

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL**

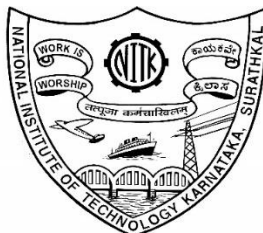
DEPARTMENT OF CIVIL ENGINEERING

POST SRINIVASNAGAR, MANGALURU – 575 025 (D K)

Phone: (0824) 2474000.

E- mail: [info@nitk.ac.in](mailto:info@nitk.ac.in)

Fax: (0824) 2474033

Website: <http://www.nitk.ac.in>**TENDER DOCUMENT**

Tender Notification: CED/SERB/BC/2020-21/ST/1-4

Date: 01-02-2021

Name of Goods	Horizontal Shaking Table
Estimated amount put to Tender	Rs. <b>17.49 Lakhs</b> (including all taxes and charges).
Time for Supply of item	30 Days
Bid Document Download Start Date	<b>02.02.2021 (4:30 pm)</b>
Online Bid Submission Start Date	<b>02.02.2021 (4:30 pm)</b>
Online Bid Submission End Date	<b>24.02.2021 (3:00 pm)</b>
Address for Submission of Tender	<a href="https://eprocure.gov.in/">https://eprocure.gov.in/</a>
Date of opening technical bid	<b>25.02.2021 (3:00pm)</b>
Contact Details of Buyer	Dr. Babloo Chaudhary, Dept. of Civil Engg., NITK Surathkal, Mangalore – 575025, Karnataka, Phone No: 0824 2473041, Email: <a href="mailto:babloo@nitk.edu.in">babloo@nitk.edu.in</a>
Purchase officer Name and Contact(Related to purchase inquiry)	Gaurav Chowdhury, Assistant Registrar (Purchase) Phone: +91-824-2473993 Email: <a href="mailto:gaurav@nitk.edu.in">gaurav@nitk.edu.in</a>



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**NOTICE INVITING e-TENDER (e-NIT)**

The National Institute of Technology Karnataka, Surathkal (in short – NITK, Surathkal) is an Institute Of National Importance under Ministry of Education, Govt of India imparting Technical Education and engaged in Research Activities.

Online Tenders(<https://eprocure.gov.in/>) are invited for the following items in **two cover system** (i.e., Technical bid and financial bid) subject to the following terms and conditions, from the reputed manufacturers or it's authorized dealers so as to reach this office on or before scheduled date and time. The tender (Technical bid) will be opened online on the due date as mentioned. Bidders can verify their bid status through online portal <https://eprocure.gov.in/>. The financial bid of only such bidders whose technical bid is accepted shall be opened on the same day or later pre-informed date.

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Purchase officer Name and Contact(Related to purchase inquiry)	Gaurav Chowdhury, Assistant Registrar (Purchase) Phone: +91-824-2473993 Email: <a href="mailto:gaurav@nitk.edu.in">gaurav@nitk.edu.in</a>

Sd/-  
HOD

## **SECTION 1 A: Instructions for Online Bid Submission**

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at:

<https://eprocure.gov.in/eprocure/app>.

### **REGISTRATION**

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “**Online bidder Enrollment**” on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

### **SEARCHING FOR TENDER DOCUMENTS**

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / email in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

## **PREPARATION OF BIDS**

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

**Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.**

## **SUBMISSION OF BIDS**

1. Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidder has to select the payment option as "offline" to pay the tender fee / EMD (Bid Security Declaration) as applicable and enter details of the instrument.
4. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
5. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption

using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

7. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

8. Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

9. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

10. The off-line tender shall not be accepted and no request in this regard shall be entertained whatsoever.

11. All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.

12. Any order resulting from this e-tender shall be governed by the terms and conditions mentioned therein.

13. No deviation to the technical and commercial terms & conditions are allowed.

14. The tender inviting authority has the right to cancel this e-tender or extend the due date of receipt of the bid(s).

### **ASSISTANCE TO BIDDERS**

1) Any queries relating to the tender document and the terms and conditions contained there in should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

## SECTION 1 B: INSTRUCTION TO BIDDER (ITB)

1. The bid should be submitted in two covers System-Technical Bid and Financial Bid through <https://eprocure.gov.in/>
2. **Technical Bid:** Documents related to the Technical Bid should be submitted in PDF format through eTendering portal <https://eprocure.gov.in/>.
3. **The Technical Bid should contain the following documents:**
  - a) Compliance statement of specifications as per **Annexure - 'A'**.
  - b) License certificate for manufacture /supply of the item & Factory license
  - c) Agreements/Purchase Orders/Completion certificates if any, for similar items from other Universities, Institutes, and Government Department/Undertakings/Public sectors the details of such supplies for the preceding three years should be given together with the prices eventually or finally paid with contact details of persons as per **Annexure – 'B'**.
  - d) List of Owner/partners of the firm and their contact numbers (Bidder Information)
  - e) Declaration of abandoned or suspended any awarded service & Blacklist Certificate. **Annexure 'C'**
  - f) Integrity Pact (for procurements above Rs1.0 Crore (Rs10.0 Million). **Annexure 'D'**
  - g) Copy of GST certificate & PAN No.
  - h) Catalog of the Product with detailed product specifications.
  - i) Undertaking that the successful BIDDER agrees to give a Performance Security amounting to 3% of the purchase order value in favor of "The Director, NITK Surathkal".
  - j) The copy of the Balance sheet, Profit & Loss A/c., Trade or Manufacturing A/c for the last 3 years should be enclosed and the turnover must be 30% of the estimated cost.
  - k) Duly filled in the checklist should be submitted along with the Technical Bid.
  - l) Contract form given in Section 5 needs to be submitted.
  - m) **EMD must be in the form of "Bid Security Declaration" (ANNEXURE –G) declaring disqualification of his bid in case the bid is withdrawn or modified by him during the bid validity period. The format of 'Bid Security Declaration' is available in the Tender document. 'Bid Security Declaration' duly signed be uploaded while submitting the e-bid. Tenders received without the 'Bid Security Declaration' will be rejected (except in the case of NSIC/MSME enlisted bidders ( under relevant NIC & Activity ) /Startups).**

4. **Financial bid :** The bidders should submit their financial bid as per the format given in Section 4 (A standard BoQ format has been provided with the tender document in the form of an Excel sheet) of the Notice Inviting Tender in

the online bid through e-Tendering portal <https://eprocure.gov.in/>. After evaluation of technical bid, the technically successful bidder shall be intimated to witness the opening of their financial bid along with date, time and venue through e-mail. The financial bid of only those bidders' will be opened who are declared "Technically Successful or Technically Responsive".

#### 5. Bid Evaluation:

On the due date, the Technical bids will be opened and referred to the Purchase Committee which is duly constituted by the Director, NITK. The committee will go through the technical aspects of the tender and recommend shortlisted firms. The recommendation of the committee is final and binding on all the parties. The committee may visit the manufacturing site to assess the capabilities to manufacture the tendered items as per the specifications. In case of any remarks/default noted, the Company will be debarred from competing for bids in our esteemed Institute for a period of one year from the date of occurring of such breach.

