

**BHARATI COLLEGE  
(UNIVERSITY OF DELHI)  
C-4, JANAKPURI, NEW DELHI-58**

---

F.NO: BC/ADMIN/SITC OF DG SETS/2021/910

Dated: 29-10-2021

**NOTICE INVITING E-TENDER  
FOR SUPPLY, INSTALLING, TESTING AND COMMISSIONING OF ONE NO. 380  
KVA DIESEL GENERATOR FOR NEW AUDITORIUM BUILDING AT BHARATI  
COLLEGE AT C-4, JANAK PURI, NEW DELHI-110058.**

Online e-tenders are invited on behalf of the Principal, Bharati College, University of Delhi from the **Reputed DG Set Manufacturer Companies** for SITC of one number 380 kVA DG Set at New Auditorium Block, Bharati College Campus at C-4, Janak Puri, New Delhi-110058:-

2. The complete set of tender document can be downloaded from the website link <http://eprocure.gov.in> & [www.du.ac.in](http://www.du.ac.in) & [www.bharaticollege.du.ac.in](http://www.bharaticollege.du.ac.in) the filled-in tender forms should be applied through online at <http://eprocure.gov.in>.

3. Time for work completion: **60 days** from the 7th day of issue of letter of Intent.

4. Manual tender application will NOT be entertained.

5. The technical bids will be opened first and financial bids of technically qualified consultants only in the presence of the Purchase Committee.

6. Estimated Cost of Works: 46.98 lacs

7. **EMD: Rs. 94,000/- (Rupees ninety four thousand only) in the form of DD payable in favor of "Principal, Bharati College".**

8. Critical Dates:

<b>Important Dates</b>	<b>DATE</b>
Published Date	1.11.2021
Bid Document Download	1.11.2021
Bid Submission Start Date	1.11.2021
Bid Submission End Date	22.11.2021
Technical Bid Opening Date	23.11.2021
Financial Bid Opening date	30.11.2021

9. In the event of any of the above mentioned dates being subsequently declared as a closed holiday for this office, the tenders will be opened on the next working day at the scheduled time.

10. It is suggested that the prospective Bidders shall monitor the [http://eprocure.gov.in/www.du.ac.in / www.bharaticollege.du.ac.in](http://eprocure.gov.in/www.du.ac.in/www.bharaticollege.du.ac.in) website constantly for any changes / updates.

11. The Principal, Bharati College, C-4, Janak Puri, New Delhi-110058 reserves the right to accept or reject any or all tenders without assigning any reasons.



**Dr. Rekha Sapra**  
Officiating Principal  
Bharati College  
(University of Delhi)  
C-4, Janakpuri, New Delhi-110058  
**Offtg. Principal**  
**Bharati College**

**SECTION- I: DETAILS OF TENDER**

1	Details of work to be done	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF ONE NO. 380 KVA DG SET AT AUDITORIUM BUILDING AT BHARATI COLLEGE, C-4, JANAK PURI, NEW DELHI-110058.
2	Form of contract	Item rate tender
3	Earnest money (Refundable)	Rs. 94,000/- in form of demand draft in favor of the "Principal, Bharati College" Payable at New Delhi in a Separate Sealed Envelope.
4	Period of contract / time of completion	60 Days
5	Last date and time for Receiving of sealed tender	22/11/2021 by 10.00 AM Interested bidders may download the tender enquiry documents and submit their tenders online at Central Public Procurement Portal website: <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a> and bid online through the portal <a href="http://www.eprocure.gov.in">www.eprocure.gov.in</a> .
6	Place and date of opening	23/11/2021 at 11.00 AM ( technical Bid ) 30/11/2021 03.00 PM ( financial bid of technically qualified bidders only)
7	Eligibility Criteria	<p>a) Experience of having timely &amp; successfully completed similar works viz., SITC of 380 kva DG Sets in govt. sector / PSU's/educational institutes during last 3 years ending last day of month previous to the one in which applications are invited should be either of the following:-</p> <p>[1] Two similar completed works costing not less than the amount equal to 40% of the estimated cost. Or</p> <p>[2] One similar completed work costing not less than the amount equal to 80% of the estimated cost.</p> <p>b) Should not have been blacklisted by any PSU / Govt. Department (a self-certification is required)</p> <p>c) The Bidder company/firm should have at least one branch offices(s) in Delhi/NCR for 100% support services. Documentary proof need to be submitted for office address.</p> <p>d) Copy of PAN Card, TIN &amp; GST Numbers should be a mandatory requirement for all bidders and it should be clearly mentioned in tender documents.</p>

		<p>e) Average financial turnover during the last 3 years, ending 31st March of the previous financial year, should be at least 80% of the estimated cost.</p> <p>f) Defect Liability and free maintenance period shall be twelve months from the date of virtual completion of the works.</p> <p>g) In case of manufacturer appointed agency, a certification from OEM addressing this particular job will be required for authentication in the prescribed format.</p> <p><b><i>Supporting document(s) to be enclosed for above or else bids will be rejected.</i></b></p>
--	--	---

**SECTION- II: SUMMARY OF SALIENT FEATURES**

1	Type of Contract	Item rate basis
2	Validity of offer	180 days from the last date of submission of bid.
3	Earnest Money Deposit (Refundable)	Rs. 94,000/- by demand draft only drawn in favor of the “Principal Bharati College” Payable at New Delhi in a separate sealed envelope.
4	Date of commencement of work at site	Within 7 days from the date of issue of letter Intent.
5	Mobilization advance	No advance payment.
6	Period of completion	60 days from the 7 <sup>th</sup> day of issue of letter of Intent.
7	Payment terms	<p>a. Payment Terms &amp; Conditions:</p> <p>a) 10% of contract value as advance against bank guarantee.</p> <p>b) 60% of contract value against delivery of material.</p> <p>c) Additional 20% of the contract value on installation of DG SETS &amp; making them operational.</p> <p>d) Balance 10% contract value shall be released after 12 months from the date of issue of virtual Completion certificate by the Architect.</p>
8	Bank Guarantee	Bank Guarantee will be treated as performance guarantee & will be released on receipt of material of DG by agency to college.
9	Refund of EMD	EMD will be released on final handover of site.
10	Period of honoring of certificates	15 days from the date of issue of certificate of payments by the Architect.
11	Defect Liability period	12 months from the date of issue of virtual Completion certificate by the Architect.
12	Liquidated Damages	0.5% per week or part there of subject to the max of 10% of total contract price.
13	Language for communication	English

14	Insurance, Custom Duties & taxes, work Contract tax, sales tax, service tax.	To be provided and paid by contractor (price quoted to include all taxes)
15	Rates of B.O.Q's items	To be quoted all inclusive and including all taxes, GST, charges, surcharges, cess etc. i.e., net to the College.
16	Period of submitting final bill by contractor	One month from the date of virtual completion.
17	Labor Cess	1% of contract value will be deducted by Bharati College as labor Cess payable to Delhi Government.
18	Water charges	Water will be provided free of cost by the client.
19	Electricity charges	0.5% of the total project cost shall be deducted towards electricity charges from contractor's final bill.
20	Signing of Agreement	Within seven days of the issue of letter of intent/work order.
21	Income tax deduction	At prevailing rate from each running bill.

Signed this \_\_\_\_\_ dated \_\_\_\_\_ 2021

Signature of contractor  
with date and seal

### SECTION – III: NOTICE TO CONTRACTORS

M/s \_\_\_\_\_

**SUB: SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF ONE NO. 380 KVA DG SET AT NEW AUDITORIUM BUILDING OF BHARATI COLLEGE, AT C-4, JANAK PURI, NEW DELHI-110058.**

Dear Sir,

1. The Bharati College, New Delhi takes the pleasure in inviting you to tender for the aforesaid work,
2. Sealed tender should be addressed to **The Principal, Bharati College at C-4, Janak Puri, New Delhi-110058.**
3. The tenders are required to submit their offer in sealed packet.
4. The clarification on technical issues, if any, may be obtained from the architect, M/s SPACE ACE,V-20A/05, DLF- City- III, Gurgaon, Haryana- 122002 Phone no 0124-4106618 on any working day during normal working hours.
5. The tenderer must obtain for himself on his own responsibility and at his own expenses all the information which may be necessary for the purpose of filling this tender and for entering into contract for the execution of the same and must examine the drawings and inspect the site of the work acquaint himself with all local conditions and matters pertaining thereto.
6. Each of the tender documents is required to be signed by the person or persons submitting the tender in token of his/their having acquainted himself/themselves with all the conditions/specifications, as laid down. Any tender with any of the document not so signed may be rejected.
7. Any additions and alternations made filling the tender must be attested by initial of the tenderer. Over-writing of figures is not permitted. Failure to comply with either of these conditions will render the tender void. No request, advice or any change in rates or conditions after submission of the tender will be entertained.
8. The tenderers shall deposit with Bharati College payable at Delhi Rs 93,000/- by Demand Draft only from any of the scheduled bank in favor of the "Principal Bharati College" as the Earnest Money. The EMD of the unsuccessful tenderers will be returned without any interest within 30 days, after a decision is taken regarding the award of the Contract. Any tender not accompanied by the requisite Earnest Money in Demand Draft will not be considered and shall stand rejected. It may be noted that conditional Tender may be liable to be rejected. The EMD of the Tenderer shall be forfeited in the following circumstances:-
  - (i) the Tenderer withdraws his bid;
  - (ii) the tenderer either fails to start the work within a period of 7 calendar days or fails to execute the agreement within 15 days after the receipt of letter of acceptance of tender or the Letter of intent;
  - (iii) the Tenderer fails to supply goods / services as per the terms of the Tender and Purchase / Work Order.
  - (iv) Any other justified reasons e.g. misleading or wrong information in the Bid, violation of the terms and conditions of the Tender, involvement in forming ring / cartel, submission of multiple bids in different names etc.

9. Within 7 (working) days of the receipt of intimation from the Bharati College of the acceptance of his/their tender, the successful tenderers shall be bound to implement the Contract by signing agreement in accordance with the terms and conditions of the contract attaching herewith, but the work order or the written acceptance by the Bharati College of tender will constitute a binding agreement between the Bharati College and the Contractors so tendering whether such formal contract is or not subsequently entered into.
10. All compensations or other money payable by the Contractor to Bharati College under the terms of this contract may be deducted from the retention money or from any sum that may be or may become due to the Contractor on any account whatsoever and in the event of the retention money being reduced by reason of- any such deductions the Contractor shall within 7 days of being asked to do so make good in cash or cheque any sum or sums which have been deducted from his retention money.

In case, where the same item of work is mentioned at more than one place in the Schedule of quantities the lowest of the rates quoted by the Contractor for the item shall be taken for the payment of that item.

11. Time is the essence of the Contract. The work should be completed in 60 days by the Contractor from 7th day of issue of letter of Intent to commence the work. Tenders shall not claim any extension of time. However, the Bharati College to its sole discretion may extend the time for completion of work.
12. The contractor fails to complete the work by the schedule date of completion or within any sanctioned extended time, he will have to pay liquidated damages for the period that work remains incomplete as per the relevant clause.
13. The quantities contained in the Schedule are only approximate. The work as actually carried out and done will be measure up from time to time, for which payment will be made subject to the terms and conditions of the Contract.
14. Tender shall be valid for period of one hundred and eighty days (**180 days**) from the last date of submission of bid to Bharati College. However, Bharati College is not bound to accept the lowest or any tender and reserves the right to accept or reject any or all tenders either in whole or in part, without assigning any reason for doing so along with their tender.

