

TENDER DOCUMENT
INTERIOR & ELECTRICAL WORKS

FOR

**ANNEXE BUILDING AT 10TH FLOOR (PHASE - II) FOR
THE STATE TRADING CORPORATION OF INDIA LTD.**

AT

**STC BUILDING, 1, TOLSTOY MARG,
NEW DELHI – 110001.**

ISSUED TO –

ARCHITECT

**MUNISH VERMA & ASSOCIATES
B-21, SHAKTI NAGAR EXTENTION
NEW DELHI - 110052.
PHONE : 27309102, 27309194, 27303091, 32603188
FAX : 011-42273603
E MAIL : mvasso@gmail.com**

To

NOTICE INVITING TENDER

Sub.: Renovation of remaining portion of 10th floor of its Annexe Building at Jawahar Vyapar Bhawan, New Delhi.

Dear Sirs,

I, HARI SINGH, Chief Engineer of **STATE TRADING CORPORATION OF INDIA LTD.** having Regd. Office at **JAWAHAR VYAPAR BHAWAN, 1, TOLSTOY MARG, NEW DLEHI – 110001**, hereby invite you to tender for the above work

1. The tender copies can be had from **Office of the Chief Engineer, State trading Corporation of India Ltd., Jawahar Vyapar Bhawan, Tolstoy Marg, New Delhi – 110 001**, during working hours from 18.05.2009... to ...04.06.2009... on all working days between 10 A. M. and 4.00 P. M. on payment of a non-refundable cost of Tender documents of **Rs. 1,000/- (Rupees One Thousand only)** in the form of Demand Draft/Banker's Cheque in favour of STATE TRADING CORPORATION OF INDIA LTD. PAYABLE AT NEW DELHI. The tender can also be downloaded from our website (www.stc.gov.in or www.tenders.gov.in). However a banker's cheque/demand draft for Rs. 1,000/- being the cost of tender must accompany such bids beside the EMD amount of Rs.50,000/-..
2. The tender duly filled in, signed & sealed and super scribed "Renovation of remaining portion of 10th Floor of its Annexe Building at Jawahar Vyapar Bhawan, New Delhi". and addressed to **THE STATE TRADING CORPORATION OF INDIA LTD.**, dropped in the Tender Box kept on the Reception of **JAWAHAR VYAPAR BHAWAN, TOLSTOY MARG, NEW DELHI – 110 001**, not later than 3 pm on 05.06.2009 under any circumstances, and the tenders will be opened on same day at 3.30 pm on 10th floor (Mini Board Room), Jawahar Vyapar Bhawan, New Delhi, in presence of contractors or their authorized representatives if they wish to be present.
3. Any other mode of sending the tender through courier or by post shall not be accepted.

- Sd -
(HARI SINGH)
CHIEF ENGINEER
For and on behalf of State Trading Corporation of India Ltd.

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LETTER SUBMITTING TENDER

**The Chief Engineer (Civil),
The State Trading Corporation of India Ltd.,
20th Floor Jawahar Vyapar Bhawan,
1, Tolstoy Marg, New Delhi – 110001**

Dear Sir/Sirs,

This has reference to the tender invited by you for the Interior & Electrical Works of your Annexe Building at 10th floor (Phase – II) of STC Building at **State Trading Corporation of India Ltd., Jawahar Vyapar Bhawan, 1, Tolstoy Marg, New Delhi – 110001.**

I/We do hereby offer to execute the works under “contract” at the representative rates mentioned in the Bill of Quantities. I/We have examined the Tentative Drawings, seen the site and read the articles of agreement, conditions of contract, specifications and special clauses - forming part of the bill of quantities. I/We agree to finish and complete the whole of the works as agreed to as per terms and conditions within **60 DAYS** from 3rd day of getting order to start work.

I/We have deposited as Earnest Money **Rs. 50,000/- (rupees fifty thousand only)** in the form of a Bank Draft in favour of **The State Trading Corporation of India Ltd.**, and payable at Delhi which amount is not to bear any interest. I/We do hereby agree that this sum shall be forfeited by the Employer in the event our tender is accepted and I/We fail to execute the contract, as per terms and conditions agreed, when called upon to do so.

I/We understand that you are not bound to accept the lowest or any tender that you receive.

Name of Partners of the firm

Yours faithfully

Name of our Bankers

SPECIAL INSTRUCTIONS

The tenderer is advised to furnish the following information / document with their tender.

1. A true copy of the letter for his registration with government department / public sector under taking.
2. A true copy of his latest income tax clearance certificate.
3. List of works carried out by the tenderer during last three years.
4. List of tools and plants owned by the tenderer.
5. This tender document contain 55 pages in addition to first 3 pages.

ARTICLES OF AGREEMENT

This agreement made at Delhi, this day of 2007 BETWEEN **The State Trading Corporation of India Ltd. (hereinafter called as STC)**, having their registered office at **Jawahar Vyapar Bhawan, 1, Tolstoy Marg, New Delhi – 110001** hereinafter referred to as the Employer which expression shall include their Heirs, Executors, Administrators & Assigns) of the one part and Sh.....of M/s (hereinafter referred to as the contractor which expression shall include their Heirs, Executors, Administrators and Assigns) of the other part.

WHERE AS the Employer is desirous of renovating **Annexe Building at 10th floor (Phase – II) of STC Building** and have got the drawings and specifications describing the works to be done through their Architects M/s **MUNISH VERMA & ASSOCIATES, B - 21 Shakti Nagar Extension, Delhi - 52** (Hereinafter referred to as the Architects) and where as the said drawings and the specifications and the Priced Bill of quantities have been signed by or on behalf of the parties here to, and where as the contractor has agreed to execute upon and subject to the conditions set forth herein (here in after referred to as “the said conditions”) the work shown upon the said drawings and described in the said specifications and the said priced bill of quantities.

NOW IT IS HEREBY AGREED AS FOLLOWS :-

1. In consideration of the payment to be made to the Contractor as hereinafter provided he shall upon and subject to the said conditions execute and complete the works shown upon the said Drawings and such further detailed drawings as will be furnished to them by the said Architects and described in the specifications and detailed specifications and the said priced Bill of Quantities.
2. The Employer shall pay the Contractor such sums as shall become payable hereunder at the times and in the manner specified.
3. The term the “Architects” in the said Conditions shall mean the said messrs **MUNISH VERMA & ASSOCIATES, B-21, Shakti Nagar Extension, Delhi - 52**.
4. The Agreement, documents and the drawings to be supplied later, mentioned above, shall form the basis of this contract and the decision of the said Architects in reference to all matters of dispute as to the material workmanship or account and as to the intended interpretation of the clauses of this agreement or any other document attached here to shall be final and binding on both parties and may be made a Rule of Court.
5. The said Contract comprises the building above mentioned and all subsidiary works connected therewith in the same site as may be ordered to be done from time to time by the said Architects even though such works may not be shown on the drawings or described in the said Specifications or the Priced Bill of Quantities.
6. The Employer through the Architects reserves to himself the right of altering the drawings and nature of the work and of adding to or omitting any items of work or of having portions of the same carried out departmentally or otherwise and the such alterations or variations shall be carried out without prejudice to this contract.
7. No **mobilisation advance** shall be paid to the Contractor by Employer on signing the contract.
8. The said conditions shall be read and construed forming part of this Agreement and the parties hereto will be respectively abide by and submit themselves to the conditions and stipulations and perform the agreement on their parts respectively in such conditions contained.
9. No labour/ material escalation shall be paid to the contractor.

10. The several parts of this Contract have been read to us and fully understood by us. As witness our hands this day of

Signed by the said

In the presence of

Signed by the said

In the presence of

SPECIAL CONDITIONS

The sealed tender shall be addressed to **The Chief Engg. (civil), State Trading Corporation of India Ltd., 20th Floor, Jawahar Vyapar Bhawan, 1, Tolstoy Marg, New Delhi – 110001** superscribed on this cover, with the name of work and due date and time of opening. The sealed cover shall contain the following documents.

1. a. Tender document (original) as provided duly filled in and signed by the tenderer and drawings provided (if any).
1. b. All other documents including covering letters etc. that the tenderer is required to furnish, Earnest money deposit etc.
2. Tender must be submitted without making any additional alternations as per details given in other clauses.
3. Addenda / Corrigenda to this tender documents, if issued, must be signed, submitted along with the tender documents in schedule of rates of tender document and should price the work based on the revised quantities where amendments of quantities are issued in addenda.
4. Tenderer are advised to submit their bids based strictly on the terms and conditions as specified and contained in the tender documents and not to stipulated any deviations.
5. **Corrections and Erasures:** All corrections(s) and alternation(s) in the entries of tender paper shall be signed in full by the TENDERER with date. No erasure or over writing is permissible.
6. Tender shall remain valid for a period of 90 days (from the date of opening the tender). The Employer may extend the said period.
- 7 a. The Employer does not bind themselves to accept the lowest or any tender and reserves to itself the right to accept or reject any or all the tenders, in whole or in part without assigning any reasons for doing so.
- 7 b. S.T.C. reserves its right to purchase Chairs, door closers & handles etc. directly from the manufacturer / agency and it will be the responsibility of the Contractor to install the same.
- 8 a. Each of the tender documents is required to be signed by the person or persons submitting the Tender in token of his/ their having acquainted himself / themselves with the Conditions of Contract, General Specifications, Special Conditions, etc., as laid down. Any Tender with any of the documents not so signed will be rejected.
- 8 b. The Tender submitted on behalf of a firm shall be signed by all the partners of the firm or by the partner who has the necessary authority on behalf of the firm to enter into the proposed contract, otherwise the Tender is liable to be rejected.
- 9 a. The tender form must be filled in English and all entries must be made by hand and written in ink. If any of the documents is missing, or unsigned, the tender will be considered invalid.
- 9 b. The Tenderer shall also submit along with his tender, a list mentioning the names of manufacturers of specialised items like steel windows, patented water proofing, flush doors, floor tiles, false ceilings etc. which he proposes to use in the work if his tender is accepted.
10. All erasures and alterations made while filling the tender must be attested by initials of the tenderer. Overwriting of figures is not permitted, failure to comply with either of these conditions will render the tender void. No request of any change in rates or conditions after the opening of the tender will be entertained.
11. Intending tenderers shall pay as Earnest money as given in **appendix hereinbefore referred to**. A tender which is not accompanied by earnest money will not be considered. The earnest money will be returned to the tenderer if his tender is not accepted but without any interest.

12. The earnest money deposit paid by the successful tenderer, when he submitted his Tender, shall be held by the Employer as part of retention money for the execution and due fulfillment of the contract. No interest shall be paid on the said deposit.
13. Within three days of the receipt of intimation from the Employer of the acceptance for his Tender, the successful Tenderer shall be bound to implement the contract by signing an agreement in accordance with the draft agreement and the Schedule of Conditions, but the written acceptance by the Employer of a Tender will constitute a binding agreement between the Employer and the person so tendering whether such formal contract is or is not subsequently entered into.
14. All compensation or other sums of money payable by the contractor to the Employer under the terms of this contract may be deducted from his earnest money and the security deposit, if the amount so permits, and contractor shall unless such deposit has become otherwise payable, within ten days after such deduction make good in cash the amount so deducted.
15. The Contractor shall not assign the contract fully or partially. He shall not sublet any portion of the contract except with the written consent of the Employer, failing which the Employer may summarily terminate the contract, whereupon the security deposit shall stand forfeited and at absolute disposal of the Employer and the Employer will not be liable to pay any damages / compensation.
16. The Contractor shall carry out all the Interior / Electrical / Fabrication work and other works strictly in accordance with drawings, details and instructions of the Architects / Engineer – In – Charge (hereinafter called as E.I.C.). If in the opinion of the Architects, changes have to be made, in the work already carried out, then it is to be carried out without any extra charge. The Employer's decisions in such cases shall be final.
17. A Schedule / Bill of probable quantities in respect of such work and specifications accompany these special Conditions. The Bill of probable quantities is liable to alterations by omission, or additions at the discretion of the Employer. Each Tender should contain not only the rates but also the value of each item of work entered in a separate column and all the items should be totaled up in order to show the aggregate value of the entire Tender. All corrections in the Tender rates shall be duly attested by the dated initials of the Tenderer. Corrections which are not attested may entail the rejection of the Tender. Rates should be quoted both in figures and words in columns specified.
18. The Tenderer must obtain for himself on his own responsibility and at his own expense all the information which may be necessary for the purpose of filling a Tender and for entering into a contract and must examine the drawings and must consider and inspect the site of the work and acquaint himself with all local conditions, means of access to the work, nature of the work and all matters appertaining thereto.
19. The rates quoted in the Tender shall include all charges for double scaffoldings, centering, water and meter charges, electric charges, temporary plumbing, hire for any tools and plants, Insurance, marking out and clearing of site, watering/curing of concrete and various other materials as mentioned in the specifications all complete. The rates quoted shall be deemed to be for the finished work to be measured at site. Tenderer must include in their rates sales Tax, Excise Duty, Octroi, Work Tax, VAT, Service Tax, fluctuations in the market rates and any other tax and duty, or other levy levied by the Central Government or State Government or Local Authority, If applicable. The Tenderer shall also be liable to pay any taxes and levies etc. levied by Central Government / State Government / Local Authorities etc., even if implemented, increased or levied after the award of this Contract. No claim in respect of Sales - Tax, Excise Duty, Octroi, work tax, VAT, Service Tax or other taxes, Duties or levies shall be entertained by the Employer under any circumstance.

Contractor is to fully indemnify STC of India Ltd. against any type of loss/accident caused due to the negligence of contractor and he should take all precautions for smooth execution of the work. In this regard, the contractor shall take Insurance Covers for Third Party and for Workmen Compensation in the joint names of STC and the contractor. The charges for insurance covers to be valid up to the completion of the work shall be borne by the contractor.

The contractor will be fully responsible for any injury or accident to any person(s) employed by him, and for any damage to any structure or any part of the property, which may arise due to operation/negligence of the contractor its workers while executing the work.

The contractor upon award of the work shall comply with all the required statutory provision e.g. payment of Wages Act, Apprentice Act, workmen's Compensation Act, Contract Labour (Regulation & Abolition) Act. Industrial disputes Act, Maternity Benefit Act, etc. and the rates made there under from time to time.

If any claim, on account of non-compliance of the above laws by the contractor arises against the STC, the tenderer shall indemnify the STC. The Engineer-In-Charge shall have the right to deduct from the money due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers.

