

Lab Plans
(Drawings)

Kindly click on the link to download the soft copy of layout plans or Copy paste the link in the address bar.

https://owncloud.iitd.ac.in/nextcloud/index.php/s/7XDkXoJbia8GgoA

PART 'C'

SCHEDULE OF QUANTITY

Name of work:- Laboratory facilities set-up for Optics and Photonics Centre (OPC) at fourth floor of SATHI Building at Sonipat Campus of IIT Delhi.

Sub-Head:- Manufacture, Supply , Installation and Commissioning of Laboratory furniture in OPC Lab at SATHI Building including services like Fume hood furniture's & accessories, Dark rooms Interior, Lab effluent drainages, Electrical, Data & Networking, Ventilation & Air- Conditioning and other allied Utility Distribution System etc. in OPC Lab at SATHI Building, Sonipat Campus.

S.No	**Description**	**Unit**	**Qty.**	**Rate Rs. (Inclusive of GST)**	**Amount Rs.**
	(A) LAB FURNITURE AND ACCESSORIES				
1	Deck Mounted Double Head Eyewash. Supply and installation of deck-mounted, double outlet emergency eyewash unit, suitable for use in laboratory settings near fume hoods or workstations with two gentle spray outlet heads with necessary accessories.	Nos.	2		
2	Supply and installation of PVC base molding with Corner clip and accessories for laboratory fume hoods of thickness 3.0 – 3.5 mm and 100 mm nominal hight, resistance to acids, alkalis, solvents, and cleaning agents used in labs.	Rft.	12		
3	Hardwood Worktop. Supply and installation of chemically resistant hardwood worktop, 25mm thick,Smooth, sanded, and coated with chemical-resistant polyurethane or epoxy sealer for use with laboratory fume hoods.	Sqft.	36		
4	18-19 mm thick granite worktop Supply and installation of 18-19 mm thick chemically resistant granite worktop for laboratory fume hood base surface. Black or dark grey preferred or approved equivalent with Chamfered or pencil round edges, machine-cut, polished and joints filled with chemical-resistant epoxy or silicone sealant	Sqft.	14		
5	L-Angle for worktop support (Nominal size of L-angle should be approximate 7 inch both arms). Supply and installation of L-angle structural supports for mounting and reinforcing worktops under fume hoods including cutting, drilling, fabrication of L-angles to required size and necessary accessories to be included with anti-corrosive paint.	Nos.	4		

6	Standing height Sink Table consisting of 1 Nos. Sink Cabinet, PP Sink with Accessories, Acrylic Pegboard, Granite worktop with Marine Edge. Supply and installation of standing height laboratory sink table, designed for laboratory environments. The unit shall include a worktop with integrated sink, sturdy underframe, and plumbing accessories suitable for chemical and water use. The table shall be suitable for heavy-duty laboratory tasks including washing, draining, and cleaning of lab glassware and materials as per approved drawing. Acrylic Pegboard Board with 23 pegs with SS 316L (Stainless Steel, Grade 316L) Tray, 610mm(L) x 610mm(H) With 90 Degree bend tube upto sink. PP Sink Size : 890mm(L)x890mm(D)x760mm(H) Waste, 1 ½ inch X 3 inch BSP (British Standard Pipe). Anti siphon bottle trap. Reducing coupler in PP 51mm X 31mm + PP Pipe lengths - 5mtr length - Dia 38mm upto nearest Drain	Nos.	1		
7	Standing height Sink Table consisting of 1 Nos. Sink Cabinet, 1 Door Cabinet, PP Sink with Accessories, Acrylic Pegboard, Granite worktop with Marine Edge. Size: 890mm(H)x 890mm (D) x 1370mm(L). Supply and installation of standing height laboratory sink table, designed for laboratory environments. The unit shall include a worktop with integrated sink, sturdy underframe, and plumbing accessories suitable for chemical and water use. The table shall be suitable for heavy-duty laboratory tasks including washing, draining, and cleaning of lab glassware and materials as per approved drawing. Acrylic Pegboard Board with 23 pegs with SS 316L (Stainless Steel, Grade 316L) Tray, 610mm (L) x 610mm(H) With 90 Degree bend tube upto sink. PP Sink Size : 890mm(L)x890mm(D)x760mm(H) Waste, 1 ½ inch X 3 inch BSP (British Standard Pipe). Anti siphon bottle trap. Reducing coupler in PP 51mm X 31mm + PP Pipe lengths - 5mtr length - Dia 38mm upto nearest Drain	Nos.	2		
8	Service Dropper Supply, fabrication, and installation of vertical service dropper to convey laboratory utilities (gas, air, vacuum,	Nos.	17		