**Offtg. Principal  
Bharati College**



## SECTION – IV: LETTER INVITING TENDER

To,

---

**SUB: SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF ONE NO. 380 KVA DG SET AT NEW AUDITORIUM BUILDING OF BHARATI COLLEGE, AT C-4, JANAK PURI, NEW DELHI-110058.**

Dear Sir,

A. Sealed item rate tenders are invited for the subject work as detailed below:

A copy of tender document with one set of drawings is enclosed for submitting your offer.

Name of work : SITC OF DG SET AT AUDITORIUM BUILDING, BHARATI COLLEGE, C-4, JANAK PURI, NEW DELHI-110058.

**1. Time for completion : 60 DAYS  
of the work**

2. Earnest Money Deposit : Rs.94,000/- by demand draft in favor of “PRINCIPAL BHARATI COLLEGE, NEW DELHI”.

Important: In case the contractor withdraws his offer within The Validity period of the tender, the earnest money deposited along with tender shall stand forfeited.

### **B. CONDITIONAL OFFER**

1. Any tenderer who proposes alterations to any of the conditions, specifications laid down in the tender documents or proposes any new conditions, whatsoever will be liable to be rejected.
2. In case any tenderers, in spite of clause 1.0 above proposes any new conditions or proposes alteration to any condition / specifications, which will have financial effect if the condition/alteration are not accepted, then at the financial effect plus or minus shall be indicated by the tenderer against each such condition/alteration proposed by the tendered for withdrawal of the condition/alteration, along with his tender offer. No financial effect shall be considered after opening of tender.
3. Bharati College reserves the absolute right to accept / reject any or all tenders without assigning any reason.

Kindly acknowledge the receipt of this letter with all enclosures and confirm that you will submit your order by due date.

4. The Principal, Bharati College reserves the right to increase or decrease the quantity given in the tender. The quantities and drawing given are tentative and can vary and Change as per working drawings supplied for construction/furnishing.

**Offtg. Principal  
Bharati College**

## SECTION – V: STANDARD TENDER OFFER

### THE BHARATI COLLEGE AT C-4, JANAK PURI, NEW DELHI-110058

#### TENDER

- 1.0 I/We have read and examined the notice inviting tender, Schedule, specifications applicable, Drawings & Designs, General rules and Directions, Conditions of Contract, clauses of contract, Special conditions, 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. We have also visited the site and are familiar with the surroundings including applicable taxes.
- 1.2 I/We hereby tender for the execution of the work specified for by the **The Principal, Bharati College, C-4, Janak Puri, New Delhi 110058** within the time specified in schedule, viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in General Rules and Directions and the Conditions of contract and with such materials as are provided by and in respects in accordance with, such conditions so far as applicable.
- 1.3 I/We agree to keep the tender open for one hundred & eighty days (**180 days**) from the last date of submission of bid and not to make any modifications in its terms and conditions.
- 1.4 A sum of Rs. 94,000/- (Rupees ninety four thousand only) is hereby forwarded in the form of Demand Draft of a Bank as earnest money. If I/we, fail to commence the work specified I/we agree that the said The Principal, Bharati College, C-4, Janak Puri, New Delhi 110058 or the authorized officer in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely otherwise the said earnest money shall be retained by him towards performance 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.
- 1.5 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 Principal.
- 1.6 I/We agree that should I/we fail to commence the work specified in the above memorandum, an amount equal to the amount of the earnest money mentioned in the form of invitation of tender shall be absolutely forfeited by The Principal, Bharati College, C-4, Janak Puri, New Delhi 110058 and the same may at the option of the competent authority on behalf of The Principal, Bharati College, C-4, Janak Puri, New Delhi-110058 be recovered without prejudice to any other right or remedy available in law out of the deposit in so far as the same may extend in terms of the said bond and in the event of deficiency out of any other money due to me/us under this contract or otherwise.
- 1.7 **Declaration –**
- i. I/We have read and understood the terms and conditions given in the Tender Document;
  - ii. I/We are eligible for award of the contract as per the qualification criteria mentioned in the Tender Document;
  - iii. I/We have accept and agrees to all the terms and conditions of the Tender;

- iv. I/We shall comply with all the terms and conditions of the Tender;
- v. All the information / documents provided in his bid are true to the best of my/our knowledge and belief. If at any stage, the information / documents are found to be false, misleading or incorrect then his Bid / Purchase Order shall be cancelled at his cost and risk and I/We shall indemnify the College for the loss caused due to the cancellation and I/We shall be liable for penal / legal action including black listing.
- vi. I/We understand that the College reserves the right to cancel the Tender at any stage or to cancel / reject any one or more bid without incurring any liability.

Dated.....

**Sign. & Stamp of Contractor**

Postal Address

**Witness:**

Address:

Occupation:

**ACCEPTANCE**

The above tender (as mentioned by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of The Principal, Bharati College, C-4, Janak Puri, New Delhi 110058 for a sum of Rs..... (Rupees .....

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

- a)
- b)
- c)

**For & on behalf of The Principal, Bharati College, C-4, Janak Puri, New Delhi 110058**

Dated .....

Signature/Designation.....

**General note:**

1. Tenderer signing the Tender should in case of firm clearly specify whether they are signing as (a) Sole proprietor (b) Partner (c) Under the owner of attorney (d) Director, Manager or Secretary etc. as the case may be. Copies of the documents authorizing the Tenderers signing the Tenders on behalf of such companies firms or persons should be attached with the Tender.
2. There should be no over writing/correction in schedule of rates. If any, that must be initialed. Conditional Tenders are also liable to be rejected. The rates must be inclusive of all taxes including GST, octroi, carriage and local charges etc.
3. If any Tenderer withdraws before the final acceptance of the Tender or if any fails to deposit the security as prescribed, within stipulated period the earnest money of the Tenderer is liable to be forfeited.
4. The Principal, Bharati College reserves the right to reject/accept any Tender or Tenders without assigning any reason thereof and may or may not accept the lowest or any of the Tender as the authority to accept the Tender rests with the Principal, Bharati College. He further reserves the right to accept all for any Tender in part/parts.
5. The Principal, Bharati College will not be liable to pay any interest on the earnest money or security deposit, which remains in its custody.
6. The Principal, Bharati college also reserves the right to forfeit the earnest money and the security deposit, if after the acceptance of the Tender, the successful Tenderer, fails to comply with any of the terms & condition set out in agreements which may be drawn up as a consequence of the acceptance of the Tender, In such cases, the right to cancel the Tender/contract is also retained by the College and the decision of the Principal, Bharati College (including forfeiture of the earnest Money/Security deposit) will be final and binding.
7. TDS will be recovered on the Gross amount payable for the work done as applicable from time to time.
8. If there is any dispute in the interpretation of any clause/clauses in the terms & condition of the contract or in case of any other dispute, the matter will be referred to the sole arbitrator nominated by Principal, Bharati College whose decision in this regard will be final & binding to both the parties.
9. If the contractor refuses to accept the work order for any specified work or fails to give the specified output, College reserves the right to get work done by other agency/contractor even at higher rates and difference of the cost will be deducted from the contractor's pending bills or security along with penalty, as the case may be.
10. The contractor shall receive all letters addressed to him by Principal, Bharati College either personally or through his authorized person failing which letters will be posted to him. Department will not be responsible for non-receipt of letters & contents of such letters shall be binding on the contractor as if these letters have been received by him on the date of posting.
11. The work will be done as per directions/specification given by the concerned. All works should be done as per tender specifications and list of makes provided in the technical bid.
12. Work at site should be commenced within 7 days from the date of issue of letter of Intent.
13. The work should be completed within 60 days from the 7th day of issue of letter of Intent.

14. Any attempt direct or indirect on the part of the Tenderer to influence by any means for the acceptance of a particular Tender will render the Tender liable to exclusion from consideration.
15. Next working day shall be applicable in case there happens to be a holiday on any of the dates above for sale and receipt of the Tenders.
16. Incomplete Tender, conditional Tender or Tender without earnest money is not likely to be considered.
17. In unavoidable circumstances like war, Civil Commotion, Fires, Floods Strikes or lock outs either party can intimate within 21 days of occurrence and up to 60 days on option to terminate the contract.
18. The contractor will be responsible & liable to make good any losses, which may be caused to the Deptt. or/and other agency due to negligence of the contractor and of his any employees.

**OFFTG. PRINCIPAL  
BHARATI COLLEGE**

## **2. GENERAL TERMS AND CONDITIONS:**

Interested bidders may download the tender enquiry documents and submit their tenders online at Central Public Procurement Portal website: <https://eprocure.gov.in/eprocure/app> and bid online through the portal [www.eprocure.gov.in](http://www.eprocure.gov.in). The bids are invited in a two bid system (Technical and Financial) from reputed firms and are required to be submitted in two parts, namely, (1) Technical Bid and (2) Financial Bid. The Financial Bid should be valid for 180 days from the date of opening of the Tender. Incomplete bid documents shall be rejected.

## **3. EARNEST MONEY DEPOSIT (EMD)& TENDER FEES:**

Earnest Money Deposit (EMD) for Rs. 94,000/- (Rupees ninety four thousand only) in the form of Demand Draft drawn in favor of “**Principal, Bharati College**” payable at New Delhi must reach by hand or through registered post to the address at “**The Principal, Bharati College, University of Delhi, C-4, Janak Puri, New Delhi-110058**” on or before the scheduled opening of the technical bid. The EMD will be returned to all the unsuccessful bidders at the end of the selection process. However, the EMD shall be forfeited in case the successful bidder withdraws or the details furnished in Annexure are found to be incorrect or false during the tender selection process. No interest shall be paid on the Earnest Money Deposit / EMD of successful bidder will be returned on receipt of performance bank guarantee as mentioned below. However the firms are in possession of valid and eligible exemption certificate issued by the Ministry of Micro, Small & Medium Enterprises/NSIC Certificate are exempted from furnishing the said Earnest Money Deposit.

## **4. BID OPENING PROCEDURE:**

The Technical Bids will be opened by a committee nominated by the Competent Authority from [www.eprocure.gov.in](http://www.eprocure.gov.in) website. The Financial Bids of such of those Bidders, who have qualified in the Technical Bid stage by the Evaluation Committee, will be taken up for after finalization of the Technical Bid opening process. L-1 Bidder will be selected by the system automatically.

## **LIST OF ANNEXURES:**

- i. Annexure –A - Technical Bid – Eligibility**
- ii. Annexure – B - Qualifying Bid Document**

**Annexure –A - Technical Bid – Eligibility**

**TECHNICAL BID - ELIGIBILITY CRITERIA**

a) Experience of having timely & successfully completed similar works viz., SITC of 380 kva DG Set in govt. sector / PSU's during last 3 years ending last day of month previous to the one in which applications are invited should be either of the following:-

[1] Two similar completed works costing not less than the amount equal to 40% of the estimated cost.  
Or

[2] One similar completed work costing not less than the amount equal to 80% of the estimated cost.

b) Should not have been blacklisted by any PSU / Govt. Department (a self-certification is required)

c) The Bidder company/firm should have at least one branch offices(s) in Delhi/NCR for 100% support services. Documentary proof need to be submitted for office address.

d) PAN, TIN & GST Numbers should be a mandatory requirement for all bidders and it should be clearly mentioned in tender documents.

e) Average financial turnover during the last 3 years, ending 31st March of the previous financial year, should be at least 80% of the estimated cost.

f) Defect Liability and free maintenance period shall be twelve months from the date of virtual completion of the works.

g) In case of manufacturer appointed agency, a certification from OEM addressing this particular job will be required for authentication in the prescribed format provided on next page.