20. The Employer shall deduct the required amount towards T.D.S. and any other tax as per the prevalent rules from all the payments made to the Contractor.
21. The calculations made by the tenderer should be based upon probable quantities of the several items of work which are furnished for the tenderer's convenience in the Bill of probable quantities but it must be clearly understood that the contract is not a lump sum contract, that neither the probable quantities nor the value of the individual items nor the aggregate value of the entire tender will form part of the contract and that the Employer does not in any way assure the tenderer or guarantee that the said probable quantities are correct or that the work would correspond thereto.
22. Time shall be considered as the essence of the Contract. The entire construction must be completed in **time period given in the appendix hereinbefore referred to** including civil works, electrical installation, sanitary, water supply, interior works and drainage arrangements from the date of allotment of work. The attention of the Tenderer is drawn to Clause 21 of the Condition of Contract to damages for non completion as per time frame stipulated above. The Tenderer shall before commencing work prepare a detailed work program which shall be approved by the Employer.
23. The Tenderer shall submit with his Tender a list of similar works he has executed giving details as to their magnitude and cost which shall not be less than Rs. 15 .00 lakhs (in single order in the past 3 years) and the time within which he works completed alongwith certificate of satisfactory completion from the institute of repute/department in this regard.
24. The tenderer shall fill all the items in the Bill of Quantities.
25. The contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work whatever the cause of delays may be, including delays arising out of modification to the work entrusted to him or any sub contracts connected therewith or delays in awarding contracts for other trades of the project or in commencement or completion of such works or in procuring Government Controlled or other building materials or obtaining water and power connection for construction purposes or for any other reason whatsoever and the Employer shall not be liable, under any circumstance, for any claim in respect thereof. The Employer does not accept liability for any sum besides the Tender amount subject only to such variations as may be provided for herein.
26. The successful Tenderer is bound to carry out any other items of work necessary for the completion of job even though such items are not included in the quantities. Schedule of instructions in respect of such additional items, their quantities and rates shall be issued in writing by the Employer.
27. If the Headquarters of successful Tenderer are elsewhere than in **Delhi**, he shall have a duly authorised Agent in **Delhi** from the commencement of the work until the building is occupied by the Employer. Such agent shall be authorised to act on behalf of the successful Tenderer to accept service of notice of contract and to agree to extras, omissions and varied items of works and rates for the same. Such Agent shall maintain on his staff a qualified engineer approved by the Employer and such office personnel as may be required for the efficient executions of works. Any notice under the contract shall be deemed to have been served on the successful tenderer if served upon

such agent or sent by registered letter to his address. Such agent shall not be changed and shall not leave during the duration of the contract, unless the written consent of the Employer have been previously obtained. If the Employer shall order the Contractor to carry out any rectification under the terms of the contract after the building is completed, the successful tenderer shall have the same or another duly authorised agent while such rectifications are being carried out.

28. The successful tenderer shall co-operate and coordinate with the other contractors for different jobs related to the project, to be appointed by the Employer, so that the work shall proceed smoothly with least possible delay and to the satisfaction of the Employer.
29. The construction and maintenance of stores and security shall be the responsibility of the Contractor.
30. The security deposit of the successful Tenderer will be forfeited if he fails to comply with any of the conditions of the Contract.
31. The expression 'Contractors' shall include its legal heirs / administrators, executors, successors and permitted assigns.
32. It shall be the responsibility of the contractor to submit samples to obtain prior approval of the Employer in respect of all materials, fittings & fixtures & any other items as decided by the Employer. One such approved sample of all items shall be kept with the Employer and at site for future reference.
33. The Contractor must submit the running bills in duplicate with complete nomenclature of the particular items executed as per Bill of Quantities.
34. The contractors shall be a solely and entirely responsible for obtaining all the approvals from local authorities & statutory bodies such as NDMC & CFO etc. or any other municipal or other authorities concerned. The contractor shall pay necessary fees and observe all necessary formalities required in this connection All expenses in this regard shall be solely borne by the contractor who shall be responsible for all consequences directly or indirectly arising out of any delay in taking action by contractor or their failure in any respect whatsoever in this regard. It is to be clearly understood that the STC shall not entertain any claim whatsoever or any liability arising from this obligation of contractor. In case of failure of the contractor in regard to this obligation the STC on the advice of the architect shall be at liberty to take action against the contractor as deemed fit and proper.

EMPLOYER

CONTRACTOR

CONDITIONS OF CONTRACT

1. Interpretations

In construing these Conditions, the Specifications, the Bill of Quantities, Tender and Agreement, the following words shall have the meanings herein assigned to them except where the subject or context otherwise requires :-

“Employer” shall mean **The State Trading Corporation of India Ltd.**

“Contractor” shall mean..... and his (their) heirs, legal representatives, assigns and successors ,

“Site” shall mean the site of the contract works for **Annexe building at 10th floor (Phase – II) of State Trading Corporation of India Ltd., Jawahar Vyapar Bhawan, 1, Tolstoy Marg, New Delhi – 110001** including any buildings and erections thereon and any other land adjoining there to (inclusively as aforesaid allotted by the Employer for the construction).

“This contract” shall mean the Articles of Agreement, these Conditions, the Priced Bill of Quantities, the Specifications, the Appendix, the Annexures, and additional instructions issued till the receipt of the Tender and subsequent correspondence if any till the date of acceptance of Tender and the letter of acceptance of contract .

“Works” shall mean the Interior / electrical works / construction of Employer’s building at the above said site according to the specifications, bill of quantities and other documents attached herein and elsewhere in the tender document.

“Act of Insolvency” shall mean any act of Insolvency as defined by the Presidency Towns Insolvency Act, or the Provincial Act or any amending Statute.

“Notice in writing” or written notice shall mean a notice in written, typed or printed characters sent (unless delivered personally or otherwise proved to have been received) by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered.

“Virtual Completion” shall mean that building is in the opinion of Architects fit for occupation.

“Words imputing persons include firms and corporations. Words inputting the singular only also include the plural and vice versa where the context so requires.

2. Scope of Contract

The Contractor shall carry out and complete the works in every respect in accordance with this Contract and in accordance with the directions and to the satisfaction of the Employer. The Architects may in their absolute discretion from time to time issue further drawings and/or written instructions details, direction and explanations which are hereafter collectively referred to as “The Employer Instructions” in regard to :-

(a) The variation or modification of the design, quality or quantity of works or the additions or omission or substitution of any work.

(b) Any discrepancy in the drawings or between the Bill of Quantities and/or Drawing and/or specifications.

(c) The removal from the site of any materials brought thereon by the Contractor and the substitution of other materials therefore.

(d) The removal and /or re-execution of any works executed by the Contractor.

(e) The dismissal from the works of any persons thereupon.

(f) The opening up for inspection of any work covered up.

(g) The amending and making good of any defects under Clause (28).

(h) Any other direction in regard to execution of the said work.

The Contractor shall forthwith comply with and duly execute any work comprised in such Architects Instructions provided always that verbal instructions, directions and explanations given to the Contractor or his Foreman upon the works by the Employer shall if involving a variation be confirmed in writing by the Contractor within seven days and not dissented from in writing within a further period of seven days by the Employer such shall be deemed to be Employer Instructions with in the scope of contract . Rates of items not mentioned in the Priced Bill of Quantities shall be fixed by the Employer.

3. Drawings and Bill of Quantities

One complete set of the Drawings and Specifications and Bill of Quantities shall be furnished by the Architects to the Contractors and the Architects shall furnish, within such time as they may consider reasonable, one copy of any additional drawing which in their opinion may be necessary for the execution of any part of the work. Such copies shall be kept on the works and the Architects and their representatives shall at all reasonable times have access to the same and they shall be returned to the Architects by the contractor before the issue of the certificate for the balance of his account under the Contract. This contract and the signed Specification and Schedule/Bill of Quantities shall remain in the custody of the Architects, and shall be produced by them at their office as and when required by the Employer or by the Contractor.

4. Contractor to Provide everything necessary

The contractor shall provide everything necessary for the proper Execution of the work according to the intent and meaning of the Drawings. Priced Bill of Quantities and Specifications taken together whether the same may not be particularly shown or described therein provided that the same can reasonably be inferred therefrom and if the Contractor finds any discrepancy therein he shall immediately and in writing refer the same to the Architects whose decision shall be final and binding on the parties. Figured dimensions shall be followed in preference to scale.

The Contractor shall provide himself for ground and/or municipal water for the carrying out of the work at his own cost. The contractor shall make his own arrangements for the supply of water by way of boring /municipal water. The Employer shall on no account be responsible for the expense incurred by the Contractor for water obtained from elsewhere and in this case the same shall be got tested and used only after specific written permission from the Employer. **Recovery of water, if supplied, will be made from the running bills @ ½% of gross amount of work done.**

The Employer will provide electricity at one point on chargeable basis. The Contractor shall have to make his own arrangement to maintain, at his own expense, an efficient service of electric light and power and shall pay for the electricity consumed. **Recovery of electricity supplied will be made from the running bills @ ½% of gross amount of work done.**

The Contractor shall supply, fix and maintain at his cost, during the execution of any works all the necessary centering, scaffolding, staging, planking, timbering, strutting, shoring, pumping, fencing, hoarding, watching, and lighting by night as well as by day, required not only for the proper execution and protection of the said work, but also for the protection of the public and the safety of any adjacent roads, streets, cellars, vaults, pavements, walls, houses, building and all other erections, matters or things; and the contractor shall take down and remove any or all such centering, scaffolding, staging, planking, timbering, strutting, shoring etc. as occasion shall require or when ordered so to do, and shall fully reinstate and make good all matters and things disturbed during the execution of the works to the satisfaction of the Architects.

5. Authorities Notices and patents

The Contractor shall arrange to give all notice required by the said Acts, Regulations or Byelaws to be given to any Authority, and to pay to such Authority, or to any Public Officer all fees that may be properly chargeable in respect of the works, and lodge the receipt with the Employer.

The Contractor shall indemnify the Employer against all claims in respect of patent, rights, and shall defend all actions arising from such claims unless he has informed the Employer / Architects before any such infringement and received their permission to proceed and shall himself pay all royalties, licence fees, damages, costs and charge of all and every sort that may be legally incurred in respect thereof.

6. Setting out works

The Contractor shall set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimension and alignment of all parts thereof. If at any time any error shall appear during the progress of any part of the work the contractor shall at his own expense rectify such error, called upon to the satisfaction of the Architects.

7. Contractor Immediately to remove all offensive matter

All soil, filth or other matter of an offensive nature, taken out of any trench, sewer, drains, cesspool or other place shall not be deposited on the surface, but shall be at once carted away by the Contractor to some pit or place provided by him at his own cost.

8. Material and Workmanship to Conform to Description

All materials and workmanship so far as procurable be of the respective kinds described in the Priced Schedule of quantities and/or Specifications and in accordance with the Architects instructions and the Contractor shall upon the request of the Architects furnish them with all invoices, accounts receipts, and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and /or carry out any test of materials which the Architects/ Employer may require.

9. Access

The Architects, their representative and the Employer shall at all reasonable times have free access to the work and or to the workshops, factories, or other places where materials are being prepared or constructed for the contract and also to any places where the materials are lying or from which they are being obtained and the Contractor shall give every facility to Architects/ Employer and their representative necessary for inspections and examinations and test of the materials and workmanship. Except the representative of Public Authorities, no person shall be allowed on the work anytime without the written permission of the Employer.

If any work is to be done at the place other than the site of the works the Contractor shall obtain the written permission of the Employer for doing so.

10. Supervision and Foreman

The Contractor shall give all necessary personal superintendence during the execution of the work and as long thereafter as the Architects may consider necessary until the expiration of the "Defect Liability Period" stated in the **appendix hereinbefore referred to**. The contractor shall also during the whole time the works are in progress employ a competent foreman approved by the Employer who shall be constantly in attendance at the building while the men are at work. Any directions, examinations, instructions or notices given by the Architects/ Employer to such Foreman shall be deemed to be given to the Contractor.

11. Clerk of Works

The terms "Clerk of works" shall mean the person approved by the Architects and appointed and paid by the Employer acting under the orders of the Architects to superintend the work in the absence of the Architects. The Contractors shall afford the Clerk of Works every facility and assistance for examining the work and materials and for checking and measuring time and materials. The contractor shall provide office accommodation to Clerk of Works. Neither the Clerk of Works nor any representative of the Architects shall have power to revoke, alter, enlarge or relax any requirements of the Contractor to sanction any day-work additions, alterations deviations or omissions or any extra works whatever, except in so far as such authority may be specially conferred by a written order of Architects / E.I.C.

The Clerks of Works, or any representative of Architects, shall have power to give notice to the Contractor or to his Foremen, of non- approval of any work materials and such work shall be suspended or the use of such materials shall be discontinued until the decision of the Architects/ Employer, is obtained. The work will from time be examined by the Architects/ Employer, the Clerk of works or the Architects representative, but such examinations

shall not in any way exonerate the Contractor from the obligations to remedy and defects which may be found to exist at any stage of the work or after the same is completed, Subject to the limitations of the clause the Contractor shall take instructions only from the Architects/ Employer.

12. Dismissal of workmen

The Contractor shall on the request of the Architects, immediately dismiss from the works any person employed thereon who may, in the opinion of the Architects, be unsuitable or incompetent or who may misconduct himself, any such person shall not be again employed or allowed on the works without the permission of Architects/ Employer.

13. Date of Commencement and Completion

The contractor shall be allowed admittance to the site on the "Date of Commencement" stated in the **Appendix hereinbefore referred to**, and he shall thereupon and forthwith begin the works and shall regularly proceed with and complete the same on or before the "Date of Completion" stated in the Appendix subject, nevertheless to provisions for extension of time hereinafter contained. The time being the essence of Contract, the Contractor will adhere to time and progress chart and will give proportionate time i.e. 1/4th of work in 1/4th of the time, 1/2 of the work in 1/2 of the time and 3/4th of the work in 3/4th of the time. In case of failure on the part of contractor to give proportionate progress in proportionate time then the Employer through the Architects may recover by way of liquidated damages the amount calculated at 1/2% of the Contract price per week of delay subject to a maximum of 10% of the Contract Price.

14. Assignment

The whole of the works included in the Contract shall be executed by the Contractor and the Contractor shall not, directly or indirectly transfer, assign or underlet the contract or any part, share or interest therein nor shall he take a new partner without the written consent of the Architects/ Employer, and no subletting shall relieve the Contractor from the full and Entire responsibility of the Contract or from active superintendence of the work during its progress.

15. Bill of Quantities

The Bill of Quantities unless otherwise stated shall be deemed to have been prepared in accordance with the method of measurement mentioned in the Specifications, and shall be considered to be approximate and no liability shall attach to the Employer for any error that may be discovered therein.

16. Sub-Contractors

All Specialists, Merchants, Tradesmen and others executing any work or supplying and fixing any goods or for which provisional sums are included in the Bill of Quantities and Specifications who may be nominated or selected by the Architects are hereby declared to be Sub-Contractors and are herein referred to as nominated Sub-Contractors.

No nominated Sub-contractor shall be employed on or in connection with the works against whom the Contractor shall make reasonable objection or (save where the Architects and the Contractor shall otherwise agree) who will not enter into a Contract providing :-

(a) That the nominated sub-contractor shall indemnify the Contractor against the same obligations in respect of the sub-contractor as the Contractor is under in respect of this Contract.

(b) That the nominated Sub-Contractor shall indemnify the Contractor against claims in respect of any negligence by the Sub-Contractor or his servants or agents or any misuse by him or them of any scaffolding or other plant and property of the Contractor or under any workmen's Compensation Act in force.

17. Variations

The Contractor may when authorised , and shall when directed, in writing by the Architects/ Employer add to , omit from, or vary the words shown upon the Drawings or described in Specification or included in the Bill of Quantities, but the Contractor shall make no additions, omission or variations without such authorisation or direction. A verbal authority or direction by the Architects/ Employer shall if confirmed by the Contractor in writing

within seven days and not repudiated by the Architects/ Employer with in next 15 days be deemed to have been given in writing.

No claim for any extra shall be allowed unless it shall have been executed under the provisions of the Clause or by the Architects/ Employer herein mentioned. Any such extra is herein referred to as an authorised extra. No variations, i.e. additions, omissions or substitutions, shall vitiate the Contract.

