

TENDER DOCUMENT

TENDER NO.: S-CEM/OTE/EMCD/1080-LE/102-06/21-22/11739

SUB: Supply, installation, Commissioning, Performance Testing and Validation of Conducted & Radiated Emission and Conducted Susceptibility Automated Test Systems

DUE ON 13.09.2021



SOCIETY FOR APPLIED MICROWAVE ELECTRONICS
ENGINEERING AND RESEARCH

(An Autonomous R&D Institution under the Ministry of Electronics &
Information Technology, Govt. of India)

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NOTICE INVITING TENDER(NIT)
(Submission of Tender in Two Bid Format)

Sealed Tenders are invited under Two Bid format (Technical & Commercial) from reputed Manufactures/ Indian agent of foreign principals for the supply of item mentioned below.

Sl. No.	Item Description	Quantity	Tender fee
			2,500/- +18% GST (Rupees two thousand and five hundred only)
1.	Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems	One	

Tender Documents can be downloaded from SAMEER-CEM website<<http://cem.sameer.gov.in>> and CPPP website<<https://eprocure.gov.in/cppp/>>

IMPORTANT DATES

SAMEER-CEM, Chennai invites bids from interested parties for **Supply, installation, commissioning, performance testing and validation of** Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems **as per the schedule mentioned below.**

Tender Schedule

Tender Reference No.	S-CEM/OTE/EMCD/1080-LE/102-06/21-22/11739
Date and time of publishing and downloading of bid document	11.08.2021 at 9.00 AM
Date of Pre-Bid Meeting	18.08.2021 at 11:00 Hrs. Pre-bid meeting will be conducted through online and link will be shared with prospective bidders on request. To get link, please e-mail at purchase.chn.sameer@nic.in or ramamoorthi.sameer@nic.in
Last date and time of submission of bids	13.09.2021 at 15.00 Hrs.
Date, time and Place of opening of Technical Bid.	13.09.2021 at 16.00 hrs. SAMEER-CEM, 2nd Cross Road, Taramani, Chennai - 600 113
Date and time of opening of financial Bids	To be announced later
Validity of Tender	180 days
Cost of Tender	Rs. 2,500/- + 18% GST (Rupees two thousand and five hundred only).

IMPORTANT TO NOTE

1. Any queries regarding the tender should be addressed to Head-Administration, SAMEER-CEM, 2nd Cross Road, Taramani, Chennai - 600 113 (either through letter or through e-mail: ramamoorthi.sameer@nic.in or purchase.chn.sameer@nic.in or contact no.044-22544020/22544061 up to 1 day before pre-bid meeting.
2. All communication, addendum/corrigendum related to this tender will be issued only on the SAMEER-CEM website cem.sameer.gov.in and CPPP.
3. Programme Director, SAMEER-CEM reserves the right to reject any or all the bids without assigning any reason.
4. The Date and time mentioned in the tender schedule shall be strictly adhered.
5. The bids will be opened in the presence of bidders/representatives. If any unscheduled holiday occurs on the date of submission/opening, then next working day shall be prescribed as date of submission/opening. Prospective bidders are requested to submit their offers in **Two-Bid format** only as per tender documents.
6. Requests for postponement of date and time of submission and opening of bids will not be entertained.
7. Fax/e-mail bids will not be accepted
8. Late/Delayed bids shall not be opened

Note-Changes suggested by prospective bidder in Pre-Bid meeting may be incorporated in the tender document at the sole discretion of the tender inviting authority and for which corrigendum will be issued separately and uploaded only on the SAMEER-CEM website cem.sameer.gov.in and [Central Public Procurement Portal \(CPPP\)](http://Central Public Procurement Portal (CPPP)).

INSTRUCTIONS TO BIDDER (ITB) FOR SUBMISSION OF BID etc.,
AND TERMS & CONDITIONS

SECTION-A ELIGIBILITY/QUALIFICATION CRITERIA

1. Eligible Bidders

1.1 Bids are invited from manufacturers or their Indian agent of foreign principals specifically authorized by the manufacturers, to quote on their behalf for this tender. The manufacturers or their Indian agent of foreign principals shall have designed, manufactured, tested and supplied the Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems similar to the type specified in the "Technical Specification". Such automated test systems must be of the most recent series/models, incorporating the latest improvements in design.

1.2 Either the Indian Agent on behalf of the Principal/OEM or Principal/OEM itself can bid, but both cannot bid simultaneously for the same item/product in the same tender.

1.3 If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/ product.

1.4 In case a foreign bidder who does not have an agent in India quotes, then the foreign bidder shall have to furnish a certificate to the effect that the bidder is or will be represented by an agent in India and will be able to carry out the supply, maintenance, repair obligations etc. during the warranty and post-warranty period. In case of non-availability of Indian agent, the foreign bidder shall ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc. during the warranty and post-warranty period. And also, provide their service visit plan for mandatory visits and breakdown visits.

1.5 Details of service support facilities that would be provided after the warranty period should be submitted in the Service Support Details Form.

1.6 The Bidder will assume total responsibility for the fault-free operation of the automated test systems, application software, if any, and maintenance during the warranty period and provide necessary maintenance services and availability of spares for ten years after end of warranty period if, required.

1.7 In order to assess the financial solvency of a firm, The Programme Director, SAMEER-CEM may seek a report from the bankers of the technically evaluated lowest quoting firm in order to assess if the firm is financially capable of executing the purchase order/work successfully.

1.8 Bidders who meet the criteria given above are subject to be disqualified, if they have made untrue or false representation in the forms, statements and attachments submitted in proof of the qualification requirements or have a record of poor performance, not properly completing the contract, inordinate delays in completion or financial failure, etc.,

1.9 If before/after the placement of the Purchase Order it is found/noticed that the supplier has been black-listed/debarred then such supplier will be dropped from the tendering process as technically not suitable to quote or order will be cancelled. Thus, black-listed/debarred firms are requested not to participate in our tendering process.

1.10 Any additional bid participation criteria/eligibility conditions etc. mentioned in the Technical Specification sheet will also form and part of the Qualification Requirements along with those mentioned in this chapter.

SECTION-B: THE BIDDING DOCUMENTS

2. Cost of Bid Document

Tender document can be purchased from the Accounts Section of SAMEER-CEM located at CIT Campus, 2nd Cross Road, Taramani, Chennai – 600 113 between 10.00 AM and 5.00 PM, on cash payment of Rs. 2500/- + 18% GST (Rupees two thousand and five hundred only) on all days except Saturdays, Sundays and public holidays. If the tender document is downloaded from our website <<http://cem.sameer.gov.in>> or <<https://eprocure.gov.in/cppp>>, then Tender fee should be paid along with Technical Bid (EMD & Tender Fee should be paid separately)

3. Contents of Bid Document

The goods required, bidding procedures and contract terms are prescribed in this bid document. The Bidder is expected to examine all instructions, forms, terms, conditions and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and shall result in rejection of the bid.

4. Amendment to Bid Document

4.1 At any time prior to the deadline for submission of bids, SAMEER-CEM may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bid Document by amendment. Such amendments shall form an integral part of bid documents and it shall amount to an amendment of relevant clauses of the Bid Document.

4.2 The prospective bidders are required to keep a watch on the SAMEER-CEM website <<http://cem.sameer.gov.in>> for any amendment to the tender document or clarifications to the queries raised by the bidders in till 01 (one) day prior to the opening of the tender. SAMEER-CEM reserves the right to reject the bids if the bids are submitted without taking into account these amendments/ clarifications. Further, bidders will be fully responsible for downloading the tender document and amendments thereto if, any for their completeness.

4.3 In order to allow prospective bidders to take reasonable time in which to effect the amendment into account in preparing their bids, SAMEER-CEM, at its discretion, may also extend the deadline for the submission of bids.

SECTION - C. PREPARATION OF BIDS

5. Language of Bid

The Bid prepared by the Bidders and all correspondence and documents relating to the bid exchanged by the bidder shall be written in English language only.

6. Documents Comprising the Bid

6.1 The bid is required to be submitted **in two Bid Format (Technical & Commercial bid)**. The bidders shall submit their bids in sealed covers (Tender No. & Due date must be compulsorily mentioned on the envelope containing the bid)

6.2 Detailed Specifications, Catalogues, List of users & Technical Details, Technical Compliance Sheet, Pre-Installation Requirements, payment terms, warranty terms etc., must be submitted along with technical bid.

6.3 Technical Bid shall include the following

- (i) Bid (EMD) security declaration form
- (ii) Tender fee as specified in the invitation to bids
- (iii) Service Support Details Form
- (iv) Deviation Statement Form
- (v) Technical Specification Compliance Statement Form
- (vi) Manufacturer's Authorization Letter
- (vii) Bidder's Performance Statement Form
- (viii) Equipment Data sheet/Technical specification.
- (ix) Tender Acceptance Letter-Annex-VII (*duly signed by the bidder with company seal*).
- (x) Bidders Eligibility Certificate-Annex-VIII (*duly signed by the bidder with company seal*)

7. Prices

7.1 The Bidder shall indicate the unit price and total price of the item it proposes to supply under the order and enclose it with the price bid. SAMEER-CEM is a Govt funded R&D centre. Please consider quoting special prices applicable to R&D institutions as per your company policies.

7.2 Full Prices in Foreign Currency or in Indian Rupees may be given in the bid for

- i. Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems -1 no.