	water, electrical conduits) from overhead service lines or pendants down to the workbench or fume hood connection points. The dropper shall be constructed from corrosion-resistant materials and properly supported to ensure stability, safety,Suitable brackets, clamps, and fasteners for secure vertical mounting and size as per approved drawings. (Approximate Size 100mm X 100mm X 2845mm)				
9	Granite Skirting Supply and installation of 18-19 mm thick granite skirting of 100 mm ht. along the base of fume hood structures or laboratory workstations. The skirting shall be fabricated from matching black/dark granite and fixed securely to the workstation base or adjacent walls to provide a clean, durable, and chemical-resistant finish that protects from splashes, wear, and cleaning chemicals. granite fix with Chemical-resistant adhesive/ silicone or epoxy grout as approved.	Rft.	66		
10	Standing height table Supply, fabrication, and installation of a standing height laboratory end-wall /wall table with a combination of open knee space and storage cabinet, topped with 18-19 mm thick black granite worktop. The unit shall be suitable for use adjacent to fume hoods or as a standalone lab table against a wall. Construction shall be chemical resistant and compliant with laboratory safety and furniture standards.				
10.1	End wall table 1 nos of Knee Space and 1 nos 1 Drawer/2 Shutter cabinet with Accessories and Size-1395mm(L)x760mm(D)x 890mm(H).	Nos.	6		
10.2	Wall table 2 nos of Knee Space and 3 nos 1 Drawer/2 Shutter cabinet with Accessories and Size-3810mm(L)x890mm(D)x 890mm(H).	Nos.	2		
10.3	Wall table 1 nos of Knee Space and 2 nos 1 Drawer/1 Shutter cabinet with Accessories and Size-1982mm(L)x760(D)x890(H) mm	Nos.	6		
10.4	Wall table 1 nos of Knee Space and 1 nos 1 Drawer/2 Shutter and 1 nos 1 Drawer/1 Shutter cabinet with Accessories and Size-2135mm(L)x760mm(D)x889mm(H).	Nos.	3		
10.5	Wall table 2 nos 1 Drawer/2 Shutter cabinet with Accessories and Size-1525mm(L)x760mm(D)x890mm(H).	Nos.	4		

10.6	Wall table 1 nos of Knee Space and 2 nos 1 Drawer/1 Shutter cabinet with Accessories and Size - 1980mm(L)x890mm(D)x 890mm(H).	Nos.	1		
10.7	Wall table 1 nos of Knee Space and 1 nos 1 Drawer/2 Shutter and 1 nos 1 Drawer/1 Shutter cabinet with Accessories and Size - 2135mm(L) x890mm(D)x 890mm(H).	Nos.	1		
10.8	End wall table 1 nos of Knee Space and 1 nos 1 Drawer/2 Shutter cabinet with Accessories and size- 1550mm(L)x760mm(D)x 890mm(H).	Nos.	1		
10.9	Wall table 2 nos of Knee Space and 3 nos 1 Drawer/2 Shutter cabinet with Accessories and Size- 3810mm(L)x760mm(D)x 890(H).	Nos.	2		
10.10	Wall table 2 nos 1 Drawer/2 Shutter cabinet with Accessories and Size- 1525mm(L)x890mm(D)x890mm(H).	Nos.	1		
11	Four Legged bench unit with Caster Supply and installation of Bench unit shall be a robust, four-legged seating solution fitted with high-quality caster wheels for mobility. It is intended for use in institutional, educational, laboratory, or industrial environments where durability and portability are essential with all complete assessories. Size:- 1600mm(L)x560mm(D)x890mm(H) Casters: 4 heavy-duty swiveling caster wheels Minimum 75 mm diameter At least 2 lockable wheels to prevent movement during use	Nos.	8		
12	Rear Scribe Supply and installation of Rear scribe is a back panel fitted to workbenches, lab tables, or counters to close the gap between the bench and the wall. It provides a neat finish and prevents items from falling behind the bench. Ideal for laboratories, educational institutions, and workstations and minimum 18 mm (for board-type scribes) or 1.2 mm (for metal types). High-pressure laminated board / Stainless steel / Powder-coated mild steel as per drawing.	Nos.	12		
13	Open rack with 5 shelves Supply and intallation Open-type vertical storage rack unit with 5 shelves, designed for storing laboratory supplies, equipment, documents, or general	Nos.	6		

	materials. The unit should be free-standing, durable, and corrosion-resistant, with smooth finishing and sufficient structural strength and Epoxy polyester powder-coated, minimum 50–60 microns. SIZE: 2134mm(H)x560mm(D)x915mm (L).				
14	Adjustable End scribe Supply and installation adjustable End Scribe is a vertically mounted finishing panel designed to cover the gap between the end of a workbench and an adjacent wall or structure. It provides a clean, sealed, and adjustable interface to accommodate minor dimensional variations or wall irregularities as per drawing.	Nos.	1		
15	Tall Unit Swinging Glazed Door with 5 Nos. Shelves Supply and Installation tall storage unit designed for laboratories, offices, or institutional use featuring a full-height swinging door with glazed (glass) panel and five fixed or adjustable shelves. The glazed door allows easy visibility of contents while providing dust protection and secure storage and 5 Nos., fixed or adjustable; made of same material as structure or glass. Size - 915mm(L)x560mm(D)x2135mm(H). Gauges of steel used in construction of cases shall be 1.2mm a. Levelling bolt reinforcements 2 mm. b. Case and drawer suspension channels, 1.9mm. c. Top and intermediate front horizontal rails, apron rails, hinge reinforcements, and reinforcement gussets, 1.2mm. d. Drawer assemblies, door assemblies, bottom, bottom back rail, toe space rail, and adjustable shelves, 0.8mm. e. The thickness of the epoxy powder coating should be between 80 and 100 microns.	Nos.	8		
16	10 mm thick Arcylic Splash Gaurd with Support Supply and instalation of Transparent acrylic splash guard designed to provide a protective barrier against splashes, Crystal clear, scratch-resistant coating preferred, contaminants, or droplets in laboratory. The unit includes a sturdy support system (frame or brackets) for secure and stable installation on benches,	Nos.	1		

