

# **JAMIA HAMDARD UNIVERSITY**

**HAMDARD NAGAR, NEW DELHI - 110062**

**TENDER DOCUMENT**

**FOR**

**RENOVATION OF DEAN OFFICE, BOARD ROOM AND**

**CONFERENCE HALL/LECTURE THEATER OF**

**FACULTY OF SCIENCE**

## NOTICE INVITING TENDER

**Subject: Enovation of Dean Office, Board Room and Conference Hall/Lecture Theatre of Faculty of Science.**

The University intends to undertake the work of Renovation of Dean Office, Board Room and Conference Hall/Lecture Theatre of Faculty of Science located at Hamdard Nagar, New Delh-110062. The scope of work involves False Ceiling, Vitrified Flooring, Wooden flooring, Plumbing, Sanitary works, Electrical, Air conditioning, PA system, internet wiring works etc which includes painting and general repair wherever necessary. Details & specification of the work are given at schedule of Quantities attached herewith. (Annexure-‘A’ for Civil works and Annexure-‘B’ for Electrical and Air-conditioning works.

The estimated costs of the works are as under:

1- Civil Engineering Works	(Annexure-‘A’)	Rs.11.42 Lakhs
2- Electrical, Air-conditioning and PA System works	(Annexure-‘B’)	Rs.13.00 Lakhs

The bids may be submitted by the following categories of parties.

Contractors for Civil Engineering works, who have executed similar nature of Civil Engineering works of at least one contract of value Rs. 9 lakhs, or two contracts of similar nature of work of Rs. 7 lakhs or three contracts of similar natures of works of Rs. 4.5 lakhs in last 10 years.

Similarly Contractors for Electrical and Air-conditioning works, who have executed similar nature of Electrical and Air-conditioning works of at least one contract of value Rs.10 lakhs, or two contracts of similar nature of work of Rs.7 lakhs or three contracts of similar natures of works of Rs. 5 lakhs in last 10 years.

Contractors should have executed similar nature of work in prestigious institutional buildings, Universities, hospitals etc, and produce credentials in support thereof.

The quantities given in the schedule are tentative and the actual quantities to be executed may vary (+ or - ). The total works have to be executed within 45 days from award of work for civil Engineering works and 55days for Electrical, Air-conditioning and PA system works. Therefore contractors with large work force/resources need only apply. Delay in execution of works shall attach liquidated damage charges as per CPWD condition of contract.

The works shall be carried out as per schedule and other specification and its general conditions of contracts of CPWD.

Bidders downloading tender documents shall submit their bid along with necessary application fee as herein specified. **Kindly visit the site before quoted the tender.**

EMD - Rs.23000/- for civil works

EMD - Rs.26000/- for Electrical, Air-Conditioning and PA System works by D.D payable in favour of the Registrar, Jamia Hamdard.

Application Fee- Rs. 1000/-

Last date of submission of bid	23.01. 2017(up to 3pm)
Date of opening of bids	23.01. 2017 at 3:30 pm
Time for completion-	45 days (Civil works)
Time for Completion (No soft copy submission)	55 days (Electrical, Air-conditioning and PA System works)

**8- Requirements to be fulfilled:**

- a) No subletting or subcontracting of the work will be permitted.
- b) An affidavit on e-stamp paper of Rs. 50/- duly notarized to the effect that the bidder undertakes that the documents submitted by him are genuine and undisputable and in the event of it coming to notice at a later date that the documents are not genuine the bidder shall be liable for criminal action and such compensation payable to Jamia Hamdard University as may be decided by its competent authority.
- c) The Company shall give an undertaking that for carrying out electrical works, they shall Employ workman having valid electrical license from competent authority
- d) (i) The Tenderer/Bidder will not withdraw his/their Tender after opening of technical bid and if done so; his/their EMD may be forfeited.  
(ii) The Bidder has not been black listed by any of the Govt. Depts./Govt. Institutions etc. during last three years.  
(iii) There is no complaint against the Tenderer / Bidder such as ‘delayed supply, non-supply/non-completion of work, non- submission of performance bank guarantee and refusal of supply etc. and for which ‘no punishment of any type’ has been given by any of the Govt. Deptts. / Govt. Institution etc.  
(iv) Names of all companies/firms where the bidder is the promoter / director / partner and/or proprietor.

Name of companies / firms, where the bidder was/is operating their Bank Accounts.

Bank Account No. of the bidder’s Company/Agency and names of authorized persons

(with copy their identification ), who were/are operating its Bank account .

The offer shall remain open for at least days from the date of opening of Technical Bids. The Cost of tender (if down loaded from web site) and Earnest money shall be accepted only in the form of

demand draft/Pay order drawn in favour of the Registrar, Jamia Hamdard University, failing which the bid will summarily be rejected.

## **GENERAL TERMS AND CONDITIONS**

**Name of Work:** -Renovation of Dean Office, Board Room and Conference Hall/Lecture Theatre of Faculty of Science.

1. The work shall be carried out following standard and accepted norms of sound engineering practice.
2. The CPWD General Terms and conditions and CPWD specifications with latest amendments & CPWD Manual provisions shall be applicable in execution of the project and shall form part of the contract.
3. The cost of tender is Rs. 1000.00 (**Non refundable**). The tender document can be purchased from the University office and the above mentioned cost of the tender document will have to be paid through a separate Demand-Draft drawn in favour of “Registrar, Jamia Hamdard University” payable at New Delhi along with the Commercial Bid, failing which the bid will summarily be rejected.
4. Earnest Money Deposit (EMD) of Rs.23000/- for Civil works and Rs.26000/- Electrical, Air conditioning and PA System works have to be enclosed along with the Bid. The EMD shall be only in the form of Demand Draft drawn in favour of “Registrar, Jamia Hamdard ”, payable at New Delhi, failing which the bid will summarily be rejected. No Cheque / Cash shall be accepted as EMD.
5. The rates shall be inclusive of all taxes (Including Service Tax), duties and cartage etc. No escalation of taxes shall be payable by the **Jamia Hamdard** during the contract period.
6. The tenderers shall attach copy of PAN Card.
7. Duly sealed tenders shall be dropped in the tender box placed at the Purchase Section, Basement of Administration Building. **Bid** MUST contain one Xerox copy of the

unfilled bid document duly signed and stamped on each page as a token of acceptance of all terms and conditions /clauses of the tender enquiry.