#### 6. Quoting of Price(s):

- a. The Indian bidder should quote firm prices in Indian rupee only unless otherwise specified elsewhere in this tender. Prices quoted in any other currency shall not be considered.

7. The Bid will be accepted only from the manufacturers (OEM) or its authorized supplier.

8. **The Institute reserves the right to visit the factory before or after the issue of supply order to satisfy itself regarding the quality of production. In case of any remarks /default noted,** the Company will be debarred from competing for bids in our esteemed Institute for a period of one year from the date of occurring of such breach.

9. **The item to be used is strictly according to the specification and subject to test by the Institute/concerned authorities. It must be delivered and installed in good working condition.**

10. The incomplete or conditional tender will be rejected.

11. The Institute reserves the right to cancel at any time after acceptance of the tender with a notice. The Supplier shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which might have derived from the execution of the supply.

12. **Performance Security** The successful bidder shall deposit performance security of 3% of the quoted price in the form of Bank Guarantee (ANNEXURE -F) / Demand Draft / Fixed Deposit Receipt of any scheduled bank drawn in favour of **The Director, NITK Surathkal, Mangaluru** payable at Mangaluru. In case the bidder fails to deposit the said Performance Security within the stipulated period, including the extended period if any, the Earnest Money Deposited by the bidder shall be forfeited automatically without any notice. Please note the following points:

- a) **Successful bidder should submit performance Security as prescribed above to the purchase Section, NITK Surathkal, on or before 30 days from the date of issue of order acknowledgment.**

- b) Performance Security shall be for the due and faithful performance of the contract and shall remain binding, notwithstanding such variations, alterations for extensions of time as may be made, given, conceded or agreed to between the successful bidder and the purchaser under the terms and conditions of acceptance to tender.
- c) The successful bidder is entirely responsible for the due performance of the contract in all respects according to the terms and conditions of the tender.
- d) The validity of the Performance Security must cover the warranty period plus two months.

**13. The validity of bids:** The rate quoted should be valid for a minimum of 180 days. No claim for escalation of the rate will be considered after opening the Tender.

**14. Warranty/Guarantee & On-site skill support:** On-site comprehensive warranty will be effective from the date of successful installation and commissioning. The OEMs/Authorized Distributors and Dealers must attach a certificate of sales and service facilities, escalation support for on-call service or station engineer, etc.

**15. Clarification of Tender Document:** Through pre-bid Conference (Under Section 1, clause No. 35).

**16. Amendment of Tender document:** At any time prior to the last date for receipt of bids, Institute may for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Tender document by an amendment. Further, Institute may at its own discretion extend the last date for the receipt of bids.

**17.** The bids shall be written in English language and any information printed in another language shall be accompanied by an English translation, in which case for the purpose of interpretation of the bid, the English translation shall govern.

**18.** The Institute reserves the right of accepting any bid other than the lowest or even rejecting all the bids. The decision of the Purchase Committee is final in all matters of tender and purchase.

**19. Cancellation of Tender:** Notwithstanding anything specified in this tender document, NITK Surathkal in its sole discretion, unconditionally and without having to assign any reasons, reserves the rights:

- a) To accept OR reject lowest tender or any other tender or all the tenders.
- b) To accept any tender in full or in part.
- c) To reject the tender offer not conforming to the terms of the tender.
- d) To give purchase preference to Public Sector undertakings when applicable as per Govt. Policy/Guidelines.

**20. Delivery Period:** The Delivery Period/Time shall be deemed to be the essence of the Contract and delivery must be completed not later than such date(s). If the Supplier does not perform its obligations within the Delivery Period/Date mentioned in the Contract, the same would constitute the breach of the Contract and the Institute shall have the right



to cancel or withdraw the Contract for the unsupplied portion after the expiry of the original or extended delivery date or period stipulated in the Contract. Such cancellation of the contract on account of non-performance by the Supplier would entitle the Buyer to forfeit the Performance Security besides other actions such as debarment from the Institute as per GFR 2017.

**21. Liquidated Damages:** Timely delivery is the essence of contract and hence if the Supplier fails to deliver Goods within the original/extended delivery period(s) specified in the contract, the Institute will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, **@ 1% per week or part of the week of delayed period** as pre-estimated damages not exceeding 5% of the contract value without any controversy/dispute of any sort whatsoever.

**22. Terms of Payment:**

- a. Payment within 30 days from the date of delivery, installation and acceptance certificate of concerned Department/Section/Purchase Section.
- b. Payment shall be made by Cheque or such other mode/electronic fund transfer offered by the Bank. NITK, Surathkal will not pay advance payment to the party. Any request for Advance payment will be rejected summarily. In case if it is necessary, the advance payment will be paid strictly against Bank Guarantee only.
- c. Payment will be made by Standard Payment terms and conditions of NITK, Surathkal as per tender document only. Any request for a change in payment terms and conditions will not be accepted.
- d. If the above conditions are not acceptable then tender will be rejected.

**23.** Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bid as to the nature of the installation site, the means of access to the site and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the installation to be done and local conditions and other factors having a bearing on the execution of the bid.

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

**25.** The rate quoted by the bidder **shall be firm throughout the contract** period and there shall be no revision of the rates for any reasons whatsoever. It should be clearly understood that any claim for changes will not be entertained in any case once the bids are opened.

**26. One bid per bidder:** Each bidder shall submit only one bid either by himself or by representing a firm.

- 27. Cost of bid:** The bidder shall bear all costs associated with the preparation and submission of his bid. The Institute in no case shall be responsible or liable for those costs.
- 28.** The bidder shall not make or cause for any alteration, erasure or obliteration to the text of the tender document.
- 29.** The Institute will declare a bidder ineligible, either indefinitely or for a specified period of time, at the sole discretion of the Institute, for the award of contract/ participating in any other tender, if at any time the Institute determines that he has furnished false information/ engaged in corrupt or fraudulent practices.
- 30.** If any overpayment is detected as a result of the post-payment audit, it shall be recovered by the Institute from the Supplier out of his Performance Security.
- 31. Determination of successful bidder:** The technically qualified bidder whose offer is evaluated as the **lowest total bid** shall be the successful bidder subject to its meeting the statutory requirements.
- 32. Price variation:** The rate quoted by the bidder shall be firm throughout the contract period. No price variation clause is applicable to this contract.
- 33. CANVASSING:**
- a) Canvassing in connection with tenders is strictly prohibited and the Tenders submitted by the Tenderers who resort to canvassing shall be liable to rejection.
  - b) Subject to the provisions concerning clarification of Bids, no Bidder shall contact the purchase committee on any matter relating to its bid from the time of the bid opening up to the time that the contract is awarded.
  - c) Any effort by the Bidder or Bidder's representative however described to influence the purchase committee in any way concerning scrutiny, consideration, evaluation of the Bid(s) or decision concerning award of contract shall entail rejection of Bid and action against the bidder as deemed fit.
  - d) The purchase committee will deal with the Bidder on a Principal basis, without involvement in any manner in India or abroad of any agent or consultant or associate or another person howsoever described.
- 34. Legal Matter:** All Domestic and International disputes are subject to Mangaluru Jurisdiction only.
- 35. Pre-Bid Conference:**
- a) All prospective bidders are requested to kindly submit their queries through E-mail to \_\_\_\_\_ & cc to \_\_\_\_\_ so as to reach the buyer, on or before 4.00 p.m. on dd/mm/yyyy
  - b) A Pre-bid Conference shall be held as indicated in Invitation to Bid. All prospective bidders are requested to kindly attend the Pre-bid Conference. In order to facilitate NITK for the proper conduct of the Pre-bid Conference, all prospective bidders are requested to kindly submit their queries through E-mail to the indicated mail address (with Tender No. and Date) so as to reach the Buyer as indicated in Invitation to Bid.
  - c) NITK shall answer the queries during the pre-bid conference, which would become a part of the proceedings of the Pre-bid Conference. These proceedings will, in turn, become a part of

