

## NOTICE INVITING TENDER

The Executive Engineer, University Works Division on behalf of GGSIPU invites sealed item rate/ tenders for the following work(s) (strike out as the case may be).

S. No.	NIT No.	Name of work & Location	Estimated cost put to tender	Earnest money	Time of completion	Last date & Time	Time & date of submission & opening of tender
						Issue of tender documents	
1	2	3	4	5	6	7	8
1	8/EE/UWD/2011-2012	N/A GGSIP University, Dwarka Campus, New Delhi SH: Setting up of Labs with Modular Laboratory Furniture, Fumehood etc. in BRL-309, University School of Basic & Applied	Rs. 31,89,443/-	Rs.64,000/-	150 days	23 <sup>rd</sup> October 2011 4:00 PM	24/10/2011 upto 3:00PM 24/10/2011, 3:30 PM

The tender forms and other details can be obtained from the office of the EE on payment of Rs.1,000/- and same can also be down loaded form website [www.ipu.ac.in](http://www.ipu.ac.in). Contractors who fulfill the following requirements shall be eligible to apply:

- a) Agency should be original manufacturer or authorized dealer of the original manufacturer of modular laboratory workstations. In case of authorized dealer, agency should have memorandum of understanding with original manufacturers of modular laboratory workstations that the workstations required under this tender shall be supplied by the tenderer with in the time period specified. The agency shall have to supply the workstations of the manufacturer with whom MOU has been signed and submitted with the bid.
- b) Agency should have satisfactorily completed three similar works each costing not less than **Rs.13.00/- lacs** or two similar work costing not less than **Rs. 20.00/- lacs** or one similar work costing not less than **26.00/- lakh** during the last seven years ending **August 2011**. Similar work shall mean work of providing & fixing modular laboratory furniture in central government / central autonomous bodies / educational institutions / central public undertaking / private establishment.  
The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of **7% per annum**; calculated from the date of completion to last date of receipt of applications for tenders.
- c) Should have minimum average annual financial turn over of Rs.25.00 lac during the last three years ending **March 2011** duly certified by Chartered Accountant. The turnover should be for SITC of modular laboratory workstations.
- d) Should not have incurred loss for more than two years during the last five years ending **March 2011** duly certified by Chartered Accountant.
- e) Should have a current solvency of Rs.15 lacs from nationalized or a Scheduled Bank. Bidder should submit solvency certificate from a Nationalized from a schedule Bank.
- f) Should have valid ISO 9001. Should submit certificate of manufacturer for compliance of standards for lab furniture, Fume hood as mentioned in tender document. Bidder to submit copy of certificates of manufacturer.

- g) Joint ventures shall not be accepted.
- h) Valid registration for Sale Tax/VAT, Excise as applicable and Income Tax. Copy of valid registration with sale tax/VAT, Excise, Pancard alongwith acknowledgement of upto date return.
- i) To become eligible, the tenderer shall have to furnish an affidavit as under:-  
"I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of department, then I/we shall be debarred for tendering in GGSIPU in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee."

A declaration to the above effect in the form of affidavit on stamp paper of Rs.10/- duly attested by Notary/Magistrate should be submitted.

Earnest Money should be deposited alongwith the tender documents in separate envelop marked as in form of Fixed Deposit receipt of Scheduled Bank/Demand Draft of a scheduled Bank issued in favour of Registrar, GGSIPU. A part of earnest money is acceptable in the form of bank guarantee also. In such case, 50% of earnest money or Rs.20 lakh, whichever is less, will have to be deposited in shape prescribed above, and balance in shape of Bank Guarantee.

Both sealed envelopes (EMD and Tender document) marked as Earnest Money and Tender shall be submitted together in another sealed envelope superscripted with name of work and due date of opening. The envelope marked tender shall be opened whose Earnest Money, placed in the other envelope marked as Earnest Money is found to be in order.



**Executive Engineer**  
**UWD**



# **GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY**

## **Tender Document**

**Name of Work: A/A GGSIP University, Dwarka Campus, New Delhi**

**Sub Head: Setting up of Labs with Modular Laboratory Furniture, Fumehood etc. in BRL-309, University School of Basic & Applied Science, GGSIPU, Dwarka Campus**

**Executive Engineer  
University Works Division  
Ground Floor, Library Block,  
GGSIPU, Sector- 16C, Dwarka,  
New Delhi – 110075  
Contact : 25302291**

Document Fee : Rs 1,000.00 (Non-refundable)

# **Volume - I**

**General Conditions**

**Special Conditions**

**Particular Specification**

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Name of Work : A/A GGSIP University, Dwarka Campus, New Delhi

Sub Head : Setting up of Labs with Modular Laboratory Furniture,  
Fumehood etc. in BRL-309, University School of Basic &  
Applied Science, GGSIPU, Dwarka Campus

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**Office of Executive Engineer**  
Guru Gobind Singh Indraprastha University  
GGSIPIU, Sector- 16C, Dwarka, New Delhi – 110075

**Press Notice**

Executive Engineer, University Works Division, Guru Gobind Singh Indraprastha University (GGSIPIU) invites on behalf of GGSIPIU sealed item rate tenders on two envelope system for following works

NIT No.	Name of work	Estimated Cost	Earnest Money	Time of Completion	Cost of Tender	Last date of sale of tenders / date of opening of technical bid
8/UWD/2011-12	A/A GGSIPIU University, Dwarka Campus, New Delhi SH: Setting up of Labs with Modular Laboratory Furniture, Fumehood etc. in BRL-309, University School of Basic & Applied Science, GGSIPIU, Dwarka Campus.	Rs 31,89,443/-	Rs 64,000/-	150 days	Rs 1000/-	24/10/2011

The tender forms and other details can be obtained from the office of Executive Engineer, UWD, Ground Floor, Library Block, GGSIPIU, Sector-16C, Dwarka, New Delhi-110075 on payment of cost of tender on submission of application. Last date of receipt of application is 19/10/2011. Complete tender document and other details can be seen on website [www.ipu.ac.in](http://www.ipu.ac.in). Tender can also be downloaded from the website [www.ipu.ac.in](http://www.ipu.ac.in).

**EE/UWD**

## ***NOTICE INVITING TENDER***

The Executive Engineer, University Works Division, on behalf of the GGSIPU invites Sealed item rate tenders in two-bid system ( Technical and Financial bid) from specialized agencies for the following work:-

1. Name of Work: A/A GGSIP University, Dwarka Campus, New Delhi.
- Sub Head : Setting up of Labs with Modular Laboratory Furniture, Fumehood etc. in BRL-309, University School of Basic & Applied Science, GGSIPU, Dwarka Campus
- Estimated Cost: **Rs.31,89,443/-**
- Time Period: 150 days from the date of start as defined in Schedule 'F' or from the first date of handing over of site, whichever is later, in accordance with phasing, if any, indicated in the tender documents.

2. **Eligibility Criteria:**

- a) Agency should be original manufacturer or authorized dealer of the original manufacturer of modular laboratory workstations. In case of authorized dealer, agency should have memorandum of understanding with original manufacturers of modular laboratory workstations that the workstations required under this tender shall be supplied by the tenderer with in the time period specified. The agency shall have to supply the workstations of the manufacturer with whom MOU has been signed and submitted with the bid.
- b) Agency should have satisfactorily completed three similar works each costing not less than **Rs.13.00/- lacs** or two similar work costing not less than **Rs. 20.00/- lacs** or one similar work costing not less than **26.00/- lakh** during the last seven years ending **August 2011**. Similar work shall mean work of providing & fixing modular laboratory furniture in central government / central autonomous bodies / educational institutions / central public undertaking / private establishment. Copy of the work done / completion certificates from client / consultant not below the rank of Executive Engineer / Project Manager / Administrative Officer shall be submitted. Performance Certificates of private establishment shall be supported by relevant TDS certificates. Performance Certificates not supported by TDS Certificates shall not be considered. Performance certificates shall also be supported by work order/supply order indicating schedule of quantity with rates.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of **7% per annum**; calculated from the date of completion to last date of receipt of applications for tenders.

The bidder should include details of only such works in **Form-2** which satisfy the qualification criteria and submit details/credentials of only such works

- c) Should have minimum average annual financial turn over of Rs.25.00 lac during the last three years ending **March 2011** duly certified by Chartered Accountant. The turnover should be for SITC of modular laboratory workstations. The bidder should furnish Annual Financial Turnover for each of the last five financial years in **Form-1** and give reference of the document (with page no.) relied upon. This should be duly certified by a Chartered Accountant. Year in which no turnover is shown would also be considered for working out the average. In case turnover of 2010-2011 is not audited, the turnover of preceding three years shall be considered for evaluation. A certificate from Chartered Accountant is to be furnished stating the fact that turnover of year 2010-2011 is yet to be audited. This should be supported by copy of balance sheet, profit and loss account duly certified by Chartered Accountant.
- d) Should not have incurred loss for more than two years during the last five years ending **March 2011** duly certified by Chartered Accountant. The bidder should furnish Annual profit/loss for each of the last 5 financial years in tabular **Form-1** and give reference of the document (with page no.) relied upon. This should be duly certified by the Chartered Accountant. In case accounts for year 2010-2011 are yet to be audited, five financial years preceding the year 2010-2011 shall be considered for evaluation. Year in which no data is shown would be considered as loss.
- e) Should have a current solvency of Rs.15 lacs from nationalized or a Scheduled Bank. Bidder should submit solvency certificate from a Nationalized from a schedule Bank.
- f) Should have valid ISO 9001. Should submit certificate of manufacturer for compliance of standards for lab furniture, Fume hood as mentioned in tender document. Bidder to submit copy of certificates of manufacturer.
- g) Joint ventures shall not be accepted.
- h) Valid registration for Sale Tax/VAT, Excise as applicable and Income Tax. Copy of valid registration with sale tax/VAT, Excise, Pancard alongwith acknowledgement of upto date return.
- i) To become eligible, the tenderer shall have to furnish an affidavit as under:-  
 “I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of department, then I/we shall be debarred for tendering in GGSIPU in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.”

A declaration to the above effect in the form of affidavit on stamp paper of Rs.10/- duly attested by Notary/Magistrate should be submitted.