8. The conditional bids shall not be considered under any circumstances and rejected without any notice or assigning any reasons therefore.
9. All bids once submitted shall be the property of Jamia Hamdard, and bidders will lay no claim whatsoever on the same.
10. Jamia Hamdard, reserves the right to reject any or all the tenders in full or in part without assigning any reasons whatsoever, and the decision of the University in this regard will be binding on all the bidders. Tenderers not complying with any of the provisions stated in this tender document are liable to be rejected. Jamia Hamdard, reserves the right to accept or reject any or all tenders without assigning any reason and does not bind himself to accept the lowest tender.
11. No T & P shall be supplied by the University.
12. Income tax shall be deducted from the contractor bill as per Govt. of India rules.
13. Jamia Hamdard welfare fund charges will deducted@0.25% of the amount of total billed amount.
14. (i) Successful bidder shall deposit an amount equal to 5% of the tendered and accepted value of the work as performance guarantee within 10 days of issue of letter of acceptance. The performance guarantee shall be valid upto the completion of defect liability period.  
(ii) Security shall be deducted @ 5 % of value of work done and total amount of security & performance guarantee shall be released after expiry of the defect liability period of one year effective from date of completion.

15. Earnest money deposited by the successful tenderer shall be converted in to security deposit & is adjustable against the actual amount to be deducted under clause 14 above.
16. The time allowed for completion of work shall be 45 days for civil works and 55 days for Electrical, Air-conditioning and PA system works which shall be reckoned from 3<sup>rd</sup> (third) day from the date of issue of work order.
17. Time allowed for the work shall be strictly followed otherwise the contractor shall be liable to pay compensation @ **1.5%** of the tendered value of the work per week of delay on the part of the contractor. The decision of Engineer-in-charge about the delay shall be final and binding. However, for any reason beyond the control of the contractor the extension of time shall be granted upon application by the contractor in prescribed format. No claim for any compensation during the extended period shall be entertained and the University's decision in this regard shall be final.
18. No escalation in any form either of material or labour shall be payable by the University. The bidder shall also absorb any statutory escalation/increase of wages /material cost if any, anticipated during the contract tenure, including extended tenure.
19. All material brought at site shall be as per list of specification & schedule of quantities (shall be strictly followed) and shall be got entered in the site book and approved by Engineer-In-charge before being used.
20. Mandatory tests have to be carried out as asked for by the Consultant/Engineer-In-Charge. Nothing extra shall be paid for such purpose.
21. In case the successful bidder resiles from the offer within one month of the work offer, the earnest money will be forfeited. Similarly if successful bidder fails to commence the work after issue of award letter, the amount of earnest money will also be forfeited.
22. Any violation of instruction/agreement or suppression of facts will attract cancellation of agreement without any reference or any notice period and in such case the amount of earnest money will be forfeited.

23. If agency at any time makes default during currency of work or does not execute any part of the work with due diligence or Commits default in complying with any of the terms and conditions of the contract and does not initiate any remedy for it or takes effective steps for its remedy or Fails to complete the work(s) or items of work within date of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in their behalf by the Engineer-in-Charge.

The Engineer- in-Charge without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to the Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

24. Registrar, Jamia Hamdard University reserves the right to terminate the contract without any reference or any notice period on account of poor workmanship, non-compliance of set norms/specifications for the works, delay in progress of work, violation of any contract provisions by the contractor, failure to start the work at Jamia Hamdard University, within 10 days from date of issue of Letter of Intent (L.O.I). In such cases the contractor is liable to pay Liquidated Damages @ 5% of tendered value besides security deposit.

25. Decision of Registrar, Jamia Hamdard in regard to interpretation of the terms and conditions and the Agreement shall be final and binding on the Agency.

26. The tenderer shall be solely responsible for any accident/medical/health related liability/compensation for the personnel deployed by it at Jamia Hamdard. The Jamia Hamdard shall have no liability in this regard.

27. The personnel provided by the agency will not claim to become the employees of Jamia Hamdard and there will be no Employee and Employer relationship between the personnel engaged by the Agency and Jamia Hamdard.
28. No tent or hut shall be allowed to be put up for workers to stay within the campus. The contractor is deemed to have inspected the site and thoroughly acquainted himself with the site conditions, availability of storage space for materials etc.
29. The tenderer should take extra precaution to ensure that there is absolutely no damage to the surrounding structure/existing system etc. If any damage made by agency, it will be got repaired/replaced/rectified by the agency itself at no extra cost.
30. The tenderer should make special note of the fact that the Renovation/remodelling/repair works are to be carried out in the existing functional building and the agency will adopt necessary barricading / covering of the area under execution with no / least disturbance to adjoining / surrounding areas of the building under use for teaching / research, etc. The tenderer shall depute their own security staff for watch and ward of their materials supplied/ installed at site till the final handing over of the complete work and temporary lockable shed/Almirah etc. shall be arranged by contractor at his own risk and cost. No accommodation/ staff/ lockable space will be provided by Jamia Hamdard under any circumstances.
31. It may here be noted, that the entire staff and labour of the Agency will follow all the security instructions issued by Jamia Hamdard University from time to time and these instructions may include the provisions to make suitable barricades or temporary wall fence to ensure that the labour confines itself to the area of the work ONLY. Serious action will be taken in case any of the contractor's workmen are found to be tampering with the Laboratory equipment and property of the University. Suitable damages will be recovered from the contractor's bills if anyone is found to do so. All decisions of the Engineer-in Charge in respect of the same will be final and binding on the contractor.