clarifications/amendments to the bidding documents and would become binding on all the prospective bidders. These proceedings would also be hosted on NITK website [www.nitk.ac.in](http://www.nitk.ac.in) for the benefit of all prospective bidders. Before formulating and submitting their bids, all prospective bidders are advised to surf through the NITK website after the Pre-bid Conference, in order to enable them to take cognizance of the changes made in the bidding document.

- d) Any Statement made at the pre-bid conference shall not modify the terms of the bidding documents unless such statement is made part of clarification in the proceeding of Pre-Bid Conference
- e) Only queries formally submitted in advance, will be answered in the pre-bid conference and will become part of the Corrigendum/Amendment.

**36. Relaxation for Startup, MSEs, Make in India will be as per GOI norms.**

## **SECTION 2: CONDITIONS OF CONTRACT.**

1. The supplier should quote the rate for Door Delivery (FOR)..
2. The Rate should be quoted in INR only.
3. The item should be landed at NITK Surathkal and this responsibility is with the bidder.
4. No custom duty exemption certificate will be provided from the institute.
5. NITK is a DSIR recognized research organization and hence eligible for concessional / exempted rate of GST @5% (For indigenous items).
6. The rate quoted should be on per unit basis. Taxes and other charges should be quoted separately, considering exemptions, if any.
7. Rate quoted should be inclusive of Testing, Commissioning and Installation of Equipment and Training.
8. **Payment:** No advance payment will be made. Payment will be made only after the supply and installation of the item in good and satisfactory condition and receipt of performance security by the supplier.
9. Guarantee and Warranty period should be specified for the complete period conforming to Section 3 of this tender document.
10. The period required for the supply and installation of Equipment should be specified conforming to Section 3 of this tender document.
11. In case of dispute, the matter will be subject to Mangaluru Jurisdiction only.

### **SECTION 3: SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS**

[To be filled up by the Department / Center of NITK, Surathkal]

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Item(s) Name to be Procured	: <b>Horizontal Shaking Table</b>
Type (Equipment/Software/Furniture/Others)	: Equipment/Machine
Brief Specifications of the Item(s) (Attach Additional Sheet if necessary)	: As per Annexure H
Quantity	: <b>Horizontal Shaking Table (uniaxial) -01 Set Cyclic Loading Jack with Servo Cylinder- 01 Set Soil Boxes- 03 Sets</b>
Any other details/requirement	:
Warranty Period (in months)	: 36
Delivery Schedule expected after the release of a Purchase order (in Weeks)	:4
Performance Security to be given by Successful Bidder after release of Purchase Order (in Rupees)	: 3% of Purchase Order

**SECTION 4 - PRICE BID**  
**[To be used by the bidder for submission of the bid]**

Tender Inviting Authority:

Name of Work/Goods/Services:

Contract No:

Name of the Bidder/ Bidding Firm / Company :

**PRICE SCHEDULE**

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )

Number	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER	NUMBER	NUMBER	NUMBER #	NUMBER #	TEXT #
Sr. No.	Item Description	Quantity	Units	BASIC RATE in Figures To be entered by the Bidder in Rs. P	COST	GST rate in %	GST Amount	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT with Taxes Rs. P	TOTAL AMOUNT In Words
1										
1.1										
1.2										
	Total in Figures									
Quoted Rate in Words										

**SECTION 5:CONTRACT FORM**

[To be provided by the bidder in the business letter head]

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1. (Name of the Supplier's Firm) hereby abide to deliver by the delivery schedule mentioned in section 3 tender document for supply of the items if the purchase order is awarded.
2. The item will be supplied conforming to the specifications stated in the tender document without any defect and deviations.
3. Warranty will be given for the period mentioned in the tender document and service will be rendered to the satisfaction of NITK, Surathkal during this period.

Signature of the Bidder : \_\_\_\_\_

Name and Designation: \_\_\_\_\_

Business Address : \_\_\_\_\_  
\_\_\_\_\_

Place:  
Date:

Seal of the Bidder's Firm

**Compliance Statement of Specifications**

<b>Sl.No.</b>	<b>Name of specification/Part/Accessories of tender enquiry</b>	<b>Specifications of the quoted Model / Item</b>	<b>Compliance Whether YES or NO</b>	<b>Deviations if any to be indicated in unambiguous terms</b>

**(Add more rows if required)**

**Signature and Seal of the Bidder**



**Previous Supply Orders Executed**

Name of the firm: \_\_\_\_\_

Order placed by [Full address of the purchaser]	Order No. and Date	Order Value	Specified Delivery Date	Actual Delivery Date	Remarks indicating reasons for late delivery, if any and justification for the price difference of their supply order and those quoted to us	Has the equipment been installed satisfactorily?	Contact person along with telephone, mobile number, fax, and E-mail address (other Universities, Institutes, and Government Department/Undertakings/Public sectors)

(Add more rows if required)

**Signature and Seal of the Bidder**

**FORMAT OF DECLARATION**  
**(To be submitted on Letterhead)**

I/We Mr./Ms. \_\_\_\_\_, S/o/ of Mr. \_\_\_\_\_ aged about \_\_\_\_\_ years, resident of \_\_\_\_\_, working as -----(designation) for ----- (name and address of the bidding agency).

I solemnly affirm and the state as under:

1. That I am working as ----- /proprietor of the ----- (name of the firm) and authorized to sign this declaration.
2. That the firm M/s---- (complete address of the firm) has not abandoned or suspended any contract work of any organization/ department so far/ during the previous five financial years.
3. That the firm M/s---- (complete address of the firm) has not been blacklisted/ debarred for competing in tenders by any organization/ department so far/ during the previous five financial years.
4. I solemnly confirm that the facts stated above are true and nothing has been concealed.

**Seal and Signature of Bidder**

**INTEGRITY PACT AGREEMENT**

***(To be signed by the bidder/same signatory authorized to sign the relevant contact)***

This Integrity Agreement is made at Surathkal on this ..... day of .....20 .....