The rates of items not included in the Schedule of Quantities shall be settled by the Employer.

18. Damage to persons and property Insurance in respect of

The Contractor shall be responsible for all injury to persons, animals or things and for all damage to the structural and/or decorative part of property which may arise from the operations or neglect of himself or of any Sub-Contractor or of any of his or Sub-Contractor's employees whether such injury or damage arise from carelessness, accident, or any other cause whether in any way connected with the carrying out of this Contract. This clause shall be held to include, inter alia, any damage to buildings, whether immediately adjacent or otherwise, and any damage to roads, streets, footpaths, bridges or ways as well as all damage caused to the buildings, and the works forming the subject of this Contract by Frost, rain or other inclemency of the weather. The Contractor shall indemnify the Employer and hold him harmless in respect of all and any expense arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any Acts of Government or otherwise and also in respect of any award of compensation or damage consequent upon such claim (Format of Indemnity bond is enclosed in annexure - I).

The Contractor shall reinstate all damage of every sort mentioned in the clause, so as to deliver up the whole of the Contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims to the property of third parties.

The Contractor shall indemnify the Employer against all claims which may be made against the Employer by a member of the public, central govt., state govt., any other authority, or other third party in respect of the works or in consequence thereof and shall at his own expense arrange to effect and maintain, until the Virtual Completion of the Contract with an approved Office of policy of insurance **in the joint names of the Employer and the contractor** against such risk and deposit such policy or policies with the Employer/Architects from time to time during the currency of the Contract. The contractor shall comply with all rules, regulations and laws including but not limited to industrial law, and also indemnify the Employer against the claims which may be made upon the Employer whether under the workmen's Compensation Act or any industrial or other Statute in force during the currency of this Contract or at common Law in respect of any Employee of the Contractor or any Sub-Contractor and shall at his own expense effect and maintain, until the virtual Completion of the Contract, with an approved office a policy of Insurance in the joint name of the Employer and the Contractor against such risk and deposit such Policies or Policy with the Architects from time to time during currency of this Contract. The Contractor shall be responsible for anything which may be excluded from the Insurance Policies above referred to and also for all other damages to any property arising out of and incidental to what is stated here-in-before

He shall also indemnify the Employer in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any award of compensation or damage arising there from, due to direct or indirect negligence of contractor or subcontractor, by any person, central government, state government or any other authority.

The Employer with the consent of the Architects shall be at liberty and is hereby empowered to deduct the amount of any damages, compensation costs, charges and expenses arising or occurring from or in respect of any such claim or damaged from any sums or sums due or to become due to the Contractor.

19. Insurance

Unless otherwise instructed by the Employer the Contractors shall **on signing the Contract insure the works and keep them insured until the Virtual Completion** of the Contract against loss or damage by fire and earthquake in an Office to be approved by the Architects/ Employer, in joint names of the Employer and Contractor for such amount and the Architects, fees and for any further sum if called upon to do so by the Architects/ Employer the premium of such further sum being allowed to the Contractor as an authorised extra. Such policy shall cover the property of the Employer only and the Architects fees and in connection with his services generally in the

reinstatement, and shall not cover any property of the Contractor or any Sub-contractor or Employee. The date of signing **Contractor shall deposit the policy and receipts for premium with the Architects within 15 days from the Contract** unless otherwise instructed by the Architects. In default of the contractor insurances as provided above the Employer or the Architects on his behalf may deduct the premium paid from any moneys due, or which may become due to the Contractor. The Contractor shall, as soon as the claim under the Policy is settled, work reinstated by the Insurance Office should they elect to do so, proceed with all due diligence with the completion of the work in the same manner as though the fire had not occurred and in all respects under the same Conditions of Contract. The Contractor, in case of rebuilding or reinstatement after fire, shall be entitled to such extension of time for completion as the Architects may deem fit.

20. Delay and Extension of Time

If in the opinion of the Employer the work be delayed (a) by force majeure or (b) by reason of any exceptionally inclement weather or (c) by reason of proceeding taken or threatened by or disputes with adjoining or neighbouring Employer or public authorities or (d) by delays of other Contractor or tradesmen engaged by the Employer or the Architects and the works not referred to in the Bill of Quantities and/or specification or (e) by reasons of Architect's instruction as per Clause No. 2 or (f) by reason of civil commotion, local combination of workmen or strike or lock-out affecting any of the building trades or (g) in consequence of the contractor not having received in due time necessary instructions from the Architects for which he shall have specially applied in writing, or (h) from other cause which the Architects may certify as beyond the control of the Contractor or (I) by reason of non payment of interim certificates at specified time, the Employer shall make a fair and reasonable extension of time for completion of the contract works. In case of strike or lock out the contractor shall as soon as may be given written notice thereof to the Employer, but the Contractor shall nevertheless constantly use his endeavours to prevent delay and shall do all that may reasonably be required to the satisfaction of Architects/ Employer to proceed with the work.

21. Damage for non-completion

If the Contractor fails to complete the works by the date of Completion stated in the **Appendix hereinbefore** referred to or with in the extended time under Clause 20 hereof and the Employer certify in writing that in their opinion the same ought reasonably so have been completed, the Contractor shall pay the Employer the sum named in the **Appendix hereinbefore referred to as "Liquidated Damages"** for the period during which the said works shall so remain incomplete and the Employer may deduct such damages from any moneys due to the Contractor.

22. Failure by Contractor to comply with Architects Instructions.

If contractor after receipt of written notice from the Employer requiring compliance, with such further drawings and/or Architects instructions fails within seven days to comply with the same, the Employer may with the consent of the Architects employ and pay other persons to execute any such work whatsoever as may be necessary to give effect thereto and all costs incurred in connection therewith shall be recoverable from the Contractor by the Employer on a certificate by the Architects as a debt or may be deducted by him from any moneys due to the Contractor.

23. Measurements of Works

The Architects may from time to time intimate to the Employer and the Contractor that they require the works to be measured and the Employer and the Contractor shall attend or send a qualified agent to assist the Architects or the Architects representative in taking such measurements and calculation and to furnish all particulars or to give all assistance required by either of them.

Should the Employer and/or Contractors not attend or neglect or omit to send such Agent then the measurements taken by the Architects or approved by them shall be taken to be correct measurements of the work.

The Employer and the Contractor or their Agents may at the time of measurements take such notes of measurements as they may require.

The final measurements and valuation in respect of the Contract shall be completed within the period of Final Measurements stated in the **Appendix hereinbefore referred to.**

24. Certificate and Payment

The Contractor shall be paid by the Employer from time to time by installments under interim certificates to be issued by the Architects to the contractor on account of the works executed when in the opinion of the Architects work to the approximate value named in the **Appendix hereinbefore referred to** as value of works for interim Certificate” (or less at the reasonable discretion of the Architects) has been executed in accordance with this Contract , subject, however, to a retention of the percentage of such value named in **Appendix hereinbefore referred to** hereto as “Retention percentage for Interim Certificates” . The Architects may in their discretion include in the interim Certificate such amount as they may consider proper on account of material delivered upon the site by the contractor for use in the works. And when the works have been virtually completed and the Architects shall have certify in writing that they have been so complete the Contractor shall be paid by the Employer in accordance with the Certificate to be issued by the Architects the sum of the money named in the **Appendix hereinbefore referred to** as “Installment after virtual Completion” and the Contractor shall be entitled to the payment of the final balance in accordance with the final Certificate to be issued in writing by the Architects at the expiration of the period referred to as “**Defects Liability Period**” in the **Appendix hereinbefore referred to** from the date of Virtual Completion or soon after the expiration of such period as the works shall have been finally completed and all defects made good according to the true intent and meaning hereof which ever shall last happen. Provided always that the issue by the Architects of any certificate during the Progress of the works at or after their completion shall not relieve the Contractor from his liability under Clause 2 and 28 in case of fraud, dishonesty or fraudulent concealment relating to the works or materials or to any matter dealt within the Certificate and in case of all defects and insufficiencies in the works or materials which a reasonable examination would not have disclosed. No certificate of the Architects shall of itself be conclusive evidence that any works or materials to which it relates are in accordance with the contract. The certificate so issued shall be for limited purpose of releasing the payment only.

The Employer shall have power to withhold any Certificate, if the work or any parts thereof are not being carried out to their satisfaction. The Employer are empowered to adjust the amount payable against the future work completed if deficiency is found in any of the previous work carried out against which payment has already been released.

Payments upon the Architects Certificate shall be made within the period named in the **Appendix hereinbefore referred to** “Period of honouring Certificate” after such certificate have been delivered to the Employer.

25. Unfixed materials when taken into account to be the property of the Employer

When in any certificate of which the Contractor has received payment the Architects have included the value of unfixed materials intended for and/or placed on or adjacent to the works such materials shall become the property of the Employer for any loss or damage to which the Contractor shall be responsible and they shall not be removed from the site except for use upon the works without the written authority of the Employer. The value of such unfixed material shall be 75% of Actual cost.

26. Delayed Payment

Amount payable by the Employer to the Contractor in pursuance of any Certificate given by the Architects here under shall, If not paid within the “Period for honouring Certificate” named in the **Appendix hereinbefore referred to**, carry interest at the rate named in the **Appendix hereinbefore referred to** as the “Rate of interest for delayed payment” from the date upon which the sum ought to have been paid by the Employer until payment.

27. Certificate of Virtual Completion

The works shall not be considered as completed until the Employer have certified in writing that they have been virtually completed and the Defects Liability Period shall commence from the date of such certificate.

28. Defects after Completion

The defects, shrinkage, settlements or other faults which may appear within “the Defect Liability Period” stated in the **Appendix hereinbefore referred to** or if not stated then within twelve months after the Virtual Completion of the works, arising in the opinion of the Employer from material or workmanship not in accordance with the contract, shall upon the direction in writing of the Architects and within such reasonable time as shall be specified therein, be amended and made good by the Contractor, at his own cost : unless the Employer shall decide that he ought to be paid for such amending and making good ; and in case of default the Employer may employ and pay other persons to amend and make good such defects, shrinkage settlements or other faults and all damage, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Contractor and such

damage, loss and expenses shall be recoverable from him by the Employer or may be deducted by the Employer upon the Architects certificate in writing from any moneys due or that may become due to the Contractor or the Employer may in lieu of such amending and making good by the Contractor deduct from any money due to the Contractor a sum to be determined under Clause No. 24 being insufficient, recover the balance from Contractor , together with any expenses the Employer may have incurred in connection therewith. Should any defective work have been done or material supplied by any subcontractor employed on the works who has been nominated or approved by Architects as provided in clause No.16 the Contractor shall be liable to make good in the same manner as if such work or material had been done or supplied by the Contractor and be subject to the provision of this clause and clause No.2 hereof. The contractor shall remain liable under the provisions of this clause notwithstanding the signing by the Architects of any certificate or the passing of accounts.

29. Architects may delay the Progress

The Architects may delay the progress of the works in case of rains or otherwise, without vitiating, the Contract, and subject to the approval of the Employer may grant such extension of time for the Completion of Contract as they think proper and sufficient in consequence of such delay and the Contractor shall not make any claim for compensation or damages in relation thereto.

30. Provisional sums Application of

All works for which provisional sums of money are provided may be selected or ordered from any manufacturers or firms at the discretion of the Employer and Employer reserves to himself the right of paying direct for any such work. The Contractor shall not be entitled to any profits for provisional item.

31. Other persons engaged by Employer

The Employer with the consent of the Architects reserves the right to execute any work not included in the contract which he may desire to have carried out by other persons, and the Contractor shall allow all reasonable facilities and the use of his scaffolding and plant for the execution of such work but is not required to provide any special plant or material for the execution of such work except by special arrangement with the Employer. Such work, shall be carried out in such manner as not to impede the progress of the work included in the Contract and the Contractor shall not be responsible for any damage or delay which may happen to or occasioned by such work.

32. Suspension

If the Contractor except on account of any legal restraint upon the Employer preventing the continuance of work suspends the works or in the opinion of the Architects neglect or fail to proceed with due diligence in the performance of his part of the Contract or if he makes default more than one in respect of Clause No.2 the Employer through the Architects shall have the power to give notice in writing to the Contractor requiring that the work be proceeded within reasonable manner and with reasonable dispatch , such notice shall purport to be a notice under this clause. After such notice shall have been given the Contractor shall not be at liberty to remove from the site of the work or from any ground contiguous thereto any plant or materials belonging to him which will have been placed thereon for the purpose of the works and the Employer shall have a lien upon all such plant and materials to subsist from the date of such notice being given until the notice shall have been complied with. If the contractor shall fail for seven days after such notice have been given to proceed with the works as therein prescribed the Employer may proceed as provided in clause No.33.

33. Termination of Contract by Employer

If the Contractor (being an individual or a firm) commit any “Act of insolvency” or be adjudged an insolvent, make an assignment or composition for the benefit of the greater part in number or amount of his creditors, or enter into a deed of Assignment with his creditors or, (being an incorporated company) have an order made against him or pass an effective Resolution or winding up either compulsorily or subject to the supervision of the court or voluntary , or if the official assignee of the contractor repudiate the contract or if the official assignee or the liquidator in any such winding up be unable within seven days after notice to him requiring him to do so , to show to the reasonable satisfaction of the Architects that he is able to carry out and fulfill the Contract and if required by the Architects to give security there for or if the Contractor , (whether an individual , firm or incorporated Company) shall suffer execution to be issued , or if the Contractor suffer any payment Contractor assign or sublet the Contract without the consent in writing of the Architects/ Employer first obtained , or if the Contractor shall charge or encumber this Contract or any payments due or which may become due to the Contractor there under, or if the Architects certify in writing to the Employer that in their opinion the Contractor :

- (1) has abandoned the Contract or,
- (2) has failed to commence the work, or has without any lawful excuse under these conditions suspended the progress of the work for fourteen days after receiving from the Employer written notice to proceed, or
- (3) has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon , or
- (4) has failed to remove materials from the site or to pull down and replace works within seven days after receiving written notice from the Employer that the said materials or work were condemned and rejected by the Employer under these conditions , or
- (5) has neglected or failed persistently to observe and perform all or any of the acts , matter or things by this Contract to be observed and performed by the Contractor for seven days after written notice has been given to Contractor requiring the Contractor to observe or perform the same , or
- (6) has to the detriment of good workmanship or in defiance of the Employer Instructions to the contrary sublet any part of the Contract.

Then and in any of the said causes the Employer after having discussion with Architects not withstanding any previous waiver, after giving seven days notice in writing to the Contractor , determine the Contract, but without thereby affecting the power of Architects or the obligations and liabilities of the Contractor, the whole of which shall continue to be in force as fully as if the Contract had not been so determined and as if the works subsequently executed has been executed by or on behalf of the Contractor .And Further , the Employer with the consent of the Architects by his agents or servant may enter upon and take possession of the works and all plants , tools, scaffolding sheds , machinery steam and other power , utensils and materials , lying upon premises or the adjoining lands or roads , and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works by employing any other contractors or other person or persons to complete the works ,and the Contractor shall not in any way interrupt or do any act , matter or thing to prevent or hinder such other Contractor or other persons or persons employed for completing and finishing or using materials and plant for the work . When the work is completed , or as soon thereafter as convenient the Employer shall give a notice in writing to the Contractor to remove his surplus materials and plant and should the Contractor fail to do so with in a period of 14 days after receipt thereof by him, the Employer may sell the same by public auction and shall give credit to the Contractor for the amount so realised The Architects shall thereafter ascertain and certify in writing under their hand what (if anything) shall be due or payable to by the Employer, for the value of the said plant and materials so taken possession of by the Employer, and the expense or losses which the Employer shall have been put to in getting the works to be so completed and the amount, if any owing to the Contractor and the amount which shall be so certified shall, there upon , be paid by the Employer to the Contractor or by the Contractor to the Employer, as the case may be , and certificate of the Architects shall be final and conclusive between the parties.