32. On completion of all work, Agency shall remove all surplus materials & leave the site in a broom clean condition, failing which the same shall be done at Agency's risk & cost.
33. The Agency shall ensure compliance of all statutory laws & bye laws of the central govt./ state govt./Municipal authorities related to the employment of their staff and all obligations under Minimum Wage Act, Workman Compensation Act, Provident Fund & Miscellaneous Provision Act, Bonus Act & Contract Labour Act 1970 etc. Jamia Hamdard University will not be responsible for such purposes in anyway.
34. Any claim, dispute or difference arising out of or in connection with this agreement and which cannot be settled by mutual consultations, shall be referred to sole Arbitration or an Arbitrator to be appointed by the Registrar, Jamia Hamdard University. The award of the Arbitrator shall be final and binding between the parties as per the terms and conditions of the Agreement to be executed on award of contract. The Arbitrator proceeding shall be governed by the Arbitration and Conciliation Ordinance dated 26th March, 1996 and shall be conducted in Delhi. The agreement drawn shall be subjected to the jurisdiction of the courts at Delhi.
35. Shop Drawing:- (i) The shop drawing for all works as required by Engineer-in-charge shall be submitted in quadruplicate at no extra cost by the contractor and in the manner so required by them. The contractor shall proceed with the works only after approval by the Engineer-in-charge. Such drawings shall be coordinated with all disciplines if work

## **GENERAL CONDITIONS FOR SUBMISSION OF TENDER**

### **1.0 Submission of Tender:**

Tenders should be submitted in sealed envelopes. The tender duly filled in should be sent to above mentioned address either by post or hand delivered in the tender box kept in the Purchase Section, Basement of Administration, Jamia Hamdard. Jamia Hamdard will not be responsible for tenders lost in postal transit or otherwise.. It should not be handed over to any

employee of the Jamia Hamdard. No tender shall be accepted later than the time schedule specified above. Tender once submitted will remain with the Jamia Hamdard and will not be returned to the bidder.

### **2.0 Price Bid:**

In this bid the bidder is required to quote his items rates/prices for the “**Renovation of Dean Office, Board Room and Conference Hall/Lecture Theatre of Faculty of Science. AT JAMIA HAMDARD.**” in the schedule of work attached. The scope of work & technical specifications are provided for your reference. The quoted prices shall be including all the taxes levied by statutory Govt. bodies. It is mandatory on bidder to quote all items rate as asked for in the **BOQ/ Schedule of work**. Failure to adhere to this condition may lead to rejection of tender. The bidders should quote unconditional rates, neatly written without any overwriting and duly signed & stamped in all pages.

### **3.0 Validity of Tender:**

Tender shall be valid for our acceptance without any change in rates and NIT conditions for a period of 45 days and 55 days from the date of opening of Technical Bid.

### **Declaration by the Tender**

This is to certify that I/We before signing this tender have read and fully understood all the terms and conditions contained herein and undertake myself/ourselves to abide by them.

Encls:

1. DD/Pay Order No.....
2. Terms & conditions (**each page must be signed and stamped with the seal**)

3. Financial Bid.

(Signature of Tenderer with seal)

Name:

Address:

Date:

Phone No:

#### **4.0 Information about the tenderer**

##### **A. In case of individual**

- i Name of Business; His age and father's name
- ii. Whether his business is registered
- iii. Date of commencement of business
- iv. Whether he pays Income Tax over Rs.10, 000/- per year.

##### **B. In case of Partnership**

- i. Name of Partners
- ii. Whether the partnership is registered
- iii. Date of establishment of firm
- iv. If each of the partners of the firm pay income tax over Rs.10, 000/- a year and if not which of them pays the same.
- v. Copies of partnership deed, if any.

##### **C. In case of Company Limited by Shares or Company Limited by Guarantees.**

- i. Amount of paid up capital
- ii. Name of Directors
- iii. Date of Registration of Company
- iv. Copies of the last two (2) years balance sheet of the Company.
- v. Certified copies of Memorandum and Articles of Association of Company.

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SIGNATURE OF TENDERER

DATE:

## 5.0 Exceptions and Deviations

NAME OF WORK :

NAME OF TENDERER :

As pointed out in the Notice Inviting Tender, Tenderer may stipulate here exceptions and deviations to the tender conditions, if considered unavoidable.

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Sl. No.	Page No. of Tender document	Cl. No. of Tender document	Subject	Deviation
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**SIGNATURE OF TENDERER**

DATE :

PLACE :

## **SPECIAL CONDITIONS OF CONTRACT**

### **1. OWNER:**

The name and address of the Owner / Engineer-in-Charge responsible for the preparation of the Contract documents are as follows:-

#### **OWNER:**

JAMIA HAMDARD, NEW DELHI

### **2. SITE**

2.1 The site is **Renovation of Dean Office, Board Room and Conference Hall/Lecture Theatre of Faculty of Science, AT JAMIA HAMDARD.**

### **2.2 CONTRACTOR TO SATISFY HIMSELF ABOUT SITE CONDITIONS**

Before tendering, the Contractor shall visit and examine the site and satisfy himself as to the site conditions the correct dimensions of the work and facilities for obtaining the special articles called for in the contract documents and shall obtain generally his own information on all matters affecting the continuation and progress of the works. No extra charge made in consequence of any misunderstanding or incorrect information on any of these points or on the grounds of insufficient description will be allowed.

## **SCOPE OF WORK**

### **3.1 SCOPE**

The general character and the scope of work is illustrated and defined by the Schedule of Quantities, drawings and Specifications herewith attached.

### **3.2 EXTENT**

The Contractor shall carry out and complete the said work in every respect in accordance with the contract, and with the directions of and to the satisfaction of the Engineer-in-charge and REGISTRAR, JAMIA HAMDARD.