### 3. Declaration of the Bidder

Even though the bidders may meet the above qualifying criteria, they are subject to be disqualified if they have

- a) Made misleading or false representation in the forms, statements and attachments in proof of the qualification requirements. In such a case, besides tenderer's

liability to action under para 9.4 of Instructions to Tenders, the tenderer is liable to face the penalty of banning of business dealings with him by GGSIPU.

- b) Records of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.
- c) Their business banned by any Central/State Government Department/Public Undertaking or Enterprise of Central/State Government.
- d) Not submitted all the supporting documents or not furnished the relevant details as per the prescribed format.

A declaration to the above effect in the form of affidavit on stamp paper of Rs.10/- duly attested by Notary/Magistrate should be submitted as per format given in **Form '9'** enclosed.

4. Location / Places and Scope of Work:

The work is to be done in Guru Gobind Singh Indraprastha University, Dwarka Campus at sector 16 C. The scope of work includes supply, installation, testing and commissioning all complete.

5. Agreement shall be drawn with the successful tenderer on prescribed Form no. CPWD 7/8, which is available as a Govt of India Publication. Tenderer shall quote his rates as per the "General Conditions of Contract for CPWD Works – 2010"(hereinafter called as GCC 2010) which will form part of the agreement. The terms and conditions of this tender document shall have precedence over the corresponding provisions of GCC 2010.
6. The site of work is available.
7. Desirous agencies may obtain tender document on request in writing from University Works Division, Ground Floor, Library Block, GGSIPU, Sector-16C, Dwarka, New Delhi-110075 on any working day between 1000 Hrs. (IST) to 1600 Hrs. (IST) up to **20/10/2011** on payment of non-refundable fee of **Rs.1,000/- (Rupees One Thousand only)** in the form of crossed Demand Draft drawn in favour of Registrar, GGSIPU payable at New Delhi. Last date of receipt of application is **19/10/2011**. Tenders can also be downloaded from the website [www.ipu.ac.in](http://www.ipu.ac.in). In case of downloaded tenders, demand draft of **Rs. 1,000/-** shall also be enclosed with the bid toward tender document cost in form of Demand Draft in favour of Registrar, GGSIPU payable at New Delhi.
8. Agencies fulfilling the above criteria mentioned at Sl. 2 (i) may submit the tender documents along with Earnest Money **Rs. 64,000/- (Rupees Sixty Four Thousand Only)** in the shape of fixed deposit receipt of a scheduled bank or demand draft of a scheduled bank issued in favour of Registrar, GGSIPU. 50% of earnest money or Rs.20 lakh, whichever is less, will have to be deposited in the shape prescribed above and balance amount of the earnest money can be accepted in the form of Bank Guarantee issued by scheduled bank having validity of 6 months or more from the last date of receipt of tenders.

9. Tender shall be submitted in a sealed cover super scribing the name of the project and due date of opening. This Envelope shall contain two sealed envelopes super scribing as below:

Part-I : Technical Bid

Part-II : Price Bid

Name of work & date of opening should be super scribed.

10. Technical bid shall contain following envelopes:

Envelop 1: Earnest money Deposit & Sale Money (in case of downloaded tenders). Envelope to be super sealed as EMD and solemnly.

- Envelop 2:
- a) Details & supporting document for eligibility criteria in prescribed formats.
  - b) Original Tender Documents signed and stamped on each page including blank schedule of quantities.
  - c) Covering letter / Letter of submittal with following details on the letter head of the agency :
    - i) Name & Address of the tenderer.
    - ii) Name , address and contact no of the person who holds power of attorney, if any.
    - iii) Name & address and contact nos of the service centres and spare parts dealer of the make of each item.
  - d) Layout & 3 D drawings showing complete details / specifications / material of each item of schedule of quantities to be supplied, installed and commissioned.
  - e) Technical catalogue of the items with details
  - f) Format of technical bid , Form 8 duly filled in and signed.

Envelop 3: Price bid shall contain:

- Only the Schedule of Quantities, Vol. II of Tender document with rates and amounts filled for each item and with no conditions. All corrections in quoted prices must be stamped and signed by the tenderer. There shall be no condition in the price bid.
- Financial bid shall be signed by the authorized signatory duly authorized by the person holding the power of attorney
- The rates of all items shall be quoted in India rupee only and shall be paid in Indian rupee only.

11. Authority to Sign

- a) If the applicant is an individual, he should sign above his full name and current address.
- b) If the applicant is a proprietary firm, the Proprietor should sign above his full name and the full name of his firm with its current address.
- c) If the applicant is a firm in partnership, the documents should be signed by all the partners of the firm above their full names and current addresses. Alternatively the documents should be signed by a partner holding Power of Attorney for the firm.

- d) If the applicant is a limited Company, or a Corporation, the Documents shall be signed by a duly authorized person holding Power of Attorney for signing the documents.
12. All information called for in the enclosed forms should be furnished against the relevant columns in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even if no information is to be provided in a column, a “nil” or “no such case” entry should be made in that column. If any particulars/query is not applicable in case of the bidder, it should be stated as “not applicable”. The bidders are cautioned that not giving complete information called for in the document or not giving it in clear terms or making any change in the prescribed forms or deliberately suppressing the information may result in the bidder being liable to be disqualified. Applications made by telegram or telex and those received late will not be entertained.
  13. The Bid must be complete in all respect leaving no scope for ambiguity. It is in the interest of Bidder to submit complete and comprehensive proposal leaving no scope for any further questionnaires.
  14. Bidder is required to make a proposal in a format as outlined in the checklist enclosed in this document in order to achieve the objective of maintaining uniform proposal structure from all the Bidders. These requirements must be adhered by all the Bidders.
  15. The pre-qualification requirements are explicitly stated in this document. Bidder must ensure submission of all documents as per checklist.
  16. Submission of Bids shall not be presumed to pre-qualify or entitle the Agency to participate in the main Tendering process.
  17. Last date for submission of tender document is **24/10/2011** upto 15.00 Hrs.
  18. Opening of Tenders

Part-I of the Tenders shall be opened at 15.30 Hrs on **24/10/2011** in the presence of the intending tenderer or their authorized representative.

Part-II of the tender (Price bid) of the agencies whose technical bid is accepted shall be opened at a later date to be intimated to the agencies.

In the event of a tender being rejected, the earnest money deposited with such tender shall there upon be returned to the tenderer, without any interest.

19. The tender for the works shall remain open for acceptance for a period of ninety days from the date of opening of financial bids. If any tenderer withdraws his tender before the said period or issue of letter of acceptance or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then University shall without prejudice to any other right or remedy be at liberty to forfeit 50% of the said earnest money deposit. Further, the tenderer shall not be allowed to participate in the re tendering process of the work.

20. If any information furnished by the Bidder is found incorrect at a later stage, such Bidder shall be liable to be debarred from tendering. The GGSIPU reserves the right to verify the particulars furnished by the Bidder independently and may visit any work site for Quality assessment.
21. The eligibility criteria shall be evaluated first and each of the above criteria shall be fulfilled individually. The financial bid of only those eligible contractors fulfilling the above mentioned criteria shall be opened and evaluated. The date and time of opening of financial bid shall be intimated separately to the agencies, who satisfy the eligibility criteria.
22. The Contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of Banker's Cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any scheduled bank (in case guarantee amount is less than Rs.1,00,000/-) or Fixed Deposit Receipts of any Scheduled Bank or in the form of an irrevocable bank guarantee bond of any scheduled nationalized bank in accordance with the form prescribed or fixed deposit receipt.
23. The description of the work is as follows:

Name of Work:           A/A GGSIP University, Dwarka Campus, New Delhi.

Sub Head :               Setting up of Labs with Modular Laboratory Furniture, Fumehood etc. in BRL-309, University School of Basic & Applied Science, GGSIPU, Dwarka Campus
24. Copies of other drawings and documents pertaining to the works will be open for inspection by the tenders at the office of executive Engineer, UWD. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to nature of ground, sub soil, the form and nature of the site, the means of access to the site, the accommodation they may require for completion of work in time bound manner and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity, access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract document. Submission of a tender by tenderer implies that he has read this letter and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the GGSIPU and local conditions and other factors having a bearing on the execution of the work. .
25. The competent authority on behalf of the GGSIPU does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the

tenders received without assigning any reason. Tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be liable for rejection.

26. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
27. The competent authority on behalf of GGSIPU reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
28. The Contractor shall not permitted to tender for works in the UWD, GGSIPU responsible for award and execution of contracts, in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any officer in the GGSIPU. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.
29. This notice inviting Tender shall form a part of the contract document. The successful tenderer/contractor, on issue of letter of Commencement of work by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of:
  - a) Notice inviting tender, Tender document including Schedule of Quantities, Contract clauses, Special conditions, particular specifications and drawings, if any, forming part of the tender document as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
  - b) Standard CPWD Contract Form – 7/8 of 2010 publication

The successful tenderer shall submit stamp papers of appropriate value as per the provisions of Indian Stamp Act. The cost of the stamp papers shall be borne by the tenderer.

- 30 The GGSIPU reserve the right to reject any or all prospective applications without assigning any reason and to restrict the list of contractors to any number deemed suitable by it.

**Executive Engineer  
University Works Division**

## ***Letter of Submission***

- (A) Item rate tender for Construction and Development of Phase-I of West Campus of GGSIPU at Sector-16 C, Dwarka, New Delhi.

Name of Work: A/A GGSIP University, Dwarka Campus, New Delhi.

Sub Head : Setting up of Labs with Modular Laboratory Furniture, Fumehood etc. in BRL-309, University School of Basic & Applied Science, GGSIPU, Dwarka Campus

- i) To be submitted by 15.00 HRS hours up to **24/10/2011** to Executive Engineer. UWD, Ground Floor, Library Block, GGSIPU, Sector-16C, Dwarka, New Delhi-110075.
- ii) Technical bids to be opened in presence of tenderers who may be present at 15.30 hours on **24/10/2011** in the office of UWD, Ground Floor, Library Block, GGSIPU, Sector-16C, Dwarka, New Delhi-110075.
- iii) Financial bid of those tenderers whose technical bid are accepted to be opened on date & time notified separately to be technically qualified bidders in the office of **Executive Engineer, UWD, Ground Floor, Library Block, GGSIPU, Sector-16C, Dwarka, New Delhi-110075.**

Issued to -----

Signature of officer issuing the documents -----

Designation -----

Date of Issue -----

### **T E N D E R**

I/ We have read and examined the Notice inviting tender, specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, special condition, particular Specification, Schedule of Quantities & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the GGSIPU within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender open for Ninety (90) days from the due date of opening of tender thereof and not to make any modifications in its terms and conditions.