**BETWEEN**

National Institute of Technology Karnataka, Surathkal, an Institute of National Importance (under NIT Act -2007) represented through The Registrar, NITK, Surathkal (hereinafter referred as the ‘**Buyer**’, which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

**AND**

.....  
(Name and Address of the Individual/Firm/Company)

Through ..... (Hereinafter referred to as the “Bidder/Contractor” and which expression shall unless repugnant to the meaning or context hereof include its succession and permitted assigns)

**Preamble**

WHEREAS **NITK Surathkal** has floated the Tender (Hereinafter referred to as “Tender/Bid”) and intends to award, underlaid down organizational procedure, contract for “Equipment”

[Hereinafter referred to as the “**Contract**”).

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as “**Integrity Pact**” or “**Pact**”), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this witness as under:

Seal and Signature of the bidder

Registrar, for NITK Surathkal

## **Article 1: Commitment of NITK Surathkal**

- i. **NITK Surathkal** commits to take all measures necessary to prevent corruption and to observe the following principles:
  - (a) No employee of NITK Surathkal, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
  - (b) NITK Surathkal will, during the Tender process, treat all Bidder(s) with equity and reason. NITK Surathkal will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
  - (c) NITK Surathkal shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- ii. If NITK Surathkal obtains information on the conduct of any of its employee which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, NITK Surathkal will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

## **Article 2: Commitment of the Bidder(s)/ Contractor(s)**

- 1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adheres to the highest ethical standers, and report to the Government / Department all suspected acts of **fraud or corruption or Coercion or Collusion** of which it has knowledge or becomes aware, during the tendering process and through the negotiation or award of a contract.
- 2) The Bidder(s)/Contractor(s) commit himself to take measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contact execution:
  - a. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contractor to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contractor.

Seal and Signature of the bidder

Registrar, for NITK Surathkal

- b. The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into an undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
  - c. The Bidder(s)/Contractor(s) will not commit any offense under the relevant IPC/PC Act. Further, the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as
  - d. part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  - e. The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and address of agents/representatives in India if any. Similarly, Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and address of foreign agents/representatives if any. Either the Indian agent on behalf of the foreign principals or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participates in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
  - f. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
- iii. The Bidder(s)/Contractor(s) will not instigate third persons to commit offenses outlined above or be an accessory to such offenses.
  - iv. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice **means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**
  - v. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, there or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/her reputation or property to influence their participation in the tendering process).

Seal and Signature of the bidder

Registrar, for NITK Surathkal

### **Article 3: Consequences of Breach**

Without prejudice to any rights that may be available to NITK Surathkal under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidders/Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

- 1) If the Bidder(s)/Contractor(s), either before awarded or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 day notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determinate the Contract - if already executed, or exclude the Bidders/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. **Such exclusion may be forever or for a limited period as decided by NITK Surathkal.**
- 2) **Forfeiture of EMD/Performance Guarantee/Security Deposit:** If NITK Surathkal has disqualified the Bidder(s) from the tender process prior to the award of the Contract or terminate/determinate the Contractor has accrued the right to terminate/determinate the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to NITK Surathkal, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Security of the Bidders/Contractor.
- 3) **Criminal Liability:** If NITK Surathkal obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of Indian Penal code (IPC)/Prevention of Corruption Act, or if the Principal/Owner has substantive suspicion in this regard, NITK Surathkal will inform the same to law enforcing agencies for further investigation.

### **Article 4: Previous Transgression**

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country conforming to the anti-corruption approach or with Central Government or State Government or any other Central/State Public Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes an incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/Owner.
- 3) If the Bidder/Contractor can prove that he has resorted/recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Seal and Signature of the bidder

Registrar, for NITK Surathkal

### **Article: 5 Equal Treatment of all Bidder/Contractors/Subcontractors**

- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidders/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.
- 2) The Principal/Owner will enter into pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

### **Article 6: Duration of the Pact**

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contractor or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this pacts as specified above, under it is discharged/determined by the Competent Authority of NITK, Surathkal.

### **Article 7: Other Provisions**

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is **Mangaluru**, the Headquarters of NITK Surathkal, who has floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In the case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) It is agreed on term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action was taken by the Owner/Principal in accordance with this **Integrity Agreement/Pact or interpretation thereof shall not be subject to arbitration.**

Seal and Signature of the bidder

Registrar, for NITK Surathkal

**Article 8: LEGAL AND PRIOR RIGHTS**

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contract documents with regard to any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....  
(For and on behalf of NITK Surathkal)

.....  
(For and on behalf of bidder/ contractor)

WITNESSES:

1. ....  
(Signature, name, and address)
  
2. ....  
(Signature, name, and address)

Place: Surathkal.

Dated:



**Format for Bank Account details of the bidder**

Name of the account holder (bidder)	
Complete address	
Contact number	
Email address	

Bank Account details:

Bank name	
Branch name	
MICR number	
Account type	
Account Number	
Please re-type Account number again	
IFSC code of the Bank	

I hereby declare that the particulars given above are correct and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold the Institute responsible for this.

I have read the option invitation letter and agree to discharge responsibility expected of me as a participant under the scheme.

Seal and signature of the bidder.

**Certification from the banker:**

Certified that the particulars furnished above are correct as per our records.

Seal and signature of the authorized officer of the bank.

**ANNEXURE - F**

**FORMAT FOR PERFORMANCE GUARANTEE BOND**

**(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred)**

(TO BE ESTABLISHED THROUGH ANY OF THE NATIONAL BANKS (WHETHER SITUATED AT MANGALURU OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT MANGALURU OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK) SITUATED AT MANGALURU. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.)

To,  
Director,  
National Institute of Technology Karnataka,  
Srinivasnagar P.O., Surathkal  
Mangaluru – 575025

**LETTER OF GUARANTEE**

WHEREAS National Institute of Technology Karnataka (Buyer) has invited Tenders vide Tender No..... Dt. .... for purchase of ..... AND WHEREAS the said tender document requires that any eligible successful tenderer (seller) wishing to supply the equipment/machinery, etc.in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of “**The Director, National Institute of Technology Karnataka, Surathkal**” in the form of Bank Guarantee for Rs ..... (**3% (Three percent) of the purchase value**) and valid till **one year or up to warranty period whichever is later** from the date of issue of Performance Guarantee Bond may be submitted within 30 (Thirty) days from the date of Order Acknowledgement as a successful bidder.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document/purchase order/performance of the equipment/machinery, etc. this Bank shall pay to National Institute of Technology Karnataka, Surathkal on demand and without protest or demur Rs ..... (Rupees.....).

This Bank further agrees that the decision of National Institute of Technology Karnataka, Surathkal (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in the tender document/purchase order shall be final and binding.

We, ..... (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the Tenderer (Seller) and/ or National Institute of Technology Karnataka, Surathkal (Buyer).

**Notwithstanding anything contained herein:**

1. Our liability under this Bank Guarantee shall not exceed Rs. .... (Indian Rupees ..... only).
2. This Bank Guarantee shall be valid up to .....(date) and
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if National Institute of Technology Karnataka (NITK) Surathkal serve upon us a written claim or demand on or before.....(date).