## **4.0 CONTRACT DRAWINGS**

Drawings forming part of the contract are listed under. Other drawings and details issued and shop drawings approved during the currency of the contract shall also form part of the contract.

The Contractor shall keep at least one copy each of drawings, conditions of contract, specifications, instructions and schedule of quantities at the site of works available for reference by any authorized representative **JAMIA HAMDARD**, at all times during the progress of the works. The drawings shall be displayed and arranged as directed by the Architects.

## **5.0 TYPE OF CONTRACT**

The Contract shall be an item rate contract. The Contractor shall be paid at the contract rates, for the actual quantity of work carried out by him in accordance with the Contract documents as measured.

## **5.1 SCHEDULE OF QUANTITIES**

The quantities given in the Schedule of Quantities are provisional and are meant to indicate the intent of the work and provide a uniform basis for tendering. The Contractor shall be paid for the actual quantity of work executed by him in accordance with Contract Documents at the contract rates.

## **6.0 WATER AND ELECTRICITY FOR CONSTRUCTION**

Water for use at site of work shall be arranged by the contractor. The contractor shall make his own arrangement for any temporary service piping taps as required for his use on the works and shall remove the same on completion. Electricity required for the job shall be made available and shall be charged as per CPWD norms or the contractor may arrange for the same at their own cost. However, necessary piping, valve, wiring, cabling, lamps, switches & sockets, main switches, halogen/tube light fitting and tapping from existing line/connection including labour have to be arranged by the contractor at their own risk & cost.

## **7.0 PAYMENT OF CONTRACTORS BILL**

Subject to the provisions of terms and conditions of the contract, , JAMIA HAMDARD, shall affect Contract payments against RA Bills shall be released to the contractor as below:

Final Bill: Within one (1) months of submission of the Bill with the final completion certificate and as per the terms and conditions of the Contract.

*Note: All Bills are required to be supported by Detailed Measurement Sheet and Analysis of Rates for Extra Items and its approval along with the Bill. The Bills shall be submitted in specified format which should indicate quantities executed in all RA Bills and cumulative Quantities besides current bill quantities along with tendered quantity/unit/rates. There may occur deviations from the above noted schedule of payments in exigent circumstances.*

## **8.0 MOBILIZATION ADVANCE (M.A.)**

**8.1** If specifically requested by the tenderer in the offer itself, a maximum of 10% (Ten percent) of contract value will be paid to Contractor as Mobilization Advance (MA).

**8.2** All other terms of MA, rate interest chargeable, recovery of MA shall be as per CPWD/GCC

## **9.0 SCHEDULE OF RATES TO BE INCLUSIVE**

Schedule of Rates shall be deemed to include and cover all costs, taxes, octroi, expenses and liabilities of every description and all risks of every kind (FOR Site) to be taken in executing, completing and handing over the work to the Owner by the contractor. The contractor shall be deemed to have known the nature, scope, magnitude and the extent of the works and materials required, through the contract documents may not fully and precisely furnish them. He shall make such provision in the Schedule of Rates as he may consider necessary to cover the cost of such item of work and materials as may be reasonable and necessary to complete the works. The opinion of the Architects as to the items of work which are necessary and reasonable for completion of work shall be final and binding on the contractor, although the same may not be shown on or described specifically in contract documents.

**10.0** Generality of this present provision shall not be deemed to cut down or limited in any way because in certain cases it may and in other cases it may not be expressly stated that the Contractor shall do or perform a work or supply articles or perform services at his own cost or without additional payment or without extra charges or words to the same effect or that it may be stated or not stated that the same are included in and covered by the Schedule of Rates.

## **11.0 SCHEDULE OF RATE TO COVER CONSTRUCTIONAL PLANT, MATERIALS, LABOUR, ETC.**

Without in any way limiting the provisions of the preceding sub-clause the schedule of Rates shall be deemed to include and cover the cost of all constructional plant, temporary works (except as provided for herein specifically) pumps, materials, labour, insurance, fuel, stores and appliances to be supplied by the contractor and all other matters in connection with each item in every respect maintained and as shown or described in the contract documents or as may be ordered in writing during the continuance of the contract.

## **12.0 SCHEDULE OF RATES TO COVER ROYALTIES, RENTS, PROVIDEND FUND, AND CLAIMS**

The Schedule of Rates shall be deemed to include and cover the cost of all royalties and fees for all articles, processes, protected by letters, patent or otherwise incorporated in or used in connection with the works, also all royalties, rents and other payments in connection with obtaining materials of whatsoever kind for the works and shall include an indemnity to JAMIA HAMDARD which the contractor hereby give against all actions, proceedings, claims, damages, costs and expenses arising from the incorporation or the use on the works of any such



articles, processes or materials. Octroi or other Municipal or local Board charge, if levied on materials, equipment or machineries to be brought to site and removed from site for use on work or after completion of the work, shall be borne by the contractor. The contractor should be registered for Provident Fund and would be required to make the deductions on the salaries paid to the workers and deposit the same to the concerned department.

### **13.0 SCHEDULE OF RATES TO COVER TAXES AND DUTIES**

No exemption or reduction of customs duties, excise duties sales tax, VAT or any part duties, transport carriages, stamp duties or Central or State Government or other body including one company or dues, taxes or charges (from or of anybody including the company), whatsoever will be granted or obtained all of which expenses shall be deemed to be included in and cover by the Schedule of rates. The contractor shall also obtain and pay for all permits, or other privileges necessary to complete work. In case where REGISTRAR, JAMIA HAMDARD UNIVERSITY wishes to avail Tax/Duty exemptions as applicable to the contractors shall comply with the instructions from REGISTRAR, JAMIA HAMDARD UNIVERSITY

### **14.0 SCHEDULE OF RATES TO COVER RISKS OF DELAY**

The schedule or Rates shall be deemed to include and cover the risk of all possibilities of delay and interference with the contractor's conduct of the works which occur from any cause including orders of REGISTRAR, JAMIA HAMDARD UNIVERSITY in the exercise of his powers and on account of extension of time granted due to various reasons and for all other possible or probable causes of delay.