The earnest money of **Rs.64,000/-** has been deposited in the shape of fixed deposit receipt of a scheduled bank/ demand draft of a scheduled bank issued in favour of Registrar, GGSIPU. If I/we, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said GGSIPU or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/we fail to commence work as specified, I/we agree that GGSIPU or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the clauses of contract. Further, I/We agree that in case of forfeiture of earnest money or both Earnest Money & Performance Guarantee as aforesaid, I/We shall be debarred for participation in the retendering process of the work.

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

Date -----

Signature of Contractor

Postal Address

Witness :

Address :

Occupation :

#### ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the GGSIPU for a sum of Rs.----- (Rupees ---  
-----)

The letters referred to below shall form part of the Agreement :

a)

b)

c)

Executive Engineer,  
University Works Department

**DETAILS OF ANNUAL TURNOVER**

**A FINANCIAL DETAILS**

<b>FINANCIAL YEAR</b>	<b>GROSS ANNUAL TURNOVER ON SIMILR WORK (IN Lakhs)</b>	<b>PROFIT/LOSS (IN Lakhs)</b>
2010-2011		
2009-2010		
2008-2009		
2007-2008		
2006-2007		

**B. Audited balance sheet and profit & loss account for above five years to be submitted.**

**C. Latest Solvency certificate from Banker valid on date of receipt of tenders.**

**D. In case the audited report of 2010-11 is not available, report of 2005-06 shall be submitted.**

**(Stamp & Signature of Bidder)**

**DETAILS OF SIMILAR WORKS COMPLETED DURING LAST 05 (FIVE) YEARS**

Sl.No.	DESCRIPTION OF WORK	POSTAL ADDRESS OF CLIENT	CONTRACT VALUE	COMPLETED VALUE	STARTING DATE	SCHEDULED COMPLETION DATE	ACTUAL COMPLETION DATE	REASONS FOR DELAY, IF, ANY

NOTE: Performance Report issued by Client for all above job(s) shall be furnished alongwith the Bid as per form 3.

(Stamp & Signature of Bidder)

**PERFORMANCE REPORT OF WORKS REFERRED IN FORM-2**

1. Name of work/ Project & Location :
2. Name of Client and Address :
3. Agreement No./ Work Order No. :
4. Value of work as per  
work order/Award : Rs.
5. Total value of actual work done : Rs.
6. Estimated Cost of award : Rs
7. Date of start :
8. Date of completion
  - i) Stipulated date of completion :
  - ii) Actual date of completion :
9. Amount of compensation levied for delayed completion, if any : Rs.
10. Amount of reduced rates item if any : Rs
11. Amount of compensation not yet decided :
12. Performance Report
  - 1) Quality of work Very Good/Good/Fair/Poor
  - 2) Financial soundness Very Good/Good/Fair/Poor
  - 3) Technical Proficiency Very Good/Good/Fair/Poor
  - 4) Resourcefulness Very Good/Good/Fair/Poor
  - 5) General behaviour Very Good/Good/Fair/Poor

Dated : \_\_\_\_\_  
(Signature & Stamp of Executive Engineer or Equivalent)

Note :

1. This FORM should be submitted separately for each work completed by the Bidder during last 07 (SEVEN) years for the works indicated in FORM-2.
2. This FORM shall be signed & stamped by the Bidder's Client not below the rank of Executive Engineer or equivalent.

**ORGANISATION STRUCTURE**

1. Name & Address of the Bidder :
2. Telephone No./Fax No./ e-mail :
3. Legal status of the Bidder (attach copies of original document defining the legal status)
  - a) An Individual
  - b) A proprietary firm
  - c) A firm in partnership
  - d) A limited company or Corporation
  - e) A Public Sector Undertaking
4. Particulars of registration with various Government Bodies (Attach attested Photo Copy)  
Organization /Place of registration Registration No
5. PAN No. -----
6. Names and Titles of Directors & Officers with designation to be concerned with this work. :
7. Name & Designation of individuals authorized to act for the organization :  
(Pl attach power of attorney in favour of authorized representative duly signed by authorized signatory)
8. Was the Bidder ever required to suspend work for a period of more than six months continuously after you commenced the construction? If so, give the name of the project and reasons of suspension of work. :
9. Has the Bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment. :
10. Has the Bidder, or any constituent partner in case of partnership firm, ever been debarred/ black listed for tendering in any organization at any time? If so, give details. :
11. Has the Bidder, or any constituent partner in case of partnership firm, ever been convicted by a court of law? If so, give details. :
13. Any other information considered necessary but not included above. :

(Stamp & Signature of Bidder)

**COMPLIANCE TO BID REQUIREMENT**

We hereby agree to fully comply with, abide by and accept without variation, deviation or reservation all technical, commercial and other conditions whatsoever of the Bidding Documents and Addendum to the Bidding Documents, if any, for subject work issued by GGSIPU.

We hereby further confirm that any terms and conditions if mentioned in our bid (Un-priced as well as Priced Part) shall not be recognized and shall be treated as null and void.

We \_\_\_\_\_ (Name of the Bidder) hereby represent that we have gone through and understood the Bidding Document (which in two parts) in Part-I (Technical Section) and Part-II (Schedule of Quantities i.e. Price/Financial bid) and that our Bid has been prepared accordingly in compliance with the requirement stipulated in the said documents.

We are submitting a copy of Bidding Document marked “Original” as part of our Bid duly signed and stamped on each page in token of our acceptance. We undertake that Part-I and Part-II of the Bidding Document shall be deemed to form part of our bid and in the event of award of work to us, the same shall be considered for constitution of Contract Agreement. Further, we shall sign and stamp each page of this Part-I and Part-II as a token of Acceptance and as a part of the Contract in the event of award of Contract to us.

We further confirm that we have indicated prices in Schedule of Quantities and submitted in Price Bid in separately sealed envelope. We confirm that rate quoted by us includes price for all works/activities/supply etc. as mentioned in item description of the items in Schedule of Quantities.

**SIGNATURE OF BIDDER** : \_\_\_\_\_

**NAME OF BIDDER** : \_\_\_\_\_

**COMPANY SEAL** : \_\_\_\_\_

**DETAILS OF REGISTRATION**

Bidder to furnish details of Provident Fund Registration :

PF REGISTRATION NO. :

DISTRICT & STATE :

We hereby confirm that the above PF Account is under operation presently and shall be used for all PF related activities for the labour engaged by us in the present work (if awarded to us).

(SIGNATURE OF BIDDER)

a) Sales Tax/VAT :

b) Excise :

c) PAN No. :

The above statement is true.

(SIGNATURE OF BIDDER)

**DECLARATION BY THE BIDDER**

(Affidavit on Non-Judicial Stamp Paper of Rs.10/- duly attested by Notary / Magistrate)

This is to certify that We, M/s \_\_\_\_\_ in submission of this offer confirm that:-

- i) We have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements;
- ii) We do not have records of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.
- iii) Business has not been banned with us by any Central / State Government Department/ Public Sector Undertaking or Enterprise of Central / State Government.
- iv) We have submitted all the supporting documents and furnished the relevant details as per prescribed format.
- v) The information and documents submitted with the tender by us are correct and we are fully responsible for the correctness of the information and documents submitted by us.
- vi) We understood that in case of any statement/information/document furnished by us or to be furnished by us in connection with this offer is found to be incorrect or false, our EMD in full will be forfeited and business dealings will be banned,

SEAL, SIGNATURE & NAME OF THE BIDDER

Signing this document

**CHECK LIST FOR SUBMISSION OF BID**

Bidder is requested to fill this check list and ensure that all details/documents have been furnished as called for in the Bidding Document along with duly filled in, signed & stamped checklist **with each copy of the "Un-priced bid (Part – I)"**.

**Please tick the box and ensure compliance:**

- 1      EMD
- 2      proposal forms
- 3      Bid Forwarding Letter
- 4      Power of Attorney in Favour of the person who has signed the bid on stamp paper of Appropriate value.
- 5      Partnership Deed in case of partnership firm and Article of Association in case of limited company.
- 6      Compliance to Bid Requirement
- 7      Declaration regarding PF
- 8      Declaration by the bidder
- 9      All pages of the bid have been page numbered in sequential manner.
- 10     Copy of ISO 9001, Type Test Certificates
- 11     Undertaking as under Clause-2(i) page-7
- 12     Declaration as under Clause-3
- 13     Valid VAT, Service Tax, Excise Registration, PAN Card

**SIGNATURE OF BIDDER :** \_\_\_\_\_

**NAME OF BIDDER :** \_\_\_\_\_

**COMPANY SEAL :** \_\_\_\_\_

**Technical Format**

S.No	Description of Work	To be filled in by Bidders		
		Sizes Offered	Detailed specifications of materials / components	Additional details
1 a)	Providing and installation of 750 - 900mm high Work Bench / Sitting Table of length and width of work top and Add on Units in any shape / configuration as per Site / Lab requirement. The portion below worktop shall consist of storage units having Drawers, Shutters, locks, hinges, handles, brackets, wheels or other required / suitable supports and provisions of leg space, fixing sinks, supporting of granite top etc. wherever required as per approved drawing, design, specifications & directions of Engineer in Charge. (The area of work top as installed shall be measured for payment. The granite top and sink units shall be measured and paid for separately.)			
	b) Less area for not Providing storage unit in under bench			
2 a)	Providing and installation of Sink units having stainless Steel sink of overall size 392mm x 392mm x 250mm with all accessories and having 3 way CP brass faucet, peg board and eye shower, all complete as per approved drawing, design, specification & directions of Engineer in Charge. a) Stainless sink nirali grace plain or equivalent. b) Eye shower of Broen make model no.7701 or equivalent. .c) Swan Neck 3 - Way Faucet of Broen make model no 15506.009 or equivalent.			