***Supporting document(s) to be enclosed for above or else bids will be rejected.***

**OFFTG. PRINCIPAL  
BHARATI COLLEGE**



**MANUFACTURER'S AUTHORIZATION (MAF)**

**MAF Letter Format (On OEM Letter head with seal)**

Date: \_\_\_\_\_

To,

\_\_\_\_<<< NAME OF CLIENT/ORGANIZATION>>\_\_\_\_\_

\_\_\_\_\_

Subject: Manufacturer's Authorization Certificate

**Tender Ref.:** << PLEASE SPECIFY SPECIFIC TENDER REF.NO.>>

Dear Sirs,

This is with reference to the above mentioned Tender.

We hereby authorize <<NAME AND ADDRESS >> to offer our range of product in their tender bids. Being authorized <<NAME AND ADDRESS >> may make techno-commercial and commercial proposal for this tender.

Upon being awarded the work <<NAME AND ADDRESS >> are authorized to install and commission our range of products falling under <<SECTION/PRODUCT CATEGORY>> of this tender.

We as Original Electronic Manufacturers will provide all the techno-commercial and service support necessary to <<NAME AND ADDRESS >> for this project during the commissioning phase of the equipments and until hand-over.

Thanking and assuring best of our services at all times.

Yours faithfully

(Seal & Signature)

**Annexure – B - Qualifying Bid Document**

**QUALIFYING BID DOCUMENT**

<b>S.No.</b>	<b>Description</b>	<b>To be filled by the bidder</b>
1.	Name & address of the Firm/Company	
2.	Name & Designation of the authorized person submitting the Bid.	
3.	Companies specifically into execution of lift works. Proof to be submitted.	
4.	Tel. No.	
5.	E-mail	
6.	Number of years of experience in doing similar business.	
7.	<p>Experience of having timely &amp; successfully completed similar works viz., SITC of 380 kva DG Set in govt. sector / PSU's during last 3 years ending last day of month previous to the one in which applications are invited should be either of the following-:</p> <p>Two similar completed works costing not less than the amount equal to 40% of the estimated cost</p> <p align="center">or</p> <p>One similar completed works costing not less than the amount equal to 80% of the estimated cost.</p>	
8.	PAN No. and IT returns for the last three financial years to be uploaded).	
9.	GST Registration No.	
10.	Details of EMD and tender fees.	EMD DD No.                      Date: Tender fees DD No.              Date:
11.	Signed copy of the NIT documents. (TO BE UPLOADED)	
12.	The Bidder company/firm should have at least one branch offices(s) in Delhi/NCR for 100% support services. Documentary proof need to be submitted for office address.	
13.	Should not have been blacklisted by any PSU / Govt. Department.	

**DECLARATION:**

- vii.I/We have read and understood the terms and conditions given in the Tender Document;
- viii. I/We are eligible for award of the contract as per the qualification criteria mentioned in the Tender Document;
- ix.I/We have accept and agrees to all the terms and conditions of the Tender;
- x.I/We shall comply with all the terms and conditions of the Tender;
- xi. All the information / documents provided in his bid are true to the best of my/our knowledge and belief. If at any stage, the information / documents are found to be false, misleading or incorrect then his Bid / Purchase Order shall be cancelled at his cost and risk and I/We shall indemnify the College for the loss caused due to the cancellation and I/We shall be liable for penal / legal action including black listing.
- xii. I/We understand that the College reserves the right to cancel the Tender at any stage or to cancel / reject any one or more bid without incurring any liability.

Dated\_\_\_\_\_

**Sign. & Stamp of Contractor**

Postal Address

**Witness:**

Address:

Occupation:

## **SPECIAL CONDITIONS OF THE CONTRACT**

### **1.1.0 Insurance for Works**

The contractor at the time of signing the contract or before commencing the execution of work, without limiting his obligations and responsibilities shall insure the works at his own cost and keep them insured until the virtual completion of the contract against all acts of God including Fire, Theft, Riots, War, Floods etc. with a Nationalized Insurance company in the joint names of the employer and the contractor (the name of the former being placed first in the policy) for the full amount of the contract. Such policy shall cover the property of the employer and fees for assessing the claim and in connection with its services generally therein and shall not cover any property of the Contractor or of any sub-contractor or employee.

The contractor shall deposit the policy and receipt for the premiums with the employer within seven (7) days, from the date of signing of the contract/commencement of the execution of the work or unless otherwise instructed by the employer. In default of the contractor insuring as provided above, the employer on his behalf may so insure and may deduct the premiums paid from any moneys due on which may become due to the contractor. The contractor shall as soon any claim under the policy is settled on the work reinstated by the Insurance office should elect to do so, proceed with all due diligence with, the completion of the works in the same manner as through the misfortune/accident had not occurred and in all respects under the same conditions of the contract. The contractor in case of rebuilding or reimbursement after accident shall be entitled to such extension of time for completion, as the employer deems fit.

### **1.1.1 Insurance in respect of damage to persons and property**

- a. The contractor shall be responsible for all injury to persons, animals or things and for all structural and decorative damage to property which may arise from the operation or neglect of himself or of any approved sub-contractor's or employees, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of this contract. The clause shall be held to include any damage to buildings, whether immediately adjacent or otherwise, and any damage to roads, streets, foot paths, bridges and works forming the subject of this contract by frost or other inclemency of the weather. The contractor shall indemnify the employer and hold him harmless damage to persons or property as aforesaid and also respect of any claims made in respect of injury or damage under any Acts of Government or otherwise and also in respect of any award of compensation of damages consequent upon such claims.
- b. The contractor shall reinstate all damages of every sort mentioned in this clause, so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties.
- c. The contractor shall indemnify the employer against all claims which may be made against the employer by any member of the public or other third party in respect of works in consequence thereof and shall at his own expense arrange to effect and maintain, until the virtual completion of the contract, with any Nationalized Insurance company in the joint name of the employer and the contractor against such risks and deposit such policy or policies with the employer from time to time during the currency of this contract. The contractor shall similarly indemnify the employer against all claims which may be made upon the employer whether under the Workman's Compensation Act or any other statute in force during the currency of this contract or at common law in respect of any employee of the contractor or any sub-contractor and shall at his own expenses effect and maintain with an approved office a policy of Insurance in the joint names of the employer and the contractor against such risks and deposit such policy of policies with the employer and the contractor against such risks and deposit such policy or policies with the employer from time to

time during the currency of the contract. The contractor shall be responsible for anything which may be excluded from the insurance policies above referred to and also for all other damages to any property arising out of and incidental to the negligent or defective carrying out of this contract. He shall also indemnify the employer in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any award of or compensation of damages arising there from.

- d. The employer shall be at liberty and is empowered to deduct the amount of any damages, compensation costs, charges and expenses arising or occurring from or in respect of any such claim or damage from any sum or sums due to or become due to the contractor including the security deposit.
- e. If the contractor fails to comply with the terms of these conditions, the employer may insure the works and may deduct the amount of the premiums paid from any moneys that may be or become payable to the contractor or may at the option, not release running payment to the contractor until the contractor shall have complied with the terms of this condition.
- f. Such insurance whether affected by the employer or the contractor will not limit or bar the liability and obligation of the contractor to deliver the works to the employer completed in all respects according to the contract. In case of loss or damage due to any of the aforesaid clause, the moneys payable under any such insurance shall be received and retained by the employer until the works are finally completed and such moneys shall then be credited to the contractor in final settlement of accounts.
- g. The works shall be executed in close co-ordination with the progress of other work. This being absence of the contract, no claim for idles labor will be entertained.

## **2.0 SCOPE OF CONTRACT:**

The Contractor shall carry out and complete the said SITC of one no. 380 kva DG Set works for college complete in every respect in accordance with Contract and with the directions of and to the satisfaction of the Architects and the employer. The Architects may in their absolute discretion and from time to time, issue further written instructions, details, directions and explanations which are hereafter collectively referred to as "Architect's Instructions" in regard to:

- a) The variations or modifications of the design quality or quantity of works or the addition or omission or substitute of any work.
- b) Any discrepancy in the drawings or between the Schedule of Quantities and/or drawings And/or Specifications.
- (c) The removal and / or re-execution or any works executed by the Contractor.
- (d) The removal from the site of any material brought there on by the contractor and the Substitution of any other material there from.
- (e) The dismissal from the works of any person / persons employed thereupon.
- (f) The opening up for inspection of any work covered up.
- (g) The amending and making good of any defects under clause "Removal of Improper Work and Material".

The Contractor shall forthwith comply and fully execute any work comprised in such Architect's Instructions provided always that verbal instruction. Directions and explanations given to the Contractor

or his representative upon the works by the Architects shall, if involving a variation, be confirmed in writing by the Contractor within 3 days and if not dissented from in writing within further 3 days by the Architect. Such shall be deemed to be the Architect's instructions within the scope of the contract.

If compliance with the Architect's instructions as aforesaid involved work and/or expense and/or loss beyond that contemplated by the Contract. Then unless the same were issued owing to some breach of this contract by the Contractors. The Employer shall pay to the Contractor on the Architect's Certificate, the price of the said work (as an extra to be valued as herein after provided) and/or expense and/or loss.

### **3. SCHEDULE OF QUANTITIES:**

The Schedule of Quantities unless otherwise stated shall be deemed to have been prepared in accordance with the method of measurements specified in the particular specifications and shall be considered to be approximate. The employer does not undertake to carry out the whole of work as shown in the drawings and taken in the schedule of quantities and reserves the right to modify the same or any part thereof. The Contractor shall not be allowed any compensations or damages for the work so omitted or cancelled by the employer. Each tender item should be filled in with the rates and amounts in separate columns and all the sections should be totaled up in order to show the aggregate value of the entire tender. The rates should be filled both in figures and words for each item and in case of discrepancy the rates filled in words shall be considered as correct for the evaluation of tender amount. The initials of the tenderers shall duly attest all corrections in the tender Schedule. Corrections, which are not attested, may entail the rejection of tender.

### **4. SUFFICIENCY OF SCHEDULE OF QUANTITIES:**

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 prices stated in the Schedule of Quantities and/or the Schedule of Rate and Prices, which rates and prices shall cover all their obligations under the contract, and all matters and things necessary for the proper completion of the works.

### **5. ERRORS IN SCHEDULE OF QUANTITIES:**

Should any error appear in the Schedule of Quantities, other than in the Contractor's prices and calculations, it shall be rectified and such rectification shall not vitiate the contract but shall constitute a variation of the Contract and be dealt with as an authorized extra or deduction.

### **6. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY**

The contractor shall provide everything necessary for the proper execution of works according to the true intent and meaning of the drawings, General conditions; specifications and Schedule of Quantities taken together whether the same may or may not be particularly shown or described therein, provided that the same can reasonably be inferred there from and if the Contractor finds any discrepancy in the drawings or between the drawings, general conditions, specifications and Schedule of Quantities. He shall immediately refer the same in writing to the Architect, who shall decide in consultation with the employer which shall be followed and their decisions shall be final and binding in the matter.