	counters, or desks. Size- 455mm(H)x 8385mm(L)				
17	Service Enclosure, Supply and installation of service enclosure designed to house and protect utility connections such as electrical outlets, gas valves, water taps, and exhaust duct connections for a laboratory fume hood. The enclosure ensures safe, organized, and accessible service points while maintaining the integrity and safety of the fume hood installation and Rubber gaskets or foam seals to prevent dust and fume leakage. Size- 300mm(L)x150mm(D)x2845mm.(H)	Nos.	1		
	PP/FRP & ACCESSORIES				
18	Supply, fabrication, and installation of PP-FRP (Polypropylene-Fiber Reinforced Plastic) ducts for laboratory fume extraction or chemical exhaust systems. The ducts shall be suitable for transporting corrosive gases and vapors in chemical processing or laboratory environments. The ducting system must be leak-proof, corrosion-resistant, and capable of withstanding high chemical exposure and negative pressure conditions. Chemical-resistant Polypropylene (PP) sheet 3 mm thick, FRP lamination using chopped strand mat (CSM) with isophthalic polyester resin, Outer surface with smooth, resin-rich, UV-resistant finish. Circular / Rectangular duct as per design requirement and system layout.	Sqm.	100		
19	MS Support for Ducts like threded rod, anchor bolts, c-chanels, clamps, angles, bolts & nuts. Inside lab, within Shaft & outside the building.	Kg.	170		
20	PP moulded 300mm dia. single leaf Butterfly Manual damper with Both side flanges For Fumehood.	Nos.	2		
21	PP moulded 200mm dia. single leaf Butterfly Manual damper with Both side flanges For Bypass.	Nos.	1		
22	PVC Coated Collapsable hose 300mm Dia with 350mm Dia Clips.	Rm.	2		
23	Fumehood Base cabinet vent connection & Accessories.	Set.	2		
	UTILITY DISTRIBUTION SYSTEM WITH ACCESSORIES				
24	Supply, laying, joining, testing and commissioning of CPVC 4120 SDR				

	11/SCH40 plastic pipe as per ASTM D-2846/ASTM F 441 pipeline with necessary slope. The rate quoted shall include for (All fittings shall be SCH40 as per ASTM F439) necessary Unions, Reducer, Coupling, Tee, Reducer tee, Elbow, Male adapter, Female adapter, End cap, Brass couplings, Flange, Gaskets, clamps Male/Female Adapter brass threaded coupling, Adhesives solution(ASTM F-493), Wall bores cutting through walls, U clamps etc. as per dwg to be considered for all sizes of every 1.5 mts distance. Note: Mode of Pipe measurement will be centreline measurement without any additional measurement for bends, Tee, reducers and fittings, supports etc.				
24.1	Pipe-Chlorinated Polyvinyl Chloride-15mm NB dia.	Mtr.	60		
25	Supply erection, testing and commissioning of CPVC ball valves with required end connections (socket/threaded/flanged) of approved make and conforming to relevant specifications. Valves shall be suitable for intended service conditions (temperature, pressure, and fluid compatibility) and include proper markings for size and flow direction.				
25.1	Ball Valve-Chlorinated Polyvinyl Chloride- 1/2" NB.	Nos.	8		
26	Supply of Box Clamp Engineering, Procurements of materials, Packing, Loading, Transportation from Vendors Works to Site, Delivery & Unloading at site of Supports for tubes and pipes. The Package shall consist of the following:				
26.1	Box Clamp with TE nut & SS Allen Screw - Polypropylene- 1/2".	Nos.	60		
26.2	CPVC and Brass Source Connector.	Nos.	3		
26.3	Sink connector.	Nos.	3		
26.4	Eye wash connector.	Nos.	3		
26.5	Fumehood connector.	Nos.	2		
	LAB EFFLUENT DRAINGAE SYSTEM WITH ACCESSORIES				
27	upply of PPR Pipe Complete with necessary slope and fittings specials like flanges, P-Trap, end cap, bends, collar, Equal Tee, Reducing Tee, Y-type Tee, gaskets, bolts, nuts, Tagging(Acrylic),				