	b) Extra for providing and installing china sink instead of stainless steel sink in item 2 (a) above			
	c) Extra for providing and installing Poly propylene sink instead of stainless steel sink in item 2 (a) above of similar size.			
3	Providing and fixing of Double Sided two tier Reagent shelf in main and add on configuration of size 1200mm x 320mm x 515mm each with cutouts for electrical module plates, switches, sockets etc. complete as per approved drawing, design, specifications & directions of Engineer in Charge.			
4	Providing and installation of Anti Vibration Table of size 900mm x 750mm x 900mm as per approved drawing, design, specifications & directions of Engineer in Charge.			
5	Providing and Fixing Single sided bench mounted electrical trunking of Length 1500mm with cutouts for module plate, switches, sockets etc. on Work Benches complete as per approved drawing, design, specifications & directions of Engineer in Charge.			
6	Providing and installation of Fume Hood with auto bypass bench type having Superstructure MS electro galvanised & Powder coated outer casing. Liner : Phenol Based Industrial Lamminate, 5 mm Thick. Vertical Type Sash with toughened glass Granite worktop with Oval Shaped 230x78x135mm PP cupsink. Remotely operated color coded three services (PW, Nit, Vac) with SS braided flexible hose & brass fittings. A soft touch button panel with main switch, switch for blower & tube light & spare switch is provided. LED indicators to show the ON & OFF positions of switches are provided. Six no. (230V, 5/16A, 50Hz) electrical sockets & switches of approved make.			
	a) 1500 mm wide			
	b) 1800 mm wide			

7	Supplying and Installation of Centrifugal Blower for fume hoods PP + FRP lined Blower with FRP-vinylester impeller and a motor, 4500CFm, 1200RPM, 5.0H.P., 100mm W.G. (ACLB 550)			
8	Ducting for Fume Hood made up of 6mm PP and 3mm FRP			
9	Supplying and installation of stainless steel chemical storage cabinet of size (W850mm x D850mm x H1650mm) as per approved drawing, design, specifications and directions of engineer in charge..			
10	Supply, Installation, testing & Commissioning of gas distribution system comprising of following items as per specifications and directions of engineer in charge.			
	a) Black steel pipes to IS 1239 heavy class Including all fittings like anchor fasteners Angle, brackets, clamp, coupling, bends, Reducers, elbows, tee , flanges, Ms structure etc. as required painting with one coat Red –oxide primer and two or more coats of Synthetic enamel paints to give an even shade Cutting class C heavy Jindal make 15mm dia			
	b) Quick shut off valve fire safe design lever type Extra superior quality 15mm (3 Nos.)Rubber tubing 1.5mtr coils ISI marked IS:10908 manufactured from the finest synthetic rubber , chemicals & filters duly Approved by oil companies (Specially designed for Laboratories) (3 Nos.)Bunsen Burner with N.P. Brass pipe &Heavy base Round valve superior quality with brass parts (3 Nos.)Manifold cylinder pipe (4 cylinder ) superior Quality fabricated from ISI Marked pipe (1 Nos.)High Pressure Controller with imported Diaphragm inside, (heavy duty). 1(Nos.)High Pressure Gas Regulator(3 noos) Non return valve (brass) (3 Nos.)One/Two /Four way LPG OutletsA) One Way outlet made of Brass having brass taps. (3 Nos.)B) Two Way outlet made of Brass having brass taps. Base Plate heavy superior quality (4 Nos.) SS 316 pigtail / Cylinder Flexible A) SS 316 with heavy 3/8” dia SS nuts. (6 nos)B) SS 316 pigtail /SS Flexible /Rubber flexible for main gas input.Bullnose diaphragm set complete (3 Nos) Clamp sets with nut 15mm Dia (10 Nos.)25mm Dia (4			

	Nos.)Reducer Brass ½” x 3/8” (3 Nos.)			
11	Supply, Installation, testing & Commissioning of gas distribution system comprising of following items as per specifications and directions of engineer in charge.			
	A) Stainless steel tubing of SS316 upto 6mm ND including tube fitting			
	B) Primary Control Module comprising of Change over Panel / Pressure Regulators (2 No.s) connected along with Metal Flexible Hose (4 Nos.), Bull Nose 8(Nos), Cylinder Brackets (4Nos.), Restraining Chains (4Nos.), Support Brackets (4Nos.), Gas Purification Panel N <sub>2</sub> /Ar (2Nos). gas Manifold system (2Nos.)			
	C) Valves			
	D) Cylinder Regulators			
	E) Clamps And Other Accessories			
	F) PVC Casing			
12	Supply, Installation, Testing and Commission of Spot Extractor of capacity to exhaust air 80-180 m <sup>3</sup> /hr. Exhaust arm, Hood, pipes and joints should be made of polypropylene (PP) material. And the hood diameter is of 385mm. This can be used wherever harmful substances represent a risk to personnel and materials. The spot extractor should be of Polypropylene (PP), and suitable for working with aggressive substance and physical contact in the working process.			
13	Supplying and Installation of Wall mounted storage units 800mm high made of resin coated pre laminated board with Front width and Depth Outer to Outer shall be measured and all as per drawing and Specifications.			

**GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY  
SECTOR-16C, DWARKA, NEW DELHI-110075**

1. Notice Inviting Tender will state the work to be carried out, as well as the date for submission and opening of tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited at the time of purchase of tender. The performance Guarantee to be deposited by the successful tenderer and the amount of security deposit to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.
2. In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act, 1952.
3. Receipts for payment made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.
4. Any person who submits a tender shall fill up the Schedule of Quantity (Vol.II) form, stating at what rate he is willing to undertake each item of the work. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort, including conditional rebates, will be liable for rejection.
5. The officer inviting tender or his duly authorized representatives, will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money forwarded at the time of purchase of tender shall thereupon be given to the contractor who shall thereupon for the purpose of identification sign copies of the specifications and other documents mentioned in Rule-I. In the event of a tender being rejected, the earnest money of unaccepted tenders shall thereupon be returned to the contractor, without any interest.
6. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.

7. The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgement or payment to the officer inviting tender and the contractor shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or a duly authorized Cashier.
8. The memorandum of work tendered for and the schedule of materials to be supplied by the department and their issue rates, shall be filled and completed in the office of the officer inviting tender before the tender form is issued. If a form is issued to an intending tenderer without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.
9. The tenderers shall sign a declaration under the official Secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them.
10. Only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the contractor does not work out the amount of an item or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount. In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the contractor has included the cost of this/these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.
11. In the case of any tender where unit rate of any item/ items appear unrealistic, such tender will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.
12. All rates shall be quoted on the tender form (i.e. Schedule of Quantities Vol. II). The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs.2.15 P' and in case of words, the word, 'Rupees' should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be upto two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.

13.
  - i) The contractor whose tender is accepted shall be required to deposit an amount equal to 5% of the tendered value of the work as performance guarantee in the form of an irrevocable bank guarantee bond of any scheduled bank in accordance with the form prescribed, fixed deposit receipt or demand draft in favour of Registrar, GGSIPU, within seven (7) days from issue of letter of Acceptance.
  - ii) The contractor whose tender is accepted, will also be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 5% of the tendered value of the work. The Security deposit will be collected by deductions from the running bills of the contractor at the rate of 5% and the earnest money deposited at the time of tenders, will be treated as a part of the Security Deposit. The Security amount will also be accepted in the shape of Fixed Deposit Receipt of a Scheduled Nationalized Bank or State Bank of India will also be accepted for this purpose provided confirmatory advice is enclosed. The security deposit as deducted above can be released against bank guarantee issued by a scheduled bank, on its accumulations to a minimum of Rs. 5 lakh subject to the condition that amount of such bank guarantee, except last one, shall not be less than Rs. 5 lakh.
14. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated in writing to the Engineer-in-Charge.
15. VAT purchase tax, turnover tax or any other tax on material in respect of this contract shall be payable by the Contractor and GGSIPU will not entertain any claim whatsoever in respect of the same.
16. The contractor shall give a list of both gazetted and non-gazetted GGSIPU employees related to him.
17. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the GGSIPU may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.
18. The tender for work includes, in addition to the laboratory furniture work, works such as sanitary, water supply instillations, drainage installation, and electrical work. The tenderer must associate with himself agencies specialized in sanitary, water supply, drainage, electrical work with appropriate licences as per directions of Engineer-in-Charge.

**CONDITIONS OF CONTRACT****Definitions**

1. The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the GGSIPU and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.
2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:
  - i) The expression works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
  - ii) The Site shall mean the land/ or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work, is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
  - iii) The Agency / Contractor / Tenderer shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assigns of such individual, firm or company.
  - iv) The GGSIPU means the Guru Gobind Singh Indraprastha University and his successors.
  - v) The Engineer-in-Charge means the Executive Engineer UWD
  - vi) Accepting Authority shall mean the authority mentioned in Schedule 'F'.
  - vii) Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Government, damages from aircraft, acts of God, such as earthquake, lightning and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the

Accepting Authority or causes solely due to use or occupation by Government of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Government's faulty design of works.

- viii) Market Rate shall be the rate as decided by the Engineer-in-Charge on the basis of the cost of materials and labour at the site where the work is to be executed plus the percentage mentioned in Schedule 'F' to cover, all overheads and profits.
- ix) Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard Schedule of Rates of the government mentioned in Schedule 'F' hereunder, with the amendments thereto issued upto the date of receipt of the tender.
- x) Department means Guru Gobind Singh Indraprastha University or authorized by GGSIPU to work on their behalf.
- xi) District Specifications means the specifications followed by the State Government in the area where the work is to be executed.
- xii) Tendered value means the value of the entire work as stipulated in the letter of award.

### **Scope and Performance**

- 3. Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.
- 4. Headings and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
- 5. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, Schedule of Rates and such other printed and published documents, together with drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.

### **Works to be carried out**

- 6. The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities (Schedule-A) shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and

fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

### **Sufficiency of Tender**

7. The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

### **Discrepancies and Adjustment of Errors**

8. The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to General Conditions.

- 8.1 In the case of discrepancy between the schedule of Quantities, the Specifications and/or the Drawings, the following order of preference shall be observed:

- i) Description of items given in Schedule of Quantities.
    - ii) Technical Specification and Special Conditions.
    - iii) Drawings.
    - iv) C.P.W.D. Specifications.
    - v) Indian Standard Specifications of B.I.S.
    - vi) Decision of Engineer-in-Charge.

- 8.2 If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.

- 8.3 Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.

### **Signing of Contract**

9. The successful tenderer/contractor, on acceptance of his tender by the accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of:-

- 9.1 The notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.

