Notice Inviting Tender

Renovation and Modification of Central Library in Academic Area at IIT Delhi.

Sub Head: Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works.

Civil Work	**:**	**Rs.8,27,87,410/-**
E & M	**:**	**Rs.5,08,33,951/-**
Total	**:**	**Rs.13,36,21,361/-**

(WORKS DEPARTMENT)

INDIAN INSTITUTE OF TECHNOLOGY DELHI

HAUZ KHAS, NEW DELHI

INDIAN INSTITUTE OF TECHNOLOGY DELHI

HAUZ KHAS, NEW DELHI-110016

INDEX

Name of work : Renovation and Modification of Central Library in Academic Area at IIT Delhi.

Sub Head : Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works.

It is certified that this document contains three parts i.e., Part A, Part B & Part C containing page no. **1 to 113.**

EXECUTIVE ENGINEER (ED-I) **EXECUTIVE ENGINEER (CD-III)**

NIT approved for Rs. 13,36,21,361/- (Rupees Thirteen Crore Thirty-Six Lakh Twenty-One Thousand Three Hundred and Sixty-One Only)

INSTITUTE ENGINEER

C—NIL I----NIL O--- NIL EE (CD-III) EE (ED-I) JE (E) JE(C)

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

Notice Inviting e -Tender

The Executive Engineer (CD-III), IIT DELHI, HAUZ KHAS, New Delhi-16 (Phone No 011-26596237) on behalf of Board of Governors invite online **Item Rate Tender** from Firms/ Contractors Registered in appropriate class and category with CPWD, MES, BSNL, and Railways for **Civil work /Building works/ Building & Roads/Composite works** of the following work:

NIT No.	:	**IITD/EE(CD-III)/2024-25**
Name of Work	:	**Renovation and Modification of Central Library in Academic Area at IIT Delhi.** **Sub Head: - Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works.**
Estimated cost	:	**Rs. 13,36,21,361/-**
Earnest Money	:	**Rs. 23,36,214/-**
Performance Guarantee	:	**5% of Tendered value**
Security Deposit	:	**2.5% of Tendered Value**
Warranty	:	**1 Year for all works.** **5 Years for specialized work i.e. water proofing work, Audio visual work, fire alarm and detection system, CCTV System, LED lighting fixtures.**
Period for completion	:	**15 Months**
Late date & time for submission of bids	:	**31/12/2024 upto15.00 Hrs.**
Date & Time of opening of Bids	:	**01/01/2025 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 the above website.

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

Budget Head: Renovation (Research Facility and Housing)/ 35.01.02 (IOE) (2021/007/0073)

Copy to: -

1. Institute Engineer
2. Executive Engineer (CD-III) for information.
3. D.A. (Works Accounts)
4. D.R. (A/Cs) – for opening of uploaded documents **at 3:00 PM on 01/01/2025** 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-III) EE (ED-I) JE (E) JE(C)

PART 'A'

INDIAN INSTITUTE OF TECHNOLOGY DELHI
HAUZ KHAS: NEW DELHI – 110016
IITD/WORKS (SP- 4847)/2024

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

The Executive Engineer (CD-III), IIT DELHI, HAUZ KHAS, New Delhi-16 (**Phone No 011-26596237**) on behalf of Board of Governors invite online **Item Rate Tender** from Firms/ Contractors Registered in appropriate class and category with CPWD, MES, BSNL, and Railways **for Civil work /Building works/ Building & Roads/Composite works** of the following work:

SL. No.	NIT No.	Name of Work	Estimated Cost (Rs.)	Earnest Money (Rs.)	Tender Fees (Rs.)	Time for Completion
1	/IITD/EE (CD-III)/2023-24	**Renovation and Modification of Central Library in Academic Area at IIT Delhi. Sub Head: - Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works.**	**13,36,21,361/-**	**23,36,214/-**	**NIL/-**	**15 Months**

Last date and time of submission of financial & Technical bid : 31/12/2024 up to 3:00 pm (on line)

Date and time of opening of Technical bid : 01/01/2025 at 3.00 pm (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 60 (Sixty) 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.10,68,97,100/-** or Two similar works each of value not less than **Rs.8,01,72,900/-** or three similar works each of value not less than **Rs.5,34,48,600/-** during last 7 years ending on the previous day of last day of submission of bid.

ii. **Earnest money of Rs. 23,36,214/ in** the form of Banker's cheque or Demand draft or fixed deposit receipt of a scheduled bank or through online mode i.e. RTGS/ NEFT in favor of **Registrar, I.I.T. Delhi** with UTR details. No relaxation in EMD will be allowed for MSMEs and MSEs as per the CPWD Manual.

3. Similar work means Composite works consisting of **Civil & E&M works only be considered.**

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, work done only 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 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 a valid class-III digital signature to submit the bid.

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

14. Contractor 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 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 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 documents from 1 to 10 on tender notice page 6.

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 the opening of the tender.

e) The Bidder does not upload ESI & EPF Registration.

25. Bid validity shall be **90 days** from the last date of submission of bid.

26. Rate of bidders shall be considered inclusive of GST.

27. Undertaking by the firm that if the firm becomes lowest then they shall submit Authorization from the OEM on OEM Letter Head before start of work along with performance guarantee regarding:

A. Modular Furniture works.

B. Addressable Fire Alarm & Detection System.

C. CCTV System.

D. Audio Visual System.

E. Lifts.

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.
2. Enlistment order of contractor.
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 paper 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 oe mentioned on the affidavit).**
6. Acceptance to execute INTEGRITY PACT.
7. Undertaking as per 'Sl. No. 20 on page No. 5' 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 the case of a Partnership firm, if all the tender papers are not signed by all the partners, a power of attorney authorizing the person who has signed the tender paper must be uploaded with the tender documents.
11. Annexure -IV (duly filled & signed by the bidders)
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 S. No. 1 to 10 are mandatory for technical qualification and document mentioned 11 to 14 are not mandatory.

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

Budget Head: (Research Facility and Housing)/ 35.01.02 (IOE) (2021/007/0073)

Copy to: -

1. **Executive Engineer (ED-I) for information.**
2. **D.A. (Works Accounts)**
3. **D.R. (A/Cs) – for opening of tenders on 01/01/2025 at 3:00 PM in the office of D.R. Store**
4. **Notice Boards.**
5. **Office Copy**
6. **Web site Administrator, I.I.T.D**
7. **NIT: - Publicity on Website on Institute as well as on CPP portal http://eprocure.gov.in may be ensured as per instruction issued.**
8. **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 contractors/firms engaged/ register in appropriate category having completed work in appropriate category for the **work** as per 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 tenders.

   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 - 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 shall be made available in parts as and when site will be 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 a revised bid any number of times but before the last time and date of submission of tender as notified.
7. While submitting the revised bid, the 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 a revised financial bid, then it shall be mandatory to submit a 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-III), 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:
    (i) The bidders are found not eligible.
    (ii) The bidders do not upload all the documents (including GST registration/ **other documents as per Tender Notice**) as stipulated in the bid document.
    (iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically in the office of tender opening authority.
    (iv) The lowest bidder does not deposit physical EMD within a week of opening of tender.

(v) 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 a 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 **Ninety (90)** 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-III)
IIT Delhi, Hauz Khas
New Delhi - 110016

C—NIL I----NIL O--- NIL EE (CD-III) EE (ED-I) JE (E) JE(C)

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. 23,36,214/-**
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)		Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works
Source of Fund (Institute/Project)		**Renovation (Research Facility and Housing)/ 35.01.02 (IOE) (2021/007/0073)**
Is Multi Currency Allowed		No
Date of Issue/Publishing		17/12/2024 (15.00 Hrs)
Document Download/Sale Start Date		17/12/2024 (15.00 Hrs)
Document Download/Sale End Date		31/12/2024 (15.00 Hrs)
Date for Pre-Bid Conference		**Nil**
Venue of Pre-Bid Conference		---
Last Date and Time for Uploading of Bids		31/12/2024 (15.00 Hrs)
Date and Time of Opening of Technical Bids		01/01/2025 (15.00 Hrs)
Tender Fee	**NIL**	(To be paid through RTGS/NEFT or OFFLINE MODE in favor of Registrar IIT Delhi.) 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.23,36,214/-**	
No. of Covers (1/2/3/4)		**02**
Bid Validity days (30/75)		**90 days (From last date of Submission of bid)**
Address for Communication		**Office of the Executive Engineer (Civil Division-III), Room No- MZ-137, Main Building, IIT Delhi, Hauz Khas, New Delhi-110016**
Contact No.		**011-26596237**
Fax No.		**Nil**
Email Address		**a26516@admin.iitd.ac.in**

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. The bidder then logs in to the site through the secured log-in by entering their user ID / 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 documents that need to be submitted. Any deviations from these may lead to rejection of the bid.
3. The 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 the 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. 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 (Refer to Schedule, Page No.11).
4. A standard BoQ format has been provided with the tender document to be filled in by all the bidders. Bidders are requested to note that they should 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 http://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 has to 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 Type**
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
		Format for "OEM authorization certificate" (ANNEXURE-IV)	.PDF
4.		Technical supporting documents in support as per Page-6 of NIT	.PDF
Bid Document – 2			
Sl. No.	**Documents**	**Content**	**File Type**
1.	Financial Bid	Price bid should be submitted in Excel format.	.xls

IITD – 6 FOR E-TENDERING	IITD

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 Delhi - 16 from approved and eligible contractors of CPWD and those of appropriate class of M.E.S., BSNL and Railway dealing with Civil work / Building work/ Building & Road / Composite works for the work of **"Renovation and Modification of Central Library in Academic Area at IIT Delhi. (Sub. Head: - Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works)"**

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.13, 36, 21,361/-** 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 (rounded to nearest Rs.1000/-) during last 7 years ending on previous day of last day of submission of bids.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated during last 7 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.D in future forever. Also, if such a violation comes to the notice of the Department before the date of start of work, the Engineer- in-Charge shall be free to forfeit the entire amount of Performance Guarantee.

IITD – 6 FOR E-TENDERING	IITD

2. An agreement shall be drawn up 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 shall be made available in parts as and when the site will be 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 a revised bid any number of times but before the last time and date of submission of tender as notified.
7. While submitting the revised bid, the 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 a revised financial bid, then it shall be mandatory to submit a 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.
    iv. **The lowest bidder does not deposit physical EMD within a week of opening of tender.**
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 the 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 bid for the works shall remain open for acceptance for a period of **Ninety (90)** days from the last date of submission of bid, if any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then 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.
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-III]** 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 to the combined estimate cost put to tender for the composite bid.

21.2 The bid document will include 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 2020 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 component of the work I.E. (Institute Engineer/EE Engineer-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 of bid for each of the minor component 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 Competent authority, the EE [CD-III] i.e Engineer in charge 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 one agreement with EE [CD-III] and has also to sign two or more copies of agreement. On such signed set of agreement shall be handed over to EE (ED-I) in charge of minor component. EE of major component will operate part A and EE (ED-I) in charge of minor component shall operate part B along with Part A of the 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 must associate agency(s) for minor component (s) conforming to eligibility criteria as defined in the bid document and must submit detail of such agency (s) to Engineer-in-charge of minor component(s) within prescribed time, Name of agency (s) to be associated shall be approved by Engineer-in-charge of minor component(s).

21.9 In case the main contractor changes any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of the Engineer-in-charge of minor component. The new agency/agencies shall also have an 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 agreement with contractor(s) associated by him for execution of minor components(s) in case the main contractor does not have capability to execute the minor component work**. Copy of such agreement shall be submitted to EE (ED-I) and EE (CD-III), in charge of major and minor components. In case of a change of associate contractor, the main contractor must enter into an agreement with the new contractor associated by him.**

21.11 Running payment for the major component shall be processed by EE(CD-III) of major discipline to the main contractor. Running payment of minor components shall be made by EE [ED-I], discipline of minor component directly to the main contractor.

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 of major component after record of completion certificate of all other components.

21.13 The final bill of whole work shall be finalized and paid by the EE(CD-III) of major component. EE (ED-I), in charge of minor component(s) will prepare and pass the final bill for their respective component of work and pass on the same to the EE(CD-III) of major component for including in the final bill for composite contractor.

INTEGRATY PACT E-TENDERING	IITD

To,

……..,

……..,
……..

Subject: - NIT No. /IITD/EE (CD-III)/2024-25 for the work of "Renovation and Modification of Central Library in Academic Area at IIT Delhi., Sub Head: - Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works"

Dear Sir,

It is hereby 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-III)

ACCEPTANCE TO EXECUTE INTEGRATITY PACT	IITD

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

To,

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

Subject: -Submission of Bid for the "Renovation and Modification of Central Library in Academic Area at IIT Delhi."
Sub Head: - Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works.

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 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)

INTEGRATY PACT E-TENDERING	IITD

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 (Civil) 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) through ..... (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.

INTEGRATY PACT E-TENDERING	IITD

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)

3. 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.
4. 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.

INTEGRATY PACT E-TENDERING	IITD

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 participates 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.

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

6. 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**.

7. 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.

INTEGRATY PACT E-TENDERING	IITD

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 an 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

1. 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.
2. 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 the 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.

INTEGRATY PACT E-TENDERING	IITD

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 to 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 GURANTEE BOND	IITD

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 up to 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

1. 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.
2. The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 60 Days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest.
3. 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.
4. 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 titles 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)

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 order of contractor.	
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 paper 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 oe mentioned on the affidavit).**	
6.	Acceptance to execute INTEGRITY PACT.	
7.	Undertaking as per **page 5/ 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.	Annexure-1 (Duly Filled & signed by the bidders)	
12.	Annexure 2 (Duly Filled & signed by the bidders)	
13.	Annexure 3 (Duly Filled & signed by the bidders)	
14.	Annexure 4 (Duly Filled & signed by the bidders)	
15.	Any other documents given in NIT	
16.	BOQ	

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

Signature of Bidder(S)

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 detail 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 Blacklisted/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	**As per Tender Notice & NIT**
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 Tender Fees) UTR No. (For Tender Fee)	
9.(In case of on-line payment of EMD) UTR No. (For EMD)	

(Signature of the Tenderer)

Name:

Seal of the Company

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.**
AS PER TENDER NOTICE		

Signature of

Bidder Name:_____

Designation:_____

Organization Name: _____

Contact No. : _____

PART-B

IITD – 7/8 E-TENDERING	IITD

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

Tender for the work of: **Name of work: - Renovation and Modification of Central Library in Academic Area at IIT Delhi., Sub Head: - Civil work, Electrical work, Fire Alarm system & Networking**

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 **Ninety (90)** days from the 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 favor of IIT Delhi as earnest money. If I/We fail to furnish the prescribed performance guarantee within the prescribed period. I/We agree that the said 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 said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.5 of the tender form. Further, I/We agree that in case of forfeiture of Earnest Money & Performance Guarantee as aforesaid. I/We shall be debarred for participation in the re-tendering process of the work.

IITD – 7/8 E-TENDERING	IITD

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 the 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 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.

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:

IITD – 7/8 E-TENDERING	IITD

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)

(a)

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

……..

Dated:

Designation …….

PROFORMA OF SCHEDULES	IITD

SCHEDULES (A to F)

(For Civil & Electrical Component)

SCHEDULE 'A'

Schedule of quantities for Civil, Electrical, Fire Alarm System, Networking, and CCTV & Furniture Works 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.

SCHEDULE 'E'

Reference to General Conditions of contract	: GCC for Maintenance work 2020 for CPWD works along with correction on slips/amendments issued up to last date of submission of bid.

Name of Work	:	**Renovation and Modification of Central Library in Academic Area at IIT Delhi. (Sub Head: - Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works.)**
Estimated cost of work:	:	**Rs.13,36,21,361/-**
Earnest Money:	:	**Rs. 23,36,214 /-**
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-III]
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	:	Executive Engineer [CD-III]
2(ii)	Accepting Authority	:	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 2021 for civil works with 7% cost index & 1.0633 GST factor, DSR 2022 for E & M works and **2018 for Fire Detection and Alarm System and 2003 for Lifts, Amendments-1** with up-to-date correction slip on date of submission of bid & Market Rate.
2(v)	Department:	:	**Works department at I.I.T Delhi**

2(vi) IITD Form & CPWD GCC for Maintenance work **2020**, 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, : 1 to 15 days

Clause 2

Authority for fixing compensation under clause 2: : Institute Engineer

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start: : 10 (Ten) days

MILE STONE CHART

Sl. No.	**Description of milestone (financial terms)**	**Period for completion from date of start in days/months**	**Withheld amount for non- achievement of milestone.**
1	1/8th (of the whole work)	1/4th (of the whole work)	In the event of not achieving the necessary progress as assessed from the running payment, 1% of the Tender value of work will be withheld for failure of each milestone.
2	3/8th (of the whole work)	1/3rd (of the whole work)	
3	3/4th (of the whole work)	3/4th (of the whole work)	
4	Full	Full	

Time Allowed for execution of work : **15 Months**

Authority to decide:

(i) Extension of Time : Director

(ii) Rescheduling of mile stones : Director

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

Clause 6 : Clause 6

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. 40.00 Lakhs

Clause -7A : **As per Institute Policy**

No running account bill shall be paid for the work till the applicable labor licenses, registration with EPFO, ESIC, and BOCW Welfare Board, whatever is 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**

Clause 10C

Component of labor expressed as a percent of the value of work**: 25%** for Civil work & **15%** for E&M works.

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 2022)**
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 and CPWD Specification 2023 for Electrical works and 2018 for Fire Detection and Alarm System, 2003, Amendment-1 for Lifts** with corrected slips & manufacturers Specifications up to the last date of bid submission / uploading of tender. Detailed nomenclature of items & specifications for market rate items as per Engineer-in-charge

Clause 12

	Type of work		**Maintenance work including works of up-gradation, aesthetic, special repair, addition/alteration**
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 Crores)	**Requirement of Technical Staff**		**Minimum experience (Years)**	**Designation of the Technical Staff**	**Rate at which recovery shall be made from contractor in the event of not fulfilling the provision of clause 32**
	Qualification	**Number (of Major + Minor Component)**			
More than 10 to 20	Graduate Engineer	1	10 (and having experience of one similar nature of work)	Project Manager	Rs.30,000/- per month
	Graduate Engineer or Diploma Engineer	1	5 or 10 respectively	Project / Site Engineer	Rs.25,000/- per month
	Graduate Engineer or Diploma Engineer	1+1	2 or 5 respectively	Planning / Quality / Billing Engineer	Rs.15,000/- per month per person
	Graduate Engineer or Diploma Engineer	1+1	2 or 5 respectively	Project Planning / Quality / 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 minimum 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 2021with 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.	5% 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 2021	

SPECIAL CONDITIONS

1. Non-judicial stamp paper worth **Rs. 100/- (Hundred Rupees only)** will be submitted by the contractor which will have to be signed as a token of acceptance.
2. No T & P will be supplied by the Institute and the contractor will have to make his own arrangements.
3. The contractors are advised to get acquainted 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 the site.
4. 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 items or in the specification, additional conditions where specifications are silent, the decision of Engineer-in-Charge shall be final and binding on contractor.
5. 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. Any damage done by the contractor to any existing item / any part of the building during the execution of work shall be made good at his own cost.
7. Articles manufactured by the reputed firms as per the approved make list and as approved by the Engineer-in-charge shall only be used at work.
8. The sample of material required in the work brought at the site shall be submitted for prior approval from the engineer–in–charge before use in the execution of work.
9. All expenditures to be incurred for testing of samples e.g. packaging, sealing, transportation, loading, unloading, etc. including testing charges shall be borne by the contractor.
10. The contractor shall submit a detailed program of work within 7- days of the date of award of work. The engineer–in–charge can modify the program and the contractors must work accordingly.
11. The contractor shall make his own arrangement for getting permission with respect to trucks from the Traffic Police.
12. No payment shall be made to the contractor for any damage caused by the rain, snowfall or any other natural causes whatsoever during the execution of work.
13. Some restrictions may be imposed by the security staff of IIT Delhi etc. on the working and or movement of labor & material. No labor camps/ huts shall be allowed on the IIT Campus. The contractor shall make his arrangements for labor huts outside the campus. However, the construction of a cement godown and Chowkidar's hut on 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. 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. The Malba / Garbage generated at the site due to construction activities shall be removed from the site immediately & shall be disposed of by the contractor to the approved dumping site of MCD and all statutory approvals from local bodies shall be the sole responsibility of the contractor.
16. The contractor shall clean the site thoroughly of scaffolding materials, rubbish, equipment 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. Contractor must quote against the item of schedule of credit of material. The contractor cannot quote either a minus rate or zero rate for these items.
18. Income tax and other taxes as applicable shall be deducted from the bills of the contractor.
19. 1% labor cess or as applicable will be deducted from the bills of the contractor.
20. Water charges @1% and Electricity charges @0.50% of gross work done shall be deducted from bills of the contractor if electricity and water are provided by IIT Delhi.
21. Agency must take proper safety major during the execution of work.
22. **GCC form 7/8 shall form part of NIT, and the bidder shall go through GCC 2020 CPWD before**

quoting rates and the same shall be deemed to be accepted by the bidder if he participates in the tender.

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

24. The contractor shall be responsible for keeping the 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.

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

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

27. 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.

28. In addition to the security deposit already deducted under clause-1A of GCC -**2020**, an amount of 10% of the total amount of waterproofing work shall be deducted from the final bill of the contractor as an additional security deposit which will be refunded only after completion of the period of Guarantee Bond and Warranty period of five years. However, this can be released on submission of Bank guarantee/FDR issued from a scheduled bank in favor of Registrar, IIT Delhi.)

29. Original warranty certificate of 5 Years 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.

30. The Central Library building is situated in a very busy location and surrounded by offices of top administrative officers of the institute. Hence, it is possible that the work may be hindered during normal working hours, and in that case, the work will be carried out during holidays and odd hours only and nothing extra will be paid on this account.

31. The contractor shall be responsible for keeping the 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.

32. Work shall be executed as per the Architectural drawings and instructions of the Engineer in charge or his representatives. The Architectural drawing and instruction of the Engineer in charge or his representatives shall be strictly adhered to.

33. The make/model of the furniture items to be procured by the successful bidder shall be as per the choice of the IIT Delhi authorities. In this regard, the decision of IITD authorities shall be final and binding on the contract.

34. **Specialized work:** The following work will be treated as specialized work**.**

    a. SITC of Addressable Fire Alarm and detection system.
    b. SITC of CCTV System.
    c. SITC of Audio-Visual System.
    d. SITC of Lifts.
    e. Waterproofing.
    f. Structural repair works
    g. SITC of Modular Furniture.

The Above Specialized work shall be carried out by specialized agencies/associated agencies /agencies 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.

The bidder should either himself meet the eligibility conditions for the work as above or otherwise he will have to associate an agency meeting the eligibility requirements for specialized works after award of work and has to submit details of such agency(s) conforming to eligibility conditions as defined in the bid document to the Engineer in charge before taking up specific component. Names of the agency(s) to be associated shall be approved by the engineer in charge . The contractor of the appropriate class shall have to associate other agency(s) for the 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 the contract. However, the composite category contractor shall also be eligible to carry out any or all these works without associating 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 the manufacturer and gets it installed by an authorized agency/ service provider of the manufacturer or specialized agency as per the criteria mentioned.

The main contractor, if does not fulfil the criteria himself, shall have to associate with a specialized agency fulfilling the following eligibility criteria having completed during last seven years ending up to the previous day of the last date of submission of tender as given below with a 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.