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

## **7. AUTHORITIES. NOTICES, PATENT, RIGHTS AND ROYALTIES:**

The contractor shall conform to the provisions of the statutes relating to the works, and to the Regulation and bye-laws of any local authority, and or any water, lighting and other Companies and / or Authorities with whose systems and the executed works building proposed to be connected, and shall before making any variation from the drawings or specifications. That may be necessitated, by so conforming give to the Architects written notice with a copy to the Employer specifying the variations proposed to be made and the reason for the making it and apply for instruction thereon. In case, the contractor shall not within ten days receive such instructions, he shall proceed with the work conforming with the provisions regulations or bye-laws in Question.

The Contractor shall bring to the attention of the architect all notices required by the said acts, regulations or bye-laws to be given to any Authority, and pay to such Authority or to any Public Officer all fees that may be properly chargeable in respect of the works and lodge the receipts with the Architect/Employer.

The Contractor shall indemnify the Employer against all claims in respect of patent rights designs, trademarks or name of other projected rights in respect of any work or material used for or in connection with the works or temporary works and from and against all claims, demands, proceedings damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. The Contractor shall defend all actions arising from such claims, and shall himself pay all royalties, license fees, damages, cost and charges of all and every sort that may be legally incurred in respect thereof.

## **8. MATERIAL AND WORKMANSHIP TO CONFORM TO DESCRIPTION:**

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

It will always be the responsibility of the Contractor to select and obtain all materials of good quality from the manufacturers without having any manufacturing defect there.

## **9. THE SETTING OUT**

The Contractor shall at his own expense set out the works accurately in accordance with plans and to the complete satisfaction of the Architect. The Contractor shall be solely responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof. If at any time any error in the respect shall appear during the progress or on completion of any part of the work. The Contractor shall at his cost rectify such error if called upon to do so to the satisfaction of the Architect and the Employer. The Architect and/or his representatives shall from time to time inspect the work. But such inspections shall not exonerate the Contractor in any way from his obligations to remedy any defects at his own cost which may be found exist at any stage of the work or after the same is completed.

**10.** The Contractor shall be solely responsible at all times for the use of good quality materials and for doing good workmanship even though the, Employer/Architects have failed to bring to his notice during their inspection of works about use of the some defective materials, and bad workmanship during the execution of the works and after completion of the works. In all cases of faulty execution and finish of the works due to use of faulty, defective and interior materials, used in the works. And due to their bad workmanship Contractor shall be liable for the payment towards damages to the Employer as ascertained by the Architect/Owner and/or he shall have to rectify the same works at his cost.

## **11. CONTRACTOR'S SUPERINTENDENCE & REPRESENTATIVE ON WORKS:**

**11.1** The contractor shall give all necessary personal superintendence during the execution of the works and so long thereafter as the Architect may consider it necessary until the expiration of the "Defects Liability period" as stated in the contract. The Contractor shall meet the Architect or their/his representatives whenever required and so informed by the Architect.

## **12. UNFIXED MATERIAL**

When any materials intended for the works shall have been placed at site by the contractor, such materials shall not be removed there from (except for the purpose of being used on the works) without the written authority of the architect and when the contractor shall have received payment in respect of any Certificate in which the Architect shall have stated that he has taken into account the value of such unfixed materials on the works such materials shall become the property of the employer and the contractor shall be liable for any loss or damage to any such materials. The payment certified against value of any unfixed materials shall not in any way exonerate the contractor from his obligation the supply of good, quality materials, which may be found to exist at any stage of work even after the same is completed.

## **13. REMOVAL OF IMPROPER WORK AND MATERIAL**

The Architects shall during the progress of the works, have power to order in writing from time to time the removal from the works, within such reasonable time/ times, as may be specified in the order, of any materials which in the opinion of the Architect are not accordance with the specifications or the instructions of the Architect, and the substitution of proper materials and the removal and proper re-execution of any work, which has been executed with materials or workman ship, not in accordance with the drawings and specification or instructions, and the contractor shall forthwith carry out such orders at his own cost, In case of default on the part of the contractor to carry out such orders, the employer shall have to employ and pay other persons to carry out the same and all expense consequent thereon or incidental thereto shall be borne by the Contractor, and shall be recovered or may be deducted by the Architects/Employer from any money due or nay become due to the contractor.

In lieu of correcting work not done in accordance with the contract, the Architect may allow such work to remain and in that case may make allowance for the difference in value together with such further allowance for damage to the employer, as his option may be reasonable.

## **14. CERTIFICATE OF VIRTUAL COMPLETION:**

The Contractor shall intimate in writing to the Architects as and when the works are complete in all respects in order to enable the Architect to intimate the Employer to take possession of the same. The works shall not be considered as virtually completed, until the Architects have carried in writing that the same have been 'Virtually complied'.

The defects liability period shall commence from the date of such Virtual Completion Certificate.

## **15. OTHER PERSONS ENGAGED BY THE EMPLOYER:**

The employer reserves the right to use the premises and any portions of the site for the execution of any work not included in this contract which he may desire to have carried out by other persons, and the Contractor is to allow all reasonable facilities for the execution of such work, but is not required to provide any plant or materials for the execution of such work, except by special arrangement with the employer. Such work shall be carried out in such a manner as not to impede the progress of the works included in the Contract, and the Contractor shall not be responsible for any damage or delay which may happen to or be occasioned by such work.



## **16. FIRE INSURANCE**

a) The Contractor shall at the time of signing the contract insure the works and keep them insured until the virtual completion of the contract, against loss or damage by fire and all natural calamities and against all other risks in an office to be approved by the Employer in the joint names of the Employer and Contractor (the name of the former being placed first in the policy) for the full amount of the contract and for further sum if called upon 'to do so by the Architect, the premium of such further sum being allowed to the Contractor as an authorized extra.

Such policy shall cover the property of the employer only, and shall not cover any property of the Contractor or of any sub-contractor or employees. The contractor shall deposit the policy and receipts for the premiums with the Employer within 10 days from the date of signing the Contract. In default of the Contractor insuring as provided above, the employer on his behalf may so insure and may deduct the premiums paid from any money due or which may become due to the contractor. The Contractor shall as soon as the claim under the policy is settled, or the work reinstated by the Insurance Office should they elect to do so proceed with all due diligence with the completion of the works in the same manner as though the fire had not occurred and in all respects under the same conditions of contract. The Contractor in case, of rebuilding or reinstatement after fire, shall be entitled to such extension of time for completion as the architect deems fit in consultation with the owner.

b) The amount so due as aforesaid shall be the total value of the works duly executed and of the contract materials and goods delivered upon the site for use in the works up to and including a date not more than seven days prior to the date of the said Certificate less the amount to be detained by the Employer (as hereinafter provided) and less any installments previously paid under this clause. Provided that such Certificates shall only include the value of the said materials and goods as and from time as they are reasonably properly and not prematurely brought upon the site and then only if property stored and /or protected against weather.

## **17. PAYMENT OF WAGES OF LABOUR BY THE CONTRACTOR**

a) The contractor shall pay to the labor engaged by him in connection with work directly or indirectly through sub-contractors, wages not less than the minimum fixed by the appropriate. Governments Authorities under minimum wages Act, 1946, as amended and shall duly and properly comply with or ensure compliance with, a legislation laws, rules or regulations relating to the Employment of labor. The Contractor shall be liable for any damages or loss caused to the Owner by violation of the provisions of this clause. A violation of this clause shall also be deemed to be a breach of Contract. If the employer is called upon to make any payment towards wages etc. of the labor employed by the Contractor, the same will be done from the outstanding payments against pending or future bills of the Contractor.

b) The contractor shall be solely responsible for the labour/ personnel employed and that the personnel provided by the contractor shall and will not make any claim to become employees of the Employer and that there will be no Employee and Employer relationship between the personnel engaged by the Contractor and the Employer.

c) The Contractor shall be fully responsible for timely monthly payment of wages and any other dues to the personnel deployed by the Contractor by 7th of every month in presence of official of the Employer, deputed for this specific purpose.

d) Further the Contractor while submitting their bill for payment shall solely and also be responsible to submit documentary evidence of having submitted ESI and EPF amount (both employers and employee's contribution) in the respective account of the worker for the period for which bill is raised, copies of challans and worker's permanent ESI account card/certificate.

## **18. FAILURE BY CONTRACTOR TO COMPLY WITH ARCHITECTS NSTRUCTION:**

If the Contractor after receipt of writing notice from the Architect requiring compliance with such further drawing and/or Architect's instructions, fails within seven days to comply with the same, the Architect may employ and pay other persons to execute any such work whatsoever as may be necessary to give effect thereto and all costs incurred in connection therewith shall be recoverable from the Contractors by the Owner on a Certificate by the Architect as a debit or may be deducted by him from any moneys due or which may become due to the Contractor.

**19.** If there are any discrepancies omission and errors in meaning or the actual contents of each item of Schedule of Quantities and other conditions of all the tender documents, the reasoning, the opinion and decision given by the Architect shall be taken as final and binding on both parties without any further appeal.

## **20. SUSPENSION OF WORKS:**

If the Contractor, except on account of any legal restraint upon the Employer preventing the continuance of the works or on account of anv of the causes mentioned in the Clause "Extension of Time", shall suspend works or in the opinion of the Architects, shall neglect fail to proceed with due diligence in the performance of his part of the Contract or if he shall more than once make default in the respects mentioned in clause 23 (removal of improper work and materials), the Employer through the Architect shall have the power to give notice in writing to the Contractor requiring that the works be proceeded within a reasonable manner, and with reasonable dispatch, such notice shall not be unreasonably given and must signify that it purports to be a notice under the provisions of this clause and must specify the acts or defaults on the part of the Contractor upon which it is based. After such notice shall have been given, the Contractor shall not remove the site of works or from any ground contiguous there to any plant or materials belonging to him which shall have been placed thereon for the purpose of the work and the Employer shall have lien upon such plants and materials to subsist from date of such notice being given until the notice shall have been complied with. Provided always that such Hen shall not under any circumstance subsist after the expiration of 30 (thirty) days from the date of such notice given, unless the Employer shall have entered upon and taken possession of the works and site as hereinafter provided.

If the Contractor shall fail seven days after such notice has been given, to proceed with the works as therein prescribed, the Employer may enter upon and take possession of works and site, and of all such plants and materials thereon intended to be used for the works, and the Employer shall retain and hold a been upon all such plants and materials until the work shall have been completed under powers hereinafter conferred upon him.

If the Employer shall exercise the above power, he may engage any other person to complete the works and exclude the Contractor his agents and servants from entry upon or access to the same, except that the Contractor or any person appointed in writing may have access at all times during the progress of the works to inspect, survey and measure the works. Such written appointments or a copy thereof shall be delivered to the Architects before the person appointed comes on to the works and the Employer shall take such steps as in the opinion of the Architect may be reasonably necessary for completing the works, without undue delay of expense using for that purpose the plant and materials above mentioned in so far so they are suitable and adapted to such use.

Upon the completion of the works, the Architect shall certify the amount of the expenses properly incurred consequent and incidental to the default of the Contractor as aforesaid and in completing the works by other persons.

Should the amount so certified as the expenses properly incurred be less than the amount which should have been due to the Contractor upon the Completion of the works by him. the difference shall be paid to the Contractor by the Employer should the amount of the former exceed the latter, the difference

shall be paid by the Contractor to the Employer. The Employer shall not be liable to make any further payments or compensations to the Contractor for or on account of the proper use of the plant for the completion of the works under the provision herein before mentioned other than such payments as is included in the Contract.