- 9.2 Standard C.P.W.D. Form as mentioned in Schedule 'F' consisting of:
- i) Various standard clauses with corrections upto the date stipulated in Schedule 'F' alongwith annexures thereto.
  - ii) C.P.W.D. Safety Code.
  - iii) Model Rules for the protection of health, sanitary arrangements for workers employed by CPWD or its contractors.
  - iv) CPWD Contractor's Labour Regulations.
  - v) List of Acts and omissions for which fines can be imposed.
- 9.3 No payment for the work done will be made unless contract is signed by the contractor.

## **Form of Performance Security (Guarantee) Bank Guarantee Bond**

1. In consideration of the Guru Gobind Singh Indraprastha University (hereinafter called “The University”) having offered to accept the terms and conditions of the proposed agreement between ----- and ----- (hereinafter called “the said Contractor(s)”) for the work ----- (hereinafter called “the said agreement”) having agreed to production of a irrevocable Bank Guarantee for Rs.----- (Rupees ----- only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and condition in the said agreement.

We, ----- (hereinafter referred as “the Bank”) hereby undertake to

(indicate the name of the Bank)

pay to the University an amount not exceeding Rs.----- (Rupees ----- only) on demand by the University.

2. We, ----- do hereby undertake to pay the amounts due and

(indicate the name of the Bank)

payable under this guarantee without any demure, merely on a demand from the University stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.----- (Rupees ----- only).

3. We, the said bank further undertake to pay the University any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.

4. We, ----- further agree that the guarantee herein contained shall

(indicate the name of the Bank)

remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the University under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of the University certified that the terms and conditions of the said agreement have been

fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. We, ----- further agree with the University that the University  
(indicate the name of the Bank)  
shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the University against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the University or any indulgence by the University to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
7. We, ----- lastly undertake not to revoke this guarantee except  
(indicate the name of the Bank)  
with the previous consent of the University in writing.
8. This guarantee shall be valid upto ----- unless extended on demand by the University. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs.----- (Rupees ----- only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated the ----- day of ----- for ----- (indicate the name of the Bank)

Signature & Seal of Bank

## PROFORMA OF SCHEDULES

### SCHEDULE 'A'

Schedule of quantities - As per Vol-II (Page 68 TO 73)

### SCHEDULE 'B'

Schedule of materials to be issued to the contractor. NIL

### SCHEDULE 'C'

Tools and plants to be hired to the contractor: NIL

### SCHEDULE 'D'

Extra schedule for specific requirements/ document for the work, if any.- NIL

### SCHEDULE 'E'

Schedule of component of Cement, Steel, other Materials,  
Labour etc. for price escalation. - Nil. No escalation shall be admissible under clause 10 C.

### SCHEDULE 'F'

Reference to General Conditions of contract. GCC 2010

Name of work : A/A GGSIP University, Dwarka Campus, New Delhi

Sub Head : Setting up of Labs with Modular Laboratory Furniture, Fumehood etc. in BRL-309, University School of Basic & Applied Science, GGSIPU, Dwarka Campus

Estimated cost of work	:	Rs. 31,89,443/-
i) Earnest money	:	Rs. 64,000/-
ii) Performance Guarantee	:	5% of tendered value
iii) Security Deposit	:	5% of tendered value

#### General Rules & Directions:

Officer Inviting Tender :	Ex Engr, UWD, GGSIPU
2(v) Engineer-in-Charge	Ex Engr, UWD, GGSIPU
2(viii) Accepting Authority	Superintending Engr, UWD, GGSIPU
2(x) Percentage on cost of materials and labour to cover all overheads and profits	15%
2(xi) Standard Schedule of Rates	DSR 2007 with upto date correction slips issued upto last date of receipt of tender

2(xii) Department	GGSIPIU
9(ii) Contract Form	CPWD Form – 7/8 , GCC 2010 Govt of India publication

**Clause 1**

Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance, in days	7 days
Maximum allowable extension beyond the period provided in (i) above	15 days

**Clause 2**

Authority for levy compensation Under clause 2.	Superintending Engr / Administrative Head, GGSIPU
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**Clause 2A**

Whether Clause 2A shall be applicable	YES
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**Clause 5**

Time allowed for execution of work.	150 days.
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Number of days from the date of issue of letter of acceptance for reckoning date of start	22 days
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Authority to give fair and reasonable extension of time for completion of work	Superintending Engineer or Admn. Head GGSIPU
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**Clause 7**

Gross work to be done together with net payment / adjustment of material collected, if any, since last such payment for being eligible to interim payment	Rs 5 lakhs
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**Clause 10 C**

Payment on account of increase in price / wages after receipt of tender of works	Not applicable
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**Clause 10 CA**

**Not Applicable**

**Clause 10 CC**

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

**Not Applicable**

**Clause 11**  
Specifications to be followed for execution of work

CPWD specification 2009 with upto date correction slip

**Clause 12**  
Deviation limit beyond which clauses 12.2 & 12.3

30%

12.5 Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation Work

Not Applicable

**Clause 16**  
Competent Authority for deciding reduced rates

Superintending Engr/ Admn. head  
GGSIPIU

**Clause 18**  
List of mandatory machinery tools& plants To be deployed by the contractor at site

**As required for completion within time period**

**Clause 36(i)**  
Minimum qualification & experience required for Principal Technical Representative

Graduate Technical expert who has executed at least one similar work.

**Clause 42**

**Not Applicable**

# **Special Conditions & Technical Specifications**

## **Special Conditions**

- 1.0 “CPWD Specifications” wherever appearing in this document would mean Latest edition of CPWD specifications with correction slips issued upto the last date of receipt of tender.
- 2.0 GCC 2010 referred in this document is Govt of India Publication and is available in the market.
  - a) CPWD Form 7/8, General Rules and Directions and Conditions of Contract forming part of ‘GCC 2010’ shall be superceeded by this document.
  - b) Wherever “President of India” is appearing in the GCC 2010 same shall be read as GGSIPU.
  - c) Wherever Superintending Engineer or Chief Engineer is appearing in GCC 2010, it may be read as Superintending Engineer/Administrative Head GGSIPU or Chief Engineer/Administrative Head GGSIPU.
  - d) Wherever CPWD or PWD is appearing in GCC 2010, it may be read as GGSIPU.
- 3.0 No payment shall be made to the contractor for any damage cause by the rain, snowfall, floods, earthquake or any other natural causes whatsoever during the execution of work. The damages to the work will be made good by the contractor at his own cost and no claim on this account shall be entertained.
- 4.0 No work shall commence in the absence of contractor’s engineers and they shall certify in writing about the correctness of layout alignment and shall ensure stability of all structural work such as partition panel and other related items.
- 5.0 All work and materials brought and left upon the ground by the contractor or by his orders for the purpose of forming part of the works, are to be considered to be the property of the GGSIPU and the same are not to be removed or taken away by the contractor or any other person without consent in writing of the Engineer-in-charge but the GGSIPU is not to be in any way responsible for any loss or damage which may happen to or in respect of any such work or materials either by the same being lost or damaged by weather or otherwise
- 6.0 Unless otherwise provided in the schedule of quantities the rates tendered by the contractor shall be all-inclusive and shall apply to all heights, levels, depths, leads, lifts including shafts, machine room & stair cases. The rates for all items of work, unless clearly specified otherwise, shall include the cost of all labour, materials, T & P, incidental expenses, contractor profit & overheads and other inputs involved in the execution of the items unless otherwise specified. The contractor shall quote the rate accordingly.

- 7.0 No foreign exchange shall be made available by the department for the purpose of procurement of equipment, plants, machinery, materials of any kind or any other items required to be carried out in execution of work. Nothing extra shall be paid on account of variation in foreign exchange rates.
- 8.0 The contractor or his authorized representative should always be available at the site of work to take instructions from Engineer in charge, and ensure proper execution of work.
- 9.0 The drawings / sketches / layout which are part of this document are indicative / conceptual for guidance only. Actual site specific layout and execution / fabrication drawings shall be prepared and submitted by the contractor to obtain approval of Engineer – in charge before actual execution of work.
- 10.0 The contractor shall execute the different items simultaneously, as far as possible, so that minimum breakage and repairs are involved.
- 11.0 The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution of environment and waterways. He shall make good at his own cost and to the satisfaction of the Engineer-in-Charge, any damage to public or private property whatsoever caused by the execution of the work or by traffic brought thereon by the contractor. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants/users of adjoining buildings.
- 12.0 All associated activities required for obtaining necessary clearances, permissions, approvals, all licenses etc. as required from all concerned authorities in respect of import/procurement of material, installation and commissioning shall be the responsibility of the contractor, the cost for which shall be deemed to be included in the rates for various items of work of Schedule of Quantities. The Contractor shall take required action well in time for completion of work within the specified completion period.
- 13.0 The contractor shall be responsible for watch and ward of all the works, equipment and various materials till complete handing over of works.
- 14.0 The contractor shall submit the test certificates from the respective manufacturer along with its declaration that all relevant standards have been complied with while manufacturing of these furniture items.
- 15.0 Wherever any reference to any Indian Standards Specification occurs in the documents relating to this contract the same shall be inclusive of all amendments issued their to or revisions there of if any, 15 days prior to the last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant standards applicable to work at site.
- 16.0 The contractor shall got approve the sample of all items including shade / colour / fabric and necessary hardware before bulk supply from Engineer-in-charge.

- 17.0 The site of placing / fixing the furniture may be at one or more places within the campus and at any floor upto seven levels for which nothing extra shall be paid.
- 18.0 Cess @ 1% of gross value of work done shall be deducted from the payment as per Delhi Building & other Construction Workers Welfare Cess Act 1996 besides other statutory deduction like income tax, VAT etc.
- 19.0 The contractor shall be fully responsible for rectifying the defect or replacing any damaged panel / partition / hardware, which may happen during the use up to 12 months from the date of completion of the work if the same is due to manufacturing defects etc. The decision of Engineer-in-Charge in this regard shall be final & binding. In case the contractor fails to carry out the said repairs, rectifications, replacement within the specified time, the department shall get the repairs / rectifications / replacement as considered necessary at the cost of the contractor by recovering the cost from the security deposit. In case additional expenditure is incurred by the department on this account, the same shall be borne by the contractor.
- 20.0 The rates quoted by the contractor shall be all inclusive keeping in mind the item description in schedule of quantities, special conditions and technical specifications and nothing extra shall be payable whatsoever, unless otherwise specified.
- 21.0 If the work is carried out in more than one shifts or during night to meet the time period of completion, nothing extra shall be paid on this account.
- 22.0 Contractor shall have to make own arrangement for water & electricity, otherwise 1% of gross amount shall be deducted from the dues of the contractor.
- 23.0 The contractor shall be bound to follow the instruction and restrictions imposed by the Administration / Police authorities on the working and movement of labour / material / vehicles etc and nothing extra shall be paid on this account.
- 24.0 The contractor shall keep himself fully informed of all facts and laws of centre and the state (GNCTD), all local bye laws, ordinances, rules and regulations and all orders and decree of bodies or tribunals having any jurisdiction or authority which in any manner affect those engaged or employed on the work or which in any way affect the conduct of works. Contractor at all times, observe and comply with all such laws, ordinances, rules, regulations, orders, decrees and shall reply all notices and pay out any fees or charges to which he is liable at his own cost. He shall protect and indemnify the department and its officers and employees against any claim or liability arising out of violations of any such law, ordinances, legislations, order or decree, whether by himself or by his employees and authorized representatives. All work shall be carried out in the manner complying in all respects with the requirements of relevant bye laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer – in - charge and nothing extra shall be paid on this account.