Sl. No.	Specialized work(s) / item of work(s)	Criteria of associate agencies
1.	SITC of Addressable Fire Alarm and detection system.	The associate agency should have successfully completed works, as mentioned under during last 7 years ending previous day of last date of submission of tender. (i) Three similar works each costing not less than Rs.9.60 lacs or (ii)Two similar works each costing not less than Rs. 14.50 lacs or (iii) One similar work costing not less than Rs. 19.50 lacs. The value of executed similar work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to previous day of last day of submission of bids. (Specialized work shall means "SITC of Addressable Fire Alarm and detection system.)"
2.	SITC of CCTV System.	The associate agency should have successfully completed works, as mentioned under during last 7 years ending previous day of last date of submission of tender. (i) Three similar works each costing not less than Rs.51.50 lacs or (ii)Two similar works each costing not less than Rs. 77.00 lacs or (iii) One similar work costing not less than Rs. 102.50 lacs. The value of executed similar work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to previous day of last day of submission of bids. (Specialized work shall means "SITC of CCTV System.)"
3.	SITC of Audio Visual System.	The associate agency should have successfully completed works, as mentioned under during last 7 years ending previous day of last date of submission of tender. (i) Three similar works each costing not less than Rs.24.50 lacs

		or (ii)Two similar works each costing not less than Rs. 36.50 lacs or (iii) One similar work costing not less than Rs. 48.50 lacs. The value of executed similar work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to previous day of last day of submission of bids. (Specialized work shall means "SITC of Audio Visual System.)"
4.	SITC of Lifts.	The associate agency should have successfully completed works, as mentioned under during last 7 years ending previous day of last date of submission of tender. (i) Three similar works each costing not less than Rs.12.50 lacs or (ii)Two similar works each costing not less than Rs. 19.00 lacs or (iii) One similar work costing not less than Rs. 25.00 lacs. The value of executed similar work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to previous day of last day of submission of bids. (Specialized work shall means "SITC of Lifts.)"
5	Waterproofing	The associate agency should have successfully completed works, as mentioned under during last 7 years ending previous day of last date of submission of tender. (i) Three similar works each costing not less than Rs 12.66 lacs or (ii)Two similar works each costing not less than Rs. 18.98 lacs or (iii) One similar work costing not less than Rs. 25.31 lacs. The value of executed similar work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to previous day of last day of submission of bids. (Specialized work shall means "waterproofing.)"
6	Structural repair works	The associate agency should have successfully completed works, as mentioned under during last 7 years ending previous day of last date of submission of tender. (i) Three similar works each costing not less than Rs 24.55lacs or (ii)Two similar works each costing not less than Rs. 36.82. lacs or (iii) One similar work costing not less than Rs. 49.09 lacs. The value of executed similar work shall be brought to 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 work shall mean "Structural repair works.)"
7	SITC of Modular Furniture	The associate agency should have successfully completed works, as mentioned under during last 7 years ending previous day of last date of submission of tender. (i) Three similar works each costing not less than Rs 117.09 lacs or (ii)Two similar works each costing not less than Rs. 175.64. lacs or (iii) One similar work costing not less than Rs. 234.18 lacs.

		The value of executed similar work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to previous day of last day of submission of bids. (Specialized work shall means "Structural repair works.)"

The responsibility of execution of the work of Lift shall lie with the Main Contractor only. The contractor is required to furnish the documents/certificates in support of his experience to execute the mentioned E&M works given after the award of work. **The main agency must associate OEM of Lift to execute the mentioned E&M component/components of the work having requisite experience. In this connection, it is mentioned that the composite contractor and the OEM of Lift shall give the required affidavit to confirm their association to the Engineer-in-charge.** Tender accepting authority may approve a change of sub-agency in case it is required during the currency of the contract.

If the composite category contractor does not eligible directly to procure the equipment of approved make from the manufacturer and get it installed from an authorized agency/service provider of the manufacturer or specialized agency as per criteria mentioned in NIT, they must associate Specialized Agency/Agencies to undertake the specialized component/components of the work having requisite experience for SITC of Lifts.

35. **The OEM must produce PERFORMANCE CERTIFICATES of at least 10 passenger lifts units, working in good condition installed in government buildings, the lifts should have been commissioned at least 05 years from the date of submission of bids, and the certificate shall be from the Engineer-in-charge (Not below the rank of Executive Engineer).**

36. **As per the conformity with statutory acts, rules, regulations, standards and safety codes,** the Installation shall be carried out in conformity with the local lifts acts and rules, getting the necessary **lift license** from the concerned Government Department/ authority shall be in the scope of the Contractor**.**

Additional conditions for furniture work

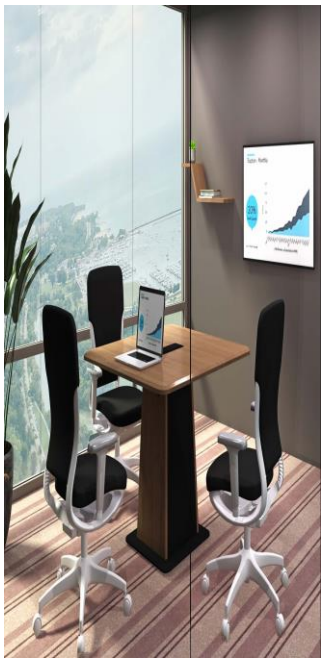
1. The agency has to submit OEM Authorization certificates as per annexure-IV **(Page- 65)** before the start of work to the Engineer in charge the actual work only be carried out at the site after the submission of the OEM authorization certificate from the manufacturer of the furniture.
2. The agency may be asked to arrange a Factory visit of the manufacturer for the Engineer-in-charge and two other representative to verify the genuineness of the product at any stage of the order.
3. The agency has to provide a copy of the invoice to the department at the time of supply of furniture and the department shall be at liberty to verify the authenticity and geniuses from the manufacturer. The modular furniture shall have to be supplied and fixed in position as per the requirement of the client department and as per the direction of Engineer-in-charge. Nothing extra shall be paid for providing & fixing/placing furniture.
4. 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 so desires. The department will be at liberty to ask for documentary evidence in support of the manufacturer material, to verify the authenticity and genuineness.
5. Authorized dealers of the original manufacturer shall submit proof from the manufacturer being the authorized dealer of the manufacturing company and shall also provide a copy of memorandum of understanding with the manufacturers stating that required items under this tender shall be provided by them to the tenderer as per the nomenclature of item and specification as mentioned in the tender papers/ISI Code within the specified time frame and shall provide warranty of two years against the manufacturing defects and to undertake repair and replacement of the defective part from the date of completion of the work.
6. The contractor has to set up a mockup of furniture from approved make only with a color scheme immediately after the award of work or before the supply of actual furniture which will be finalized by IIT Delhi authorities.
7. The original warranty certificate from 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 after submitting the original warranty certificate from OEM.
8. The final bill will only be cleared after submitting the original warranty certificate & OEM authorization certificate from the manufacturer of the furniture.
9. All the furniture items strictly should have certifications as mentioned in the detailed furniture specification in front of each item. Further, all certifications mentioned compulsorily be submitted to the engineer in charge before the actual supply of material failing which material will not be accepted at the site and no payment will be made for those items for which certifications will not given.
10. The order of preference for furniture items may strictly be followed as below: -
    a) Detailed technical specifications and drawings of furniture items as given in this NIT.
    b) Nomenclature of item as per Schedule of Quantities.
    c) Special Conditions.
    d) Additional conditions.
    d) Technical Specifications.
    e) Contract Clauses of Standard CPWD Contract form.
    f) Indian Standard Specifications of BIS
11. No claim for idle establishment & labor, machinery & equipment, tools & Plants, and the like for any reason whatsoever, shall be admissible.
12. The department shall not bear responsibility for lack of knowledge of site conditions and also the consequences thereof. The information and site data mentioned herein and also 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.
13. **The new Addressable Fire Alarm System shall be seamlessly integrated with the existing system of new Academic Blocks, LH Complex, and Multi Storied Building etc. An undertaking on OEM letter head in this regard shall be enclosed with the Technical Bid.**
14. **The SITC of Lifts work shall be executed as per CPWD General Specifications for Electrical Works Part-I (Int.) 2023, Part-II (Ext.) 2023, Part-IV (Sub St.) 2013, Part-III (Lifts & Escalators) 2003, Amendment-1.**

DETAILED TECHNICAL SPECIFICATIONS & INDICATIVE IMAGES OF FURNITURE ITEMS

BOQ S.No.	DETAILED SPECIFICATIONS OF ITEMS	REFERENCE IMAGE
248	Supplying & installation of High back chair of following specifications: 1. SEAT/BACK ASSEMBLY: The cushioned seat assembly consists of seat base moulded in glass-filled Polyamide, moulded Polyurethane foam & upholstered with high stretch knitted polyester fabric. The cushioned back assembly consists of back inner moulded in Polypropylene in-situ moulded with Polyurethane foam & upholstered with high stretch knitted polyester fabric. Back Size: 45.5 cm. (/1/) x 53.0 cm. (H) Seat Size : 48.5 cm. (W) x 49.0cm.(D) 2. HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam used in seat and back cushion is moulded in Density Min 48 kg/m3, and hardness load 15 ± 2 kgf as per IS:7888 for 25% compression. 3. TILT MECHANISM, SPINES & SPINE CONNECTOR: The seat and back are firmly connected to the base frame and are cantilevered in such a way that it gives a multi-dimensional movement possibility just with a simple lean on the sides or back, without need for complex manual adjustments. The cantilevered seat offers impact cushioning while sitting and synchronizes with the back movement during posture changes. The ""S"" shaped spines moulded in high strength glass-filled Poly-amide and the spine connector moulded in glass-filled Poly-amide form the back-spine structure involved in multi-dimensional recline motion. The variable tilt angle recline motion can be adjusted with 3 position Tilt Limit feature which should be inbuilt in seat base and the tension (return force) should be user weight dependent. 4. ADJUSTABLE ARMRESTS: The assembly consists of armrest housing sliding over the armrest structure, both moulded in glass-filled Poly-amide: The height adjustment feature should be button operated having adjustment of 6.6±0.5cm. The Armrest Top should be made up of integral skin PU moulded over plastic inner moulded in glass-filled Poly-amide. 5, PNEUMATIC HEIGHT ADJUSTMENT: The seating height can be adjusted with a pneumatic gas-lift having an adjustment stroke of 9.2 ± 0.3cm. 6. PEDESTAL ASSEMBLY: The pedestal should be injection moulded in glass-filled Poly-amide and fitted with 5 nos. twin wheel castors. The pedestal should be 66.0±0.5 cm. pitch centre diameter and 76.0±1.0 cm. withcastors. 7. TWIN WHEEL CASTORS: 5 nos. twin wheel castor are injection moulded in Poly-amide having 5.0 ± 0.1 cm wheel diameter assembled to the pedestal. Overall Dimensions of Chair Seat Height - min 44.50 to max 53.80 cm. Height - min 99.50 to max 108.80 cm. Width & Depth of Chair as measured from pedestal - Width-76.0 cm and Depth-76.0 cm. The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified. The product should be Greenguard certified by UL, AIOTA, Greenpro, IAQ, BIFMA LEVEL-2 Certified by BIFMA Licensed Certifiers.	

249	Supplying & installation of Work Station of following specifications: Size: 1500x600x1200mm with KBPT, Pedestal and CPU torlley, Extended Side Panels of 4ft Width. Providing and placing panel & tile based modular workstation, with partition thickness as 52.4 mm thk and ht - 1200mm including powder coated aluminum trims. Tiles: Combination of top tiles are fabric magnetic/fabric/fabric tackable/white board/glass writing board/clear glass tile/plain metal/prelam tile. Bottom tiles - Plain metal/fabric magnetic/fabric/laminated/prelam. SPLIT Tiles: Combination of two finishes for the top tiles on the user side shall be split fabric magnetic/fabric tackable/white board/prelam/ plain metal along with split fabric magnetic/fabric tackable/white board/prelam/ plain metal. INTERMEDIATE BLOCKS: Intermediate blocks are given in fabric/DL + Fabric/DL finish. Wire Management - Wires shall be taken into the system through cable ducts from the junction boxes and it is carried up to the panels through concealed conduits inside the blocks. HALF SCREEN WITH FRAME - at intermediate position between 2 people and at the end above worktop in clear glass/fabric tackable /laminate/white board finsh. Side panels or legs - made up of 25 mm thick prelam particle board with flat pvc lipping edge banding considered only on the open-end conditions or metal powder coated legs at the end and shared condition. Extended side panel of 4 ft width. System shall also have 120 mm high powder coated standalone panel legs to give the system an elevated look. Worksurface - made up of 25 mm thick prelam particle board with flat pvc lipping edge banding of size 1200 mm w x 600 mm d. CPU trolley - with castors. KBPT with/without mouse tray -plastic / metal / articulated. The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified. The product should be Greenguard certified by UL, AIOTA, Greenpro, IAQ, BIFMA LEVEL-2 Certified by BIFMA Licensed Certifiers.	
250	Supplying & installation of Workstation of following specifications: Size: 900x600x1200mm with KBPT, Pedestal and CPU torlley, Extended Side Panels of 4ft Width. Providing and placing panel & tile based modular workstation, with partition thickness as 52.4 mm thk and ht - 1200mm including powder coated aluminum trims. Tiles: Combination of top tiles are fabric magneitc/fabric/fabric tackable/white board/glass writing board/ clear glass tile/ plain metal/ prelam tile. Bottom tiles - Plain metal/ fabric magnetic/fabric/laminated/prelam. SPLIT Tiles: Combination of two finishes for the top tiles on the user side shall be split fabric magnetic/fabric tackable/white board/prelam/ plain metal along with split fabric magnetic/fabric tackable/white board/prelam/ plain metal. INTERMEDIATE BLOCKS: Intermediate blocks are given in fabric/DL + Fabric/DL finsh. Wire Management - Wires shall be taken into the system through cable ducts from the junction boxes and it is carried upto the panels through concealed conduits inside the blocks. HALF SCREEN WITH FRAME - at intermediate position between 2 people and at the end above worktop in clear glass/fabric tackble /laminate/white board finsh. Side panels or legs - made up of 25 mm thk prelam particle board with flat pvc lipping edge banding considered only on the open end conditions or metal powder coated legs at the end and shared condition. Extended side panel of 4 ft width. System shall also have 120 mm high powder coated standalone panel legs to give the system an elevated look. Worksurface - made up of 25 mm thk prelam particle board with flat pvc lipping edge banding of size 1200 mm w x 600 mm d.CPU trolley - with castors.KBPT with/without mousetray - plastic / metal / articulated. The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified. The product should be Greenguard certified by UL, AIOTA, Greenpro, IAQ, BIFMA LEVEL-2 Certified by BIFMA Licensed Certifiers.	

251	Supplying & installation of Workstation of following specifications: Size: 1650x600x1200mm with KBPT, Pedestal and CPU torlley, Extended Side Panels of 4ft Width. Providing and placing panel & tile based modular workstation, with partition thickness as 52.4 mm thk and ht - 1200mm including powder coated aluminium trims. Tiles: Combination of top tiles are fabric magneitc/fabric/fabric tackable/white board/glass writing board/ clear glass tile/ plain metal/ prelam tile. Bottom tiles - Plain metal/ fabric magnetic/fabric/laminated/prelam. SPLIT Tiles: Combination of two finishes for the top tiles on the user side shall be split fabric magnetic/fabric tackable/white board/prelam/ plain metal along with split fabric magnetic/fabric tackable/white board/prelam/ plain metal. INTERMEDIATE BLOCKS: Intermediate blocks are given in fabric/DL + Fabric/DL finsh. Wire Management - Wires shall be taken into the system through cable ducts from the junction boxes and it is carried upto the panels through concealed conduits inside the blocks. HALF SCREEN WITH FRAME - at intermediate position between 2 people and at the end above worktop in clear glass/fabric tackble /laminate/white board finsh. Side panels or legs - made up of 25 mm thk prelam particle board with flat pvc lipping edge banding considered only on the open end conditions or metal powder coated legs at the end and shared condition. Extended side panel of 4 ft width. System shall also have 120 mm high powder coated standalone panel legs to give the system an elevated look. Worksurface - made up of 25 mm thk prelam particle board with flat pvc lipping edge banding of size 1200 mm w x 600 mm d.CPU trolley - with castors.KBPT with/without mousetray - plastic / metal / articulated. The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified. The product should be Greenguard certified by UL, AIOTA, Greenpro, IAQ, BIFMA LEVEL-2 Certified by BIFMA Licensed Certifiers.	
252	Supplying & installation of panel & tile based Work Station of following specifications: Size 1500(W1) x1500(W2) x600(D)x1200(H)mm with KBPT, Pedestal and CPU torlley. Partition thickness as 52.4 mm thk and ht - 932.5/1047/1200/1353/1467.50 including powder coated aluminium trims. Tiles: Combination of top tiles are fabric magneitc / fabric / fabric tackable /white board/glass writing board/ clear glass tile/ plain metal/ prelam tile. Bottom tiles - Plain metal/ fabric magnetic / fabric /laminated/prelam. SPLIT Tiles: Combination of two finishes for the top tiles on the user side shall be split fabric magnetic / fabric tackable/white board/prelam/ plain metal along with split fabric magnetic/fabric tackable/white board/prelam/ plain metal. INTERMEDIATE BLOCKS: Intermediate blocks are given in fabric/DL + Fabric/DL finsh. Wire Management - Wires shall be taken into the system through cable ducts from the junction boxes and it is carried upto the panels through concealed conduits inside the blocks. HALF SCREEN WITH FRAME - at intermediate position between 2 people and at the end above worktop in clear glass/fabric tackble /laminate/white board finsh. Side panels or legs - made up of 25 mm thk. prelam particle board with flat pvc lipping edge banding considered only on the open end conditions or metal powder coated legs at the end and shared condition. System shall also have 120 mm high powder coated standalone panel legs to give the system an elevated look. Worksurface - made up of 25 mm thk prelam particle board with flat pvc lipping edge banding of size 1500 mm w1 X 1500 MM w2 x 600 mm d. Pedestals with or without legs - Nova pedestal flat metal front, full ht free standing central locking of size 390 mm w x 435 mm d x 646 mm ht 3dr = 2box+1file. CPU trolley - with castors. KBPT with/without mousetray - plastic/metal/articulated. The product should be BIFMA LEVEL, AIOTA, GRIHA, SCS IAQ, GREENPRO certified. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	

253	Supplying & installation of DESK based modular workstation of following specifications: Size 1500x600 mm with KBPT + Pedestal + CPU Trolly with System ht - 750 mm. Understructure - The slanted legs with perforated metal modesty in between are connected to the understructure with the help of PDC Connectors to provide a stable and sturdy base for the worktops. Modesty panel shall be of Metal 1.2 mm thick CRCA. Wire Management : Metal powder coated power box with wire raiser + D56 is given to pull wires from the floor junction box upto the power box fixed under neath the worktop. Aluminium access flaps on worktop above power box cut out for accessing switches. Worktop mounted metal modesty made from 0.8 mm thk CRCA (IS: 513) is provided. Worksurface - made up of 25 mm thk prelam particle board with flat pvc lipping edge banding of size 1200 mm w x 600 mm d. Pedestals - Nova pedestal flat metal front, full ht free standing central locking of size 390 mm w x 435 mm d x 646 mm ht 3dr = 2box+1file. The product should be Greenguard UL,BIFMA LEVEL, AIOTA,GRIHA, SCS IAQ, GREENPRO certified. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
254	Supplying & installation of square table of size 1150x1150x740mm with following specifications: Work Surface: Made of 25mm Thick Pre-laminated twin board of E1-P2 grade and approved shade conforming to IS-12823:1990, Edge banded with matching 2 mm thick PVC lipping. Soft closing access flap provided for access to power supply and audio cables. Work top to be made available in two shapes i.e., Square /Pebble (Round) (as approved by the Engineer-In-Charge). Side Panels: Made of 25mm Thick Pre-laminated twin board of E1-P2 grade and approved shade conforming to IS-12823:1990 matching to the Worktop, Edge banded with matching 2 mm thick PVC lipping. Cutout with Gromet provided for routing cables in case any Audio-Visual equipment is to be fixed later. Understructure: The Under-structure consists of an Inner Tube Assembly with Top for Worktop Mounting and Base plate with levellers. The Top Plate is made of 5mm thk hot rolled steel Plates (HR) (As per IS: 2062) & the bottom plate is made of 8mm thk hot rolled steel Plates (HR) (As per IS:2062). The Inner Tube Assembly is made of 25.4mmx 25.4mm x 1.2mm thk round electric resistant welded tube (ERW) (As per IS:7138) welded together using Tungsten inert gas welding. The whole structure is epoxy polyester powder coated (DFT 40-60 microns). The product has a knock-down construction. Cutout for standard Anchor Roma 6 Module to be provided for electrical fittings. An additional cutout with a plate to be provided for mounting Audio Visual Cables(eg HDMI,VGA-A,etc.). Removable panel: The 3D removable panels are to be provided for ease of serviceability. It also provides easy access to internal space in case any Audio-Visual equipment is to be added later. It is made of 1.2mm CRCA MS IS:513 and EPOXY POLYESTER Powder Coated (DFT 40-60 microns). The product should be Greenguard UL, BIFMA, AIOTA, GRIHA, GREENPRO certified. The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified.	
255	Supplying & installation of rectangular table of size 2100x1150x740mm with following specifications: Work top: Made up of 25mm thick pre-laminated twin board of E1-P2 grade and approved shade conforming to IS-12823:1990, Edge banded with matching 2 mm thick PVC lipping. Access panels provided with soft closing hinges. Understructure-The Under-structure consists of mixture of 25mm and 18mm pre-laminated twin board of E1-P2 grade and approved shade conforming to IS-12823:1990, Edge banded with matching 2 mm thick PVC lipping. Anodised aluminium alloy 63400 - WP profile is added at bottom edges for improving the aesthetics. The product has a knock-down construction. Wire Management-Bottom cabinet with door is provided for flow of wires and cables. Cutout provision below. Access flap at four locations for standard 8 module Anchor Roma is provided. Beside each cutout, an additional cutout with plate is provided for mounting Audio-Visual	

	Cables (eg. HDMI,VGA-A,etc). The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified.	
256	Supplying & installation of double-sided book rack of size 1200Wx600Dx2078Hwith following specifications: **Body** a. Side panels, Frame & Cross L bracket are made using 0.8 mm CRCA (IS:513). b. The assembly consists of 2 tie rods, 4 fixing brackets and 2 turnbuckles. The tie rods are fixed in a shape of 'X'. The tie rods are made of 4mm diameter rods of MS while fixing brackets are made of 2mm thick. CRCA IS:513Grade. c. Optional wooden panel of 25mm thk PLT, E1-P2 grade board for PLT ref. Specification - FF04/DSN/STD/101, edges shall be provided with machine pressed 2 mm thick PVC lipping glued with hot melt EVA glue **Under Structure:** Under structure is made of 0.8m CRCA (IS:513). Sizes of under structure for single body: 1. 1200W x 295D x 80H 2. 2400W X 295D X 80H Shelves - a. Shelves used are 10 bend panel made of 0.8mm CRCA (IS:513). b. Shelf panels are placed on shelf support and then fixed using nut and bolts from below. c. Standard config. consists of 6 loading levels formed by 5 no of adjusted shelf for each main and add on unit. d. Uniformly Distributed Load Capacity per each shelf is 80 Kg maximum. **Construction:** Completely Knock down construction. **Finish:** All MS Sheetmetal and metal frame components are powder coated with epoxy polyester powder to the min. thickness of 45 microns. **Stack ability:** The add-on units can be stacked width wise to form a bank of racks having common side panel up to 4800W **Shelves back stiffener:** At the rear side of the shelves back stiffeners are provided. These act as separators made of 0.8mm THK CRCA (IS:513). **Label Holder:** It is an aluminum extrusion of length 296mm for single body bookrack, fitted on to front of body. The Paper is 300GSM matt finish, to be inserted into the aluminum extrusion. The length of paper is 296mm for single body bookrack. The product should be Greenguard UL, BIFMA, AIOTA, GRIHA, GREENPRO certified. The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified.	
257	Supplying & installation of wall / single sided book rack of size 1200Wx600Dx2078H with following specifications: **Body** a. Side panels, Frame & Cross L bracket are made using 0.8 mm CRCA (IS:513). b. The assembly consists of 2 tie rods, 4 fixing brackets and 2 turnbuckles. The tie rods are fixed in a shape of 'X'. The tie rods are made of 4mm diameter rods of MS while fixing brackets are made of 2mm thick. CRCA IS:513 Grade. c. Optional wooden panel of 25mm thk PLT, E1-P2 grade board for PLT ref. Specification - FF04/DSN/STD/101, edges shall be provided with machine pressed 2 mm thick PVC lipping glued with hot melt EVA glue **Under Structure:** Under structure is made of 0.8m CRCA (IS:513). Sizes of under structure for single body: 1. 1200W x 295D x 80H	