34. Termination of contract by Contractors

If the Employer , commit any “Act of insolvency” or if the Employer being an (individual or Firm) shall be adjudged insolvent or shall make an assignment or composition for the benefit of the greater part in number or amount of his creditors, or (being an incorporated company) shall have an order made against him or pass an effective Resolution for winding up either compulsorily or subject to the supervision of the court or voluntarily or if the official Assignee of the Employer shall repudiate the Contract, or if the official Assignee of the Liquidator in any such winding up shall be unable with in fourteen days after notice to him requiring him so to do, to show to the reasonable satisfaction of the contractors that he is able to carry out and fulfill the contract and to make all payments due and to become due there under and , if required by the Contractor to give security for the same or if the works be stopped for three months under the order of the Employer or by any injunction or other order of any Court of Law, then and in any of the said cases the Contractor shall be at liberty to determine the Contract by notice in writing to the Employer through the Architects and he shall be entitled to recover from the Employer payment for all works executed duly certified by the Architect .

In arriving at the amount of such payment the net rates contained in the Contractors original Tender shall be followed, or where the same may not apply valuation shall be made in accordance with Clause 17 hereof .

35. Disputes to be finally determined by Architects

The decision, opinion, direction, certificate or valuation with respect to all or any of the matters under clause 2,4, 8, 14, 20, (a,b,c,d,e,f, & h) 28, 32, and 33 hereof (which matters are herein referred to as excepted matters) shall be final and conclusive and binding on the parties hereto and shall be without Appeal. Any other decision, opinion, direction, certificate or valuation of the Architects or any refusals of the Architects to give any of the same shall be subject to the right of Arbitration and review in the same way in all respects (including the provision as to opening the Reference) as if it were a decision of the Architects under Clause No. 37.

36. Deposit

The amount deposited by the Contractor along with his Tender shall be retained with the Employer and it shall be returned to the Contractor on the Virtual Completion of the works after duly certified by the Architects or In case of default in any of the foregoing conditions the deposit amount shall be forfeited to the Employer.

37. Settlement of Dispute, Arbitration

All disputes and differences of any kind what ever arising out of or in connection with the Contract or the carrying out of works (whether during the progress of the works or after their completion and whether before or after the determination abandonment or breach of the Contract) shall be referred to and settled by the Architects who shall state their decision in writing subject to the Employer consent. Such decision may be in the form of a final certificate or otherwise. The decision of the Architects with respect to any of the excepted matters shall be final and without Appeal as stated in clause No. 35. But if either the Employer or the Contractor be dissatisfied with the decision of the Architects or any matter question or the dispute of any kind (except any of the excepted matters) or as to with holding by the Architects of any certificate to which the Contractor may claim to be entitled, then and in any such case either party (the Employer or the Contractors) may within 30 days after receiving notice to such decision give a written notice to the other party requiring that such matters in dispute be arbitrated upon. Such written notice shall specify the matters which are in dispute and such dispute of difference of which such written notice has been given and no other shall be and is hereby referred to the arbitration and final decision of a single Arbitrator being Fellow of the Indian Institute of Architects to be agreed upon and appointed by both parties or in case of disagreement as to the appointment of a single arbitrator, to the arbitration of two Arbitrators being both fellows of the Indian Institute of Architects one to be appointed by each party, which Arbitrators shall before taking upon themselves the burden of reference appoint an Umpire.

The Arbitrator, the Arbitrators or the Umpire shall have power to open up, review and revise any certificate, opinion , requisition or notice, save regard to the excepted matters referred to in Clause No. 35 and to determine all matters in dispute which shall be submitted to him or them and of which notice shall have been given as aforesaid .

Upon every or any such reference the cost of and incidental to the Reference and Award respectively shall be in the direction of the Arbitrator or 'Arbitrators' or the Umpire who may determine the amount thereof, or direct the same to do taxed as between Attorney and Employer or as between party and shall direct by whom and to whom and in what manner the same shall be borne and paid . The submission shall be deemed to be a submission to Arbitration within the meaning of the Indian Arbitration Act 1940 or any statutory modification thereof. The award of the Arbitrator or Arbitrators or the Umpire shall be final and binding on the parties. Such Reference except as to the withholding by the Architects of any Certificates under Clause 32 to which the Contractor claims to be entitled shall not be opened or entered upon until after the completion or alleged completion of the works or until after the practical cessation of the works arising from any cause unless with written consent of Employer and the Contractor. Provided always that the Employer shall not withhold the payment of the Interim Certificate nor the Contractor except with the consent in writing of the Architects in any way delay the carrying out of the works by reason of any such matter , question or dispute referred to Arbitration but shall proceed with the work with all due diligence and shall until the decision of the Arbitrator or Arbitrators or the Umpire be given abide by the decision of the Architects and no award of the Arbitrator or arbitrators or the Umpire shall relieve the Contractor of the obligation to adhere strictly to the Architects Instructions with regard to the Actual carrying out of the work . The Employer and the Contractor hereby also agree that Arbitration under this clause shall be condition precedent to any right or Action under the Contract.

38. Labour Escalation

No labour escalation will be paid to the Contractor under any circumstances.

39. Material Escalation

No material escalation will be paid to the Contractor under any circumstances.

40. Secured advance:

Secured advance shall be paid for the non-perishable materials subject to maximum of 75% of the invoice cost.

SCHEDULE OF MATERIALS TO BE ISSUED TO THE CONTRACTOR

No material will be supplied by the Employer and all the materials will have to be procured by the Contractor.

APPENDIX HEREINBEFORE REFERRED TO

Clause No.	Description	Detail
11	Earnest money	Rs. 50,000/- (rupees fifty thousand only) as bank draft in favour of The State Trading Corporation of India Ltd.
24 & 28	Defects Liability Period	One year
13	Date of commencement	Within 3 days from the date of order to start the work /or date of handing over possession of site.
13	Date of Completion	<u>2 (two)</u> Calendar months from the date of commencement
23	Period of final measurement	15 days from the date of completion
36	Retention money / security deposit	10% of contract value (including Earnest Money)
24	Installment after virtual completion	50% security deposit to be released after virtual completion and balance 50% to be released after defects liability period.
	Estimated cost	Rs. 23.50 lacs (approx)
	Liquidated damages	¼% of the Contract price per week of delay subject to a maximum of 10% of the Contract Price.

EMPLOYER

CONTRACTOR

SPECIFICATIONS FOR CIVIL WORK

1. General

(a) These specifications are intended for general description of quality and workmanship of material and finished work. They are not intended to cover minute details. The work shall be executed in accordance with best modern practices. The Architects decision shall be final and binding on any issue arising out from any discrepancies.

(b) The quantities furnished are approximate and may vary. The contractor quoted rates shall remain firm within the variation limits.

(c) Rates quoted shall include labour , materials, tools, plants, appliances, transport, equipment, taxes, duties , octroi, levies, contractors supervision, overheads and profit and all that are necessary for the satisfactory completion of the job other than services and materials supplied by the Employer.

(d) In case where the specifications given below are found wanting the latest I.S. specifications shall hold good.

Wherever reference has been made to Indian standard or any other specifications the same shall mean to refer to the latest specifications irrespective of any particular edition of such specifications being mentioned in the specifications below or Schedule of quantities.

The workmanship shall be the best of its kind and shall conform to these specifications are given. In case nothing is specified in these specifications the Indian Standard specifications in every respect and where I.S.I is also silent latest trade practices shall prevail subject to the approval of the Architects. All materials or workmanship which in the opinion of the Architects is defective or unsuitable shall be removed immediately from the site and shall be substituted with proper material and / or workmanship forthwith.

2. WOOD WORK AND JOINERY

(1) Timber

(a) Unless otherwise specified, all timber for frames of doors, windows, ventilators, etc. shall be best quality sound, **well seasoned Sycamore wood / Ghana Teak wood** or timber as specified in Bill Of Quantities, shall be free from knots , shakes, fissures, flaws, sun cracks and other defects. The planed surface shall be smooth and free from blemishes and discolourations.

(b) All timber for carpentry and joinery in touch with masonry or concrete shall be coal tarred or creosoted before fixing. All rough frame work in partitions suspended ceilings and veneering to walls etc., shall be treated with approved wood preservatives as per manufacturer's instructions and specifications. The rates quoted shall provide for such treatments.

(c) Timber member shall be fabricated out of kiln seasoned timber.

(d) Carpentry Work :

The timber shall be properly, planed and wrought in a workman like manner. Joints shall be true and fit properly, assembled accurately and clamped together so as be square, flat and close jointed. The combed joints shall have two tongues on each member to be jointed and shall be glued and pinned together with wooden pegs. Pegs shall engage all tongues and no tongue shall be less than 6 mm. thick.

In mortice and tenon joints all tenons shall not be less than 12mm thick and shall be the full width of the member. Tenons shall be glued into the mortices. Through tenons shall in addition be pinned with wood dowels of not less than 6 mm dia. or with non-ferrous metal dowels of not less than 6 mm dia. Alternatively through tenons may be wedged if the mortices are tapered.

2) Holdfasts : Three holdfasts shall be fixed to each post of the door frame and two to each post of the window frame. The M.S. holdfasts shall be of the size 30 cmsx40mmx5mm & shall be fixed to the frames by means of screws and/or bolts & nuts but not nails . The other end of the holdfast shall be fixed into jambs with cement concrete 1:2:4 block dimensions or as direction. Horns in frames shall be cut and shall not be used as of hold fasts.

Whenever asked for, rawl plugs or bolts as directed shall be used for rough grounds framing hangers etc.

(3) Workmanships

(a) The workmanship shall be first class and to the approval of the Architects. Scantling and boarding shall be accurately sawn and shall be of required width and thickness. All carpenter's work shall be wrought except where otherwise described. The workman ship and joinery shall be accurately set out in strict accordance with the drawings and shall be framed together and securely fixed in approved manner and with properly made joints. All work is to be properly tenoned, shouldered, wedged, pinned, etc and properly glued with approved quality glue to the satisfaction of the Architects.

(b) Screws: All screws to be used in wood work and joinery shall be of brass or as specified or as directed by the Architects.

(c) Tolerances: 1.5mm will be allowed for each wrought face of the sizes specified except where described as "finished" in which case they shall hold to be the full dimensions.

(d) Protection: All wood work and joinery edges of timber frames etc. shall be protected from being damaged during construction by providing rough timber casings securely fixed and other adequate protective measures.

(e) Antitermite treatment shall be done suitably as directed by the Architects.

(f) Doors / windows frames shall have cut rebates. Planted rebates shall not be permitted.

(g) Where door frames are fixed flush with plaster to wall, **teak wood cover mould 40x12mm** as per drawing shall be provided all round where the plaster is flush with the frame, painted or finished as in doors and rates quoted shall include for the same.

SPECIFICATIONS

INTERIOR & ALLIED WORKS

1. GENERAL

The work under this tender shall be executed strictly in accordance with constructional and material requirements defined under these specifications. The contractor shall carefully acquaint himself with these specifications to determine his contractual obligations for work. The conditions of these specifications will be binding on the contractor and no deviation shall be permissible unless specifically approved by the Project Manager / Architect in writing.

1.1 DRAWINGS / DIMENSIONS

Figured Dimensions on drawings shall supersede measurements by scale and drawings to a large scale take precedence over those to a smaller scale. Special dimensions or directions in the specifications shall be checked on site. The dimensions where stated do not allow for wastage, laps, joins etc. The levels, measurements and other information concerning the existing site as shown on the drawings are believed to be correct, but the contractor shall be entertained hereafter on account of any errors or omissions in the levels or the description of the ground turning out to be different from what was expected or shown on the drawings.

1.2 CO-ORDINATION OF DRAWING

Before commencement of work, the contractor shall so-relate all relevant Structural, Architectural and services drawings and satisfy himself that the information available there from is complete and unambiguous.

The contractor shall be responsible for any error / difficulty in execution / damage incurred owing to any discrepancy in the drawings which has been overlooked by him and has not been brought to the notice of the Project Manager / Architect before execution.

1.3 B.I.S. CODES OF PRACTICE

Wherever any reference is made in the specifications to any Bureau of Indian Standard (B.I.S.) or Indian Standard (I.S.) Code of practice, it shall be understood to indicate the latest version of the code of practice in usage at the time of construction.

2. ALUMINUM DOORS, WINDOWS AND GLAZINGS

2.1 SHOP DRAWING

Contractor shall submit to the Architect for his approval shop drawings within 10 days of confirming opening sizes the drawing should be to full scale as possible showing all items of work including: -

- a. Metal thickness.
- b. Arrangement of components.
- c. Jointing.
- d. Details of the site connections.
- e. Fastenings.
- f. Flashings.
- g. Metal finishes.
- h. Glazing.
- i. Weather-stripping.
- j. Sub framing.
- k. Hardware (including preparation)
- l. Sealants.
- m. Other pertinent information.

- 2.2 **INSPECTION:** All material brought to site by the contractor for use in work shall be subject to inspection and approval by the Architect and shall be required to get necessary tests carried out on material and work from approval laboratory/test house the cost of which shall be borne by the contractor.
- 2.3 **ALUMINIUM SECTIONS:** Aluminium sections used for work shall be as per Architect approved drawing and suitable for use to meet architectural design technical, structural, functional and visual considerations. The aluminium extruded section shall conform to IS designation HE9 WP/ HV9 WP alloy with chemical composition and technical properties as per IS 733 and IS 1285.
- 2.4 **SAMPLES:** Sample of typical curtain wall shall be made and got approved before mass fabrication.
- 2.5 **FABRICATION:** All frames shall be square and flat and the frames being fabricated to a true right angle and shall conform to IS 1948. These shall be fabricated as per approved shop drawing. Both fixed and openable frames shall be fabricated out of a section which has been machine cut to length and mechanically jointed with hardened nickel zinc plated steel screws and jointing accessories such as cleat fixture, machine bolt made of such, material as not to cause bimetallic action. For matching with coloured anodized aluminium section all visible screws shall be coloured black by chemical process. Threads of machine screws used shall with stand 150-kg/ sqm wind pressure with out deformation. Required sash bars as per approved drawing shall have water right EPDM gasket so that water does not penetrate through water penetrates exterior gasket and are property welded / braced / screwed to the main members.
- 2.6 **PRECAUTIONS:** Contractor shall ensure that aluminum curtain walls are not deformed /damaged during subsequent construction .All fitting hinges and frame works etc. shall be protected with alkathene sheets so that these may not be damaged during execution of work.
- 2.7 **FITTINGS**
Hinges, locks, handles, stay tower bolts rubber buffers door closer and other fittings shall be provided as called for in the schedule of hardware/drawings.
- 2.8 **FIXING**

The contractor shall fix aluminium doors frames wherever possible shall be fixed in placed before erecting partition. Where this is not possible prepared openings shall be left for holdfasts. Breaking of partition or walls for inserting holdfasts will not be permitted. Where the frames are to be fixed to column /wall faces they shall be fixed with rawl bolts / expansion bolts of approved make in approved manner. Special concrete blocks with cement concrete 1:2:4 (1cement: 2coarse: 4stone aggregate 10mm nominal size) with 3mm thick M.S. plate 100x100mm shall be cast set at suitable places into the jambs of opening. Door and window frames shall be welded to the blocks with spaces in approved manner.
- The contractor shall be responsible for assembling composites bedding and pointing with mastic inside and outside at the mullion and transoms. Fixing lugs to the frames placing the doors /windows in their respective opening and bedding with mastic. The contractor shall be responsible for all builders work including all cutting out and making good forming fixing holes for inserting loose lugs bolts and clips and for stacking of window doors adjacent to the opening for necessary hoisting. The contractor shall be responsible for the doors and windows being set straight. Plump and level and for their satisfactory operation after operation after the fixing is complete.
- 2.9 **MANUFACTURER'S ATTENDANCE**

The manufacturer immediately prior to the commencement of glazing shall adjust and set all windows and doors and accept responsibility for the satisfactory working of the opening frames. The contractor shall give three days clear notice to the manufacturer that glazing will commence.
- 2.11 **MASTIC CEMENT**

The gaps between frames and support and also any gaps in the door and window section shall be raked out as directed and filled with mastic cement of approved colour and make to ensure complete water tightness. The mastic cement shall be of such colour and composition that it would not stain the masonry / concrete work shall receive paint without bleeding will not sag or run and shall not set hard or dry out under any condition of weather. The sample of plastic cement to be used for this purpose shall be got approved from Architect before its actual use.

