



**ODISHA POWER TRANSMISSION CORPORATION LTD
OFFICE OF THE SENIOR GENERAL MANAGER,
CENTRAL PROCUREMENT CELL,
JANPATH, BHUBANESWAR - 751022
TENDER SPECIFICATIONNO.**

SR.G.M-CPC -TENDER-DIFERENT TYPES OF TESTING EQUIPMENTS - 10 / 2016-17

**E-TENDER NOTICE NO 10/2016-17
FOR PROCUREMENT OF DIFFERENT TYPES OF TESTING EQUIPMENTS**

Sl. No.	Description of Diagnostic Testing Kits	Quantity Required
1	Tower Footing resistance /impedance measurement test kit	15
2	Contact Resistance Meter (200A)	9
3	Circuit Breaker Analyzer	5
4	Frequency Response Analyzer	6
5	3 rd Harmonic Leakage detector	6
6	Power Analyzer	6
7	Automatic moisture Content Measurement Kit	2
8	Digitalized Flash Point Apparatus	2
9	Surface Tension Meter	2
10	Portable Desiccators	2
11	AC/DC Earth Fault Locator	9
12	Digital Capacitance & Tan Delta Kit	9
13	Digital clamp on earth resistance meter	40
14	Transformer oil BDV Test Kit (Manual) 0-100 KV	60

Request for online tender documents - From dt-10.11.2017 (10.00 Hr)

To dt-13.12.2017 (13.00 Hr)

Last date of submission of online tender - dt -14.12.2017(13.00 Hr)

Date of opening of Tender - 15.12.2017(15.00 Hr)

PREBID MEETING :

(Lot-I, II, III, V, VI, VII & VIII) on 20.11.2017(10.00hr onwards)

(Lot-IV, IX, X, XI, XII, XIII & XIV) on 21.11.2017(10.00hr onwards)

Venue : Conference Hall of CPC, OPTCL

ODISHA POWER TRANSMISSION CORPORATION LTD.
REGD. OFFICE: JANPATH, BHUBANESWAR – 751 022,
ODISHA
e-TENDER NOTICE NO. CPC-10/ 2016-17

For and on behalf of ODISHA POWER TRANSMISSION CORPORATION LTD, Sr.G.M. [C.P.C.] invites Tenders from reputed manufacturers (OEM) / Channel Partner of OEM (Indian Agent for the foreign made testing equipment) in two part bidding system for supply of **Different types of Testing Equipments**. The interested bidders would be required to enroll themselves on the tender portal www.tenderwizard.com/OPTCL. Complete set of bidding documents are available at www.tenderwizard.com/OPTCL from 10.11.2017 (10.00 Hrs) up to 13.12.2017 (13.00 Hrs). Interested manufacturers / Channel Partner of OEM may visit OPTCL's official web site <http://www.optcl.co.in> and www.tenderwizard.com/OPTCL for detail specification & prebid meeting schedule.

N.B: All subsequent addendum / corrigendum to the tender shall be hosted in the OPTCL's official website <http://www.optcl.co.in> / www.tenderwizard.com/OPTCL only.

SENIOR GENERAL MANAGER [C.P.C.]



NOTICE INVITING TENDER
ODISHA POWER TRANSMISSION CORPORATION LTD.,
REGD. OFFICE: JANPATH, Bhubaneswar.
e-TENDER NOTICE NO- CPC- 10/2016-17

For and on behalf of the ODISHA POWER TRANSMISSION CORPORATION LTD., the undersigned invites bids under two-part bidding system in e-tendering mode only as per the following details.

Tender specification No	LOT	Description of equipment / materials.	Quantity	Earnest money deposit (in INR)	Cost of Tender specification documents	Tender Processing fee (in INR)	Last date of receipt of bids.	Date opening of tender
SR.G.M-CPC -E-TENDER- TESTING EQUIPMENTS - 10/ 2016-17	I	Tower Footing resistance /impedance measurement test kit	15	91800	Rs. 10,000+ 12% GST (Rs 11,200/-)	Rs 5,000/ + GST@ 18% Rs 5,900/-	Dt 14.12.2017 up to 13.00hrs	Dt 15.12.2017 at 15.00 hrs
	II	Contact Resistance Meter (200A)	9	49869				
	III	Circuit Breaker Analyzer	5	99905				
	IV	Frequency Response Analyzer	6	92801				
	V	3 rd Harmonic Leakage detector	6	30000				
	VI	Power Analyzer	6	30998				
	VII	Automatic moisture Content Measurement Kit	2	17000				
	VIII	Digitalized Flash Point Apparatus	2	31000				
	IX	Surface Tension Meter	2	43720				
	X	Portable Desiccators	2	3000				
	XI	AC/DC Earth Fault Locator	9	64020				
	XII	Digital Capacitance & Tan Delta Kit	9	300910				
	XIII	Digital clamp on earth resistance meter	40	20000				
	XIV	Transformer oil BDV Test Kit (Manual) 0-100 KV	60	54698				

The bidders who want to submit bids shall have to pay non-refundable amount of Rs. 11,200/- (Rupees Eleven thousand two hundred) only including GST @ 12%) towards the tender cost, in the form of Demand draft/Pay order/Cash only, drawn in favour of the D.D.O Head Qrs, OPTCL, Bhubaneswar. They have to also submit notarized hard copy of GST registration certificate on or before the date & time of submission of techno-commercial bid.

Local micro & small enterprisers (MSEs) (In the state of Odisha) based in Odisha and registered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC can participate without payment of the cost of tender specification.

The bidders shall have to submit non-refundable amount of Rs.5,900/- (Rupees Five thousand & nine hundred) only including GST @ 18%) towards the tender processing fee to K.S.E.D.C.Ltd, in e-payment mode. The e-payment of above amount is to be made to enable the bidder to download the bid proposal sheets & bid document in electronic mode.

The bidder shall submit EMD upto Rs. 200,000/- in shape of DEMAND DRAFT only and above Rs. 2,00,000/- in shape of bank guarantee prior to last date & time for submission of bid as notified in tender notice. The demand draft/pay order for tender cost, processing fees are to be submitted along with the EMD at the office of the undersigned on or before the last date & time of submission of tender.

The bidders shall scan the Demand Draft/Pay order/ Bank guarantee, towards EMD/ notarised hard copy of valid registration as local MSE (In the state of ODISHA) (if any) and upload the same in the prescribed form in .gif or .jpg format in addition to sending the original as stated above.

The prospective bidders are advised to register their user ID, Password, company ID from website www.tenderwizard.com/OPTCL by clicking on hyper link "Register Me".

Any clarifications regarding the scope of work and technical features of the tender can be had from the undersigned during office hours.

Minimum qualification criteria of bidders: AS STIPULATED IN SECTION-II, (G.T.C.C) OF THE TENDER SPECIFICATION.

**SENIOR GENERAL MANAGER,
CENTRAL PROCUREMENT CELL**

**ODISHA POWER TRANSMISSION CORPORATION LTD.
OFFICE OF THE SR. GENERAL MANAGER
CENTRAL PROCUREMENT CELL
FAX NO.:0674 – 2542964
TELEPHONE NO.:0674 – 2541801**

JANAPATH, BHUBANESWAR – 751022

**TENDER SPECIFICATION NO.Sr.G .M.-CPC –TESTING EQUIPMENTS –
10/2016-17**

CONTAINING

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**SECTION – II : GENERAL TERMS AND CONDITIONS OF
CONTRACT (G.T.C.C.) (COMMERCIAL)**
SECTION – III : LIST OF ANNEXURES (COMMERCIAL)
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PART-I
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COMMERCIAL SPECIFICATION.

PART-I SECTION-I

INSTRUCTIONS TO BIDDER

1. Submission of Bids: -

The bidder shall submit the bid in Electronic Mode only i.e. www.tenderwizard.com/OPTCL. The bidder must ensure that the bids are received in the specified website of the OPTCL by the date and time indicated in the Tender notice. Bids submitted by telex/telegram will not be accepted. No request from any bidder to the OPTCL to collect the Bids in physical form will be entertained by the OPTCL.

The OPTCL reserves the right to reject any bid, which is not deposited according to the instruction, stipulated above. The participants to the tender should be registered under GST Laws.

1. For all the users it is mandatory to procure the Digital Signatures of Class-III.
2. Contractors / Vendors / Bidders / Suppliers are requested to follow the below steps for **Registration**:
 - a. Click “Register”, fill the online registration form.
 - b. Pay the amount of Rs. 2360/- through e payment mode only.
 - c. Send the acknowledgment copy for verification.
 - d. As soon as the verification is being done the e-tender user id will be enabled.
3. After viewing Tender Notification, if bidder intends to participate in tender, he has to use his e-tendering User Id and Password which has been received after registration and acquisition of DSCs.
4. If any Bidder wants to participate in the tender he will have to follow the instructions given below:
 - a. Insert the PKI (which consist of your Digital Signature Certificate) in your System.
(Note: Make sure that necessary software of PKI be installed in your system).
 - b. Click / Double Click to open the Microsoft Internet Explorer (This icon will be located on the Desktop of the computer).
 - c. Go to Start > Programs > Internet Explorer.
 - d. Type **www.tenderwizard.com/OPTCL** in the address bar, to access the Login Screen.

- e. Enter e-tender User Id and Password, click on “Go”.
 - f. Click on “Click here to login” for selecting the Digital Signature Certificate.
 - g. Select the Certificate and enter DSC Password.
 - h. Re-enter the e-Procurement User Id Password
- 5.To make a request for Tender Document Bidders will have to follow below mentioned steps.
- Click “Un Applied” to view / apply for new tenders.
 - Click on Request icon for online request.
- 6.After making the request Bidders will receive the Tender Documents which can be checked and downloaded by following the below steps:
- Click to view the tender documents which are received by the user.
 - Tender document screen appears.
 - Click “Click here to download” to download the documents.
- 7.After completing all the formalities Bidders will have to submit the tender and they must take care of following instructions.
- Prior to submission, verify whether all the required documents have been attached and uploaded to the particular tender or not.
 - Note down / take a print of bid control number once it displayed on the screen
8. Tender Opening event can be viewed online.
9. Competitors bid sheets are available in the website for all.
10. **For any e-tendering assistant contact help desk number mentioned below.**
- Bangalore – 080- 40482000.

The participants to the tender should be registered under GST Laws.

2.Division of Specification.The specification is mainly divided into two parts viz. Part-I & Part-II

Part-I Consists of

- | | |
|-------------------|---|
| [i] Section-I | Instruction to Bidders. |
| [ii] Section-II | General Terms & conditions of contract. |
| [iii] Section-III | Schedules and forms etc. |
| [iv] Section-IV | Technical Specification. |

Part-II Consists of

Schedule of prices as per Annexure-V

3. Tenders shall be in Two Parts.

The Bidders are required to submit the tenders in two parts viz. Part-I (Techno commercial) & Part-II (Price bid).

The Bidders are required to submit the tenders in two parts Part-I, technical and commercial and Part-II "Price Bid".

4. Opening of Bids.

[a] The part-I shall be opened on the date and time fixed by the OPTCL for opening of bids in Electronic mode in presence of such of the bidders or their authorized representatives [limited to one person only] on the due date of opening of tender who opt to remain present. After scrutiny of the technical particulars and other commercial terms, clarifications, if required, shall be sought for from the bidders. The bidders shall be allowed 15 days' time for such activity.

[b] On receipt of technical clarification, the bids shall be reviewed, evaluated and those not in conformity with the technical Specification / qualifying experience, shall be rejected. If any of the technical proposal requires modification to make them comparable, discussion will be held with the participating bidders.

All the responsive bidders shall be given opportunity to submit the revised technical and revised price proposals as a follow up to the clarification (modification if any) on the technical proposals. The qualified bidders shall be given opportunity to submit revised price proposals within 15 days from the date of such discussion or within time frame mutually agreed, whichever is earlier.

[c] When the revised price proposals are received, the original price proposals will be returned to the bidders unopened along with their original technical proposals. Only the revised technical and price proposals will be considered for bid evaluation. The price bids [Part-II] of such of the Bidders, whose tenders have been found to be technically and commercially acceptable, including those supplementary revised price bids, submitted subsequently, shall be opened in the presence of the bidder's representative on a date and time which will be intimated to all bidders whose bids will be technically and commercially acceptable.

[d] The bidders are required to furnish sufficient information to the Purchaser to establish their qualification, capacity to manufacture and/or supply the materials/perform the work. Such information shall include details of bidder's experience, its financial, managerial and technical capabilities.

[e] The bidders are also required to furnish details of availability of appropriate technical staff and capability to perform after sales services. The above information shall be considered during scrutiny and evaluation of bids and any bid which does not satisfactorily meet these requirements, shall not be considered for price bid evaluation.

[f] There will be demonstration of the equipment which is to be done at OPTCL Site before opening of the Price Bid. Those Bidders, fulfilling technocommercial criteria of the tender will be asked for demonstration of their equipments at suitable sites of OPTCL.

Accordingly, the bidders, at their own cost, will have to demonstrate their equipment within 1(one) month of issue of intimation for the same from OPTCL & as per the place & date scheduled by OPTCL or else, the bidder will be out of race.

Suitability Check : A group of technical persons of OPTCL will evaluate the suitability of the equipment after field demonstration. Those bidders who are fulfilling other technocommercial specifications & found suitable during the field demonstration, their price bid will be opened.

[g] The price bids of the technically and otherwise acceptable bids shall only be evaluated as per the norms applicable in terms of this Specification.

5. Purchaser's Right Regarding Alteration of Quantities Tendered.

The Purchaser may alter the quantities of materials/equipment at the time of placing orders. Initially the purchaser may place orders for lesser quantity with full freedom to place extension orders for further quantity under similar terms and conditions of the original orders. Orders may also be split among more than one Bidder for any particular item, if considered necessary in the interest of the Purchaser to get the goods/equipment earlier.

6. Procedure and opening time of tenders.

Tenders will be opened in the office of the Senior General Manager [C.P.C.] on the specified date and time in presence of the bidders or their authorized

representatives [limited to one person only] in case of each bidder who may desire to be present, at the time of opening the bids.

7. Bidder's Liberty to deviate from Specification.

The Bidder may deviate from the specification while quoting, if in his opinion, such deviation is in line with the manufacturer's standard practice and conducive to a better and more economical offer. All such deviations should however be clearly indicated giving full justifications for such deviation. [Read with Clause-9, Section-II of the Specification].

8. Eligibility for submission of bids.

Only those manufacturers(OEM)/Channel Partner of OEM (Indian Agent for the foreign made testing equipment) who have deposited the cost of tender specification are eligible to participate in the tender. They should submit the money receipt as a proof of such payment. The local Micro and small Enterprises(MSEs)(**In the state of Odisha**) based in Odisha and registered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC can participate without payment of the cost of tender specification

9. Purchaser's right to accept/reject bids:

The purchaser reserves the right to reject any or all the tenders without assigning any reasons what so ever if it is in the interest of OPTCL, under the existing circumstances. [Read with clause-10, Section-II of the specification].

10. Mode of submission of Tenders.

[A] Tenders shall be submitted in electronic mode only.
(www.tenderwizard.com/OPTCL)

[B] **Telegraphic or FAX tenders** shall not be accepted under any circumstances.