### **15.0 SCHEDULE OF RATES CANNOT BE ALTERED**

For work under unit rate basis, no alteration will be allowed in the schedule of rates by reason of works or any part of them being modified, altered, extended, diminished or omitted. The schedule of rates are fully inclusive rates which have been fixed by the Contractor and agreed to by JAMIAHAMDARD and cannot be altered.

## ANNEXURE-‘A’

## List of approved makes-civil work

S. No.	Material	Make
1.	Ordinary Portiant Cement	L&T, Ultra Tech, ACC or other brands approved by the Engineer In-charge
2.	Steel Reinforcement Bars	TISCO, SAIL,RINL, Rathu Udyog Ltd
3.	Structural Steel Sections	TISCO,SAIL,RINL, Suprems
4.	Stone Aggregate (Blue/Black)	Sohna, Pali or other approved
5.	Water Proof Shuttering	Century, Green, Duro
6.	Paints	ICI, Asian, Berger, Nerolac
7.	Water Proof Paint	Apex (Asian),
8.	White Cement	Birla, JK Cement
9.	Waterproofing	Structural Water proofing Co, Dr. fixit, Overseas Water Proofing
10.	Silicon Sealants	Dow Cornig/GE
11.	Glass and Mirror	Saint Gobain/Gardian/Asahi/Modi
12.	The Adhesives	Weber, Lafarge, Keisel, Balendura
13.	Expansion Joint Covers	C.S., Inpro
14.	Vitrified Tiles	Kajaria or equivalent
15.	Vertical Blinds	Vista or equivalent
16.	19mm commercial Board and 6mm thick Ply	Duro or equivalent
17.	Fittings	
18.	Laminate	Greenlam or Equivalent
19.	Water closet, Cistern, Wash Basin	Hindware
20.	C.P. Brass Fittings	Parko or Equivalent
21.	Wooden laminate flooring	Pergo or equivalent

## ANNEXURE-‘A’

## RENOVATION OF DEAN OFFICE, BOARD ROOM AND CONFERENCE HALL/LECTURE THEATER OF FACULTY OF SCIENCE

S.NO.	Description of Item	Qty	Unit	Rate	Amount
1.	Dismantling wooden false ceiling/Gypsum partition including disposal of unserviceable surplus material and staking of serviceable material at Maint. Store or as directed by Engineer In-charge.	124.00	Sqm		
2.	Dismantling of flushing cistern/wash basin/W.C. of all types (C.I./PVC/Vitrious China) including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	3.00	Each		
3.	Dismantling tile work in floors and walls laid in cement mortar including stacking material within 50 metres lead. For thickness of tiles 10 mm to 25 mm	20.00	Sqm		
4.	Disposal of building rubbish / malba / similar	12.13	cum		

	unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.				
5.	Providing and laying vitrified floor tiles in floors and skirting in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS : 15622, of approved make, in all colours and shades, laid on Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477, in thickness as per site condition including grouting the joints with white cement and matching pigments etc., Size of Tile 600x600 mm. (double charged tiles of kajaria make	225.00	Sqm		
6.	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm center, with 25mm long dry wall screws @ 30 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but	55.00	Sqm		

	excluding the cost of painting with 12.5 mm thick tapered edge gypsum fire resistant board conforming to IS: 2095- Part I				
7.	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of (i) 1st course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. :(ii) 2nd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.(iii) 3rd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area.(iv) 4th course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/sqm).	12.00	Sqm		
8.	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	0.3	Cum		
9.	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete. (designer tills)	22.00	Sqm		
10.	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigments etc., complete.	5.00	sqm		
11.	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement, with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	0.108	Cum		
12.	Centering and shuttering including strutting, propping etc. and removal of form for : Suspended floors, roofs, landings, balconies and access	1.62	Sqm		

	platform				
13.	Steel reinforcement for R.C.C. work straightening, cutting, bending, placing in position and binding all complete upto plinth level. Cold twisted bars	20.00	Kg		
14.	12 mm cement plaster of mix : 1:4 (1 cement: 4 fine sand)	20.00	Sqm		
15.	French spirit polishing : Two or more coats on new works including a coat of wood filler	40.00	Sqm		
16.	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level. Cement mortar 1:4 (1 cement :4 coarse sand)	10.00	Sqm		
17.	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.	10.00	Sqm		
18.	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length ( hold fast lugs or dash fastener shall be paid for separately). Second class teak wood including polishing work and fixing teak wood moulding.	0.06	Cum		
19.	Providing and fixing wash basin with C.I. brackets, 32 mm C.P. brass waste of standard pattern,including painting of fittings and brackets,cutting and making good the walls wherever required: White Viterious China Wash basin size 630x450mm.Hindwear or equivalent.	1.00	each		
20.	Providing and applying white cement based putty of average thickness 2mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	180.00	sqm		
21.	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface : Water thinnable cement primer	380.00	sqm		
22.	Wall painting with Acrylic emulsion paint of approved and mnufacture to give an even shade ,two or more coats on new work	330.00	sqm		
23.	Providing and fixing PTMT Bottle trap for wash basin and sink.Bottle trap 32mm single piece moulded with height of 260mm from the center of the waste coupling 77mm breadth with 25mm minimum water seal, weighting not less than 263gms.of prayag make.	1.00	each		
24.	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work, including cutting chases and 20mm nominal outer dia. Pipes.	15.00	Meter		