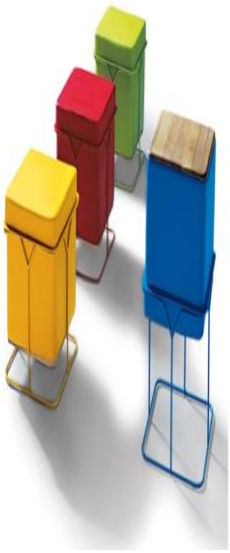
	2. 2400W X 295D X 80H Shelves - a. Shelves used are 10 bend panel made of 0.8mm CRCA (IS:513). b. Shelf panels are placed on shelf support and then fixed using nut and bolts from below. c. Standard config. consists of 6 loading levels formed by 5 no of adjusted shelf for each main and add on unit. d. Uniformly Distributed Load Capacity per each shelf is 80 Kg maximum. **Construction:** Completely Knock down construction. **Finish:** All MS Sheetmetal and metal frame components are powder coated with epoxy polyester powder to the min. thickness of 45 microns. **stack ability:** The add-on units can be stacked width wise to form a bank of racks having common side panel up to 4800W **Shelves back stiffener:** At the rear side of the shelves back stiffeners are provided. These act as separators made of 0.8mm THK CRCA (IS:513). **Label Holder:** It is an aluminum extrusion of length 296mm for single body bookrack, fitted on to front of body. The Paper is 300GSM matt finish, to be inserted into the aluminum extrusion. The length of paper is 296mm for single body bookrack. The product should be Greenguard UL,BIFMA LEVEL, AIOTA,GRIHA, GREENPRO certified. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
258	Supplying & installation of 1 Seater Sofa with following specifications: 1)SEAT FOAM : The seat is made up of PU foam in Density 28 ±2 kg/cu.mtr with an additional top layer of super soft PU foam in Density 32 ± 2 kg/cu, upholstered with fabric or leatherette. 2)BACK FOAM : The back is made up of PU foam in Density 28 ± 2 kg/cu. mtr with two additional top layer of super soft foam of density 32±2 kg/cu. mtr, upholstered with fabric or leatherette. 3)UNDERSTRUCTRE : Understructure is made up of 1.2±0.1 cm. thick hot pressed plywood [moisture resistance & termite proof as per IS:303] & pinewood of cross sections devoid of major knots & surface defects. 6 nos. per seat & 3.8mm Dia zigzag spring assembly is mounted over understructure for cushioning purpose. 4)LEG ASSEMBLY : It is a welded Assembly made in Stainless steel (grade SS 202) tube & plate with plastic endcap. 5) Size: Width (W): 86.0 CM. Depth (D): 90.5 CM. Height (H): 85.5 CM. Seat Height (SH): 45.0 CM. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
259	Supplying & installation of 2 Seater Sofa with following specifications: 1)SEAT FOAM : The seat is made up of PU foam in Density 28 ±2 kg/cu.mtr with an additional top layer of super soft PU foam in Density 32 ± 2 kg/cu, upholstered with fabric or leatherette. 2)BACK FOAM : The back is made up of PU foam in Density 28 ± 2 kg/cu. mtr with two additional top layer of super soft foam of density 32±2 kg/cu. mtr, upholstered with fabric or leatherette. 3)UNDERSTRUCTRE : Understructure is made up of 1.2±0.1 cm. thick hot pressed plywood [moisture resistance & termite proof as per IS:303] & pinewood of cross sections devoid of major knots & surface defects. 6 nos. per seat & 3.8mm Dia zigzag spring assembly is mounted over understructure for cushioning purpose.	

	4)LEG ASSEMBLY : It is a welded Assembly made in Stainless steel (grade SS 202) tube & plate with plastic endcap. 5) Size: Width (W): 146.0 CM. Depth (D): 90.5 CM. Height (H): 85.5 CM. Seat Height (SH): 45.0 CM. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
260	Supplying & installation of 3 Seater Sofa with following specifications: 1)SEAT FOAM : The seat is made up of PU foam in Density 28 ±2 kg/cu.mtr with an additional top layer of super soft PU foam in Density 32 ± 2 kg/cu, upholstered with fabric or leatherette. 2)BACK FOAM : The back is made up of PU foam in Density 28 ± 2 kg/cu. mtr with two additional top layer of super soft foam of density 32±2 kg/cu. mtr, upholstered with fabric or leatherette. 3)UNDERSTRUCTRE : Understructure is made up of 1.2±0.1 cm. thick hot pressed plywood [moisture resistance & termite proof as per IS:303] & pinewood of cross sections devoid of major knots & surface defects. 6 nos. per seat & 3.8mm Dia zigzag spring assembly is mounted over understructure for cushioning purpose. 4)LEG ASSEMBLY : It is a welded Assembly made in Stainless steel (grade SS 202) tube & plate with plastic endcap. 5) Size: Width (W): 146.0 CM. Depth (D): 90.5 CM. Height (H): 85.5 CM. Seat Height (SH): 45.0 CM. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
261	Supplying & installation of Side / Corner table with following specifications: 1) TABLE GLASS: It should be 10 ±0.3 mm thick black tinted Toughened glass UV glued with bushes made in SS 202 grade for focing with understructure. 2) UNDERSTRUCTURE: It should be a welded Assembly made in SS202 grade Dia. 12±0.04mm as per IS:1762. 3)SIZE: Width = 60.0 cm, Depth = 60.0 cm, Height=45. cm. The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified.	
262	Supplying & installation of Locker Unit with following specifications: Overall size of 4 Door PLU + Lkr (Base) shall be 380mm(W)x450mm(D)x1830mm(H). Stackability shall have add - on units that can be stacked width wise to form bank of lockers having common side panel. Locking shall have 10 Lever cam lock with lock lever plus option of hasp arrangement. Material shall be CRCA 0.6 mm thickness. Construction shall be Rigid Knockdown construction; shelf shall be uniformly distributed. Load carrying capacity per each shelf level is 35 Kg maximum. Finish shall be epoxy polyester powder coated to the thickness of 50 microns. Handle/Label holder shall be Aesthetically appealing Snap fit ABS plastic handle. Ventilation shall be attractive punched pattern for ventilation. The product should be Greenguard UL,BIFMA LEVEL, AIOTA,GRIHA, SCS IAQ, GREENPRO certified. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	

263	Supplying & installation of Filing Cabinet of size 1072x1200x460mm with following specifications: Construction should be a knockdown construction of 25mm thk and 18mm thk pre-Laminated boards with metal cladding of 0.8mm thk C.R.C.A (as per IS:513) from outside. Side metal cladding should be coated with Epoxy polyester powder of 50±10 microns thickness. The storage unit should be provided with 11mm thk bent metal top made of 0.8mm thk C.R.C.A (as per IS:513). The metal top should be coated with Epoxy polyester powder of 50±10 microns thickness. Drawer Fronts should be made of 18mm thk pre-laminated boards with decorative laminate on one side and backing laminate on the other side. Aesthetically appealing recessed handles of Aluminium extrusion should be provided for easy opening and closing. Lock with shooting bolt arrangement (central locking for 2 / 3 / 4 drawer units) should be provided. The skirting units should be provided with 150mm high skirting made of 0.8mm thick C.R.C.A (as per IS: 513) and should be coated with Epoxy Polyester powder of 50± 10 microns thickness. Screw type adjustible leveler with plastic base is to be provided for vertical adjustment for floor unevenness and leveling of units. Back panels should be made of 18mm thick pre-Laminated boards with options of Decorative laminate as well as Fabric finishes. It shall consist of split back top panel and split back bottom panel separated by an Aluminium extrusion. Drawers should be mounted through High quality full extension precision ball slides for smooth movement. File Hangers should be provided one per drawer for anchoring Ezee files inside to side-Lateral direction. Anti-tipping safety arrangement should be provided to ensure that when one drawer is opened for use, it does not allow other drawers to be opened. Anti-rebound mechanism to be available in slides to prevent drawer from coming out again after it is pushed in. The product should be Greenguard UL,BIFMA LEVEL, AIOTA,GRIHA, SCS IAQ, GREENPRO certified. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
264	Supplying & installation of Chair with following specifications: 1. SEAT/BACK ASSEMBLY: The seat and back are made from seasoned wood and plywood. The same is upholstered with synthetic leather and polyurethane foam. BACK SIZE:38.5cm. (W) X 26.0cm. (H). SEAT SIZE : 38.50cm (W) x 39.50cm (D) 2. UNDERSTRUCTURE ASSEMBLY: The understructure assembly is a cantilever type frame made of 2.54 ±0.03cm x 0.2 ±0.016 cm thk MS E.R.W. tube and powder coated (DFT 40-60 microns). The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
265	Supplying & installation of Visitor Chairs without armrest with following specifications: 1. SEAT/BACK ASSEMBLY: The cushioned seat assembly consists of seat base moulded in glass-filled Poly-amide, moulded Polyurethane foam & upholstered with high stretch knitted polyester fabric. The cushioned back assembly consists of back inner moulded in Polypropylene in-situ moulded with Polyurethane foam & upholstered with high stretch knitted polyester fabric. Back Size : 44.0 cm. (/1/) x 46.0 cm. (H) Seat Size : 48.5 cm. (W) x 47.0 cm. (D) 2. HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam used in seat and back cushion is moulded in Density Min 48 kg/m3 and hardness load 15 ± 2 kgf as per IS:7888 for 25% compression. 3. FRAME ASSEMBLY: - The powder coated (DFT 40-60 micron) tubular frame is cantilever type and made of dia 2.54 +/- 0.03 cm X 0.3 +/- 0.016cm thk MS ERW tube. Shoes are made of glass filled Poly amide and fixed to the tubular frame. Overall Dimensions of Chair Seat Height - min 47.1 cm.	

	Height - 93.3 cm. Width & Depth of Chair as measured from pedestal - Width-48.5 cm and Depth-58.9 cm The product should be Greenguard UL,BIFMA LEVEL, AIOTA,GRIHA, SCS IAQ, GREENPRO certified. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
266	Supplying & installation of double door steel almirah in desired color as approved by Engineer-In-Charge with following specifications: Metal almirah(welded) shall have an overall size of : 916mm(W)x486mm(D)x1981mm(H) with welded construction. It should have the shelf thickness of 0.7 mm, Back thickness of 0.8mm, Door thickness of 0.8mm (high yield strength) and all other components shall have a thickness of 0.9mm. These components shall be made of CRCA 'D' grade high yield strength as per IS:513. The metal almirah(welded) should have a Mazak handle and Three-way locking mechanism with Shooting Bolts. It should have a height wise adjustable shelf mounting which shall have a Uniformly Distributed Load Capacity of max 40 Kg. It should also have a M10 Screw type Leveller with Hex plastic base. The finishing shall include Epoxy powder coated to the thickness of 50 microns (+/- 10). The product should be Greenguard UL, BIFMA LEVEL, AIOTA,GRIHA, SCS IAQ, GREENPRO certified. The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified.	
267	Supplying & installation of sofa of size 90x79x70.50 cm (WxHxD) with following specifications: 1. SEAT • Understructure is made using a combination of 12mm Plywood (As per IS:303) vertical panels and Pine-Wood longitudinal members. 2mm thk kraft-board is stapled on the front side for foam sticking surface. • Seat is made with 100mm PU Slab-stock foam pasted on the seat ply. 12mm PU Slab-stock foam is pasted along the front and sides. • The seat is upholstered in fabric. 1200mm, 1500mm, and 1800mm Length Sofas are provided with 02 nos of 6A electrical sockets with individual switches. 900 Length Sofas are provided with 01 nos of 6A electrical sockets with individual switch. The Electricals are safely housed in a box mounted on Pine-wood section within the seat & power is supplied through a 1.5 mtr AC cord with ceramic fuse (5A). 2. BACK • Understructure is made using a combination of 12mm Plywood (As per IS:303) vertical panels and Pine-Wood longitudinal members. 2mm thk MDF-board is stapled on the front & back side for foam sticking surface. • Back is made with 50mm PU Slab-stock foam, while 12mm PU Slab-stock foam is pasted along the back and sides. The back is upholstered in fabric. 3. LEGS • The legs are made using FSC-certified seasoned Teak-Wood finished with a clear matt coat of PU Lacquer. 4. ASSEMBLY • The Seat and Back are connected using Bolts, Washers & Nuts. Legs are assembled using Bolts, Washers & Drive-in T-Nuts. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	

268	Supplying & installation of back-to-back sofa of size 90x79x133.50 (WxHxD) cm with following specifications: 1. SEATS: • Understructure is made using a combination of 12mm Plywood (As per IS:303) vertical panels and Pine-Wood longitudinal members. 2mm thk kraft-board is stapled on the front side for foam sticking surface. • Seat is made with 100mm PU Slab-stock foam pasted on the seat ply. 12mm PU Slab-stock foam is pasted along the front and sides. The seat is upholstered in fabric. • 1200mm, 1500mm, and 1800mm Length Sofas are provided with 02 nos of 6A electrical sockets with individual switches on each seat. 900 Length Sofas are provided with 01 nos of 6A electrical sockets with individual switch on each seat. The Electricals are safely housed in a box mounted on Pine-wood section within the seat & power is supplied through a 1.5 mtr AC cord with ceramic fuse (5A). 2. BACK: • Understructure is made using a combination of 12mm Plywood (As per IS:303) vertical panels and Pine-Wood longitudinal members. 2mm thk MDF-board is stapled on the both sides as back foam sticking surface. Back is made with 50mm PU Slab-stock foam on both front and back, while 12mm PU Slab-stock foam is pasted along the sides. • The back is upholstered in fabric. LEGS: • The legs are made using seasoned FSC-certified seasoned Teak-Wood finished with a clear matt coat of PU Lacquer. 4. ASSEMBLY: • The Seat and Back are connected using Bolts, Washers & Nuts. Legs are assembled using Bolts, Washers & Drive-in T-Nuts. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
269	Supplying & installation of workpod of size 122.5x132.8x93.5 cm (WxHxD) with following specifications: 1. BASE: The base-top is made using 18mm Plywood (As per IS:303), and Natural Veneer pasted onto 4mm backing Plywood. The base-top has a bidding of FSC-certified seasoned Teak-Wood finished with a clear matt coat of PU lacquer around the periphery. The base Under-structure consists of Legs and Cross-members made with FSC-certified seasoned Teak-Wood . They are connected using Epoxy Resin Based Adhesive and finished with a Clear Matt Coat of PU lacquer. The Under-structure and top is assembled using alloy steel hardware (blackened & coated with rust preventive oil). 2. BACK-FRAME: The Back-frame has an Under-structure made of 18mm Plywood (As per IS:303). It is covered with 06mm Plywood (As per IS:303) from the inside. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	

270	Supplying & installation of flip desk of size 60x74x40 cm (WxHxD) with following specifications: 1. SEAT • The seat is made up of synthetic leather upholstered on PU slabstock foam of 6.5 cm ± 0.5 cm which is fitted to the upholstered wooden batten box by bolting from the inside. Holding plate is made of HR Steel of 0.3 cm (±0.02 cm) thickness as per IS:2062 which is bolted to the upholstered seat assembly. * SEAT SIZE : 42.0 cm. (W) x 42.0 cm. (D) 2. CASING: Casing is made up of 01 cm (±0.02 cm) M.S. rod as per IS:9550. Casing is powder coated (DFT 40-60 microns). Also casing is coated with nano coat to improve the abrasion resistance of the surface. * CASING SIZE: 44.0 cm. (W) x 44.0 cm. (D) x 37.5 (H) 3. WOODEN BATTEN BOX ASSEMBLY : Side panels of batten box is made up of 0.9 cm (±0.05 cm) plywood as per IS:303. The four corners of batten box is made up of solid wood which forms the radius. Bottom portion of batten box is covered by 1.2 cm (±0.05cm) rubber wood panel which is finished with a clear mall coat of PU lacquer. Sides of wooden batten box is upholstered with synthetic leather with backing of PU slab stock foam of 0.6 cm. Upholstered wooden box can be flipped in the reverse way to use it as desk surface by keeping it on the casing. * BATTEN BOX SIZE : 40.0cm (W) x 40.0 cm (D) x 27.4 cm (H) * NOTE: Dimensions are product out to out dimensions (extreme point) on components. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
271	Supplying & installation of round table of size 90 cm (dia.) and 102 cm (Ht.) with following specifications: WORKTOP: Worktop is made up of 25mm thick corian with 0.4mm membrane foil on top surface. The worktop is available in 5 shapes; viz.: Circle 2. UNDER-STRUCTURE: The under-structure consists of an InnerTube Assembly with Top Plate, for Worktop Mounting and an Outer Tube Assembly with Round / Rectangle / Square Bottom Plate. The Inner & Outer Tube Assemblies are telescopically connected. The Top Plate is made of 5mm thk HOT ROLLED Steel Plates (HR) (As per IS:2062) & the bottom plate is made of 8mm thk HOT ROLLED Steel Plates (HR) (As per IS:2062). The Inner Tube Assembly is made of 82.5 x 2.0 mm thk ROUND ELECTRIC RESISTANCE WELDED Tubes (ERW)(As per IS:7138) and 8mm thk HOT ROLLED Steel Plates (HR) (As per IS:2062) welded together using TUNGSTEN INERT GAS Welding. The Outer Tube Assembly is made of 89 x 2.50 mm thk ROUND ELECTRIC RESISTANCE WELDED Tubes (ERW)(As per IS:7138) and 8mm thk HOT ROLLED Steel Plates (HR) (As per IS:2062) welded together using TUNGSTEN INERT GAS Welding. The whole structure is EPDXY POLYESTER Powder Coated (DFT 40-60 microns). The product has a knock-down construction. It is assembled using alloy steel hardware (blackened & coated with rust preventive oil). The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
272	Supplying & installation of rectangular table of size 90x120x72 cm (WxDxH) with following specifications: WORKTOP (PU) Worktop is made of PU on top side. Hardness on top surface is 2H. The worktop is available in 5 shapes; viz.: Circle, Bite, Rectangle, Square & Face 2. UNDER-STRUCTURE: The under-structure consists of an Innertube Assembly with Top Plate, for Worktop Mounting, & an Outer Tube Assembly with Round / Rectangle / Square Bottom Plate. The Inner & Outer Tube Assemblies are telescopically connected. The Top Plate is made of 5mm thk HOT ROLLED Steel Plates (HR) (As per IS:2062) & the bottom plate is made of 8mm thk HOT	

	ROLLED Steel Plates (HR) (As per IS:2062). The Inner Tube Assembly is made of 82.5 x 2.0 mm thk ROUND ELECTRIC RESISTANCE WELDED Tubes (ERW)(As per IS:7138) and 8mm thk HOT ROLLED Steel Plates (HR) (As per IS:2062) welded together using TUNGSTEN INERT GAS Welding. The Outer Tube Assembly is made of 89 x 2.50mm thk and ROUND ELECTRIC RESISTANCE WELDED Tubes (ERW) (As per IS:7138) and 8mm thk HOT ROLLED Steel Plates (HR) (As per IS:2062) welded together using TUNGSTEN INERT GAS Welding. The whole structure is EPOXY POLYESTER Powder Coated (DFT 40-60 microns). The product has a knock-down construction. It is assembled using alloy steel hardware (blackened & coated with rust preventive oil). The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
273	Supplying & installation of desk of size 60x45x72 cm (WxDxH) with following specifications: 1. WORKTOP : Worktop is made of combination of 12mm and 6mm thk Corian (matt finish) and 18mm thk Marine ply (BWP Grade)(As per IS:710) with 0.6mm backing laminate on bottom side. Corian is composed of acrylic resin and natural minerals that make it a non-porous, non-toxic, water-proof, seam-less and homogeneous surfacing material with resistance to scratches, stains, mould and mildew 2. UNDER-STRUCTURE: The under-structure is combination of 16 x 2 mm thk Round Electric Resistance Welded Tubes (ERW)(As per IS:7138) and 3mm thk Hot Rolled Steel Plates (HR) (As per IS:2062) welded together using Tungsten Inert Gas (TIG) Welding. The whole structure is Epoxy Polyester Powder Coated (DFT 40-60 microns). It is assembled with the Worktop using alloy steel hardware (blackened & coated with rust preventive oil). The understructure is provided with spacers so that the worktop does not get damaged in stacked conditions. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.	
274	Supplying & installation of chair of approved colour and size 63.50x63x80 cm (WxDxH) with following specifications: 1.SHELL: The seat-back shell is made of 15mm Plywood (As per IS:303) panels connected using Brackets made from 3mm Hot Rolled Steel Plates (HR) (As per IS:2062). The Steel Brackets are Epoxy Polyester Powder Coated (DFT 40-60 microns). 25mm PU slab-stock foam is pasted onto both sides of the shell and pinched together to achieve the radius along the periphery. It is upholstered in Leatherette. 2. SEAT CUSHION : The seat-cushion is made using 50mm PU slab-stock foam and is upholstered in Leatherette. It is held in place with hook and loop tape stitched to it's bottom side. 3. UNDERSTRUCTURE : The understructure is made of FSC-certified seasoned Teak-Wood finished with a clear matt coat of PU Lacquer. Understructure members are glued together using Epoxy Resin Based Adhesive. The shell is fixed to the understructure using alloy steel hardware (blackened & coated with rust preventive oil). The product should be Greenguard UL, BIFMA LEVEL, AIOTA, GRIHA, , GREENPRO certified. The OEM should be ISO 9001:2015,ISO 14001:2015 & ISO 18001:2007 certified.H20	
275	Supplying & installation of rectangular table of size 1800x900x740 mm (WxDxH) with following specifications: The top shall be 25 mm thick PLB with 2 mm thick PVC Edge Beading plus the Understructure shall be having C - Frames 1.6 mm thick MS supporting the top . The Legs shall be of dia. 38.1 x 1.6 mm thick MS ERW tube. The OEM should be ISO 9001:2015, ISO 14001:2015 & ISO 18001:2007 certified.	