	washers, unions, heat welding,etc.The rate quoted shall include for necessary wall bores cutting through walls, column, pipe clamps & supports(including required size of anchor fasteners type, Threaded Rods, " U " Clamp & Universal GI clamps with necessary bolts, washer and nuts, suspended in ceiling and Roof slabs etc.) to be considered for all sizes of every 1 mts distance, including earth excavation, chipping of concrete for 150mm & finishing the same with necessary cement works etc.				
27.1	Pipe-Polypropylene-50mm NB dia.	Mtr.	60		
28	ESD (Electrostatic Discharge) Antistatic epoxy resin flooring Supply, surface preparation, and application of 3-layer ESD-safe antistatic epoxy resin flooring of having minimum thickness 2.0 mm (or as specified) for protection against electrostatic discharge in sensitive areas such as electronics assembly, data centers, pharmaceutical cleanrooms, and laboratories. The flooring shall be designed to safely dissipate static charges while providing a durable, chemical-resistant, and seamless surface.	Sqm.	468		
29	Making Core cuts in RCC Slab as per requred sizes and locations as shown in the drawing inclusive of necessary ad`ditional bracing for reinforcement. Rate to include carting away the debris and making necessary provisions to protect equipment and installed works completed in floor below. Depth of corecuts to be verified as per site. Rate to be inclusive of sealing the surrounding sides of the openings with epoxy grout and the annular space around the opening to be filled with microconcrete and non shrink cement slurry. All core cuts for plumbing areas to be tested for water proofing post completion of works	Nos.	4		
30	Supply & installation of Desk based Workstation with Desk mounted privacy screen of following sizes & details as per approved mockup/drawing/design & manufacturers specifications which include: Size- 1200mm(L)x600mm(D)x750mm(H) Table top – All table tops (+750mm level) to be formed out of 25 mm thick Particle board finished in approved shade of	Nos.	30		

	laminate all sides and balancing laminate on unexposed face/underside. Provided with metal Flip top (min. 500mm W) for wire manager on front work surface sufficient for accommodating switch sockets and data/voice ports as per requirement.. Legs & Understructure – System to have trapezoidal shaped Metal support structure / Metal Loop legs (60mm X 30mm) formed out of 1.6mm thick CRCA finished in powder coating and fixed with die-cast connector which makes weld-free design. Extrusion shall be made in trapezoid shapeas and as per approval of architect. Panel above Table Top – 450mm high panels (30mm thick) above table top and length equal to workstation length, straight edged desk mounted screen with metal powder coated Trims, made of 1.6mm thick CRCA alongwith fabric panel inserted in a block. Tiles above table top are Fabric pinup & Laminate White board shall be provided. The panel/screens to be rigid and straight and properly aligned. Cable Management – Individual raceway arrangement through power beam/Power tray under desk for Data and Power Cables. Each workstation shall be equipped with Power & Data terminations below the table top & accessed via Flip top. The user should be able to plug and unplug their equipment without leaving their seat. Flip top box with brush/horse hair on work. surface to accommodate 3Socket + 2switch for power & 2 socket for data/voice point (or as instructed) on work surface. The flip top to have additional support and should be of thicker in nature. Beams- Leg to Leg Beam will be made of Aluminum extruded powder coated with Trapezoidal cross section of size 60 x 30mm ABOVE TABLE TOP :900Wx300H-8MM thk sandwich glass supported on Table Top with Clamp Pedestal unit Size :375mm (L) x 450mm(D) x600mm (H)				
31	**Cabin Table**				
31.1	Supply and installation of modular table set comprising the following components: 1. Table Top:	Nos.	8		

	Main Table Top Size: 1600mm (W) x 600mm (D) Return Table Top Size: 1000mm (W) x 450mm (D) Material: 25mm thick high-density particle board with both surfaces finished in durable laminate (minimum 0.8mm thickness). Edge Banding: All exposed edges to be sealed with 2mm PVC edge banding using hot-melt adhesive. Finish: Scratch-resistant, stain-resistant, and easy-to-clean surface; color/finish as per client approval. 2. Table Frame and Legs: Material: Mild Steel (MS) with powder-coated finish. Legs: Fixed height design to accommodate tabletop height ergonomically (standard height ~750mm). Beam Support: MS beam integrated beneath the tabletop for added structural support and rigidity. Finish: Durable epoxy powder coating, color as specified by the client (typically black, white, or grey). Cable Management: Provisions for wire management (optional as per design). 3. Mobile Pedestal Unit: Size: 375mm (W) x 450mm (D) x 600mm (H) Construction: Made of 18mm pre-laminated particle board for body and 25mm top. Configuration: 3-drawer unit (1 stationery + 2 filing drawers or as specified). Locking: Central locking system for all drawers. Hardware: High-quality drawer slides (telescope or ball bearing), handles, and castors for mobility. Finish: Matching laminate finish to the tabletop for visual harmony.				
32	**Cabin Chiar**				
32.1	Executive cabin highback chair designed for long-duration seating in office environments. The chair is equipped with an MPA-style high back for full spinal support, a cushioned back pad, and an adjustable headrest to enhance comfort and posture.Backrest: Design: MPA-style ergonomic contour Type: High back with integrated lumbar and upper back support	Nos.	8		