25.	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete:25 to 40mm nominal bore.	1.00	Each		
26.	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	01	Each		
27.	Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/6 litre (adjustable to 4 litre/8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.	1.00	Each		
28.	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	01	Each		
29.	Providing and fixing C.P. brass angle valve for basin mixture and geyser points of approved quality confirming to IS:8931 a) 15mm nominal bore.	5.00	each		
30.	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	03	Each		
31.	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) : For fixed portion Powder coated aluminium (minimum thickness of powder coating 50 micron)	75.00	Kg		
32.	Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge. Pre-laminated particle board with decorative	2.4	Sqm		

	lamination on both sides				
33.	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge. SUB HEAD : 21 - ALUMINIUM WORK 361 Code No. Description Unit Rate ` 362 SUB HEAD : 21 - ALUMINIUM WORK (Cost of aluminium snap beading shall be paid in basic item): With float glass panes of 8 mm thickness	15.00	Sqm		
34.	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm center, with 25mm long dry wall screws @ 30 mm interval, including fixing of commercial ply to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including pasted of 4mm tick teak ply strips of 100 mm width including making of groove and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but including the cost of painting & polishing with 12 mm thick commercial ply pasted with 4mm thick teak ply strips of width of 100 mm with groove pattern complete as required.	100.00	Sqm		
35.	Removing the wall paper completely including	35.00	Sqm		

	cleaning the surface for applying the finishing work as required				
36.	Removing the existing carpet/P.V.C. flooring including cleaning the surface as required and staking the flooring at maintenance store or as directed by engineer In-charge.	161.52	Sqm		
37.	Repair of executive table (existing) by removing the existing laminate and re pasted the new laminate of 1mm thick of approved color and make including necessary polishing and repair work complete as required . The size of the table is approx.. 8'x3'x2.5'	1.00	Job		
38.	Providing and making computer table of size 3'x2'x2.5' which is made out of 19mm thick commercial board pasted with 1mm thick laminate on all exposed surface of approved color and make . The computer table having a sliding tray made out of 19mm board supported with having sliding channels including provision of keeping the CPU and files complete with teak wood moulding/margin including necessary polishing work.	1.00	Nos		
39.	Providing & fixing of wall paper (3D) of approved quality with adhesive etc. complete. (basic cost of wall paper is minimum of Rs. 45.00 per sqft.)	56.00	sqm		
40.	Removing the existing wooden doors for the execution of flooring work and refixing the same in proper size as required.	7.00	Each		
41.	Providing and laying 8mm thick wooden laminate flooring of size 196mm into 1288 mm with cushioning of 10 mm thick foam sheet of approved quality and make including all necessary material and labor and leveling of floor etc. complete (Basic cost of laminate floor is Rs. 150 per sqft.)	18.00	Sqm		
42.	Dismantling the existing galvanized iron and cast iron pipelines from the walls and floor etc. complete as required including making of provision for fixing the wall mounted water closet complete with necessary PVC pipes and fittings with staking the material with the campus as instructed by engineer in charge.	1.00	Job		
43.	Removing the khangar from the sunken of the toilet and re-filling the same after cleaning the khangar complete as required.	120.00	Cft		
44.	Providing and fixing 24" long 20mm dia C.P. brass hanger rod with Hook complete. Jaquar make	1.00	Nos		
45.	Providing and fixing C.P.Brass toilet roll paper holder of jaquar	1.00	Nos		
46.	Providing a fixing jaquar brass square with round towel ring (chrome)	01	Each		
47.	Providing and fixing C.P. brass coat hook dual systems complete. Jaquar make	1.00	Nos		
48.	Providing and fixing copper connection pipe with	4.00	Nos		



	PTMT Nuts, collar and brush of approved quality and color. 15mm nominal bore with 45cm length.				
49.	Providing and fixing long body bib cock of approved quality confirming to IS standard and wt. not less than 690gms 15mm nominal bore (Jaquar ,makes)	1.00	Each		
50.	Providing and fixing Stainless steel jail of approved quality and color. Circular type.125mm nominal dia .	1.00	Each		
51.	Providing and fixing C.P. brass hand faucet complete as required with one meter flexible tube and wall hook (sleek quality of jaquar)	1.00	Nos		
52.	Providing and fixing C.P. brass soap dish of standard size as required. Jaquar make	1.00	Nos		
53.	Providing and fixing C.P. brass soap dispenser of jaquar	1.00	Nos		
54.	Providing and fixing the stainless steel handle with lock and latch complete set of dorset make on existing wooden doors	3.00	Each		
55.	Providing and fixing the stainless steel door stopper (Twin blade) on existing wooden door complete as required	03	Each		
56.	Providing and fixing the C.P. brass wash basin mixer of jaquar quality .	01	Each		
57.	Repair of existing wooden table of size 3'x2'x3' including pasting 1mm thick laminate (high gloss) colour and make complete on all exposed surfaces of table including providing and fixing the handles etc, as required including necessary panting and polishing work.	01	Each		
58.	Providing vision panel on existing doors not exceeding 0.1 sqm in all type of flush doors/wooden door (glass of 5mm thick ) (overall area of door shutter to be measured): Rectangular or square	8.00	Sqm		
59.	Providing and fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture pin headed of size 600x600 on the existing wooden frame work on wall complete with all necessary labor and material as required	30.00	Sqm		
60.	Modification of the existing window of size 4'x3' which is made out of teak wood frame of size 8"x2.5" into required size of 6'x3' including providing and fixing the 6mm thick sliding glass on wooden beading and frame of size 2"x1" complete with making the opening in brick work complete as required.	01	Job		
61.	Providing, making & fabricating the wooden cupboard of approximate size 10'x7'x2' which is made out of 19 mm thick commercial board with 6mm thick commercial ply on back. The cupboard having 9 box with middle partition on each box and the each box having two shutters complete with pasted 1mm thick laminate of approved colour and make on all exposed surface including providing and fixing the necessary hardware like hinges,	70.00	Sqft		