ADDITIONAL SPECIFICATIONS FOR PASSENGER LIFTS

1) Passenger Lift
Location:- Library Building

1	Type of Lift	**:**	13 PASSENGER
2	Number of lifts required [Location wise]	**:**	01 (One)
3	Load: Number of persons	**:**	844 kg : 13 Passenger per each lift
4	Rated speed	**:**	1.0 MPS
5	Travel in meters	**:**	As per Site Condition / Manuf. Standard
6	Number of floors served	**:**	G + 2 Floors [G, 1, 2]
7	[a] Inside size of lift well	**:**	To be Constructed as per the Manufacturer Standard
	[b] Pit depth	**:**	As per Manufacturer Standard
8	Clear inside size of lift car	**:**	As per IS Standard
9	Dimension of lift machine room	**:**	**Machine room Less**
10	Position of counter weight	**:**	At the back / side of the car
11	Position of machine room	**:**	At the top of the lift shaft
12 [a]	Type of control	**:**	Microprocessor based AC variable voltage variable frequency & Gearless
[b]	Type of operation	**:**	As per Manufacturer Standard
[c]	Potential free contacts	**:**	Potential free contacts for each floor position and up and down movement of the lift shall be provided in the controller which can be used for the building automation system at later date for monitoring only.
13	Car entrance door		Stainless Steel [Linen] Finish Doors.
[a]	Number	**:**	One
[b]	Size	**:**	As per Site Condition / Manuf. Standard
[c]	Type of doors	**:**	Horizontal sliding – centre opening
[d]	Car open in front only or open	**:**	In front only
14	Construction design and finish of car body work	**:**	Stainless steel [Hairline / Linen finish]
15	**Type of signal system**		
[a]	Digital floor position indicator in the car and at all landings [to be provided above the car / landing doors]		
[b]	Travel direction indicator in the car and at all landings [to be provided above the car / landing doors]		
[c]	Gongs and visual indication on all landings for pre arrival of the car for two or more cars		
[d]	Overload warning Audio & Visual indicator, inside the car [lift should not start on overload]		
[e]	Battery operated alarm bell and emergency light		
[f]	Car operating panel with fade proof luminous buttons in car and with intercom		
[g]	Luminous hall buttons at all landings		
[h]	Fireman's switch at ground floor		
[i]	Hall position indicators and buttons shall be Segment LED Indicators, Tactile button along with additional Braille inscriptions.		
[j]	Fire Emergency Return: Upon activation of a key switch or a building's fire		

	alarm, all calls are cancelled, all cars immediately return to a specified evacuation floor and the doors open to facilitate the safe evacuation of passengers. Emergency Car Lighting: Car lighting which turns on immediately when power fails, providing a minimum level of lighting within the car.		
[k]	Emergency Landing Device (Automatic rescue Device) **with audio announcer:** Upon power failure, a car equipped with this function automatically moves and stops at the nearest floor using a rechargeable battery, and the doors open to facilitate the safe evacuation of passengers with audio announcer. Dry type Battery (Maintenance Free) should be used for power backup.		
[l]	Automatic speed control: Door load on each floor, which can depend on the type of hall doors, is monitored to adjust the door speed, thereby making the door speed consistent throughout all floors.		
[m]	Door load detector: When excessive door load has been detected while opening or closing, the doors Door Load Detector immediately reverse.		
[n]	Door Nudging Feature — With Buzzer: A buzzer sounds and the doors slowly close when they have remained open for longer than the preset period.		
[o]	Multi-beam Door Sensor: Multiple infrared-light beams cover at least 2/3 of the door height of the doors to detect passengers or objects as the doors close.		
[p]	Car Fan Shut Off — Automatic, If there are no calls for a specified period, the car ventilation fan will automatically turn off to conserve energy.		
[q]	Car Light Shut Off — Automatic, If there are no calls for a specified period, the car lighting will automatically turn off to Conserve energy.		
[r]	False Call Cancelling— Automatic, If the number of registered car calls does not Correspond to the car load, all calls are cancelled to avoid unnecessary stops.		
[s]	False Call Cancelling— Car Button Type Automatic, If a wrong car button is pressed, it can be cancelled by quickly pressing the same button again twice.		
[t]	Overload Holding Stop A buzzer sounds to alert the passengers that the car is overloaded. The doors remain open and the car will not leave that floor until enough passengers exit the car.		
[u]	Safe Landing Service- If a car has stopped between floors due to some equipment malfunction, the controller checks the cause, and if it is considered safe to move the car, the car will move to the nearest floor at a low speed and the doors will open.		
[v]	LCD / LED Position Indicator 5-7-inch LCD / LED for car operating panels shows the date and time, car position, travel direction and elevator status messages.		
[w]	Hall LCD / LED Position Indicator Display 5 to 7 inch LCD / LED for elevator halls shows the date and time, car position, travel direction and elevator status messages.		
[x]	Provision of CCTV and Intercom including wiring.		
[y]	Provision of Floor announcement with all-time music.		
[z]	Provision of Single Phase/ phase failure sensing for ARD along with auto correction of phase reversal.		
16	**Landing entrance**		
[a]	Location of landing entrance in different floors	**:**	All doors on the same side
[b]	Number	**:**	G, 1, 2.
[c]	Size	**:**	As per IS Standard
[d]	Type of doors	**:**	Horizontal sliding centre opening
[e]	Lift in use / lift out of order sign	**:**	A suitable box above the lift landing with LED illuminated [in English / Hindi] sign of

			"LIFT OUT OF ORDER" coming up simultaneously at all floors
17	Electric supply	**:**	[a] Power: 415 V, a.c., 3 phase, 50 Hz, 4 wire system
			[b] Lighting: 230 V, 50 Hz, a.c.
18	Is neutral wire available for control circuits	**:**	Yes
19	Proposed date for commencement on site	**:**	As per contract
20	Proposed date for completion	**:**	As per contract
21	Environmental condition at site of installation	**:**	Summer condition
			Winter condition
			Monsoon condition
			Height above sea level
22	Traction System	**:**	**Rope-in / belt driven technology**
23	Fire Rating	**:**	**2 Hour fire rating landing doors (certification required)**
24	Car Flooring	**:**	**Natural granite flooring**
25	Door sensor	**:**	**Light curtain protection on door**
26	Car and landing operation panel	**:**	Tactile push button along with additional Braille inscriptions.
27	Ventilation	**:**	**Noiseless type fans (blowers) of appropriate throw of CFM inside the car**
28	Mirror	**:**	**Full length mirror on rear side**
29	Confirming to Quality Standard IS/ISO-9001:2015		IS/ISO-9001:2015

2) Dumb Waiter (Goods Lift)
Location:- Library Building

1	Type of Lift	**:**	Dumb Waiter (Goods Lift)
2	Number of lifts required [Location wise]	**:**	01 (One)
3	Load:	**:**	100 kg
4	Rated speed	**:**	0.3 MPS
5	Travel in meters	**:**	As per Site Condition / Manuf. Standard
6	Number of floors served	**:**	G + 1 Floors [1, 2]
7	Electric supply	**:**	[a] Power: 415 V, a.c., 3 phase, 50 Hz, 4 wire system
			[b] Lighting: 230 V, 50 Hz, a.c.
8	Type of control	**:**	Microprocessor based AC variable voltage variable frequency & Gearless
9	Construction design and finish of car body work	**:**	Stainless steel
10	Confirming to Quality Standard IS/ISO-9001:2015	**:**	IS/ISO-9001:2015

TECHNICAL PARTICULARS

(Addressable Fire Alarm and Detection System

1. INTELLIGENT FIRE ALARM SYSTEM should have minimum 640 character LCD display. Qwerty keypad and minimum 4000 events & 1000 Alarm history log in the nonvolatile memory (EPROM), The panel shall work in degrade mode in case of CPU failure, power supply unit (230 + 5% v, 50 hz), 48 hrs back-up with 24 volt sealed maintenance free batteries with automatic charger. The panel shall have facility to connect printer to printout log and facility to have seamless integration with Digital Voice Evacuation system and 2 ways Communication Fire Fighters System (which is part of the schedule of work under SH: PA system). The panel shall be capable for remote accessibility on a mobile app through cloud platform/solution. UL864, 10th Edition & FM Approved. The panel shall be capable of self-programing without any dependency on dongle or programming software. Quoted rate shall include supply of necessary software & hardware for programming the panel with all necessary license.

2. CENTRAL GRAPHICAL FIRE ALARM MANAGEMENT SYSTEM shall be able to centrally monitor and Control the fire alarm system. The software shall provide the facility to Monitor, Control all the Digital PAVA as well as 2 waycommunication from main control room using voice signals over Fire Network along with the fire detection signal. The Graphic workstation shall act as an independent node communicating on the peer to peer network and shall not be dependent on the Fire Panel CPU for operation. Failure of Fire Panel CPU shall not result in failure of GUI. The software shall be capable of monitoring 200 Nodes with 100 Mbps Transmission rate on Fiber Optics Network and 12 Mbps Transmission on cable and 2,50,000 network points. The software shall be capable to Monitor & Control all the Digital Voice Evacuation as well as 2 way communication from main control room using voice signals over Fire Network along with the Fire detection signal. The Graphic workstation shall act as an independent node communicating on the peer to peer network and shall not be dependent on the Fire Panel CPU for operation. Failure of Fire Panel CPU shall not result in failure of GUI.

3. INTELLIGENT ANALOG ADDRESSABLE PHOTO THERMAL DETECTOR should be with Sensitivity range of 0.5 to 4.0% obs/f complete with mounting base complete as required. The detector shall have twin bi-colour LED for 360 deg viewing. Addressing shall be with user friendly rotary decimal switches designed to meet UL268, 7th Edition. The detector sensitivity (day & night) shall be controlled from the panel to get accustomed to the local environment. The detector shall work on cooperative mode to avoid false alarm.
4. INTELLIGENT ADDRESSABLE THERMAL DETECTOR with rate of rise cum fixed temperature thermistor complete with base shall have twin bi-colour LED for 360 deg viewing and be designed to meet. Detector shall comply UL521 guideline & FM Approved.

5. INTELLIGENT ADDRESSABLE MULTI CRITERIA [smoke + Heat + CO + IR] detector including suitable photo detector complete with base shall have twin bi-colour LED for 360 deg viewing Designed to meet UL268, 7th Edition.

6. ADDRESSABLE MANUAL CALL POINT shall have an LED which shall blink in normal state & get steady on activation to monitor the heath status of the device. ADDRESSABLE HORN CUM STROBE shall be rated at 75 dBA @ 3m for Audible annunciation and 75cd flashing at 1 Hz for visual indication

ANNEXURE-IV

Format for "OEM authorization certificate for Furniture"

To
The Executive Engineer (CD-III)
IIT Delhi, Hauz Khas,
Delhi – 110016

Name of Work	**:**	**Renovation and Modification of Central Library in Academic Area at IIT Delhi.**
Sub Head	**:**	**Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works.**
Subject	**:**	**OEM authorization certificate for furniture work.**

Dear Sir,

This is to inform you that M/s…….. (Name of the OEM of furniture) having its registered office at ……hereby authorize M/s…….(Name of the contractor/bidder) having its registered office at…….to supply, install, test, and commission our furniture-related items against your above-mentioned work. We shall provide full support to M/s……..(Name of the contractor/bidder) for our range of products quoted by them to meet the above-mentioned tender requirements. We shall provide 2 2-year standard warranty at no extra cost.

The undersigned is authorize to issue authorization on behalf of M/s…….. (Name of the OEM of furniture).

Authorize Signatory (OEM)

FORM OF WATERPROOFING 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.

That if the Guarantor fails to execute the waterproofing or commits breaches hereunder then the Guarantor will indemnify 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-III)***

PARTICULARS SPECIFICATIONS AND REPAIR METHODOLOGY TO BE FOLLOWED FOR STRUCTURAL REPAIR WORK

The Methodology for the Repair of Columns, Beams And Slabs.

The damages have been classified in the following four categories.

1 Severe:

The members under these categories are badly affected. Multiple very wide structural cracks more than 70 percent were observed. The reinforcement in the members is heavily corroded and visible as the cover at most of the places had fallen out. The NDT result of these structural members also show that strength of concrete has been in the category of heavily deteriorated category.

2 Medium:

The structural members placed in this category are having multiple cracks to the tune of 30precent. The reinforcement in these members is also corroded causing spalling of concrete at various locations and loose chunks of concrete come out easily on hitting with a metallic hammer. The NDT result of these members shows the quality of concrete has been in the category of 'Doubtful'.

3 Mild:

Small size Structural and non-structural cracks are observed in these members. The NDT result of these members corresponds to the quality of concrete to be fair. The corrosion in the reinforcement of these is started and needs attention

4 No Damaged/ Repaired:

No visual damage was observed; the structural members seem to be OK, due to repair by the maintenance division in the past.

Three different repair methodologies are being suggested for the repair of the columns. The **''Repair Methodology-1''** is suggested for the **''Severely''** damaged columns. The **''Repair Methodology-2''** is suggested for the repair of columns in which **Medium** and **Mild** category type of damages. ''**Repair Methodology-3;** is suggested for the repair of externally located damaged beams, and chajjas. These methodologies are as detailed below:

Repair Methodology-1

This repair methodology includes,

- Supporting the Structure,
- Removal of unsound concrete from the affected area,
- Protective treatment to the existing steel reinforcement,
- Addition of the reinforcement steel where the area of the steel is reduced to more than 10 percent,
- Repairs using single component high strength polymer modified mortar or using high strength free flow micro concrete,
- Strengthening of the member using E-Glass or Carbon fiber wrapping,

1) Supporting the Structure.

Providing and erecting steel props (about 14' height, braced at the center and supporting a continuous 2'' x 3'' wooden runner, resisting on the wedge and block minimum capacity 3 Ton) to support the structure provisionally during repair and jacketing etc. and maintaining them in position till required as directed by IIT Delhi. It is the responsibility of the contractor or applicator to provide appropriate shoring and provide proper jacks to de-stress the structure, before taking up the repair and retrofitting.

2) Removal of Unsound Concrete from Affected Area:

The First step in preparing reinforcing steel for repair or cleaning is removing the

deteriorated concrete surrounding the reinforcement. Care should be used to ensure that further damage to the reinforcing steel is not caused by the process of removing the concrete. Impact breakers can heavily damage reinforcing steel if the breaker is used without regard to the location of the reinforcement. For this reason, a cover meter or reinforcing bar locator should be used to determine the depth, size, quantity, and approximate location of the reinforcement in the concrete. Once the larger area of unsound concrete has been removed, a smaller chipping hammer should be used to remove the concrete in the vicinity of the reinforcement. Care should be taken not to vibrate the reinforcement or otherwise cause damage to its bond to concrete adjacent to the repair area. No reinforcing bar is to be cut or removed without the approval of the engineer. All weak, damaged, and easily removable concrete should be chipped away. If the reinforcing bars are only exposed after all unsound concrete is removed, it may not be necessary to remove additional concrete to expose the full circumference of the reinforcement. When the exposed reinforcing steel has loose rust, corrosion products, or is not well bonded to the surrounding concrete, the concrete removal should continue to crete a clear space behind the reinforcing steel of 6 mm (0.25 in.) , plus the dimension of the maximum size aggregate of the repair material.

3) Application of concrete penetrating corrosion inhibitor on concrete surface:

Carry out application of 'Bi-polar migratory corrosion inhibitor on concrete surface by brush in two coats. This inhibitor has migratory kind of property which permits the materials to migrate to a virtual extent of 60 mm, through pores of concrete, inhibiting the corrosion and de-passivating the electro-chemical reaction. It has property to attack anode as well as cathode, which is purely alkaline in nature (pH-9.5), so it has no carcinogen activity with concrete. Material shall have evaluated test reports indicating significant reduction in corrosion rate indicative of its suitability for tropical applications. Grout 50 to 75 mm deep holes at the spacing of 350 mm c/c with the dosing of 100 ml per hole in concrete body.

4) Providing Additional Reinforcing Steel :

Makeup lost steel area due to corrosion by providing additional steel reinforcement. The steel shall confirm to IS 1786 grade Fe500D. Anchor the steel rebar in sound concrete body up to desired depth by structural GRADE adhesive. Fixing of rebars is to be with pre left binding wires with existing steel at regular grid after aligning concrete profile with new mortar up to existing steel face.

5) Strengthening the Columns, Beams & Slabs

i) Making Up Lost Strength of Core Concrete by Low Viscosity Monomer:

Make up to lost strength of core concrete shall be with grouting of low viscosity (2-5cps- as per ASTM-D-2196) monometer. This is a low viscous high molecular weight thermosetting polymer. Due to its low viscosity it effectively fills up all micro-cracks and voids up to full depth of concrete. Beside enhancing existing binding matrix this shall also enhance in ductility property of elements.

Description of Grout:

- Drilling of holes 12 mm dia. And about 1/3 rd of element deep into concrete along the cracks or in honey combed and deteriorated areas, fix the perforated nozzles, and seal the sides with Epoxy sealant.
- Epoxy sealant: This is a non-shrink sealant. It is built in resilience to absorb impact and movements in joints.
- Inject very low viscous injection resin into pre-drilled nozzles at a pressure of 4-10 kg/cm^2 or as instructed by engineer-in-charge using compressed air and injecting gun. Seal the nozzles with epoxy after injection is completed.

ii) Grouting of Structural Cracks by Low Viscosity Epoxy Grout: Grout the wide structural cracks in the concrete by grouting of low viscosity grout

(200 cpc as per ASTM-D-2196). Cut a V-grove along the crack of proportionate size. Drill the holes along the crack at desired spacing. Seal the remaining portion by no-shrink epoxy putty to avoid any leakages of grout material. Grout the low viscosity material through epoxy injection gun under pressure of 3 to 4 kg/ cm^2. Cut and seal the nozzles after 24 hrs of application of grouting.

iii) Sectional Reconstruction in Excessively Damaged Concrete in Structural Elements

a.) Bonding Coat:

Bond between new and old concrete is important aspect for effective participation of total cross sectional area of concrete. Selection of type of bond coat is based on, type of stresses bond strata is expected to go, and prevailing area where application is to be carried. After the various pre-treatment apply liberal quantity of bond coat on cleaned concrete surfaces as per the detailed manufacture's procedure. Ensure that the application of new concreting is carried out during the pot life of material.

b). Making up lost- section with free flow micro concrete:

For replacing the carbonated part of concrete and repairing the damaged surface of concrete, fix the form work across the profile of damaged structural element. Pour the free flow concrete mix in the form work. Makeup concrete is based on type of structural element and its location. For large replacement of damaged concrete the free flow type of micro-concrete can be used. For small patch works the latex modified mortars can be used.

c.) Making up lost- section with latex modified mortar:

Makeup mortar is based on type of structural element and its location. Here following type of modified mortars are recommended.

Modified mortar:

For replacing the carbonated part of concrete and repairing the damaged surface of concrete usage of following formulated mortar is recommended.

Mix:

- Cement: 50 Kg
- Sand: 150 Kg
- Monobond: 2.5 to 5 kg
- Water: 15-20 Liters.

6) Strengthening of the member using E-Glass or Carbon fiber wrapping: Methodology for wrap System- Fiber Wrapping Technique:

The fiber wrapping technique of retrofitting is relatively new technique. It has got certain wrapping technique of retrofitting is relative ease for application, high strength to weight ratio, energy, and time saving, clean and noise free application, high strength to weight ratio, energy, and time saving, clean, and noise free application. The fiber wrapping system offers resistance to corrosion of reinforcement also. The fiber wrap skin acts as a deterrent to environmental degradation. It also has tailor ability
to adapt to any shape of substrate concrete.

The following are the steps taken for Fiber Wrapping:

1. The contact surface of concrete element shall not have free moisture at the time of application.

2. All bare concrete surfaces to be strengthened shall be primed with epoxy primer using a roller brush. Any surface concavity is to be filled by epoxy or other suitable putty.
3. Apply saturate epoxy on the surface.
4. Stretch unidirectional glass fiber over the surface and press by rollers to squeeze out the saturant through the fabric. Air bubbles are also removed due to this operation. … indicated the general direction of fiber for beams in flexure and shear, and columns in confinement. The wrapping around the beam-column joints are shown….
5. The fibers of the composite shall be lapped at least 150 mm in the direction of fiber between adjacent layers.
6. The process is repeated (steps6- 7) for application of second layer.
7. For the elements exposed to sunlight, a sealer coat may be applied on the wrap.

Protective Measure against Deterioration of building due to corrosion of Reinforcement:

The following treatment is general is recommended for the affected concrete members:

- The loose and disintegrated concrete be removed.
- The concrete surface should be thoroughly scrubbed by hard steel wire brush to ensure that no loose mortar, disintegrated concrete or concrete lumps are left. The scrubbed surface should then be cleaned by washing with water and made free of dust particles. Preferably by blowing air under pressure.
- Apply the bond coat of Epoxy coating on the entire surface, to have proper bond in between the old concrete and mortar.
- Make the column with polymer modified cement mortar when the bond coat is tacky. Cement: sand mortar (1:3) used shall have 20% acrylic emulsion by weight of cement. It shall be cured for 7 days by sprinkling water.
- In case the concrete member is in good condition but there are small cracks or undulations, the cracks, joints, or undulations are repaired using epoxy sealant .

The Following is the Detailed Procedure for Fiber Wrapping:

1. **Structure Preparation:**
   Basic repairs must be made to the structure prior to strengthening with FRP. Spelled concrete removed, Corroded or damaged steel addressed major cracks injected. Build the surface with polymer modified mortar or micro concrete.
2. **Surface Preparation:**
   The surface to be repaired is typically rubbed off to smooth out irregularities remove contaminants and radius sharp corners. This can be performed by shot or sand blasting, water jet or grinder
3. **Primer:**
   In order to promote adhesion and prevent the surface from drawing resin from the FRP, a low viscosity epoxy primer is applied with a roller until the substrate is locally saturated.
4. **Putty**
   Adhesive, high viscosity putty is applied when necessary to the surface to fill in ‘bug holes’ offset or voids.
5. **Cutting Fabric**:
   In a clean area away from the resins, the fabric is carefully measured and cut in accordance with the specifications.
6. **Saturating Fabric:**
   On large, high volume projects, the fabric can be saturated using custom saturator. For lower volumes and shorter strips, the fabric can be either saturated on a table, or the surface can be coated with resin and the dry fabric applied.

7. **Applying Fabric:**
   The pre-wetted, or dry, fabric is carefully laid onto the surface and smoothed out to remove air bubbles and ensure that the fibers are straight.
8. **Quality Control Monitoring:**
   During the cure, 2 to 6 hours depending on ambient conditions, the fabric is checked to ensure that all air bubbles are removed and that the fabric is not sagging.
9. **Applying Second Saturate Coat & Sand Pasting:**
   After inspection of wrapped fiber apply second coat of saturate on wrap and apply subsequent layer as per design. Apply coarse river sand if wrapping is followed by plastering or POP when second coat becomes tacky.
10. **Applying Bond Coat & Plastering:**
    Apply compatible bond coat on wrapped surfaces and carrying out plastering with rich cement mortar.
11. **Applying Top Coat For Exposed Surface:**
    Apply compatible UV resistant polyurethane top coat on wrapped surfaces in case of wrapping surfaces are exposed to direct sun light and wrapped surfaces are not plastered.

Repair Methodology-2:

This repair methodology is for the columns whose damage level is classified as ‘’Mild’’ and ‘’Moderate’’, which includes:
Supporting the structure.
Removal of unsound concrete from the affected area,
Protective treatment to the existing steel reinforcement.
Addition of the reinforcing steel, if required.
Building up the columns with high strength free-flow micro concrete,

1. In the above methodology the steps: I, ii, iii, and iv are the same as those explained in Repair ‘’Methodology-1’’,
2. Here jacketing of the columns is recommended with high strength free flow micro-concrete (strength not less than 50 MPa) right from the foundation level to make up the concrete that was lost due to delamination or chipping.
3. The specifications for this micro-concrete are explained in ….
4. Fiber wrapping is not required for the columns whose damage is classified as ‘’Mild’’ and ‘’Moderate’’**.**

LIST OF APPROVED MAKES FOR CIVIL, ELECTRICAL, FIRE ALARM SYSTEM, NETWORKING, CCTV & FURNITURE WORKS.