	Material: Breathable mesh/fabric/leatherette with cushioned back pad Size: Height (from seat to top of backrest): 700–750 mm Width (backrest): 450–500 mm Seat: Cushion: High-density PU moulded foam Size: Width: 480–520 mm Depth: 450–500 mm Seat height adjustment range: 450–550 mm Headrest: Adjustable in both height and tilt angle Headrest height from top of seat: 950–1050 mm (adjustable) Armrests: Pad: PU arm pads with rotational adjustment Armrest height from seat: 180–250 mm Mechanism: Tilt: Weight-sensitive synchronous tilt mechanism Locking: 4-position backrest lock Base: Heavy-duty 5-star base (Chrom base) Twin-wheel castors for smooth movement Diameter of base: Approx. 650–700 mm 360° swivel rotation Pneumatic gas-lift for seat height adjustment Load capacity: Minimum 120 kg				
33	Express Chair for Work Station				
33.1	Express chair mid back designed for workstation use, suitable for continuous desk work in open offices or individual workspaces. The chair features a breathable mesh back, adjustable components, and a synchronized tilt mechanism to promote healthy posture and comfort throughout the workday.Base & Mobility: Base: Heavy-duty 5-star base (Chrom base) Movement: 360° swivel with smooth-rolling twin-wheel castors Stability: Wide diameter (approx. 650–700 mm) for enhanced balance Seat & Height Adjustment: Mechanism: Pneumatic gas-lift for height adjustment Seat Height Range: Approx. 450–550 mm Seat Cushion: High-density PU molded foam for extended seating comfort	Nos.	54		

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	Seat Size (approx.): Width: 480–500 mm Depth: 450–480 mm Backrest: Material: Breathable, high-resilience mesh back for air circulation Lumbar Support: Integrated adjustable lumbar support to reduce back strain Back Size (approx.): Height: 600mm–650 mm from seat Width: 450mm–500 mm Reclining & Lock Mechanism: Mechanism: Synchronized tilt for seat and back coordination Locking: 1-position tilt lock Tension: Tension bar for adjusting resistance to recline movement Armrests: Type: Height adjustable arms for ergonomic positioning Pad: Soft PU pads for forearm comfort Arm Height Range: Approx. 180mm–250 mm from seat Designed for 8+ hours of daily use Minimalist, modern design suitable for open office layouts Minimum weight capacity: 120 kg				
34	Laboratory Fume hood & Accessories				
34.1	Supply, installation, and commissioning of a 5 Feet Bench Top Laboratory Fume Hood with the following specifications: Hood Width: 5 feet (1500 mm) Sash Type: Combination sash (vertical and horizontal sliding options) Internal Working Depth: 30 inches (approx. 760 mm) Construction: Heavy-duty CRCA steel with epoxy powder coating for chemical and corrosion resistance Liner: Chemical-resistant phenolic resin lining for inner chamber Worktop: Optional granite or epoxy resin top with provision for sink and reagent racks Lighting: In-built LED or fluorescent lighting ensuring a minimum of 800 lux Airflow: Designed to maintain a face velocity of 80–100 FPM, compliant with ASHRAE 110 or EN 14175 standards Utilities: Provisions for electrical sockets, gas/air/water valves, airflow monitor, and service ports as required Accessories: Base cabinets, lattice assembly, and other utility fittings	Nos.	2		
35	Providing and fixing roller blinds, the fabric should be screen openness of 5% and composition of 75% PVC and 25%	Sqm.	100		

	polyester with fabric weight of 465 GSM having fire resistance grade of NSPA 701, BS 586 part- II with anodized aluminium channel weight, bracket and hangers etc complete. The fabric will be approved colour and shed of approved manufacturer complete.				
36	Providing and fixing self adhesive frosted/decorative/sun control film on glass partition, glass door and windows of approved design and make 3M / Garware or equivalent all complete as per direction of Engineer-in-charge.	Sqm.	200		
	(B) INTERIOR WORKS AND ACCESSORIES (Civil Work)				
37	False Ceiling Works				
37.1	Providing and fixing mineral fibre false ceiling tiles at all heights of size 595X595mm of approved texture, design and pattern. The tiles should have Humidity Resistance (RH) of 99%, Light Reflectance ? 85%, Thermal Conductivity k = 0.052 - 0.057 w/m K, Fire Performance as per (BS 476 pt - 6 &7)in true horizontal level suspended on interlocking T-Grid of hot dipped all round galvanized iron section of 0.33 mm thick (galvanized @120 gsm) comprising of main T runners of 15x32 mm of length 3000 mm, cross T of size 15x32mm of length 1200 mm and secondary intermediate cross T of size 15x32 mm of length 600 mm to form grid module of size 600x600 mm suspended from ceiling using galvanized mild steel item (galvanised@80gsm) 50 mm long 8mm outer diameter M-6 dash fasteners, 6 mm diameter fully threaded hanger rod up to 1000 mm length and L-shape level adjuster of size 85x25x2 mm, spaced at 1200 mm centre to centre along main 'T'. The system should rest on periphery walls /partitions with the help of GI perimeter wall angle of size24x24X3000 mm made of 0.40 mm thick sheet, to be fixed to the wall with help of plastic rawl plug at 450 mm centre to centre & 40 mm long dry wall S.S. screws. The exposed bottom portion of all T-sections used in false ceiling support system shall be pre-painted with polyester baked paint, for all heights. The work shall be carried out as per specifications, drawings and as per directions of the engineer-in-charge.				
37.1.1	With 20 mm thick beveled tegular mineral fibre false ceiling tile (NRC 0.7)	Sqm.	370		