	handles, lock, magmatic capture etc. with necessary polishing and panting work complete as required.				
62.	Providing, making & fabricating the wooden cupboard of approximate size 14'x2.5'x2' deep and of required size which is made out of 19 mm thick commercial board with 6mm thick commercial ply on back. The cupboard having shutters with horizontal and vertical partitions complete with pasted 1mm thick laminate of approved colour and make on all exposed surface including providing and fixing the necessary hardware like hinges, handles, lock, magmatic capture etc. with necessary polishing and panting work complete as required.	115.00	Sqft		
63.	Providing and fixing the wooden blinds of approved color and make. The horizontal blinds having the wooden strips of size 50mm x 4mm or as per manufacturer specifications with suitable wooden section in the ceiling for suspending the blinds. with required hook on top, both side complete as required.	150.00	Sqft		
64.	Providing , making and fabricating the wooden wall hanging unite of approx. size 6'x2'x1' which is made out of 19 mm thick commercial board with 6mm thick back play. The wooden unite having the provision of glass sliding shatters of 4mm thick plane glass complete with pasted 1mm thick laminate of approved colour and make on exposed surface complete with all necessary hardware lick wheel/rado, aluminium channel etc. as required.	12.00	Sqft		
65.	Providing and fixing the PVC cabinet over the washbasin. The cabinet having the looking mirror and necessary storage space inside as required of make cipla/equivalent	01	Each		
66.	Dismantling the steel windows and ventilators by cutting the windows shutters and frame by welding machine complete as required including staking the material in maintenance store	06	Each		

**ANNEXURE-‘B’****List of approved make for Electrical, PA System and Air-Conditioning works****Specification of material**

<b>S. No.</b>	<b>Particulars</b>	<b>Make</b>
1.	PVC Insulated Copper Conductor cable	Havell's /Polycab/Finolex
2.	Aluminium Armoured Cable	Havell's / Polycab/Nicco
3.	AC Box	ABB/MDS/ Hager
4.	MCB/Isolator	ABB/ MDS/ Hager
5.	Distribution Box	ABB/ MDS/Hager
6.	PVC conduits/ casing caping	Setia/Plasoduct/AKG
8.	LED Lights	Crompton Greaves /Philips/ Havells
9.	Exhaust Fan /Wall Fan	Crompton Greaves / Havells
10.	Cat-6 Data cable	AMP/D-Link/
11.	Split type Air-conditioner / Cassette type indoor unit.	Diakin /Hitachi /Mitsubishi
12.	Voltage stabilizer	Blue bird/Logic stat
13.	10Amp/20Amp modular light and power plug	Anchor Roma/North West /MK
14.	PA System complete with amplifier, microphone, speakers etc.	Sennheiser /AKG/Bosch/Apart
15.	LCD Projector	Sony/Epson

**Electrical, Air-conditioning, Multimedia works for the Renovation of Conference Hall, Board Room, and Dean Office at F/O Science:**

**PART –A**

<b>S. No.</b>	<b>Particulars</b>	<b>Quantity (Nos./Rmt.)</b>	<b>Rates (Rs.)</b>	<b>Amount (Rs.)</b>
1.	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	79		
2.	Supplying and fixing suitable size GI box with modular plate and cover in front, on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required. (For light plugs to be used in non residential buildings).	23		
3.	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	14		
4.	Providing and fixing wall fan of 16” size complete connection testing & commissioning etc as required (.).	11		
5.	S/fixing of metal clad AC Box with metal top and accessories along with one 32Amp, MCB single pole complete with connection testing & commissioning etc as required.	07		
6.	Supply and installation of recess mounted 12 watts LED round down lighters with connection, testing & commissioning etc. as required. (CAT Ref: LCDD-12-CDL/TL/WW) of CG make or equivalent as per list of approved makes.	44		
7.	Supply and installation of recess mounted 36 watts LED energy saving recess laminar suitable for 600mmX600mm modular /POP/Gypsum ceiling with connection, testing & commissioning etc. as required. (CAT Ref: LCTLR-36-FO-CDL) of CG make or equivalent as per list of approved makes.	21		
8.	S&F 12” exhaust fan with louvers complete connection testing and commissioning etc as required.	01		

9.	<p>Wiring for circuit/ sub-main wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed PVC conduit as required</p> <p>A. 2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth  B. 2 X 4 sq. mm + 1 X 4 sq. mm earth  C. 2 X 6 sq. mm + 1 X 6 sq. mm earth</p>	<p>300 Rmt.  180Rmt.  150Rmt.</p>		
10.	<p>Supplying and fixing of following sizes of PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.</p> <p>20 mm  25 mm  32 mm</p>	<p>50Rmt.  80Rmt.  10Rmt.</p>		
11.	Supplying and drawing CAT-6 data cable in suitable PVC conduit.	150Rmt.		
12.	Supplying and fixing RJ-45 data cable jack (IO) with box complete in all respect as per requirement.	08Nos.		
13.	<p>Supplying and fixing of following way surface/ recessed, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of, common neutral link, earth bar, din bar for Mounting MCB's (but without MCB's and incomer ) as required.</p> <p>A. 4 way (4 + 12), Double door</p>	01No.		
14.	<p>S/F of following amps single pole MCB in the existing MCB distribution board complete connection testing and commissioning etc as required.</p> <p>A. 6-32Amp Single Pole MCB  B. 63Amp TPN MCB</p>	<p>12Nos  01No</p>		
15.	Supply and laying of 3 ½ X 35sqmm aluminum armored cable PVC Insulated & PVC sheathed 1.1kv grade with saddle on surface.	50Rmt.		
16.	End termination of 3 ½ X 35sqmm aluminum armored cable with thimble and glan, complete	02		

	in all respect.			
<b>PART-B</b>				
<b>Air-conditioning works</b>				
1.	Supply Installation testing and Commissioning of split air-conditioning unit having cassette type indoor unit with four way flow and outdoor unit with 3 star rating .  (a) 2.2TR Capacity, Diakin FCNQ26 or equivalent as per approved list.	5Nos.		
2.	Supply and Installation of following size soft Copper pipes with insulation of 9mm thick nitrile rubber including electrical power cables from indoor unit to outdoor unit as required. (a) For 2.2 TR Cassette unit 5/8" & 3/8"	60Rmt.		
3.	Supply and Fixing of PVC drain piping with 6mm thick nitrile rubber insulation of following sizes. (a) 25mm Dia (b) 40mm Dia	60Rmt. 25Rmt.		
4.	Fabrication and Installation of M.S Angle Iron frame for outdoor units complete with 1 coat of metal primer and two coats of synthetic enamel paint.	5Nos.		
5.	Supply and installation of following capacity automatic voltage stabilizer having over current and under voltage protection (input voltage is 230 volt + /- 10% AC 50 C/S. A- 5KVA voltage stabilizer	05Nos.		