After the works shall have been so completed by persons other than the contractor, under the provisions herein before contained, the Architect shall give notice to the contractor to remove his plant and all surplus materials as may not have been used in the completion of the works from the site. If such plant and materials are not removed within a period of 14 days after the notice shall have been given, the Employer may remove and sell the same, holding the proceeding loss the cost of the removal and sale to the credit of the Contractor. The Owner shall not be responsible for any loss sustained by the Contractor from the sale of the plant and materials etc. in the event of the Contractor not removing it after notice.

## **21. CERTIFICATES AND PAYMENTS:**

The Contractor shall be paid by the Employer from time to time, by installments under Interim Certificates to be issued by the Architect on the bills submitted by the Contractor in the Performa prescribed by the Employer on account of the work executed when in the opinion of the Architect, work to the approximate value, named in the Appendix as 'Value of Work for Interim Certificates (or less at the reasonable discretion of the Architects) has been executed in accordance with this Contract.

The Payment shall, however, to a retention of the percentage of such value named in the Appendix hereto mentioned as 'Retention Percentage until the total amount, retained shall reach the sum named in the appendix as 'Total Retention Money' after which time the installments shall be up to the full value of the work subsequently so executed. The Architects may in their discretion include such amount, as they may consider proper on account of materials delivered upon the site by the Contractor for use in the work.

And when the works have been virtually completed and the Architect shall have certified in writing that they have been completed. The Contractor shall be paid by the Employer in accordance with the Certificate to be issued by the Architect the sum of money named in the Appendix as 'Installment after Virtual Completion', being a part of the said Total Retention Money.

The Contractor shall be entitled to the payment of the final balance in accordance with the final certificate to be issued in writing by the Architect/ Employer at the expiration of the period referred to as 'The Defects Liability Period' in the Appendix hereto from the date of Virtual Completion or as soon after the expiration of such period as the works shall have been finally completed and all defects made good according to the true intent and meaning hereof, whichever shall happen, provided always that the issue by the Architect of any certificate during the progress of the works or at or after the completion shall not relieve the Contractor from his liabilities in cases of fraud, dishonesty or fraudulent concealment relating to the works or materials or any matter dealt with in the certificate, and in case of all defects and insufficiency in the works or materials which reasonable examination would not have disclosed. No certificate of the Architect shall of itself be conclusive evidence that any works or materials to which it relates are in accordance with the contract.

The Architect shall have power to withhold any Certificate if any works or any parts thereof are not being carried out to his satisfaction. The Architect may be any certificate makes any correction in any previous certificate, which shall have been issued by him.

All efforts shall be made so that invariably the payment upon the Architect's Certificates are made within the period named in the Appendix as Period of Honoring of Certificates after such certificates have been delivered to the Employer. Notwithstanding the aforesaid, the Employer shall have a right to withhold payment of pending of future bills of the Contractor if there is any demand from his workers for payment of wages etc. which he is legally bound to pay, and adjust, the same against such bills and release the balance amount, if any, to him.

## **22. NOTICE IN WRITING:**

Written Notices for the Employer, the Architect, or the Contractor may be served personally or otherwise proved to have been received or sent by registered post to the last known place of abode or business of the party to whom the same is to be given or in the case of a Company or Corporation, Notices may be served at or sent by registered post to the Registered Offices of the Company or Corporation.

Any notice sent by registered post shall be deemed to be served at the time, when in the ordinary course of post it would be delivered.

That the responsibility of procuring various items of materials which will require to be incorporated in the works will be that of the Contractor. No material for incorporation of the work including Cement shall be issued to the Contractor by the Employer.

The Contractor shall indemnify the Employer against any loss caused (at any time during the execution of the said works, or during the Defects liability Period after completion of the said works), on account of defective workmanship in works and on account of use of the materials which are not as per Specification in the said works referred to in this Contract, even though they received the payments from the Employer against the same works.

## **23. SETTLEMENT OF DISPUTES AND DIFFERENCES:**

Any dispute, difference, controversy or claim (“Dispute”) arising between the Parties out of or in relation to or in connection with this Tender / Contract, or the breach, termination, effect, validity, interpretation or application of this Tender / Contract or as to their rights, duties or liabilities hereunder, shall be addressed for mutual resolution by the authorized official of the parties. If, for any reason, such Dispute cannot be resolved amicably by the Parties, the same shall be referred to the sole arbitration of the Principal, (Bharati College) or any other person appointed by him as Sole Arbitrator. The provisions of the Arbitration and Conciliation Act, 1996 or any statutory modifications on re-enactment thereof as in force will be applicable to the arbitration proceedings. The venue of the arbitration shall be at New Delhi. The cost of the Arbitration proceedings shall be shared equally by both the parties. The language of the arbitration and the award shall be English. The decision / award of the arbitrator shall be final and binding.

## **24. SERVICE OF NOTICE TO CONTRACTOR:**

Any notice to be given to the Contractor under the terms of the contract shall be served by sending the same by post to or leaving the same at the address of the Contractor as shown on the tender form.

## **25. SERVICE OF NOTICE ON EMPLOYER:**

Any notice to be given to the Employer under the terms of the contract shall be served by sending the same by post to or leaving the same at the Employer's registered office.

## **26. PRICES ARE FIRM AND NOT SUBJECT TO ANY VARIATION:**

All rates and prices in this contract are firm for the entire period of contract. No price escalation or de-escalation or adjustment to the contract price or rates of item shall be made in respect of any increase or decrease after the submission and/or acceptance of tender, in the prevailing market rates of labor or materials etc on account of any reason, statutory or otherwise, which may result in an increase or decrease of the cost in carrying out the work. The accepted agreement rates for various items are taken as including all the above and firm for the entire period of contract.

All liabilities that may arise due to any statutory increase in the cost of labor and/or material shall be borne by the Contractor till the entire completion of work and nothing extra shall be paid.

**27. PROVIDENT FUND AND E.S.I.S.**

The contractor shall bear full liability for payments under provident fund and employees State Insurance Scheme and other labor laws for his workers and staff.

**28. SHOP DRAWINGS:**

All DG set related samples to be got approved from the architect before execution. The cost of above to be included in the tender of respective items. The Successful Tenderer shall submit Shop Drawings for review prior to execution.

**29. MEASUREMENTS OF WORKS:**

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

Should the contractor not attend or neglect or omit to send such an agent then the measurements taken by the Architects/ Employer shall be taken to be correct measurements of the works- The measurements. Unless otherwise stated, shall be taken in accordance with the 'method of measurements' mentioned in the particular specifications. In case of any dispute arises in the 'Method of measurements' then the final decision given by the Architects regarding the method of measurement shall be

Taken to be correct and final by the Contractor and the Employer. The contractor or his agent may at the time of measurement take such notes and measurements as he may require.

All authorized extra works, omissions and all variations made without the Architect's knowledge, if substantially sanctioned by him in writing shall be included in such measurements.

**30.** In case of failure to supply the goods / services of the ordered quantity / specifications / quality in the time schedule and at the agreed rates, the Employer shall have right to purchase the same from the market at the prevalent rate and the difference between the agreed price and purchase price would be adjusted with the Retention Money / Security deposit of the Contractor or recovered from the Contractor. Further, if the supplied items are not in accordance with the ordered items then the Employer reserves the right to reject the whole lot or accept, whole or part supply, at less than the agreed / market price. Any loss to the Employee on this account shall be adjusted with the Retention Money / Security deposit of the Contractor.

**31. Black-Listing** – Tenderer would be also be liable to be black-listed under following circumstances:-

- Giving false, misleading or fake information / document in the tender / bid;
- Withdrawing the bid after opening of the Financial bids;
- Refusal to accept Work / Purchase Order at the quoted prices;
- Failure to supply goods of the ordered quantity / quality / specifications at the agreed rates within the time schedule;
- Adoption of any unethical or illegal practices;
- Any other justified reason.

### **32. WATER:**

Water shall be made available to the Contractor free of cost. Connection will be provided at one point in the premises and the Contractor shall have to make his own arrangements for carriage / storage of water.

### **33. ELECTRICITY:**

The Employer shall make available electricity at the site of work to the Contractor.

Temporary light points required in working area will be provided by the Contractor at his own cost in consultation with the Architect at site. The tender rates shall be quoted accordingly by the contractor.

**The recovery for electricity shall be affected as per the rates paid by the Employers to the Electricity Supply Co. from time to time, from his payments due or @ 0.50% of the project cost.**

34. All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book having pages of A-4 size.
35. The contractors shall submit his final bill to the Architect within 30 days of completion of work. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished.
36. The contractor shall forfeit his claim in case he fails to submit his bill within 9 Months after completion of his work.
37. The malba / garbage, removed from the site, shall be disposed of by the contractor at any of the approved MCD dumping ground.
38. The contractor or his authorized representative should always be available at the site of work to take instructions from departmental officers and ensure proper execution of work. No work should be done in the absence of such authorized representative.
39. The structural and other drawings for the work shall, at all times, be properly correlated before executing any work and no claim whatsoever shall be entertained in this respect.
40. The contractor shall maintain in good condition, all work executed till the completion of entire work allotted to the contractor.
41. The tendered rates for all items of work, unless specified otherwise, shall include the cost of all operations, labor, materials and other inputs involved in the execution of the items.
42. Unless otherwise specified in the Schedule of Quantities, the rates for all items of work shall be considered as inclusive of working in or under water and/or liquid mud and/or foul conditions including pumping or bailing out liquid mud or water accumulated in excavations during the progress of the work from springs, tidal or river seepage, rain, broken water mains or drains and seepage from subsoil aquifer.
43. 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 Employer and same are not to be removed or taken away by the contractor or any other person without the special license and consent in writing of the Architect, but the Employer 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.

- 44.** No claim for idle establishment & labour, machinery & equipments, tools & plants and the like, for any reason whatsoever, shall be admissible during the execution of work as well as after its completion.
- 45.** The contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case he or his authorized representative is not present or does not associate himself, the Architect shall do the needful for getting the samples collected and tested; the result of such tests and consequences thereof shall be binding on the contractor. All expenditure required for collection, preparation & forwarding the samples to the laboratory will also be recovered from the contractor.
- 46.** Other agencies working at site may also simultaneously execute the works entrusted to them and to facilitate their working, the contractor shall make necessary provisions e.g. holes, openings, etc. for laying/burying pipes, cables, conduits, clamps, hooks etc. as may be required from time to time.
- 47.** The work shall be carried out in such a manner so as not to interfere and disturb other works being executed by other agencies, if any.
- 48.** Any damage done by the contractor to any existing work or work being executed by other agencies shall be made good by him at his own cost.
- 49.** The work shall be carried out in the manner complying, in all respects with the requirement of relevant rules and regulations of the local bodies under the jurisdiction of which the work is to be executed and nothing extra shall be paid on this account.
- 50.** On account of security consideration, there could be some restrictions on the working hours, movement of vehicles for transportation of materials and location of labor camp. The contractor shall be bound to follow all such restrictions and adjust the program for execution of work accordingly. Nothing extra shall be paid on this account.
- 51.** For the safety of all labor directly or indirectly employed in the work for the performance of the contractor's part of this agreement, the contractors shall, in addition to the provision of CPWD safety code and directions of the Architect /, make all arrangements to provide facility as per the provision of Indian Standard Specifications (Codes) & nothing extra shall be paid on this account:
- 52.** The contractor shall have to make his own arrangement for housing facilities for staff and labor away from construction site outside the college campus and shall have to transport the labor to and from between construction site and labor camp at his own cost. No labor huts will be allowed to be constructed at the project site except for two temporary sheds for chowkidar and storekeeper including store.
- 53.** The right of carry out the work either in conformity with or in a manner entirely different from the terms of this tender document that may be considered most suitable before or subsequent to the receipt of tenders due to exigencies of work, is reserved with the Architect.
- 54.** 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 rate quoted by the contractor shall cover such charges also and nothing extra on account of such incidental charges, if any, shall be paid.
- 55.** Architect shall have full powers to send workmen and employ on the premises to execute fittings and other work not included in the contract. For whole operations the contractor is

to afford every reasonable facility during ordinary working hours provided such operations are carried out in such a manner as not to impede the progress of work included in this contract, in the opinion of Architect.