4. CARPENTRY AND JOINERY

4.1 EXTENT AND INTENT

It is the intent of this specification to include all carpentry and joinery work in connection with doors windows glazing partitions ceiling paneling cabinets and other items of wood work called for in the drawing.

3.2 GENERAL

The carpentry and joinery work shall include the furnishing of all first materials equipments incidentals and appliances required to complete the work including the provision and installation of fastening devices and hardware in accordance with the drawings and the attached hardware schedule.

3.3 TIMBER

Sycamore wood / Figured Sycamore wood / any other wood where called for shall be of selected best quality first class wood. All timber shall be uniform in texture free from large loose dead or cluster knots waness rot decay discoloration soft or spongy spots hollow pockets sap wood pith or center heart and all the defects and blemishes.

3.4 SAMPLES AND SHOP DRAWINGS

The contractor shall before proceeding with the work submit to the Architect for his approval complete samples of the various materials including hardware and fastening devices and shop drawing and large scale details covering all joinery work.

3.5 ROUGH CARPENTRY

Materials unless otherwise called for all framing and other concealed wood members shall be of first class teakwood and shall be seasoned to a moisture content of not less than 10% or more than 15%. Wood of greater moisture.

3.6 WORKMANSHIP

All carpenter's work shall be done by skilled workmen using proper tools .All joints shall as possible be mortise and tenoned and glued with best quality approved waterproof glue. Where mortise tenon joints are not possible .the joints shall be securely nailed with the longest nails that may be used without splitting the wood. Wherever it is necessary or an adequate joints cannot be formed by nailing the members shall be lapped or jointed by GI straps or extra wood blocks .All joints shall be done with neatness and as approved and directed by the Architect.

3.7 BLOCK BOARD AND PLY

Block board and ply for partition cupboards and all other cabinet work shall be solid core phenol formaldehyde resin bounded of approved make as called for.

Unless otherwise shown all blackboards and ply shall be commercial ply veneered on both faces. Samples of flush doors ply blackboards etc. shall be submitted to the Architect for his approval and all shutters

boards etc. to be used in the work shall conform to the approval and all shutters boards etc, to be used in the work shall to the approved sample in all respects.

3.8 PARTITION AND CABINET WORK

General: Partitions cabinets etc, shall be fabricated and assembled in the workshop as far as practicable and then brought instead the building ready to set in place .The various members shall be worked in the best manner know to the trade mortised and tenoned doweled blocked and glued together so as to avoid the use of nails s for as possible .The details shall be closely followed moulding clearly cut and miters accurately made. Free edge of shutters shelves partitions sides etc. shall be provided with first class teakwood edging glued and nailed in approved manner. Shelves where shown fixed shall be supported on aluminum or other cleats or in other manner as approved by the Architect. Adjustable shelves shall have brass sockets and pins as detailed on drawing.

Drawer bottoms shall be of 6mm commercial ply unless otherwise show. Drawer front sides and back shall be of first class teakwood .The drawers shall slide on wooden bearers as shown on drawing.

Timber skirtings where called for shall be of first class teakwood cut to required sizes. Planed smooth on visible faces and fixed in position in approved manner. Cutout opening etc. shall be provided in the counters and ranges. Pipes etc. as shown on drawing and as required at site.

3.9 HARDWARE FITTINGS

Hinges, handles, knobs, locks, ball catchers, adjustable shelf fitting (Brass lacquered or polished) and other hardware fittings for doors and cabinetwork shall be of the best quality and specified make as approved by the Architect. The number, size etc, shall be as per the hardware schedule and as shown on drawings.

3.10 PRESERVATIVE TREATMENT

All woodwork in contact with masonry shall be painted with approved asphalt or antitermite & fire retardant coating (viper or equivalent) before placing. Care shall be taken to keep exposed surfaces clear from tar etc. felt shall be used to isolated wood from masonry wherever practicable .All concealed wood etc. shall be treated fully and liberally with so lignum before placing in position.

3.11 PAINTING AND POLISHING

All exposed wooden faces of partitions, Glazing, Doors, Cabinetwork etc. shall be Duco painted /melamine polished as per specs to approved finish. Door shutters internal faces of cupboards and cabinets etc shall be enamel painted/oiled to approved finish. Drawer bottom sides of drawers etc. oiling etc. shall be carried out as specified under "Painting".

3.12 PROTECTION OF WORK

The contractor shall be responsible for the temporary doors and closing in opening necessary for the protection of the work during progress .He shall be also provide and maintain any other temporary covering required for the protection of finished wood work left unprotected.

5. GLAZING COMPOUND

Glazing putty for setting glass shall be of approved quality (Shalimar or approved equivalent) suitable for use of metal windows and confirming to IS 420-1953. Setting blocks shall be of NEOPRENE of approved quality and make.

5 HARDWARE

1. EXTENT AND INTENT

The intention of the contractor is that the building as shown shall be completely equipped with required hardware .Any required item not noted or listed shall be finished in a grade equal to and in harmony with similar item listed.

The contractor shall furnish all labour materials tools appliances and incidental required to complete the hardware work specified herein or listed in the schedule of hardware or as may be required by the actual conditions at the building including the necessary screws special screws bolts expansion bolts and other devices necessary which shall be of sufficient size to securely and permanently fix the hardware in place. No steel or iron screws shall be used. Special screws shall match material and finish of article being fastened.

2. GENERAL

All hardware shall be of the best quality of its type and strictly in conformity with the materials and finished described in schedule of hardware .If called upon to do so the contractor shall arrange to get hardware specially manufacture to the design requirements and standard laid down by the Architect.

3. SAMPLES

Samples of each different item of hardware including screws or any particular item of perfect hardware shall be submitted to the Architect for approval.

4. QUALITY

All hardware shall be of perfect fit uniform in finish and free imperfection that affect serviceability or mar the appearance.

5. INSTALLATION

All hardware shall be installed by skilled workmen equipped with proper and adequate tools .The hardware shall be installed true plump and square in accordance with the manufacturer's instructions

6. PROTECTION

Hardware shall not installed earlier than necessary and it shall be the responsibility of the contractor to protect all hardware removing some when necessary for protection and deliver all in good working order and unblemished. Any defective or marred items shall be made good to the satisfaction of the Architect without additional cost to the Employer.

7. GUARANTEE

The contractor shall be responsible for the proper working of all hardware for a period of one year from the data of completion and acceptance of the building.

Specifications FOR ELECTRICAL WORK

1. The installation shall generally be carried out in conformity to the Indian Standard Specifications and Code of Practice for electrical works, but where the specifications attached to the tender differ from these specifications, these specifications shall be followed.
2. In case where the I.S. Specifications and these Specifications are found wanting, the work shall be carried out as per relevant latest Code of Practice recommended by B.S.S.
3. In addition, the installation shall comply in all respects with the requirements of Indian Electricity Act, 1910, amended upto date and Indian Electricity Rules, 1956, thereunder and the special requirements, if any, of the state Electricity Board / New Delhi Municipal Committee.
4. Except where joint box system has been expressly mentioned in the schedule of work, wiring shall be done in "looping system" and Phase or live conductor shall be looped at switch box and neutral conductor can be looped from light, fan, or socket outlets. In non - residential buildings, neutral conductor & earth continuity wire shall be brought to each switch board situated in rooms and halls and these shall be terminated inside the switch boards with suitable connectors and such switch boards shall be of adequate size to accommodate 1No.5 Amps socket outlet and control switch in future.

Where joint box system has been expressly mentioned in specifications for wiring ,these all joints in conductors shall be made by approved mechanical connector laid in approved Junction Boxes.

5. The successful tender shall give all notices required by the said Act etc. He shall also undertake to provide test certificates.
6. All materials and fittings, appliances etc. used in the Eletrical Installation shall conform to the latest Indian Standard Specifications, wherever these exist. In the absence of I.S. Specifications, revelant B.S. Standard shall be applicable.
7. All cables and flexible cords shall be accompanied by the makers test certificates stating the class and giving the result of the insulation test.
8. In case of materials, for which standard specifications do not exist, the materials shall be got approved by the Engineer of the Society/Architects.
9. No wiring shall be laid under the floors unless it is absolutely inescapable. In case this is unavoidable, it should pass through class 'B' water - tight galvanised iron pipes & not through ordinary conduit. No extra payment shall be made on this account.
10. (a) Point wiring shall consist of branch wiring for final sub - distribution board together with the controlling switch (or push) as far as and including the ceiling rose or any other approved terminations or socket outlet. In case of more than one light being controlled by a switch, the wiring upto the ceiling rose of the first light first light including the switch shall be considered as a primary point. Loop wiring from light to light shall be considered as a secondary point and distinguishing rates shall be quoted. In case of light controlled from 2 points, the point wiring should include among others, the two way switches.

(b) A 3 pin socket outlet point and fan point shall include the earth continuity bare copper conductor of No. 14 SWG from earth pin to the terminal or bus at the final distributing centre.

11. Workmanship:

Good workmanship and neat appearance are the pre - requisites for compliance with various sections of these specifications.

The work shall be carried out under direct supervision of a person holding certificate of competency issued by the relevant State/ Central Govt. and in accordance with the latest Statutory Rules & Regulations in force. The relevant I.S. Code practices are to be followed and labour force engaged shall also be holding certificates of competency as applicable.

Tenderer shall mention the name of supervisor on the Completion Drawings for ready reference at later date.

12(a) In estimating the current to be carried out by any conductor, incandescent lamps, shall be rated at 100 watts, the ceiling fans shall be rated at 80watts, table fans and ordinary socket points at 60watts fluorescent lamps of 4 ft. at 50 watts and 2ft. at 25 watts and power socket outlets at 1000 watts, unless the actual values are specified.

(b) Lights, fans, bells/buzzers, and socket outlets may be worked on a common circuit. Such sub - circuits shall not have more than a total of 8 points of lights, fans & socket outlets. The load of such circuits shall be restricted to 800 watts. The number of socket outlets shall not be more than 2 per circuit.

As regards power sub - circuits, the outlets shall be provided according to the load design for these circuits but in no case shall these be more than 2 outlets of each circuit, and independent conduit shall be laid for this system of load.

13. Drawings:

(a) The Contractor shall prepare fabrication & detailed working drawing on the basis of electrical drawings supplied by Architects and obtain the approval of the Architects. All work shall be carried out only on approval of these drawings. However, approval of the drawings does not relieve the contractor of his responsibilities to meet with the intent of the specifications.

(b) The Contractor shall also submit complete layout drawings to the Architects on completion of the work. The rate quoted by the contractor shall be inclusive of this work.

These drawings must give the following information :

(i) Runs of conduit, diameters of conduits, number of wires contained in conduit and size of wires for point wiring :

(ii) Location of all distribution boards, main switches and junction and pull boxes and fuses.

(iii) Complete schematic diagram of the installation;

(iv) Location of earthing station;

(v) Telephone outlets and its sizes of conduits etc.

The virtual completion certificate will not be issued.

14. Position of lighting points, Distribution Boards and Switchgears:

(a) Light, fan and 5Amps socket outlet switch board shall be installed so that the bottom of switch board is 1.25Meters (4') above the floor unless the front of switch board is completely enclosed by a hinged door or the switch board is situated at a position to which only authorised persons have an access.

(b) Switch boards shall not be erected above gas stoves or sinks or within 2.5 meters (8ft.) of any washing unit in washing rooms or laundries.

(c) Switch boards for socket outlets for domestic power shall be installed so that the bottom of switch board is at a height of 230mm (9") from the floor level. However, such switch boards in kitchen shall also be at a height of 1.25 meters (4') from floor. Switch boards of heating appliances shall be at a close position to the appliance itself.

(d) The recommended positions of the lighting points, control switches, distribution boards & switchgears as shown on the layout drawings, will be adhered to as far as practicable.

(e) Should there be any discrepancy or incomplete description ambiguity or omission in the drawings and other documents, whether original and supplementary forming the contract, the Tenderer shall, immediately on discovering the same, draw attention of the Architects.

(f) Before commencement of work, the exact final position of all points, switch boxes and the distribution board shall be ascertained by the Tenderer from the Architects' representative.

15. Samples:

The Contractor shall submit 2 sets of samples of accessories and apparatus, he proposes to use in the installation, to the Architects for approval. Drawings or samples, as required, shall be submitted by the Contractor and this specification shall not be departed from without the written instructions from the Architects. The verbal approval given by the Architects of any drawings or samples submitted by the contractors shall in no way exonerate the contractors from their liability to carry out the work in accordance with the terms of the contract.

16. Conduits : A (M.S Conduits)

(a) All metallic conduits, if specified in detailed specifications & scope for L.S. work, shall be heavy gauge resistance welded and screwed electrical thread, manufactured in accordance with BSS : 31 or latest I.S.S.

(b) No smaller size than 25 mm diameters shall be employed unless otherwise specified and conduits and conduit accessories shall be enamelled or galvanised as specified for the various positions.

(c) All conduits shall be of ample size to give easy "draw in" and "out" of all the cables in the conduits and the number of conductors shall not exceed that laid down as per appendix (I).

(d) Care shall be taken to ensure that all conduits are adequately protected while stored on site prior to erection and no damaged conduit shall be used.

(e) All ends of conduits shall be reamed and filed to remove rough edges and inside surfaces of conduits shall be smooth and free from burrs and all other defects.

(f) Conduits showing traces of rust shall be wire brushed and painted with an approved mettalic paint.

(B) P.V.C Conduits:

2 mm thick PVC conduits conforming to relevant I.S codes shall be used as specified in detailed scope of work later.