11. Earnest money deposit:

The tender shall be accompanied by Earnest Money deposit of value specified in the notice inviting tenders against each lot / bid. Tenders without the required EMD as indicated below and at **Annexure-VIII** will be rejected outrightly. The local Micro and small Enterprises(MSEs) (**In the state of Odisha**) based in Odisha and registered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC can participate by submitting Earnest

Money Deposit @ fifty percent of the amount indicated in the Notice Inviting Tender.

The earnest money deposit shall be furnished in one of the following forms subject to the conditions mentioned below:

- (a) **Bank Draft:** -To be drawn in favour of Drawing & Disbursing Officer, OPTCL [H.Qrs.Office], Bhubaneswar-751 022.
- (c) Bank Guarantee from any Nationalized/Scheduled Bank strictly as per enclosed proforma vide **Annexure-VI** to be executed on non-judicial stamp paper worth Rs.29.00 or as applicable, as per prevailing laws in force and also to be accompanied by the confirmation letter of the issuing Bank Branch.

NOTE:

- (i). The validity of the EMD in the form of Bank Guarantee shall be at least for 300 days from the date of opening of tender failing which the tender will be liable for rejection.
- (ii) No interest shall be paid on the Earnest Money Deposit.
- (iii) EMD upto Rs. 200,000/- shall be submitted in shape of DEMAND DRAFT only and above Rs. 2,00,000/- the Earnest Money Deposit shall be furnished in form of bank guarantee.
- (iv) No adjustment towards EMD shall be permitted against any outstanding amount with the **ODISHA POWER TRANSMISSION CORPORATION LTD.**
- (v) The chart showing particulars of EMD to be furnished by Bidders of different categories is placed at **Annexure-VIII.**
- (vi) In the case of un-successful Bidder, the EMD will be refunded after the tender is decided. In the case of successful Bidder, this will be refunded only after furnishing of security money referred to at clause-19 of Section-II.
- (vii) Suits, if any, arising out of this clause shall be filed in a Court of law to which the jurisdiction of High Court of ODISHA extends.
- (vii) EMD will be forfeited if the Bidder fails to accept the letter of intent and/or purchase order issued in his favour or to execute the order, placed on them.
- (viii) Tenders not accompanied by Earnest Money shall be disqualified.

12. Validity of the Bids: -

The tenders should be kept valid for a period of **240** days from the date of opening of the tender, failing which the tenders will be rejected.

13. PRICE: -

Bidders are requested to quote-'FIRM' Price. No deviation from **FIRM PRICE** will be entertained irrespective of deviation clause No.7 of this part of the specification.

14. Revision of tender price by Bidders: -

[a] After opening of tenders and within the validity of period, no reduction or enhancement in price will be entertained. If there is any change in price, the tender shall stand rejected and the EMD deposited shall be forfeited.

[b] After opening of price bid if the validity period is not sufficient to place purchase order, the Bidder may be asked by the purchaser to extend the validity period of the bid under the same terms and condition as per the original tender.

However, the bidder are free to change any or all conditions including price except delivery period of their bids at their own risk, if they are asked by the purchaser to extend the validity period of the bid prior to opening of price bid.

15. Bidders to be fully conversant with the clauses of the Specification: -

Bidders are expected to be fully conversant with the meaning of all the clauses of the specification before submitting their tenders. In case of doubt regarding the meaning of any clause, the Bidder may seek clarification in writing from the Senior General Manager (Central Procurement Cell) OPTCL. This, however, does not entitle the Bidder to ask for time beyond due date, fixed for receipt of tender.

16. Documents to Accompany Bids.

Bidders are required to submit tenders in the following manner:

Part-I of the Tender shall Contain the following documents.

- [i]** Declaration Form. [As per Annexure-I]
- [ii]** Earnest Money. [As per **Annexure-VIII**]
- [iii]** Technical specification and Guaranteed Technical Particulars conforming to the Purchaser's Specification along with drawings, literatures and all other required Annexures, duly filled in.
- [iv]** Photostat copies of type test certificates of materials/equipments offered as stipulated in the Technical Specification.

- [v] Abstract of Terms & conditions in prescribed proforma as per **Annexure-II**.
- [vi] General Terms & Conditions of supply offer as per Section-II of the Specification.
- [vii] List of orders executed for similar materials/equipments during preceding 2 (two) years indicating the customer's name, Purchase Order No. & Date, date of supply and date of commissioning etc.
- [viii] Data on past experience **as per Clause-7 of Section-II** of the Specification.
- [ix] Sales tax clearance certificate for the previous year and GST Compliance Rating. The GST Identification Number(GSTIN) under GST Laws and permanent account number [PAN] of the firm under Income tax Act are required.
- [x] Audited Balance sheet & profit loss accounts of the bidder, for past (3) three years.
- [xi] Schedule of quantity and delivery in the prescribed Proforma vide **Annexure, as appended.**
- [xii] List of Orders in hand to be executed.
- [xiii] Deviation schedule.
- [xiv] Local micro & small enterprisers (MSEs) **(In the state of Odisha)** based in Odisha and registered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC have to submit notarized hard copy of valid registration as local MSE**(In the state of Odisha)** as above on or before the date & time of submission of techno-commercial bid and upload the scan/soft copy of the same in e-tender portal.
- [xv] The bidder should not have any pending litigation or arbitration with OPTCL with regard to any project or related activity. The bidder should certify/declare the same in unequivocal terms by way of an affidavit duly sworn before a magistrate or a Notary.

[17. Documents/Papers to accompanyPart-II Bid.

- (a) Part – II of the tender shall consist of the following
Schedule of prices in the prescribed proforma as per **Annexure-V**

18. Conditional Offer:

Conditional offer shall not be accepted.

19. General: -

- (i) In the event of discrepancy or arithmetical error in the schedule of price, the decision of the purchaser shall be final and binding on the Bidder.
- (ii) For evaluation, the price mentioned in words shall be taken if there is any difference in figures and words in the price bid.
- (iii) Notice inviting tender shall form part of this specification.
- (iv) The price bids of the technically and otherwise acceptable bids shall only be evaluated. The EMD of others, if any, shall be returned to the bidders.
- (v) Bidder can offer any lot or all the lots of the tender, if there are more than one lots. But the tender (bid) must be furnished separately for each lot. For each lot, the Bidder has to submit PART-I & PART-II of the bids separately.
- (vi) It should be distinctly understood that the part-II of the bid shall contain only details/documents relating to price, as outlined in clause-17 mentioned herein above. Inclusion of any of the documents/information etc. shall render the bid liable for rejection.

20.0

(i) There will be no pre-dispatch inspection of testing equipment at manufacturer's/supplier's site.

(ii) There will be demonstration of the equipment which is to be done at OPTCL Site before opening of the Price Bid. Those Bidders, fulfilling technocommercial criteria of the tender will be asked for demonstration of their equipments at suitable sites of OPTCL.

Accordingly, the bidders, at their own cost, will have to demonstrate their equipment within 1(one) month of issue of intimation for the same from OPTCL & as per the place & date scheduled by OPTCL or else, the bidder will be out of race.

Suitability Check :A group of technical persons of OPTCL will evaluate the suitability of the equipment after field demonstration. Those bidders who are fulfilling other technocommercial specifications & found suitable during the field demonstration, their price bid will be opened.

(iii)Acceptability Check: After delivery, the Firm at their own cost, shall demonstrate their equipment again for two consecutive days at site of OPTCL and the test results of the equipment for both the days shall be similar. In

case, the variation of test results found to be not within the limit, the equipment shall not be accepted by OPTCL and the Firm shall take back the instrument & no compensation in this regard shall be paid to the Firm by OPTCL. Moreover in such case, other clauses of the tender specification shall be applicable.

21. Litigation/Arbitration

(i)- Bidder has to furnish detailed information on any litigation or arbitration arising out of contracts completed or under execution by it over the last five years. A consistent history of litigation by or against the bidder may result in rejection of bid.

(ii) The bidder should not have any pending litigation or arbitration with OPTCL with regard to any project or related activity. The bidder should certify/declare the same in unequivocal terms by way of an affidavit duly sworn before a magistrate or a notary. Bid furnished by the bidder shall not be eligible for consideration if it is not accompanied by the affidavit. Further, the bid/LOA/LOI shall liable for outright rejection/cancellation at any stage if any information contrary to the affidavit/declaration is detected.

PART-I

SECTION – II.

GENERAL TERMS AND CONDITIONS OF CONTRACT [G.T.C.C.]

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PART-I
SECTION-II
GENERAL TERMS AND CONDITIONS OF CONTRACT [G.T.C.C.]

1. Scope of the contract:

The scope of the contract shall be to design, manufacture, supply of equipments/ materials as per the specification at the consignee's site, and rendering services in accordance with the enclosed technical specification with yearly calibration of equipments for a guarantee period of 05 years for smooth & reliable operation of the equipments.

2.0 Definition of terms:

For the purpose of this specification and General Terms and Conditions of contract [GTCC], the following words shall have the meanings hereby indicated, except where otherwise described or defined.

2.1 "The Purchaser" shall mean the Senior General Manager [Central Procurement Cell] for and on behalf of ORISSA POWER TRANSMISSION CORPORATION LTD., Bhubaneswar.

2.2 "The Engineer" shall mean the Engineer appointed by the Purchaser for the purpose of this contract.

2.3 "Purchaser's Representative" shall mean any person or persons or consulting firm appointed and remunerated by the Purchaser to supervise, inspect, test and examine workmanship and materials of the equipment to be supplied.

2.4 "The supplier" shall mean the bidder whose bid has been accepted by the purchaser and shall include the bidder's executives, administrators, successors and permitted assignees.

2.5 "Equipment" shall mean and include all machinery, apparatus, materials, and articles to be provided under the contract by the suppliers.

2.6 "Contract Price" shall mean the sum named in or calculated the bid.

2.7 "General Condition" shall mean these General Terms and Conditions of Contract.

2.8 The Specification” shall mean both the technical as well as commercial parts of the specification annexed to or issued with GTCC and shall include the schedules and drawings, attached thereto as well as all samples and pattern, if any.

2.9 “Month” shall mean “Calendar month”.

2.10 Writing” shall include any manuscript, type written, printed or other statement

reproduction in any visible form and whether under seal or under hand.

2.11 “FOR Destination costs” shall mean the cost of equipment and material at the consignee’s store/site. The cost is inclusive of Goods and Services Tax and other local taxes, packing, forwarding and insurance and freight charges.

2.12 The term “Contract document” shall mean and include GTCC, specifications, schedules, drawings, form of tender, Notice Inviting Tender, covering letter, schedule of prices or the final General Conditions, any special conditions, applicable to the particular contract.

2.13 Terms and conditions not herein defined shall have the same meaning as are assigned to them in the Indian Contract Act, failing that in the Orissa General Clauses Act.

3. Manner of execution:

(i) The supplier is required to produce shop routine test Certificate, calibration certificates of Testing Instruments at the time of offering their materials/equipment for inspection, testing & acceptance. The test house/laboratory where tests are to be carried out must be approved by the Govt. A letter pertaining to Govt. approved laboratory must be furnished to the purchaser along with the offer for inspection.

(ii) The Purchaser has the right to have the tests carried out at his own cost by an independent agency whenever there is dispute regarding the quality of supply.

5. Training facilities.

The supplier shall provide all possible facilities for training of Purchaser’s Technical personnel, when deputed by the Purchaser for acquiring first hand knowledge in assembly of the equipment, its erection, commissioning and for it’s proper operation and maintenance in service, wherein it is thought necessary by the purchaser.

6. Rejection of Materials.

In the event any of the equipments/materials, supplied by the manufacturer is found defective due to faulty design, bad workmanship, bad materials used or otherwise not in conformity with the requirements of the Specification, the Purchaser shall either reject the equipment or ask the supplier in writing to rectify or replace the defective equipment free of cost to the purchaser. The contractor on receipt of such notification shall either rectify or replace the defective equipment free of cost to the purchase within 15 days from the date of issue of such notification by the purchaser. If the supplier fails to do so, the Purchaser may:-

- [a] At its option replace or rectify such defective equipments/materials and recover the extra costs so involved from the supplier plus fifteen percent and/or.
- [b] Terminate the contract for balance work/supplies, with enforcement of penalty Clause as per contract for the undelivered goods and with forfeiture of Performance Guarantee/Composite Bank guarantee.
- [c] Acquire the defective equipment/materials at reduced price, considered equitable under the circumstances.

7. Experience of Bidders:

The bidders should furnish information regarding experience particularly on the following points:

- [i] Name of the manufacturer:
- [ii] Standing of the firm and experience in manufacture of equipment/ material quoted:
- [iii] Description of equipment/material similar to that quoted, supplied and installed during the last two years with the name(s) of the Organisations to whom supplies were made wherein, at least one (1) certificate shall be from a state/central P.S.U.
- [iv] Details as to where installed etc.
- [v] Testing facilities at manufacturer's works.
- [vi] If the manufacturer is having collaboration with another firm [s], details regarding the same.
- [vii] A list of purchase orders of identical material/equipments/materials offered as per

technical specification executed during the last two years along with users certificate. User's certificate shall be legible and must indicate, user's name, address, designation, place of use, and satisfactory performance of the equipment/materials for at least two years from the date of commissioning. Wherein at least one (1) certificate shall be from a State/Central or P.S.U. Bids will not be considered if the past manufacturing experience is found to be un-satisfactory or is of less than 2 (two) years on the date of opening of the bid and bids not accompanying user's certificate will be rejected.

8. Language and measures:

All documents pertaining to the contract including specifications, schedule, notices, correspondence, operating and maintenance instructions., drawings or any other writing shall be written in English language. The metric system of measurement shall be used exclusively in this contract.

9. Deviation from specification:

It is in the interest of the BIDDER to study the specification, specified in the tender schedule thoroughly before tendering so that, if any deviations are made by the BIDDER,(both commercial and Technical), the same are prominently brought out on a separate sheet under heading "Deviations Commercial" and "Deviations Technical".

A list of deviations shall be enclosed with the tender. Unless deviations in scope, technical and commercial stipulations are specifically mentioned in the list of deviations, it shall be presumed that the BIDDER has accepted all the conditions, stipulated in the tender specification, not withstanding any exemptions mentioned therein.

10. Right to reject/accept any tender:

The purchaser reserves the right either to reject or to accept any or all tenders if the situation so warrants in the interest of the purchaser. Orders may also be split up between different BIDDER on individual merits of the BIDDER. The purchaser has exclusive right to alter the quantities of materials/ equipment at the time of placing final purchase order. After placing of the order, the purchaser may defer the delivery of the materials. It may be clearly understood by the BIDDER that the purchaser need not assign any reason for any of the above action [s]

11. Supplier to inform himself fully:

The supplier shall examine the instructions to BIDDER, general conditions of contract, specification and the schedules of quantity and delivery to satisfy himself as to all terms and conditions and circumstances affecting the contract price. He shall quote price [s] according to his own views on these matters and understand that no additional allowances except as otherwise provided there in will be admissible. The purchaser shall not be responsible for any misunderstanding or incorrect information, obtained by the supplier other than the information given to the supplier in writing by the purchaser.

12. Patent rights Etc.

The supplier shall indemnify the Purchaser against all claims, actions, suits and proceedings for the infringement of any patent design or copy right protected either in the country of origin or in India by the use of any equipment supplied by the manufacturer. Such indemnity shall also cover any use of the equipment, other than for the purpose indicated by or reasonably to be inferred from the specification.