38	roviding and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :				
38.1	12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095- (Part I) :2011 (Board with BIS certification marks)	Sqm.	150		
39	Providing and fixing partition upto ceiling height consisting of G.I. frame and				

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	required board, including providing and fixing of frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of 120 gms/sqm(both side inclusive), consisting of floor and ceiling channel 50mm wide having equal flanges of 32 mm and 0.50 mm thick, fixed to the floor and ceiling at the spacing of 610 mm centre to centre with dash fastener of 12.5 mm dia meter 50 mm length or suitable anchor fastener or metal screws with nylon plugs and the studs 48 mm wide having one flange of 34 mm and other flange 36 mm and 0.50 mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610 mm centre to centre by 6 mm dia bolts and nuts, including fixing of studs along both ends of partition fixed flush to wall with suitable anchor fastener or metal screws with nylon plugs at spacing of 450 mm centre to centre, and fixing of boards to both side of frame work by 25 mm long dry wall screws on studs, floor and ceiling channels at the spacing of 300 mm centre to centre. The boards are to be fixed to the frame work with joints staggered to avoid through cracks, M.S. fixing channel of 99 mm width (0.9 mm thick having two flanges of 9.5 mm each) to be provided at the horizontal joints of two boards, fixed to the studs using metal to metal flat head screws, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, angle beads at corners (25 mm x 25 mm x 0.5 mm), joint finisher and two coats of primer suitable for board as per manufacture's specification and direction of engineer in charge all complete.				
39.1	75 mm overall thickness partition with 12.5 mm thick double skin fire rated Glass Reinforced Gypsum (GRG) plaster board conforming to IS: 2095: part 3 (Board with BIS certification marks)	Sqm.	338		
39.2	66mm overall thickness partition using 8mm thick double skin multipurpose cement board reinforced with cellulose fibre manufactured through autoclaving process (High pressure steam cured) as per IS : 14862 with suitable fibre cement screws	Sqm.	102		
40	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular				

	sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
40.1	For fixed portion				
40.1.1	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg.	760		
40.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
40.2.1	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg.	890		
41	Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade l Type ll, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineerin-charge.				
41.1	Pre-laminated particle board with decorative lamination on both sides	Sqm.	65		
42	Providing and fixing bright finished 100 mm mortice lock with 6 levers without pair of handles of approved quality for aluminium door, with necessary screws etc complete as per direction of Engineer-in-charge.	Nos.	22		
43	Providing and fixing aluminium round shape handle of outer dia 100mm with SS screws etc. complete as per direction of Engineer-in-charge				
43.1	Powder coated minimum thickness 50 micron aluminium	Nos.	44		
44	Making the opening in brick masonry including dismantling in floor or walls by cutting masonry and making good the damages to walls, flooring and jambs				

	complete, to match existing surface i/c disposal of mulba/ rubbish to the nearest municipal dumping ground, all complete as per direction of Engineer-in-Charge.				
44.1	For door/ window/ clerestory window	Sqm.	10		
45	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 1.10 times of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
45.1	All works above plinth level upto floor V level				
45.1.1	Concrete of M30 grade with minimum cement content of 350 kg /cum	Cum	5		
46	Centering and shuttering including strutting, propping etc. and removal of form for				
46.1	Foundations, footings, bases of columns, etc. for mass concrete	Sqm.	10.16		
47	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
47.1	Thermo-Mechanically Treated bars of grade Fe-500D or more	Kg.	500		
48	Providing and fixing thermal insulation with Resin bonded rock wool conforming to IS: 8183, density 48 kg/m3, 50 mm thick, wrapped in 200 G virgin Polythene bags placed over existing false ceilng and held in position by criss-crossing Gl wire.	Sqm.	338		
49	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats				