### **PART-C**

#### **Public address and multimedia system**

Technical Specification A V System for				
S.N.	Description	Technical specification	Qty.	Amount

1	<p><b>Boundary Layer Microphone</b></p> <p><b>Make: Sennheiser</b> <b>Model: MEB 114 S</b></p>	<p>On table boundary layer microphone should have following specification:  Frequency response: 40 Hz – 20 kHz or better  Max. sound pressure level: 140 dB or more  Transducer principle: pre-polarized condenser microphone  Pick-up pattern: 31ardioids  Acoustics: boundary layer microphone  LED light ring: red / green  Microphone modes: Toggle on/off  Push to mute &amp; Push to talk</p>	1	
2	<p><b>Wireless vocal set (Handheld)</b></p> <p><b>Make: Sennheiser</b> <b>Model: XSW 35</b></p>	<p>Wireless handheld microphone set should have following specification:  Presets: 12  Signal-to-noise ratio: &gt; 103 dB(A) or better  Diversity reception: True Diversity  Transmitter: Frequency response (microphone): 80...16000 Hz or better  Sound pressure level (SPL): 149 dB or more  Pick-up pattern: 31ardioids  Operating time approx. 10 h or more</p>	1	
3	<p><b>Wireless lapel set (Handheld)</b></p> <p><b>Make: Sennheiser</b> <b>Model: XSW 12</b></p>	<p>Wireless lapel microphone set should have following specification:  Presets: 12  Signal-to-noise ratio: &gt; 103 dB(A) or better  Diversity reception: True Diversity  Transmitter: Frequency response (microphone): 100...16000 Hz or better  Sound pressure level (SPL): 142 dB or more  Pick-up pattern: Omni-directional  Operating time approx. 10 h or more</p>	1	
4	<p><b>Podium gooseneck microphone set with sock mount</b></p> <p><b>Make: Sennheiser</b> <b>Model: MEG1440</b></p>	<p>Gooseneck microphone set should have following specification:  Connector: XLR 3m/XLR 5m.  Dimension : 450MM  Transmitter: Frequency response (microphone): 50Hz – 20Khz  Sound pressure level: 130 dB SPL  Pick-up pattern: cardioids</p>	1	
4	<p><b>Two-way Wall Mount speakers</b></p> <p><b>Make: Apart</b> <b>Model: MASK4T</b></p>	<p>Two way wall mount speaker should have following specification:  Woofer size: 4.25 inch or more  Tweeter size: 1 inch or more  100V transformer power taps: 20 – 10 – 5 – 2.5 watts or more  Low impedance dynamic power: 70 watts or more  Main construction material: ABS plastic  Vertical dispersion angle 1000 Hz: 180° or more  Horizontal dispersion angle 1000 Hz: 180° or more  Max SPL 1m: 104 dB or more  Frequency response: 80 – 20K Hz or better  Grille main material aluminum</p>	6	

5	<b>Power Amplifier</b> <b>Make: Apart</b> <b>Model: Concept1T</b>	2-zone 100 volt integrated mixing amplifier output power RMS 100 volts      2 x 60 watts or more cooling system    convection RS232 (serial communication port) line input unbalanced      4 or more      1	1	
6	<b>Sound Craft epm6</b> <b>Make: Sound craft</b> <b>Model: EMP6</b> <b>Mixer</b>	Frame sizes 6+2, 8+2 and 12+2 XLR-type and ¼" metal jack connector sockets 3-band EQ with a swept mid on mono inputs 2 configurable auxiliary buses	1	
7	<b>Rack 19" 9U Along with all standard accessories</b> <b>Make: MTS</b> <b>Model: 9U</b>	Rack 9U for housing products consisting of the following specifications:- Castor with Break (set of 4 pcs) 1U Cantilever Tray Fan 90 CFM 23 VAC Power Distribution unit 6 points 5 AMP R/P 1U Blank Panel MS 1U Vent Plates Mounting Hardware (Pkt of 5 Pcs.)	1	
8	<b>3000 lumen XGA Projector</b> <b>Make: Epson</b> <b>Model:X29</b>	3000 lumens XGA projector should have following specification:  Lumens 3000 or more Resolution XGA or better Input connectivity:VGAx2, HDMIx1,Audio 3.5mmX2 Technology: LCD Size: 0.55" with MLA (D8) Lense : Optical Zoom (Manual) / Focus (Manual) Zoom Ratio: 1 – 1.2 Throw Ratio: 1.48 – 1.77 (Wide – Tele) <b>Lamp:</b> Life (Normal/Eco): 5,000 hours / 10,000 hours Type: 200W UHE	1	
9	<b>84" motorized screen</b> <b>Make: AV Space</b> <b>Model: 8443</b>	Motorized Screen should have following specifications: 84" Motorized screen with remote control Aspect ratio 4:3	1	
10	<b>Cable &amp; Connectors</b> <b>Make: Falcon/TS/PAC</b>	Cable & Connectors All	1	



	<b>Model: MX/TS</b>			
11	<b>Installation &amp; Programming</b>	Implementation services includes – Design, Engineering , Labour , Installation , Testing and commissioning and training to users at the site to set the systems up and operate the same. And Programming for Audio and Control	1Job	