LIST OF APPROVED MAKES FOR CIVIL & ELECTRICAL WORKS

A:- Civil Items

S. No.	Description	Approved Makes
1	EWC seat covers	HINDWARE/ PARRYWARE/ CERA/ KEROVIT
2	C.P brass fittings/ Accessories	JAQUAR/ MARC/ KOHLAR /KEROVIT
3	PVC Seat Cover	PRAYAG/ POLYTUF/SHAKTI/ PEARL
4	PVC Fittings/ Accessories	PRAYAG/ PRIMA/SHAKTI/ PEARL
5	Cement (Grey) OPC/ PPC Grade-43	ACC/ L&T/J.K/ BIRLA/ULTRA TECH/ VIKRAM
6	Cement(White)	J.K/ BIRLA
7	Reinforcement Steel	PRIMARY MANUFACTURERS APPROVED BY MINISTRY OF STEEL/ SECONDARY MANUFACTURERS HAVING VALID BIS LICENSE (to be as per latest BIS provisions)
8	Structural Steel	PRIMARY MANUFACTURERS APPROVED BY MINISTRY OF STEEL/ SECONDARY MANUFACTURERS HAVING VALID BIS LICENSE (to be as per latest BIS provisions)
9	Stainless Steel (Grade 304)	JINDAL/ SAIL/ SALEM
10	Bricks	COMMERCIALLY AVAILABLE OR REQUIRED STRENGTH
11	Aluminum Sections	HINDALCO/ JINDAL/ MAHAVIR
12	Flush doors	CENTURY/ MERINO/ DURO BOARD/ GREEN
13	Laminates	GREENLAM/ DURO/ ARCHID/ MERINO/ CENTURY
14	Glass	SAINT GOBAIN/ MODI FLOAT/ ASAHI FLOAT
15	Ceramic Glazed tiles/ Border tiles	1ST QUALITY KAJARIA/ NITCO/ JOHNSON/ ORIENT/ SOMANY
16	Vitrified Tiles	JOHNSON/ KAJARIA/ ORIENT/ SOMANY
17	Interlocking Precast paver blocks/ Kerb Stone	HINDUSTAN TILES/ SWASTIK/ DALAL
18	Stainless Steel Hinges	JOLLY/ GARG/ AMIT/ ASJ/ SUPREME
19	Stainless Steel Nuts/ Bolts/ Screws	KUNDAN/ PUJA/ ATUL/ GKW
20	Paint/ primer/ oil bound distemper/ Acrylic paint/ plastic paint	1ST QUALITY PAINTS OF ASIAN/ BERGER/ NEROLAC/ SHALIMAR /DULUX
21	Water Proof Cement Paint/ Exterior Paint	1ST QUALITY PAINTS OF ASIAN PAINTS/ BERGER/ NEROLAC/ SHALIMAR /DULUX
22	Sanitary ware (Vitreous China) (European Seats, Urinals, Wash Basins, etc.)	HINDWARE/ PARRYWARE/ CERA/ KEROVIT
23	G.I Pipes	TATA / JINDAL(HISSAR)/ BHUSHAN/ APL APPOLO
24	G.I Fittings	UNIK/ ZOLOTO/ AM
25	Stainless Steel Sink	NEELKANTH/ JAINA/ KINGSTON (COBRA)
26	Commercial Board/ PLY	MERINO/ DURO/ GREEN/ CENTURY/ KIT (SWASTIK)
27	CI Pipes/ Fittings	RIF/ NECO/ BENGAL IRON WORKS/ BC/ SKF
28	CI Pipes "Class LA"	NICO/ KESORAM/ ELECTRO STEEL/ KAPILANSH
29	Floor Spring	DORMA/ GODREJ/ HAFELE/ GEZE/ OZONE
30	Door Closer	SANDHU/ HARDWIN/DORMA/ GODREJ/ HAFELE/ GEZE/ OZONE
31	Mirror	ATUL/ MOIGUARD / SAINT GOBAIN/ AASHI
32	Vertical Blinds	VISTA/ MAC/ MARVEL DÉCOR/ SAINT GOBAIN/DECK DÉCOR
33	False Ceiling	ARMSTRONG/ SAINT GOBAIN/ META WORTH
34	Water proofing compound	SIKA/ FOSROC/ PIDILITE/ ASIAN/BASF/CICO
35	Particle Board	NOVA PAN/ BHUTAN BOARD/ ECO BOARD
36	Adhesive	FEVICOL/ VAMICOL/ DUNLOP/ VAM ORGANIC / kajaria
37	Tile Adhesive	PIDILITE/ FERROUSCRETE/ BALLENDURA/ CICO

38	Wall Putty	BIRLA /JK/ SARA
39	Epoxy Grout	BALLENDURA / KERAKOLL/ FERROUSCRETE
40	PVC Water storage tank (ISI marked)	SINTEX/ UNI PLAST/ POLYWELL
41	PVC insulated Water storage tank Heavy Duty 4/5 layer	SINTEX/ UNIPLAST/ POLYWELL/ EURO
42	Brass Ball Valve/ Gate Valve/ Float Valve / Butterfly valve	ZOLOTO/ AM/ LEADER/ SANT
43	Aluminium Door fittings	CLASSIC/ EVEREST/ ARGENT
44	Brass Bib/ Stop cock	AGI/ ELITE/ SHAKTI/ SANT/ LEADER/ PRIMA
45	Thermoplastic paint	CBM/ CMS/ S.N. INDUSTRIES
46	Plaster of Paris Putty	ADHASHREE/ SHREE RAM/ J.K/ BIRLA
47	RCC Pipe	LAKSHMI/ SOOD & SOOD/ JAIN &Co./ DIWAN SPUN PIPES
48	PVC Pipe	PRAKASH/ PRINCE/ SUPREME
49	Sandwich Roof Panel (Puff Panel)	KAKTUS/ ZEP/ E- PACK/ LLOYED
50	WPC Board and MPC Board	FLORESTA, ECOSTE, RAJ SHREE
51	WPC Door Frame	FLORESTA, ECOSTE, RAJ SHREE
52	Self- Closing Hinges	HETTICH, KITCH, PLUM
53	Poly Carbonate Sheet	GE LEXAN/ POLYGAL/TUFLITE
54	ACP Panel	ALSTRONG /ALUCOBOND / EUROBOND/ ALUDECOR
55	Acoustic Wooden/Fabric Paneling	ARMSTRONG / ANUTONE/ CREDENCE / TOPAKUSTIC
56	Polyvinyl Flooring	ARMSTRONG / POLY FLOR/ TARKETT
57	Glow Stud, Solar Power Stud	ROAD STAR/ 3M/ DARK EYE/ EVERY DENNISON
58	Laminate Wooden Flooring	VISTA/ ACTION TESA/ ARMSTRONG/ PERGO
59	Sun Control Film	3M/ GARWARE/ SAINT GOBAIN
60	Insulation (Mineral / rock wool)	UP TIWAGA LTD / ROCKWOOL IND./ F.G.P.
61	Fire Door	NAVAIR/ SHAKTI/ RADIANT/SIGNUM/PROMAT
62	Flush door Shutters of various thickness	MERINO/ DURO/ GREEN/ CENTURY/ KIT (SWASTIK)
63	Open cell false ceiling	ARMSTRONG /CREDENCE /HUNTER DOUGLAS
64	Calcium silicate false ceiling	AEROLITE, RAMCO, HILUX, USG BORAL
65	Gypsum Board	GYPROC BY SAINT GOBAIN, USG BORAL, ARMSTRONG
66	Fiber Cement Board	EVEREST/ USG BORAL / VISAKA
67	CPVC Pipe Fitting & Solvent	SUPREME/ ASTRAL/ ASHIRWAD / PRINCE / PRAKASH
68	UPVC Pipes & Fittings	SFMC / SUPREME/ FINOLEX
69	UPVC Window	FENESTA / REHAU/ ENCRAFT/ (NCL Wintech)/ SAINT GOBAIN
70	Friction Stay Hinges	EARL- BIHARI/ EBCO/HETTICH
71	M.S Pipes	JINDAL/ APPOLO/ SWASTIK / TATA / SURYA
72	Gypsum Plaster	FERROUS CRETE (FERRO-500)/ GYPROC (ELITE-100)/ KERAKOL (K-100)
73	GRC Wall Tile / Jali	UNISTONE/ DALAL/ SWASTIK ALWAR / ULTRA
74	HDMR Board	CENTURY/ GREEN/ ACTION TESSA
75	High Pressure Laminate(HPL)	CENTURY/ GREEN / MERINO/TRESPA/ FUNDERMAX
76	Anchor Fastener(Mechanical/ Chemical)	HILTI/ MUNGO/CANON/ FISCHER/ WUERTH
77	Cupboard Lock	PLAZA/ GODREJ/ HETTICH/ HAFLEY
78	Rust remover / Rust converting primer /paint	FOSROC/SIKA/BASF/PIDILITE
79	polymer based zinc rich primer	FOSROC/SIKA/BASF/PIDILITE
80	anticorrosive paint	FOSROC/SIKA/BASF/PIDILITE
81	Concrete penetrating HI-TECH Corrosion inhibitor	FOSROC/SIKA/BASF/PIDILITE
82	Thixotropic Epoxy repair mortar	FOSROC/SIKA/BASF/PIDILITE
83	Latex / SBR Polymer Compound	FOSROC/SIKA/BASF/PIDILITE
84	Low viscous epoxy resin grout	FOSROC/SIKA/BASF/PIDILITE
85	Epoxy resin for Concrete bond coat	FOSROC/SIKA/BASF/PIDILITE
86	Pre-batched non-shrink polymer modified mortar	FOSROC/SIKA/BASF/PIDILITE

87	Pre-batched Pre Mixed Non- Shrink Micro Concrete	FOSROC/SIKA/BASF/PIDILITE
88	Pre-batched Pre Mixed Non- metallic composite fiber wrapping system	FOSROC/SIKA/BASF/PIDILITE
89	Epoxy for rebar/shear anchor	FOSROC/SIKA/BASF/HILTI
90	Modular kitchen basket and accessories (SS-304 Grade)	HETTICH/ KITCH/ PLUM / PECOCK
91	Manhole cover /Grating	KK MANHOLE / DALAL / SWASTIK / HINDUSTAN
92	laminate wooden flooring	VISTA / ARMSTRONG / ACTION TESSA
93	Engineered wood Flooring	PERGO / JUNKERS / BOEN / SQUARFOOT
94	SS Pipe (304 grade) FOR WATER SUPLY	JINDAL / TATA / ALFA PRESS / VIEGA
95	Epoxy flooring	FOSROC / SIKA / BASF
	FURNITURE	
96	Work Station	GODREJ INTERIO/ HAWORTH / STEEL CASE/ WIPRO/ FEATHERLITE/ HERMAN MLLER
97	Executive Table/ other table	GODREJ INTERIO/ HAWORTH / STEEL CASE/ WIPRO/ FEATHERLITE/ HERMAN MLLER
98	Chair / Audi Chair	GODREJ INTERIO/ HAWORTH / STEEL CASE/ WIPRO/ FEATHERLITE/ HERMAN MLLER
99	Lab Furniture's	KEWANEE / WALDNER / GODREJ/ WIPRO / FEATHERLITE
100	Hostel beds and cots	ZUARI / EVOK / GODREJ / WIPRO / FEATHERLITE
101	Hospital beds	HUNTLEY / STRIKER /GODREJ /WIPRO /FEATHERLITE

B:- E & M Items

S. No.	Description	Approved Makes
01	MCB(10KA)/ Isolators & MCB DB with End Box.	Legrand / Siemens/ Lauritz knudsen / ABB/ Schneider
02	MCCB	Legrand / Siemens/ Lauritz knudsen / ABB/ Schneider
03	MCCB BOX	Legrand / Siemens/ Lauritz knudsen / ABB/ Schneider
04	Modular type switch/ socket, TV socket, Fan Regulator.	Lauritz knudsen / ABB/ Wipro North West/ Legrand (Arteor/ Myrius)/ Schneider (Zencelo).
05	Steel conduit pipe and Accessories (ISI)	BEC/ AKG/ NIC / Steel Krafts
04	PVC conduit pipe and Accessories(ISI)	BEC/ AKG/ NIC
05	Junction Boxes/ MS Boxes	Havells Crabtree / Anchor / North West / Legrand
06	Bushes	PVC/ Nylon
07	FRLS PVC insulated copper conductor cable / Wire	Polycab / Finolex / Havells
08	LED Light Fixture	Philips/ Trilux/ LT / Wipro/ Havells
09	Ceiling Fans (BLDC) & Wall Fan	Havells/ Atomberg/ Bajaj/ Crompton.
10	Exhaust Fan/ Fresh Air Fan	Havells/ Bajaj/ Crompton.
11	Industrial type socket	Legrand / Siemens/ Lauritz knudsen / ABB/ Schneider
12	DLP U-PVC channel & accessories	Schneider / Legrand or Equivalent
13	Modular Plate & Cover Plate	Lauritz knudsen / ABB/ Wipro North West/ Legrand (Arteor/ Myrius)/ Schneider (Zencelo).
14	Distribution Board	Legrand / Siemens/ Lauritz knudsen / ABB/ Schneider.
15	XLPE Alumium/ Copper conductor Armoured cable	Havells/ Polycab/ RR kabel/ KEI/ Universal
16	Multifunction Meter	Lauritz knudsen / AE/ Schneider/ Rishabh/ Siemens / ABB
17	Ammeter	Lauritz knudsen / AE/ Rishabh/ Schneider / ABB / Siemens
18	Voltmeter	Lauritz knudsen / AE/ Rishabh/ Schneider / ABB / Siemens
19	Frequency Meter	Lauritz knudsen / AE/ Rishabh/ Schneider / ABB / Siemens
20	CT’s	AE/ KAPPA/ Pragati
21	Selector Switches	AE/ KAPPA/ Pragati

22	Contractors	Lauritz knudsen / Seimens/ GE power/ Legrand/ ABB / Siemens
23	Push button & Pilor lamps	Lauritz knudsen / Seimens/ Schneider / Siemens / ABB
24	LED indicating Lights	Lauritz knudsen / Seimens/ Schneider / Siemens / ABB
25	GI Pipe	Jindal Steel/ Jindal Hisar/ Sail/ Tata
26	DW HDPE Pipe	Reliance/ Duraline/ Hasti
27	Cat 6 LAN Cable	Legrand/ Molex/ Amp
28	Air conditioners	Mitsubishi / Hitachi/ Daikin/ Blue Star/ Panasonic/ Voltas
29	Access Control System	Bosch/ Honeywell/ HID/ Nextwatch
30	Intruder Alarm Systerm	Ademco/ bosch/ DSC/ Honeywell
31	Cable raceway floor/ wall mounted & Accessories(MS/G.I)	Legrand/ AKG/ BEC/ ESSAR/ Honeywell/ Godrej.
32	Sandwitch Bus trunking/ Rising Main	C&S/ Lauritz knudsen / Schneider/ ABB / Siemens
33	Telephone wire	Delton/ Finolex/ Havells/ Skytone
34	Occupancy Sensor	Wipro/ Schneider/ Honeywell/ Seimens/ Bosch
35	Gooseneck Microphone	Televic/ Beyerdynamic/ Bosch/ Bose/ Sennheiser
36	Amplifier	Crown/ Extrom/ Crestron
37	24 Port Switch	Cisco/ Netgear/ Hp/ Juniper
38	8 Port LIU	Legrand/ AMP/ Molex
39	16 Port Gigabit POE Switch	Netgear/ Juniper/ Cisco
40	HDMI/ USB Cable	AMX/ Crestron/ Manhatten
41	AV Speaker	JBL/ Bosch/ Bose/ Sony
42	CCTV Camera	Pelco/ Bosch/ Honeywell
43	DVR (Digital Video Recorder)	Bosch/ Honeywell/ Pelco
44	Fire Suppression System	Minimax/ Ceasefire/ Ansul
45	Fire Panel	Johnson Control (IFC)/ Notifier (UL) / Bosch (UL) / Mircom (UL) / Fike (UL).
46	PA System	Notifier/ Johnson Control/ Fike/ Cooper/ Bosch/ Honeywell
47	Addressable Heat/ Smoke detector/ Hooter/ RI/ Pullstation/	Johnson Control (IFC)/ Notifier (UL) / Bosch (UL) / Mircom (UL) / Fike (UL).
48	Conventional Heat/ Smoke detector/ Hooter/ RI/ Pullstation/	System Sensor/ Cooper/ GST/ Ravel/ Fike/ Essar/ Honeywell/ Bosch/ Bosch
49	Cable joint Kit	Raychem/ M-Seal/ Densons/ 3M

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 order of contractor.	.PDF
3.		Attested 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 paper 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 oe 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.		Annexure-I (duly filled & signed by the bidders)	.PDF
12.		Annexure-II (duly filled & signed by the bidders)	.PDF
13.		Annexure-III (duly filled & signed by the bidders)	.PDF
14.		Annexure IV (Duly Filled & signed by the bidders)	
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.

PART 'C'
SCHEDULE OF QUANTITY

Name of work : Renovation and Modification of Central Library in Academic Area at IIT Delhi.
Sub Head : Civil, Electrical, Fire Alarm System, Networking, CCTV & Furniture Works.

S.No	Description	Qty	Unit	Rate	Amount
A	**CIVIL WORK**				
1.	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
2.	All kinds of soil.	8	cum		
3.	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
4.	All kinds of soil				
5.	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	20	metre		
6.	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	4	cum		
7.	Excavating holes more than 0.10 cum & upto 0.5 cum including getting out the excavated soil, then returning the soil as required in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering etc, disposing of surplus excavated soil, as directed within a lead of 50 m and lift upto 1.5 m.				
8.	All kinds of soil	10	each		
9.	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:				
10.	1:3:6 (1 Cement: 3 coarse sand (zone-III) derived from natural sources: 6 graded stone aggregate 20 mm nominal size derived from natural sources)	10	cum		
11.	Providing and fixing up to floor five level precast cement concrete solid block, including hoisting and setting in position with cement mortar 1:3 (1 cement: 3 coarse sand), cost of required centering, shuttering complete:				
12.	1:1½:3 (1 Cement: 1½ coarse sand(zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources).	2.57	cum		

13.	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	1	cum		
14.	Centering and shuttering including strutting, propping etc. and removal of form for				
15.	Shelves (Cast in situ)	8	sqm		
16.	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
17.	Thermo-Mechanically Treated bars of grade Fe-500D or more.	150	kg		
18.	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing of edges to give high gloss finish etc. complete at all levels.				
19.	Granite stone slab of colour black, Cherry/Ruby red				
20.	Area of slab over 0.50 sqm	168	sqm		
21.	Extra for fixing marble /granite stone, over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin-based adhesive, including cleaning etc. complete.	31	metre		
22.	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	12	each		
23.	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	381	sqm		
24.	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:				
25.	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	34	sqm		
26.	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
27.	Fixed to openings /wooden frames with rawl plugs screws etc.	608	kg		
28.	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS: 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.	15	each		

29.	Providing and fixing aluminium sliding door bolts, ISI marked anodised (anodic coating not less than grade AC 10 as per IS: 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete:				
30.	250x16 mm	15	each		
31.	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :				
32.	250x10 mm	30	each		
33.	150x10 mm	752	each		
34.	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete:				
35.	125 mm	166	each		
36.	100 mm	240	each		
37.	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete.				
38.	Twin rubber stopper	15	each		
39.	Providing & fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt/ suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS: 2046 Type S, including cost of adhesive of approved quality.				
40.	1.0 mm thick	68	sqm		
41.	Providing and fixing plain lining with necessary screws/nuts & bolts/ nails, including a coat of approved primer on one face, and fixed on wooden /steel frame work, complete as per direction of Engineer-in- charge (Frame work shall be paid for separately).				
42.	12mm thick commercial ply conforming to IS: 1328 BWR type	610	sqm		
43.	Providing and fixing fire-resistant door frame of section 50 x 60 mm on horizontal side & 35 x 60 mm on vertical sides having built in rebate made out of 1.6 mm thick GI sheet (Zinc coating not less than 120gm/ sqm) suitable for mounting 120 minutes Fire Rated Glazed Door Shutters. The frame shall be filled with mineral wool Insulation having density minimum 96Kg/cum. The frame will have a provision of G.I. anchor fastners 14 nos (5 each on vertical style & 4 on horizontal style of size M10 x 80) suitable for fixing in the opening along with factory made template for SS ball bearing hinges of Size 100x89x3mm for fixing of fire rated glazed shutter . The frame shall be finished with a approved fire resistant primer or powder coating of not less than 30 micron in desired shade as per the directions of Engineer - in- Charge. (Cost of SS ball bearing hinges is excluded).	57	metre		

44.	Providing and fixing 60 mm thick glazed fire resistant door shutters of 120 minutes fire rating confirming to IS:3614 (Part II) or EN1634-1:1999, tested and certified as per laboratory approved by Engineer-in-Charge, with suitable mounting on door frame, consisting of vertical styles, top rail & side rail 60 mm x 60 mm wide and bottom rail of 110 mm x 60 mm made out of 1.6mm thick G.I. sheet (zinc coating not less than 120gm/sqm) duly filled mineral wool insulation having density minimum 96 kg/cum and fixing with necessary stainless steel ball bearing hinges of size 100x89x3mm of approved make, including applying a coat of approved fire resistant primer or powder coating not less than 30 micron etc all complete as per direction of Engineer-in-Charge (panelling to be paid for seperately).	30	sqm		
45.	Providing and fixing glazing in fire resistant door shutters, fixed panels & partitions etc., with G.I. beading made out of 1.6 mm thick G.I. sheet (zinc coating not less than 120 gm/m²) of size 20 x 33 mm screwed with M4 x 38 mm SS screws at distance 75 mm from the edges and 150 mm c/c , including applying a coat of approved fire resistant primer/ powder coating of not less than 30 micron on G.I. beading, & special ceramic tape of 5 x 20 mm size etc complete in all respect as per NBC 2016, IS 16231 (Part 3):2016 and as per direction of Engineer-in-charge with glass of required thickness having 120 minutes of fire resistance both integrity & radiation control (EW120) and minimum 20 minutes of insulation (EI20). The manufacturer have to give test report/certification of fire glass and the glass should have the stamp showing the value of E, EW & EI. The glass shall be tested in approved NABL accredited lab or by any other accreditation body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 for testing and calibration scopes shall be eligible. The maximum glazing size shall not be more than 1100x2200 mm (w x h) or 2.42 sqm.	18	sqm		
46.	Providing and fixing bright /matt finished Stainless Steel handles of approved quality & make with necessary screws etc all complete.				
47.	125 mm	200	each		
48.	Providing and fixing cupboard shutter with 19mm thick one side decorative and other side balancing lamination factory pressed BWP grade marine ply as per IS 710 of approved brand including 2mm thick PVC edge banding tape with hot glue by edge bending machine etc. with auto closing spring loaded hinges (hydraulic type) etc. complete as per direction of Engineer- in-charge.(Payment of providing and fixing auto closing hinges shall be paid separately)	24	sqm		
49.	Providing and fixing 19mm thick both side balancing lamination factory pressed BWP grade marine ply as per IS 710 of approved brand boxes, shelves, racks, almirah, cupboard and drawer etc. including necessary nails, screws etc. complete as per direction of Engineer-in-charge.	110	sqm		
50.	Providing and fixing stainless steel soft closing spring hinges at 0-degree hinges (hydraulic type) of approved make/brand to cupboard shutters with full threaded steel screws including making necessary recess in board and finished etc. complete as per direction of Engineer-in-charge.	150	each		
51.	Providing and fixing 2mm thick 16 to 19mm wide PVC edge binding tape of approved quality for cupboard/wardrobe shutters including necessary synthetic resin hot pressed to edges on binding machine etc. complete as per directions of Engineer- in-charge.	413	metre		

52.	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	250	kg		
53.	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.				
54.	Using M.S. angels 40x40x6 mm for diagonal braces	3	sqm		
55.	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
56.	Hot finished welded type tubes	2435	kg		
57.	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar, bent to shape with hooked ends in R.C.C. slabs or beams during laying, including painting the exposed portion of loop, all as per standard design complete.	270	each		
58.	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
59.	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	300	kg		
60.	Providing and fixing carbon steel galvanised (minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm2), counter sunk head, comprising of 10 mm dia polyamide PA 6 grade sleeve, including drilling of hole in frame , concrete/ masonry, etc. as per direction of Engineer-in-charge.				
61.	10 x 80 mm	300	each		
62.	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in- charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	635	kg		
63.	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
64.	25 mm thick	20	sqm		
65.	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	20	sqm		
66.	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	20	metre		

67.	Providing and laying flamed finish Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge :				
68.	Flamed finish granite stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent.	100	sqm		
69.	Providing and laying Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.				
70.	Polished Granite stone slab colour of Black, Cherry/Ruby Red or equivalent	250	sqm		
71.	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :				
72.	In 75x75 mm deep chase	159	metre		
73.	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	8	each		