13. Delivery:-

[a] Time being the essence of the contract; the equipment shall be supplied within the delivery period, specified in the contract. The Purchaser, however, reserves the right to reschedule the delivery and change the destination if required. The delivery period shall be reckoned from the date of placing the Letter of Intent/Purchase order, as may be specified in LOI/Purchase order.

[b] The desired delivery period shall be as indicated at Annexure-III (Quantity & DeliverySchedule) of Section-IV (Technical Specification). .

14. Despatch instructions.

I] The equipments/materials/ materials should be securely packed and dispatched directly to the specified site at the supplier's risk by Road Transport only.

II] Loading & unloading of Ordered Materials.

It will be the sole responsibility of the supplier for loading and unloading of materials both at the factory site and at the destination site/store.

The Purchaser shall have no responsibility on this account

15. Supplier's Default Liability.

[i] The Purchaser may, upon written notice of default to the supplier, terminate the contract in circumstances detailed hereunder.

[a] If in the judgement of the Purchaser, the supplier fails to make delivery of equipment/material within the time specified in the contract or within the period for which if extension has been granted by the Purchaser in writing in response to written request of the supplier.

[b] If in the judgement of the Purchaser, the supplier fails to comply with any of the provisions of this contract. In the event, Purchaser terminates the contract in whole or in part as provided in Clause-15 (i) of this section, the Purchaser reserves the right to purchase upon such terms and in such a manner as he may deem appropriate in relation to the equipment/material similar to that terminated and the supplier will be liable to the Purchaser for any additional costs for such similar equipment/material and/or for penalty for delay as defined in clause-22 of this section until such reasonable time as may be required for the final supply of equipment.

[ii] In the event the Purchaser does not terminate the contract as provided in clause 15(i) of this Section, supplier shall be liable to the Purchaser for penalty for delay as set out in Clause-22 of this section until the equipment is accepted. This shall be based only on written request of the supplier and written willingness of the Purchaser.

16. Force Majeure:

The supplier shall not be liable for any penalty for delay or for failure to perform the contract for reasons of force majeure such as acts of god, acts of the public enemy, acts of Govt., Fires, floods, epidemics, Quarantine restrictions, strikes, Freight Embargo and provided that the supplier shall within Ten (10)days from the beginning of delay on such account notify the purchaser in writing of the cause of delay. The purchaser shall verify the facts and grant such extension, if facts justify .

17. Extension of time:-

If the delivery of equipment/material is delayed due to reasons beyond the control of the supplier, the supplier shall without delay give notice to the purchaser in writing of his claim

for an extension of time. The purchaser on receipt of such notice may or may not agree to extend the contract delivery date as may be reasonable but without prejudice to other terms and conditions of the contract.

18. Guarantee period: -

[i] The stores (Equipment/materials) covered by the specification in for procurement of Testing Equipments should be guaranteed for satisfactory operation and against defects in design, materials and workmanship for a period of 5(five) years from the last date of demonstration after receipt of equipment/material. The guarantee certificate shall be furnished in triplicate to the purchaser for his approval. Any defect noticed during this period should be rectified/replaced by the supplier free of cost to the purchaser provided such defects are due to faulty design, bad workmanship or bad materials used, within one month upon written notice from the purchaser failing which provision of (Penalty/ B.G. forfeiture) shall apply.

In addition to the above, the supplier has to conduct calibration test of the equipments at OPTCL site without any extra cost annually within one month from the date of completion of each year. However, in between the two successive test for calibration if any defect is noticed, the same has also to be attended by the supplier without any price implication on OPTCL as the equipment is under coverage of guarantee period.

The supplier will have to bear the cost of spares, software, transportation, transit insurance (to & fro), etc of kit for repair at test lab/works. Equipment after repairs, need to be returned within thirty days from the date of despatch from the owners site for rectification/repair.

All the expenses for maintaining supplied equipment **“Healthy and in workingcondition”** to be borne by Successful bidder during the period of guarantee. No extra claim for repairing & calibration of the equipment shall be made by the supplier.

19. B.G. towards security deposit, 100% payment and performance guarantee:

[i] For manufacturers situated Inside & out side the state of Orissa.

The Composite Bank Guarantee as per the prescribed Proforma for 10% [ten percent] of the total FORD destination cost of the purchase order,(In case of successful bidder who is a local Micro and small Enterprise(MSEs) **(In the state of Odisha)**,based in Odisha ®istered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC 5% (five percent), shall be furnished from any nationalized/scheduled bank having a place of business at Bhubaneswar, to the office ofSr.General Manager [Central Procurement Cell] OPTCL within 15 days from the date of issue of the purchase order,. The BG shall be

executed on non judicial stamp paper worth of Rs.100.00 [Rupees One Hundred] only or as per the prevalent rules, valid for a period of 62(Sixtytwo) months from the last date of stipulated delivery period, for scrutiny and acceptance, failing which the supply order will be liable for cancellation without any further written notices. The BG should be accompanied by a confirmation letter from the concerned bank and should have provision for encashment at Bhubaneswar, before the Bank Guarantee is accepted and all concerned intimated.

(ii) No interest is payable on any kind of Bank Guarantee.

[iii] In case of non-fulfillment of contractual obligation, as required in the detailed purchase order/Specification, the composite Bank guarantee shall be forfeited.

20. Import License

In case imported materials are offered, no assistance will be given for release of Foreign Exchange. The firm should arrange to import materials from their own quota. Equipment of indigenous origin will be preferred.

21. (A) Terms of Payment.

- i) 100% value of each consignment with 100% Goods and Services Tax in full as applicable will be paid on receipt of materials in good condition at stores/desired site and verification thereof, subject to furnishing and approval of Composite Bank Guarantee at the rate of 10% (Ten percent), of the cost of supplied materials, as stipulated under clause-19 of this specification & on prior approval of guarantee certificate & Test certificate by the Purchaser.
- ii) TDS under GST Laws for intra state transactions shall be deducted, if applicable.
- iii) Any imposition of new tax or revision of tax shall be paid/reimbursed at the time of dispatch, scheduled or actual whichever is lower (i.e. If delivery is within schedule period, tax variation as applicable shall be paid, and if delivery is made beyond schedule date, any additional financial implication due to statutory variation in tax shall be to bidder's account)

[B] The supplier shall furnish Composite Bank Guarantee of appropriate amount to OPTCL covering 10% or 5 % as applicable of F.O.R. Destination cost of the purchase order well in advance (within 15 days from the date of issue of the purchase order) before despatch of materials.

22. Penalty for Delay in Completion of Contract

I) If the Supplier fails to deliver the materials/equipments/materials within the delivery schedule, specified in the contract including delivery time extension, if any, granted thereto, the Purchaser shall recover from the Supplier, penalty for a sum of half percent

(0.5 percent) of the Taxable Value at Destination of the un-delivered equipment for each calendar week of delay or part thereof. For this purpose, the date of receipted challan shall be reckoned as the date of delivery. The total amount of penalty shall not exceed five percent (5%) of the Taxable Value at Destination of the unit or units so delayed. Equipment will be deemed to have been delivered only when all its components and accessories as per technical Specification are also delivered. If certain components & accessories are not delivered in time, the equipment will be considered delayed until such time as the missing parts are delivered.

II) If the Supplier fails to rectify /replace the equipment/material within 30 days from the date of intimation of the defect, so noticed by the purchaser within the guarantee period then the penalty for sum of one half of the one percent (0.5%) of the total Purchase order amount for each calendar week of delay shall be recovered by the purchaser within the guarantee period. For this purpose, penalty date will start from the 30th. day from the date of issue of letter on defectiveness of equipment/material, so supplied, by the purchaser. The total amount of penalty in this case shall not exceed 10% (TEN PERCENT) of the purchase order amount. The purchase order amount shall mean Total Taxable Value and all taxes & duties. If the defects so intimated will not be rectified by the supplier within the guarantee period, then whole of the B.G. will be forfeited by the purchaser, without any intimation to the Supplier.

23. Insurance

The Supplier shall undertake insurance of stores covered by this Specification unless otherwise stated. The responsibility of delivery of the stores at destination in good condition rests with the Supplier. Any claim with the Insurance Company or transport agency arising due to loss or damage in transit has to be settled by the supplier. The Supplier shall undertake free replacement materials damaged or lost, which will be reported by the consignee within 30 days of receipt of the materials at destination without awaiting for the settlement of their claims with the carriers and underwriters.

24. Payment Due from the Supplier.

All costs and damages, for which the supplier is liable to the purchaser, will be deducted by the purchaser from any money, due to the supplier, under any of the contract (s), executed with OPTCL.

25. Sales Tax clearance certificate , Rating under Goods and Services Tax and Balance sheet and profit & Loss Account:

- i. Sales Tax clearance certificate for the previous year, Rating under Goods and Services Tax shall be enclosed with the tender.
- ii. Audited Balance Sheet and Profit & Loss Account of the bidder for the previous three years shall be enclosed to assess the financial soundness of the bidder(s).

26. Certificate of Exemption from Goods and Services Tax.

Offers with exemption from Goods and Services Tax shall be accompanied with authenticated proof of such exemption. Authenticated proof for this clause shall mean attested Photostat copy of exemption certificate. Any claim towards Goods and Services Tax shall be paid on actual basis subject to production of authenticated documentary evidence.

27. Supplier's Responsibility.

Notwithstanding anything mentioned in the Specification or subsequent approval or acceptance by the Purchaser, the ultimate responsibility for design, manufacture, materials used and satisfactory performance shall rest with the BIDDER. The Supplier(s) shall be responsible for any discrepancy noticed in the documents, submitted by them alongwith the bid(s)

28. Validity

Prices and conditions contained in the offer should be kept valid for a minimum period of 240(Two hundred forty) days from the date of opening of the tender, failing which the tender shall be rejected.

29. EVALUATION.

- (i) Evaluation of bids will be on the basis of the FOR DESTINATION PRICE (By Road Transport) including Goods and Services Tax& other levies as may be applicable. The FORD PRICE shall consist of the following components
 - a) Taxable value of equipment/materials
 - b) Goods and Services Tax
 - c) Other levies.
 - d) Mandatory spares, if any for maintenance of equipment. (At the discretion of the purchaser)
 - e) Test charges, if any.

- f) Supervision of erection, testing and commissioning charges, if any.
- g) Any other items, as deemed proper for evaluation by the purchaser.
- h) Loading factors will be taken in to account during evaluation if the prices of some of the items, not quoted.
- i) Any imposition of new tax or revision of tax shall be considered at the time of price bid evaluation.

(II) Weightage shall be given to the Following factors in the Evaluation & Comparison of Bids.

In comparing bids and in making awards, the Purchaser will consider other factors such as compliance with Specification, minimum qualification criteria as per clause-30, outright rejection of tenders clause-34 of this tender, relative quality, adaptability of Supplies or services, experience, financial soundness, record of integrity in dealings, performance of materials/equipments/materials earlier supplied, ability to furnish repairs and maintenance services, the time of delivery, capability to perform including available facilities such as adequate shops, plants, equipment and technical organisation.

(III) The local MSE **(In the state of Odisha)** bidders, based in Odisha, shall be required to furnish their willingness to match their bid price with that of the lowest evaluated bidder without any price preference and in case they agree, they shall be eligible to get up to **20%** of the tendered quantity to be distributed suitably among the willing MSE bidders failing which the said **20%** of the tendered quantity be awarded to the lowest evaluated bidder.

30. Minimum Qualification Criteria of Bidders.

All the prospective bidders are requested to note that their bids for tendered equipment can only be considered for evaluation if:

(a) The firm must be an Original Equipment manufacturer(OEM) or Channel Partner of OEM (Indian Agent for the foreign made testing equipment) of above rated or higher specification/capacity equipment/materials for a minimum period of 3 (three) years as on the date of opening of the tender.

(b) The firm must have supplied at least 50% of tendered quantity of testing equipment or kits for which tendering have been done to reputed Indian utilities like PGCIL, NTPC , State Electricity Boards/utilities and must submit the performance certificates from them.

(c) The BIDDER should have adequate infrastructural facility for “After sales service” in India. After sale service should be rendered by the Bidder beyond the Guarantee period of 60 (Sixty) months.

(d) The firms must agree to demonstrate their product to OPTCL at their cost at any point of OPTCL.

- There will be demonstration of the equipment which is to be done at OPTCL Site before opening of the Price Bid. Those Bidders, fulfilling technocommercial criteria of the tender will be asked for demonstration of their equipments at suitable sites of OPTCL.

Accordingly, the bidders will have to demonstrate their equipment within 1(one) month of issue of intimation for the same from OPTCL & as per the place & date scheduled by OPTCL or else, the bidder will be out of race.

- Again, the Firm shall demonstrate their equipment at OPTCL field for two consecutive days against the order and the test results shall be similar for both the days test. In case the variation of test results found to be not within the limit the equipment shall not be accepted by OPTCL and the Firm shall take back the instrument and no compensation in this regard shall be paid to the Firm by OPTCL.

(e) The above rated or higher specification /capacity equipment/material should have at least 2 (two) years successful performance from the date of commissioning. At least one of the performance certificates shall be submitted from Govt.of India/State Govt.(s) or their undertakings or in any reputed Power utilities.

(f) The bidder should have conducted type tests on the tendered equipment/materials in Government approved laboratory within five years from the date of opening of the tender.

(g) Copies of documents, defining the constitution or legal status, place of registration and principal place of business of the company or firm or partnership or collaborator or parent Company etc. shall be furnished along with the bid.

(h) Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have made misleading or false representations in the forms, statements and attachments, submitted in proof of qualification requirements and/or record of poor performance such as not properly completing the contract, inordinate delays in completion of supply, litigation history or financial failure etc.

(i) Notwithstanding anything stated above, the purchaser reserves the right to assess the Bidder's capability and capacity to perform the contract within the scheduled time, should circumstances warrant such assessment in the overall interest of the Purchaser.

31. Jurisdiction of the High Court of Orissa.

Suits, if any, arising out of this contract shall be filed by either Party in a court of

Law to which the jurisdiction of High court of Odisha extends.

32. Correspondences.

- i) Any notice to the supplier under the terms of the contract shall be served by Registered Post or by hand at the Supplier's Principal Place of Business.
- ii) Any notice to the Purchaser shall be served at the Purchaser's Principal Office in the same manner.

33. Official Address of the Parties to the Contract

The address of the parties to the contract shall be specified:-

**[i] Purchaser: Senior General Manager (Procurement)(CPC) OPTCL
Bhubaneswar-751022 (Orissa)
Telephone No. 0674 - 2541801
FAX No.0674-2542964**

**[ii] Supplier: Address
Telephone No.
Fax No.**

34. Outright Rejection of Tenders

Tenders shall be out rightly rejected if the followings are not complied with.