17. Preparation of Conduit: [For M.S. Conduits only (if specified)]

(a) The inside surface and ends of conduits and fittings used in connection therewith, shall be smooth, cut square and free from burrs and all other defects. Reamers shall be used on the ends of all conduits after screw threads have been cut and all grease, enamel, etc. removed.

(b) All threads shall be clean and free from rust. Powdered soap stone, ealc or prepared compounds shall be used as lubricants to facilitate pulling - in of conductors; oil and grease will not be used.

(c) Tallow or other approved lubricant shall be used, where threads are cut.

18. Erection of Conduit: [For M.S. Conduits only (if specified)]

(a) The conduit shall be properly and tightly screwed between the various lengths and to the boxes to which it runs and terminates so that the wiring is continuously and effectively projected throughout its entire length. No part of the conduit shall be under mechanical stress & the whole conduit system shall be electrically and mechanically continuous throughout.

(b) Corners shall be turned by means of easy bends or sets made cold without altering the section or opening the seam. The radius of every conduit bend shall be such as to allow compliance with Regulation B-32 of the IEE Regulations for bends in cables, and, in addition, the inner radius of the bend shall not be less than 2.5 times the outside diameter of the conduit.

(c) Where conduits are connected by means of a socket, the ends of the conduits shall but together in the centre of the socket, and except in the case of running joint, no exposed threads shall be visible after erection.

(d) Where running joints are used, they shall be thoroughly coated immediately after erection with zinc chromate primer and then painted. Where the finish of the conduit is damaged in erection, it shall be immediately made good with an approved metallic paint. All vice marks shall be removed and the conduit well protected, where the galvanising has cracked or flaked.

(e) Where conduits terminate at a drilled hole entry, connection shall be made by means of a coupler & brass male hexagon bush. A serrated or compression washer shall be fitted between the bush and box to ensure good continuity.

19. Completion Prior to Wiring:

(a) All conduit installations must be completed and erected in their entirety before they are wired and must be fully rewirable from outlets to distribution boards or trunking systems etc., to which they connect.

(b) No wiring of any part of the installation shall commence until instructions are received to do so by the Engineer at such times as he is satisfied that the wiring will not be damaged due to building operations.

20. Method of Installing Concealed Conduits:

(a) For concealed work, the whole of the conduit shall be installed in such a manner that rewiring can be carried out from the fitting boxes and switch boxes only.

(b) Draw-in boxes will only be permitted in special instances approved by and at the discretion of the Engineer.

(c) All general conduit installation requirements, set out above, shall apply to concealed work.

21. Fixing Conduits and Accessories:

(a) Where concealed conduits are to be covered in walls, floors etc., they shall be fixed by approved methods fixing pipe hooks spaced not more than 0.914 meter (8ft.) apart and shall be firm against the structure along their length without springing

(b) Switch boxes and socket boxes, etc., shall be securely fixed by means of counter sunk steel screws and rawl plugs. They shall be firmly grouted in position prior to plastering or screeding.

(c) Any light point or socket outlet boxes associated with conduits buried in concrete shall not normally be fixed, but shall be held rigidly in position in an approved manner by the conduits and grouted in.

(d) The Electrical Contractor shall provide attendance during the pouring of concrete to ensure that the conduits and accessories are not displaced.

(e) Where conduits are concealed in wall chases, they shall be recessed in such a manner that they will be finally covered by the full thickness of plaster and/or rendering to a minimum depth of 12.5mm. (1/2")

22. Conduits in False Ceiling:

In false ceiling, the conduits shall be fixed by conduit saddles to the soffit of the structural ceiling slab, or shall be supported by means of mild steel straps securely fixed to both conduit and structural ceiling, or by other approved means to the approval of the Engineer. The conduits shall be supported by means of separate fixing securely fixed to the box and the structural ceiling, or by other approved means, so that the box is held rigid.

23. Inspection Boxes etc.:

(a) Small circular B.S. boxes shall be used for inspection and point boxes on conduits, upto and including 25mm. diameter. Where inspection boxes are necessary for conduits larger than 5mm.diameter, the through pattern type shall be used, unless otherwise directed by the Engineer.

(b) Wherever several conduits are run together, adequately sized adaptable boxes, common to all runs shall be used, meeting with the approval of the Engineer, to avoid inserting inspection boxes in the individual runs. Where it is necessary to segregate wiring, metal fillets shall be securely fixed within the box.

24. Fixing of Boxes:

(a) All boxes except, those for external works, shall be securely fixed by means of counter sunk screws, minimum size 1 1/2" x No.8 using approved type rawl plugs.

(b) At least one screw shall be used for fixing standard circular conduit boxes and two screws for large conduit boxes and adaptable boxes upto 150mm. x 100mm. size. A minimum of four fixing screws shall be used for larger boxes.

(c) In all cases, the fixing holes shall be suitable for counter sunk screws, so that the screw heads do not project into the boxes and all screw driver burrs shall be removed before cables are drawn in.

(d) For external work and other particularly damp situations, galvanised cast iron, weather proof boxes with external fixing plugs shall be used.

(e) In addition to the external fixings, the boxes shall be supported by saddles spaced not more than 150mm. on each side of the box. Fixing holes shall not be drilled in the box.

25. Conduit Boxes:

Where the change from solid conduit to flexible conduit occurs, a standard conduit box shall be inserted between the 2 types of conduit. The flexible conduit adapter shall be screwed into the spouted entry of conduit box and the use of dome covers will not be permitted.

26. Switches:

(a) S.P. Tumbler/Piano/Modular switches will be of flush type, mounted on metal switch plate/bridge inside the above box. Groups of switches shall be mounted in the same box with multiple type switch plate.

27. Wires & Cables:

All wires shall be PVC insulated copper conductor unless otherwise specified.

28. Fittings:

Unless otherwise specified, light fittings shall be generally fixed, as directed by the Site Engineer:

(a) Wall fittings such as brackets batten holders etc. shall be at 6'-6" height unless otherwise specified or directed.

(b) All ceiling fittings shall be flush with ceiling and installed with/without teakwood round base of approved design, as directed.

(c) Bulk head fittings shall be flush with ceiling /wall, as required. Bulk head fittings on walls shall be at a height as specified.

(d) Pendants fittings shall be suspended to a height of 8'-0" from floor level.

(e) All fitting shall have their leading in VIR/PVC wires of size not less than 1.5sq.mm cable or otherwise as directed by the Engineer-in-charge. Pendant shall be suspended with T.R.S. Twin core flexible cable (black) or size not less than 14/.0076".

(f) Screwed holders shall be used in brackets & pendants. Batten light fittings shall have brass holders on T.W. round block in case of surface wiring and bakelite batten holder in case of recessed system of wiring.

(g) **Ceiling Rose:** For recessed system of wiring, this shall be of porcelain make and flush type. For surface type of wiring, this shall be of bakelite.

29. Testing of Installation:

(a) Insulation Resistance:

(i) The insulation resistance shall be measured by applying between earth & the whole system of conductors or any section thereof with all fuses in place and all switches closed, and except in earthed concentric wiring and all lamps in position or both poles of the installation otherwise electrically connected together, a direct current pressure of not less than twice the working pressure provided that it need not exceed 500volts for medium voltage circuits. Where the supply is derived from the 3 wire (A.C. or D.C.) or a poly phase system, the neutral pole of which is connected to earth either direct or through added resistance, the working pressure shall be deemed to be that which is maintained between the outer or phase conductor and the neutral.

(ii) The insulation resistance measured as above shall be not less than 50 divided by the number of points on the circuit provided that the whole installation shall not be required to have an insulation resistance greater than one mega-ohm.

(iii) Control rheostats, heating and power appliances & electric signs may, if required, be disconnected from the circuit during the test, but in that event the insulation resistance between the case or frame work, and all live parts of each rheostat, appliance and sign, shall be not less than that specified in the relevant Indian Standard Specification or where there is no such specification shall be not less than half a mega-ohm.

(iv) The insulation resistance shall also measured between all conductors connected to one pole or phase conductor of the supply and all the conductors connected to the middle wire or the neutral or to the other pole or phase conductors of the supply and its value shall be not less than the specified in sub-clause (ii).

(v) On completion of an electric installation (or an extension to an installation) a certificate shall be furnished by the contractor countersigned by the certified supervisor under whose direct supervision, the installation was carried out. This certificate shall be in the prescribed form as required by the local Electric Supply Authorities.

(b) **Testing of Earth Continuity Path:** The earth continuity conductor including metal conduits and metallic envelopes of cables in all cases shall be tested for electric continuity and the electrical resistance of the same along with the earthing lead but excluding any added resistance or earth leakage circuit breaker measured from the connection with the earth electrode to any point in the earth continuity conductor in the completed installation, shall not exceed one ohm.

(c) Testing of Polarity on non-linked single pole switches:

(i) In a 2 wire installation a test shall be made to verify that all non-linked single pole switches have been fitted in the same conductor throughout & such conductor shall be labelled or marked for connection to an outer or phase conductor or to the non-earthed conductor of the supply.

(ii) In a three wire or a four wire installation, a test shall be made to verify that every non-linked single pole switch is fitted in a conductor which is labelled and marked for connection to one of the outer or phase conductor of the supply.

30. The Contractor shall be responsible for providing the necessary instruments and subsidiary earths for carrying out the tests. The earth continuity tests shall not comply with the I.S. Specifications as may be applicable. Should the above tests not comply with the limits laid down, the Tenderer shall rectify the faults until the required results are obtained.

31. Telephone System:

Wiring for telephone shall be of copper with PVC cable of size as specified. Layout shall be as per drawings..

32. Miniature Circuit Breakers:

The breakers shall have quick break trip free mechanism with thermal overload and magnetic short circuiting tripping characteristic. The mechanism shall be such that the circuit can not be held closed against fault. The thermal element shall prevent reclosing of a circuit when a fault or overload persists. The contacts shall be of Silver Tungsten or other suitable material to give long contact life. Multiple units shall have an inter-tripping mechanism ensuring complete isolation in the event of an overload or fault on any one phase. The connectors shall be suitably shrouded. It shall be of 9 KA capacity. Use motor duty MCB for air-conditioning outlets and other motor duty outlets (C series)

SPECIFIC CONDITIONS OF CONTRACT (Electrical Work)

GENERAL

- 1.01 The contractor shall have to submit test report forms for receiving electrical connection from DVB promptly, if so required by the Employer.
- 1.02 The work as indicated in the scope of work attached herewith including any modification/addition/alteration ordered subsequently, shall be carried out as per the standard/specifications indicated below:-
- i) Relevant ISS as modified upto date. Where IS codes do not exist, the British Standards shall be followed.
 - ii) Indian Electricity Rules 1956 as amended up to date.
 - iii) CPWD Specifications for Electrical Works (Part – I) Internal, (Part –II) External 1995 and (Part – IV) 1982, with correction slips up to the date of Tendering.
 - iv) LIST OF INDIAN STANDARDS

L.T. Switchgear Boards / Panels and other Components

- a. Factory built Assemblies of switchgear up to 100 V : I.S. : 8623 – 1980
- b. Heavy duty air break switches and composite units of switches and fuses : I.S. : 4064 – 1967
- c. Push buttons : I.S. : 6875 (part 2) 1973
- d. Contractors : I.S. : 2999-1975
- e. Air break isolators for voltage not exceeding 1000 V : I.S. : 2607 – 1967
- f. High rupturing fuses : I.S. : 9224
- g. Direct acting electrical indicating instruments : I.S. 1248 – 1968
- h. Current transformers, general requirement, measuring and protective : I.S. 2705 (Part I to IV)
- i. Power socket outlets : I.S. : 4615

L.T. Cables

- a. PVC insulated, heavy duty cables : I.S. 1554 – 1976 (Part – II)
- b. Installation & maintenance of cables : I.S. 1255 – 1967

Earthing

- a. Code of practice for earthing : I.S. : 3043

Protective Relays

- a. Thermal relays : I. S. : 3842 (Part IV)

- b. Power relays : I. S. : 3842 (Part V)

SAFET CODE OF PRACTICE (INSTALLATION)

- a. Guide for safety procedures and practice in electrical works : I.S. : 5216 – 1969
- b. Guide on effects of current passing through human body : I.S. : 8337 – 1977
- c. Warning symbols for Dangerous voltage : I.S. : 2147 – 1962
- d. Degree of protection provide by enclosures for low voltage switchgear and controller : I.S. : 2551 – 1963
- e. Danger notice plates : I.S. : 8923 - 1987

1.03 A table indicating makes acceptable in respect of some important materials is attached. The contractor can use only the makes specified in the table against a particular item subject to conformity with specifications. For material not covered in above-mentioned table any ISI marked product may be used and if same is not available, then it shall conform to relevant IS/BS and will be used with prior approval of Employer.

1.04 All the materials to be used has to be inspected and approved by the Employer before installation at site.

1.05 The following works shall be deemed to be included within the scope of the work to be executed by the contractor:-

- i) All minor building work such as cutting holes and chases in walls/ceiling and making good the same with cement mortar 1:4 (1 cement: 4 coarse sand)
- ii) Provision of supports and clamps for fixing arrangement including nuts, bolts, cable glands, lugs, terminal blocks etc as a part of the particular item unless given separately in the schedule of quantities.

1.06 QUALITY OF MATERIAL AND WORKMANSHIP

All the parts of the equipment shall be of such a design, size and material so as to function satisfactorily under all rated conditions of operation. All components of the equipment shall have adequate factor of safety. The work of fabrication and assembly shall conform to sound engineering practice and on the basis of “Fail Safe Design”. The mechanical parts subject to wear and tear shall be easily replaceable type.

The construction of the equipment shall be of such design so as to facilitate easy operation; inspection, maintenance and repairs. All connections and contacts shall be designed to minimise risk of accidental short circuit by animals, birds, vermin etc. all identical items and their components/parts should be completely interchangeable including spare parts.

1.07 INSPECTION BEFORE DISPATCH

All routine tests prescribed in relevant standards (IS/BS) shall be conducted before dispatch of equipment. No equipment shall be dispatched from the manufacturer’s premises without such test being conducted and test result recorded. These test certificates shall be given along with the supply of equipment.

The authorised representative of the Employer shall, inspect and witness the pre-delivery tests at manufacturer’s work. For this purpose, the contractor shall give 15 days advance information to the Employer for inspection. The Employer reserves the right to have inspection done through a third party.

1.08 TESTING AND INSTALLATION

- a) The entire system shall be tested to the satisfaction of the Employer or its authorised

representative.

- b) Tests shall be performed in the presence of the Employer. The contractor shall provide labour, equipment and materials required for performance of the tests.
- 1.09 The contractor shall have to furnish two sets of manufacture's operation and maintenance manuals including maintenance schedule of all major equipments including relevant data sheets, catalogues the spare parts manual and wiring diagrams etc. as applicable.
- 1.10 The contractor shall furnish four sets of completion plan while handing over the installation.
- 1.11 The contractor shall arrange fitness/clearance certificate from the office of Electrical Inspector, Delhi Administration for the electrical installation. However the fee for such certificates to be paid to Delhi Admn. Shall be born by the Employer.

2. COMMERCIAL CONDITIONS

2.1 TERMS OF PAYMENT (for point wiring)

- a. 25% (Twenty five- percent) On laying of conduit.
- b. 25% (Twenty five- percent) On drawing of wires.
- c. 25% (Twenty five- percent) On fixing of switches etc.
- d. 15% (Fifteen- percent) On testing and commissioning.