This Bank further agrees that the claims if any, against this Bank Guarantee, shall be enforceable at our branch office at ..... situated at ..... (Address of local branch).

Yours truly,  
Signature and seal of the guarantor:  
Name of Bank &Address:  
Date:

**Instruction to Bank:** Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. The bank is requested to take appropriate necessary action on or after the expiry of the bond period.

Form of "Bid Security Declaration" - To be submitted in the **Letterhead of the Bidder**

**"BID SECURITY DECLARATION"**

To:  
**The Director,  
National Institute of Technology Karnataka, Surathkal.  
Post Srinivasnagar, Mangaluru – 575025.**

Sir,

Sub.: Submission of Bid Security/ EMD Declaration – Reg.

Ref.: Tenders invited for "-----" vide NIT No. -----

I/ We declare that:

1. I/ We understand that according to the tender document, bids must be accompanied by EMD or a Bid Security Declaration. Accordingly, I/ We have opted for submitting this Bid Security Declaration.
2. I/ We declare that I / We will not withdraw our bid during the Bid validity period or make any modifications to my/ our bid.
3. I/ We understand that if I/ we withdraw my/ our bid or modify the bid, I/ we will be automatically suspended from being eligible for bidding and also will be debarred from competing for bids in your esteemed Institute for a period of one year from the date of occurring of such breach.
4. I/ We understand that if I/ We fail to furnish the Performance Guarantee before the deadline specified in the LoA / Lol, my/ our bid will be automatically cancelled and I/ We will also be debarred from competing for bids in your esteemed Institute for a period of one year from the date of occurring of such breach.
5. I/ We further understand that if I/ We fail to sign the contract in case the work is awarded to me/ us or fail to furnish the Performance Guarantee, my/ our bid will be automatically cancelled and I/ We will also be debarred from competing for bids in your esteemed Institute for a period of one year from the date of occurring of such breach.
6. I/ We understand that this Bid Security Declaration will automatically expire if we are not the successful bidder/ upon the expiry of bid validity period.
7. I/ we declare that I am/ we are authorized to sign this declaration.

**Signature of the Bidder with seal**

## Detailed Technical Specifications

### **A) Horizontal Shaking Table (01 Set)**

Supplying of Horizontal Shaking Table which can be used to model tests. The shaking table can generate sinusoidal earthquake loading. Real earthquake data can be also fed into it in order to generate shaking same as the real earthquake data. One complete set of this item includes (1) Horizontal Shaking Table (uniaxial), (2) Cyclic Loading Jack with Servo Cylinder and (3) Soil Boxes.

#### **(1) Horizontal Shaking Table (uniaxial) - 01 Set**

The Horizontal Shaking Table must be Uni Axial Servo Hydraulic Shake Table. It must be simple to operate and compact and able to handle sinusoidal loadings and real earthquake data. The top shaking platform must be able to vibrate like sinusoidal loadings and real earthquake. The sinusoidal loading data and earthquake data can be fed in its controlling device, and the top platform must vibrate like the feeding data. Arrangement should be made on the top platform so that a soil box can be fixed with the help of nuts and bolts system or some easy way. Warranty (all parts and as a whole) for the item must be of 03 years. AMC (Annual maintenance contract) must be of 05 years from the date of purchase for the item. No extra money will be provided for the AMC and warranty.

*Specifications for the Horizontal Shaking Table are given below:*

<i>Items</i>	<i>Description(s)</i>
<b><u>Shake Table:</u></b>	
Table dimension	2.0 x 2.0 meters (Payload - 2000kg)
Uni-axial Horizontal shake table acceleration	Up to 1.0g
Table Peak velocity	0.5 m/s or any other suitable value
Operating frequencies	0.1 to 20Hz.
Actuator mounting	RIGID With reaction frame
Horizontal movement of the table	with linear bearings
Reaction frame	It has to be grouted on floor for vibration isolation
Mounting holes on the table Top	M12 x 1.75 STD thread at 200mm pitch for fitting test components on the table (or as suitable)
<b><u>Servo hydraulic Actuator:</u></b>	
Suitable Load capacity to Push / Pull	2000 Kg payload
Actuator	double acting, double ended (Actuators should be installed on the reaction frame and should be connected with shake table)
Piston Stroke	+/-50mm (0-100mm) or other suitable value
Frequency response	0.1 to 20Hz
Direct drive proportional directional valve for operation	Should be suitable for conducting seismic loading tests/study at frequencies from 0.1 to 20 Hz
<b><u>Hydraulic Power Pack:</u></b>	
Maximum operating pressure	50 bar or other suitable value
Flow of Pump	20 LPM or other suitable value
Oil Tank Capacity	100 Liters or other suitable value
Motor, 3 phase AC supply	5HP or other suitable value

**Function:**

Auto STOP	For Over Temperature, over pressure, Filter Clogging or other safety features
Operation of System	Through control signal from PC/Laptop
Return line Filter	10 micron or other suitable value
Cooling unit for power pack	Water cooled, to maintain the Oil temperature at 55 to 65 degree Centigrade or suitable arrangement.

**Geodynamic/Dynamic Controller:**

Technical Specifications.

- Control Type Advance high precise closed loop control for servo hydraulic
- DAQ Type 32-bit architecture
- Data Sampling rate 115 ksps
- No. of Analog Input channel 8 / 16
- Analog Input  $\pm 10$  VDC Voltage from any amplifier thru connector
- No. of Digital Input channel 4 no.
- No. of Digital Output channel 4 no.
- No. of Analog Output channel 1 no.
- Servo valve update rate 10 kHz
- System resolution [bits] 19-bit
- Display On PC
- Safety features Audio visual identity
- Input waveform Regular, random and user defined signal (matlab signal acceptable).
- Measurement accuracy  $\pm 0.2\% \pm 1$  digit
- Balance Auto balancing with start command
- Calibration Through PC using GEODYNAMIC software
- Conversion time <1ms/channel
- Ambient conditions Temp. 55p C & Relative Humidity 99%
- Power supply 200 to 250VAC  $\pm 10\%$ , 50 Hz.
- PC Interface USB
- Weight [kg] ~5

**Geodynamic/Dynamic Software - 1 pc license**

Technical specification

- Multiple transducer profile creation / calibration on a single channel,
- Transducer verification and calibration,
- Real-time value and peak value display,
- Project test data management,
- Auto machine identity and setup,
- Test add stage feature enable,
- Data export facility in ASCII, Excel format,
- Feed able test termination condition,
- Sample selection as per user requirement,
- Specimen information entry available,
- Online graph display of all sensors.