74.	Providing 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 :				
75.	12.5 mm thick tapered edge gypsum moisture resistant board	588	sqm		
76.	Providing and fixing thermal insulation with Resin Bonded Fibre glass wool conforming to IS: 8183 having density 24 kg/m3, 50 mm thick, wrapped in 200G Virgin Polythene Bags fixed to wall with screw, rawel plug & washers and held in position by criss crossing GI wire etc. complete as per directions of Engineer-in-Charge.	274	sqm		
77.	12 mm cement plaster of mix :				
78.	1:6 (1 cement: 6 fine sand)	50	sqm		
79.	15 mm cement plaster on the rough side of single or half brick wall of mix :				
80.	1:6 (1 cement: 6 fine sand)	50	sqm		
81.	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :				
82.	Water thinnable cement primer	7828	sqm		
83.	Finishing walls with Acrylic Smooth exterior paint of required shade:				
84.	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	948	sqm		
85.	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade :				
86.	Two or more coats on new work	7828	sqm		
87.	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
88.	Two or more coats on new work	500	sqm		
89.	French spirit polishing :				

90.	Two or more coats on new works including a coat of wood filler	671	sqm		
91.	Providing and applying white cement-based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	7828	sqm		
92.	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	7828	sqm		
93.	Polishing in high gloss/matt finish melamine clear polish on woodwork in required color/wooden shade texture with following process in the sequence as detailed below: 1. The surface to be polished is rubbed with sand paper 80/ 120 no. and then with sand paper of 160/180 nos. 2. Applying two coats of sealer with spray gun and allowing sufficient drying time for 1st coat and 2nd coat is allowed to dry for 8 to 12 hrs. 3. On drying of sealer coat, wet rubbing with emery cloth of finer grading with ample water to remove excess sealer layer and make the surface further smooth after this wet rubbing, then surface is applied with special grade melamine fillers to fill all the small and big holes/grooves etc. Filler coat to be allowed to dry for 4 to 6 hrs on which again a light wet rubbing is done this surface is further allowed to dry for 12 hrs. 4. On this, 1st coat of melamine polish is applied with spray gun using melamine clear polish and melamine thinner in required proportion. This 1st coat is allowed to dry for 24 hrs then this dry surface is again fine wet rubbed smooth, which is further allowed to dry for 12 hrs. The final melamine polish is applied with compressor pressure spray gun using melamine clear polish and melamine thinner mixed in required proportion complete as per direction of Engineer-in-Charge. (Final coat to be done in 1 or 2 layers without gap of time.)	50	sqm		
94.	Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq.meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.				
95.	With cement mortar 1:4 (1cement: 4 coarse sand)	50	sqm		
96.	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.				
97.	For door/ window/ clerestory window	20	sqm		
98.	Cleaning of terrace/loft water storage tank (inside surface area) upto 2000 litre capacity at all heights with coconut brushes, duster etc., removal of silt, rubbish from the tank and cleaning the tank with fresh water disinfecting with bleaching powder @ 0.5gm per litre capacity of tank including marking the date of cleaning on the side of tank body with the help of stencil and paint and disposing of malba all complete as per direction of Engineer-in-Charge. (The old date already written on tank should be removed with paint remover or black paint and if date is not written with the stencil or old date is not removed deduction will be made @ Rs. 0.10 per litre) (if during cleaning any GI fittings or ball cock is damaged that is to be repaired by contractor at his own cost and nothing extra will be paid on this account)	10000	litre		
99.	Dismantling 15 to 40 mm dia G.I. pipe including stacking of dismantled pipes (within 50 metres lead) as per direction of Engineer- in-Charge.(a) Internal Work- Exposed on wall	60	metre		

100.	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
101.	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	10	cum		
102.	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	30	cum		
103.	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in-charge.	12	cum		
104.	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.				
105.	In cement mortar	107	cum		
106.	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :				
107.	Of area 3 sq. metres and below	211	each		
108.	Of area beyond 3 sq. metres	20	each		
109.	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.				
110.	For thickness of tiles 10 mm to 25 mm	1863	sqm		
111.	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	140	sqm		
112.	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	1600	sqm		
113.	Demolishing mud phaska in terracing and disposal of material within 50 metres lead.	208	cum		
114.	Dismantling of flushing cistern of all types (C.I./PVC/Vitrious China) including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	12	each		
115.	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	250	sqm		
116.	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable material and stacking of serviceable material within 50 meters lead as directed by Engineer-in-charge.	4125	sqm		
117.	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	515	cum		
118.	Providing and fixing water closet squatting pan (Indian type W.C.pan) with 100 mm sand cast Iron P or S trap, 10 litre low level whiteP.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:				
119.	White Vitreous china Orissa pattern W.C. pan of size580x440 mm with integral type foot rests	2	each		

120.	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink asper IS:13983 with C.I. brackets and stainless steel plug 40 mm,including painting of fittings and brackets, cutting and making goodthe walls wherever required :				
121.	Kitchen sink without drain board				
122.	610x510 mm bowl depth 200 mm	1	each		
123.	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto1 metre long with S.S. triangular plate to Eureopean type W.C. ofquality and make as approved by Engineer - in - charge.	4	each		
124.	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.	12	each		
125.	Providing and fixing toilet paper holder:				
126.	C.P. brass	12	each		
127.	Providing and fixing soil, waste and vent pipes :				
128.	100 mm dia				
129.	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outsideIS:15905	140	metre		
130.	Providing and fixing M.S. holder-bat clamps of approved design toSand Cast iron/cast iron (spun) pipe embedded in and includingcement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2coarse sand : 4 graded stone aggregate 20 mm nominal size),including cost of cutting holes and making good the walls etc. :				
131.	For 100 mm dia pipe	25	each		
132.	Providing and fixing bend of required degree with access door, insertionrubber washer 3 mm thick, bolts and nuts complete.				
133.	100 mm dia				
134.	Hubless centrifugally cast (spun) ironepoxy coated inside & outside as perIS:15905	5	each		
135.	Providing and fixing plain bend of required degree.				
136.	100 mm dia				
137.	Hubless centrifugally cast (spun) ironpipes epoxy coated inside & outsideIS:15905	10	each		
138.	Providing and fixing double equal plain junction of required degree.				
139.	100x100x100x100 mm				
140.	Hubless centrifugally cast (spun) ironpipes epoxy coated inside & outsideIS:15905	5	each		
141.	Providing and fixing single equal plain junction of required degree :				
142.	100x100x100 mm				
143.	Hubless centrifugally cast (spun) ironepoxy coated inside & outside as perIS:15905	8	each		
144.	Providing and fixing Hubless centrifugally cast iron offsets epoxycoated inside & outside as per IS:15905				
145.	65 mm offsets				
146.	With 100 mm dia pipe	4	each		
147.	Providing and fixing Hubless centrifugally cast iron offsets epoxycoated inside & outside as per IS:15905				
148.	130 mm offsets				
149.	With 100 mm dia	4	each		
150.	Providing and fixing terminal guard :				
151.	100 mm				

152.	Hubless centrifugally cast (spun) ironepoxy coated inside & outside as perIS:15905	5	each		
153.	Providing and fixing shielded coupling for Hubless centrifugally castiron pipe				
154.	100 mm dia				
155.	SS 304 grade coupling with EPDM rubbergasket	120	each		
156.	Providing and fixing trap of self cleansing design with screwed downor hinged grating with or without vent arm complete, including cost ofcutting and making good the walls and floors :				
157.	100 mm inlet and 100 mm outlet				
158.	Hubless centrifugally cast (spun) ironepoxy coated inside & outside as perIS:15905	36	each		
159.	Cutting chases in brick masonry walls for following diameter sandcast iron/centrifugally cast (spun) iron pipes and making good thesame with cement concrete 1:3:6 (1 cement : 3 coarse sand :6graded stone aggregate 12.5 mm nominal size), including necessaryplaster and pointing in cement mortar 1:4 (1 cement : 4 coarsesand) :				
160.	100 mm dia	15	metre		
161.	Providing and fixing white vitreous china extended wall mountingwater closet of size 780x370x690 mm of approved shape includingproviding & fixing white vitreous china cistern with dual flush fitting,of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres),including seat cover, and cistern fittings, nuts, bolts and gasket etccomplete.	10	each		
162.	Providing and fixing white vitreous china battery based infrared sensoroperated urinal of approx. size 610 x 390 x 370 mm having pre &post flushing with water (250 ml & 500 ml consumption), havingwater inlet from back side, including fixing to wall with suitablebrackets all as per manufacturers specification and direction ofEngineer-in-charge.	9	each		
163.	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. Internal work - Exposed on wall				
164.	25 mm dia nominal bore	50	metre		
165.	32 mm dia nominal bore	90	metre		
166.	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps, i/c making good the walls etc. concealed pipe, including painting with anti corrosive bitumastic paint, cutting chases and making good the wall :				
167.	15 mm dia nominal bore	25	metre		
168.	20 mm dia nominal bore	120	metre		
169.	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
170.	25 mm nominal bore	2	each		
171.	20 mm nominal bore	6	each		
172.	32 mm nominal bore.	2	each		
173.	Providing and fixing uplasticised PVC connection pipe with brass unions :				
174.	45 cm length				
175.	15 mm nominal bore	42	each		

176.	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work) :				
177.	15 mm nominal bore	5	each		
178.	20 mm nominal bore	18	each		
179.	25 mm nominal bore	5	each		
180.	32 mm nominal bore	6	each		
181.	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.				
182.	15 mm nominal bore	12	each		
183.	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931				
184.	15mm nominal bore	30	each		
185.	Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in-charge.	48	each		
186.	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :				
187.	150 mm diameter	12	metre		
188.	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :				
189.	150 mm diameter S.W. pipe	12	metre		
190.	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:				
191.	150 x 100 mm size P type				
192.	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2	each		
193.	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
194.	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :				
195.	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	1	each		

196.	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) :				
197.	For fixed portion				
198.	Powder coated aluminium (minimum thickness of powder coating 50 micron)	5142	kg		
199.	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)				
200.	Powder coated aluminium (minimum thickness of powder coating 50 micron)	1626	kg		
201.	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side, having 12 mm air gap, including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.	624	sqm		
202.	Providing and fixing Brass 100mm mortice latch and lock with 6 levers without pair of handles (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	5	each		
203.	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-in-charge				
204.	Powder coated minimum thickness 50 micron aluminium	10	each		
205.	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				
206.	Upto 5 mm depth and 5 mm width	840	metre		
207.	Upto 10 mm depth and 10 mm width	200	metre		
208.	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : (a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours. (b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	158	sqm		

209.	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: (a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment. (b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer- in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer- in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. (c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. (d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test.“All above operations to be done in order and as directed and specified by the Engineer-in-Charge :				
210.	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	1772	sqm		
211.	Providing and fixing double scaffolding system (cup lock type) on the exterior side of building/structure, upto 25 metre height, above ground level, including additional rows of scaffolding in stepped manner as per requirement of site, made with 40mm dia M.S. tube, placed 1.5 metre centre to centre, horizontal & vertical tubes joint with cup & lock system with M.S. Tubes, M.S. tube challis, M.S. clamps and staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for execution of work of cleaning and/ or pointing and/ or applying chemical and removing it thereafter. The scaffolding system shall be stiffened with bracings, runners, connecting with the building etc, wherever required, if feasible, for inspection of work at required locations with essential safety features for the workmen etc., complete as per directions and approval of Engineer-in-charge. Note:- (1) The elevational area of the scaffolding shall be measured for payment purpose. (2) The payment will be made once only for execution of all items for such works.	2160	sqm		
212.	Cleaning the sand stone surface and removing dirt, dust, bird dropping, grease, oil, algae, fungus, monkey beats, vegetable growth etc., including providing, applying and washing the surface with liquid Ammonia Chemical of 5% solution and other chemical cleaning agent as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacturer, with the help of required scrubbers and also cleaning with machine operated water jet mixed with desired quantity of fine silica where ever required, without causing any scratching/ damage to the stone surface and finally washing the surface with clean water with the	1620	sqm		

	help of pressure jet machine, complete in all respect, including taking all precautions to safeguard ventilators, windows, doors etc. by suitable covering so as to avoid any damage to the building/structure, all as per direction of Engineer- in-charge (The rate is inclusive of all materials & labours involved except scaffolding).				
213.	Providing & fixing in position Phenol bonded Bamboowood flooring with planks of sizes 14mm thick, minimum 1800mm length and minimum 100 mm wide, in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC). The flooring shall be fixed with tongue and groove interlocking system, with underlayment of 4mm thick expanded polyethylene foam sheets having density 40kg/cum, over prepared surface with necessary quarter round planks of size 1900mm x 18mm and door reducer of size 1900mm x 44mm, wherever required. The bamboowood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of the Engineer-in-charge.	939	sqm		
214.	Providing & fixing in position Phenol bonded Bamboo wood in wall skirting with planks of sizes 14mm thick, 1900mm length (minimum) and 85mm wide(minimum), in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC). The skirting shall be fixed with SS screws & rawl plugs, over underlayment of 4mm thick, expanded polyethylene foam sheets having 40kg/cum density over prepared surface. The bamboowood planks shall have minimum density of 1000Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of the Engineer in-charge.	24	sqm		
215.	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.				
216.	With 20 mm thick beveled tegular mineral fibre false ceiling tile (NRC 0.7)	3570	sqm		

217.	Chipping of unsound/weak concrete material from slabs, beams, columns etc. with manual Chisel and/ or by standard power driven percussion type or of approved make including tapering of all edges, making square shoulders of cavities including cleaning the exposed concrete surface and reinforcement with wire brushes etc. and disposal of debris for all lead and lifts all complete as per direction of Engineer-In-Charge				
218.	50mm average thickness	1520	sqm		
219.	25 mm average thickness	320	sqm		
220.	Cleaning of reinforcement from rust from the reinforcing bars to give it a total rust free steel surface by using alkaline chemical rust remover of approved make with paint brush and removing loose particles after 24 hours of its application with wire brush and thoroughly washing with water and allowing it to dry, all complete as per direction of Engineer-In-Charge.				
221.	Bars upto 12 mm diameter	6280	metre		
222.	Bars above 12 mm diameter	800	metre		
223.	Providing, mixing and applying bonding coat of approved adhesive on chipped portion of RCC as per specifications and direction of Engineer-In-charge complete in all respect.				
224.	Epoxy bonding adhesive having coverage 2.20 sqm/kg of approved make	1520	sqm		
225.	Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/ masonry by suitable gun/pump at required pressure including cutting of nipples after curing etc. complete as per directions of Engineer-in-Charge. (The payment shall be made on the basis of actual weight of approved grout injected.)				
226.	Epoxy injection grout in concrete/RCC work of approved make	1080	kg		
227.	Providing, laying & jointing of foam concrete blocks having density @ 500kg/cum (autoclaved aerated cement blocks) in cement mortar 1:4 (1 cement : 4 coarse sand) over the existing floor at all level, lead as per direction of Engineer-In-Charge.	30	cum		
228.	Providing and fixing 5mm thick looking mirror of superior galss and of approved quality and make: Saint Gobain / Modi Guard and of required shape and size with necessary wooden moulded beading (2nd class teak wood) of size 50x12mm duly polished with backing of 12mm thick commercial ply including priming coat on unexposed surface, with necessary fixing arrangement and screws etc. complete :	10	sqm		

229.	Driling and fixing NRV nozzles in RC members, including (fixing material : Renderoc Plug of Fosroc / Sikadur-31 of Sika / MasterBrace 2200 of BASF or equivalent of Pidilite & Krishna Conchem). i. Drilling Holes: Drilling 12 mm dia, 50 to 75 mm deep holes or upto required depth in structural members of the intervals of 350 mm in staggered manner or as directed by the Engineer-in-charge in RC structural elements. ii. Cleaning of holes: Clean the holes by air blower prior to fixing nozzles. iii. Fixing of Nozzles: Insert 12mm dia. NRV nozzles in cleaned holes. External end of nozzles to be machine to receive outlet of grouting gun. Fix it inside the holes by applying thyrotrophic epoxy putty to ensure complete sealing. Cure the system for min. 12 hrs. iv. Cuttting of Nozzles: Cut the nozzles by chisel after completion of grouting without damaging structural elements:	3600	Nos		
230.	Providing mixing & applying pre-batched one component polymer modified dual shrinkage compensated thixotropic cementious patch repair mortar as per the manufacturer specifications and as per the direction the Engineer-in-charge. The comperessive strength of polymer modified mortar shall be ≥ 45 Mpa (28 Days) according to ASTM C109. (Product :- Renderock S2 of Fosroc/ SikaTop® 122 HS of Sika / MasterEmaco S 348 of BASF or equivalent of Pidilite)				
231.	For 20 mm thickness over slab, beams, columns and stair case slabs.	1520	sqm		
232.	Add/ deduct for every 10 mm thickness	320	sqm		
233.	Providing and fixing 2.0mm thick heavy duty homogeneous floor covering with polyurethane reinforcement in flooring & skirting in approved pattern on a smooth and damp-proof base using rubber based adhesive of approved quality and manufactured like Fevicol SR 998 or equivalent including rolling with light wooden roller weiging about 5 kg. all complete as directed by Engineer - in - Charge, in approved colour and shade having follwoing specifications: 1. Full conformance with the requirements of ISO 10581/EN 649. 2. Flexible pvc sheet and tile flooring in 2mm thickness. 3. Use area classification 23/34/43 as defined in ISO 10874/EN 685. 4. Fully tested to EN 13501-1 in respect of flamespread. 5. For slip resistance, classified DS to EN 13893. 6. Classified Type I within ISO 10581 re Binder Content. 7. BRE Global A+ rating ENP 472* in major use areas such as education and healthcare. 8. Tested to international standards for low VOC emissions.	2450	sqm		
234.	Providing and fixing 12 mm thick frameless toughened glass in partition and doors of approved brand and manufacture, including making necessary holes etc. for fixing the fittings but excluding the cost of fittings all complete as per direction of Engineer-in-charge.	493	sqm		
235.	Providing and fixing H or D type handle as per drawing and directions of Engineer-In-Charge of Ozone make (MODEL-OGH-55 or OGH-11) /Dorma / Hettich of size 32 mm dia. and 457 mm long with necessary screws etc. complete.	20	Pair		

236.	Providing and fixing wall to Glass connector or glass to glass connector of appropriate degree of make Ozone / Dorma / Hettich Complete as per drawing and Direction of Engineer-in-charge.	100	Nos		
237.	Providing and fixing Over Panel Fitting of Ozone make (MODEL-OPF-1) /Dorma / Hettich Complete as per Direction of Engineer-in-charge.	20	Nos		
238.	Providing and fixing top Pivot of Ozone make (MODEL-OFS-ACC-GDP) or Equivalent of Dorma / Hettich Complete as per Direction of Engineer-in-charge.	20	Nos		
239.	Providing and fixing Floor spring of Ozone make (MODEL FS-9000) or Equivalent of Dorma / Hettich Complete as per Direction of Engineer-in-charge.	20	Nos		
240.	Providing and fixing U shape Chanel of make ozone (Model: OZGL-UPR-SS) or equivalent of Dorma / Hettic & wall Angle in top and bottom for supporting the Toughened Glass as per direction of Engineering-charge	236	Mtr		
241.	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.	724	sqm		
242.	Removing and taking out old PVC flooring / PVC tiles i/c stacking of unserviceable material within 50 meters lead as per directions of Engineer-In-Charge.	3500	sqm		
243.	Providing & fixing chrome plated brass deck mounted battery based infrared sensor operated pillar cock, having foam flow technology of make cera / Hindware or equivalent (Cat No.: F6010108) including the cost of making holes in granite and slab and as per directions of Engineer-In-Charge.	12	Nos		
244.	Providing and Fixing Toilet Cubicle (Make: Merino / Greenlam) of standard / dimensions as per site requirement made up of 12mm thick Solid Compact Laminate Panels. Finish of the Compact Laminate panels should be as suede / Raw Silk or as approved by the Engineer-In-Charge. The complete system includes doors, pilasters and intermediate panels finished with approved texture / shade as per the detail drawings & as per IS 2046 and as per fire retardant BS-476/97 standard. The product should have Green Guard Certificate. This also includes providing and fixing in position necessary hardware made out of SS 304 & aluminium powder coated top rail as per manufacturer's specifications. The main hardware include SS Door Knob, SS Gravity Hinges, SS thumb turn lock set indicators, Aluminium powder coated top rail, SS Coat Hooks, SS U-Channels, SS Adjustable foot, Noise deafening tape, SS Screws and wall plugs etc. The top fitting should consist of Aluminium Powder Coated Top Rail which will get fixed with mid & End pilasters. The minimum dimensions of toilet cubical are as follows: 1. Width of cubical = 1000mm for general & 1500mm for Divyang 2. Depth of cubical = 1500mm for general & 1750mm for Divyang 3. Height of entire cubical = 1995mm 4. Width of Door = 600mm for general & 900mm for Divyang. 5. Height of Door = 1785mm 6. Ground Clearance = 100 to 150mm (as specified by the manufacturer)	6	Each		

245.	Providing and fixing fire rated hydraulic door closer of BLC-0604 Backer Fire Solution / TS 89 F Dorma / Geze TS 2000 V with necessary accessories and S.S. screws etc. complete as per directions of Engineer-In-Charge.	10	Each		
246.	Providing and fixing Push type Single Point panic bar for Single Leaf door with external trim & Half Cylinder For Glazed Fire Check Door at stair case location of make Backer Fire Solution / Dorma / Geze with necessary accessories and S.S. screws etc. complete.	10	Each		
247.	Providing and fixing 300 fire rated mm long Flush Bolt one at top and one at bottom on Glazed Fire Check Door of make Backer Fire Solution / Dorma / Geze with necessary accessories and S.S. screws etc. complete as per directions of Engineer-In-Charge.	10	Each		
248.	Supply and installation of required size, shape, design and colour (as per enclosed drawing) Chair as per approved make and direction of Engineer- in-charge (Make: Godrej, Model no. Motion High Back Larger Seat with adjustable Armrests Chair (Equivalent of Featherlite/ equivalent of wipro)	177	Each		
249.	Supply and installation of required size, shape, design and colour WORKSTATION of Size 1500W x 600D x 1200H (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make: Godrej, Model No.-RECTA WORKSTATION [WISH] + KBPT + PEDASTAL & CPU TROLLEY / (Equivalent of Featherlite/ equivalent of wipro)	77	Each		
250.	Supply and installation of required size, shape, design and colour WORKSTATION of Size 900W x 600D x 1200H (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make: Godrej, Model No.-RECTA WORKSTATION [WISH] + KBPT + PEDASTAL & CPU TROLLEY / (Equivalent of Featherlite/ equivalent of wipro)	14	Each		
251.	Supply and installation of required size, shape, design and colour WORKSTATION of Size 1650W x 600D x 1200H (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make: Godrej, Model No.-RECTA WORKSTATION [WISH] + KBPT + PEDASTAL & CPU TROLLEY /(Equivalent of Featherlite/ equivalent of wipro)	13	Each		
252.	Supply and installation of required size, shape, design and colour WORKSTATION (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make: Godrej, Model No.-RECTA WORKSTATION [WISH] + KBPT + PEDASTAL & CPU TROLLEY / (Equivalent of Featherlite/ equivalent of wipro)	3	Each		
253.	Supply and installation of required size, shape, design and colour WORKSTATION of Size 1500W x 750D x 750H (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make: Godrej, Model No.-RECTA WORKSTATION [UPBEAT] + KBPT + PEDASTAL & CPU TROLLEY / (Equivalent of Featherlite/ equivalent of wipro)	18	Each		
254.	Supply and installation of required size, shape, design and colour SQUARE TABLE of size 1150x1150x740mm (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- MINGLE POD SQUARE TABLE of size 1150x1150x740mm / (Equivalent of Featherlite/ equivalent of wipro)	3	Each		