- 25.0 The detailed description of work and materials given in the specifications/ tender documents are not necessarily repeated in the bill of quantities / schedule of quantities.
- 26.0 The execution of any items of work where any incidental work is actually required but not specifically stated in the tender, it is to be understood that the amount quoted by the contractor shall cover such charges also and nothing extra shall be paid on account of such incidental charges, if any.
- 27.0 The said lab is for research purpose, Custom duty exemption certificate, wherever if applicable, shall be issued by University.

### LIST OF APPROVED MAKES OF MATERIALS

S.No.	Material	Approved Make
1)	Laboratory & Fume Hood Fittings	WATER SAVER/BROEN/FAG/MESSER
2)	Laboratory Sinks / Drip Cups	WATER SAVER/ BROEN/MESSER/ WEESMAN/WALDNER
3)	Laboratory & Fume Hood Electrical socket / switches	NORTHWEST / LEGRAND / MK
4)	PP EXHAUST FANS	COLASIT/SEAT
5)	FUME HOOD	WALDNER / KEWAUNEE / WEESMAN
6)	Double Stage Regulator	PRAMA/ DRUVA/PCI
7)	Tubing, Tube Fittings & Ball Valves, Pressure Gauge	PARKER/ MESSERS/ SWAGELOK/ SANDWIK/WIKA
8)	Gas Purifier	PRAMA / DRUVA/PCI
9)	Dual Cylinder Manifold	PRAMA / DRUVA/PCI
10)	High Pressure Pigtails	PRAMA / DRUVA/PCI
11)	Gas Control Box	PRAMA / DRUVA/PCI
12)	Cassing	PRAMA / DRUVA/PCI
13)	Blower/Motor	KEC/CGL/SIEMENS

# **Technical Specifications**

## **General Specifications**

### **1.0 Scope**

- 1.1 The scope of laboratory furniture shall consist of supply of raw material, fabrication, assembling, preparation of design, drawings, supply and erection. Work shall be executed in a well coordinated and professional manner.
- 1.2 All works shall be executed strictly in accordance with the item description, specifications and approved drawings. However in absence of specifications, relevant standards shall be followed along with relevant item description, technical specifications, drawings and manufacturer specifications.
- 1.4 The work shall be executed and measured as per metric dimensions given in schedule of quantities, drawings etc. (F.P.S. units wherever indicated are for guidance only)

### **2.0 Quality & Workman Ship**

- 2.1 The specifications are intended for the general description of the work quality and workmanship. The specifications are however not intended to cover the minute details and in its absence the relevant CPWD / relevant standards / manufacturer's specifications or the best trade practices shall be followed.
- 2.2 All material shall confirm to the approved makes of materials specified. The procurement of various materials shall be either from the manufacturers or their authorized dealers so that there is no duplicate / spurious makes are used. Notwithstanding all above, contractor shall be held responsible for the execution of works and use of proper best available quality of materials as per the tender specifications. For the items/materials not appearing in the list, the decision of Engineer-in-charge shall be final and binding. Contractor will have no claim if the material/finished product brought at site are rejected by Engineer-in-Charge in part or full lot due to bad workmanship / quality. Such material/finished product will not be measured and paid and the contractor shall remove the same from the site of work within 7 days after the written instructions in this regard are issued by engineer-in-Charge or his authorized representative.
- 2.4 The contractor shall produce all materials in advance so that there is sufficient time for testing and approving of the material and clearance of the same for use in work. The contractor shall produce test certificates of all the material in respect of their conformation to the relevant Indian standards / tender specifications. All tests required for the materials as desired by the Engineer-in-Charge shall be at the contractors cost
- 2.4 Testing may also be carried out at the discretion of the Engineer-in-Charge, from the lot of finished product brought at site by the contractor. In case such tests have been

carried out by the principal manufacturer at its testing facility, the same will may be provided by the contractor for consideration.

### **3.0 Drawings & Execution of Work**

3.1 The work shall be executed as per the layout approved by Engineer – In Charge. The contractor shall prepare the layout on the basis of the layout attached in this tender document keeping in view the site requirements and seek approval from engineer in charge.

3.2 Upon approval of layout, the contractor shall prepare shop drawings for fabrication / assembling / joineries etc. All manufacturing, fabrication, assembling work in connection with the item shall be under taken by the contractor after the approval of shop drawings by the Engineer – in Charge.

### **4.0 Fabrication**

4.1 All steel sheet components should be fabricated by precision shearing, leveling, notching, piercing, machines to achieve consolidated dimensions within close tolerances under the strict quality checks and assembled with the aid of fixtures. Exposed welding marks should be polished smooth to improve aesthetic. Corner intersections of vertical and horizontal members should in the same plane with bolted joints and should be suitably aligned.

### **5.0 Finishing & Surface Treatment :**

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

After the phosphate treatment, the steel shall be dried and all steel surfaces shall be coated with a corrosion-resistant finish with Powder Coating process. Surfaces to be coated include the inside of cabinet doors and drawer heads, behind all cross rails, all inside surfaces underneath the cabinet interior bottom panel, inside front and rear posts, inside of sub-base members, and behind adjustable shelf front and back edges. Baking at elevated temperatures to provide maximum properties of corrosion and wear resistance shall then cure the coating. Finishes specified to be a color shall then receive an additional sprayed and heat cured color coat, of the color specified, on all surfaces exposed to view after installation except as follows: drawer bodies, case channels, removable backs in cupboards and removable shelves (other than those in open front units or glazed units with swinging or sliding doors). These parts, along with the area under the toe space enclosure and the back of the cabinet

when not exposed to view after installation, shall be #61 Light Neutral.

All CRCA steel parts should be de-greased Zinc plated and coated with zinc phosphate (Coating Thickness should be at least 4.5 grams/mtr<sup>2</sup>) in a multi - tank hot phosphating system. and epoxy powder coated for better corrosion resistance. The thickness of powder coat shall not be less than 50 microns, conforming to relevant BIS code, which accordingly passes the test of Salt Spray for 1000 hours and having the scratch hardness of 3 kgs.

## **Particular Specification**

### Laboratory Furniture

The laboratory furniture required should be modular in design, made of mainly Melamine resin coated laminated flat press board complying to EN 312 and EN 14322 standards, coated on both sides.

### **Ergonomics:**

The furniture should be designed as to maintain height 900mm for standing posture and 750mm for sitting posture.

The work benches for laboratory and fume hood shall comply with EN 13150:2001, EN 14727:2006 and EN 14175-1:2003, 2004 or equivalent ASHRAE Standards. Type test certificates for compliance of these standards of the manufacturer shall be submitted.

### **Fabrication (General)**

All Melamine resin coated laminated flat press board components should be fabricated by precision shearing, leveling, notching, piercing, machines to achieve consolidated dimensions within close tolerances under the strict quality checks and assembled with the aid of fixtures. Corner intersections of vertical and horizontal members should be in the same plane with bolted joints and should be suitably aligned.

### **Under Bench Storage Modules: -**

Modular and durable Under Bench Storage Modules should have high aesthetic look. Body of under bench unit should be of Melamine resin coated laminated flat press board with thickness of 19mm and real panel thickness of 8mm and weight capacity of 730kg/m. Compartment base support adjustable in whole pattern, drilled in compartment base for secure connection of base to side walls secured against removal with a load capacity of 20-30kg. Drawer base should be on roller guide/telescopic guide, reinforced aluminum section with integrated labeling and handle rail ball bearing roller guide/telescopic guide. The pullout cupboard must have PP (3mm) safety edges on all sides.

Sides should have holes for connecting to the adjacent module with the help of threaded steel screws (finished in nickel chrome plating) thereby enhancing the rigidity of furniture / bench runs.

End cover panels are required to be provided to enhance the aesthetic appeal of end modules on a bench run.

Modules will be available in various sizes depends up on requirement.

The shutters should be fixed on the modules with detachable concealed imported hinges having adjustability in three directions, which is openable to 95° and are self closing on return.

**NOTE: Laboratory furniture should be on plinth (150mm)**

### **The reagent Shelf:**

The island table must have reagent frame of infinitely variable in height. It should have facility to fix one storage level on each side. The glass of 5mm to be use as a shelf and it should have four scaffold rod holders. It should have aluminum frame of width 75mm on both sides of island table and the height of the frame should be 1895mm (approx.). It should have system channel for electrical/gas supply service outlets. The island table should have un-obstructed access to both sides.

### **Bench Top/ Sink Top:**

The following types of bench / Sink tops are available to be fixed on tables.

The tabletops shall be of 18/19 mm Jet black Granite of even surface and the level tolerance less than 1 mm. The front edge of the granite shall be chamfered at an angle of 28 deg and smoothed. The back splash for the wall bench shall be granite 18/19mm thick material for an height of 4" from the finished table top level. Granite (in black colour) Jet Black Granite with 18/19 mm thick.

### **Overhead Storage Cabinets**

Wall mounted Storage Cabinets should be of complete modular design should have high aesthetic look. Body of Overhead storage cabinet should be of Melamine resin coated laminated flat press board with thickness of 19mm and real panel thickness of 8mm. Consisting of Cabinet Frame, glass shutters/Sliding door/Glass Sliding door, shelves and SS handles. The pullout cupboard must have PP (3mm) safety edges on all sides.