- [i] The tenderer shall submit the bid in electronic mode only and shall submit the tender cost on or before the date and time of submission of technical bid. In case of local Micro and small Enterprises (MSEs) **(In the state of Odisha)**, based in Odisha & registered with respective DICs, Khadi, Village, Cottage & Handicrafts Industries, OSIC and NSIC participating in the tender they have to submit notarised hard copy of valid registration as local MSE as above on or before the date and time of submission of technical bid.
- [ii] The Bidder shall submit the bid in electronic mode only.
- [iii] The Tender shall not be submitted telegraphically or by FAX.
- [iv] The Bidder shall furnish the Tender cost, EMD & Tender processing fee on or before last date and time of submission of bid.
- [v] The Tender shall be kept valid for a minimum period of 240 days & EMD should be kept valid for 300 days from the date of opening of tender.
- [vi] The Tender shall be submitted in two parts as specified & as indicated in clause no 16.0 & 17.0 of Section-I (Instruction to bidder).
- [vii] The bid shall accompany relevant documents in support of Minimum Qualifying requirement as indicated in clause No 30.0 above.
- [viii] The bid shall accompany Guaranteed Technical Particulars (file named as 2.pdf) & bidder shall fill up Annexure-V (Abstract of general terms and conditions in complete shape).
- [ix] The schedule of prices should be filled up fully to indicate the break-up of the prices including taxes and duties. Incomplete submission of this schedule will make the tender liable for rejection.
- [x] The Bidder should quote 'FIRM' price only and the price should be kept valid

for a minimum period of 240 days from the date of opening of the tender.

- [xi] Detailed information on any litigation or arbitration arising out of contract completed or under execution by it over the last five years. A consistent history of litigation by or against the bidder may result in rejection of bid.
- [xii] The bidder should not have any pending litigation or arbitration with OPTCL with regard to any project or related activity. The bidder should certify / declare the same in the unequivocal terms by way of an affidavit duly sworn before a magistrate or a notary. Bid furnished by the bidder shall not be eligible for consideration if it is not accompanied by the affidavit. Further the bid / LOA/ LOI shall be liable for outright rejection/ cancellation at any stage if any information contrary to the affidavit / declaration is detected.

35. Documents to be treated as confidential.

The supplier shall treat the details of the specification and other tender documents as private and confidential and these shall not be reproduced without written authorization from the Purchaser.

36. Scheme/Projects

The materials/equipment covered in this specification shall come under “O&M WORKS”

38. CONTACTING THE PURCHASER: -

- a) Subject to Clause No.4 (opening of bids) of part-I, Section-I (Instruction to BIDDER), no bidder shall contact the purchaser on any manner, relating to its bid, from the time of bid opening to the time, the contract is awarded.
- (b) Any effort by a Bidder to influence the purchaser in the purchaser’s bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidder’s bid.

SECTION – III.
LIST OF ANNEXURES

[I TO XIII]

[PAGE 31 TO 47]

SECTION – III

[LIST OF ANNEXURES]

The following schedules and proforma are annexed to this specification and contained in Section-III as referred to in the relevant clauses.

1	Declaration form	ANNEXURE-I
2	Abstract of terms and conditions to accompany Section-II of Part-I	ANNEXURE-II
3	Schedule of Quantity and Delivery	ANNEXURE-III
4	Abstract of price component [to accompany Part-II of this specification]	ANNEXURE-IV
5	Schedule of prices to accompany Part-II	ANNEXURE-V
6	Bank Guarantee form for earnest money deposit	ANNEXURE-VI
7	Composite Bank Guarantee form for security deposit, payment and performance	ANNEXURE-VII
8.	Chart showing particulars of E.M.D.	ANNEXURE – VIII
9.	Data on Experience.	ANNEXURE – IX
10.	Schedule of spare parts.	ANNEXURE-X
11.	Schedule of Installations.	ANNEXURE-XI
12.	Schedule of deviations(Technical)	ANNEXURE-XII(A)
13.	Schedule of deviations(Commercial)	ANNEXURE-XII(B)
14	Litigation/Arbitration	ANNEXURE-XIII

ANNEXURE - I
DECLARATION FORM

To

The Sr. General Manager (CPC)
OPTCL Head Qrs.BBSR,751022

Sub:- Tender Specification No-_____

Sir,

1. Having examined the above specification together with terms & conditions referred to therein * I/We the undersigned hereby offer to supply the materials/equipments covered therein complete in all respects as per the specification and General conditions, at the rates, entered in the attached contract schedule of prices in the Tender.
2. * I/We hereby undertake to have the materials/equipments delivered within the time specified in the Tender.
3. * I/We hereby guarantee the technical particulars given in the Tender supported with necessary reports from concerned authorities.
4. * I/We certify to have submitted the bid electronically by remitting *cash/money order/D.D./ remitting the cost of tender, herewith and this has been acknowledged by your letter/ money receipt No. Dated,
5. In the event of Tender, being decided in *my/our favour, * I/We agree to furnish the Composite B.G. in the manner, acceptable to ORISSA POWER TRANSMISSION CORPORATION LTD., and for the sum as applicable to *me/us as per clause-19 of section-II of this specification within 15 days of issue of letter of intent/purchase order failing which *I/We clearly understand that the said letter of Intent/Purchase order will be liable to be withdrawn by the purchaser, and the EMD deposited by us shall be forfeited by OPTCL.

Signed this day of 2014

Yours faithfully

Signature of the Bidder with seal of the company

[This form should be dully filled up by the Bidder and uploaded at the time of submission of tender.]

* (Strikeout whichever is not applicable)

ANNEXURE-II

ABSTRACT OF GENERAL TERMS AND CONDITIONS OF CONTRACT [COMMERCIAL] TO ACCOMPANY PART-I

(To be filled up by the tenderer as indicated in the excel sheet)

ANNEXURE-III

SCHEDULE OF QUANTITY AND DELIVERY

(To be filled up by the Bidder)

SL No	Description of materials	Quantity required	Desired Delivery	Destination	Remarks.
1	2	3	4	5	6

Place:

Date:

Signature of Bidder
with seal of Company.

ANNEXURE-IV

(To be filled up by the tenderer as indicated in the excel sheet)

NB:- Abstract of price component shall be done for equipment/material offered, for testing & commissioning charges, if any. All the above prices will be taken during bid price evaluation.

ANNEXURE-V.

(To be filled up by the tenderer as indicated in the excel sheet)

[Herein after referred to as supplier (s)] do hereby unequivocally and unconditionally guarantee and undertake to pay during the above said period, on written request by the Sr. General Manager [Procurement] ODISHA POWER TRANSMISSION CORPORATION LTD. _____

[Indicate designation of the purchaser]

an amount not exceeding Rs. _____ to the OPTCL, without any reservation. The guarantee would remain valid up to 4.00 PM of _____

[date] and if any further extension to this is required, the same will be extended on receiving instructions from the _____ on whose behalf this guarantee has been issued.

2. We the _____ do hereby, further undertake

[Indicate the name of the bank]

to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the OPTCL stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the OPTCL by reason of any breach by the said supplier [s] of any of the terms or conditions or failure to perform the said Bid . Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____

3. We undertake to pay the OPTCL any money so demanded not withstanding any dispute or disputes so raised by the contractor [s] in any suit or proceeding instituted/pending before any Court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the supplier(s) shall have no claim against us for making such payment.

4. We, the _____ further agree that the guarantee

[Indicate the Name of the Bank]

herein contained shall remain in full force and effect during the aforesaid period of 240 days [two hundred forty days] and it shall continue to be so enforceable till all the dues of the OPTCL under or by virtue of the said Bid have been fully paid and its claims satisfied or discharged or till Managing Director, ODISHA POWER TRANSMISSION CORPORATION LTD. certifies that the terms and conditions of the said Bid have been fully and properly carried out by the said Supplier [s] and accordingly discharges this guarantee. Unless a

demand or claim under this guarantee is made on us in writing on or before the

we shall be discharged from all liability under this guarantee thereafter.

5. We, the _____ further agree with the OPTCL that

[Indicate the name of the Bank]

the OPTCL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Bid or to extend time of performance by the said Supplier [s] from time to time or to postpone for any time or from time to time any of the powers exercisable by the OPTCL against the said supplier [s] and to forbear or enforce any of the terms and conditions relating to the said bid

and we shall not be relieved from our liability by reason of any such variation, postponement or extension being granted to the said Supplier [s] or for any forbearance act or omission on the part of the OPTCL or any indulgence by the OPTCL to the said Supplier[s] or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the name, style and constitution of the Bank or the supplier [s].

7. We, _____ lastly undertake not revoke this

[Indicate the name of the Bank]

Guarantee during its currency except with the previous consent of the OPTCL in writing.

8. We the _____ Bank further agree that this guarantee shall also be invokable at our place of business at Bhubaneswar (indicate the name of the branch)in the state of ODISHA.

Notwithstanding anything contained herein.

- 1) Our liability under this bank guarantee shall not exceed Rs.------(Rupees-----).
- 2) The bank guarantee shall be valid up to dt.-----
- 3) We are liable to pay the guaranteed amount or any part there of under this bank guarantee only & only if you serve upon us at -----branch at Bhubaneswar a written claim or demand on or before dt.-----.

Dated _____ Day of _____

For _____

[Indicate the name of Bank]

Witness (Signature, names & address)

- 1.
- 2.

ANNEXURE-VII

PROFORMA FOR COMPOSITE BANK GUARANTEE FOR SECURITY DEPOSIT PAYMENT AND PERFORMANCE

This Guarantee Bond is executed this _____ day of _____
2014 by us the _____ Bank at _____
P.O. _____ P.S. _____
District _____ State _____

1. WHEREAS the ODISHA POWER TRANSMISSION CORPORATION LTD., a body corporate constituted under the Electricity Act, 2003 [hereinafter called “the OPTCL” which shall include its successors and assigns has placed orders No. _____ Date _____ [hereinafter called “The Agreement”] on M/s. _____ [hereinafter called “The Supplier”] which shall include its successors & assigns for supply of materials.

AND WHERE AS the supplier has agreed to supply materials to the OPTCL in terms of the said agreement AND

WHEREAS the OPTCL has agreed [1] to exempt the supplier from making payment of Security [2] to release 100% payment of the cost of materials as per the said agreement and [3] to exempt from performance guarantee on furnishing by the Supplier to the OPTCL, a Composite bank Guarantee of the value of 10 % [ten percent] of the contract price of the said agreement.

NOW THEREFORE, in consideration of the OPTCL having agreed [1] to exempt the Supplier from making payment of Security [2] releasing 100% payment to the Supplier and [3] to exempt from furnishing performance guarantee in terms of the said agreement as aforesaid, we, the _____ [Bank][hereinafter referred to as ‘the Bank’] do hereby undertake to pay to the OPTCL an amount not exceeding Rs. _____ [Rupees _____] against any loss or damage caused to or suffered by or would be caused to or suffered by the OPTCL by reason of any breach by the said Supplier [s] of any of the terms or conditions contained, in the said agreement.

2. We the (_____ Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on demand from the OPTCL stating that the amount claimed is due by way of loss or damage caused to or suffered by the OPTCL by reason of any breach by the said Supplier [s] of any of the terms or conditions, contained in the said agreement or by reason of the supplier's failure to perform the said agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____

[Rupees _____]

3. We the _____ Bank} also undertake to pay to the OPTCL any money so demanded notwithstanding any dispute or disputes raised by the supplier [s] in any suit or proceeding instituted/pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

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

4 We, (_____ Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to do so enforceable till all the dues of the OPTCL under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Managing Director, ODISHA POWER TRANSMISSION CORPORATION LTD. certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Supplier [s] and accordingly discharges this Guarantee.

Unless a demand or claim under this guarantee is made on us in writing on or before the [Date _____], we shall be discharged from all liability under this guarantee thereafter.

5. We,(_____ Bank) further agree that the OPTCL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Supplier [s] and we shall not be relieved from our liability by reason of any such variations or extension being granted to the said supplier [s] or for any forbearance, act or omission on the part of the OPTCL or any indulgence by the OPTCL to

the said Supplier [s] or by any such matter or thing whatsoever which under the law relating to sureties would but these provisions have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the name , style and constitution of the Bank and supplier [s].
7. We,[_____Bank] lastly undertake not to revoke this guarantee during its currency except with the previous consent of the OPTCL in writing.
8. We the _____ Bank further agree that this guarantee shall also be invokable at our place of business at Bhubaneswar (indicate the name of the branch)in the state of ODISHA.

Not withstanding any thing contained here in.

- 1) Our liability under this bank guarantee shall not exceed Rs.------(Rupees-----).
- 2) The bank guarantee shall be valid up to dt.-----
- 3) We are liable to pay the guaranteed amount or any part there of under this bank guarantee only & only if you serve upon us at -----branch at Bhubaneswar a written claim or demand on or before dt.-----.

Dated _____ Day of _____

For _____
[Indicate the name of Bank]

Witness (Signature, names & address)

- 1.
- 2.

ANNEXURE-VIII

CHART SHOWING PARTICULARS OF EARNEST MONEY DEPOSIT FURNISHABLE BY BIDDERS

1.	Central and State Government Undertakings	Exempted
2.	All other inside & outside state units.	The amount of EMD as specified in the specification /Tender Notice in shape of bank guarantee /DD.

NB: - **REFUND OF E.M.D.**

- [a] In case of unsuccessful Bidders, the EMD will be refunded immediately after the tender is decided. In case of successful Bidder, this will be refunded only after furnishing of Composite Bank Guarantee referred to in clause No.19 of Section-II of this specification. Suits, if any, arising out of EMD shall be filed in a court of law to which the jurisdiction of High Court of ODISHA extends.
- [b] Earnest Money will be forfeited if the Bidder fails to accept the letter of intent/purchase order, issued in his favour or revises the bid price[s] within the validity period of Bid.

ANNEXURE-IX

DATA ON EXPERIENCE

- [a] Name of the manufacturer.
- [b] Standing of the firm as manufacturer of equipment quoted.
- [c] Description of equipment similar to that quoted [supplied and installed during the last two years with the name of the organizations to whom supply was made].
- [d] Details as to where installed etc.
- [e] Testing facilities at manufacturer's works.
- [f] If the manufacturer is having collaboration with another firm, details regarding the same and present status.
- [g] A list of purchase orders, executed during last three years.
- [h] A list of similar equipments of specified rating, voltage class, short circuit rating, Designed, manufactured, tested and commissioned which are in successful operation for at least two years from the date of commissioning with legible user's certificate. User's full complete postal address/fax/phone must be indicated. (Refer clause No.7 of the Part-I, Section-II of the specification).

Place:

Date:

Signature of Bidder

Name, Designation, Seal

ANNEXURE-X

SCHEDULE OF SPARE PARTS FOR FIVE YEARS OF NORMAL OPERATION & MAINTENANCE

SL. No	Particulars	Quantity	Unit delivery rate	Total price

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Place:

Date:

Signature of Bidder

Name, Designation, Seal

ANNEXURE-XI

SCHEDULE OF INSTALLATIONS.

Rated Voltage	Place of installation and complete postal address	Year of commissioning

Place:

Date

Signature of Bidder

Name, Designation, Seal

ANNEXURE-XII

DEVIATION SCHEDULE.

Bidder shall enter below particulars of his alternative proposal for deviation from the specification, if any.

A) Technical

Sl.No	Clause No. of specification	Particulars of deviations.

Place: -

Date

Signature of Bidder:

Name, Designation, Seal

B) Commercial deviations.

Sl.No	Clause No. of specification	Particulars of deviations.

Place: -

Date

Signature of Bidder:

Name, Designation, Seal

ANNEXURE - XIII
LITIGATION HISTORY

Name of the Bidder:

Bidder should provide information on any history of litigation or arbitration resulting from contracts executed in the last five years or currently under execution.

Year.	Award for or against bidder	Name of client, cause of litigation and matter in dispute	Disputed amount (current value in Rs.)