7.3 Prices indicated shall be entered separately in the following manner (For Indigenous and Imported Items):

- (i) **For indigenous items:** Price should be quoted FOR at SAMEER-CEM, Chennai, inclusive of packing, forwarding, installation and commissioning charges.
- (ii) **For Imported items:** The quote shall be on the basis of Ex-works inclusive of packing, forwarding, transportation, installation and commissioning charges.
- (iii) **Taxes:** SAMEER-CEM is registered with Department of Scientific and Industrial Research (DSIR) for the purpose of availing custom duty exemption in terms of Government of India Notification No. 51/96-customs amended to 24/2007- customs dated 1st March 2007. **{approx. 5.20 % duty is applicable under this notification (5% Basic + cess/surcharge)}** and central excise duty exemption in terms of Government Notification no. 10/97-central excise amended to 16/2007-central excise dated 1st March 2007.
- (iv) Concessional GST (5%) Rates will be applicable to SAMEER-CEM as per GOI, Ministry of Finance, Notification No. 47/2017-Integrated Tax (Rate) dt. 14/11/2017. It is certified that SAMEER-Centre for Electromagnetics is an Autonomous Institute of the Ministry of Electronics & Information Technology, Govt. of India and it is registered with the (DSIR) Department of Scientific & Industrial Research, Government of India vide their Registration No. F.No.11/354/1997/-TU-V dated 18th March 2019, Valid up to 31.03.2022. It is also certified that the material/goods purchased is required for Research & Development in SAMEER-CEM. Duly signed GST concessional Certificate will be provided along with PO
- (v) We don't issue any 'Form C' or 'Form D'.
- (vi) If there is no explicit mention of taxes in offer, then quoted price will be *deemed inclusive* of such taxes. **No other charges except those mentioned clearly in the price bid will be paid.**
- (vii) Packing, forwarding, documentation, freight and insurance charges and installation charges must be clearly mentioned separately. Vague terms like "packing, forwarding, transportation etc., would be extra" without mentioning the specific amount/percentage of these charges will NOT be accepted. Such offers shall be treated as incomplete and will be rejected.

8. Training

The supplier should provide detailed onsite training at SAMEER-CEM Chennai at free of cost, after installation and commissioning of the said AUTOMATED TEST SYSTEMS at SAMEER-CEM. This training shall be to the satisfaction of SAMEER-CEM Scientists.

9. Installation

Installation, commissioning, performance testing and validation of Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems will be the sole responsibility of the Supplier / Indian Agent. Installations with all infrastructural works have to be done by the supplier. The bid must include pre-requisite for installation of the AUTOMATED TEST SYSTEMS at SAMEER-CEM. Bidders shall also indicate in their offer the total expected time required for installation/commissioning and testing of AUTOMATED TEST SYSTEMS. However, the successful bidder shall arrange and complete the installation of the AUTOMATED TEST SYSTEM within 60 days from the date of arrival of the AUTOMATED TEST SYSTEM at SAMEER-CEM. **The successful bidder should take all precautionary measures to ensure the safety of the workmen during installation of the AUTOMATED TEST SYSTEMS and SAMEER shall not be responsible in case of any eventuality.**

10. Warranty

- a) Bidders (OEM/ Agents) must submit offers with at least 3 **(three) years comprehensive and onsite warranty** after successful installation of the test system in all respects at Site, i.e., SAMEER-CEM, Chennai **(which would be considered for the tender evaluation purpose).**
- b) The successful installation date along with the date to be reckoned for start of the warranty period needs to be certified by the vendor & the user scientist. **The warranty offered should be unconditional and the vendor should agree to replace or repair at their cost. The spare parts for the repair during warranty period have to be provided by the vendor.**
- c) All costs /expenses incurred towards repair/service during warranty period (like courier/Freight, Insurance, Customs etc) shall be reimbursed by the supplier to SAMEER-CEM. Alternatively, supplier / manufacturer shall take up the total responsibility of courier/Freight, Insurance, Customs etc. for repair/service during warranty period.
- d) The supplier shall warrant that the equipment to be supplied shall be new and free from all defects and faults in materials used workmanship and manufacture and shall perform in full conformity with the specifications and applicable standards.
- e) The system supplied shall be covered by a warranty of three (3) years from the date of acceptance after I&C in labs as mentioned above including for the equipment manufactured by 3rd party suppliers.

- f) If within the period of warranty, the equipment is reported by the buyer to have failed to perform as per specification, the seller shall either replace or rectify the same free of charge, maximum within 10-14 working days for spares available in India and 45 working days for spares to be imported after notification of such defects received by the seller. Warranty of equipment would be extended by such duration.

11. Delivery Period:

- a) Delivery period is 180 days from the date of design approval by SAMEER-CEM and after opening irrevocable Letter of Credit (LC) by sight. **Part shipment is not permitted.**
- b) In case of **Indigenous suppliers**, delivery is to be made at SAMEER-CEM, Chennai. Delivery must be on FREIGHT PAID BASIS for despatch by Road.
- c) In case of **Foreign suppliers: Delivery is on the basis of Ex-works**
- e) The bidder must provide information regarding mode of shipment whether it is by **Air/Sea/Road/Rail.**

12. Bid Currencies

Prices shall be quoted in Indian Rupees (INR) or in freely convertible foreign currency preferably in **USD (\$), Euro (€), Yen (¥), GBP (£) and SFr (CHF).**

13. Documents Establishing Bidder's Eligibility and Qualifications

The bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and their qualification to perform the contract if the bid is accepted.

14. Documents Establishing Goods' Eligibility and Conformity to Bid Document

14.1 The documentary evidence of the test systems eligibility shall consist of a statement on the **country of origin** of the goods and services offered which shall be confirmed by a **certificate of origin at the time of shipment.**

14.2 Specifications are basic essence of the product. It must be ensured that the offers are strictly as per our tendered specifications. At the same time, it must also be kept in mind that merely copying our specifications in their quotation shall not make firms eligible for consideration. The documentary evidence of conformity of the AUTOMATED TEST SYSTEMS to the Bid Document may be in the form of literature, drawings and data, and shall consist of:

- (i) An item-by-item commentary on the SAMEER-CEM Technical Specifications, demonstrating substantial responsiveness of the goods and services to those

specifications or statement of deviations and exceptions to the provisions of the Technical Specifications.

- (ii) A list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the AUTOMATED TEST SYTEMS for a period of 10 years, following commencement of the use of the goods by the Purchaser.

15. Period of Validity of Bids

Bids must remain valid for at least **180 days** after the date of bid opening prescribed by SAMEER-CEM. A bid valid for a shorter period may be rejected by SAMEER-CEM as non-responsive.

15.1 In exceptional circumstances, SAMEER-CEM may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (fax or e-mail).

16. Patent Right & IPR Laws:

The supplier shall indemnify SAMEER-CEM against all third-party claims of infringement of Patent, Trademark or Industrial Design Rights arising from the use of Goods or any part thereof in the Purchaser's country (INDIA). The vendor should be sure about his claim on the ownership of technology and total compensation in the event of a claim should be paid to the buyer in case of patent infringement.

17. Right to Information Act.2005

The bidder may indicate if any information in his tender includes information of commercial confidence, trade secrets or intellectual property, the disclosure of which would harm the competitive position of their company.

18 Format of Bid

The tenders are invited on two bid systems i.e. the qualifying bid and then the price bid:

18.1 The tender form for Technical bids shall be complete in all respects should be submitted in sealed cover superscripted - **“Technical Bid - Supply, Installation, Commissioning, Performance testing and Validation of Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems.**

18.2 The tender form for price bid shall be complete in all respects should be submitted in sealed cover super scribed - **“Price Bid -Supply, Installation, Commissioning, Performance testing and Validation of Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems”**

18.3 The above two sealed covers should be put together in another big cover/envelope which should be sealed with wax. The cover shall be super scribed as “Tender No:....., dated: & Name of Tender **“Supply, Installation, Commissioning, Performance Testing and Validation of Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems”** and addressed to

The Programme Director,
Society for Applied Microwave Electronics Engineering and
Research(SAMEER) -
Centre for Electromagnetics, CIT Campus, 2nd Cross Road, Taramani,
Chennai - 600 113, Tamil Nadu, India.

Further, the sentence **“NOT TO BE OPENED”** before due date and time of tender opening, should also to be indicated on this envelope. If the outer big envelope is not sealed and marked properly as above, SAMEER will not take any responsibility for its misplacement, premature opening etc. The bid document shall be submitted in the above mentioned address latest **by 13.09.2021 at 15.00 Hrs.**

19. The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be initialled /endorsed by the person or persons signing the bid.

19.1 Any interlineations, erasures or overwriting shall be valid only if the person or persons signing the bid initial them.

19.2 The Bidder shall furnish information on commissions or gratuities, if any paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract as per the bid form.

SECTION - D. SUBMISSION OF BIDS

20. Deadline for Submission of Bids

20.1 Bids must be received at SAMEER-CEM in the address specified not later than the time and date specified in the NIT. In the event of the specified date for the submission of Bids being declared a holiday for SAMEER-CEM, the Bids will be received up to the appointed time on the next working day.

20.2 SAMEER-CEM may, at its discretion, extend this deadline for submission of bids by amending the bid documents.

21. Late Bids

Any bid received after the deadline for submission of bids prescribed by SAMEER-CEM, will be rejected and/or returned to the Bidder.

22. Modifications and Withdrawal of Bids

The Bidder may modify or withdraw its bid after the submission of bid provided that written notice of the modification or withdrawal is received by SAMEER-CEM prior to the deadline prescribed for submission of bids.

22.1 No bid may be modified subsequent to the deadline for submission of bids.

22.2 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the bid form. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security

SECTION- E: OPENING AND EVALUATION OF BIDS

23. Opening of Bids

23.1 SAMEER-CEM through its "TENDER OPENING COMMITTEE (TOC)" will open bid in the presence of Bidders/representatives who choose to attend, as per the schedule given in invitation to bids.

23.2 Bidders interested in participating in the bid opening process, should depute their representatives along with an authorization letter to be submitted to SAMEER-CEM (Tender Opening Committee) at the time of bid opening as mentioned in the NIT.