### **PEG Board**

Peg board of overall dimension 420 mm by 550 mm shall be made of 10 mm dia Polypropylene. The board to have minimum 22 nos. peg holders with a pitch of 10 mm box type construction. The side thickness of entire unit to be 21 mm and the drip tray to be of 60 mm width. All complete as per design, drawing and as per specification / additional specifications & as directed by Engineer-in-Charge.

### **Chemical Storage Cabinet (Approx. 225 liters)**

Supplying and installation of Fire Resistant (30min.) Cabinet for storage of chemicals/acids/alkalis with galvanized steel shelves & PP trays. The chemical storage cabinet should be of size (W850mm x D850mm x H1650mm). It must be designed to meet OSHA & NFPA standards. It should be sturdily constructed of all welded, 18 gauge(1mm), welded steel construction, 2" (51mm) liquid-tight containment sump of insulating air space for fire-resistant. It should have Epoxy-baked on powder coat finish inside-and-out which provides increase chemical resistance. It must have double wall construction, dual vents, earthing wire-connection, adjustable shelves, leak-proof sills, 3 point self-latching doors & leveling feet. It must include polyethylene trace attached to galvanized steel shelves and a separate polyethylene liner for the bottom sump. A liner should be removed for easy cleaning of drips & leaks. It must have door closing system within 60sec. automatically incase of fire. The shelf should be equipped with removable PP tray, impervious to liquid and highly resistant against corrosives.

### **Spot Extractor**

The Spot Extractor parts like, exhaust arm, hood, pipes and joints should be made of polypropylene (PP) or other corrosive chemical resistive material. And the exhaust air volume should be 80 – 180 m<sup>3</sup>/Hr. Ceiling mounted with 3 joint exhaust arm. The hood diameter should be of  $\geq 300$  mm. This should be usable wherever harmful substances represent a risk to personnel and materials. The spot extractor should be suitable for working with aggressive substance and physical contact in the working process

#### **SPECIFICATIONS OF BALANCE TABLE**

- The design of balance tables shall guarantee a contract and damping protection for the weighing plate.
- Supports should be made of a steel frame with 4 stands with vibration absorbing damping elements.
- Contract protection by lining on all sides.
- Weighing plate of steel concrete with terrazzo surface.
- Construction: Specially mounted, heavy balance plate made of fine concrete.
- Supporting construction with balance plate, vibration-decoupled.
- Bench frame with worktop and specially mounted, vibration-free plate.

#### **Dimensions:-**

- Width: 900mm, Depth: 750 or 900mm
- Working Height: 750mm
- Balance Plate; WidthX Depth; 400X450(mm) approx

#### **Material:-**

- Supporting Construction: Steel Profile
- Worktop: Stoneware Top
- Balance Plate: Fine concrete

#### **Laboratory Sinks and Drip cups:**

The laboratory sinks and drip cups are used to discard used/waste chemicals and washing water. They will have coving and slope towards drain. The sinks and drip cups shall have lipped edges on top.

They shall be of following materials.

**Polypropylene/Stainless Steel Size:** 392mm x 392mm x250mm

The sink/drip cup shall have waste coupling of 1<sup>1</sup>/<sub>4</sub> “BSP threads for further connection of waste line plumbing.

**Polypropylene Molded Sinks** should be injection molded from Poly propylene co-polymer resin. The sinks should be with self draining base and should be suitable for mounting on top or underside of the work benches. The sinks should be compatible to a vast number of acids, alkalis and reagents.

#### **Water Tap/ Gas Valve:-**

Sophisticated 3 way taps / valves with goosenecks required at the sink tables will be made of forged brass body with 1/2" BSP male inlet and powder coated. Goosenecks shall have a separate outlet coupling with a female thread securely brazed to the gooseneck for attachment of serrated hose ends, aspirators and other outlet fittings. Rigid goosenecks shall have a male inlet thread and be threaded directly into the faucet body so as to be absolutely rigid. Swing goosenecks shall utilize a TFE packing with an externally adjustable packing nut. Water faucets and valves shall be fully assembled and individually tested at 80 pounds per square inch (PSI) water pressure.

The taps will have ABS (Acrylonitrile Butadiene Styrene) plastic knob with International approved colour code.

### **Eye Shower:-**

Eye Shower: Provide emergency eye, eye/face wash and drench hose units with spray-type outlet heads to deliver a soft, wide, high volume spray of water. Outlet heads shall have an internal self-regulating flow control, a reticulated polyurethane filter, a threaded spray cover and a hinged swingaway dust cover. Hinged cover shall be permanently attached to outlet head body with a stainless steel pin. All wearing components shall be located inside spray head for ease of service.

### **➤ FUME HOOD:**

- In view of high performance of safety, the Fume Hoods should be as per EN-14175 Part 3 tested & certified.
- Fume hoods should be standing on Rigid Metal Supports, Designed for easy maintenance for all components by easy and quick access whenever required. Construction should be of Aero Dynamics Design. Material of construction should be Corrosion and chemical proof, Fireproof, water proof, termite proof, easy to clean surfaces, conforming to all fumehood safety standards followed by European union or USA. Operator Safety also to be ensured via INTAKE AIRFLY PROFILE (to be provided by the vendor) on the front edge of the Fume Cupboard.
- It should be aerodynamically designed for performing better to achieve internationally accepted face velocity of 0.4 to 0.6 meter / sec at front fascia.

### **Over All Dimension:**

- Upper Unit: L = 1800 mm, D=890mm, H=1500mm.
  - Base Unit: L = 1800 mm, D=890mm, H=900mm
  - Upper Unit: L = 1500 mm, D=890mm, H=1500mm.
  - Base Unit: L = 1500 mm, D=890mm, H=900mm
- **Material of Construction:**

- Side walls of the Fume Hood should be made of best quality Melamine resin coated laminated flat press board coated on both sides with thickness of 19mm and has processing rounded PP safety edges on all sides(3mm).
- Internal lining of Phenolic resin.
- It must have Aluminum channels with Service Controls and Electrical Controls should be on Front Facia thereby providing maximum interior working space.
- Fume Hood Air Flow Monitor and Alarm system should also be provided. Set Points for Lack of Air and Sash Limit be indicated with sound and Light Alarms.
- It must have three rows of scaffold points.
- It must have socket on the inside and operated from outside.
- It must of synchronously running telescope sash window for the use of operation.
- Work surface of 18mm premium quality granite dished all sides.
- It must have vertical sliding window frame with two horizontal slider in guide rails. Horizontal sliders must be with impact elastic handles, also serving to stop the other sliding pane. Counter balance for easy, quite movement, even when the sliders apply a one sided load to the vertical sliding window. The counter balance must be connected to the sliding window by coated stainless steel wire via the ball bearing and a drop protection should be immediately effective in any position. Vertically / Horizontally moving Sash of 5 mm thick safety glass/ toughened Glass.
- Equipped with fully wire lighting set of 65 watt fluorescent lamp. It must have pressure release port and exhaust port.
- Audio-visual Alarm system to indicate exhaust condition and alarm if no exhaust.
- The hood superstructure should be pre-wired and contain fire proof multi filament wire, connections, and fixtures with wire color coding. Wiring electrical services shall consist of universal Indian sockets/switches, light switch and controls for airflow & other utilities. 4 nos. of 5/15 Amps, 230 Volt AC should be provided.
- Hood work surface shall be thick jet black granite (preferably 1-1/4") made to contain spillage. A cup drain made of PP (single moulded cup type sinks) flush with the work surface in black color should be provided under the raw water tap.
- Fume Hood Base of best quality frame structure and PP molded storage modules, having vent pipe opening / connection to the main duct.

- Ducting - of 250mm-dia superior HDPE / PP FRP pipe and its accessories.
- PP / FRP centrifugal Blower of suitable capacity should be fitted with ISI mark 3 Phase, 415 V, Suitable RPM Electrical motor of suitable HP / required capacity to achieve the right CFM for better Fume exhaust System. The designing of making cluster has to be done by vendor after the approval from Engineer in Charge.
- **Utility:**
  - Raw water (1 No.), water in (1 No.), water out (1 No.), Gas Service N2 (1 No.) and 1 Vacuum service to be provided which will be made of forged brass with panel mounting valves.
  - 3 No's 6/16 amps Switch Socket with MCB on front fascia.
  - PP drip cup of size 230x78x135 mm deep with 1-M drainpipe.

### **TECHNICAL SPECIFICATIONS FOR DUCTING, BLOWER**

#### **Blower**

- 1.1 The exhaust fans supplied and installed shall be of 'Centrifugal Corrosion Resistant' type and shall be capable of delivering the design flow rate against all duct losses. One blower may be combined to 2 or more hoods as per the layout of the lab for best economy and variable air flow control as indicated above.
- 1.2 The fans shall be robust in construction and suitable for continuous duty operation. It shall be mounted with ease of maintenance and shall be installed with proper vibration isolators to minimize vibration transmission to ductwork and support structure.
- 1.3 Aerodynamic performance of the fan shall be tested and comply with 'ISO 5801' standards.
- 1.4 Sound level shall be tested and comply with 'ISO 5136.2'.
- 1.5 The casing shall be of self-supporting design, thermoformed (size 400 and below), welded by machine (automatically welded for size 400 and below). The material of construction shall be fire retardant polypropylene (PP/FRP) for fire safety and suitable for use against corrosive 'medium' and a maximum allowable operating temperature of 70°C.
- 1.6 Impeller material shall be fire retardant polypropylene (PP/FRP) for fan size up to 400 (polypropylene {PP} for fan size 450 and above) suitable for use against corrosive 'medium' and a maximum allowable operating temperature of 70°C. It shall consist of

about 20 forward curved blades injection molded up to size 710 (thermoformed blades, automatically welded from 800). The impeller balancing shall be tested in accordance to VDI 2060, Q6.3 standard.

- 1.7 Each impeller above size 450 shall be tested in an over speed test stand above its nominal rate and dynamically balanced on two levels in accordance to VDI 2060, Q6.3 standard.
- 1.8 The fan shall be driven by a standard TEFC electric motor with class 'F' insulation and class 'B' temperature rise. Motor make Preferably CG, Siemens, GEC shall be suitable for outdoor installation with IP55 protection and suitable for operation with single/three phase (Indian specs) electrical supply. Motor supplied shall be in accordance to IEC standards.