Place: -

Date

Signature of Bidder:

SECTION-IV

TECHNICAL SPECIFICATION

Power system of OPTCL comprises of installations of EHT S/S such as 400/220/132/33KV, 220/132/33KV, 220/33KV, 132/33KV alongwith some switching stations & EHT lines of different voltage levels such as 400KV, 220KV, 132KV etc. For testing such as precommissioning tests, routine tests/monitoring tests of healthiness & emergency tests of S/S equipments such as ICTs/Autotransformers as well as two winding power transformers, CTs, IVTs, CVTs, Surge Arrestors, auxiliary supply system such as AC/DC supply & transmissionlines of various voltage levels, OPTCL is in need of following precision type testing & measuring instruments/Kits.

Firms having instruments/Kits with better specification than that specified hereunder can also quote their bid and they must highlight the advantages of their products in their technical offer FOR ALL TYPE OF TESTING KITS AS MENTIONED IN THE TENDER SPECIFICATIONS. Prebid meetings will be convened for necessary discussion on technical specification. Interested bidders may attend the same as per schedule of prebid meetings in the 1st page of this document.

General Technical Specification:

The following technical specification will be common for all equipment if not mentioned specifically.

- i. Power Supply : 230 V + 10% / - 20% ; Frequency: 50 Hz
- ii. Protection of equipment
 - a) Over load, Over Voltage, Surge Protection
- iii. Length of Test lead set : 15 meters (Minimum or as specified).
- iv. All equipment must able to perform under inductive / prevailing electrical interference in the 400 kV switchyard / Line so as not to make any effect on equipment and measurement. Such interference because of EHV voltage (up to 400 kV) shall not have any problem on the equipment during the test. (Except Laboratory equipment)
- v. All equipment must give repetitive results under charged switchyard condition. The test set shall comply with relevant National/International standards regarding EMI/EMC and Safety.
- vi. All equipment shall be supplied completely with current leads, voltage leads, grounding cable, power cord to test the product in all respect and hard carrying case which are necessary for carrying testing equipment to site. It the responsibility of supplier to see all necessary accessories required to perform all type of test to be supplied along with the kit.

3.0 Environment Service (Climatic) Conditions:

The equipment to be supplied against this specification shall be capable of performing and maintaining the required accuracy for satisfactory operation under climatic conditions mentioned below:

- a) Ambient temperature (degree C) : -5°C to $+55^{\circ}\text{C}$
- b) Relative Humidity (in %) : 95% RH Non condensing at 40°C

LOT-I :

Tower Footing resistance /Impedance measurement test kit	
SL.NO.	PARTICULARS
1	APPLICATION : 1. The TOWER FOOTING IMPEDANCE TESTER (TFIT) shall be capable to test ground impedance of individual tower legs of transmission towers up to 400 kV levels, without disconnecting the overhead ground wire
2	GENERAL : 1. The TFIT should be portable and microprocessor based. 2. TFIT should be high frequency earth analyzer, used to measure the power systems ability to discharge transient energy in to ground whilst minimizing earth potential rise, ensuring that equipment and personnel are safe from any danger. 3. TFIT should overcome the complete grid resistance because of parallel path from many towers.
3	FUNCTIONAL REQUIREMENTS : 1. Test Frequency: 25 kHz 2. Resistance Measurement Range : 0-300 Ω 3. Resolution : 0.05 Ω 4. Short circuit current 20 mA 5. Principle of operation : 3 peg fall of potential method 6. Display : High resolution LCD display 7. Operating temperature : -5 $^{\circ}$ C to 55 $^{\circ}$ C
4	RANGE , ACCURACY & RESOLUTION: <ul style="list-style-type: none">• Measurement Accuracy : $\pm 2\%$• Resolution : 0.05 Ω
5	OTHER REQUIREMENTS : <ul style="list-style-type: none">• The following accessories shall be provided along with the equipment.<ul style="list-style-type: none">> Galvanized pegs : 5 numbers, length of 30 cm and 3.175 cm diameter> Wire for connection : two numbers each of 50 m wound on bobbins with crocodile clip at either end and one cable of 2 m with crocodile clip with either end> Hammer & peg Extractor 1 no.• Supplier should provide details of laboratories where this instrument can be get calibrated in India, in case of imported equipment.• The performance certificates of the similar equipment supplied in last five years shall be provided with contact details of user.• Calibration certificates should be traceable to International Standards and date of issue of this certificate should not be older than 1 month from date of dispatch.

6	<p>EXTERNAL INTERFACE SPECIFICATIONS: A Suitable laptop with latest Operating System compatible with the kit. The laptop should have the following features :</p> <p><u>LAPTOP COMPUTER SPECIFICATION</u> Power supply : 230V AC Single Board Computer : Intel Core i7 7th Generation,15.6 inch Display Processor : I7 @ 2.7 GHz or above RAM : 8 GB DDR4 HDD : 1 TB SATA Drive or above, with Graphic Card 2GB or higher CD Drive : DVD RW Support at least Read (48x), Write (24x) & Rewrite (10x) operations with multi-session capacity. Ethernet Port : Dual Gigabit Ethernet Interface: 10/100/1000Base-T Connector: RJ-45 x 2 Operating System : Window 7 or higher</p>
7	<p>MAINS POWER SUPPLY /BATTERY :</p> <ul style="list-style-type: none"> • 230 V ± 10%, The modular in-built rechargeable battery shall be maintenance free type. Supplier shall mention the following : - Type & make - Size - Rating of battery.
8	<p>MANUAL :</p> <ul style="list-style-type: none"> • Operation manual in English - 1 set along with softcopy • Maintenance manual in English - 1 set along with softcopy
9	<p>TESTING & TRAINING :</p> <ul style="list-style-type: none"> • Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL. <p>Scope of training:</p> <ul style="list-style-type: none"> • Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its utilization by arranging testing at site. • Hand on practice for kits which are being manufactured outside India.
10	<p>ACCESSORIES :</p> <ul style="list-style-type: none"> • Carry case which is normal weather proof and shock / vibration proof to protect inside equipment.
11	<p>SAFETY :</p> <ul style="list-style-type: none"> • Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards.
12	<p>CALIBRATION :</p> <ul style="list-style-type: none"> • The system shall have valid certificate traceable to National & international standards

LOT-II :

HIGH CURRENT PORTABLE DIGITAL MICRO-OHM METER / CONTACT RESISTANCE METER(200A)	
SL.NO.	PARTICULARS
1	APPLICATION : 1. The Contact Resistance meter (CRM) shall be microprocessor based and suitable for measuring low value resistance of circuit breaker, switch, disconnecter, isolators, welding joints etc. 2. The CRM shall be suitable to conduct measurements in charged substation up to 400 kV, with both side grounded
2	GENERAL : 1. The CRM should be portable ; microprocessor based with LCD Display, and shall be suitable for use in high voltage sub-station environment. 2. The CRM should be compatible with PC and will have features for measurement storage and reporting. 3. The CRM should have in built software to enable individual test or and entire series of test and store the results.
3	FUNCTIONAL REQUIREMENTS : 1. The resistance reading shall be digital and displayed directly without any need for any balancing or calculations. 2. The CRM shall also indicate output current value as percentage of set value and this shall be achieved without any need for manual control 3. The current output of the CRM shall be true ripple free DC. 4. The CRM shall have built- in memory for storing the test results for minimum 50 values. 5. The measurement shall have date & time stamped and can be easily transferrable to PC or on USB port.
4	RANGE & ACCURACY : Test Current : • 10-200 A DC with Resolution of 1 A or better • Up to 100 Amp should be possible to inject continuously without overloading. Resistance : • Range : 0.1 $\mu\Omega$ to 1.0 Ω • Accuracy : 1 % of reading \pm 1 digit of FS • Resolution : 0.1 $\mu\Omega$ to 0.1 m Ω (lower range to Higher Range)
5	MEASUREMENT : • Test lead cables should be provided with suitable clips to make proper contact with test equipment surface whose resistance is to be measured. • Measurement method employed should eliminate the error that may be introduced by test lead resistance and contact resistance between probe and material to be tested.

6	<p>OTHER REQUIREMENTS : The CRM should be equipped with thermal and over current protection. It should comply with various relevant International standards such as International standards IEC 61010-1, Electromagnetic Compatibility (EMC) as follows:</p> <ul style="list-style-type: none"> > CE conformity EMC standard 89/336/EEC > Emission EN 50081-2, EN 61000-3-2/3 > Interference Immunity EN 50082-2 <ul style="list-style-type: none"> • Supplier should provide details of laboratories where this instrument can be get calibrated in India, in case of imported equipment. • The performance certificates of the similar equipment supplied in last five years shall be provided with contact details of user. • Calibration certificates should be traceable to International Standards and date of issue of this certificate should not be older than 1 month from date of dispatch.
7	<p>EXTERNAL INTERFACE SPECIFICATIONS : A Suitable laptop with latest Operating System compatible with the kit. The laptop should have the following features :</p> <p><u>LAPTOP COMPUTER SPECIFICATION</u></p> <p>Power supply : 230V AC Single Board Computer : Intel Core i7 7th Generation,15.6 inch Display Processor : I7 @ 2.7 GHz or above RAM : 8 GB DDR4 HDD : 1 TB SATA Drive or above, with Graphic Card 2GB or higher CD Drive : DVD RW Support at least Read (48x), Write (24x) & Rewrite (10x) operations with multi-session capacity. Ethernet Port : Dual Gigabit Ethernet Interface: 10/100/1000Base-T Connector: RJ-45 x 2 Operating System : Window 7 or higher</p>
8	<p>MAINS POWER SUPPLY :</p> <ul style="list-style-type: none"> • 230 V ± 10%, The modular in-built rechargeable battery shall be maintenance free type. Supplier shall mention the following : Type & make - Size - Rating of battery.
9	<p>MANUAL :</p> <ul style="list-style-type: none"> • Operation manual in English - 1 set along with softcopy • Maintenance manual in English - 1 set along with softcopy
10	<p>TESTING & TRAINING :</p> <ul style="list-style-type: none"> • Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL. <p>Scope of training:</p> <ul style="list-style-type: none"> • Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its utilization by arranging testing at site. • Hand on practice for kits which are being manufactured outside India.

11	<p>ACCESSORIES : One additional set of measurement cables* (optional) Carry case which is normal weather proof and shock / vibration proof to protect inside equipment.</p>
12	<p>SAFETY :</p> <ul style="list-style-type: none"> • Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards. • In case of sudden opening of test leads, the equipment should automatically shut down instantaneously.
13	<p>CALIBRATION : The CRM should have valid calibration certificate traceable to National & international standards</p>

LOT-III :

PORTABLE AUTOMATIC CIRCUIT BREAKER TESTING SYSTEM ALONG WITH SOFTWARE FOR ON-SITE TESTING OF CIRCUIT BREAKERS	
SL.NO	PARTICULARS
1	<p>APPLICATION :</p> <ul style="list-style-type: none"> * The system is required for field-testing of Circuit Breakers in High Voltage Substations up to 400 kV rating with breaker grounded atleast at one end for safe operation * The supplier shall submit list of customers to whom the instrument has been supplied for the past five years along with performance certificates
2	<p>GENERAL :</p> <ul style="list-style-type: none"> * The microprocessor based Automatic Circuit Breaker Testing System shall be able to measure on all types of circuit breakers namely SF6, Air Blast, Minimum Oil, Bulk Oil, Vacuum Circuit Breakers etc up to 400 kV the following functions with the breaker grounded atleast at one end for safe operation. - Contact Opening and Closing timings. -Timing of main and PIR contacts -Bounce -Contact Speed -Travel of Contacts - Contact wipe - Timing of Auxiliary contacts -Circuit Breaker trip / close coil currents & voltages -Motor currents & voltages - Travel time (motion measurement) - Time spread between poles and units of one pole (pole discrepancy) in operating time - pre-insertion Resistors timing - Station battery voltage at breaker end

	<ul style="list-style-type: none"> - Static contact resistance - Dynamic contact resistance <ul style="list-style-type: none"> • Shall provide efficient, accurate measurements of circuit breaker dynamic timing and motion. <ul style="list-style-type: none"> • Accuracy of test results shall be unaffected by severe conditions of electrostatic and electromagnetic interferences present in EHV substation. • Shall have adequate safety circuit for protection of operating personnel and also for safety of the equipment. • Optional spares, essential accessories and advances over the specified requirements, if any, may please be quoted separately.
FUNCTIONAL REQUIREMENTS	
3	<ul style="list-style-type: none"> • Measurement of timing simultaneously of least 2 main breaks per pole with PIR contacts (2 breaks x 3 pole) and on all three poles of the breaker simultaneously. <p>Totally minimum of 6 channels for main contact timing and associated 6 PIR contacts.</p>
4	<ul style="list-style-type: none"> • Measurement of all parameters shall be measured at pre selectable sampling speed of 1,5,10 kHz of better, but for Dynamic Resistance it shall be minimum 10 kHz.
5	<ul style="list-style-type: none"> • The instrument shall be capable of measuring following timings in accordance with IEC 62271-1 and IEC 62271-100. Open (O). Close (C), Open-Close (O-C), Close-Open (C-O) and Open-Close-Open (O-C-O)
6	<ul style="list-style-type: none"> • The instrument shall display the operation timings directly in milliseconds. The breaker analyser shall be able to measure record display and print the various values of timing, bounces of contacts, coil current, travel, DCRM signature in graphical form. Suitable software & data station shall also be part of the supply at no cost extra. • Laptop for control, Data Acquisition and Data Analysis suitable for 400 KV Sub-station site environment. A Suitable laptop with latest Operating System compatible with Circuit Breaker Analyser. The laptop should have the following features <p><u>LAPTOP COMPUTER SPECIFICATION</u></p> <p>Power supply : 230V AC Single Board Computer: Intel Core i7 7th Generation, 15.6 inch Display Processor: I7 @ 2.7 GHz or above RAM : 8 GB DDR4 HDD : 1 TB SATA Drive or above, with Graphic Card 2GB or higher CD Drive : DVD RW Support at least Read (48x), Write (24x) & Rewrite (10x) operations with multi-session capacity. Ethernet Port : Dual Gigabit Ethernet Interface: 10/100/1000Base-T Connector: RJ-45 x 2 Operating System : Window 7 or higher</p>