**56.** All the workers employed by contractor at site should be in a dress code with reflective jackets.

### **57. Rates for extra Additional, Altered or Substituted work**

The rates for additional, altered or substituted work shall be worked out in accordance with the following provisions in their respective order.

- i) If the rates for similar additional, altered or substituted work and directly available in the contract for the work, the contractor is bound to carry out the work at the same rates as are available in the contract for the work.
- ii) If the rates for additional, altered or substituted work are not directly available in the contract for the work the rates will be derived from the rates for a similar class of work as are specified in the contract for the work.
- iii) If the rates for the altered, additional or substituted work cannot be determined in the manner specified in sub-clause (i) to (ii) above, then the contractor shall within three days of the date of receipt of order to carry out the work, inform the Architect of the rate which it is intending to charge for such works supported by analysis of the rate or rates claimed (CPWD analysis). Rates finalized and approved by the Architect on the basis of these details will be final and binding. However, the architect by notice in writing will be at liberty to cancel his order to execute such work and arrange to carry it out in such a manner as he may deem advisable, but under no circumstances shall the contractor suspend the work once ordered in writing on the plea of non-settlement of rate.

### **58. Reimbursement of Variation in Price**

Prices and rates quoted by the Tenderers shall be considered as firm for the complete work and entire duration of the contract. No claim for extra payment due to any rise in rates of raw material and labour or due to whatsoever reasons shall be considered, not even for extended period of completion.

### **59. Termination of the Contract**

If at any time after the commencement of the work the employer for any reason whatsoever does not require the whole or part thereof as specified in the tender to be carried out, the Employer shall have the right to terminate this Agreement and The Principal (Bharati College) shall communicate the termination by giving a notice in writing to the contractor.

The contractor shall have no claim to any payment or compensation whatsoever on account of any profit or advantage, which would have derived from the execution of the work in full, but which he did not derive in consequences the full amount of the work not having been carried out.



The Contractor shall not have any claim or compensation by reason of any alterations having been made in the original specification, or the designs and instruction on which shall involve any containment of the work originally contemplated. However, in case of part cancellation, the Contractor shall be paid such amount as is commensurate to the actual work done by him till such termination notice is received.

## **60. Jurisdiction**

The contractor and its operation shall be governed by the law of India for the time being in force, irrespective of the place of delivery of materials the place of execution of work or place of payment under this contract shall be deemed to have been entered into at New Delhi.

## **61. Bye Laws of Local Authorities**

The contractor shall conform to the provisions of all applicable Government Acts which relate to works and to the regulations and bye laws of any local authorities. The Contractor shall give all such notices required by the said Act or Laws, etc., and pay all fees payable to such authorities and allow for these contingencies in his tendered rates including fees for encroachment, stacking charges, costs of restorations, etc, and all other fees payable to the local authorities. The Contractor shall keep the employer indemnified against all penalties and liabilities for every breach of any such Act, Rules, Regulations or Bye-laws.

Further the Contractor shall specifically ensure compliance of various Labour Laws/Acts including but not limited to with the following and their re-enactments / amendments / modifications while dealing with the employment of labour such as:

- The Payment of Wages Act, 1936
- The Minimum Wages Act, 1938
- The Workmen Compensation Act, 1923
- The Contract Labour (Regulations & Abolishing) Act.
- The Employer's Liabilities Act, 1938
- Industrial Dispute Act, 1938
- Maternity Benefit Act, 1961
- The Employees State Insurance Act, 1948

Safety code, labour welfare Act or rules or any modification thereof any other laws and regulations framed by the Competent Legislative Authorities from time to time.

## **62. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY**

The contractor shall provide everything necessary for the proper execution of works according to the true intent and meaning of the General conditions; specifications and Schedule of Quantities taken together whether the same may or may not be particularly shown or described

therein, provided that the same can reasonably be inferred there from and if the Contractor finds any discrepancy in the general conditions, specifications and Schedule of Quantities. He shall immediately refer the same in writing to the Architect, who shall decide in consultation with the employer which shall be followed and their decisions shall be final and binding in the matter.

The Contractor shall supply, fix and maintain at his own cost, during the execution of any works, all necessary lighting by nights as well as by day required not only for the proper execution and protection of the said works, but also for the protection of the public and the safety of any adjacent roads, streets, collars, vaults, pavements, walls, houses, building all other erections, matters or things. The following points comes under the liability of the awarded contractor, such as:

62.1 To provide sound proof enclosure for DG SETS to be installed.

62.2 The 380 KVA DG SET is to be installed on ground floor adjacent to new academic block. The foundation for the same to be taken by contractor including all lifting, crane, loading, unloading, etc. charges into consideration. Nothing extra shall be paid on this account by the Bharati College. The architect/ consultant would verify the same prior to installation of DG SETS.

62.3 CPCB (Central Pollution Control Board) approval certificate to be submitted by the awarded contractor. The charges for the same are not to be levied on the college. Only statutory fees would be paid by College subject to the receipt received from the concerned authority. Apart from the statutory fees, Contractor should ensure the rates quoted by him includes any other item in his tender.

AGREEMENT (on Rs 100 non Judicial stamp paper):

The Bharati College,  
C-4, Janak Puri,  
New Delhi-110058.

AND

M/s\_\_\_\_\_

THIS AGREEMENT is entered into on\_\_\_\_\_ 2021

**BETWEEN**

**A. The Bharati College**, situated at C-4, Janak Puri, New Delhi 110058 acting through its authorized signatory The Principal {hereinafter referred to as the “**Employer**” which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns} of First Part;

**AND**

**B. M/s\_\_\_\_\_**, having its principal office at \_\_\_\_\_ (hereinafter referred to as “**Contractor**” which expression shall, unless repugnant to the context or meaning thereof, include its successors and permitted assigns and substitutes) of the Second Part.

The Employer and the Contractor are hereinafter, collectively referred to as the “**Parties**” and individually as a “**Party**”.

FOR: PROVIDING & FIXING 380 KVA DG SET AT BHARATI COLLEGE AT C-4,  
JANAK PURI, NEW DELHI-110058 at the accepted tendered cost for

Rs.\_\_\_\_\_ (Rupees\_\_\_\_\_)

subject to the executed and verified quantities

**WHEREAS:**

WHEREAS, the Employer is desirous of employing an agency for more providing & fixing one no. 380 KVA DG set specifically stated in the Technical Bid Documents which has been annexed and is a part of the Service Agreement dated [●].

WHEREAS, the Employer after going through the various tenders submitted by various contractors and after having being satisfied by the various representations made by the **[PLEASE INSERT THE NAME OF THE CONTRACTOR WHOM YOU WOULD SELECT]**, have decided to select **[NAME OF THE CONTRACTOR]** as Contractor for providing & fixing one no. 380 KVA DG set at the Audi Building of Bharati College located at **C-4, Janak Puri, New Delhi-110058.**

AND WHEREAS, the Contractor having represented that it has the capability and the diligence and the infrastructure to meet the obligations and the responsibilities and carry out works specified in Tender document (Annexure of this Contract) which they submitted on [●] and was accepted on [●], the Contractor has decided and is willing to undertake all the obligations and the responsibilities have been appointed as Contractor for providing & fixing 380 KVA DG set at the Audi Building of Bharati College located at **C-4, Janak Puri, New Delhi-110058.**

Now therefore this Agreement witnesses that Contractors , in consideration of the payment to be made by the Employer of the fees as per the terms and conditions of this Agreement and the Tender Document dated [●] and under the general supervision of the Architect, will perform and render all services in connection with the installation of DG set as prescribed above at the aforesaid Building, subject to the terms and conditions in this Agreement and such specialized professional services as are described in this Agreement.

1. The Contractor shall have to complete the work within 60 days from signing of Agreement.
2. Payment Terms & Conditions:
  - a) 10% of contract value as advance against bank guarantee.
  - b) 60% of contract value against delivery of material.
  - c) Additional 20% of the contract value on installation of DG SETS & making them operational.
  - d) Balance 10% contract value shall be released after 12 months from the date of issue of virtual Completion certificate by the Architect.

#### **SCOPE OF WORK:**

The scope of work or works shall be as per items in BOQ, unless there be something either in the subject or context repugnant to such installation of DG Set works be executed 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.

The site shall mean the land under Bharati College Campus, New Audi Block into or through which work is to be executed under the contract or any adjacent land, area or common paths through which work is to be executed under the contract or any adjacent land, area or common paths which may be allotted or used for the purpose of carrying out the contract.

Schedule(s) referred to in these conditions shall mean the relevant schedule(s).

Tendered Value means the value of the entire work as stipulated in the letter of award of work.

### **3. GOVERNING LAW AND JURISDICTION:**

This agreement shall be constructed and interpreted in accordance with the laws of India. All disputes and difference of any kind whatsoever arising out of or in connection with this contract shall be deemed to have arisen in New Delhi and only courts having jurisdiction over Delhi shall determine the same.

Part or complete Payment will be made by the Bharati College, New Delhi only on satisfactory completion of work in full / part thereof and value of work executed shall be determined, based on the measurements and check measurements checked and certificate given by the Architect.

### **4. REIMBURSEMENT OF VARIATION IN PRICE:**

Prices and rates quoted by the Tenderers shall be considered as firm for the complete work and entire duration of the contract. No claim for extra payment due to any rise in rates of raw material and labour or due to whatsoever reasons shall be considered, not even for extended period of completion

### **5. BLACKLISTING**

The Employer may by notice in writing blacklist the Contractor for suitable period in case Contractor fails to discharge its obligation under this agreement without sufficient grounds or found guilty for breach of condition(s) of the agreement, negligence, carelessness, inefficiency, fraud, mischief and misappropriation or any other type of misconduct.

### **6. ASSIGNMENT & SUB-LETTING**

The contractor shall not assign, delegate, transfer, etc., any of their right/s and / or obligation/s under this agreement to any third person/s, concern/s, firm/s, company/ies or entity/ies.

**The filled BOQ (Financial Bid) and signed original tender documents (technical bid) would be part of this Agreement.**

SIGNED, SEALED AND  
DELIVERED

The Principal (Bharati College)  
by:

In the presence of:

- 1.
- 2

SIGNED, SEALED AND  
DELIVERED

For and on behalf of  
Contractor  
by:

In the presence of:

- 1.
- 2

## DG SETS & ANCILLIARIES

### 1 SCOPE

The scope of this section consists of but is not necessarily limited to the following:

- a. **The contractor shall supply, deliver to site, hoisting into position, install, test and commission the standby power generating set together with the necessary controls and switchboards as specified and indicated in the Drawings. Protection circuits, control wiring and interlock circuits not specified or indicated in the Drawings, but deemed necessary for the safe operation of the generating system shall be provided to complete the system.**
- b. **Provide manufacturer's factory representative's services, including coordination, start-up and testing supervision.**
- c. Testing (factory and field), start-up supervision, training and providing necessary documentation and tools for operation.
- d. Carry out performance test run at site.