255.	Supply and installation of required size, shape, design and colour RECTANGULAR TABLE of size 2100x1150x740mm (as per enclosed drawing) as per approved make and direction of Engineer-in-charge. (Make-Godrej, Model No.- MINGLE UNITIZED PLT TABLE of size 2100x1150x740mm / (Equivalent of Featherlite/ equivalent of wipro)	5	Each		
256.	Supply and installation of required size, shape, design and colour DOUBLE SIDED UNIT of size 1200W X 600D X 2078H (as per enclosed drawing) as per approved make and direction of Engineer-in-charge. (Make-Godrej, Model No.- DOUBLE SIDED UNIT of size 1200W X 600D X 2078H, RDNC DR1 MTL SW 1200mm 600mm / (Equivalent of Featherlite/ equivalent of wipro)	170	Each		
257.	Supply and installation of required size, shape, design and colour WALL SIDED UNIT of size 1200W X 300D X 2078H (as per enclosed drawing) as per approved make and direction of Engineer-in-charge. (Make-Godrej, Model No.- WALL SIDED UNIT of size 1200W X 300D X 2078H, RDNC SR1 MTL SW 1200mm 300mm / (Equivalent of Featherlite/ equivalent of wipro)	57	Each		
258.	Supply and installation of required size, shape, design and colour 1 SEATER SOFA of size Width (W): 86.0 CM, Depth (D): 90.5 CM, Height (H): 85.5 CM, Seat Height (SH): 45.0 CM. (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- PISA 1 SEATER SOFA / (Equivalent of Featherlite/ equivalent of wipro)	45	Each		
259.	Supply and installation of required size, shape, design and colour 2-SEATER SOFA of size Width (W): 146.0 CM, Depth (D): 90.5 CM, Height (H): 85.5 CM, Seat Height (SH): 45.0 CM. (as per enclosed drawing) as per approved make and direction of Engineer-in-charge. (Make-Godrej, Model No.- PISA 2-SEATER SOFA / (Equivalent of Featherlite/ equivalent of wipro)	20	Each		
260.	Supply and installation of required size, shape, design and colour 3-SEATER SOFA of size Width (W): 206.0 CM, Depth (D): 90.5 CM, Height (H): 85.5 CM, Seat Height (SH): 45.0 CM. (as per enclosed drawing) as per approved make and direction of Engineer-in-charge. (Make-Godrej, Model No.- PISA 3-SEATER SOFA / (Equivalent of Featherlite/ equivalent of wipro)	3	Each		
261.	Supply and installation of required size, shape, design and colour SIDE / CORNER TABLE of size 600x600 mm with tinted toughened glass top (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- PISA SIDE / CORNER TABLE / (Equivalent of Featherlite/ equivalent of wipro)	35	Each		
262.	Supply and installation of required size, shape, design and colour PERSONAL LOCKER UNIT 38x183x45 cm (WxHxD) (as per enclosed drawing) as per approved make and direction of Engineer-in-charge. (Make-Godrej, Model No.- PERSONAL LOCKER UNIT, Product ID: PLU00001DX / (Equivalent of Featherlite/ equivalent of wipro)	5	Each		
263.	Supply and installation of required size, shape, design and colour FILING CABINET of size 1072x1200x460 mm (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- Reserve Lateral Filing Cabinet, Product ID: RESERV01DX / equivalent of Featherlite / (Equivalent of Featherlite/ equivalent of wipro)	1	Each		

264.	Supply and installation of required size, shape, design and colour CHAIR of size 43.5x87.5x56.5 CM (WxHxD) having Leatherette as upholstery material (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- VIVID CHAIR/ (Equivalent of Featherlite/ equivalent of wipro)	16	Each		
265.	Supply and installation of required size, shape, design and colour VISITOR CHAIR WITHOUT ARM REST of size 48.5 x 93.3 x 58.9 CM (WxHxD) (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- MOTION VISITOR CHAIR WITHOUT ARM REST / (Equivalent of Featherlite/ equivalent of wipro)	144	Each		
266.	Supply and installation of required size, shape, design and colour DOUBLE DOOR STEEL ALMIRAH of size 91.6 x 198 x 48.6 CM (WxHxD) (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- STORWEL PLAIN / (Equivalent of Featherlite/ equivalent of wipro)	3	Each		
267.	Supply and installation of required size, shape, design and colour SOFA of size 90 x 79 x 70.5 CM (WxHxD) (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- GRAPH SOFA / (Equivalent of Featherlite/ equivalent of wipro)	6	Each		
268.	Supply and installation of required size, shape, design and colour BACK-TO-BACK SOFA of size 90 x 79 x 133.5 CM (WxHxD) (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- GRAPH BACK-TO-BACK SOFA / (Equivalent of Featherlite/ equivalent of wipro)	9	Each		
269.	Supply and installation of required size, shape, design and colour WORKPOD of size 122.5 x 132.8 x 93.5 CM (WxHxD) (as per enclosed drawing) as per approved make and direction of Engineer-in-charge. (Make-Godrej, Model No.- IMMERSE WORKPOD/ (Equivalent of Featherlite/ equivalent of wipro)	16	Each		
270.	Supply and installation of required size, shape, design and colour FLIP CHAIR of size 60 x 74 x 40 CM (WxHxD) (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- TETRIS FLIP CHAIR / (Equivalent of Featherlite/ equivalent of wipro)	40	Each		
271.	Supply and installation of required size, shape, design and colour ROUND TABLE of size 90 (dia) x 102 (H) CM (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- TOPO ROUND TABLE / (Equivalent of Featherlite/ equivalent of wipro)	12	Each		
272.	Supply and installation of required size, shape, design and colour RECTANGULAR TABLE of size 90 x 120 x 72 CM (WxDxH) CM (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- TOPO RECTA TABLE / (Equivalent of Featherlite/ equivalent of wipro)	12	Each		
273.	Supply and installation of required size, shape, design and colour DESK of size 60 x 45 x 72 CM (WxDxH) CM (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- MODESK / (Equivalent of Featherlite/ equivalent of wipro)	8	Each		
274.	Supply and installation of required size, shape, design and colour CHAIR of size 63.50 x 63 x 80 CM (as per enclosed drawing) as per approved make and direction of Engineer- in-charge. (Make-Godrej, Model No.- GREET CHAIR / (Equivalent of Featherlite/ equivalent of wipro)	14	Each		

275.	Supply and installation of required size, shape, design and colour RECTANGULAR TABLE of size 1800x900x740mm (as per enclosed drawing) as per approved make and direction of Engineer-in-charge. (Make-Godrej, Model No.- INSIGHT TABLE of size 1800x900x740mm / (Equivalent of Featherlite/ equivalent of wipro).	24	Each		
276.	**ELECTRICAL WORK**				
277.	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.				
278.	Group C	500	Point		
279.	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc .as required.	12	Point		
280.	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/recessed steel conduit along with 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	750	Metre		
281.	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit alongwith 2 Nos. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	600	Metre		
282.	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required.				
283.	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	800	Metre		
284.	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	300	Metre		
285.	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	100	Metre		
286.	4 X 2.5 sq. mm + 2 X 2.5 sq. mm earth wire	150	Metre		
287.	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	100	Metre		
288.	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				
289.	3 x 2.5 sq. mm	300	Metre		
290.	6 x 2.5 sq. mm	300	Metre		
291.	3 x 4 sq. mm	1000	Metre		
292.	6 x 4 sq. mm	1000	Metre		
293.	Supplying and drawing following pair 0.5 mm dia FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.				
294.	2 Pair	100	Metre		

295.	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.				
296.	20 mm	100	Metre		
297.	25 mm	100	Metre		
298.	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
299.	20 mm	1000	Metre		
300.	25 mm	3500	Metre		
301.	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
302.	5/6 A switch	320	Each		
303.	15/16 A switch	360	Each		
304.	3 pin 5/6 A socket outlet	320	Each		
305.	6 pin 15/16 A socket outlet	360	Each		
306.	Telephone socket outlet	20	Each		
307.	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	270	Each		
308.	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	100	Each		
309.	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
310.	1 or 2 Module (75mmX75mm)	20	Each		
311.	3 Module (100mmX75mm)	20	Each		
312.	6 Module (200mmX75mm)	160	Each		
313.	12 Module (200mmX150nnm)	180	Each		
314.	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	50	Each		
315.	Supplying and fixing extra conduit down rod of 20 cm length G.I. pipe 15 mm dia, heavy gauge including painting etc. as required. (Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	270	Each		
316.	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required.				
317.	1 run of cable	2500	Metre		
318.	2 run of cable	2000	Metre		
319.	3 run of cable	500	Metre		
320.	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.				

321.	Group C	900	Point		
322.	Providing and fixing following rating and breaking capacity and pole MCCB with thermomagnetic release and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.				
323.	125 A, 16 KA,TPMCCB	12	Each		
324.	150 A, 16 KA,TPMCCB	4	Each		
325.	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
326.	12 way , Double door	12	Each		
327.	16 way, Double door	6	Each		
328.	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MOB 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 MOB TPDB is normally used where 3 phase outlets are required.)				
329.	8 way (4 + 24), Double door	4	Each		
330.	12 way (4 + 36), Double door	12	Each		
331.	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 MOB DB complete with connections, testing and commissioning etc. as required.				
332.	Single pole	702	Each		
333.	Triple pole	10	Each		
334.	Supplying and fixing DP sheet steel enclosure on surface/ recess along with 25/32 A 240 V "C" curve DP MCB complete with connections, testing and commissioning etc. as required.	10	Each		
335.	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	10	Each		
336.	Supplying and fixing 30 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top along with 30 A "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	5	Each		
337.	Supplying and fixing Cable End Box (Loose Wire Box) suitable for following single pole and neutral, sheet steel, MCB distribution board, 240 Volts, on surface/ recess, complete with testing and commissioning etc. as required.				
338.	For 14 way, Double door SPN MCBDB	18	Each		
339.	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.	16	Each		
340.	Supplying, installing, testing and commissioning of following capacity End Feed Unit made of 1.6mm thick sheet steel enclosure duly painted with powder coating to existing rising mains complete with TPN disconnect or FSU and HRC fuses, mounting stands, cable end box, brass compression gland, connections, earthing etc. as required.				
341.	600 A TPN	2	Each		

342.	Supplying, installing on wall, testing and commissioning of following capacity Air Insulated Compact Type Rising Mains for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply with enclosure having IP-54 rating after fixing the tap of boxes and all accessories, made of 1.6mnn thick steel sheet duly powder coated in convenient sections complete with 4 Nos aluminium bus bars having current density of 130 Al sq cm at nominal current rating, necessary joints & expansion joints, fire barrier at each floor, provision of tapping at every metre, continuous earthing with 2 Nos aluminium strip of suitable size (one on each side) including, G.I. clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. as required.				
343.	630 A, lsc = 50kA for 1 second	21	Metre		
344.	Supplying, installation, testing & commissioning of following capacity Plug In/ tap off box on the existing Air Insulated Compact Type bus trunking/ rising mains for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply made with 1.6mm thick sheet steel enclosure (IP54) duly powder coated with provision of MCCB/ACB (but without MCCB/ACB) complete etc. as required				
345.	250 A, lsc= 30kA for 1 sec	6	Each		
346.	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.				
347.	300 mm width X 50 mm depth X 1.6 mm thickness	300	Metre		
348.	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.				
349.	300 mm width X 50 mm depth X 1.6 mm thickness	20	Each		
350.	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.				
351.	300 mm width X 50 mm depth X 1.6 mm thickness	20	Each		
352.	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	2	Set		
353.	Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required.	20	Metre		
354.	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	20	Metre		
355.	Providing and fixing 6 SWG dia GI. wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ subnnain wiring/ cable as required.	1700	Metre		
356.	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.	600	Metre		

357.	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
358.	3.5 X 95 sq. mm (45mm)	24	Each		
359.	3.5 X 150 sq. mm (50mm)	10	Each		
360.	3.5 X 240 sq. mm (62mm)	4	Each		
361.	4 X 16 sq. mm (28mm)	30	Each		
362.	Supplying and fixing of 32 mm dia X 2.00 metres long GI. pipe (medium class) bracket for mounting of fluorescent / HPMV / HPSV street light fitting on pole including bending the pipe to the required shape, 2 nos 40 mm X 3 mm flat iron clamps with nuts, bolts and washer, painting the flat iron with primer and finish paint etc. as required.	10	Each		
363.	**FIRE DETECTION AND ALARM SYSTEM**				
364.	Supplying, installation, testing & commissioning of intelligent analog addressable photothermal detector complete with mounting base complete as required.	260	Each		
365.	Supplying, installation, testing & commissioning of fault isolator complete with base as required.	10	Each		
366.	Supplying, installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed tempreature thermistor complete with base as required.	4	Each		
367.	Supplying, installation, testing & commissioning of addressable fire control module complete as required.	8	Each		
368.	Supplying, installation, testing & commissioning of addressable manual call point complete as required.	20	Each		
369.	Supplying, installation, testing & commissioning of addressable horn cum strobe complete as required.	18	Each		
370.	Supplying, installation, testing & commissioning of 6 inches dia, 2 watts, 70/100 volts ceiling speaker complete as required.	20	Each		
371.	Supplying, installation, testing & commissioning of digital audio amplifier 75 Watt, 25V rnns operating at 240 Volt AC Supply complete as required.	1	Each		
372.	Supplying & laying of 2x1.5 sqmm fire alarm armoured cable, 600/1000V rated with annealed copper conductor having XLPE insulation, steel wire armouring & FRLS outer sheath complete as required.	2500	Metre		
373.	Supplying and drawing of cable Fire Retardant PVC insulated copper conductor cable in the existing surface / recessed steel conduit of following pairs, cores and size including connections and interconnections etc. as required.				
374.	speaker cable Single pair, 2-core, 1.5 sqmm	60	Metre		
375.	Supply, Installation, Testing and Commissioning of 1200 mm sweep, BEE 5 star rated, ceiling fan with Brush Less Direct Current (BLOC) Motor, class of insulation: B, 3 nos. blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, Power Factor not less than 0.9, Service Value (CM/M/W) minimum 6.00, Air delivery minimum 210 Cum/Min , 350 RPM (tolerance as per IS : 374-2019), THD less than 10%, remote or electronic regulator unit for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Supply, earthing etc. complete as required.	270	Each		

376.	Supplying and fixing following rating, double pole, 240 volts, MCB in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
377.	63 Amp	18	Each		
378.	Providing and fixing FR PVC DLP adaptable trunking without cover of (150 mm x 50 mm) size with provision of internal partition separation for Power & LAN on surface on existing wall etc. as required. .	200	Meter		
379.	Providig and Fixing of FR PVC trunking cover width 40 mm + full cover width 85 mm for Power + LAN component	200	Meter		
380.	Providing and fixing of Clip on partition - Plastic .	200	Meter		
381.	Providing and fixing of Seperation on partition - Plastic .	200	Meter		
382.	Providing and fixing of End caps for 150 mm x 50 mm trunking .	50	Each		
383.	Providing and fixing of Internal angle for 150 mm x 50 mm trunking .	20	Each		
384.	Providing and fixing of External angle for 150 mm x 50 mm trunking .	20	Each		
385.	Supplying and Fixing DLP U-PVC turnking of 105mm x 50mm on surface etc as required.	100	Meter		
386.	Supplying and Fixing Full Flexible cover of width 85mm on existing DLP U-PVC turnking etc as required.	100	Meter		
387.	Supplying and Fixing of internal angle for 105mm x 50mm existing DLP U-PVC turnking etc as required.	20	Each		
388.	Supplying and Fixing of external angle for 105mm x 50mm existing DLP U-PVC turnking etc as required.	20	Each		
389.	Providing and fixing of 90° Flat angle for 105 mm x 50 mm trunking .	2	Each		
390.	Supplying and Fixing of End cap for 105mm x 50mm on existing DLP U-PVC turnking etc as required.	50	Each		
391.	Supplying and Fixing 1 module arteor frame for 40 mm cover .	300	Each		
392.	Supplying and fixing of 3 module arteor frame for 85 mm cover .	50	Each		
393.	Supplying and fixing of 6 module arteor frame for 85 mm cover .	300	Each		
394.	Supplying and fixing following modular switch/ socket on the existing 1/3/6 module frame / U-PVC trunking system including connections etc. as required.				
395.	Information socket - category 6-UTP - 1 module .	300	Each		
396.	6 Amp switch	300	Each		
397.	20 Amp switch	600	Each		
398.	6 Amp switch-2/3 pin universal socket outlet	300	Each		
399.	6 pin 20 Amp socket outlet/6 pin 6/16 A universal socket	600	Each		
400.	Supplying and fixing of 8 (2 x 4) modules Pop-up flush-mounting box . including cutting the table top etc as required.	20	Each		
401.	Supplying and fixing double USB charger-2 module.	20	Each		
402.	Supplying and fixing HDMI socket-1 module.	20	Each		
403.	Supplying and Fixing Metal/GI raceway of size 225 mm x 38 mm-3 compartments including cutting the floor and repairing the same as required. (Length 2.44 m)	500	Meter		
404.	Supplying and Fixing Metal/GI raceway junction box (225mm x 225mm x 65-90mm) for joining raceway of size 225 mm x 25 mm (metal) on the floor including cutting the floor etc as required.	100	Each		
405.	Supplying, Installation, Testing and Commissioning of Cable cubby (One no 05 Amp switch & socket, 1 No 3000mA USB port & 1 No. Data Socket(RJ-45)) on existing table top including drilling hole, fixing cable cubby & finishing etc as required.	900	Set		
406.	Supplying and fixing 1" x 1" pre coated aluminium casing and capping on existing table etc as required.	500	Meter		

407.	Supply of 25W Surface/suspended linear 4ft luminaire(50mm width) made of Aluminum extruded housing in white powder coated finish and snap fit plastic moulded end caps, High transmittance PMMA opal profiled diffuser, control gear accessible and serviceable from bottom, suitable for standalone and continuous row mounting for endless line of light, High efficiency long life LED package in integral module with lumen efficacy > 95 Lm/W and viewing angle of 120° to ensure better uniformity. Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection. Lumen Output of 2400 lumens.CRI >80, Color temperature 4000K, THD <10% and PF >0.90,IP20,IK03.Life class of 50,000 hrs @ L70, Operating Temperature:-10 TO +45 DEG.C; Input Supply Voltage Range:140-270 V, Frequency :50-60 HZ; Internal Surge Protection:3.5 KV.	549	Each		
408.	Supply Installation and Commissioning of surface/ Suspended 15W round shape cylinracal light with high performance LEDs, pressure die-cast aluminium heat sink & PC diffuser in white powder coated finish with integral electronic low THD (<15%) LED driver.High efficiency long life LED package in integral module with lumen efficacy of >100 lm/W , with deep recessed, glare free. Powered by an integrated driver, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability test. Lumen Output of 1500 lumens, CRI >80, Color temperature 3000/4000K, THD <10% and PF >0.95,IP40,IK03.Life class of 50,000 hrs @ L70, Operating Temperature:-10 TO +45 DEG.C; Input Supply Voltage Range:140-270 V, Frequency :50-60 HZ; Internal Surge Protection:3 KV;	254	Each		
409.	Supply and installation of LED 40W decorative, corrosion resistant, surface luminaire. Housing in Aluminum extrusion heat sink for effective thermal management, sturdiness and excellent corrosion resistant Lumen Output of 4200 lumens.CRI >80, Color temperature 6000K and PF >0.90,IP20,IK03.Life class of 50,000 hrs @ L70, Operating Temperature:-10 TO +45 DEG.C; Input Supply Voltage Range:140-270 V, Frequency :50-60 HZ; Internal Surge Protection:3 KV;	59	Each		
410.	Supply Installation and Commissioning of recess 15W round shape light with high performance LEDs, pressure die-cast aluminium heat sink & PC diffuser in white powder coated finish with integral electronic low THD (<15%) LED driver. High efficiency long life LED package in integral module with lumen efficacy of >100 lm/W , with deep recessed, glare free. Powered by an integrated driver, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability test. Lumen Output of 1500 lumens, CRI >80, Color temperature 3000/4000K and PF >0.95,IP40,IK03.Life class of 50,000 hrs @ L70, Operating Temperature:-10 TO +45 DEG.C; Input Supply Voltage Range:140-270 V, Frequency :50-60 HZ; Internal Surge Protection:3 KV;	79	Each		
411.	Supply and installation of LED 25W decorative, corrosion resistant, surface-suspended luminaire. Housing in Aluminum extrusion heat sink for effective thermal management, sturdiness and excellent corrosion resistant fitted in white finish.High transmittance PS diffuser in opal finish for glare free uniform light distribution.High efficiency long life SMD LED module is mounted on FR4 with lumen efficacy of >140lm/W to enhance the lumen output.Powered	10	Each		

	by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection. Lumen Output of 2180 lumens.CRI >80, Color temperature 4000K, THD <10% and PF >0.90,IP20,IK03.Life class of 50,000 hrs @ L70, Operating Temperature:-10 TO +45 DEG.C; Input Supply Voltage Range:140-270 V, Frequency :50-60 HZ; Internal Surge Protection:3 KV;Havels				
412.	Supply installation and Commissioning of Round donut shape suspended LED light,25W decorative, corrosion resistant, surface-suspended luminaire. Housing in Aluminum extrusion heat sink for effective thermal management, sturdiness and excellent corrosion resistant fitted in white finish.High transmittance PS diffuser in opal finish for glare free uniform light distribution.High efficiency long life SMD LED module is mounted on FR4 with lumen efficacy of >140lm/W to enhance the lumen output.Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection. Lumen Output of 2180 lumens.CRI >80, Color temperature 4000K, THD <10% and PF >0.90,IP20,IK03.Life class of 50,000 hrs @ L70, Operating Temperature:-10 TO +45 DEG.C; Input Supply Voltage Range:140-270 V, Frequency :50-60 HZ; Internal Surge Protection:3 KV;	21	Each		
413.	Supply and installation of Hexagone shape 25W LED decorative, corrosion resistant, surface-suspended luminaire. Housing in Aluminum extrusion heat sink for effective thermal management, sturdiness and excellent corrosion resistant fitted in white finish.High transmittance PS diffuser in opal finish for glare free uniform light distribution.High efficiency long life SMD LED module is mounted on FR4 with lumen efficacy of >140lm/W to enhance the lumen output.Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection. Lumen Output of 2180 lumens.CRI >80, Color temperature 4000K, THD <10% and PF >0.90,IP20,IK03.Life class of 50,000 hrs @ L70, Operating Temperature:-10 TO +45 DEG.C; Input Supply Voltage Range:140-270 V, Frequency :50-60 HZ; Internal Surge Protection:3 KV;Havels	10	Each		
414.	Supply of 2x2 Panel recess mounting luminaire with suitable wattge as per design high performance LEDs, suitable for mounting with Armstrong/Grid ceiling.CRCA powder coated white after phosphochromate treatment. LED module is mounted on FR4 with lumen efficacy of >140lm/W to enhance the lumen output and viewing angle of 120° to ensure better uniformity.Powered by an independent Isolated, electronic LED driver with Output Short-circuit protection, Surge protection & other reliability test. Lumen Output of 3800 lumens.CRI >80, Color temperature 4000K, THD <10% and PF >0.95,IP20,IK03.Life class of 50,000 hrs @ L70, Operating Temperature:-10 TO +45 DEG.C; Input Supply Voltage Range:140-270 V, Frequency :50-60 HZ; Internal Surge Protection:3 KV.	50	Each		
415.	S/I/T/C of Microwave Surface Mount Sensor (occupancy Sensor) etc as required.	210	Each		
416.	Supplying, Installation, testing & commissioning of energy efficient LED compound light equipped with power coated PDC alluminium body & secondry optical lens for superior light distribution with energy efficient electronic driver with following features:- 130-300 Vac, 50Hz, wattage 120 Watts, efficancy not less then 110 Lm/W, CCT 6500K, Nominal surge protection 2.5 kV, Power factor not less then 0.9, Minimum IP protection 66 etc.	10	Each		