	wherever required to achieve even shade and colour.				
49.1	Two coats	Sqm.	760		
50	Filling the gap in between aluminium/ stone/ wood frame and adjacent RCC/Brick/ Stone/ wood/ Ceramic/ Gypsum work by providing weather/structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete, complying to ASTM C920, DIN 18540 F & ISO 11600				
50.1	Upto 5 mm depth and 5 mm width	Mtr.	156		
51	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):				
51.1	With float glass panes of 5 mm thickness (weight not less than 12.50 kg/sqm)	Sqm	27		
	(C) ELECTRICAL WORK				
1	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required.	Mtr.	200		
2	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required. (Acceptable make: Havells / Polycab / NICCO / RR Kabel / Skytone / Gloster / KEI / Universal / Finolex)				
2.1	3 x 4 sq. mm	Mtr.	2000		
2.2	3x 6 sq. mm	Mtr.	200		
3	Supplying and Laying and fixing of one number PVC insulated and PVC sheathed / XLPE Copper armoured power cable of 1.1 KV grade of following size on surface as required. (Acceptable make: Havells / Polycab / Finolex / Gloster / Skytone / RR Kabel / Universal)				
3.1	3.5 Core x 25 sqmm	Mtr.	100		
4	upplying and making end termination with brass compression gland and aluminium / tinned copper lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
4.1	3.5 Core x 25 sqmm (28 mm)	Each	8		

5	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required. (ISI marked)				
5.1	25 mm	Mtr.	100		
5.2	32 mm	Mtr.	500		
6	Supplying and laying of ISI marked PVC pipe of 25 mm dia for laying of cable wire including providing tee, joints, elbows, supports, etc. of 2 mm thick etc. complete as required. (Acceptable make: Supreme / Astral / Prince / Ashirwad / Prakash)				
6.1	25 mm	Mtr.	500		
7	Supplying and laying of ISI marked flexible PVC pipe of 25 mm dia for wiring including providing tee, joints, elbows, supports, etc. wherever required etc. complete as required.				
7.1	25 mm	Mtr.	300		
8	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A, tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required. (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.) (MCCB as a incomer) [Acceptable make: Havells / Siemens / Standard / Crompton / L&T / Legrand / GM]				
8.1	12 way (4 + 36), Double door	Each	11		
9	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, “C” curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. [Acceptable make: Havells / Siemens / Standard / Crompton / L&T / Legrand / GM]				
9.1	Single pole	Each	300		
10	Supplying and fixing following rating, four pole, 415 V, MCB in the existing MCB DB complete with connections, testing and commissioning etc. as required. [Acceptable make: Legrand / Havells / L&T / C&S / Crompton / GM / Siemens/ Standard]				
10.1	63 Amp	Each	11		

11	Supplying and fixing Cable End Box (Loose Wire Box) suitable for triple pole and neutral, sheet steel, Vertical MCB distribution board, 415 Volts, on surface/ recess, complete with testing and commissioning etc. as required.	Each	11		
12	Supplying and laying DLP PVC trunking system and accessories with Body + Flexible cover + Flat angle + End cap for accommodating wire and power chord for aesthetics in specific areas complete as directed. (Acceptable make: Legrand)				
12.1	Body without cover 80 X 50 mm	Mtr.	300		
12.2	Flexible cover width 40 mm	Mtr.	300		
12.3	Flat angle for the above size trunking	Each	50		
12.4	Clip on partition – Plastic	Each	80		
12.5	End Cap	Each	20		
13	Supplying and laying arteor socket outlets clip with cover on support 3 modules for 65 mm cover complete as required.(Acceptable make: Legrand)	Now.	15		
14	Supplying and laying arteor socket outlets clip with cover on support 6 modules for 65 mm cover complete as required.(Acceptable make: Legrand)	Nos.	15		
15	Supplying and laying arteor socket outlets clip with cover on support 8 modules for 65 mm cover complete as required.(Acceptable make: Legrand)	Now.	55		
16	Supplying and fixing following modular switch / socket on the existing modular plate and switch box including connections but excluding modular plate as required. [Acceptable make: Legrand / Havells / L&T / MDS / Wipro / GM / Polycab / Schneider]				
16.1	15/16 A switch	Each	155		
16.2	6 pin 16 A Socket	Each	210		
17	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				
17.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	50		
17.2	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	50		
18	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray "bends" (galvanisation not less than 50 microns) with perforation not more than 17.5%, in convenient sections,				

	joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				
18.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	10		
18.2	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	10		
19	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray "Tee" (galvanisation not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				
19.1	100 mm width X 50 mm depth X 1.6 mm thickness	Each	10		
19.2	300 mm width X 62.5 mm depth X 2.0 mm thickness	Each	10		
	FUME HOOD CONTROL PANEL				
20	Fabrication, supply,Installation testing & commissioning of Electrical control panel of cubicle construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, inter-connection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for Control Panel of Fume Hood complete as per CPWD specification for Electrical Works with required Incoming and Outgoings, suitable for operation on 415 V, 3 phase, 50 Hz ac Supply with enclosure protection class IP 42 as required. 1. Auxilliary contactor to be provided along with auto-manual switch where ever required. 2. All Breakers both Incoming & Outgoing shall have LED 'ON / OFF / TRIP' indications without fail. 3. CTs shall be with single or dual ratio (as per requirement) are cast resin type only as required. 4. Ventilators shall be provided as required. 5. All doors to have double rubber gasket with shutter assembly & door seating frame. 6. TP means three pole 7. TPN means 4 pole breaker with 50% neutral	Job	1		