### 2. Submission

All technical submissions shall be got approved from the Architect.

Equipment submission with manufacturer's data.

Shop Drawing showing the co-ordinate installation detail and control block diagram.

Builder's works requirement.

Detail water cooling circulation drawing complete with cooling tower, pump sizing calculation endorsed by the Contractor and Manufacturer.

### 3. **PRODUCT**

#### **Diesel Engine**

6 cylinder, In-line 4 stroke, radiator cooled engine.

Well-designed air handling system with

- Dry type, Replaceable paper element air cleaner with restriction indicator.
- Air to air after cooling.
- Optimized Turbocharger for increased altitude capabilities.

Best in class fuel economy with

- CELECT fuel system with A1 class electronic governing.
- Dual fuel filter system: Pre filter including water separator and Water In Fuel (WIF) sensor and main filter.

Electrical lift pump for faster response

- Standard integral set-mounted radiator system, designed and tested for 50°C ambient temperature.
- Full flow spin on lube oil filter.
- Plate type lube oil cooler.
- First fill of lube oil and coolant.
- Electrical starter motor with soft start engagement feature.
- Battery charging alternator.
- 2 x 12 V DC batteries.

#### **Alternator**

- Stamford HC alternator frames from Cummins Generator Technologies.
- Brushless type, Screen protected, Revolving field, Self-excited alternator conforming to IS/IEC 60034-1
- Phase reconnect able winding with 12 terminals brought out for connection.
- Better motor starting capability.
- Best in class efficiency.
- Compact design with sealed bearings for longer life and lesser maintenance.
- Impregnation on all wound components for better mechanical strength.



## **Control Panel**

- Control panel to be manufactured with 14/16 gauge CRCA sheet and is powder coated for weather-proof and long lasting finish.
- The control panel must consists of the following parts:
- Power Command 1.2 controller
- Aluminum bus bars with suitable capacity with incoming/ outgoing terminals
- Indicating lamps for 'Load ON' and 'Set Running'
- Instrument fuses duly wired and ferruled
- MCCB of suitable rating with overload and short circuit protections

## **Power Command 1.2 features**

The Power Command® control system must be a microprocessor based generator set monitoring, metering and control system with LCD display designed to meet the demands of today's engine driven generator sets.

- Intuitive operator interface which includes LED backlit LCD display with tactile feel soft-switches and generator set status LED lamps.
- Digital AVR for shunt or PMG excitation with torque matching.
- Digital electronic governing with temperature compensation and smart starting.
- SAE J1939 interface to Full Authority Electronic (FAE) engines.
- Remote start-stop.
- Engine metering: Oil pressure, Coolant temperature, Battery voltage, Engine speed.
- AC Alternator metering: L-L Voltage and L-N Voltage, Current (1 and 3 phase), Volt-Amperes (phase and total) and Frequency.
- Engine protection: Low lube oil pressure, High/Low coolant temperature, over speed, Battery Over/Under/Weak Volts, Fail to crank/start, Sensor failure.
- AC Alternator protection: Over/Under voltage, Over/Under frequency, Over current, Short circuit and Loss of AC sensing.
- Data logging: Engine hours, Control hours, Engine starts and up to 10 recent fault codes.

- Configurable glow plug control.
- Configurable cycle cranking.
- 12 and 24 Volt DC operation.
- Sleep mode.
- Programmable I/Os (4 inputs and 2 outputs), expandable with AUX101/102 modules.
- Modbus interface (RS485 RTU).
- In Power compatible (PC based service tool).
- Certifications - meets the requirement of relevant UL, NFPA, ISO, IEC, Mil Std., CE and CSA standards.

### **Silencer**

Hospital grade silencer suitably optimized to meet stringent noise emission standards laid down by MoEF / CPCB.

### **Mounting Arrangement**

Engine and alternator are mounted on a common MS fabricated base frame with AVM pads.

Base frame with integral fuel tank is provided with drain plug, air vent, inlet and outlet connection, level indicator and provision for cleaning.

### **Optional**

Engine: Coolant heater, Lube oil drain, Heavy duty air cleaner, Heat exchanger

Alternator: PMG

Control Panel: PC3.3, Microprocessor/ Relay based AMF control panel

Others: Mobile sets with canopy

### **Acoustic Enclosure**

Specially designed to meet stringent MoEF/ CPCB norms of 75 dBA @ 1mtr at 75% load under free field conditions.

The acoustic enclosure to be made of CRCA sheets in munsel green shade and a structural/ sheet metal base frame painted in black.

High quality noise absorbent and fire-retardant grade acoustic insulation material (Rockwool) complying to IS 8183.

Air inlet louvers specially designed to operate at rated load.

Base lifting for easy handling at customer site.

Designed to have optimum serviceability.

Made on special purpose CNC machines for consistency in quality and workmanship.

11 tank pretreatment process and UV resistant powder coating of all parts to withstand extreme environment.

Use of special hardware for longer life.

Flush styling - no projections.

Fluid drains for lube oil and fuel.

Fuel filling arrangement inside the enclosure.

## **Starting**

Starting system of the standby generator shall be of a heavy-duty electric motor complete with a 24 V.D.C. heavy-duty battery of at least 300 AH. The electric motor shall be capable of cranking the engine to achieve the rated speed in less than 10 seconds from the initiation of the starting process. The electric start battery shall be of adequate capacity for 10 successive starts. Time delay relays shall be incorporated to provide a rest period of 1-5 seconds (adjustable) before each successive start and a time lag period of 19-100 seconds (adjustable) before the system lock out due to failure of the 5th start to crank up the engine.

The generator set shall be provided with a micro-processor based control system which is manufactured to provide automatic starting, monitoring, and control functions for the generator set. Interface to BMS system according to point schedule on drawings shall be provided.

The control system shall include an engine governor control, which shall function to provide steady state frequency regulation. The governor control shall include adjustments for gain, damping, and a ramping function to control engine speed and limit exhaust smoke while the unit is starting. The governor control shall be suitable for use in paralleling applications without component changes.

## **Speed Regulation**

The governor shall be capable of regulating the speed of the engine within the limits approximately 10% of the rated speed within 4 seconds due to a sudden application or removal of a full load. The steady load speed shall vary within the limits of approximately 1% of the rated speed.

## **Cooling**

The engine cooling system shall be of a closed circuit water recirculating system to cool the engine as well as the body to minimize heat radiated into the generator room. The cooling circuit shall exchange heat through a radiator capable to remove the heat generated under continuous full load operation.

## **Lubricator**

The lubricating system shall be by a positive displacement oil pump providing a positive force feed to all lubricating points.

## **Exhaust System**

Adequate sized piping and fittings shall be installed to carry the engine exhaust discharge into the atmosphere as indicated in the drawings & as per the requirement of Center / State Pollution Control Board or Pollution Control Committee as the case may be.

Galvanized M.S. structural support and vibration arrestors for D.G. set chimney to specify along with drawing for statutory clearance..

Mufflers shall be installed to reduce the engine exhaust noise to a maximum of 5 dBA above ambient noise level at nearest area accessible to the public within 3m from Generator Room and at least 2m above floor level. Flexible connection shall be provided between the engine and the fixed piping.

## **Fuel Piping and Fuel Tank Installation**

The complete system shall include engineering, supply, installation, testing and commissioning of tank for storage of fuel, pumps, piping, valves and control system.

## **Instruments**

An instrument panel mounted on the engine shall be provided and shall comprise the following flush-mounted instruments and gauges:

Cooling water inlet and outlet temperature

Cooling water inlet temperature to lubricating oil cooler

Lubricating oil inlet and outlet temperature

Lubricating oil pressure gauge

Tachometer, positive driven

Hour counter.

## **Protection Devices**

Warning indication and automatic shut-down shall be provided for the following:

Low oil pressure shutdown and alarm

Low and high coolant temperature alarm

High coolant temperature shutdown

Fail to crank shutdown

Over cranking shutdown

Over speed shutdown

Low & high DC voltage alarm

Low battery alarm

Low fuel-day tank alarm

High and Low AC voltage shutdown

Under frequency shutdown

Over current and alarm and shutdown

Short circuit shutdown

Ground fault alarm

Overload alarm

Emergency stop

Failure indication lights and alarm for all fault conditions shall be provided on control panel for restoring the operation to normal.

The starting circuit shall be disconnected in the event of any of the above shutdowns.

## **Generator Control Panel**

The generator control panel shall have all necessary instruments and accessories for operation and control of the generating set. On sensing the utility mains voltage dip to below said voltage volts, the control panel shall send a signal to start the generator. After 5 successive start and if the diesel generator is not started up, the alarm signal shall be activated.

The generator control panel shall consist of all Auto-transfer switch, circuit breakers, protective relays if applicable and accessories required to control the generator operation and shall include but not limited to the following:

Voltmeters

Ammeter

Frequency Meter

Power factor meter

Kilowatt meter with maximum demand indicator

Kilowatt hour meter

Hour run meter

Start-stop and automatic mains monitoring system

Emergency off push button

Manual speed adjusting control reset for overload, alarm muting.

Fully automatic trickle battery charger with voltmeter

Indicating lamps for 'Mains Available', 'Mains on Load', 'Standby Available', 'Standby on Load', 'Alarm', 'Mains Fail', etc.

Audio and visual (flasher) alarm.

The start-stop and automatic mains monitoring system shall be equipped with the following:

Duty selector switch for 'off-automatic-test-manual' operation

Manual start-stop push button switch

Manual alternator circuit breaker 'On-Off' switch

Cancel alarm switch

Reset switch

Indicating lamps

Battery Status

## INTERFACE WITH BUILDING AUTOMATION SYSTEM

**All necessary hardware's/ software's to integrate the Generator microprocessor panel to BAS system shall be provided free of cost by generator manufacturer / supplier.**

For the integration of Microprocessor Panel of the generator with the Building Automation System, an Interface Control Document shall be developed by BAS Contractor. It shall be responsibility of Generator Contractor to provide following to BAS Contractor for preparing the interface.

- a. Hardware Protocol of Microprocessor panel.
- b. Software Protocol of Microprocessor panel.
- c. Communication structure relating to collection of message / event information.
- d. Description of the formatted packets / blocks of data which construct controller commands / responses.
- e. Written permission to BAS contractor to develop the interface without any financial implication.

### **Acoustic Enclosure**

The diesel generator sets shall be provided with integral acoustic enclosure at manufacturing stage itself.

The maximum permissible sound pressure level for new Diesel Generator (D.G) sets with rated capacity upto 1000 KVA manufactured on or after 1<sup>st</sup> January 2005 shall be 75 dB(A) at 1.0 Metre from the enclosure surface.

## ACOUSTIC ENCLOSURE FOR DIESEL GENERATOR

Acoustic Enclosure for DG Set shall be as given below:

DG Set Capacity	:	380 KVA
Structure	:	MS Press bend 3 mm
Panels	:	Steel fabricated double wall insulated panels.
Thickness of panels	:	100 mm thick
Outer sheet	:	2 m thick CRCA sheet steel
Inner Sheet	:	1.25 mm thick CRCA Perforated sheet steel
Frame & Strainer	:	2 mm thick CRCA sheet steel
Insulation	:	Mineral wool as per IS 8183 - 1993
Thickness	:	100 mm thick (50 mm x 2 slabs)
Density	:	64 Kg / m <sup>3</sup>
Anti Droning	:	HDPE sheet
Thickness	:	6 mm thick

Air Circulation System	:	Axial flow fans of suitable capacity required for(intake / exhaust system) 300 /180 KVA DG Set offered.
Insertion loss	:	Minimum 25 dBA
Temperature inside enclosure	:	should not exceed from 7 degree C above ambient temperature.
Location	:	Outdoor
Finishing	:	Powder coating of colour shade approved by consultant / owner.
Noise Level	:	75 dBA at a distance of 1.0 meter.