RANGE & ACCURACY	
7	<ul style="list-style-type: none"> •Range of instrument shall be from 0.1 to 999 milliseconds and least count of the instrument shall be 0.1 millisecond.
8	<p>The current channel shall able to measure current up to 25 Amps during close and open operation</p> <p>a) Number of channels : 4 (3 for open and 1 for close)</p> <p>b) Range : 25 Amp DC</p> <p>c) Accuracy : $\pm (0.5\%rdg + 0.1\%FS)$</p>
9	<p>(i) The travel channels shall be provided for measuring displacement of the circuit breaker moving parts, contact wipe, over-travel, rebound, damping time and an average velocity. The channels can able to adopt analog or digital transducers as and when required.</p> <p>a) Number of Channels : 3</p> <p>b) O/P Voltage for linear transducer : 5V DC</p> <p>c) Accuracy : 1% with Resolution of reading :12 bit</p> <p>(ii) The auxiliary inputs are used to monitor dry (potential free) and wet (potential) auxiliary contacts.</p> <p>a) Dry Contact</p> <p>b) Wet Voltage sensing for working voltage upto 300 V DC, 250 V AC Minimum sensing voltage: 10V</p> <p>c) No. of auxiliary Contact : 6 wet & 6 dry</p>
10	<p>The instrument shall have accuracy as follows:</p> <p>For all timing operations:</p> <ul style="list-style-type: none"> • Resolution at fastest sampling rate : 0.1 mS or better • Accuracy at fastest sampling rate : Value $\pm 0.05\% \pm 1$ digit or better for Coil currents • Resolution at preselected full scale current range: 0.1% of range or better • Accuracy at preselected full scale current range : Value $\pm 0.5\% \pm 1$ digit or better <p>For Travel channel (0-5V)</p> <ul style="list-style-type: none"> • Resolution Min : 5×10^{-3} V or better • Accuracy : Value $\pm 0.5\% \pm 1$ digit or better
11	<p>The Dynamic Resistance Measurement shall be measured with injection of up to 100 A DC with at least 10 kHz sampling speed.</p> <p>a) The instrument shall be able to perform DCRM measurement in Close and Open operation.</p> <p>b) No of DCRM channel : 6 channels for resistance + 6 channels for Current.</p>
OTHER REQUIREMENTS	
12	The instrument shall have inbuilt clock to tag the test results with date and time of test
13	The instrument shall have easy to use menu driven user interface for its operation. The selection of menu options shall be through the keypad / laptop
14	The analyser shall comply to various safety standards like installation / overvoltage : category II, and EMC standard for: Directive 2004 / 108 / EC

15	<p>COMMUNICATION</p> <ul style="list-style-type: none"> • Shall have RS232 / standard communication port for computer interface / LAN RJ45 • Shall also support Bluetooth communication for safe operation of the instrument remotely.
16	<p>MAINS POWER SUPPLY:</p> <ul style="list-style-type: none"> • Power supply input AC voltage : 230 VAC, 50Hz
17	<p>MANUAL :</p> <ul style="list-style-type: none"> • Operation manual in English - 1 set • Maintenance manual in English - 1 set
18	<p>TESTING & TRAINING :</p> <ul style="list-style-type: none"> • Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL. <p>Scope of training:</p> <ul style="list-style-type: none"> • Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its utilization by arranging testing at site. <ul style="list-style-type: none"> • Site testing on some typical circuit breakers covering up to 400 kV class breakers • Hand on practice for kits which are being manufactured outside India.
19	<p>INSTALATION & COMMISSIONING :</p> <ul style="list-style-type: none"> • Installation, Commissioning & successful demonstration of test equipment shall be the responsibility of the supplier at atleast one of the identified 400 kV Sub-station of OPTCL.
20	<p>STATIC CONTACT RESISTANCE MEASUREMENT :</p> <p>The Static Contact Resistance measurement shall able to measure with injection of minimum 200 A DC current or better by Kelvin's 4 wire principle. The Static Contact Resistance Measurement shall be carried out with a separate instrument with single channel having accuracy as detailed below. The minimum current for measurement shall be at least 200 A or better. The test leads of the DCRM shall be interchangeable with Static Contact Resistance Meter for easy usage to save item and effort.</p> <p>a) Resistance range 0.1 $\mu\Omega$ -999.9 mΩ b) Accuracy \pm (0.1 % rdg +0.1% FS) with Resolution 0.1$\mu\Omega$</p>
21	<p>ACCESSORIES :</p> <p>Transducers required to measure simultaneously three poles shall be supplied.</p> <p>Details of type of Circuit Breaker(Rating. Make and Model etc.) will be shared by OPTCL.</p>
22	<p>SAFETY :</p> <ul style="list-style-type: none"> • Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards.
23	<p>CALIBRATION :</p> <ul style="list-style-type: none"> • The system shall have valid calibration certificate traceable to National / International standards.

LOT-IV :

FOR "PORTABLE AUTOMATIC SWEEP FREQUENCY RESPONSE ANALYSER WITH SOFTWARE FOR DIAGNOSIS OF POWER TRANSFORMERS AT SITE	
SL.NO.	PARTICULARS
1	APPLICATION
	* The Sweep Frequency Response Analyser (SFRA) with dedicated software system is required for diagnostic field-testing of EHV class power transformers at site
	* The equipment shall be robust, portable have automatic test sequences. Automatic with external Laptop control mains and / or optional battery operation and user defined test procedures with dedicated software for acquisition storage and analysis of the data
	* The supplier shall submit list of customer to whom the instrument has been supplied for the past five years along with performance certificates
2	GENERAL FEATURES :
	* The measuring instrument and its accessories should fulfill the requirements of IEC 60076-18.
	* Shall have automatic testing features for diagnosis of EHV power transformers at site.
	* Shall be able to detect:
	√ Winding deformation and displacement
	√ Winding deformation & displacement
	√ Core movements
	√ Faulty core grounds
	√ Partial winding collapse
	√ Hoop buckling
	√ Broken or loosened clamping structures
	√ Shorted turns and open windings
	* Automatic report generation
	* Interface facility to external Computer to prints reports etc.
	* High reliability of results due to the applied measurement method and innovative connection technique
	* Portable & robust with hard transport casing
* Mains operation or battery operation	
* Short circuit and overload protection	
3	TECHNICAL
	FEATURES * Shall cover the full dynamic range and maintains the same energy level at each frequency.
	* Dynamic range(> 100dB)
	* High signal to noise ratio across the entire frequency range

	<p>* Shall filter induced interference & noise.</p> <p>* Shall provide special test leads for reproducibility & accurate measurement</p> <p>* The frequency range shall cover most important diagnostic areas: √ Core and magnetic properties √ Winding movement and deformation. √ Interconnections - leads, load tap-changer, de-energized tap changer</p> <p>* User friendly and dedicated software with analysis guidelines</p>
4	<p>DYNAMIC RANGE (>100dB)</p> <p>* The minimum dynamic range of the measuring instrument shall be +10dB to -90dB of the maximum output signal level of the voltage source at a minimum signal to noise ratio of 6dB over the whole frequency range.</p>
5	<p>AMPLITUDE MEASUREMENT ACCURACY</p> <p>* The accuracy of the measurement of the ratio between V_{in} and V_{out} shall be better than $\pm 0.3\text{dB}$ for all ratios between +10dB and -40 dB and $\pm 1\text{dB}$ for all ratios between -40dB and -80dB over the whole frequency range</p>
6	<p>PHASE MEASUREMENT ACCURACY</p> <p>* The accuracy of the measurement of phase between V_{in} and V_{out} shall be better than $\pm 1^\circ$ at signal ratios between +10dB and -40dB over the whole frequency range.</p>
7	<p>OUTPUT VOTAGE* Output Voltage Standard voltage 10V peak to peak. Source output voltage should preferably be user adjustable from 0-20V peak to peak at 50 Ω or better.</p>
8	<p>REQUENCY RANGE</p> <p>* Minimum frequency range shall be 20 Hz - 2MHz Auto scaling</p>
9	<p>FREQUENCY ACCURACY</p> <p>* The frequency accuracy shall be better than $\pm 1\%$ over the whole frequency range.</p>
10	<p>MEASUREMENT RESOLUTION BANDWIDTH</p> <p>* For measurement below 100 Hz the maximum measurement resolution band width (between -3dB points) shall be 10Hz above 100 Hz it shall be less than 10% of the measurement frequency or half the interval between adjacent measuring frequencies whichever is less.</p>
11	<p>SMOOTHING OF RECORDED DATA</p> <p>* The output data recorded shall not be smoothed by any method that uses adjacent frequency measurements, but averaging or other techniques to reduce noise using multiple measurements at particular frequency or using the measurement within the measurement resolution bandwidth for particular measurement frequency are acceptable.</p>
12	<p>MEASUREMENT LEAD</p> <p>* Separate measurement lead shall be used for each of the source, reference and response connections. Coaxial leads used for measurement shall be of equal lengths and shall have a characteristic impedance of 50Ω. The signal attenuation caused by individual leads shall be less than 0.3 dB at 2MHz. The zero-check measurement made without a test object or earth leads shall result in an amplitude deviation at 2 MHz of less than 0.6dB. The maximum length of the passive lead for passive lead system shall be 30m.</p>

13	<p>IMPEDENCE</p> <ul style="list-style-type: none"> * The measurement impedance for response voltage measurement shall be $50\Omega \pm 2\%$ over the frequency range. * If coaxial measurement leads are used the input impedance of the reference and response voltage reference voltage channels of the measuring instrument shall be $50\Omega \pm 2\%$ over the frequency range.
14	<p>DATA DISPLAY</p> <ul style="list-style-type: none"> * Scaling Linear /Log/& both * Frequency range 20 Hz -2 MHz minimum * Plotting magnitude vs, Frequency : o Phase verses Frequency : o Plot delta (difference) verses Frequency * Correlation verses Frequency ban (user selectable bands) * Waveform: Real time capture and display of reference and measured waveforms
15	<p>SOFTWARE</p> <p>Shall be user friendly dedicated software. Shall be compatible with Windows 2000/XP/Vista/7/8 operating system.</p> <ul style="list-style-type: none"> * Data shall be recorded as single computer readable file in XML 1.0 specification format. * Data manager shall allow selection of data based on equipment tested, location, test equipment used test setup. Organization, Rating, tap position etc. and overlay results. * Expert system and dedicated software with analysis guidelines for analysis of the data. * Identification & comparison of any differences or areas of dissimilarity between two SFRA * Identification & analysis between the reference curve variations in the measured data * Shall provide difference sub-band cross correlation * Export analysis guidelines to aid frequency response analysis * Plotting: shall provide plots of frequency versus magnitude & phase * All dedicated softwareshall be supplied in original in CDs.
16	<p>COMMUNICATION</p> <ul style="list-style-type: none"> * RS 232 / Ethernet / Wireless (Bluetooth)/ USB/LAN RJ45
17	<p>LAPTOP FOR CONTROL DATA ACQUISITION AND DATA ANALYSIS</p> <p>A suitable laptop with latest Operating System compatible with SFRA software to be supplied along with the equipment. The laptop should have the following features.</p> <p><u>LAPTOP COMPUTER SPECIFICATION</u></p> <p>Power supply : 230V AC Single Board Computer : Intel Core i7 7th Generation,15.6 inch DisplayProcessor : I7 @ 2.7 GHz or above RAM : 8 GB DDR4 HDD : 1 TB SATA Drive or above, with Graphic Card 2GB or higher CD Drive : DVD RW</p>

	Support at least Read (48x), Write (24x) & Rewrite (10x) operations with multi-session capacity. Ethernet Port : Dual Gigabit Ethernet Interface: 10/100/1000Base-T Connector: RJ-45 x 2 Operating System : Window 7 or higher
18	POWER INPUT * 230 V AC 50 Hz/AC Adapter/ Battery operated
19	MANUAL * Operating & User manual in English - Two sets * Maintenance manual in English- Two sets
20	ACCESSORIES * Input power supply card AC adaptor * Protective ground cable - 2 Nos. * Measurement cables - 2 sets * Interfacing cables - 2 sets * High-density plastic moulded rugged transport cases for all separate units and accessories
21	CALIBRATION* Calibration certificate traceable, to National / International standards from an International accredited Laboratory with uncertainty calculations shall be provided. * Calibration set and calibration software if any for calibrating the instrument shall be supplied.
22	ENVIROMENTAL* Shall have Dust proof enclosure.
23	SAFETY * Shock proof /Vibration proof. EMC compliant & safety requirements as per relevant International Standards.
24	INSTALATION & COMMISSIONING * Installation, Commissioning & successful demonstration of test equipment at OPTCL shall be the responsibility of the supplier.
25	TRANINING : Classroom training at OPTCL, Bhubaneswar, Odisha with theory and practical sessions on the usage of the instrument. •Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL. Scope of training: • Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its utilization by arranging testing at site. Hand on practice for kits which are being manufactured outside India.
26	SCOPE OF SUPPLY * Supplier should clearly list out the scope of supply and items in details.

LOT-V :

PORTABLE LEAKAGE CURRENT MONITORING SYSTEM USING THIRD ORDER HARMONIC ANALYSIS TECHNIQUE FOR METAL OXIDE SURGE ARRESTERS (MOSA) FOR ON-SITE TESTING	
SL.NO.	PARTICULARS
	GENERAL
2	<ul style="list-style-type: none">* The system is required for diagnostic field-testing of Metal oxide Surge Arresters from 66 kV to 765 kV networks.* Shall be capable of continuous monitoring of one or more arresters to investigate details in leakage current changes verses time.* The supplier shall submit list of customers to whom the instrument has been supplied for the past five years along with performance certificates.
	TECHNICAL
3	<ul style="list-style-type: none">* Shall adopt well proven monitoring technique using third order harmonic analysis with compensation for harmonics in the system voltage (IEC-60099-5 method B2).* Shall be capable of continuous monitoring of leakage current with time to collect information of the condition of the Metal Oxide Surge Arresters (MOSA).* Shall provide Diagnostic indicators, like indication of high leakage current to avoid risk of breakdown of the MOSA.* Shall also be combined with multiplexer system for continuous monitoring of a number of surge arresters in a substation.* Shall be capable of monitoring metal enclosed surge arresters for Gas Insulated Substations (GIS).* Shall have well proven monitoring technique with compensation.* The system shall be portable & robust.* Shall have built in self calibration facility.* Shall have appropriate Current transformers & Field probes for accurate measurement.* Shall have built in temperature sensor.* Using this system data and entering / measuring ambient temperature and operating voltage, the leakage current data are automatically normalized to a standard ambient temperature (20⁰C) and operating voltage* The measurements are compared with the specific reference (arrester identification) in the database and the instruments & database are synchronized to store the data in right database.
4	ELECTRONICS : <ul style="list-style-type: none">* Total arrester leakage current : 200 μA to 10 mA or better* Field probe current: 1 μA to 1mA or better* Accuracy : \pm 5% or better
5	:POWER SUPPLY <ul style="list-style-type: none">* Shall operate both on Mains & built in Lithium ion battery.* 230 V AC, 50Hz or 12 - 18 V DC

6	<p>COMMUNICATION :</p> <ul style="list-style-type: none"> * RS 232/ Ethernet / Wireless (bluetooth)/ USB port/LAN RJ45 suitable for PC connectivity for data download & uploading of test set up
7	<p>SOFTWARE :</p> <ul style="list-style-type: none"> * Windows compatible dedicated software for acquisition, measurement and analysis of the data * Data management in the software shall include Arrester ID, Operational & measured parameters * Shall have Digital & graphical display of the measured parameters * Software shall be windows compatible * Shall have Automatic & user defined test sequences. * Comparison of the monitored data at different conditions. * Shall support continuous monitoring of leakage current of one or more arresters. * Shall include On- line configurations using suitable communication ports * All dedicated software shall be supplied in original in CDs.
8	<p>SAFETY :</p> <ul style="list-style-type: none"> * The leakage current monitoring system should preferable have a non-galvanic connection with the field probe to ensure its safety along with operator in case the field probe is accidentally or by mistake raised higher than the flash over zone. * From operator safety point of view wireless design of field probe and measuring circuit would be most preferable. * Stock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards.
10	<p>ACCESSORIES :</p> <ul style="list-style-type: none"> * Interconnecting cable, measuring cables, champs, interfacing cable- 2 sets each * Grounding cables with suitable clamps - 2 sets * Any other essential associated cables, accessories & standard package for the satisfactory operation of the instrument - 2 sets each * Appropriate clamp- on CT and Field probe * Accessories like 110V PT secondary voltage adapter for continuous monitoring and accessories suitable for coupling to metal enclosed GIS surge arresters- 2 sets each * High-density plastic moulded rugged transport cases for all separate units and accessories - 1 set each
11	<p>MANUAL :</p> <ul style="list-style-type: none"> * Operation manual in English - 1 set * Maintenance manual in English- 1 set
12	<p>DATA STORAGE:</p> <ul style="list-style-type: none"> * Shall have Battery backed RAM
13	<p>DISPLAY :</p> <ul style="list-style-type: none"> * LCD screen, with good resolution