	8. 4P means Four Pole breaker with 100% neutral 9. Unless specified as 3.5 pole breaker, 4 pole means 4 pole ONLY. 10. All breakers to have breaker manufacturer's factory made Spreaders. 11. The control wiring has to be in Troughs of appropriate size. 12. Base frame shall be with each panel. The size will be equal to each section. **All the below line items are included in the panel.** Auto & manual switch reqire for AHUs,Duct heater & ODU feeders. Interlock to be provide between AHUs,Duct heater & ODU feeders. Power contactors to be consider for each feeder, for any interlocking refer SLD cost should be inclusive All VFD feeders will have filters / choke. Rated Capacity VFD shall be provided. Delay timer to be consider between AHU & ODU units VFD make: ABB ACS 560 to be considered or similar superior of Siemens / Schnider / Danfoss. Control transformer to be provide in the panel. All structural steel and stand cost inclusive				
	DATA & NETWORKING WORKS				
21	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required. (Acceptable make: D Link / Legrand / Finolex)				
21.1	1 run of cable	Mtr.	500		
21.2	2 run of cable	Mtr.	300		
21.3	3 run of cable	Mtr.	300		
22	Providing of Information outlets with single port suitable for CAT 6 structured cabling including all termination & testing with face plate for wall/race way mount with all accessories price of face plate inclusive etc. complete as required.	Nos.	50		
23	Supplying and Installation of Data/ voice faceplates as required for quad (4 no) outlets with suitable mounting box etc. complete as required.	Nos.	40		
24	Supplying and Installation of Fully loaded 48 port patch panel for data outlets etc. complete as required.	Nos.	2		
25	Supplying and Installation of Fully loaded 24 port patch panel for data & Voice outlets etc. complete as required.	Nos.	1		

26	Supplying and Installation of 22U mounting rack with pre wired & power sockets etc. complete as required. (Acceptable Make: Rittal / Netrack)	Nos.	1		
27	Providing of FLUKE TEST certification for structured cabling including terminations etc. complete as required	Nos.	1		
	CENTRIFUGAL BLOWER & ACCESSORIES				
28	Supplying and Installation of low pressure direct driven PP Centrifugal Fan CMVeco250/225 (1700cfm @110 mm static) with clamp adapter, Electro galvanized stand, base frame, flexible connections, nut bolts vibration isolators, anchor fasteners etc. complete as required with following items. 1) PP Weather cowl Dia. 250 mm, (0.80 Sqm) - 01 no. 2) MS Stack support for CMVeco-250/225 model, (kg -80 Kgs) - 01 no. 3) 25x25x14g thick PP Bird mesh for dia 200 mm Bypass end connection - 1 no. 4) 250 mm dia. and 3 mm thickness PVC Transparent flexible connection for inlet & outlet of the blower, refer cluster details. - 02 nos.	Job	1		
	MOTOR & ACCESSORIES				
29	Supplying and Installation of 3.7 KW/ 2P TEFC B5/ Flange mounted 3 phase 50 hz., IE2 Terminals box should be on top side. Motor shall be compatible for VFD operation, motor guard with accessories for 3.7 KW etc. complete as required.	Job	1		
	WET SCRUBBER & ACCESSORIES				
30	Providing and fixing Vertical single stage packed bed scrubber with integrated water tank. The scrubber capacity is 1550-2500 CFM and made up of PP+FRP material. The approximate size shall be 900 mm dia & 3600mm ht, complete with packing material,. mist eliminator, inspection window, marine light with external switch and FRP coated MS ladder with handrail. Provision for Makeup Water connection with control Valve, Water Level Indicator, provision for Drain connection with Control Valve, Over Flow Pipe with float valve. Scrubber Recirculation Pump with inlet Flange with Y-Strainer, ball valves, Outlet Flange with NRV, Ball Valve. Complete recirculation piping with suitable supports. Inlet and outlet flange for duct connections with gasket and Bolt Nuts. Vertical Seal less Scrubber Pump with enclosure suitable for 65 Lpm flow, 1HP X 1 (1Working), 3phase 50Hz,	Job	1		

	415Volts. Provision for Dosing connection if any with Valve, Scrubber Mounting Bolt & Nuts with Anti Vibration Pads. The operating Temperature is upto 60deg C (max.) and Pressure drop across the scrubber shall not be more than 600Pa (approx.). complete with make up water connection and drain connection etc. complete as required.				
				Total Rs.	

Special Conditions:

1. No labour huts shall be allowed at Sonipat Campus of IIT Delhi, and nothing shall be paid extra on this account.
2. The contractor must visit the site of work /buildings before quoting the rates.
3. No labour to stay at Sonipat Campus of IIT Delhi and nothing shall be paid extra on this account.
4. The site shall be available as per the directions of the Engineer in Charge.
5. The quoted rates of participating agencies shall be inclusive of GST.