23.3 The Bidders' representatives who are present shall sign the bid opening attendance sheet evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for SAMEER-CEM, the Bids shall be opened at the appointed time and location on the next working day.

23.4 The bidder's names, bid modifications or withdrawals, specifications, and the presence or absence of requisite bid security and such other details, TOC at its discretion, may consider appropriate, will be announced at the bid opening meeting.

24. Bids that are received late shall not be considered for further evaluation, irrespective of the circumstances.

24.1 If any correction in the price quoted in the tender in words and/or figures shall be encircled in red ink by the bidders/representative and signed. The members of the tender opening committee shall endorse this.

25. Clarification of Bids

25.1 To assist in the examination, evaluation and comparison of bids, the Purchaser may, at its discretion ask the bidder for any clarification(s) of its bid/offer. The request for clarification and the response shall be in writing and no change in the prices or substance of the bid shall be sought, offered or permitted. **However, no post Bid clarifications at the initiative of the Bidder shall be entertained/considered.**

25.2 Any clarification and confirmation from the vendor after opening of the bid should not result in modification of their original offer in order to suit or meet the tendered specifications which would not be considered and accepted. Technical evaluation will be done strictly as per the details mentioned by the vendor in original offer with respect to the tendered specifications of SAMEER-CEM.

25.3 Any item not quoted in their original offer will not be accepted even though the bidder is willing to provide the materials + the unmentioned items at the same cost.

25.4 Any confirmation/clarification/modification by the bidder against the letter from SAMEER-CEM for communicating them the technical points of rejection would not make the firm technically suitable and their offer will stand as technically rejected. **Technical evaluation will be done strictly as per original offer submitted by the vendor with respect to the tendered specifications of SAMEER-CEM.**

26. Preliminary Examination

26.1 The TOC will examine the bids to determine whether they are complete, whether required tender fee and EMD have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

26.2 The TOC shall examine the bids to confirm that all documents and technical documentation as requested have been provided, and to determine the completeness of each document submitted

(a) All the tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the NIT. The tenders, which do not meet the basic requirements, are to be treated as unresponsive and ignored. The following are some of the important points, for which a tender may be declared as unresponsive and to be ignored, during the initial scrutiny:

- (i) The Bid is unsigned.
- (ii) The Bidder is not eligible.
- (iii) Tender fee.
- (iv) The Bid validity is shorter than the required period.
- (v) The Bidder has quoted for goods manufactured by a different firm without the required authorization letter from the manufacturer/OEM.
- (vi) Bidder has not agreed to give the required performance security.
- (vii) The goods quoted are sub-standard, not meeting the required specification etc.
- (viii) Against the schedule of Requirement (incorporated in the tender enquiry), the bidder has not quoted for the entire requirement as specified in that schedule.
- (ix) The bidder has not agreed to some essential condition(s) incorporated in the tender enquiry.

27. Prior to the detailed evaluation, the TOC will determine the substantial responsiveness of each bid to the bidding documents. For purposes of this clause, a substantive responsive bid is one, which conforms to all terms and condition of the bidding documents without material deviations, reservations or omissions. A material deviation, reservation or omission is one that:

- (a) affects in any substantial way the scope, quality or performance of the items and Related Services specified in the Contract; or
- (b) limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or
- (c) limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or

27.1 The TOC determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

27.2 If a bid is not substantially responsive, it will be rejected by the TOC and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.

28. Non-conformities between the figures and words of the quoted price

28.1 Any discrepancy between quoted prices in figures and that in words, if noted will be sorted out in the following manner:

(a) If there is a discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the TOC there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.

(b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.

(c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

28.2 If there is such discrepancy in a bid, the same is to be conveyed to the bidder with target date on the above lines and if the bidder does not agree to the observation of the TOC, the tender is liable to be ignored and its Bid Security may be forfeited.

29. Non-conformity, Error and Omission

29.1 Provided that a Bid is substantially responsive, the TOC may waive any non-conformities or omissions in the Bid that do not constitute a material deviation.

29.2 Provided that a bid is substantially responsive, the TOC may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

30. Examination of terms & Conditions, technical Evaluation

30.1 The TOC shall examine the Bid to confirm that all terms and conditions specified in the tender document have been accepted by the Bidder without any material deviation or reservation including the terms & conditions mentioned.

30.2 Prior to the detailed evaluation, the TOC determine the *substantial responsiveness* of each bid to the Bid Document as mentioned. Deviations from or objections or reservations to critical provisions such as those concerning Bid Security/ Performance Security, Warranty, Taxes& Duties will be deemed to be a material deviation. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

30.3 TOC shall evaluate the technical aspects of the Bid submitted to confirm that all requirements specified in Schedule of Requirement of the Bidding Documents have been met without any material deviation or reservation.

30.4 If, after the examination of the terms and conditions and the technical evaluation with respect to the tendered technical specification of SAMEER-CEM, the Purchaser determines that the Bid is not substantially responsive in accordance with ITB, it shall reject the Bid.

30.5 SAMEER-CEM may waive any minor informality, non-conformity, or irregularity in a bid, which does not constitute a material deviation, provided such a waiver, does not prejudice or affect the relative ranking of any Bidder.

30.6 After downloading, the language of standard clauses etc. mentioned in this 'Bid Document' should not be tampered with/ changed/modified in any manner whatsoever. If any such modification etc. comes to our knowledge at any stage, the bid shall be rejected immediately.

31. Evaluation & Comparison of Bids.

31.1 Conversion to Single Currency: -To facilitate evaluation and comparison, the TOC will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to Indian Rupees at the selling exchange rate established by the Reserve Bank of India <www.rbi.org> prevailing rate on the date of opening the Price bid.

31.2 For the bids surviving the technical evaluation which have been found to be substantially responsive shall be evaluated and compared.

31.3 To evaluate a Bid, the TOC shall only use all the factors, methodologies and criteria defined below. No other criteria or methodology shall be used.

32. PROCESS OF EVALUATION (BETWEEN INR QUOTE & FOREIGN CURRENCY QUOTE): -

(a) For goods manufactured in India: -

1. The price of the item shall be quoted on the basis F.O.R destination (delivered at SAMEER-CEM), as specified in the bidding document.

- (i)** GST and other taxes like excise duty etc., which will be payable on the goods of the contract is awarded. SAMEER-CEM is not entitled for issuing C&D form.
- (ii)** All Charges involved for inland transportation, insurance, Road Permit if required for delivering the goods at the desired destination i.e., F.O.R, SAMEER-CEM, Chennai, Tamil Nadu.
- (iii)** The installation, training, accommodation and travel charges if any

(b) The goods manufactured in abroad: -

- (i) The price of the items shall be quoted on the basis of CIP (Destination Port) as specified in the bidding document.
- (ii) Installation, Transportation, Insurance and Training charges if any.
- (iii) In case, where the foreign principal quotes and he does not have an agent in India then the foreign service engineer visits and AMC charges should be provided. The foreign service engineer's visit during installation would be added for the purpose of cost comparison and selection.

(c) (i) Indigenous quote:

The final landing cost of items, freight, forwarding, insurance, taxes etc. shall be the basis of evaluation.

(ii) Foreign quote:

The Ex-works price shall be the basis of evaluation.

(iii) Foreign Vs. Indigenous quote:

The final landing cost of purchase taking into account, freight, forwarding, insurance, taxes etc, customs clearance charges, Bank/LC charges, transportation upto SAMEER-CEM

33. PROCESS OF EVALUATION: (BETWEEN TWO OR MORE FOREIGN CURRENCY QUOTE): -

SAMEER-CEM shall evaluate the bids for deciding a technically suitable lowest quoting would be on CIP (Destination Port).

34. If the bidder quoted certain optional items, these items should not be taken into consideration for the evaluation of the bid unless the specifications of the optional item quoted by the bidder are part of original indented specification.

35. Contacting SAMEER-CEM

35.1 No bidder shall contact SAMEER-CEM or concerned scientist on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded. If the bidder wishes to bring additional information to the notice of SAMEER-CEM, it should do so in writing.

35.2 Any effort by a bidder to influence SAMEER-CEM in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.

SECTION-F: PAYMENT TERMS

36. Payment Terms

37.1 Payment for Indigenous supplier: 100% payment shall be made by the SAMEER-CEM against Supply, installation, Commissioning, Performance testing and validation of Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems at SAMEER-CEM in good condition and to the entire satisfaction of the user scientist.

36.2 Payment for Foreign Suppliers:

100% of the payment will be released by Irrevocable Foreign Letter of Credit (BY SIGHT) on presentation of complete and clear shipping documents.

36.3 Commission for Indian Agent

Bidders must clearly indicate in their offer whether they have any Agent in India. If so, bidders must furnish the names and addresses of their agents and state clearly whether agents are authorised to receive any commission. The rate of commission amount must be indicated, which will be payable only in non-convertible Indian currency. Unless otherwise specified it will be assumed that Agency commission has been included in the offered price. If there is no mention about the commission amount, it will be assumed that no commission is involved against this purchase. Commission to Indian Agents shall be released only after successful installation & commissioning by the Bidder/Indian agent.

36.4 No outright advance payments will be made to the firms.

(i) No extra charge will be paid by SAMEER-CEM,. Supplier shall take care for all transit risks for the safe delivery of the item.

(ii) The L/C will be confirmed at the suppliers cost, if requested specifically by the supplier. **All bank charges abroad shall be to the account of the beneficiary i.e. supplier and all bank charges in India shall be to the account of the opener i.e. purchaser.** If L/C is requested to be extended/ reinstated for reasons not attributable to the purchaser, the charges thereof would be to the suppliers' account. Payment of local currency portion shall be made in Indian Rupees within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.