14	<p>CALIBRATION :</p> <p>* The system shall have calibration certificate traceable to National/ International standards from an International accredited Laboratory with un certainty calculations.</p> <p>* The system should have self-calibration and on-site verification facility</p>
	<p>TESTING & TRAINING : • Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL.</p> <p>Scope of training:</p> <ul style="list-style-type: none"> • Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its utilization by arranging testing at 400KV S/S site. <p>Hand on practice for kits which are being manufactured outside India.</p>
15	<p>INSTALLATION & COMMISSIONING :</p> <p>* Installation, Commissioning & successful demonstration of test equipment at OPTCL shall be the responsibility of the supplier.</p>
17	<p>SCOPE OF SUPPLY</p> <p>* Supplier should clearly list out the scope of supply and items in details.</p>

LOT-VI :

POWER ANALYSER	
SL.NO.	PARTICULARS
1	<p>APPLICATION :</p> <p>1. This instrument shall be ideal for use in general electrical systems maintenance, protective relay testing, monitoring power quality of the system. The instrument shall have fast performance, accurate checking and testing protective relay and meter installation during commissioning and routine test / maintenance.</p>
2	<p>GENERAL :</p> <p>1. This instrument shall be suitable for high-speed, simultaneous measurement and display of all three phase system parameters including phase angle even at very low current levels.</p> <p>2. The instrument shall be suitable for measurement of impedance, interconnection resistance and cell voltage.</p> <p>3. It should be of 3 phase, 4 wire system with feature of power quality / harmonics analyser.</p> <p>4. It should be very versatile, menu-driven instrument with a build in timer and data logging.</p> <p>5. It should have the unique firm ware, combined with a built in microprocessor based timer</p>

FUNCTIONAL REQUIREMENTS

3	<p>1. The power analyser shall be a multifunction instrument for measuring AC or DC voltage, AC primary and secondary current , total power, active power, reactive power, power factor, phase angle and frequency of a single or three phase electrical system</p> <p>2. The instrument should be easily configurable to measure amplitude and phase angle between any voltage & current.</p> <p>3. These measured quantities should be displayed simultaneously on an enlarged font size for easier reading on a graphic display.</p> <p>4. The instrument shall be capable of automatically storing measured data and should have large backlighting LCD display to display parameters in one screen.</p> <p>5. The screen shall also able to display harmonics, with simultaneous display of current and voltage in graphical / vectorial form.</p> <p>6. It should also able to display total harmonic distortion.</p> <p>7. It should be possible to adjust ratio of voltage & current sensors provided; It should be also possible to enter the voltage & current sensors ratio in the instrument to get the direct value</p> <p>8. It should also display 3 phase voltage and current unbalance, ratio of unbalanced factor, calculated unbalance current through neutral Line (In), capture transient events including Dip, Swell, flicker and Outage with threshold %.</p>
4	<p>RANGE, ACCURACY & RESOLUTION :</p> <ul style="list-style-type: none"> • True RMS Voltage : 600 V • Phase angle : -180⁰to + 180⁰ • Frequency Range : 45 Hz to 65 Hz • AC current: 20 A directly , suitable current clamp arrangement should be provided to measure current upto 1200 A (two clamps one for 0-100 A and second for 100-1200 A should be provided) • DC Current : upto 1200 A using compatible sensor • Voltage and current measurement accuracy : ± 0.2 % and ± 0.5 % with voltage / current sensors • Frequency measurement accuracy :± 0.02 Hz or less • Harmonics (both current and voltage) : upto 50th order • <u>Power factor : -1.00 (lead) to 0.0 to + 1.00 (lag)</u> • Transient measurement : 6 kV peak • Transient overvoltage measurement : 2 MHz sampling • Crest Factor 1.00 to 99.00

5	<p>Measurement circuit can be (i) single phase 2 wire (1 P2W), single phase 3 wire (1P3W), three phase three wire (3P3W) or three phase 4 wire (3P4W) plus extra input channel (must be synchronized to reference channel during AC / DC measurement).</p> <ul style="list-style-type: none"> • There shall be 4 channels for voltage measurements and 4 channels for current measurements. • It shall be possible to measure voltage flicker, voltage unbalance factor, voltage swell and voltage dip and voltage interruption as per IEC / IEEE standards. • The instrument shall be possible to measure Demand measurement with digital output alarm function. • The instrument shall be able to measure current flowing through neutral line for 3 phase, 4 wire system.
OTHER REQUIREMENTS	
6	<ul style="list-style-type: none"> • Max / Min hold feature should record any event that that has crossed set max/min value during the measurement period • The instrument shall be menu driven and shall be capable of data retention and data logging capabilities • Supplier should provide details of laboratories where this instrument can be get calibrated in India, in case of imported equipment. • Calibration certificates should be traceable to International Standards and date of issue of this certificate should not be older than 1 month from date of dispatch.
7	<p>EXTERNAL INTERFACE SPECIFICATIONS : A Suitable laptop with latest Operating System compatible with the kit. The laptop should have the following features :</p> <p><u>LAPTOP COMPUTER SPECIFICATION</u></p> <p>Power supply : 230V AC Single Board Computer : Intel Core i7 7th Generation,15.6 inch DisplayProcessor : I7 @ 2.7 GHz or above RAM : 8 GB DDR4 HDD : 1 TB SATA Drive or above, with Graphic Card 2GB or higher CD Drive : DVD RW Support at least Read (48x), Write (24x) & Rewrite (10x) operations with multi-session capacity. Ethernet Port : Dual Gigabit Ethernet Interface: 10/100/1000Base-T Connector: RJ-45 x 2 Operating System : Window 7 or higher</p>
8	<p>MAIN POWER SUPPLY / BATTERY :</p> <ul style="list-style-type: none"> • 230 V \pm 10%, The modular in-built rechargeable battery, shall be maintenance free type. Supplier shall mention the following : <ul style="list-style-type: none"> - Type & make - Size - Rating of battery.

9	<p>MANUAL :</p> <ul style="list-style-type: none"> • Operation manual in English - 1 set along with softcopy • Maintenance manual in English - 1 set along with softcopy
10	<p>TESTING & TRAINING :</p> <p>Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL.</p> <p>Scope of training:</p> <ul style="list-style-type: none"> • Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its utilization by arranging testing at 400KV S/S site. <p>Hand on practice for kits which are being manufactured outside India.</p>
11	<p>INSTALATION & COMMISSIONING :</p> <ul style="list-style-type: none"> • Installation, Commissioning & successful demonstration of working of test equipment to the satisfaction of OPTCL shall be responsibility of the supplier. It shall be performed at one of the identified 400 kV Sub-station of OPTCL.
12	<p>ACCESSORIES :</p> <p>One additional set of measurement cables.</p> <p>Carry case which is normal weather proof and shock / vibration proof to protect inside equipment.</p>
13	<p>SAFETY :</p> <ul style="list-style-type: none"> • Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards.
14	<p>CALIBRATION :</p> <ul style="list-style-type: none"> • The system shall have valid calibration certificate traceable to National & international standards

LOT-VII :

AUTOMATIC MOISTURE CONTENT MEASUREMENT TEST KIT (KARL FISHER TEST)	
SL.NO.	PARTICULARS
1	<p>APPLICATION :</p> <p>To determining moisture content as per the following standards : ASTM D 1533, BS EN 60814 : 1998 & IEC 60814 : 1997</p>
2	<p>GENERAL :</p> <p>The equipment offered shall be rugged, portable, fully automated, battery operated instrument user friendly & easy to use that measures the amount of water in mineral dielectric oil. It shall be simple & easy to test with no special knowledge or training to use it effectively. The equipment is highly suited for field & laboratory measurements. The equipment shall allow titration of samples with a range of specific gravities form 0.60 to 1.40 in 0.01 steps. The equipment shall able test different sample sizes of 0.1 to 10 ml.</p>

	<p>CALCULATION : Calculation modes : Weight / weight, Weight / dilution ratio, Volume / Volume, Volume / density (User Programmable) Stirrer speed : Microprocessor controlled The equipment doesn't need calibration of reagents as KF-UNI uses the patent pending Automatically Compensated Errors (ACE) control System which guarantees that the electrolysis current produced and the count displayed are always correctly synchronized, regardless of changes to the electrolysis cell resistance thus eliminating the need to calibrate the reagents. Specifications :</p>
3	<ul style="list-style-type: none"> • In build calendar & clock for analysis time & date printout.
FUNCTIONAL REQUIREMENTS	
4	<ul style="list-style-type: none"> • Moisture content measuring range : 1 ppm - 100%
5	<ul style="list-style-type: none"> • Maximum sensitivity : 0.1 µg
6	<ul style="list-style-type: none"> • Maximum titration speed : 2 mg per minute
7	<ul style="list-style-type: none"> • Precision Between 10-1000 µg : ± 3 µg or better
8	<ul style="list-style-type: none"> • Display format µg, mg/kg, ppm, & Print format : µg ± mg /kg, ppm,%
9	<p>CALIBRATION : A calibration procedure to be included in the operating instruction manual and the quotation / technical bid shall include the necessary list of items, with calibration certificate traceable to National / international standards.</p>
OTHER REQUIREMENTS	
10	<p>NOMENCLATURE : Specify the Make, Model & Origin of Manufacturer of the equipment</p>
11	<p>WEIGHT : Light weight for easy transportation to field</p>
12	<p>MAINS POWER SUPPLY :</p> <ul style="list-style-type: none"> • Power supply 230 V +/- 10V AC, 50+/- 5Hz mains supply • Internal re-chargeable battery : 12V DC Car adaptor (long Battery life of 8 hours).
13	<p>MANUAL:</p> <ul style="list-style-type: none"> • Operation manual in English - 1 set • Maintenance manual English - 1 set • Technical data sheet, literature is enclosed along with the offer which is as per GTP
14	<p>TRAINING : Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL. Scope of training:</p> <ul style="list-style-type: none"> • Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its utilization by arranging testing at site. Hand on practice for kits which are being manufactured outside India.

15	INSTALATION & COMMISSIONING : • Installation, Commissioning & successful demonstration of test equipment shall be the responsibility of the supplier at least one of the identified 400 kV Sub-station of OPTCL.
16	ACCESSORIES : • Required Accessories to be listed by the bidder.
16	SAFETY : • Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards.

LOT-VIII :

DIGITALIZED FLASH POINT APPARATUS		
SL.NO.	PARTICULARS	
1	APPLICATION	The measurement shall be possible according to the following standards: i. ASTM D-93, ii. ISO 2719
2	GENERAL	The kit shall able to measure the Flash Point of Transformer oil products by automatic detection of flash as per i. ASTM D-93, ii. ISO 2719 by pensky martens closed cup method. The kit shall be microprocessor based portable & fully automatic measurement with ability to display quick results.
FUNCTIONAL REQUIREMENTS		
3	RANGE	Flash Point Temperature Range : 10 ⁰ C - 400 ⁰ C or better / Higher with Resolution : 0.1 ⁰ C
4	TYPE OF CUP	Instrument continuously closed cup type
5	STANDARDS APPLICABLE	Measurement according to ASTM D-93 and ISO 2719.
6	AUDIO SIGNAL INDICATION	Instrument shall be Programmable, with end poing indication by audible alarm
7	AUTOMATION	Display of results and provide with USB interface and PC communication software for storing and recalling test results.
8	CALIBRATION	A calibration procedure to be included int he operating instruction manual and the quotation / technical bid shall include the necessary list if items. The system shal have valid calibration certificate traceable to National / International standards.
OTHER REQUIREMENTS		
9	NOMECLATURE	Specify the Make, Model & Origin of Manufacturer of the equipment

10	MAINS POWER	<ul style="list-style-type: none"> Power supply : 230 V +/- 10 V AC, 50 Hz mains supply
11	MANUAL	<ul style="list-style-type: none"> Operation manual in English - 1 set Maintenance manual English - 1 set Technical data sheet, literature is enclosed along with the offer which is as per GTP
12	TESTING & TRAINING	<p>Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL.</p> <p>Scope of training:</p> <ul style="list-style-type: none"> Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its utilization by arranging testing at site. <p>Hand on practice for kits which are being manufactured outside India.</p>
13	INSTALLATION & COMMISSIONING	<ul style="list-style-type: none"> Installation, Commissioning & successful demonstration of test equipment shall be the responsibility of the supplier at one of the identified 400 kV Sub-station of OPTCL.
14	ACCESSORIES	<ul style="list-style-type: none"> Required Accessories to be listed by the bidder.
15	SAFETY	<ul style="list-style-type: none"> Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards for safe working at substation of equipment and human being.

LOT-IX :

INTERFACIAL TENSION METER		
SL. NO.	PARTICULARS	
1	APPLICATION	To measure interfacial tension of insulating oils as per IEC 60422, ASTM D 971, ISO 6295, EN 14210, IEC 60296
2	GENERAL	<p>The instrument shall be fully automatic (microprocessor based) device for the measurement of interfacial tension of Transformer oil according to IEC IEC 60422, ASTM D 971, ISO 6295, EN 14210. IEC 60296. The unit must have internal microprocessor.</p> <p>The kit shall consist of the following :</p> <p>The kit shall have tension meter, sample vessel, calibrator to calibrate weight, temperature control unit, thermometer, heating & cooling bath etc.</p>

FUNCTIONAL REQUIREMENTS		
3	AUTOMATION	Fully automatic device with internal software (microprocessor based) The Instrument shall have Rs-232C/USB interface for connection with external printer for printing of results. It shall have internal software for independent operation without using an external Computer_Maximum interfacial Tension & Resolution {999 mN/m) &(0.01 mN/m).
4		Maximum interfacial Tension : 999mN/m Resolution : (0.01mN/m) Sample Stage speed : 0.1 - 500 mm /min Stage position State Resolution : 20 µm Display : Large LCD display. It shall have immediate display of data on the screen.
5	CALIBRATION	A calibration procedure to be included in the operating instruction manual and the quotation / technical bid shall include the necessary list of items, with calibration certificate traceable to National / International standards.
OTHER REQUIREMENTS		
6	MAINS POWER	• Power supply : 230 V +/- 10 V AC, 50+/-5 Hz mains supply
7	MANUAL	• Operation manual in English - 1 set • Maintenance manual English - 1 set
8	TESTING & TRAINING	Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL. Scope of training: • Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its utilization by arranging testing at site. Hand on practice for kits which are being manufactured outside India.
9	INSTALLATION & COMMISSIONING	• Installation, Commissioning & successful demonstration of test equipment shall be the responsibility of the supplier at least one of the identified 400 kV Sub-station of OPTCL.
10	SAFETY	• Shock proof, Vibration proof, EMC compliant & Safety requirements as per relevant International Standards.