### **Ducting.**

1. PP (i.e. PPGL) with One side smooth & glassy finish and other end is mat finish. The smooth surface should be the inner surface of the duct. On mat side, FRP lining to be done. 25 mm x 25 mm Stitch welding is done on inner surface and continuous welding on outer surface with 5 mm welding thickness.
2. FRP Lining to be done on the outer surface of PPGL. I.e. on mat side. One layer FRP is one mm. The final layer should be with fine mat to have smooth and good finish. While making the lining, there should not be any air pockets or any sort of Uneven finish. There should be time gap between the FRP layers, allowing each layer to be got dried.
3. Isothelic resin to be used. (Naphtha).
4. The flange thickness should be 1.5 times of the duct thickness up to 750 mm and 2 times above 750 mm ducting.
5. All flanges are to be matched with M8, GI fasteners and flat washers on both the sides.
6. All the flanges should have fasteners at the 4 corners.
7. All the fasteners to be fixed at a pitch distance of between 125 mm to 150mm.
8. All the flanges should be properly ground and dressed.
9. Duct support distance should not be more than 2500 mm.
10. Any duct length should not be more than 3600 mm.
11. All square / rectangular ducts with more than 1800 mm length should have a brazing frame at the center on the external surface.
12. Provide 40 x 40 flanges up 750 mm duct size and 50 x 50 above 750 mm.
13. The finish paint should be as approved by Engineer-in-Charge.



# Volume II

## Schedule of Quantities

## Schedule of Quantities

Name of Work: A/A GGSIP University, Dwarka Campus, New Delhi

Sub Head: Setting up of Labs with Modular Laboratory Furniture, Fumehood etc. in BRL-309, University School of Basic & Applied Science, GGSIPU, Dwarka Campus

S.No	Description	Unit	Qty.	Rate (in Rs.)	Amount (in Rs.)
1 a)	Providing and installation of 750 - 900mm high Work Bench / Sitting Table of length and width of work top and Add on Units in any shape / configuration as per Site / Lab requirement. The portion below worktop shall consist of storage units having Drawers, Shutters, locks, hinges, handles, brackets, wheels or other required / suitable supports and provisions of leg space, fixing sinks, supporting of granite top etc. wherever required as per approved drawing, design, specifications & directions of Engineer in Charge. (The area of work top as installed shall be measured for payment. The granite top and sink units shall be measured and paid for separately.)	Sq. Mtr.	26		
	b) Less area for not Providing storage unit in under bench	Sq. Mtr.	4		
2 a)	Providing and installation of Sink units having stainless Steel sink of overall size 392mm x 392mm x 250mm with all accessories and having 3 way CP brass faucet, peg board and eye shower, all complete as per approved drawing, design, specification & directions of Engineer in Charge. a) Stainless sink niral grace plain or equivalent. b) Eye shower of Broen make model no.7701 or equivalent. .c) Swan Neck 3 - Way Faucet of Broen make model no 15506.009 or equivalent.	Each	5		
	b) Extra for providing and installing china sink instead of stainless steel sink in item 2 (a) above	Each	5		
	c) Extra for providing and installing Poly propleylene sink instead of stainless steel sink in item 2 (a) above of similar size.	Each	5		
3	Providing and fixing of Double Sided two tier Reagent shelf in main and add on configuration of size 1200mm x 320mm x 515mm each with cutouts for electrical module plates, switches, sockets etc. complete as per approved drawing, design, specifications & directions of Engineer in Charge.	Each	4		
4	Providing and installation of Anti Vibration Table of size 900mm x 750mm x 900mm as per approved drawing, design, specifications & directions of Engineer in Charge.	Each	1		
5	Providing and installation of 18mm thick Granite Work top with edge moulding and grooves over 8mm thick backing ply complete as per approved drawing, design, specifications & directions of Engineer in Charge.	Sq. Mtr.	25		

6	Extra for providing opening of required size & shape for wash basins/kitchen sink in kitchen platform, vanity counters and similar location in marble/Granite/stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete.	each	5		
7	Providing and Fixing Single sided bench mounted electrical trunking of Length 1500mm with cutouts for module plate, switches, sockets etc. on Work Benches complete as per approved drawing, design, specifications & directions of Engineer in Charge.	Each	11		
8	Providing and installation of Fume Hood with auto bypass bench type having Superstructure MS electro galvanised & Powder coated outer casing. Liner : Phenol Based Industrial Lamminate, 5 mm Thick. Vertical Type Sash with toughened glass Granite worktop with Oval Shaped 230x78x135mm PP cupsink. Remotely operated color coded three services (PW, Nit, Vac) with SS braided flexible hose & brass fittings. A soft touch button panel with main switch, switch for blower & tube light & spare switch is provided. LED indicators to show the ON & OFF positions of switches are provided. Six no. (230V, 5/16A, 50Hz) electrical sockets & switches of approved make.				
	a) 1500 mm wide	Each	1		
	b) 1800 mm wide	Each	1		
9	Supplying and Installation of Centrifugal Blower for fume hoods PP + FRP lined Blower with FRP-vinylester impeller and a motor, 4500CFm, 1200RPM, 5.0H.P., 100mm W.G. (ACLB 550)	Each	1		
10	Ducting for Fume Hood made up of 6mm PP and 3mm FRP	Sq. Mtr.	50		
11	Supplying and installation of stainless steel chemical storage cabinet of size (W850mm x D850mm x H1650mm) as per approved drawing, design, specifications and directions of engineer in charge..	Each	1		
12	Supply, Installation, testing & Commissioning of gas distribution system comprising of following items as per specifications and directions of engineer in charge.				
	a) Black steel pipes to IS 1239 heavy class Including all fittings like anchor fasteners Angle, brackets, clamp, coupling, bends, Reducers, elbows, tee , flanges, Ms structure etc. as required painting with one coat Red –oxide primer and two or more coats of Synthetic enamel paints to give an even shade Cutting class C heavy Jindal make 15mm dia	Mtr.	100		

	b) Quick shut off valve fire safe design lever type Extra superior quality 15mm (3 Nos.)Rubber tubing 1.5mtr coils ISI marked IS:10908 manufactured form the finest synthetic rubber , chemicals & filters duly Approved by oil companies (Specially designed for Laboratories) (3 Nos.)Bunsen Burner with N.P. Brass pipe &Heavy base Round valve superior quality with brass parts (3 Nos.)Manifold cylinder pipe (4 cylinder ) superior Quality fabricated from ISI Marked pipe (1 Nos.)High Pressure Controller with imported Diaphragm inside, (heavy duty). 1(Nos.)High Pressure Gas Regulator(3 noos) Non return valve (brass) (3 Nos.)One/Two /Four way LPG OutletsA) One Way outlet made of Brass having brass taps. (3 Nos.)B) Two Way outlet made of Brass having brass taps. Base Plate heavy superior quality (4 Nos.) SS 316 pigtail / Cylinder Flexible A) SS 316 with heavy 3/8" dia SS nuts. (6 nos)B) SS 316 pigtail /SS Flexible /Rubber flexible for main gas input.Bullnose diaphragm set complete (3 Nos) Clamp sets with nut 15mm Dia (10 Nos.)25mm Dia (4 Nos.)Reducer Brass 1/2" x 3/8" (3 Nos.)	Each	1		
13	Supply, Installation, testing & Commissioning of gas distribution system comprising of following items as per specifications and directions of engineer in charge.				
	A) Stainless steel tubing of SS316 upto 6mm ND including tube fitting	Mtr	150		
	B) Primary Control Module comprising of Change over Panel / Pressure Regulators (2 No.s) connected along with Metal Flexible Hose (4 Nos.), Bull Nose 8(Nos), Cylinder Brackets (4Nos.), Restraining Chains (4Nos.), Support Brackets (4Nos.), Gas Purification Panel N <sub>2</sub> /Ar (2Nos). gas Manifold system (2Nos.)	Each	1		
	C) Valves	Each	8		
	D) Cylinder Regulators	Each	2		
	E) Clamps And Other Accessories	Set	1		
	F) PVC Casing	mtr	100		
14	Supply, Installation, Testing and Commission of Spot Extractor of capacity to exhaust air 80-180 m <sup>3</sup> /hr. Exhaust arm, Hood, pipes and joints should be made of polypropylene (PP) material. And the hood diameter is of 385mm. This can be used wherever harmful substances represent a risk to personnel and materials. The spot extractor should be of Polypropylene (PP), and suitable for working with aggressive substance and physical contact in the working process.	Each	4		
15	Supplying and Installation of Wall mounted storage units 800mm high made of resin coated pre laminated board with Front width and Depth Outer to Outer shall be measured and all as per drawing and Specifications.	Sq. Mtr.	8		
16	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Internal work - Exposed on wall.				
	a) 15 mm dia. nominal bore	mtr	10		

17	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Internal work - Exposed on wall.				
	a) 20 mm dia. nominal bore	mtr	10		
18	Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall				
	a) 15 mm dia nominal bore	mtr	10		
19	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.				
	a) 25 to 40 mm nominal bore	each	6		
20	Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work.				
	a) 15 mm diameter pipe.	mtr	20		
21	Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work.				
	a) 20 mm diameter pipe.	mtr	20		
22	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931				
	a) 15 mm nominal bore.	Each	10		
23	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required.				
	a) 50 mm nominal bore.	Each	5		
24	Providing and fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS: 13592 Type A including jointing with seal ring conforming to IS:5382 leaving 10 mm gap for thermal expansion.(i) Single socketed pipes				
	a) 75 mm diameter	mtr	50		
25	Providing and fixing on wall face unplasticised - PVC moulded fittings / accessories for unplasticised - PVC rain water pipes conforming to IS:13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
	a) Shoe (Plain)				
	i) 75 mm Shoe	Each	5		
26	Providing and fixing on wall face unplasticised - PVC moulded fittings / accessories for unplasticised - PVC rain water pipes conforming to IS:13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
	a) Bend 87.5 degree				
	i) 75 mm bend	Each	10		

27	Providing and fixing unplasticised-PVC pipe clips of approved design to unplasticised-PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 ( 1 cement : 4 coarse sand ) and making good the wall etc. complete.				
	a) 75 mm	Each	10		
28	Dismantling slab with Kota stone top laid on RCC 100mm thick including 115mm thick walls and base all complete with disposal of malba outside university as per direction of Engineer-in-charge.	Job	1		
	<b>Total</b>				

**EE/UWD**