SECTION - G: PENALTY CLAUSE

37. Penalty clauses: -

37.1 Penalty (Liquidated Damages) @ **0.5%** of basic price per week will be deducted from Manufacturer's/ Indian Agent's Bill for delay in Delivery & Despatch beyond Delivery dates (as extended by SAMEER-CEM in Purchase Order and Letter of Credit Schedule). Maximum deduction for failing to deliver within SAMEER-CEM approved delivery period & extensions will be limited to **5%** of Ex-works Value (equivalent in Indian Rupees) for non-fulfilment of delivery deadlines and any other contractual obligations as per Purchase Order. Once the maximum is reached, SAMEER-CEM may consider termination of the Contract.

37.2 Delay in Installation beyond contractual deadline will result in forfeiture of Performance Bank Guarantee.

37.3 For any clarification, please mail at purchase.chn.sameer@nic.in

38.4 Corrigenda: Corrigenda, if any, to this tender will be published on our website <http://cem.sameer.gov.in>. The bidders are advised to check our website before submitting the bid.

37.5 PERFORMANCE GUARANTEE

The successful bidder has to give Performance Bank Guarantee (PBG) in the form of Demand Draft / Fixed Deposit Receipt from an Indian Nationalised bank / a counter Letter of Credit (LC) (in case of foreign order) **for 3 % of Purchase Order Value. Performance Bank Guarantee should remain valid for a period of sixty days beyond the warranty period.**

37.6. SAMEER-CEM Clearing Agent in India for imported consignment

M/s.BalmerLawrie& Co Ltd.,
628, Anna Salai, Teynampet,
Chennai-600 018, Tamil Nadu, India
Phone 91-44- 24302463 - 24348104
E-mail: thiyagarajan.j@balmerlawrie.com , baskar.m@balmerlawrie.com
Mobile: 9940015440 / 9551324005

37.7 Delivery& Documents:

Details of Shipping and other Documents to be furnished by the Supplier are

(i) For Goods manufactured within India

Within 24 hours of dispatch, the supplier shall notify SAMEER-CEM the complete details of dispatch and also supply following documents by registered post / speed post and copies thereof by FAX or e-mail.

(ii) For Goods manufactured abroad

- i) Supplier's original invoice giving full details of the goods including quantity, value, and so on;
- ii) Packing list;
- iii) Certificate of country of origin of the goods to be given by the seller or a recognized chamber of commerce or another agency designated by the local Government for this purpose;
- iv) Certificate of pre-dispatch inspection by the purchaser's representative; if applicable
- v) Manufacturer's test certificate and guarantee;
- vi) Certificate of insurance;
- vii) Bill of lading/ airway bill/rail receipt or any other dispatch document, issued by a Government agency (like the Department of Posts) or an agency duly authorized by the concerned Ministry/Department, indicating:
 - a) Name of the vessel/carrier;
 - b) Bill of lading/airway bill;
 - c) Port of loading;
 - d) Date of shipment;
 - e) Port of discharge and expected date of arrival of goods; andAny other document(s) as and if required in terms of the contract.

Note:

1. The nomenclature used for the item description in the invoices(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s)
2. The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses

37.8 Insurance:

- (i) The goods supplied under the contract, shall be fully insured in a freely convertible currency against loss or damage. Insurance liabilities will be as per the basis of delivery point/INCOTERMS in case of imported items, the supplier shall arrange and pay for air/marine insurance making, SAMEER-CEM as beneficiary.

37.9 Pre-bid meeting

To provide a level playing field, pre-bid meeting will be held through online at the time and date mentioned in the tender schedule for clarifying issues/clearing doubts, if any, about the specifications and other allied technical/commercial details of the chamber and its related accessories projected in the bidding document. The date, time of the pre-bid meeting are indicated in the tender schedule. Bidders are requested to submit written queries in advance of the meeting either through e-mail <ramamoorthi.sameer@nic.in, purchase.chn.sameer@nic.in> or registered speed post to the address mentioned above. After the meeting, the techno-commercial requirements may be revised if, considered necessary by way of a formal corrigendum and shared with all the prospective bidders.

TECHNICAL BID

TECHNICAL SPECIFICATIONS

1. Specifications of Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems as per MIL-STD-461F/G.

- The total EMI/EMC automated test systems shall be supplied in one phase. A tentative list of equipment and their broad specifications are given in the following sections.
- However, any other equipment/ component(s)/accessory not explicitly indicated in this requirement but is/are considered essential for the system performance, operation and maintenance shall be indicated and included or excluded in the offer.
- It is the sole responsibility of the vendor to prove the performance specifications of the integrated automated test systems as per the required standards, irrespective of the constituent equipment and their specifications offered or used in it.

Note: The successful vendor need to coordinate with Chamber supplier and electrical department during the installation of the test equipment.

Note: The successful vendor shall provide the automation software to carry out ALL the tests mentioned below as per the international standards.

2. General requirements:

Test and Measurement Equipment required for carrying out the following EMI / EMC tests as per MIL-STD-461F/G need to be provided.

Sl.no	Test as per Mil-Std-461F/G	Description
Conducted Emission (CE)		
1	CE101	Audio Frequency Currents, Power leads, 25 Hz to 10 kHz
2	CE102	Radio Frequency Potentials, Power leads, 10 kHz to 10 MHz
3	CE106	Antenna Port, 10 kHz to 40 GHz
Conducted Susceptibility (CS)		
4	CS103	Antenna port, Inter-modulation, 15 kHz to 10 GHz
5	CS104	Antenna port, Rejection of Undesired signals, 25 Hz to 20 GHz
6	CS105	Antenna port, Cross-modulation, 25 Hz to 20 GHz
Radiated Emission (RE)		
7	RE 101	Magnetic field, 25 Hz to 100 kHz
8	RE 102	Electric field, 10 kHz to 18 GHz
9	RE 103	Antenna Spurious & Harmonic outputs, 10kHz to 40GHz

3. Detailed technical requirements:

A. Test Rack 1:

- 1) CE101, Conducted Emissions, Power Leads, 25 Hz to 10 kHz
- 2) CE102, Conducted Emissions, Power Leads, 10 kHz to 10 MHz
- 3) RE 101 Radiated Emissions, Magnetic Field, 25 Hz to 100 kHz
- 4) RE 102 Radiated Emissions, Electric Field, 10 kHz to 18 GHz

S.No.	Parameters	Specifications	Qty	Remarks
	General features: <ul style="list-style-type: none"> • It should be 19" rack with fans and internal cabling. • Switching unit for automatic switching of signal paths. This is important to eliminate change of connectors manually. Switching unit to cover entire frequency range up to 18GHz. These switching paths should be operated through system controller. • A suitable power distribution unit for power line to eliminate conducted noise. 			
	Basic CE101, CE102, RE101 and RE102 Test Rack instruments are as follows:			
A.1	Measurement Receiver:		1No.	
	Characteristic	Fully Compliant to latest CISPR 16-1-1 Edition 4 and MIL-STD-461F/G. Single unit with built in pre-selector and preamplifier. Receiver should have in-built user friendly and fully automatic total internal alignment/adjustment facility without additional hardware. It has to automate the test setups as per Mil-Std-461 F/G.		
	Mode	Receiver and spectrum analyser modes.		
	Scan	Frequency domain and time domain.		
	Frequency Range	20Hz to 40GHz		
	Frequency Resolution	0.01Hz		
	Frequency reference & Aging per year	$\leq 1 \times 10^{-7}$ /year		
	Detectors(Receiver mode)	Peak, CISPR-AV, RMS-Avg, Quasi-Peak.		
	IF and Resolution Bandwidths	-6dB EMIBandwidth: Mil-Std-461: 10 Hz, 100 Hz, 1 kHz, 10kHz, 100 kHz, 1 MHz. CISPR: 200Hz, 9kHz, 120kHz, 1MHz. -3 dB Bandwidth: 10Hz to 10MHz		
	Video Bandwidth	1Hz to 10MHz		
	Max. input Level: DC Voltage :	RF input, AC coupled 50V RF input, DC coupled 0V		

CW RF power (Average power):	RF attenuation ≥ 10 dB, with preselection off and preamplifier off: 30dBm		
Built in Preamplifier	100kHz to 40GHz with min 20dB Gain		
Built in Pre-selector	Should be in built in the receiver up to 40GHz, should be specified at -6dB bandwidth from 20Hz -40GHz		
Input Attenuator	Setting Range 0 to 70dB Switching uncertainty ≤ 0.2 dB		
1dB compression of I/p Mixer (with pre-selector off, preamplifier off and LNA off)	+ 7 dBm throughout the Frequency		
Third Order Intermodulation Distortion (with two tone of -15dBm)	pre-selector off/ Preamplifier off +17dBm (typical), 10MHz to 3.6GHz +20dBm (typical), 3.6GHz to 8GHz +10dBm (typical), 8GHz to 40GHz		
Units of Levels Axis	Logarithmic Level Display: dBm, dBmV, dB μ V, dB μ A, dB μ V/m, dB μ A/m, dBpW, dBpT etc.		
Interface	USB ports, IEEE488.2, LAN		
Memory	Hard disk, internal		
Trigger	Free run, video, external		
Power supply	230 V +/-10% AC, 50 Hz +/-3%		
Software	EMI Measurement Software For CE101, CE102, CE106, RE101, RE102 and RE103 compliance with Mil-Std-461F/G		
GUI	Keyboard, Mouse & Printer for report generation		
Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
Documents to be	Hard and Soft copies of the		

	supplied	operational manuals to be supplied.		
	DC blocks	Single/multiple DC blocks shall be provided from 10MHz to 40 GHz with connectors suitable to RF input ports of receiver.		
	RF fuse holder	Frequency range: DC-1GHz		
	Hard carrying case	Shall be provided		
A.2	RF Switching Unit		01 No.	
	Frequency Range	DC- 18GHz		
	Relay type	6x SPDT, Coaxial relay		
	Connector type	SMA or N Type		
	VSWR	≤ 1.9		
	Insertion Loss	≤ 1.0 dB		
	Isolation	50 dB, typical		
	Remote control:	LAN		
	Adaptors	19 inch rack adaptors		
	Max Power Input	3W (at 18GHz, increases with reducing Frequency)		
A.3	Low Frequency Signal Generator		01 No.	
	Frequency Range	10μHz to 25MHz		
	Number of channels	1		
	Impedance	50 Ohm		
	Power	10mVpp - 10Vpp (into 50ohms)		
	Harmonics	≤ -40dBc		
	Spurious (non-harmonics)	≤ -70dBc at 1MHz		
	Interface	USB/ IEEE-488.2(GPIB)/ LAN		
	Waveforms	Sine, Square, Ramp, Triangle, Pulse, Arbitrary		
	Modulation	AM, FM, PM, FSK, pulse modulation		
	Power Requirement	230 V +/-10% AC, 50 Hz +/-3%		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
A.4	Synthesized Signal Generator		01 No.	
	Frequency Range	100kHz to 40GHz		
	Frequency Resolution	0.001Hz		