2.2 APPROVALS

The successful contractor shall be responsible to get approval of the scheme prior to start of job from DVB as well as to get the work inspected and approved by Electrical Inspector of the complete scheme including incurring expenses for the approvals.

NOTES

GENERAL

1. The rates quoted for all items in this schedule shall be applicable to the work pertaining to that item in all floors and at any heights including double heights whether specifically mentioned or not for any building in the complex. The contractor must see and sign the tentative drawings before filling the rates.
2. The rates quoted shall include for extending minor assistance to other contractors / agencies engaged by the Employer in connection with other trades of the work or may be of similar nature in the project and for proper co-ordination of various items to accommodate the works of other such agencies and making good the holes in R.C.C works, brick work and other works made by other agencies before filling up water proofing/other items of work. The successful tender shall extend such facilities like supply of water, electricity, etc. for other agencies on chargeable basis.
3. It is sole discretion of Employer to delete any item of work during execution of work. The quantities mentioned in the BOQ are tentative and may vary on either side up to any limit.

WOOD WORK:

- (a) All fittings to be obtained from reputed manufactures samples of all hardware fittings shall be got approved by the Architects before placing order.
- (b) All door and windows shall be as per detailed drawings prepared by the Architects and as directed.
- (c) The rate shall include providing & fixing rawl plugs for fixing of chaukhats wherever required & painting of all joinery woodwork with three or more coats of approved brand and first quality synthetic enamel paint over a coat of approved wood primer. If required, additional coat of paint shall be given to obtain uniform and good finish at no extra cost. If directed, putty shall be applied all over the surface to ensure smooth and neat finish at no extra cost.

**LIST OF APPROVED MANUFACTURERS FOR DIFFERENT MATERIALS
TO BE USED IN THIS PROJECT FOR ELECTRICAL WORKS**

(All materials shall be ISI mark)

Sl.No.	Details of Materials	Manufacturers Name
1.	M.S. Conduits and accessories	BEC / AKG / NIC
2.	P.V.C. conduits and accessories	BEC(Grey) / AKG / KALINGA
3.	P.V.C. insulated copper conductor wires 1100 volts grade (All wires shall be multi-stranded)	Finolex / Skyline / Proflex / Polycab
4.	M V Switchgear	L & T / GE Power Control / Schnieder
5.	Miniature circuit breakers	Legrand / Clipsal / Schnieder
6.	Switches, plugs, telephone outlets & wiring accessories	M.K. (Modular Clip ON Type) / Legrand / CLIPSAL
7.	G.I. Pipe	Jindal (Hisar)
8.	Telephone wires	Delton / Finolex
8.	Cat6e cable	Skytone / Legrand / Finolex
9.	PVC insulated Aluminium conductor armoured cables of 1100 V/ 11000 V grade	Cable Corporation of India/Fort Gloster/INCAB
10.	Cable Glands	Chromium plated Brass heavy duty glands, weatherproof with rubber washers and gaskets of Comet make
11.	Cable Lugs	Dowells crimping type
12.	CFL light fixtures	Philips / Pierlite / Bajaj
13.	Fluorescent light fixtures	Philips / Pierlite / Bajaj
14.	Indicating Lamps	Vaishno, Kaycee, L & T
15.	Terminal Blocks	Elmex
16.	Compact Fluorescent Lamps	Osram / Philips / Crompton / Bajaj
17.	Energy meter	Jaipur / Havells
18.	Scraped earth metal clad socket and top	Crompton / BCH / MDS
19.	Earth Leakage Circuit Breaker	L & T-Hager / MDS / Clipsal
20.	Telephone Tag Block	Krone
21.	Fire Detectors	System sensor/Apollo
22.	Co-axial cables	Delton / Finolex
23.	Panels	Paragon / Tricolite / Anand Power

Note:

1. The Contractor shall produce samples before procurement of the material for approval of the Employer for all materials required for work. The material of the makes out of the above as approved by the Employer shall be used on the work. The decision of the Employer from the above makes shall be final.
2. In respect of the material for which approved makes are not specified as above, the same shall be decided by the Employer and shall be as per the sample got approved from Employer before the procurement.
3. The Contractor shall submit samples of all materials one months from the date of start of work for approval from the Employer.

**LIST OF APPROVED MANUFACTURERS FOR DIFFERENT MATERIALS TO BE USED IN THIS
PROJECT FOR CIVIL / INTERIOR / PLUMBING WORKS**

Details of Materials	Manufacturers Name
<u>Distemper/Paints</u> Plastic Emulsion Synthetic Enamel Oil Bound Distemper	Berger/Asian /ICI --do-- ---do--
<u>Textured paint</u>	Heritage (Bakelite Hylam Ltd) / Spectrum
<u>Wood Work</u> Ply board/ Plywood Laminate Veneer Ply Flush Door Locks Anodised Aluminium fittings for door & windows Door closer Floor springs	Green / Duro/Mayur Greenlam / Duro Mica Duro / Mayur / Green Duro Doors Godrej Argent / Classic Raja (heavy duty) Hardwyn / Door King / Godrej Sandhu / Prabhat / Door King
<u>Gypsum Board</u>	India Gypsum
<u>Aluminium glazing / Structural glazing</u>	Alkarma / Ashu Décore India (P) Ltd. / AGV Aluminium (P) Ltd.
<u>Vertical / Venetian Blinds</u>	Mac Décor / Vista Levealor
<u>Glass</u>	Modi Float Glass / St. Gobain Float glass
<u>Looking glass / mirror</u>	Modi float / Atul
<u>Polysulphide Sealant</u>	Ordinary PIDISEAL by M/s PIDILITE INDUSTRIES LTD. Bombay or TUFFESEAL by M/s Hindustan Brothers 225 Rue Francuis Martin, Pondicherry –605001.
<u>Waterproofing Compound</u>	CICO No.1 SUPAPLAST
<u>M.S. Pipes Heavy class</u>	Jindal / Surya Prakash
<u>G.I. Pipe Fittings</u>	Unik / Zoloto / "R" Brand
<u>Polymeric Tape 4 mm thk</u>	Makpolykote / Pypkote
<u>Butterfly Valve</u>	C&R / Advance
<u>Dual Plate check valve</u>	C&R / Advance

Ball Valve	Arco(Italy) / Bugatti
Enamel Painting of Pipes	J & N / Asian / Nerolac / Berger
Welding Rods	Victor / Maruti
Manual Call Box	Agni (Suraksha) / Agni
Hooter with Line Matching Transformer	Agni (Suraksha) / Agni
Fire Alarm Panel & P. A. Panel	Agni (Suraksha) / Agni
Amplifier	Ahuja / Mega / Philips

Note:

1. The Contractor shall produce samples before procurement of the material for approval of the Employer for all materials required for work. The material of the makes out of the above as approved by the Employer shall be used on the work. The decision of the Employer from the above makes shall be final.
2. In respect of the material for which approved makes are not specified as above, the same shall be decided by the Employer and shall be as per the sample got approved from Employer before the procurement.
3. The Contractor shall submit samples of all materials one month from the date of start of work for approval from the Employer.

SECTION - A (CIVIL / INTERIORS / LOOSE FURNITURE)

S.NO.	DECSRIPTION	QTY.	UNIT	RATE	AMOUNT
	<p>Note:</p> <p>1. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating and nothing extra will be paid for the same. The sample of melamine MAT polish with P.U. Coating should be got approved by the E.I.C. / Architects.</p> <p>2. Only sycamore wood & European Sycamore ply veneer etc. shall be used. All the exposed surfaces shall be either with European Sycamore Ply veneer or Sycamore wood unless specified otherwise.</p> <p>3. Only Seasoned wood is to be used.</p> <p>4. All the samples of brass fittings, Hinges, sliding fittings & other hardware items should be approved by the E.I.C. / Architects before installation.</p> <p>5. The rates quoted should be for all heights and levels.</p> <p>6. All the wooden members should be treated with anti-termite treatment.</p> <p>7. Provision for carrying electrical conduits & fixing of M.S. boxes to be made in the panelling / partitions / table & running counters as per the detailed drawings and instruction of E.I.C. / Architects.</p> <p>8. The fire suppression works & Air-Conditioning works should be got done through the agencies already working in STC.</p>				
1	Dismantling of existing carpentary works, partitions, false ceiling, wall panelling, electrical wires, conduits & fixtures and fittings, etc. all complete as per site requirements and stacking the usable materials within building premises complete at site as directed by the Engineer-In-Charge.	1	Job		
2	Removing and dumping of malba from the site to dumping ground/ outside the site premises as per the instructions of the Engineer - In - Charge .	1	Job		

3	<p><u>OPTA A False Ceiling (white tiles)</u></p> <p>Providing and fixing OPTA A false ceiling. Ceiling Tiles shall be Ecophon Advantage square edge glass-wool based acoustic ceiling in size 600 x 600 x 12mm having noise reduction co-efficient (NRC) of 0.85- 0.85(Average) Measurement of sound absorption coefficient in a reverberation room according to SS-EN 025259, light reflectance 83% and humidity resistance of 95% at 30°C. The weight of the system with the tile should be approx. 2.2 kg/m² and the tiles should have class A absorption according to EN ISO 11654 (SS 025260). Fire classifications for the tiles should be according to latest European norms of Euroclass A2-s1, d0. Advantage A tiles to be laid on 24 mm Grid system comprising of main runner of size 3600 mm, cross tee of 1200 mm and 600 mm of and wall angle of 3000 mm.</p>				
	<p>The rate quoted should include for work done at all heights including scaffolding, labour, cartage & transportation etc., all accessories required for proper fixing of false ceiling as per sound Engineering Practices, all taxes, levies etc. complete in all respects up to the entire satisfaction of the E.I.C. / Architects. The work should be carried out by the authorised installer of the Company. Nothing extra shall be payable for making provisions for fixing of light fixtures and A.C. grills & diffusers etc.</p>	175	Sqm.		
4	<p>Providing well seasoned Sycamore wood work in frames of doors & windows etc. fixed in position including painting the portion in contact with masonry / R.C.C. / wooden partition with 2 or more coats of Antitermite treatment and fixing the frames with suitable dash fasteners or as per the directions of the E.I.C. / Architects and melamine MAT polish with P.U. Coating to give an even shade including a coat of wood filler as per directions of site incharge & Architect.</p>	0.65	Cum		

5	<p>Providing and fixing 75 mm thick full height partitions as per layout given in detailed drawing No. A/STC/ANNEXE/PH-II/101 with internal hard wood frame work 55mm x 55mm thick @ 600mm c/c both sides (maximum spacing) with 230 mm x 12.5 mm Sycamore wooden skirting / band on top & bottom on both sides. The partitions should be fixed with R.C.C. floor & beams with dash fasteners of appropriate size to attain maximum stiffness. The partition has 4 mm thick European sycamore veneer over 6 mm thick commercial plywood on both sides of the hard wood frame to make thickness of partition as 75 mm thick. The rate quoted should include for providing and fixing 25 mm thick glass wool of 32 kg/M3 density with 28% perforation of total area placed in cloth bags to fill the gaps in the hard wood frame. The work should be carried out as per detailed drawing No. A/STC/ANNEXE/PH-II/101.</p>				
	<p>All the exposed surfaces should be Sycamore wood or 4 mm thick European Sycamore veneer ply. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. All other surfaces will be enamel painted complete as per instructions at site. The rates are given for complete partition work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.</p>	127	Sqm.		
6	<p>Providing and fixing 75 mm thick low height partition (up to 1500 mm height) as per layout given in detailed drawing No. A/STC/ANNEXE/PH-II/101 with internal hard wood frame work 55mm x 55mm thick @ 600mm c/c both sides with 230 mm x 12.5 mm Sycamore wooden skirting / band on top & bottom on both sides. The partitions should be fixed with R.C.C. floor & beams with dash fasteners of appropriate size to attain maximum stiffness. The partition has 4 mm thick European Sycamore veneer over 6 mm thick commercial plywood on both sides to make thickness of partition as 75 mm thick. The rate quoted should include for providing and fixing 25 mm thick glass wool of 32 kg/M3 density with 28% perforation of total area placed in cloth bags to fill the gaps in the hard wood frame. The work should be carried out as per detailed drawing No. A/STC/ANNEXE/PH-II/101.</p>				

	All the exposed surfaces should be Sycamore wood or 4 mm thick European Sycamore veneer ply. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. All other surfaces will be enamel painted complete as per instructions at site. The rates are given for complete partition work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.	25	Sqm.		
7	Providing and fixing 50 mm thick low height partition (up to 1500 mm height) as per layout given in detailed drawing No. A/STC/ANNEXE/PH-II/101 with internal hard wood frame work 30mm x 30mm thick @ 600mm c/c both sides with 230 mm x 12.5 mm Sycamore wooden skirting / band on top & bottom on both sides. The partitions should be fixed with R.C.C. floor & beams with dash fasteners of appropriate size to attain maximum stiffness. The partition has 4 mm thick European Sycamore veneer over 6 mm thick commercial plywood on both sides to make thickness of partition as 55 mm thick. The work should be carried out as per detailed drawing No. A/STC/ANNEXE/PH-II/101.				
	All the exposed surfaces should be Sycamore wood or 4 mm thick European Sycamore veneer ply. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. All other surfaces will be enamel painted complete as per instructions at site. The rates are given for complete partition work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.	22	Sqm.		

8a	Providing and fixing 50 mm thick doors made of internal hard wood frame work of 75 mm x 30 mm thick, 5 Nos. of frames equally placed on both sides. The outer moulding of Sycamore wood all around the hard wood frame should be out of 50 mm x 40 mm thick for stiffness. The rate quoted should include for providing and fixing 30 mm thick glass wool of 32 kg/M3 density with 28% perforation of total area placed in cloth bags to fill the gaps in the hard wood frame. The top surface of hard wood framework shall be finished with 6 mm thick commercial ply & 4 mm thick European Sycamore veneer ply on both sides to make total thickness of the door as 50 mm. The door is provided with S.S. plate of size 380 mm x 250 mm on both sides. The rate quoted should include for providing and fixing 4 Nos. of 5" long heavy duty brass hinges. The rate quoted should also include for providing and fixing all necessary brass hardware except lock & door closers (locks and door closers will be paid separately).				
	The locks and door closers can also be supplied by the S.T.C. & it will be the responsibility of the Contractor to install the same and nothing extra will be paid for the same. All the exposed surfaces should be Sycamore wood or 4 mm thick European Sycamore veneer ply. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. The rates are given for complete work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.	20	Sqm.		
8b	Same as above but for fixing the door with sliding arrangements including all fittings etc. complete in all respects up the entire satisfaction of the Engineer-in-Charge.	3	Sqm.		
9	Providing concealed door closers as per the sample approved by the E.I.C.	8	Each		
10	Providing 6 lever brass locks & handles (duly polished & lacquered) of Godrej make on flush door shutters.	8	Each		
11	Providing and painting with plastic paint on new or old work (on walls and ceilings), 2 or more coats to give an even shade including primer coat complete as per directions of the Engineer-In-Charge. The rate quoted should include for scrapping the existing paint, if required.	0	Sqm.		