LOT-X :

PORTABLE DESICCATORS		
SL. NO.	PARTICULARS	
1	APPLICATION	Desiccators (Vacuum) shall be manufactured from high quality Polypropylene and polycarbonate to provide a crystal clear view of the desiccant placed inside it. These auto cleavable desiccators are capable of holding vacuum upto 740 mm of HG for 24 hrs, without any greasing.
2	GENERAL	For easy handling of the dome, it is provided with a knurled knob. The internal groove is provided on the flange to hold a silicon rubber O-Ring while its polypropylene stopcock is fitted with a self-lubricating PTFE plug to perform three way tasks viz. vacuum creation, shutting off & vacuum releasing.
FUNCTIONAL REQUIREMENTS		
3	DIMENSION	The size of the desiccators shall be such that it can be of minimum size of 250 x276 x 240 mm
4	MATERIAL	Desiccators (Vacuum) shall be manufactured from high quality Polypropylene and Polycarbonate to provide a crystal clear view of the desiccant placed inside it.
5	VACUUM STABILITY	These auto cleavable desiccators are capable of holding vacuum upto 740 mm of Hg for 24 hrs, without any greasing.
6	CALIBRATION	<ul style="list-style-type: none">• The system shall have valid calibration for vacuum stability certificate traceable to National/ International standards.
OTHER REQUIREMENTS		
7	GTP / BROCHURE	Technical data sheet / original brochure, literature is enclosed along with the offer which is as per GTP
8	OPERATION MANNUAL	2 copies of technical operating procedure need to be submitted along with the equipment.
9	COMMUNICATION	<ul style="list-style-type: none">• Technical data sheet, literature is enclosed along with the offer which is as per GTP
10	MAINS POWER SUPPLY	The main equipment should be compatible to be connected to vacuum pump operating at power supply 230+/- 10V AC.
11	MANUAL	<ul style="list-style-type: none">• Operation manual in English - 1 set• Maintenance manual English - 1 set
12	TESTING & TRAINING	Training for OPTCL Engineers shall be provided for 2 days at kit delivery site of OPTCL. Scope of training: <ul style="list-style-type: none">• Operation, utilization, maintenance & upkeep of the instrument for field testing and demonstration of its

		utilization by arranging testing at site. Hand on practice for kits which are being manufactured outside India.
13	INSTALATION & COMMISSIONING	• Installation, Commissioning & successful demonstration of test equipment shall be the responsibility of the supplier at least one of the identified 400 kV Sub-station of OPTCL.
14	ACCESSORIES	Accessories to be supplied are to be mentioned by the bidder.

LOT-XI :

AC& DC EARTH FAULT LOCATOR	
SL.NO.	FEATURES
1	The portable battery Ground Fault locating instrument can identifying traces and locates ground faults in underground ac & dc systems – on line as well as off-line mode also. This can be used in small and large ungrounded system.
2	It can work in high electrical noisy environment and the strength of the test signal can be adjusted.
3	The system should consist of a line operated transmitter and a portable battery powered receiver. The transmitter can be left behind during tracing and the fault can be tracked easily using the hand held receiver and clamp-on probe.
4	The measurement should be unaffected by the presence of dc current and ac ripple.
5	The kit should able to measure and display branch ground fault current in grounded AC system.
6	Feature should include soft start charging to prevent sensitive relay tripping.
7	It can track Earth fault location system for DC 20...500 V.
8	It can track Earth fault location system for AC 20...500 V.
9	Injected test current magnitude is of 10mA/25mA selectable.
10	Selectable Alarm set-point and audio and visual indication on the measuring device with actual magnitude of measured fault test current display and indication of phase in which fault has occurred.
11	Must be capable of measuring leakage current of grounded AC circuits also with minimum sensitivity of 5mA. With harmonic analysis of upto 8th harmonics and THD.
12	Technical data sheet, literature is enclosed along with the offer which is as per GTP
13	Specify the Make, Model & Origin of Manufacturer of the equipment

LOT-XII :

DIGITAL CAPACITANCE & TAN DELTA KIT

The fully automatic microprocessor based 12 KV Power Factor/Tan-Delta capacitance testing kit to assess insulation condition & dielectric loss of transformers of various rating in a charged switch yard upto 400 KV.

The kit shall able to sense abnormal current,voltage& temperature.

The system conducts a continuous temperature analysis and adjusts set-points based on the changing test environment.

Safety Features: Open Ground Detection Circuit, Abnormal voltage as well as Current Sensing with continuous, Temperature compensation facility.

Source Output / Test Voltage: 25 V to 12 kV

Resolution: 1 V

Accuracy: $\pm 1\%$ of reading, ± 1 V

Output Current

- Continuous @ 100 mA at 12 kV rms
- 10 minutes @ 200 mA at 12 kV rms
- 2 minutes @ 300 mA at 12 kV rms
- Resolution: 0.1 μ A
- Accuracy: $\pm 1\%$ of reading, ± 1 μ A

Power Factor/Tan-Delta:

- Range: % PF 0 to $\pm 100.00\%$,
- **Power factor**0-100% (0-1), 0.001% maximum resolution.
- **Dissipation factor/Tan delta** 0-100 (0-10,000%), 0.001% maximum resolution)
- Power output-2 KW.
- PF/Tan d (Entire Range) Typical Accuracy: $\pm 0.5\%$ (Entire Range)
- Resolution: 0.01% (0.0001) ,Typical Accuracy: $\pm 0.005\%$

Capacitance Measurement:

- Range : 0 to 1 μ F,
- Accuracy: $\pm 0.5\%$ of reading, ± 1 nF
- Resolution: 0.01 pF;

Watts Measurement:

Range: 0 to 2 kW, actual power with Resolution: 0.5 mW ; $\pm 2\%$ of reading at 12 kV and accuracy of $\pm 0.03\%$ of VA, ± 0.5 mW

Test Frequency:

Range: **45 to 70 Hz** independent of input signal with Resolution: 0.1 Hz and Accuracy: $\pm 1\%$ of reading at 12 KV.

15 to 400HZ independent of input signal with Resolution: 0.1 Hz and Accuracy: $\pm 1\%$ of reading at 4kv.

Maximum interference Conditions at line Frequency

The kit shall be able to nullify Electrostatic and Electromagnetic in charged switch yard so as to measure the parameters accurately with the specified accuracy range & capability to reject noise up to 15mA.

.EMC Immunity shall be as per IEC 61000-4-2/3/4/5/6/11, IEC 801-2(1984)

Electrostatic Discharge

ANSI/IEEE C37.90.1 Surge Withstand Capability.

Safety shall be as per EN 61010-1:2001 (2nd Edition),

Digital Capacitance & Tan Delta Kit	
SL.NO.	DESCRIPTION
1	Maker's name, address and country
2	The fully automatic Microprocessor based 12 kV Power Factor/Tan-Delta capacitance testing kit to assess insulation condition & dielectric loss of transformers of various rating in a charged switchyard up to 400KV.
3	Test Frequency: Range: 45 to 70 Hz independent of input signal at 12KV 15-400HZ independent of input signal at 4 KV.
4	The accuracy and resolution of Output Current is as per specification.
5	The accuracy and resolution of Capacitance is as per specification.
6	The accuracy and resolution of Watt, and Pf etc are as per specification.
7	The test can be formed in various modes like Grounded & Ungrounded mode.
8	Safety Features: Open Ground Detection Circuit, Abnormal Voltage & Current Sensing System with continuous temperature compensation facility
9	Length of test lead sets of 15 meters to be supplied for winding resistance/Capacitance & Tan delta measurement.
10	The kit full fills safety, according to EMI/EMC compatibility for safe working within EHT substation up to 400KV both for equipment and human being.
11	Specify the Make, Model & Origin of Manufacturer of the equipment
12	Technical data sheet, literature is enclosed along with the offer which is as per GTP
13	<p>A Suitable laptop with latest Operating System compatible with the kit. The laptop should have the following features :</p> <p><u>LAPTOP COMPUTER SPECIFICATION</u></p> <p>Power supply : 230V AC Single Board Computer : Intel Core i7 7th Generation, 15.6 inch Display Processor : I7 @ 2.7 GHz or above RAM : 8 GB DDR4 HDD : 1 TB SATA Drive or above, with Graphic Card 2GB or higher CD Drive : DVD RW Support at least Read (48x), Write (24x) & Rewrite (10x) operations with multi-session capacity. Ethernet Port : Dual Gigabit Ethernet Interface: 10/100/1000Base-T Connector: RJ-45 x 2 Operating System : Window 7 or higher</p>

LOT-XIII :

Digital clamp on earth resistance meter :

The digital clamp on earth tester for testing ground resistance without connecting any auxiliary earth spike/ probe in the ground and shall also able to measure the leakage current. It shall have following parameters.

Technical Specification :

- The meter shall have jaw size of 50mm & shall have with the backlit LCD display
- The meter shall have resistance measurement range from 0.05Ω to 500 Ω
- The meter shall also have True RMS AC current measurement range from 0.5mA-35.0A and must have auto current measurement feature
- The meter shall have the memory storage facility of 200 records with a real time clock for date and time stamping of results. Data shall be carried out on PC through USB port.
- The meter shall also have a Pre-Hold button, in which in difficult to access areas the Pre-Hold button can be activated and after clamping automatically the readings get locked on the display .
- The meter shall have high and Low limit alarms setting
- The meter shall be CATI V600V and IP30 with jaws closed.

Safety Protection:

- The meter must be CATIV600V, Pollution Degree 2 and IP30 with jaws closed.

General Specification:

Power Supply : 4X 1.5V cells type IEC LR6

Digital clamp on earth resistance meter	
PARTICULARS	
SL.NO.	DESCRIPTION
1	Maker's name, address and country
2	The digital clamp on earth tester for testing ground resistance without connecting any auxiliary earth spike/ probe in the ground and shall also able to measure the leakage current.
3	The meter shall have jaw size of 50mm
4	The meter shall have resistance measurement range from 0.05Ω to 500 Ω
5	Technical data sheet , literature is enclosed alongwith the offer which is as per GTP
6	Specify the Make, Model & Origin of Manufacturer of the equipment

LOT-XIV :

TRANSFORMER OIL BDV TEST KIT(MANUAL) 0-100KV :

The Oil Test Set to perform accurate break down voltage test up to 100 KV on all types of transformer insulating oil (mineral, ester & silicon etc.). The unit shall be manually or motorized operation. It shall be complete with test cell with necessary gauges for adjusting the gap. The test vessel shall be of moulded type to give repeatable test results with lock in precision electrode gap settings.

General Technical Specification:

- Input power supply: 230 V , 50 Hz
- Output test voltage : 0 – 100 kV;
- Capacity: 1 KVA; Indication: Mains ‘ON and ‘HT’ ‘ON’ Indicating Lamps.
- Metering: 96 sq. mm. Size back of panel mounting, voltmeter.
- Test Cup made of Acrylic Suitable Transparent Test Cup with cover
- The capacity of oil container shall be between 300 /500 ml mushroom / spherical head and ground to adjust the Electrode gap distance.
- Protection: Electronic fast acting over current tripping directly.
- Motorization: The unit will be supplied with the rate of rise of voltage @ 2KV/second and in case of motorization failure; the unit can be operated manually.
- Interlocking: Low and high level interlocking for drive motor.
- Accessories: Mains 3 pin cord 2 meter long. Test cell with Electrodes.
- GO & NO GO Gauges with Operating Instructions
- Housing: Rugged Construction to ensure prolonged Usage.
- Test to IS-6792, IEC-156
- Manual ,Motorized operation
- Digital KV meter
- Test voltage range : 0-100 KV
- Audio + visual alarm at BDV
- Live natural ground protection
- Ergonomically design completely user friendly

TRANSFORMER OIL BDV TEST KIT(MANUAL) 0-100KV	
SL.NO.	DESCRIPTION
1	Maker’s name, address and country
2	The Oil Test Set to perform accurate break down voltage test up to 100 KV on all types of transformer insulating oil (mineral, ester & silicon etc.).
3	The unit shall be manually or motorized operation. It shall be complete with test cell with necessary gauges for adjusting the gap
4	Motorization: The unit will be supplied with the rate of rise of voltage @ 2KV/second and in case of motorization failure; the unit can be operated manually.

5	Test to IS-6792, IEC-156
6	It can incorporate on-line monitoring of temperature and moisture in oil.
7	Technical data sheet, literature is enclosed along with the offer which is as per GTP
8	Specify the Make, Model & Origin of Manufacturer of the equipment

Quantity & Delivery Schedule

Lot No.	Description of Diagnostic Testing Kits	Quantity Required	Destination	Delivery in months
1	Tower Footing resistance /impedance measurement test kit	15	Any store/site of OPTCL within the state of ODISHA as per despatch clearance	Within 4 (four) Months from the date of the issue of the Purchase Order
2	Contact Resistance Meter (200A)	9		
3	Circuit Breaker Analyzer	5		
4	Frequency Response Analyzer	6		
5	3 rd Harmonic Leakage detector	6		
6	Power Analyzer	6		
7	Automatic moisture Content Measurement Kit	2		
8	Digitalized Flash Point Apparatus	2		
9	Surface Tension Meter	2		
10	Portable Desiccators	2		
11	AC/DC Earth Fault Locator	9		
12	Digital Capacitance & Tan Delta Kit	9		
13	Digital clamp on earth resistance meter	40		
14	Transformer oil BDV Test Kit (Manual) 0-100 KV	60		

N.B: The detail delivery programme & quantity to be delivered will be informed at the time of placing P.O / issue of release order.

PART – II
PRICE BID

1. PRICE:

- (i) Bidders are required to quote their price(s) for goods offered indicating they are 'FIRM'
- (ii) The prices quoted shall be FOR Destination only at the consignee's site/store inclusive of packing, forwarding, Freight & Insurance. In addition, the break-up of FOR Destination price shall be given as per schedule of Prices in Annexure-V of Section – III. The Bidders has to certify in the price bid that any implication of lower Tax and Input Tax Credit benefit as per anti-profiteering and other provisions under GST Laws, have been fully passed on to the Purchaser, while quoting the tender prices.

2. INSURANCE :

Insurance of materials/equipments, covered by the Specification should normally be done by the Suppliers with their own Insurance Company unless otherwise stated. The responsibility of delivery of the materials/equipments at destination stores/site in good condition rests with the Supplier. Any claim with the Insurance Company or Transport agency arising due to loss or damage in transit has to be settled by the Supplier. The Supplier shall undertake free replacement of equipments/materials damaged or lost which will be reported by the Consignee within 30 days of receipt of the equipments/materials at Destination without awaiting for the settlement of their claims with the carriers and underwriters.

3. CERTIFICATE FOR EXEMPTION FROM GOODS AND SERVICES TAX:

Offers with exemption from Goods and Services Tax shall be accompanied with authenticated proof of such exemption. Authenticated proof for this clause shall mean Photostat copy of exemption certificates, attested by Gazetted Officers of State or Central Government.

4. PROPER FILLING UP OF THE PRICE SCHEDULE:

- (i) In case where Freight & Insurance charges are not furnished, 5% of the Ex-works price shall be considered as the freight & Insurance charges.
- (ii) The tenderer should fill up the price schedule (Annexure-V of Section-III) properly and in full. The tender may be rejected if the schedule of price is submitted in incomplete form as per clause-34 (ix) of Section-II of the Specification.

5. NATURE OF PRICE INDICATED IN SPECIFICATION SHALL BE FINAL.

The nature of price indicated in the Clause-13, Section – I of PART –I of the Specification shall be final and binding.