**Desktop Computer System - 01 Set**

Supplying of desktop computer system which must be compatible with the horizontal shaking table system. It must be compatible for both the operation of the shaking table (e.g. providing earthquake loadings, sinusoidal loading etc.) and collection of data from DAQ (data from sensors). The specifications for Desktop Computer System are given as follow:

1	Model	To be specified by vendor (Only a Business/Enterprise series of desktop to be considered)
2	ISO Certification	Manufacturing facility/brand should be ISO certified.
3	Processor	Intel Core i7 [9 <sup>th</sup> Generation processor] or better.
4	Memory	1TB SSD/HDD
5	RAM	16 GB (Expandable up to 64 GB or more)
6	Type of Drives used to populate the Internal Bays	SSD/HDD
7	Total SSD/HDD Capacity	1TB SATA Hard Disk Drive or equivalent SSD or better
8	Number of Cores per Processor	8
9	Chipset Number	Intel Q 370 or higher
10	Operating System	Windows 10 Pro (64bit) English
11	Total SSD/HDD Capacity (GB)	1TB or more
12	LED Backlit Monitor Size	22 Inches or more
13	Monitor Resolution (PIXELS)	1920x1080 or better
14	Cache (MB)	12 or more
15	Type of RAM	DDR4 or better
16	RAM Speed (MHz)	2666 or more
17	Graphics	Intel Integrated HD Graphics or higher.
18	Audio	Integrated High Definition audio codec or better.
19	Video Card	AMD Radeon™ R5 430, 2GB, FH (DP/DP) or better
20	Network Interface	Intel integrated network connection 10/100/1000 Gigabit Ethernet or higher.
21	Optical Drive	Multi Burner DVD Rewriter (SATA) or Cyberlink Software for Windows 8/10 without media or better OR COMPATIBLE.
22	Ports & Connectors	Front: Minimum of 4 no of USB ports (2* USB 3.0 + 2*USB 2.0 or all 4 * USB 3.0) Rear: 4 No or higher USB port with minimum 4* USB 3.0 Audio Ports: Stereo Line-in, 1 Microphone-in (Front) 1 Speaker/Line-out (Back),1 Headphone (front), 1RJ-45, 1 no VGA Port, 1 no Display Port, 1 no Serial Port.
23	Keyboard & Mouse	Keyboard - KB216 Black (English, US International) or better Mouse - USB Optical Scroll Mouse (or better), Same make as PC
24	TPM Security	Trusted Platform Module (Discrete TPM Enabled) or Better
25	Comprehensive Warranty	5 years warranty for the product (Part, Labor, etc.) on site including Monitor from OEM only.

26	Environmental Certification & Compliance: PC	Energy Star Green Guard, EPEAT Gold. RoHS : Restrictions of Hazardous Substances. TUV or better
27	Recyclable Capability	The PC Should be minimum 85% or above recyclable when properly disposed at end of life cycle. The brand should have clear cut policy on disposal of the same.
28	Temperature	Temperature Range Operating: 10° to 35° C
29	Security features	Trusted Platform Module/Chassis intrusion switch <ul style="list-style-type: none"> <li>▪ Power- on password</li> <li>▪ Administrator password</li> <li>▪ Hard disk password</li> <li>▪ Boot sequence control</li> <li>▪ Boot without keyboard and mouse</li> </ul> Individual USB port disablement
30	Power Cord	System Power Cord 6A (EURO-INDIA) or better
31	Optical Software	Cyberlink Software for Windows 8/10 without media or better
32	Wireless	Wireless LAN Card
33	Availability of Webcam integrated with display	Yes
34	Availability of Speakers integrated with display	Yes
35	<b>Display Monitor (LED Monitor 24-inch or more)</b>	<b>02 Nos</b>
36	<b>Portable External Hard Drive</b>	<b>Capacity- 2TB of an approved brand/Seagate/WD</b>
37	<b>Antivirus</b>	<b>Standard Antivirus (total security of the system including internet safety) for 03 years subscriptions</b>
38	<b>Microsoft (MS) Office pack</b>	<b>Microsoft Office 2019 H&amp;S or better version</b>
39	Software Stack	Applications Software for Windows 10 Pro (64bit) English
40	Operating System Recovery Options	Windows 10 Pro OS Recovery Media 64bit – DVD OR BETTER/EQUIVALENT
42	Other Miscellaneous items	All other Miscellaneous items/software in order to make the desktop computer system ready to use properly.

**Laptop - 01 Set**

Supplying of one laptop which must be compatible with the horizontal shaking table system. It must be compatible for both the operation of the shaking table (e.g. providing earthquake loadings, sinusoidal loading etc.) and collection of data from DAQ (data from sensors). The specifications for the laptop are given as follow:

Brand Name and Model	Dell XPS 9570 (i7/16GB-RAM/512GB-SSD/Win10+MS office) Or Equivalent model and configuration from an approved brand
Processor Brand	Intel
Processor Type	Core i7-8750H (6 cores) 8th Generation (9M Cache, up to 4.1 GHz, 6 cores)

	or equivalent or better
Processor Count	1
RAM Size	16 GB or more
Memory Technology	DDR4
Maximum Memory Supported	32 GB or more
Memory Clock Speed	2666 MHz
Memory & Storage:	16GB RAM DDR4-2666MHz 512GB M.2 PCIe Solid State Drive
Hard Disk Description	Flash Memory Solid State
Hard Drive Interface	Solid State
Batteries	1 Lithium ion batteries required. (included)
Standing screen display size	15.6 Inches
Resolution	1920x1080, FHD, Infinity Edge Anti-Glare IPS 100% sRGB 400-Nits display
Product Dimensions	23.5 x 35.7 x 1.4 cm;
Weight	Not more than 2.5 Kilograms
Item Height	14 Millimeters
Item Width	35.7 Centimeters
Form Factor	Clamshell / T&L
Speaker Description	Waves MaxxAudio pro
Graphics Coprocessor	NVIDIA GeForce GTX 1050 Ti
Graphics Chipset Brand	NVIDIA
Graphics Card Description	Dedicated
Graphics Card Ram Size	4
Connectivity Type	Killer 1535
Wireless Type	Bluetooth
Number of USB 3.0 Ports	2
Number of HDMI Ports	1
Number of Audio-out Ports	2
Number of Microphone Ports	1
Optical Drive Type	Not present
Card Reader	USB 3.0
Power Source	Battery Powered



Operating System	Windows 10 Home Plus
Average Battery Life (in hours)	14 Hours
Are Batteries Included	Yes
Lithium Battery Energy Content	97-Watt Hours
Lithium Battery Weight	0.85 Grams
Number of Lithium Ion Cells	6
Number of Lithium Metal Cells	6
Included Components	Laptop, Battery, AC Adapter, User Guide and Manuals
Manufacturer	Dell Computers
Country of Origin	China
Imported By	Dell Indi Pvt Ltd, Chennai
Item Weight	2 kg 250 g
<b>Microsoft (MS) Office pack</b>	<b>Microsoft Office 2019 H&amp;S or better version</b>
Software Stack	Applications Software for Windows 10 Pro (64bit) English
Keyboard & Battery	Backlit Keyboard with Finger Print Reader, 6-Cell Battery 97Whr
I/O ports:	Two USB 3.1 Gen 1 ports with PowerShare One Thunderbolt 3 (USB 3.1 Gen 2 Type-C) port with Power delivery One HDMI 2.0 port One headset port
Others	Killer Wi-Fi 6 AX1650 (2x2)   Bluetooth 5.0 Finger Print Reader 1 year Premium Support Plus
<b>Portable External Hard Drive</b>	<b>Capacity- 2TB of Seagate/WD/any approved brand</b>
<b>Warranty</b>	<b>5 years warranty for the product</b>
<b>Antivirus</b>	<b>Standard Antivirus (total security of the system including internet safety) for 03 years subscriptions</b>
ISO Certification	Manufacturing facility/brand should be ISO certified.
Graphics Chipset Brand	NVIDIA
Graphics Card Description	Dedicated
Graphics Card Ram Size	4