12	Providing and fixing panelling on walls as per layout given in detailed drawing No. A/STC/ANNEXE/PH-II/101 with internal hard wood frame work 75 mm x 30mm @ 600mm c/c both sides with 230 mm x 12.5 mm Sycamore wooden skirting / band on top & bottom on both sides. All the hard wood frame should be properly fixed to the wall with dash fasteners in proper alignment & levels up to the entire satisfaction of the E.I.C. / architects. 6 mm thick commercial ply & 4 mm thick European sycamore veneer with 4 mm grooves as per design shall be provided on top of the hard wood frame.				
	The work should be carried out as per detailed drawing No. A/STC/ANNEXE/PH-II/101. All the exposed surfaces should be Sycamore wood or 4 mm thick European Sycamore veneer ply. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. The rates are given for complete panelling work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.	80	Sqm.		
13	Providing and fixing panelling on existing openable windows with hardwood frame & 4 mm thick Sycamore veneer on top. All the exposed surfaces should be Sycamore wood or 4 mm thick European Sycamore veneer ply. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. The rates are given for complete panelling work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.	18	Sqm.		
14	Providing and fixing 2 mm thick homogeneous floor covering MIPOLAM TROPLAN 100 of GERFLOR (FRANCE) make. Roll width of 2.0 Meter x 20 Meter with directional design colour dyed as a raw mixture to ensure even colour throughout the thickness. The flooring should be treated with Polyurethane treatment (PUR) which facilitates ease of maintenance & eliminates the use of acrylic emulsion after installation. The flooring should be anti-static & anti fungal. The flooring must incorporate antibacterial & fungicidal treatment for hygiene. The rate quoted should include for a good grade of acrylic based adhesive to be used for installation. The flooring should comply to K-5 wear rating with an electrical resistance of 108 (EN108) category. The flooring should be suitable for heavy traffic areas. All joints must be hot seam welded. The work should be carried out by the procedure specified by the manufacturer and the work should be got done through authorised dealers / applicators of the company or by the company directly.	175	Sqm.		

15	Providing and fixing vertical blinds of MAC (Black out range) or approved equivalent make, colour, size and shape in existing window openings. The sample can also be seen in the training center at 4th floor or board room at 10th floor.	64	Sqm.		
16	Providing & making 1600 mm long, 750 mm wide, 750 mm high office / computer table with drawer units made of 19 mm thick commercial Board top, side supports, apron and front fascia in varying lengths and 750 mm height. Table Top will be supported on vertical supports of 75 mm x75 mm Sycamore wooden legs with top supports 50 mm x 50 mm Sycamore wood and with 19 mm thick Commercial board top with 4 mm thick European Sycamore on top of the board with Sycamore wood moulding 53 x 23 mm all round. Table Top will be provided with 75 mm deep key board tray on sliding channels. Drawer Unit will have drawers with central locking arrangement, running on sliding channels. Drawers will be made of 19 mm thick commercial board sides, back & base and 19 mm thick commercial board at front finished with 4 mm thick European Sycamore veneer. Table top will be finished with 4 mm thick European sycamore veneer and supports inside, front fascia with 4 mm thick European Sycamore Ply veneer. All other surfaces will be enamel painted complete as per instructions at site.				
	The brass hinges, fixtures, handles and locking arrangements will be fixed as per the instruction of the Architect. Units top, front, all exposed /open shelves will be finished with 4 mm thick European Sycamore veneer and sides will be finished with 4 mm thick European Sycamore veneer. Sycamore wood half round moulding of 53 mm x 23 mm shall be fixed as per the drawing in front . All other surfaces will be enamel painted of approved colour & shade complete as per detail drawings / Architects instructions at site. The work should be carried out as per detailed drawing No. A/STC/ANNEXE/PH-II/101. All the exposed surfaces should be Sycamore wood or 4 mm thick European Sycamore veneer ply. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. The rates are given for complete work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.	8	Each		

17	<p>Providing & making Side Units 900 mm x 444 mm deep made of 19 mm thick commercial Board top, sides, bottom, drawers & shutters of size as shown in the drawings finished with 4 mm thick European sycamore Ply veneer at top, front & sides. Side Unit will have 2 nos. of drawers at top, running on sliding channels and openable shutters in lower area with brass hardwares, locking arrangements etc. complete. Drawers will be made of 19mm thick commercial board sides, front & back with 19 mm thick board with 50 mm x 50 mm Sycamore wood frame as shown. Also 19 mm thick commercial board will be fixed on back side of unit. All internal surfaces will be finished with enamel paint of approved colour & shade complete in all respect as per detailed drawing No. A/STC/ANNEXE/PH-II/101 / Architects instructions at site.</p>	8	Each		
18	<p>Providing, fabricating & fixing running computer counters 750 mm wide and 750 mm height and in varying lengths as per detail drawing Nos. A/STC/ANNEXE/PH-II/101 made of 19 mm thick commercial board top, side supports, apron and front fascia in varying lengths as per plan. Table Top will be supported on vertical supports with 53 mm x 23mm Sycamore wood moulding as per detailed drawing. Apron will be provided and one side European Sycamore ply veneer will be fixed on front side. The counter is fixed to low height partition with full height commercial board stiffeners, 2 Nos. in each unit of length 3216 mm long or of any length. Table Top will be provided with 80 mm deep key board tray on sliding channels. Drawer Units will have 1 nos. of drawers with central locking arrangement, running on sliding channels as per the drawing. Table top will be finished with 4 mm thick European Sycamore ply veneer and supports inside, front fascia with 4 mm thick European Sycamore veneer. All other surfaces will be enamel painted complete as per instructions at site.</p>	26	Meter		
19	<p>Providing making & fixing 400 mm deep Over Head Storage Units in varying lengths (max. 2400 mm) and heights made of 19 mm thick commercial board top, bottom, sides, shelves & shutters and 19 mm thick back commercial board. Vertical division will be made of 19 mm thick commercial board @ 320 mm c/c to make 6 equal divisions with 19 mm x 4mm thick lipping all around. On the outer surface, Sycamore wood moulding will be provided as per design. Shutter will be provided with brass hardwares and locking arrangement. Shelves will be provided @ 471 mm c/c to make 2 equal divisions. Units front & sides will be finished with 4 mm thick European Sycamore veneer. All other surfaces will be enamel painted of approved colour & shade complete as per detail drawings No. A/STC/ANNEXE/PH-II/101 and as per E.I.C. / Architect's instructions at site.</p>				

	All the exposed surfaces should be Sycamore wood or 4 mm thick European Sycamore veneer ply. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. The rates are given for complete work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.	18	Sqm.		
20	Providing and fixing soft display board with 12 mm thick soft board & Sycamore wood moulding and fabric etc. complete in all respects up to the entire satisfaction of the E.I.C. / architects. All the exposed surfaces should be Sycamore wood. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. The rates are given for complete work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.	12	Sqm.		
21	Providing and fixing wooden pelmets made out of 19mm thick commercial board as per the existing pattern finished with 4mm thick European sycamore veneer complete in all respects up to the entire satisfaction of the E.I.C. / architects. All the exposed surfaces should be Sycamore wood. All wooden members should be treated with anti termite treatment. All the exposed wooden / ply surface shall be polished with Melamine MAT finish with P.U. coating. The rates are given for complete work and nothing extra will be given. Minor modifications may be suggested by the architects / E.I.C. as per site requirements and nothing extra will be paid for the same.	20	Meter		
22	Providing and placing in position high back executive chairs of Godrej make.	8	Each		
23	Providing and placing in position medium back visitors chairs of Godrej make.	16	Each		
24	Providing and placing in position medium back chairs of Godrej make (for office use).	10	Each		
TOTAL OF S.H. C/O TO ABSTRACT					

SECTION - B ELECTRICAL WORKS

Sl. No.	Description	Qty	Unit	Rate (Rs.)	Amount (Rs.)
	POINT WIRING (all switches and accessories are Modular type of MK make)				
1	Wiring for the following light points with 1.5 sq.mm PVC insulated copper conductor wires in concealed MS conduits in F.ceiling/walls/ceiling as directed including providing 6 amps flush type switches, 5 sided GI Boxes for housing switches and earthing complete as required.				
a.	One point controlled by one 6 amps Switch.	48	Each		
b	Two points controlled by one 6 amps Switch.	15	Each		
2	Wiring for 6 amps light plug outlets with 1.5 sq.mm PVC insulated copper conductor wires in MS Conduits in ceiling/walls/floor as directed including providing 6 amps flush type 5 pin socket and 6 amps switch with cover plate, 5 sided GI boxes for housing switches, sockets and earthing complete as required	55	Each		
3	Wiring for 16 amps power outlet points with 4 sq.mm PVC insulated copper conductor wires in concealed MS conduits in F.ceiling/walls/Ceiling/ floor ducts as directed including providing 16 amps flush type 6 pin switches and socket with cover plate 5 sided GI outlet boxes for switches and socket and earthing the third pin with 4 sq.mm PVC insulated copper conductor wires complete as required (Only one outlet shall be connected on each circuit)	20	Each		
4	Wiring for the following Call Bell points with 1.5 Sq.mm PVC insulated copper conductor wires in concealed MS conduits in F.ceiling / walls / ceiling as directed including providing 6 amps flush type Bell Push, 5 sided GI Boxes for housing switches and earthing complete as required.	4	Each		
5	Providing and fixing in position the following PVC conduits including all accessories concealed in false ceiling/wall/floor/ceiling as required including M.S. junction or pull boxes with 3mm thick perspex sheet cover plate complete with 1.6 mm dia G.I. pull wires. (for Telephone & Computer system)				
	25 mm dia conduit	400	Meter		
6	Providing and fixing in position suitable 1.6 mm thick G.I. outlet box along with 1 No. RJ - 11 Telephone Jack and cover plate with all fixing accessories as required.	23	Each		

7	Providing and fixing in position suitable 1.6 mm thick G.I. outlet box along with 1 No. RJ - 45 computer outlets and cover plate with all fixing accessories as required.	23	Each		
8	Providing and fixing in position 2mm thick M.S. Telephone junction box of size suitable for fixing of following Krone Tag Block with key lock arrangement. Also provide clamps for fixing tag blocks.				
	30 pair Telephone Tag Block Box	1	Each		
9	Providing and fixing in existing Metal Box Krone Tag Block of following pairs consisting of necessary Back Mount Frame, disconnection modules and grommets complete as required.				
	30 pair Telephone Tag Block	1	Each		
10	Supply, drawing and making connections with Telephone single cord outlet and Telephone Junction Box with the following unarmoured PVC insulated Telephone wires in existing conduits from the telephone outlet points to the Telephone junction box.				
	(3 x 0.51 mm) unarmoured PVC insulated ATC cable	800	Meter		
11	Supply, drawing and making connections with Telephone Main Junction box and Telephone Junction Box with the following armoured PVC insulated Telephone wires in False Ceiling / concrete slab / wall from the junction box to the Main Telephone junction box including supports from the roof complete with all accessories.				
a.	30 x (2 x 0.61 mm) armoured PVC insulated ATC cable	30	Meter		
12	Supply, drawing and making connections with computer points RJ-45 using Cat-6e cable.	750	Meter		
DB, SUB-MAIN WIRING & EARTHING					
13	Providing and fixing in position the following MS conduits including all accessories concealed in false ceiling/wall/floor/ceiling as directed complete with GI pull wires. (for sub-main wiring)				
	32 mm dia MS conduit	60	Meter		
14	Supply, drawing, making connections at both ends using copper lugs and crimping the following sizes of PVC insulated stranded copper conductor wires in existing conduits complete as required.				
	4 x 16 + 2 x 4 sq. mm copper wires	60	Meter		

15	Supply and installation of sheet metal enclosed double door 12 way TPN DB, consisting of 36 Nos. 6/20 AMP SP MCB's and controlled by one number 30 MA sensitivity 63 AMPS four pole ELCB backed up with 63 Amps. TPN MCB.	1	Each		
	LIGHTING FIXTURES AND FANS (all lighting fixtures shall be inclusive of lamps)				
16	Supply, Receiving, storing, handling, assembling, fixing in position, testing and commissioning of CFL Light Fixture with lamp in false ceiling complete with all fixing accessories as required.				
a.	Philips Cat. No. FBH 145/118 HF	18	Each		
b.	Philips Cat. No. FBS 450/236 D6 PW HF	38	Each		
17	Supply, Receiving, storing, handling, assembling, installing in position, effecting proper connections, testing and commissioning of call bell buzzer / bell indicators including wooden base and fixing clamps as required.	4	Each		
	FIRE DETECTION AND ALARM SYSTEM				
18	Providing and fixing in position the following MS conduits including all accessories concealed in False ceiling/walls/partitions as required including 5 sided 1.5mm thick M.S. junction boxes and 3mm thick perspex sheet cover plate complete with G.I. pull wires.				
	1.6mm wall thickness 25mm dia	425	Meter		
19	Providing and fixing in position 1.6mm thick M.S. outlet boxes for housing for remote indicators including providing remote indicator & 3 mm thick hylam sheet cover as required	22	Each		
20	Supply and drawing of the following PVC insulated copper conductor wires in existing conduits .				
a.	1 x 1.5 sq. mm PVC insulated FRLS copper conductor wires	500	Meter		
21	Supply, installation, connecting, testing and commissioning of Smoke Detectors (Ionisation) type as required complete. (Appolo make series 60)	12	Each		
22	Supply, installation, connecting, testing and commissioning of Smoke Detectors (Optical) type as required complete. (Appolo make series 60)	12	Each		
23	Supply, installation, connecting, testing and commissioning of Heat Detectors as required complete. (Rate of rise cum fixed type)	24	Each		

	(Appolo make series 60)				
24	Supply, installation, connecting, testing and commissioning of Electronic Hooters (30 M range) in suitable size of M.S. box.as required complete.	1	Each		
25	Supply, installation, connecting, testing and commissioning of Manual Call Pushes with Hammer etc.in suitable size of M.S. box as required complete.	2	Each		
26	Supply, installation, connecting, testing and commissioning of 305mm heavy duty Exhaust fan including making holes and providing louvers etc. complete as required. Crompton/bajaj/almonard make	1	Each		
	TOTAL OF S.H. C/O TO ABSTRACT				

SECTION - C (FIRE SUPPRESSION & AIR-CONDITIOING WORKS)

S. No.	Description	Qty	Unit	Rate	Amount
1	Supply, erection and commissioning of MS heavy class pipe complete with bends, tees, reducers, and flanges, etc as per IS 1239 Part-I and Part-II welded construction with angle iron painted supports, hangers, anchors etc including painting with one coat of red oxide and two coats of P.O. Red enamel.				
a	65mm diameter	55	Meter		
b	25mm diameter	45	Meter		
2	Dismantling of old pipes including removal from the site.				
a	50mm diameter	55	Meter		
b	25mm diameter	45	Meter		
3	Providing, fixing, testing and commissioning of pendant type sprinkler heads with quartzoid bulb and an operating temperature of 68 degree celcius.	34	Each		
4	S&E of sprinkler Rosset Plate for sprinklers below the false ceiling.	17	Each		
5	Making/modification of A/C duct as per False ceiling levels as per existing patterns.	18	Each		
6	Providing and fixing supply and return grill for air-conditioning 12" x 16" size (as per approved design already installed in the office).	32	Each		
	TOTAL OF S.H. C/O TO ABSTRACT				

ABSTRACT

1	Total of Interior works (Section - A)				
2	Total of Electrical Works (Section - B)				
3	Total of Fire Suppression & Air-Conditioning works (Section - C)				
	Total				