Note : DG set shall be supplied with built-in acoustic enclosure from factory as per latest CPCB Norms.

## **EXECUTION**

### **Testing and Commissioning**

All the necessary comprehensive tests shall be performed to the approval and satisfaction of the Architect at the completion of installation. Before the commencement of acceptance testing, the installation shall be in a state of practical completion and shall have completed all of the preliminary testing and adjusted the equipment to its proper running order.

A full ten (10) days' notice of his readiness for carrying out acceptance tests shall be given to the Architect.

Prior to the date of giving such notice a complete details schedule of the tests to be carried out shall be submitted to the Architect for his approval and alterations and additions to the schedule are required to be made.

Notwithstanding his approval of the testing schedule the Architect may at any time before or during the testing period direct further tests to be carried out that he considers necessary.

Any variation to the programme for the testing period shall be at the discretion of the Architect.

Upon completion of all above tests, four (4) sets of the test results shall be submitted for the Architect approval. All test reports submitted shall be endorsed by all parties witnessing the test including the contractor's and manufacturer's Qualified Personnel.

No acceptance tests shall be carried out except in the presence of the Architect or their authorized representatives appointed for the purpose.



The Contractor shall provide at his own cost all materials, including electric power, instrument test set, fuel, lubricants and other consumable, Load Bank required for the tests and adjustments of the equipment and for carrying out the acceptance tests and any re-tests that may be necessitated by failure of the installation or by any other causes within his control.

The Contractor shall ensure that the fuel supplied for use in acceptance tests is part of a batch for which certified test data is available. Two copies of the test certificate shall be supplied to the Architect prior to the commencement of tests.

During the testing period the Contractor shall appoint a qualified personal to carry out the checking and testing the testing instrument (equipment which are to be used for the test) including accurately calibrated test equipment for checking the accuracy of gauges and instruments forming part of or supplied with the installation.

Prior to commencement of testing a detailed list of the equipment shall be submitted to the Architect for his approval and no item on the list shall be removed from the site without his consent until the completion of testing.

### **ANNUNCIATION**

Annuciation with Hooter, Test, Accept and Reset P.B. and Annunciator.

#### 8 Window Solid State Annunciator for each DG sets.

<u>Channel No.</u>	<u>Inscription</u>
01	Set fails to start (only alarm)
02	Over current (breaker trip)
03	Earth Fault (Breaker trip)
04	Excitation Failure (Engine should be stop with breaker trip)
05	Reverse Power (Breaker trip)
06	Emergency Shutdown (Breaker will trip with engine stop command)
07	Over speed (Breaker will trip with engine stop command)
08	Low Lube Oil pressure (Breaker will trip with engine stop command)

## **BATTERY CHARGER**

### **GENERAL**

The battery charger shall be Float cum Boost type IGBT controlled. The charger shall have selector switch for Auto Float – Boost / Manual Float / Manual Boost Mode of operation. During Auto Float – Boost Mode, Automatic Changeover shall take place from Float Mode to Boost mode and Vice-Versa. This means that when the Batteries are fully charged the charging shall automatically change from Boost charge to trickle charge.

### **CONSTRUCTION FEATURE**

The battery charger shall be housed in sheet steel cubicle of Angle Iron frame work with sheet steel panels of 1.6 mm thickness. Louvers shall be provided in the cabinet for the ventilation. The cubicle shall be painted in Siemens Grey shade RAL7032 of IS-5. Four wheels shall be provided at the base.

### **PERFORMANCE**

The D.C output voltage of Float / Boost charger shall be stabilized within  $\pm 2\%$  for AC input variation of  $230\text{ V} \pm 10\%$ , frequency variation of  $50\text{ Hz} \pm 5\%$  and DC load variation of 0-100%. The voltage regulation shall be achieved by a constant voltage regulator having fast response IGBT control. The ripple content will be within 3% of DC output nominal voltage.

There shall be provision to select Auto Float / Manual Float / Manual Boost modes. During Auto Float Mode the battery charging shall automatically changeover from Boost Mode to Float Mode and Vice Versa. During Manual Float / Boost modes it shall be possible to set the output volts by separate potentiometers.

The battery charger shall have automatic output current limiting feature.

### **COMPONENTS**

The battery charger shall essentially comprise of the following

- 1 No. double pole ON/OFF MCB at AC input.
- 1 No. pilot lamp to indicate charger ON.
- 1 No. Main Transformer : Double wound, naturally air cooled, having copper winding.
- 1 set single phase full wave bridge rectifier consisting of 4 Nos. IGBTs, liberally rated, mounted on heat sinks and complete with resistor / condensor network for surge suppression.

- 1 No. rotary switch to select auto float / manual float / manual boost. During auto float mode automatic changeover shall take place from float mode to boost mode and vice versa.
- 1 set solid state constant potential controller to stabilize the DC output voltage of the float cum boost charger at  $\pm 2\%$  of time set value for AC input voltage variation of  $230\text{ V} \pm 10\%$ , frequency variation of  $\pm 5\%$  from 50 Hz and simultaneous load variation of 0-100% and also complete with Current Limiting Circuit to drop the Float Charger output voltage upon overloads to enable the battery to take over.
- 1 No. electronic controller to automatically changeover battery charging from boost to float and vice versa..
- 1 No. DC ammeter and toggle switch to read charger output current and battery charge / discharge current.
- 1 No. moving coil DC voltmeter to read the DC output voltage.
- 2 set potentiometer to adjust the output voltage during manual /auto float and boost modes.
- 2 No. double pole ON/OFF MCB at DC output, 1 No. at charger output and the other at load.
- 2 set DC output terminals. 1 set for the load and the other set for the battery.
- Alarm Annunciation : Visual and audible alarm with manual accept reset facility shall be provided for the following for BMS Connectivity
  - a. AC mains fail
  - b. Charger Fail
  - c. Load / Output overvolt.

**Rating**

AC Input	:	230 V + 10% AC 50 Hz single phase.
DC Output	:	To float / boost charge batteries and also supply a continuous load.
Current Rating	:	30.0 Amps
Float Mode	:	27.0 V nominal (Adjustable) between 24-28.0 V.
Boost Mode	:	29.0 V nominal (Adjustable) between 24-32.0 V.
Voltage Regulation		

:  $\pm 2\%$  for AC input variation of  
230 V  $\pm 10\%$ . Frequency  
Variation of 50 Hz  $\pm 5\%$  and DC  
load variation 0-100%

### **Performance Tests**

The schedule of tests to be performed in the Factory Acceptance Test shall include the following:

On each of three separate days and before any other operation of the diesel-alternator on that day three successful manual start-up operations to be accomplished.

Three separate manual start-up operations each within one minute of the diesel-alternator being shut down after running continuously for not less than one hour and attaining normal engine running temperatures.

Three separate automatic start-up operations with simulation of “mains failure”. In all or any of these tests the diesel-alternator may be out on load by the automatic closing of the emergency power supply circuit breaker.

Three separate automatic shutdown operations, each initiated by mechanical simulation of a “low pressure” condition.

Three separate automatic shutdown operations, each initiated by manual instigation of an “over-speed” condition.

Three separate abortive start-up operations, each inducing “failure to start” shut-down.

The load tests shall be carried out as follows:

25% of full load at 1.0 pf For half hour

50% of full load at 1.0 pf For one hour

100% of full load at 1.0 pf For two hours

110% of full load at 1.0 pf For one hour

At the completion of the test, readings shall be taken of Voltage, Frequency, Current, Temperature, Vibration, Fuel ratio to Unit produced, Flue analysis and the following:

Insulation resistance – rotor, stator, exciter – to earth;

Insulation resistance – between stator windings;

Alternator rotor and exciter armature temperature

## **Site Test**

Upon the delivery to the site and if the generator set is required to re-assemble on site, similar tests shall be carried out by the Contractor to ensure that the performance is not degraded.

The tests, but not limited to are:

Diesel engine-Generator coupling and shafts alignment.

On load 'mains failure' simulation test

Safety devices test

Remote monitoring

Auxiliary contacts etc.

Load tests.

BMS interface test

Load tests may be carried out through building load and/or Contractor load bank. Cost to arrange for the load for purpose of testing shall be included in the Tender.

## **Painting of pipe work**

All pipe work, other than buried pipes, shall be painted immediately after installation with at least one coat of red primer and two (2) finishing coats of best quality aluminum paint. The colour will be determined by the Architect on site.

## **Vibration Control**

The complete generator assembly shall be isolated on static deflection unhoused spring-neoprene in series isolator with non-skid neoprene pads. Start-up and shut down rocking restraint snuffers shall be provided at four corners of base frame.

All fuel line pipes shall be cushioned with a layer of harnesss and neoprene pad at attached points.

All pipe work and engine silencers shall be suspended on static deflection spring-neoprene in-series hangers.

Detail calculation and proposal for justifying the size and provision shall be provided for Architect review prior to the installation.

**LIST OF APPROVED MAKES FOR DG SETS :**

<b>S.No.</b>	<b>ITEM</b>	<b>APPROVED MAKE</b>
<b>A</b>	<b>Approved DG set Manufacture's</b>	<b>Sudhir, Cumins, Kirloskar, Jakson, TPL, Stamford</b>
1.	ENGINE	Cummins / Volvo / Kirloskar / Perkins
2.	Alternator	Stamford / Kirloskar / Lecoi Somer
3.	Control Panel	Advance Panel & Switch gear / ADAC / Risha Control
4.	Power Distribution Panel and Motor Control Centre	Gauri Switchgears Pvt. Ltd. / Risha Control Switchgears Pvt. Ltd. / Tricolite / Neptune
5.	Final Distribution Board	ABB / Eaton / Legrand / Schneider
6.	Moulded Case Circuit Breaker (MCCB)	Schneider Electric / Legrand / Eaton
7.	Motor Protection Circuit Breaker(MPCB)	Schneider Electric / Siemens / Legrand
8.	Miniature Circuit Breakers (MCB)	Schneider Electric / Siemens / Legrand / Eaton
9.	ELCB / RCBO/ RCCB/ AFD	Schneider Electric / Siemens / Legrand / Eaton
10.	Protection Relay a) Electromagnetic Type	ABB / Areva / Larsen & Toubro
11.	Protection Relay b) Numeric Type	ABB / AREVA / L & T / Schneider Electric / Siemens
12.	Indicating Lamps LED type and Push Button	Larsen & Toubro (ESBEE) / Schneider Electric Siemens / Teknik
13.	Overload relays with built in Single Phase preventer.	ABB / C&S GE / Power Control / Mitsubishi Electrical
14.	Electronic Digital Meters (A/V/PF/Hz/KW/KWH) with LED Display	Automatic Electric / Conzerv (Schneider)
15.	Sealed Maintenance Free Batteries	Amar / Raja / Exide / Global (Rocket) / Luminous / Shinkobe
16.	Battery Charger	Caldyne / Chhabi Electricals / Joshi Electricals / Volstat
17.	Cable Trays (Factory Fabricated) / Raceways	Profab / SMC / NPES