Reference oscillator aging rate	$\leq 1 \times 10^{-7}$ per year		
Level	-120dBm to +10dBm or better		
Level Resolution	0.01dB		
Sweep	Type: Step and list sweep Frequency range: full band Trigger: Auto/free run, external, remote control		
SSB Phase Noise	-95dBc or better at 10GHz @ 20kHz offset		
Harmonics	-30 dBc or better throughout the band		
Non harmonics	-50dBc or better throughout the band with 10kHz offset and 10dBm power		
Modulation	AM, FM, PM, Pulse modulation (on/off ratio 40dB min). Built-in modulation source shall be available for all modulations.		
Interface	USB/ IEEE-488/ LAN		
Power Requirement	230 V +/-10% AC, 50 Hz +/-3%		
Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		

Accessories/Instruments for CE101

A.5	Precision Resistor		01 No.	
	Value	1.0 $\Omega \pm 1\%$		
	Power Rating	25W		
A.6	Current Probe and calibration fixture		01 Set	
	Frequency range	20Hz-100MHz		
	Clamp inner diameter	3.2 cm		
	Max. Current (DC to 400Hz)	200 Amp		
	RF Connector	N Female		
	Calibration fixture	Suitable fixture shall be provided to calibrate.		
	Calibration	Accredited calibration certificate and report containing calibration data for		

		all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
A.7	Oscilloscope		01 No.	
	General	Automatic measurement, auto-set feature, Cursor measurements & waveform setup		
	3dB Bandwidth	1GHz		
	No. Of Channels	2		
	Real Time sample Rate(Max.)	5 GSa/sec half channels 2.5GSa/sec all channels		
	Input Impedance	50ohm, 1Mohm (selectable)		
	Coupling	AC, DC		
	Time base range	0.5ns/div to 50sec/div		
	Display	Capacitive touch enabled colour LCD or better		
	Interface	LAN/ USB		
	Data export	Min. 2 USB ports		
	Associated Probes	100:1 x1No., 10: 1x1No., 1:1x2Nos		
	Power supply	230 V +/-10% AC,50 Hz +/-3%		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
A.8	Line Impedance Stabilization Network (LISN)		08 Nos.	
	RF output Socket	50Ohm, BNC/N		
	Frequency Range	10kHz -100MHz		
	Impedance Requirements of Mil-std 461F/G	$50\mu\text{H} + 5\Omega \parallel 50\Omega$		
	Maximum Input Current rating	70 A		
	Supported Power System	DC, 50/60Hz and 400Hz		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an		

		ISO/IEC 17025 Accredited calibration Laboratory.		
	Shall fulfil the requirements of Mil-Std-461F/G			
A.9	RF termination		08 Nos.	
	Frequency Range	DC- 1GHz		
	Impedance	50 Ohm		
	VSWR	≤ 1.2		
	Power rating	2W, typical		
	Connector	Suitable to terminate LISN RF port		
A.10	Provide additional accessories/ cables, adapters as required for CE101		1 Set	
Accessories/Instruments for CE102				
A.11	Bi Directional Attenuators		01 No.	
	Frequency Range	DC- 2GHz		
	Attenuation	20dB		
	Impedance	50 Ohm		
	VSWR	≤ 1.2		
	Power rating	5W		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory .		
A.12	Provide additional accessories/ cables, adaptors as required for CE102 test		1 Set	
Accessories/Instruments for RE101				
A.13	Magnetic Pick-up coil		1 No.	
	Frequency Range	20Hz -100kHz		
	Input Impedance	50 Ohm		
	Diameter	13.3cm		
	No. of turns	36		
	Wire	7-41 Litz wire(7 strand, No.41 AWG)		
	DC Resistance	Between 5 and 10 Ohm		
	Shielding	Electrostatic		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters (antenna factor) as per SAE ARP958 from an ISO/IEC 17025 Accredited		

		calibration Laboratory.		
A.14	Provide additional accessories/ cables, adaptors as required for RE101 test		1 Set	
Accessories/Instruments for RE102 (10kHz to 18GHz)				
	Antennas			
A.15	Active Rod Antenna		01 No.	
	Frequency Range	9kHz - 30MHz		
	Polarization	Linear		
	Input Impedance	50 Ohm		
	Type	Fixed Length Rod for repeatability as per Mil-Std-461E/F/G		
	Square counter poise	At least 60cm on a side		
	Rod Height	41 Inches (1.041 m)		
	RF Connector	BNC /N female		
	Power Supply	Built in rechargeable Battery		
	Battery Charger	Suitable Battery Charger compatible with 230 V, 50 Hz		
	RF cable with ferrite and grounding kit	Shall be provided as per MIL-STD-461F/G		
	Calibration adapter	Suitable to calibrate antenna as per SAEARP958		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters (antenna factor at 1m distance) as per SAEARP958 from an ISO/IEC 17025 Accredited calibration Laboratory.		
	Preamplifier	Antenna base shall have built-in preamplifier and matching unit		
	Antenna mount that can be used to fulfil antenna position in MIL-STD-461E/F/G			
A.16	Bi conical antenna		01 No.	
	Frequency Range	20MHz - 300MHz		
	Polarization	Linear		
	Input Impedance	50 Ohm		
	VSWR	2.5, average		
	Power Handling	Max. 75W CW		
	RF Connector	N female		
	Length	137cm tip to tip, typical		
	Calibration	Accredited calibration certificate and		

		report containing calibration data for all important parameters (antenna factor at 1m distance) as per SAEARP958 from an ISO/IEC 17025 Accredited calibration Laboratory.		
A.17	Double ridge Horn Antenna -1		01 No.	
	Frequency Range	200MHz - 2GHz		
	Polarization	Linear		
	Input Impedance	50 Ohm		
	Opening	69cmx94.5cm, typical		
	Input Power	800W (CW) @ 200MHz		
	VSWR	< 1.7 average		
	RF Connector	N female		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters (antenna factor at 1m distance) as per SAEARP958 from an ISO/IEC 17025 Accredited calibration Laboratory.		
A.18	Double ridge Horn Antenna -2		01 No.	
	Frequency Range	1GHz - 18GHz		
	Polarization	Linear		
	Input Impedance	50 Ohm		
	Opening	24.2cmx13.6cm, typical		
	Input Power	300W (CW)		
	VSWR	<2, average		
	RF Connector	N female		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters (antenna factor at 1m distance) as per SAEARP958 from an ISO/IEC 17025 Accredited calibration Laboratory.		
A.19	Tripod		1 set	
	Tripods with suitable mounting adapters for each EMI antenna specified above shall be provided.			
A.20	Antenna Mast		1set.	
	Antenna Mast type	Automatic & remote controlled		
	Antenna scan height	a)1 to 4.0m b)Antenna height shall be settable at any height and the		

		information shall be available in the display		
	Polarization	Automatic polarization change shall be possible		
	Weight handling	Antenna mast shall be Capable of handling weight of minimum 12kg		
	Driver configuration	a) Motor, digital drive, electrical networks etc. shall be installed in a high performance shielded box to suppress EMI generated by the electronics and also to protect this system against the fields generated in the chamber. It shall meet the CISPR 22 Class B EMC standard. b) The driver of the mast shall be upgradable and compatible with the Turntable and various test instruments.		
	Accuracy	scan height $\pm 10\text{mm}$		
	Mounting adapters	Suitable to antennas mentioned in A.15, A.16, A.17, A.18, B.17, and B.18		
	Interface	Mast shall be linked to the GPIB controller through fiber optics.		
	AC input supply	230 V +/-10% AC, 50 Hz +/-3%		
A.21	External Preamplifiers		1 set	
	Frequency Range	10kHz to 18 GHz		
	Gain	35dB		
	Noise Figure	< 3dB		
	VSWR	< 2.5		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
A.22	Stub radiator		1No.	
	Frequency range	30MHz-18GHz		
A.23	Provide additional accessories/ cables, adaptors as required for RE102 test		1 Set	
A.24	Measurement Software		1No.	
	Measurement Software (For CE101, CE102, RE101, RE102)			