	in suitable size GI pipe with reducer, GI saddle, bracket for proper fixing as required.)				
417.	S/I/T/C of high speed wall mounting fan 400 mm sweep, copper winding, capacitor start, suitable for operation on 230V, 50 Hz, AC supply with inbuilt speed regulator etc. complete with all standard accessories such as motor, blades clamp etc as required. Colour of fan shall be finallized by Engineer-in-charge)	120	Each		
418.	S/I/T/C of 12"(300mm) size,1400rpm,copper wound, heavy duty metalic Exhaust Fan of double ball bearing capacitor start,suitable for 230 volt,50 Hz,single phase A.C. supply and complete with accessories such as motor, legs,frame,loober and Nut & bolts etc complete as required.	10	Each		
419.	S/I/T/C of 10"(250mm) size,copper wound, ventiling fresh air fan of double ball bearing capacitor start,suitable for 230 volt,50 Hz,single phase A.C. supply and complete with accessories such as motor, legs,frame,loober and Nut & bolts etc complete as required	10	Each		
420.	Providing and fixing 160A,36kA,FP MCCB rating and breaking capacity and pole MCCB with thermomagnetic release and terminal spreaders with SS Enclosure box suitable for 415 volt,3 phase,4 wire,50 Hz A.C supply system including drilling holes in SS enclosure box, making cable connections, etc. as required. Note: SS Enclosure is include in this item)	1	Each		
421.	Supplying and drawing of UTP 4 pair CAT 6A LAN Cable in the existing surface/ recessed steel/ PVC conduit as required				
422.	1 run of Cable	400	Meter		
423.	Supplying & Laying and fixing of one number PVC insulated and PVC sheathed / XLPE Aluminium armoured power cable of 1.1 kV grade of following size on wall surface as required.				
424.	Above 35 sq. mm and upto 95 sq. mm (3.5C x 95 sq.mm) (clamped with 25x3mm MS flat clamp)	100	Meter		
425.	Above 95 sq. mm and upto 185 sq. mm (3.5C x 150 sq.mm) (clamped with 25/40x3mm MS flat clamp)	100	Meter		
426.	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp) (3.5C x 300 sq.mm)	50	Meter		
427.	Upto 35 sq. mm (2C x 1.5 sq.mm) copper cable (clamped with 1mm thick saddle)	750	Meter		
428.	Supplying,Laying and fixing of one number PVC insulated and PVC sheathed / XLPE Aluminium and copper armoured power cable of 1.1 KV grade of following size on cable tray as required.				
429.	Above 35 sq. mm and upto 95 sq. mm (3.5C x 95 sq.mm) (clamped with 25x3mm MS flat clamp)	500	Meter		
430.	Above 95 sq. mm and upto 185 sq. mm (3.5C x 150 sq.mm) (clamped with 25/40x3mm MS flat clamp)	100	Meter		
431.	Upto 35 sq. mm (4C x 16 sq.mm) copper cable (clamped with 1mm thick saddle)	300	Meter		
432.	Supplying, Installation, Testing & Commissioning i/c making solid foundation of brick,cement concrete (0.50Mtr above the Floor level) of cubical type Panel Double Door Type suitable for 415V, 3 Phase, 4 wire 50 Hz AC supply system, fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with for powder coating for prickling and degreasing in approved shade, having 500 amp capacity extensible type TPN Aluminium Alloy bus bars of high conductivity, DMC/SMC bus bars supports with short circuit withstand capacity of 31 MVA for 1 sec., bottom base channel of MS section not less than 100mm x 50mm x 5mm thick, fabrication	1	Set		

	shall be done in transportable sections, entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of AL. bus bars and control wiring with 2.5 sq.mm PVC insulated copper conductor S/C cable, cable alleys, cable gland plates in two half, i/c providing following switch gears. INCOMER 1 Nos. 400 Amps. FP power contractor with 2 NO + 2 NC Aux contacts with Standard coil voltage 415 volt,50 Hz conforms to IS/IEC 60947-4-1 & IEC 60947-4-1 1 Nos. 400 Amps. FP MCCB of 36 KA with inbuilt protection. MAIN BUS BARS TPN aluminium bus bars of minimum of 500 Amps capacity with heat shrinkable coloured sleeves and i/c DMC/SMC bus bars supports at required intervals complete for cross section, size supports & their spacing etc. for withstanding fault level of 31 MVA for 1 sec. METERING 1 nos. 0-500V Digital type Voltmeter with selector switch.& protection MCB 1 nos. 0-400A Digital type Ammeter with selector switch with CT's 400/5A 3 Nos. phase indication lights LED type with protection MCB. OUTGOINGS 6 Nos. 250 Amps. FP MCCB of 36 KA with inbuilt protection. Total Panel Cubical Type Panel AS DESCRIBED ABOVE.				
433.	Supplying, Installation, Testing & Commissioning i/c making solid foundation of brick,cement concrete (0.50Mtr above the Floor level) of cubical type Panel Double Door Type suitable for 415V, 3 Phase, 4 wire 50 Hz AC supply system, fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with for powder coating for prickling and degreasing in approved shade, having 300 amp capacity extensible type TPN Aluminium Alloy bus bars of high conductivity, DMC/SMC bus bars supports with short circuit withstand capacity of 31 MVA for 1 sec., bottom base channel of MS section not less than 100mm x 50mm x 5mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of AL. bus bars and control wiring with 2.5 sq.mm PVC insulated copper conductor S/C cable, cable alleys, cable gland plates in two half, i/c providing following switch gears. INCOMER 1 Nos. 300 Amps. FP power contractor with 2 NO + 2 NC Aux contacts with Standard coil voltage 415 volt,50 Hz conforms to IS/IEC 60947-4-1 & IEC 60947-4-1 1 Nos. 250 Amps. FP MCCB of 36 KA with inbuilt protection. MAIN BUS BARS TPN aluminium bus bars of minimum of 300 Amps capacity with heat shrinkable coloured sleeves and i/c DMC/SMC bus bars supports at required intervals complete for cross section, size supports & their spacing etc. for withstanding fault level of 31 MVA for 1 sec. METERING 1 nos. 0-500V Digital type Voltmeter with selector switch.& protection MCB	3	Set		

	1 nos. 0-300A Digital type Ammeter with selector switch with CT's 300/5A 3 Nos. phase indication lights LED type with protection MCB. OUTGOINGS 6 Nos. 200 Amps. FP MCCB of 36 KA with inbuilt protection. Total Panel Cubical Type Panel AS DESCRIBED ABOVE.				
434.	**FIRE ALARM SYSTEM**				
435.	Supplying, installation, testing & commissioning of intelligent addressable High Sensitivity Photo Detector with sensitivity level of 0.02% to 2% Obs/Feet. The detector shall have the parabolic amplifier to focus the light beam to a very small volume near the receiving photo sensor at the incipient stage of fire- when the smoke particles are lesser than 0.3 microns intrudes inside the detection chamber & shall have better response time at much earlier stage of fire. The detector shall have twin bi-colour LED for 360 deg viewing. Addressing shall be with user friendly rotary decimal switches.	2	Each		
436.	"Supplying, installing, testing and commissioning approved make microprocessor based Multi-loop, Networkable Addressable Fire Alarm Control Panel with minimum 600 characters LCD display, 4000 trouble events including 1000 alarm log history events, Self Programmable alphanumeric keypad for programming. The panel should be equipped with sufficient number of loops & each loop shall have a capacity of inimum 125 detectors & 125 other devices excluding 20% spare. The panel shall work in degrade mode in case of CPU failure, Products not having this feature may offer Redundant CPU. Four access levels, flash EPROM, 240 volts AC power supply, automatic battery charger, 24 volts sealed lead acid batteries sufficient for 24 hours normal working and 30 mins in alarm condition with the charging capacity of 200AH. The panel shall be capable of self programing without any dependancy on dongle or programming software. Quoted rate shall include supply of necessary software & hardware for programming the panel with all necessary licence. Panel shall have Modbus/ Bacnet over IP protocol for future integration with BMS. However, for present arrangement FA system will be standalone with 24x7 monitoring. The panel shall be capable for remote accessibility on a mobile app through cloud platform/solution. Complied to meet UL864, 10th Edition and FM Approved. The Panel will be Seamlessly Integrated with existing Central Fire Alarm Panel and complete information of Panel should be seen on Main Central Fire Alarm Panel" 4 Loop Panel	1	Job		
437.	**CCTV**				
438.	DOME CAMERA - SITC of 2Mpx IR Varifocal Dome Camera 1920 X 1080 at 25/30fps,1/2.9"CMOS, lens 3.5-9mm,Auto focus and zoom, H.265, H.264 compression, Smart Compression, internal 850nm IR Range 30 meter from same OEM, 100dB true WDR as per IEC62676 , Built in Microphone, triple streaming, Motion Detection, Camera sabotage,IP66,IK10 housing, Camera shall support SD card 2TB,ONVIF profile S,G, & T,HTTPS using TLS 1.2, AES256, NDAA, Temp +60deg, UL/cUL Listed, UL/IEC/EN 62368-1, UL 60950-22, CE, FCC. The Camera to be provided by OEM should not be complying to GB28181, GB/T28181-2011 standards and there should be no option to activate or deactivate GB/T 28181 standards in the camera web page/Settings. Note: MAF/Letter of Authorization from Original Equipment	95	Each		

	Manufacturer (OEM) on the same and specific to the tender should be submitted before delivery of the Material.				
439.	"BULLET CAMERA - SITC of 2Mpx IR Varifocal Bullet Camera, 1920 X 1080 at 25/30fps,1/2.9""CMOS, lens 3.5-9mm,Auto focus and zoom, H.265, H.264 compression,Smart Compression, internal 850nm IR Range 30 meter from same OEM, 100dB true WDR as per IEC62676, triple streaming,Motion Detection,Camera sabotage,IP66,IK10 housing,Camera shall support SD card 2TB,ONVIF profile S,G, & T,HTTPS using TLS 1.2, AES256, NDAA,Temp +60deg, UL/cUL Listed, UL/IEC/EN 62368-1, UL 60950-22, CE, FCC.The Camera to be provided by OEM should not be complying to GB28181, GB/T28181-2011 standards and there should be no option to activate or deactivate GB/T 28181 standards in the camera web page/Settings. Note: MAF/Letter of Authorization from Original Equipment Manufacturer (OEM) on the same and specific to the tender should be submitted before delivery of the Material."	4	Each		
440.	VMS SOFTWARE - Supply installation Testing and Commissioning of Video Management Software, All Cameras shall be of same make*web based client allows viewing and exporting video without installing any software.*Imports users and roles from existing LDAP servers to reduce administrative overhead,and enables single sign-on (SSO)*Capable of listening for ASCII commands*Check on VMS and camera health using SNMP*Supports IPv4 and IPv6 cameras*Enables and supports Risk Management Framework (RMF),incorporates FIPS 140-3 validated cryptographic modules*TLS-based encryption over HTTPS Note: MAF/Letter of Authorization from Original Equipment Manufacturer (OEM) on the same and specific to the tender should be submitted before delivery of the Material.	100	Lot		
441.	SERVER - Video Management Server support for 128 Cameras SITC of Rack Server Operating System Microsoft Windows 10 IoT Enterprise 64-bit (LTSC)Memory 16 GB DDR4 ECC2x M.2 SSDs 240 GB (RAID 1)Processor Intel® Xeon® Silver 4310Dell iDRAC Controller iDRAC9 Basic NVIDIA Quadro P1000 (4 GB memory)Video Outputs 4x Mini DisplayPort (DP++) 1.42 x Gigabit Ethernet (1000Base-T) portsIP Version IPv4 and IPv6Recording Throughput 450Mbps Bandwidth3 year warranty. Note: MAF/Letter of Authorization from Original Equipment Manufacturer (OEM) on the same and specific to the tender should be submitted before delivery of the Material.	2	Nos		
442.	HARD DISK - Supply, Installation, Testing & Commissioning of 200 TB Video Hard Disk.	1	Lot		
443.	WORKSTATION - Supply, Installation, Testing & Commissioning of Client WorkStation with CPU of Intel Core i7 Processor, With 8GB RAM, 1 GB Graphic Card, and 500 GB HDD.	2	Nos		
444.	24 PORT SWITCH - Supply, Installation, Testing & Commissioning of POE Layer II managed ethernet switch, 24 port RJ45 10/100/1000 T with 2 nos. OFC Port. Switch shall have minimum 24 nos. 10/100/1000 Base-T ports with PoE+ capability and minimum 370W of PoE Power and additional 4 nos. of SFP uplink ports loaded with 2 nos. of SMF modules. Shall have minimum 56 Gbps of switching fabric and 80 Mpps of forwarding rate. Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z, 802.3af, 802.3at. Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP	6	Nos.		

	Source guard, BPDU Guard, spanning tree root guard IPv6 QoS and IPv6 ACL.				
445.	8 PORT FULLY LOADED LIU - Supply, Installation, Testing& Commissioning of 8 PORT Fully loaded Fiber LIU including connection as per specifications & complete as required.	2	Nos.		
446.	SFP MODULE - Supply, Installation, Testing & Commissioning of Gigabit SFP Module as per specifications complete as required.	4	Nos.		
447.	6 CORE OFC CABLE - Supply installation Testing and Commissioning of 6 Core OFC Cable..	300	Meter		
448.	STP CAT 6A CABLE - Supply, Installation, Testing & Commissioning of STP CAT 6A Cable..	5000	Meter		
449.	6U RACK - Supply installation Testing and Commissioning of 6U Rack Wall Mount..	6	Nos.		
450.	UPS - Supply installation Testing and Commissioning of online 3KVA UPS 30 Mins Backup.	1	Nos		
451.	**AUDIO VIDEO SYSTEM**				
452.	SITC of 100" or better 4K (3,840 x 2,160), Direct (Full Array LED), Professional Slim Blade Stand Display with 4K HDR Processor X1,HDR (HDR10, HLG, Dolby Vision), Native Contrast ratio upto 6,000:1, Response time 6ms, Peak Brightness 850 cd/m² or better, 4K X-Reality PRO, TRILUMINOS DISPLAY technology, 24/7 Portrait ,Tilt functionality, Flexible Content Layout with HTML5, 16GB On Board Storage, Motion flow XR,HDCP 2.3 (HDMI) / RS232 / USB/ RJ45 / Wi-Fi with In-Built Bluetooth / 20W Speakers / Android™ OS system, Viewing angle 178 degree, Pro Mode, Pro Display using Apple AirPlay & Chromecast etc.	1	Each		
453.	SITC of 65" or better 4K (3,840 x 2,160), Direct (Full Array LED), Professional Slim Blade Stand Display with 4K HDR Processor X1,HDR (HDR10, HLG, Dolby Vision), Native Contrast ratio upto 1200:1, Response time 6ms, Peak Brightness 440 cd/m², 4K X-Reality PRO, TRILUMINOS DISPLAY technology, 24/7 Portrait ,Tilt functionality, Flexible Content Layout with HTML5, 16GB On Board Storage, Motion flow XR,HDCP 2.3 (HDMI) / RS232 / USB / RJ45 / Wi-Fi with In-Built Bluetooth / 20W Speakers / Android™ OS system, Viewing angle 178 degree, Pro Mode, Pro Display using Apple AirPlay & Chromecast etc.	2	Each		
454.	SITC of PTZ Camera for Video conferencing purpose having - 1/2.5” high quality, 8.4MP CMOS sensor, 3840x2160 pixels, 4K@ 60fps, 12x Optical Zoom, 16x Digital Zoom, 80.8° Field of View, 200+ Pre-sets, USB 3.0, HDMI, RJ45,3G-SDI, USB. etc as required.	1	Each		
455.	9.7" ipad with touch panel controller to select the desire preset of the camera (to focus the camera on the person speaking)	1	Each		
456.	8x8 HDMI Matrix Switcher having 8 HDMI Input and 8 HDMI Outputs 4K, Matrix Switching.	1	Each		
457.	HDMI to USB 3.0 media converter with Audio Input.	1	Each		
458.	HDMI Cable 15 Meter, 4K Kramer,	4	Each		
459.	HDMI Cable 10 Meter, 4K Kramer,	3	Lot		
460.	USB Cable 10 Metr	2	Lot		
461.	SITC of Digital Chairman Discussion Unit with builtin Digital Signal Processing, Unit with Priority and Next-in-Line Configuration, Priority button silences all delegate microphones and allows only the chairperson to speak, Next-in-line button gives the floor to the next speaker in a waiting list of speakers who requested to speak, User Button with Feedback, Shielded microphone, immune to mobile phone interference, High-quality integrated loudspeaker, Headphone output with Volume Adjustment, Loop-through, daisy-chain cabling, Different LED	1	Each		

	Signalling for Mic On/Off OR Request to-Speak Push Button, Audio Quality 16Bit digital, Frequency Response: 30Hz-15kHz.				
462.	SITC of Digital Delegate Discussion Unit with built-in Digital Signal Processing, User Button with Feedback, shielded microphone, immune to mobile phone interference, High-quality integrated loudspeaker, Headphone output with Volume Adjustment, Loop-through, daisy-chain cabling, Different LED Signalling for Mic On/Off OR Request to-Speak Push Button, Audio Quality 16Bit digital, Frequency Response: 30Hz-15kHz.	18	Each		
463.	SITC of gooseneck Microphone 500mm or better having following specifications Transducer principle Back electret (condenser) Operating principle Pressure gradient, Polar pattern Unidirectional, cardioid ,Nominal conditions Signal to noise ratio > 70 dB(A).	19	Each		
464.	SITC of Digital Central Conference Controller with Recording & Web Server, Conference Controller with built-in Digital Signal Processing, Control upto minimum 50 Discussion Unit and expandable upto 150 Discussion Unit by configuring Master Slave/Power supply, Controller unit with 4 Bus Connection. 4 Branches. OR 2 Closed Loop for redundancy mechanism, Control & Configure the Controller via the Integrated Web Server, Two USB Connections to connect USB Storage Device for Direct Recording of the Meeting. The Second USB Storage Device will take over automatically inscenaro the Fist USB Storage get full, Camera Control Integration Capability, Controller with LCD display to implement several Conference Mode: Direct access, Request, Push to talk, FIFO, Vox control, Selectable Voice Activation, Digital Acoustic, Feedback Reduction, With Audio Input & Output for connectivity with external sysytem like amplifier, microphone & audio/video conference system, Audio Quality 16Bit digital, With Power Saving Mode allows controller to sleep state if it has been left ON, Headphone Port, Certification: CE . Technical specification:- Frequency response : 50HZ~16KHZ(±1dBV) T.H.D. : ≦0.1% S/N Ratio : ≧85dBV Conference microphone connection: CAT5E cable RJ-45 port x 4 sets Ethernet Technology: 10 MBPS Ethernet.	1	Each		
465.	SITC Of conference cable RJ 45 2 Mtr	20	Each		
466.	SITC Of conference cable RJ 45 20 Mtr	2	Each		
467.	Supplying, Installation, testing and commissioning of Amplifier with 2 x 300W at 8ohm & 70/100V Line, Signal to Noise ratio >97dB, THD	1	Each		
468.	SITC of Wall/Ceiling Mount Speaker fo 50 W @8 ohm, 70/100V Transformer Tap, Senstivity 86dB, 106db SPL, Two way speaker having 5.25" Speaker and 3/4" Tweeter with necessary mounting arrangement.	6	Each		
469.	Supply, Installation, testing and commissioning of Digital Signal Processor with Multipurpose software based digital audio signal processor with a total of 8 balanced analog microphone/line level audio inputs with AEC and 8 balanced analog microphone/line level audio outputs. In addition to the fixed 8x8 analog audio I/O, it should also have a software definable bank of 8 balanced analog audio Input/output channels where each channel can be independently configured during design or run time as either a microphone/ line level input or a microphone /line level output; RJ 45 LAN Control, with standard accessories complete as required.	1	Each		
470.	Microphone cable	20	Each		
471.	Digital podium : Mild Steel, tray for keyboard, 21" interactive monitor with Motorized Positioning up or down as per user	1	Each		

	convenience, Connectivity for Laptop, Visulaiser, control for projector ON/off, Screen Up/Down, etc as required.				
472.	Equipment Rack 24U, 19" with 600mm Depth	1	Each		
473.	Network Switch 10 Port.	1	Each		
474.	SITC of 65" or better 4K (3,840 x 2,160), Direct (Full Array LED), Professional Slim Blade Stand Display with 4K HDR Processor X1,HDR (HDR10, HLG, Dolby Vision), Native Contrast ratio upto 1200:1, Response time 6ms, Peak Brightness 440 cd/m², 4K X-Reality PRO,TRILUMINOS DISPLAY technology, 24/7 Portrait ,Tilt functionality, Flexible Content Layout with HTML5, 16GB On Board Storage, Motionflow XR,HDCP 2.3 (HDMI) / RS232 / USB / RJ45 / Wi-Fi with In-Built Bluetooth / 20W Speakers / Android™ OS system, Viewing angle 178 degree, Pro Mode, Pro Display using Apple AirPlay & Chromecast etc.	1	Each		
475.	SITC of 4K Auto Frame Capmera with Microphone array with intelligent USB camera of output of up to 4K (3840x2160) @30 frames and Built-in with 96dB speaker, Bluetooth WiFi infrared, microphones array, built-in Beam Forming (BF) microphone, and audio pickup distance of 6 meters. 4K AF CameraSoundbar should supports HDMI 2.0 output and USB3.0 output with all required cables.	1	Each		
476.	**LIFTS**				
477.	SITC of 13 Passenger Machine Room Less (MRL) Lift for (G+2) 03 stops 03 openings (all opening on same side) of SS Cabin, SS Hairline Finish Doors, Gearless Motor, Travel 06-meter (Approx.) Speed 1.0 M/sec with ARD, 3 way Telephone System, Overload, Floor Announcement System, Collective Selective, Handicapped Friendly Buttons, Full height Infrared Curtain including labors.	1	Job		
478.	Supply and fixing lift shaft suitable for 13 Passengers Lift for 3 stop 3 opening (all opening on same side) with travel height 6 Mtr and overhead 4200 mm including pit depth of 1600 mm of M.S. Pole & Chanel frame enclosed with ACP Panels & for sealing the top ray of lift shaft so the rain water cannot enter in lift shaft including labors all work complete as per directions of Engineer-In-Charge. Note: The successful bidder will essentially submit the detailed structural drawing, floor plans and elevation drawings within 15 days after award of work which will be then vetted by NIT/IIT & the successful bidder will also submit the stability report duly examined and issued by NIT/IIT. All above work will be in the scope of successful bidder and nothing extra will be paid on this account.	1	Job		
479.	S/I/T/C of Dumb waiter of 100 Kg capacity,0.3 M/Se speed suitable to serve G + 1 (02 stop/02 opening) with AC variable voltage & variable frequency drive (VVVF drive) 415 volts, 3 phase, AC supply,50 Hz with gearless motor, car enclosure made out of stainless steel hairline finish with flooring stainless steel 1.2mm thick including all standard accessories call and send control operation from landings, complete all as specified including labours.	1	Job		
480.	**CREDIT OF DISMANTLE ITEMS**				
481.	Credit of dismantle of old Iron Scrap like steel windows / door frames, MS grills, MS bars, GI pipe and fittings etc.	3000	Kg		
482.	Credit of dismantle of old Wooden Scrap like old flush doors, wooden frames, ply, board etc.	5000	Kg		
483.	Credit of dismantle of old PVC scrap like PVC cistern, PVC tanks, PTMT fittings etc.	500	Kg		
484.	Switches & Sockets.	700	Each		
485.	Copper / Aluminum wires	100	Kg		

486.	1' x 4' conventional type / Led fittings	450	Each		
487.	2' x 2' Led / conventional type fittings	60	Each		
488.	18/20 watt led channel fittings & 12watt /18-watt fittings	130	Each		
489.	1200mm Ceilings fans	150	Each		
490.	400 mm wall fan	60	Each		
491.	10" / 12" / 15" / 18" Exhaust fan	15	Each		
492.	SPN DB's	40	Each		
493.	VTPN DB's	10	Each		
494.	MCCB Box with MCCB	4	Each		
495.	Type of MCB's	150	Each		
496.	90 watt Faced Light	5	Each		
497.	Dismantled Fire Alarm System.	1	Set		
	Total Amount				

Special Conditions:

1. No labour huts shall be allowed in IIT Campus, 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 in IIT Campus nothing shall be paid extra on this account.
4. Site shall be available as per directions of Engineer in Charge.
5. Quoted rates of participating agencies shall be inclusive of GST.