	It should be Windows based Menu driven, user friendly interactive and selectable by functional keys.		
	Supports GUI environment for instrument and system configuration.		
	Software should provide for selection of the following menu driven features:		
	Verification/calibration of the EMI receiver.		
	Enable user to compare results graphically.		
	Building user's own limit levels.		
	Save the measurement data for later use in internal / external memory.		
	Correction of measured data for transducer factor, cable loss and internal correction.		
	Rescan the selected frequency band of signals, if desired.		
	Software should preferably support IEEE 488, RS-232, USB and LAN interfaces for instrument control.		
	Generating test reports in graphical and tabulated data format, giving list of stimulus, emissions crossing the limit levels etc.		
	Context sensitive online help facility.		
	Ability to export reports to MS-Office based documents or PDF or HTML format.		
	Database for limit lines of MIL, EN, CISPR, IEC, etc., standards.		
	EMI Evaluation and calculation tool for diagnostic purpose, such as Peak search, acceptance analysis, sub range maxima, sub range minima, maxima limitation, keep frequencies, merge result, add result, exclude range, exclude ranges		
A.25	System controller	1 No.	
	CPU	Intel Core i7, 3.4 GHz, 8 MB Cache or better	
	Chipset	Intel Q8 series or latest	
	Bus Architecture	3 PCI (PCI/ PCI Express) or more	
	Memory	8 GB DDR4 RAM with 32 GB Expandability	

Hard Disk Drive	1TB 7200 rpm or Higher		
Monitor	21 inch larger LED/ TFT Digital Color Monitor TCO-05 certified		
Keyboard	104 keys		
Mouse	Optical with USB interface		
Bays	2 Nos. or above		
Ports	6 USB Ports or more (at least 2 USB with 3.0), audio ports for microphone and headphone in front. 1 RS 232 , RJ - 45		
DVD ROM Drive	8X or better DVD ROM Drive		
Networking facility	-10/100/1000 on board integrated Network Port with remote booting facility remote system installation, remote wake up, TPM enabled 1.2 chip using any standard management software -Bluetooth -WIFI		
Operating System	Windows 10 Professional preloaded, as specified, with Media and Documentation and Certificate of Authenticity		
OS Certifications	Windows 10 OS certification		
Power Management	Screen Blanking, Hard Disk and System Idle Mode in		

		Power On, Set up Password, Power supply SMPS Surge protected		
	Preloaded Software	MS-office, Norton or McAfee or eTrust or e-Scan or Kaspersky or Trend Micro or PC Tool or Quick heal Antivirus (Latest Version) with 1 year License		
	Compatible GPIB / IEEE 488.2 communication s/w with requisite h/w; Fibre optics Interface card :NI 480 Original CD/DVD pack with License for all above S/W and Drivers)			
	Ports for user end use other than those already used for system:			
	Application Software , Updated Antivirus, Other applications			
	Connectors/ports required for automated testing of CE101, CE102, RE101 and RE102 tests			
	Fiber Optic Extender			
A.26	Provide additional accessories/ Cables or adapters as required for CE101, CE102, RE101 and RE102 tests		1 Set	
A.27	Test Rack Subsystem - Test rack with castor wheels, Power distribution system, Heat dissipation unit and all necessary cables		1 set	

B. Test Rack2:

- 1) CE106, Conducted Emissions, Antenna Terminal, 10 kHz to 40GHz
- 2) RE 103, Radiated Emissions, Antenna Spurious and Harmonic Outputs, 10kHz to 40GHz

S.No.	Parameters	Specifications	Qty	Remarks
	General features: <ul style="list-style-type: none"> • It should be 19" rack with fans and internal cabling. • Switching unit for automatic switching of signal paths. This is important to eliminate change of connectors manually. Switching unit to cover entire frequency range up to 40GHz. These switching paths should be operated through system controller. • A suitable power distribution unit with EMI power line filter for power line to eliminate conducted noise. 			
Basic CE106 & RE103 Test Rack instruments are as follows:				
B.1	Measurement Receiver		-	The EMI Receiver in Rack1 will be used
B.2	RF Switching Unit		01 No.	
	Frequency Range	DC- 40GHz		
	Relay type	6x SPDT, Coaxial relay		
	Connector type	SMA 2.9 (K-type female)		
	VSWR	≤ 1.9		
	Insertion Loss	≤ 1.0 dB		
	Isolation	50 dB		
	Remote control	USB/IEEE 488-2(GPIB)/LAN		
	Adaptors	19 inch rack adaptors		
	Max Power Input	3W (at 40GHz, increases with reducing Frequency)		
B.3	Low Frequency Signal Generator		-	The equipment in Rack1 will be used
B.4	Synthesized Signal Generator		-	The equipment in Rack1 will be used
B.5	Line Impedance Stabilization Network (LISN)		-	The LISNs in Rack1 will be used
B.6	Tuneable Band Rejection Filter Network set		1 set	
	Frequency Range	10kHz-20GHz (in Various Band)		
	Rejection	50dB (minimum)		

	Connector	N Female		
B.7	Bi Directional Attenuators		2 in each attenuation level	
	Frequency	DC-2.4GHz		
	Attenuation	10dB,40 dB		
	Impedance	50 Ohm		
	Average Power	300W		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
B.8	Bi Directional Attenuators		2 in each attenuation level	
	Frequency	DC-18GHz		
	Attenuation	10, 20, 30, 40 dB		
	Impedance	50 Ohm		
	Average Power	150W		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
B.9	Bi Directional Attenuators		2 in each attenuation level	
	Frequency	DC-40GHz		
	Attenuation	10, 20, 30 dB		
	Impedance	50 Ohm		
	Average Power	20W		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
B.10	High Power Bi Directional Attenuators		2 Nos	
	Frequency	DC-500MHz		
	Attenuation	30dB		
	Impedance	50 Ohm		
	Average Power	2000W		

	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
B.11	Dual Directional Couplers		1 set covering full frequency range and power rating.	
	Frequency Range	10 kHz - 40 GHz		
	Impedance	50 Ohm		
	Insertion loss	0.1dB - 0.3dB		
	Coupling factors	40 -70 dB		
	Power rating	10kHz-250MHz : 3,500 W Power rating 250 -1000 MHz : 3000 W 1.0 - 2.5 GHz : 1500 W 2.5 - 7.5 GHz : 2800 W 7.5 - 18 GHz : 3000 W 18 - 26.5 GHz : 300 W 26.5 - 40 GHz : 200 W		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
	Low insertion loss and VSWR (main line) are preferred. High coupling factor and directivity are preferred.			
B.12	Dummy Loads		1 set covering full frequency range.	
	Frequency	DC to 40GHz		
	Impedance	50ohm		
	Power Handling	5kW		
	Antennas			
B.13	Active Rod Antenna		-	Antenna in Rack1 will be used
B.14	Bi conical antenna (20MHz-300MHz)		-	Antenna in Rack1 will be

			used
B.15	Double ridge Horn Antenna -1(200MHz-2GHz)	-	Antenna in Rack1 will be used
B.16	Double ridge Horn Antenna -2 (1-18GHz)	-	Antenna in Rack1 will be used
B.17	Double ridge Horn Antenna -3		01 No.
	Frequency Range	18GHz - 26.5GHz	
	Polarization	Linear	
	Input Impedance	50 Ohm	
	Input Power	50W (CW)	
	VSWR	1.5	
	RF Connector	N/K female	
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters (antenna factor at 1m distance) as per SAEARP958 from an ISO/IEC 17025 Accredited calibration Laboratory.	
B.18	Double ridge Horn Antenna -4		01 No.
	Frequency Range	26.5 to 40GHz	
	Polarization	Linear	
	Input Impedance	50 Ohm	
	Input Power	20W (CW)	
	VSWR	1.5	
	RF Connector	K-type female	
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters (antenna factor at 1m distance) as per SAEARP958 from an ISO/IEC 17025 Accredited calibration Laboratory.	
B.19	Tripods		1 set
	Tripods with suitable mounting adapters for antennas as mentioned in B.17 and B.18 shall be provided.		
B.20	External Preamplifiers (10kHz to 18GHz)	-	Equipment in

			Rack1 will be used
B.21	External Preamplifiers(18GHz to 40GHz)		1 set
	Frequency Range	18GHz to 40GHz	
	Gain	35dB	
	Noise Figure	< 3dB	
	VSWR	< 2.5	
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.	
B.22	Measurement Software(for CE106 and RE103)		1No.
	It should be Windows based Menu driven, user friendly interactive and selectable by functional keys.		
	Supports GUI environment for instrument and system configuration.		
	Software should provide for selection of the following menu driven features:		
	Verification/calibration of the EMI receiver.		
	Enable user to compare results graphically.		
	Building user's own limit levels.		
	Save the measurement data for later use in internal / external memory.		
	Correction of measured data for transducer factor, cable loss and internal correction.		
	Rescan the selected frequency band of signals, if desired.		
	Software should preferably support IEEE 488, RS-232, USB and LAN interfaces for instrument control.		
	Generating test reports in graphical and tabulated data format, giving list of stimulus, emissions crossing the limit levels etc.		
	Context sensitive online help facility.		
	Ability to export reports to MS-Office based documents or PDF or HTML format.		
	Database for limit lines of MIL, EN, CISPR, IEC, etc., standards.		
Automation of CE106/RE103Tests: The fundamental should be determined either automatically and the			

	limit lines automatically generated as per MIL461E/F/G requirements		
	EMI Evaluation and calculation tool for diagnostic purpose , such as Peak search, acceptance analysis, sub range maxima, sub range minima, maxima limitation, keep frequencies, merge result, add result, exclude range, exclude ranges		
B.23	System controller	1 Nos	
	CPU	Intel Core i7, 3.4 GHz, 8 MB Cache or better	
	Chipset	Intel Q8 series or latest	
	Bus Architecture	3 PCI (PCI/ PCI Express) or more	
	Memory	8 GB DDR4 RAM with 32 GB Expandability	
	Hard Disk Drive	1TB 7200 rpm or Higher	
	Monitor	21 inch larger LED/ TFT Digital Color Monitor TCO- 05 certified	
	Keyboard	104 keys	
	Mouse	Optical with USB interface	
	Bays	2 Nos. or above	
	Ports	6 USB Ports or more (at least 2 USB with 3.0), audio ports for microphone and headphone in front. 1 RS 232 , RJ - 45	
	DVD ROM Drive	8X or better DVD ROM Drive	

Networking facility	<p>-10/100/1000 on board integrated Network Port with remote booting facility remote system installation, remote wake up, TPM enabled 1.2 chip using any standard management software</p> <p>-Bluetooth</p> <p>-WIFI</p>		
Operating System	Windows 10 Professional preloaded, as specified, with Media and Documentation and Certificate of Authenticity		
OS Certifications	Windows 10 OS certification		
Power Management	Screen Blanking, Hard Disk and System Idle Mode in Power On, Set up Password, Power supply SMPS Surge protected		
Preloaded Software	MS-office, Norton or McAfee or eTrust or Kaspersky or e-Scan or Fore front or Trend Micro or PC Tool or Quick heal Antivirus (Latest Version) with 1 year License.		
Compatible GPIB / IEEE 488.2 communication s/w			

	with requisite h/w; Fibre optics Interface card :NI 480 Original CD/DVD pack with License for all above S/W and Drivers)		
	Ports for user end use other than those already used for system		
	Application Software , Updated Antivirus, Other applications		
	Connectors/ports required for automated testing of CE106 and RE103 tests		
	Fiber Optic Extender		
B.24	Provide additional accessories/ Cables, adapters as required for CE106 and RE103 tests	1 Set	
B.25	Test Rack Subsystem – Test rack with castor wheels, Power distribution system, Heat dissipation unit and necessary cables	1 Set	

C. Test Rack 3:

1. CS103, Conducted Susceptibility, Antenna Port, Inter modulation, 15 kHz to 10 GHz
2. CS104, Conducted Susceptibility, Antenna Port, Rejection of Undesired Signal, 30Hz to 20GHz
3. CS105, Conducted Susceptibility, Antenna Port, Cross-Modulation, 30 Hz to 20GHz

S.No.	Parameters	Specifications	Qty	Remarks
C.1	LF signal Generator		2 Nos	
	Frequency Range	10 μ Hz to 25MHz		
	Number of channels	1		
	Impedance	50 Ohm		
	Power	10mVpp – 10Vpp (into 50ohms)		
	Harmonics	\leq -40dBc		
	Spurious (non-harmonics)	\leq -70dBc at 1MHz		
	Remote control	USB/ IEEE-488.2(GPIB)/ LAN		
Waveforms	Sine, Square, Ramp, Triangle, Pulse, Arbitrary			

	Modulation	AM, FM, PM, FSK, pulse modulation		
	Power Requirement	230 V +/-10% AC, 50 Hz +/- 3%		
	Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
C.2	Microwave Signal Generator		2 No.	
	Frequency Range	100kHz to 40GHz		
	Frequency Resolution	0.001Hz		
	Reference oscillator aging rate	$\leq 1 \times 10^{-7}$ per year		
	Level	-120dBm to +10dBm or better		
	Level Resolution	0.01dB		
	Sweep	Type: Step and list sweep Frequency range: full band Trigger: Auto/free run, external, remote control		
	SSB Phase Noise	-95dBc or better at 10GHz @ 20kHz offset		
	Harmonics	-30 dBc or better throughout the band		
	Non harmonics	-50dBc or better throughout the band with 10kHz offset and 10dBm power		
	Modulation	AM, FM, PM, Pulse modulation (on/off ratio 40dB min). Built-in modulation source shall be available for all modulations.		
	Interface	USB/ IEEE-488/ LAN		
	Power Requirement	230 V +/-10% AC, 50 Hz +/-3%		
	Calibration	Accredited calibration		

		certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
C.3	Power Divider/ Splitter		2 Nos	
	Frequency Range	DC to 26.5 GHz		
	Input Power	0.5 W CW (Min.)		
	Insertion Loss	7.5dB, typical		
	Impedance	50 Ohm		
	VSWR	1.3 (Max.)		
	Connectors:	K-type (2.92mm) Female		
C.4	Step Attenuator		1 Set	
	Frequency Range:	DC - 18GHz		
	Attenuation Range	0 - 115dB		
	Attenuation Steps	5dB		
	Input Power	1 W (Average)		
	Software Control	LAN/GPIB Control		
Calibration	Calibration report containing calibration data for all important parameters as per manufacturer specification.			
C.5	Low pass filter set		1 set	
	Impedance	50 Ohm		
	Ripple in pass Band	< 0.5dB		
	Insertion loss at 3 times of the cut off frequency	>100 dB		
	No. of filters	Shall meet requirements of CS103, 104,105 tests as per MIL - STD-461 F/G		
C.6	EMI Receiver		1 No.	
	Characteristic	Fully Compliant to latest CISPR 16-1-1 Edition 4 and		

	MIL-STD-461F/G. Single unit with built in pre-selector and preamplifier. Receiver should have in-built user friendly and fully automatic total internal alignment/ adjustment facility without additional hardware. It has to automate the test setups as per Mil-Std-461 F/G.		
Mode	Receiver and spectrum analyser modes.		
Scan	Frequency domain and time domain.		
Frequency Range	20Hz to 40GHz		
Frequency Resolution	0.01Hz		
Frequency reference & Aging per year	$\leq 1 \times 10^{-7}$ /year		
Detectors(Receiver mode)	Peak, CISPR-AV, RMS-Avg, Quasi-Peak.		
IF and Resolution Bandwidths	-6dB EMI Bandwidth: Mil-Std-461: 10 Hz, 100 Hz, 1 kHz, 10kHz, 100 kHz, 1 MHz. CISPR: 200Hz, 9kHz, 120kHz, 1 MHz. -3 dB Bandwidth: 10Hz to 10MHz		
Video Bandwidth	1Hz to 10MHz		
Max. input Level: DC Voltage : CW RF power (Average power):	RF input, AC coupled 50V RF input, DC coupled 0V RF attenuation ≥ 10 dB,with preselection off and preamplifier off: 30dBm		
Built in Preamplifier	100kHz to 40GHz with min 20dB Gain		
Built in Pre-selector	Should be in built in the receiver up to 40GHz, should be specified at -6dB bandwidth from 20Hz -40GHz		
Input Attenuator	Setting Range 0 to 70dB		

	Switching uncertainty ≤ 0.2 dB		
1dB compression of I/p Mixer (with pre-selector off, preamplifier off and LNA off)	+ 7 dBm throughout the Frequency		
Third Order Inter modulation Distortion (with two tone of -15dBm)	pre-selector off/ Preamplifier off +17dBm (typical), 10MHz to 3.6GHz +20dBm (typical), 3.6GHz to 8GHz +10dBm (typical), 8GHz to 40GHz		
Units of Levels Axis	Logarithmic Level Display: dBm, dBmV, dB μ V, dB μ A, dB μ V/m, dB μ A/m, dBpW, dBpT etc.		
Interface	USB ports/ IEEE488.2/ LAN		
Memory	Hard disk, internal		
Trigger	Free run, video, external		
Power supply	230 V +/-10% AC, 50 Hz +/-3%		
Software	EMI Measurement Software For CS103, CS104 and CS105 compliance with Mil-Std-461F/G		
GUI	Keyboard, Mouse & Printer for report generation		
Calibration	Accredited calibration certificate and report containing calibration data for all important parameters as per manufacturer specification from an ISO/IEC 17025 Accredited calibration Laboratory.		
Documents to be supplied	Hard and Soft copies of the operational and service manuals to be supplied		
DC blocks	Single/multiple DC blocks		

		shall be provided from 10MHz to 40 GHz with connectors suitable to RF input ports of receiver.		
	RF fuse holder	Frequency range: DC-1GHz		
	Hard carrying case	Shall be provided		
C.7	Measurement Software(for CS103, CS104 and CS105 tests)		1 No.	
	It should be Windows based Menu driven, user friendly interactive and selectable by functional keys.			
	Modular and flexible enough to allow the user to adapt the system to new Regulations I Standards or extend or modify the hardware due to new test requirements.			
	User's selection of MIL or other Regulation test limits or DUT susceptibility threshold levels.			
	User's option to modify I debug I update the program			
	software program should comply with any make of USB / RS 232 / IEEE 488 / LAN compatible equipment,			
	Ability for harmonics monitoring of power amplifier and test system			
	Enable the system to calibrate the test equipment			
	Generating test reports in graphical and tabulated data format.			
	Ability to export reports to Doc, RTF, PDF or HTML			
	Measurements may be stopped during runtime to evaluate signals or repeat individual measurements while working in the semi - automatic mode. After evaluation the measuring routine can be resumed.			
	Graphical representation of the results on computer screen.			
	Download the results data in internal I external memory, Context sensitive on line help facility.			
	Automation for CS 103,104,105 test by supporting/controlling two signal generators for generating the interfering signal and a third signal generator for the wanted signal.			
C.8	System controller		1Set	

CPU	Intel Core i7, 3.4 GHz, 8 MB Cache or better		
Chipset	Intel Q8 series or latest		
Bus Architecture	3 PCI (PCI/ PCI Express) or more		
Memory	8 GB DDR4 RAM with 32 GB Expandability		
Hard Disk Drive	1TB 7200 rpm or Higher		
Monitor	21 inch larger LED/ TFT Digital Color Monitor TCO- 05 certified		
Keyboard	104 keys		
Mouse	Optical with USB interface		
Bays	2 Nos. or above		
Ports	6 USB Ports or more (at least 2 USB with 3.0), audio ports for microphone and headphone in front. 1 RS 232 , RJ - 45		
DVD ROM Drive	8X or better DVD ROM Drive		
Networking facility	-10/100/1000 on board integrated Network Port with remote booting facility remote system installation, remote wake up, TPM enabled 1.2 chip using any standard management software -Bluetooth -WIFI		

	Operating System	Windows 10 Professional preloaded, as specified, with Media and Documentation and Certificate of Authenticity		
	OS Certifications	Windows 10 OS certification		
	Power Management	Screen Blanking, Hard Disk and System Idle Mode in Power On, Set up Password, Power supply SMPS Surge protected		
	Preloaded Software	MS-Office, Norton or McAfee or eTrust or Kaspersky or e-Scan or Fore front or Trend Micro or PC Tool or Quick heal Antivirus (Latest Version) with 1 year License		
	Compatible GPIB / IEEE 488.2 communication s/w with requisite h/w; Fibre optics Interface card :NI 480 Original CD/DVD pack with License for all above S/W and Drivers)			
	Ports for user end use other than those already used for system:			
	Application Software , Updated Antivirus, Other applications			
	Connectors/ports required for automated testing of CS103, CS104 and CS105 tests			
	Fiber Optic Extender			
C.9	Printer		1 No.	
	Type	Laser printer		
	Color	Black and white		

	Functions	Print, scan and copy		
	Print size	A4		
	Compatible operating system	Windows 10		
	Interface	USB2.0 or better		
	Power supply	230 V +/-10% AC, 50 Hz +/-3%		
C.10	Accessories, cables, adapters, connectors, and terminations necessary to conduct CS103, CS104 and CS105 tests		1Set	
C.11	Test Rack Subsystem - Test rack with castor wheels, Power distribution system, Heat dissipation unit and all necessary cables		1Set	

Technical Bid shall include the following

- (i) Bid (EMD) security declaration form
- (ii) Tender fee as specified in the invitation to bids
- (iii) Service Support Details Form
- (iv) Deviation Statement Form
- (v) Technical Specification Compliance Statement Form
- (vi) Manufacturer's Authorization Letter
- (vii) Bidder's Performance Statement Form
- (viii) Equipment Data sheet/ Technical specification.
- (ix) Tender Acceptance Letter-Annex-VII (*duly signed by the bidder with company seal*).
- (x) Bidders Eligibility Certificate-Annex-VIII (*duly signed by the bidder with company seal*)

I/We certify that all the terms and conditions of the tender documents are acceptable to us.

Signature of the authorized person

Date:

Place:

Name:

Designation:

Company Seal:

Cover-II (Price)

Format for Price Bid (Bidder is required to submit the price bid in the given format on their LETTER HEAD

ITEM	DESCRIPTION	QUANTITY	PRICE IN INR	PRICE IN (Name of the currency)
I	Conducted emission (CE101, CE102, CE106), Radiated emission (RE101, RE102, RE103) and Conducted susceptibility (CS103, CS104, CS105) Automated Test Systems as per MIL-STD-461F/G.			
II				
III				
IV				
V	OTHER CHARGES			
1.	TAXES AND DUTIES APPLICABLE ON ITEMS			
	I			
	II			
	III			
	IV			
2.	FREIGHT from bidder's manufacturing facility to SAMEER, Chennai, India			
3.	INSURANCE			
4.	OCTROI			
5.	ADDITIONAL CHARGES IF ANY			
		TOTAL		
	TOTAL AMOUNT (IN WORDS)			

Signature of the Manufacturer/authorized agent

Date :

Name :

Place:

Company Seal:

ANNEXURE -I

MANUFACTURER'S AUTHORIZATION LETTER

Dated-----

To
The Programme Director
SAMEER-Centre for Electromagnetics
CIT Campus, 2nd Cross Road,
Taramani
Chennai - 600 113
INDIA.

Dear Sir:

We _____ who are established and reputed manufacturers of having factories at _____ (*address of factory*) do hereby authorize M/s. _____ (*Name and address of Agent*) to submit a bid, negotiate and receive the order from you against your tender No. TENDER NO. S- S-CEM/OTE/EMCD/1080-LE/102-06/21-22/11739, for the **Supply, installation, Commissioning, Performance Testing and Validation of Conducted & Radiated Emission and Conducted Susceptibility test systems**. No company or firm or individual other than M/s _____ is authorized to bid and conclude the contract in regard to this business.

We hereby extend our full guarantee and warranty as per the requirement of SAMEER-CEM mentioned in the tender document for the goods and services offered by the firm.

Yours faithfully,

(Name)

(Name of manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the Bidder in its techno-commercial un priced

ANNEXURE -II

BIDDER'S PERFORMANCE STATEMENT FORM

(For a Period of Last 5 Years)

Order placed by (full address of purchaser)	Description and quantity of ordered similar equipment	Order No and Date	Price	Date of Completion of delivery as per Contract/ Actual	Remarks indicating reasons for late delivery, if any	Has the equipment been installed satisfactory ?	Contact Person along with Tel.No., Fax No. & e-mail address

Name of the bidder

Signature& Seal

Date:

Place:

ANNEXURE-III

SERVICE SUPPORT DETAILS FORM

S.N.	Nature of training imparted	List of similar type equipment's services in the past 3 years or as per Tender Enquiry/Document	Address, Telephone Nos., Fax and email address of the firm located in India	Value of minimum stock of consumable spares held at all times

Signature and Seal of the manufacturer/Bidder

Place:

Date:

ANNEXURE-IV

DEVIATION STATEMENT FORM

The following are the particulars of deviations from the requirements of the tender document and specifications:

CLAUSE	DEVIATION	REMARKS (INCLUDING JUSTIFICATION)

Signature and Seal of the Manufacturer/Bidder

Place :

Date :

NOTE:

Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviation"

ANNEXURE-V

TECHNICAL SPECIFICATION COMPLIANCE STATEMENT FORM

An item-by-item commentary on the SAMEER-CEM Technical Specifications demonstrating substantial responsiveness of the equipment's to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications. (Technical literature/brouchers/manuals should be attached along with this format)

ITEM NAME	Supply, installation, Commissioning, Performance Testing and Validation of Conducted & Radiated Emission and Conducted Susceptibility automated test systems		
Sl.No	Tender Specifications	Bidder's Specifications	Remarks/Deviation if any

(Technical literature/brouchers/manuals should be attached along with this format)

Please note:

1. Compliance statement should compare/comparing the specifications of the quoted model to the required specifications. This statement should also give the page number(s) of the technical literature where the relevant specification is mentioned.
2. Bids must have supporting documents (technical literature or copies of relevant pages from the service manual or factory test data) for all the points noted above, failure regarding which may result in rejection of bid.

Signature of the authorized person

Name :

Designation :

Company Seal :

Date :

Place :

Annexure-VI

TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:

To,

The Programme Director,
Society for Applied Microwave Electronics Engineering and
Research(SAMEER) -
Centre for Electromagnetics, CIT Campus, 2nd Cross Road, Taramani,
Chennai - 600 113, Tamil Nadu, India.

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: S-CEM/OTE/EMCD/1080-LE/102-06/21-22/11739

Name of Tender:- **Supply, installation, Commissioning, Performance Testing and Validation of Conducted &Radiated Emission and Conducted Susceptibility automated test systems**

Dear Sir,

1. I/ We have downloaded/obtained the tender document(s) for the above mentioned tender from the web site(s) namely:

- i. <http://cem.sameer.gov.in>
- ii. <https://eprocure.gov.in/cppp>

as per your advertisement, given in the above mentioned website(s).

2. I/We hereby certify that I /we have read the entire terms and conditions of the tender documents from Page No. 1 to 38 (including all documents like annexure(s), schedule(s), etc, which form part of the contract agreement and I /we shall abide hereby by the terms/conditions/clauses contained therein.

3. The corrigendum(s) issued from time to time by SAMEER-CEM too have also been taken into consideration, while submitting this acceptance letter.

4. I/We hereby unconditionally accept the tender conditions of above mentioned tender document(s) /corrigendum(s) in its totality/entirety.

5. I/We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt.Department/Public sector undertaking.

6. I/We certify that all information furnished by our firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then SAMEER-CEM shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours faithfully,

(Signature of the Bidder, with Company Seal)

Annexure-VII

Eligibility of Bidder

(To be given on Company Letter Head)

*(As per the OM No. 6/18/2019-PPD dated 23.07.2020 issued by the Department of Expenditure,
Public Procurement Division, Ministry of Finance, Government of India)*

To

**The Programme Director
SAMEER-Centre for Electromagnetics
CIT Campus, 2nd Cross Road,
Taramani
Chennai - 600 113
INDIA.**

Sir,

I/We have read clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I/We hereby certify that this bidder is not from such a country and eligible to be considered".

Yours faithfully,

(Signature of the Bidder, with Company Seal)

Annexure-VIII

Bid Security Declaration Form

(To be given on Company Letter Head)

Dated:

To

The Programme Director,
Society for Applied Microwave Electronics Engineering and Research (SAMEER)
CIT campus, 2nd Cross Road, Taramani, Chennai - 600 113

Sir,

I, the undersigned, declare that:

1. I am duly authorised to submit bid and undertakings in response to your tender No. _____.

2. I understand that the bidders are required to submit Bid Security of the prescribed amount, while submitting bids in response to tender enquiries of the Society for Applied Microwave Electronics Engineering and Research (SAMEER).

3. As an alternative to the Bid Security, I hereby declare that my firm, which is submitting the current bid, will be suspended for the period of time specified in the request for bid document or for a period of three years if no such period of time is specified in the request for bid document, from being eligible to submit bids for contracts with SAMEER,
 - i. if we withdraw or modify the bid during the period of validity (including the extended period of validity) **or**
 - ii. If we fail to sign the contract, or to submit the performance security before the deadline prescribed in the request for bid document or in the communication sent by SAMEER.

Signature with seal:

Name: _____

Designation _____

Name of the firm _____

Place _____