**(2) Cyclic Loading Jack with Servo Cylinder - 01 Set**

Supplying a complete set of cyclic loading jack with servo cylinder which can be used to model tests. It must be simple, compact, easy to use and able to provide cyclic loadings. It can be motor

driven gear drive with servo cylinder. As shown in figure 1, the jack can be connected to an external control unit. Amplitude and frequency of the cyclic loadings can be changed/control by the external control unit. In addition, data can be collected from the control unit (by using USB or other method) for further analyses of test conducted. The piston type arrangement can be made to push and pull a tests sample by jack/piston. The arrangement should be made on end of the piston so that a test sample can be fixed by screw. The jack should be able to push the test sample (0-5mm) and pull the sample (0-5mm). The control system can be connected to the cyclic loading jack by a connecting wire. The whole system should be compact and easy to use. This item must be ready to use in all the respect. Warranty (all parts and as a whole) for the item must be of 02 years. AMC must be of 05 years from the date of purchase for the item. No extra money will be provided for the AMC and warranty. It must be fabricated with the consent/direction of work in-charge/convener, some minor change can be made at the time of fabrication. The work must be completed as per the detailed provided and directions of the work in-charge/convener. The schematic diagram of this item is shown in Figure 1. Details of the cyclic loadings are given as follow:

SN	Items	Details
1	Frequency range	0.01 Hz to 0.10 Hz
2	Amplitude	5mm (+/- 5mm)
3	No of cycle	20-100 (at rate of 5)

### **(3) Soil Boxes:**

Supplying of soil boxes for conducting geotechnical tests/experiments in a laboratory. It contains three items (i) *Open Top Soil Box [size - 2m (L) x 1m(H) x 0.5m(W)]*, (ii) *Tilting soil box* and (iii) *Soil Box (Open Top) [size – 1.0m (L) x 1.0m(H) x 0.5m(W)]*.

#### **(i) Open Top Soil Box - 01 No.**

Drawing of the soil box (open top) is attached. Size of the box is 2.0m(L) x 0.5m (W) x 1.0m(H). All sides and bottom of the box must be made of *high quality transparent acrylic plates (thickness 20 mm)*. Frame of the box must be of metal (e.g. mild steel). The box must be water tight, no seepage of water is allowed if the box is filled with water and saturated soils. At both ends of the box, a partition wall is planned. The partition walls must be water tight. Furthermore, both the partition walls must be removable or/and collapsible. All the weldings, fixtures and fittings like screws for fixing acrylic plate with the metal frame should be provided of approved quality and make. This item must be ready to use in all the respect. Warranty (all parts and as a whole) for the item must be of 02 years. AMC must be of 05 years from the date of purchase for the item. No extra money will be provided for the AMC and warranty. Details of the soil box are given as follow:

Items	Details
Material	MS Channel and Acrylic sheet (transparent)
Coating on metal channels	Non-corrosive powder coating/painting
Thickness of Acrylic sheet	20 mm
Bottom mounting flange	06 -08 Nos (thickness-10 mm or more, Wide = 100mm or more, Length=800 mm)

The soil box must be fabricated with the consent/direction of work in-charge/convener, some minor change can be made at the time of fabrication. The work must be completed as per the detailed drawing and/or directions of the work in-charge/convener.

Size: 2.0m (L) x 0.5m (W) x 1.0m (H). For indication purpose, a photograph of similar soil box is given in Fig. 2. Drawing of the soil box is shown in Fig. 3.

**(ii) Tilting Soil Box - 01 No.**

The tilting soil box (open top) must be made of acrylic frames and metal frame (see Figure 4). Size of the bottom box is 2.0m(L) x 0.60m (W) x 0.5m(H). All sides and bottom of the box must be made of high quality transparent acrylic plates. For the box, side of the box can be made of 10 mm thick acrylic. However, its bottom must be made of 20 mm thick acrylic sheet. As shown in figure 4, the longer portion (1.5m length) of the box must made in such a way that the box can be inclined (at different angle based on requirement) as per requirement by the help of jack or other simple/easy arrangement. The arrangement should be also provided with the box. However, shorter portion of the box can be fixed (no inclination needed). Both the bottom boxes should be attached by hinges or other mechanism, so that, water coming from longer portion must not go/spill outside the box (the water should come from longer portion to shorter portion directly without leakage at joining location of both the boxes)

As shown in Fig. 4, three to four nozzles must be fixed above the box Upper box (open top) so that water can be sprinkled over the whole area of the box (longer portion). It should be like a rainfall over the whole box (longer portion). For that nozzles can be fixed in a water pipe (made of good quality steel/cast iron/copper or better material). In addition, water inlet and outlet should be provided for supplying water to the nozzles. Flexible water pipe of length 30 m (15m + 15m) should be also included in the item; and the flexible water pipe should be well connected to inlet and outlet provided. In order to control the water flow in the inlet pipe, valves, flow meter should be provided. The whole arrangement can be made in such a way that purpose of rainfall simulator can be fulfilled.

All the frames must be of metal (e.g. mild steel). **The metal frame should be removable or/and collapsible (not welded). Both the boxes should be also removable from each other.** The box must be water tight, no seepage of water is allowed if the box is filled with water and saturated soils. All the weldings, fixtures and fittings like screws for fixing acrylic plate with the metal frame should be provided of approved quality and make. This item must be ready to use in all the respects. The soil box must be fabricated with the consent/direction of work in-charge/convener, some minor change can be made at the time of its fabrication. The work must be completed as per the detailed drawing and/or directions of the work in-charge/convener. Warranty (all parts and as a whole) for the item must be of 02 years. AMC must be of 05 years from the date of purchase for the item. No extra money will be provided for the AMC and warranty. Details of the soil box are given as follow:

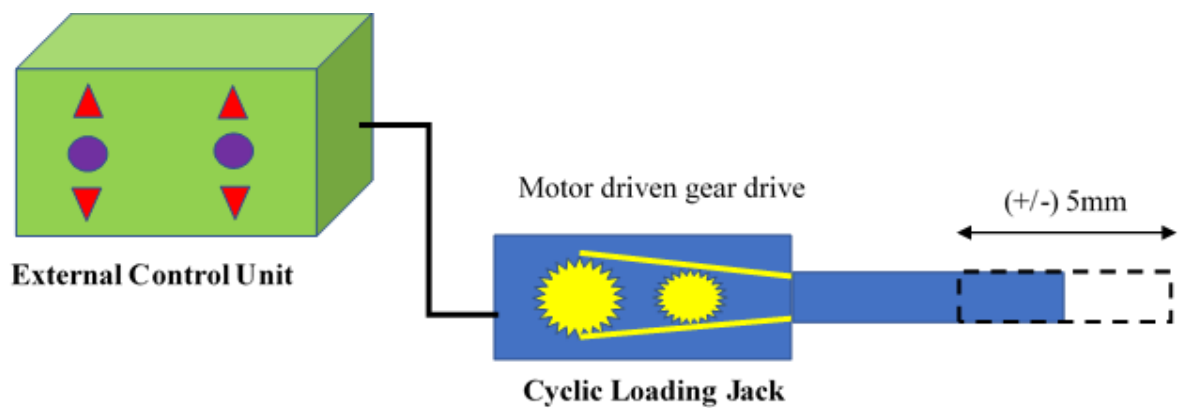
Items	Details
Material	MS Channel and Acrylic sheet (transparent)
Coating on metal channels	Non-corrosive powder coating
Thickness of Acrylic sheet	Bottom-20mm and side -10mm
Flexible water pipe	30 meters to with all fittings
Nozzles (for water spray)	Material-Brass or stainless steel Total no of nozzles = 3 to 4 nos (or as suitable)

**(iii) Soil Box (Open Top) - 01 No.**

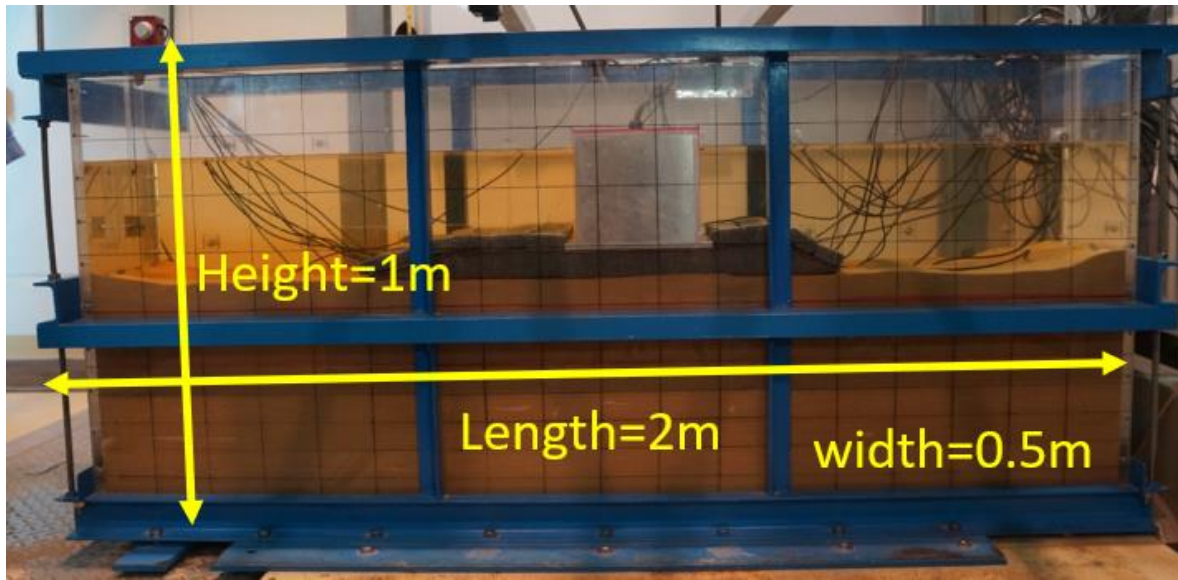
Size of the soil box (open top) is 1.0m(L) x 0.5m (W) x 1.0m(H). All sides and bottom of the box must be made of *high quality transparent acrylic plates (thickness 20 mm)*. Frame of the box must be of metal (e.g. mild steel). The box must be water tight, no seepage of water is allowed if the box is filled with water and saturated soils. All the weldings, fixtures and fittings like screws for fixing acrylic plate with the metal frame should be provided of approved quality and make. This item must be ready to use in all the respect. Warranty (all parts and as a whole) for the item must be of 02 years. AMC must be of 05 years from the date of purchase for the item. No extra money will be provided for the AMC and warranty. The soil box must be fabricated with the consent/direction of work in-charge/convener, some minor

change can be made at the time of fabrication. The work must be completed as per the detailed drawing and directions of the work in-charge/convener. The soil box is shown in figure 5. Details of the soil box are given as follow:

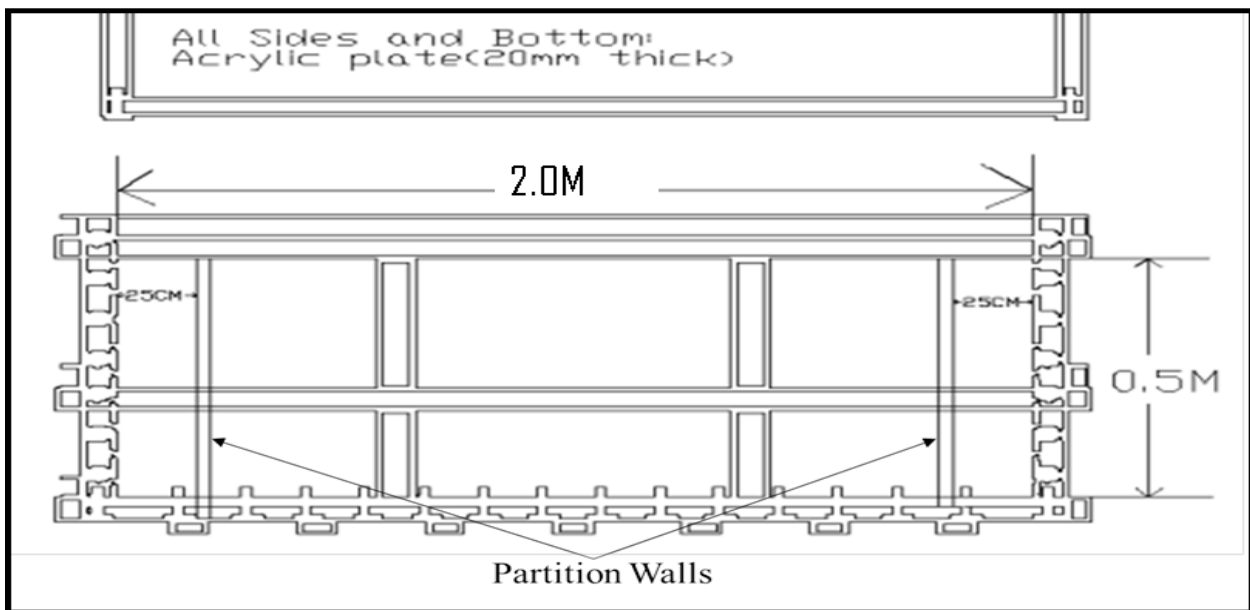
Items	Details
Material	MS Channel and Acrylic sheet (transparent)
Coating on metal channels	Non-corrosive powder coating/painting
Thickness of Acrylic sheet	20 mm



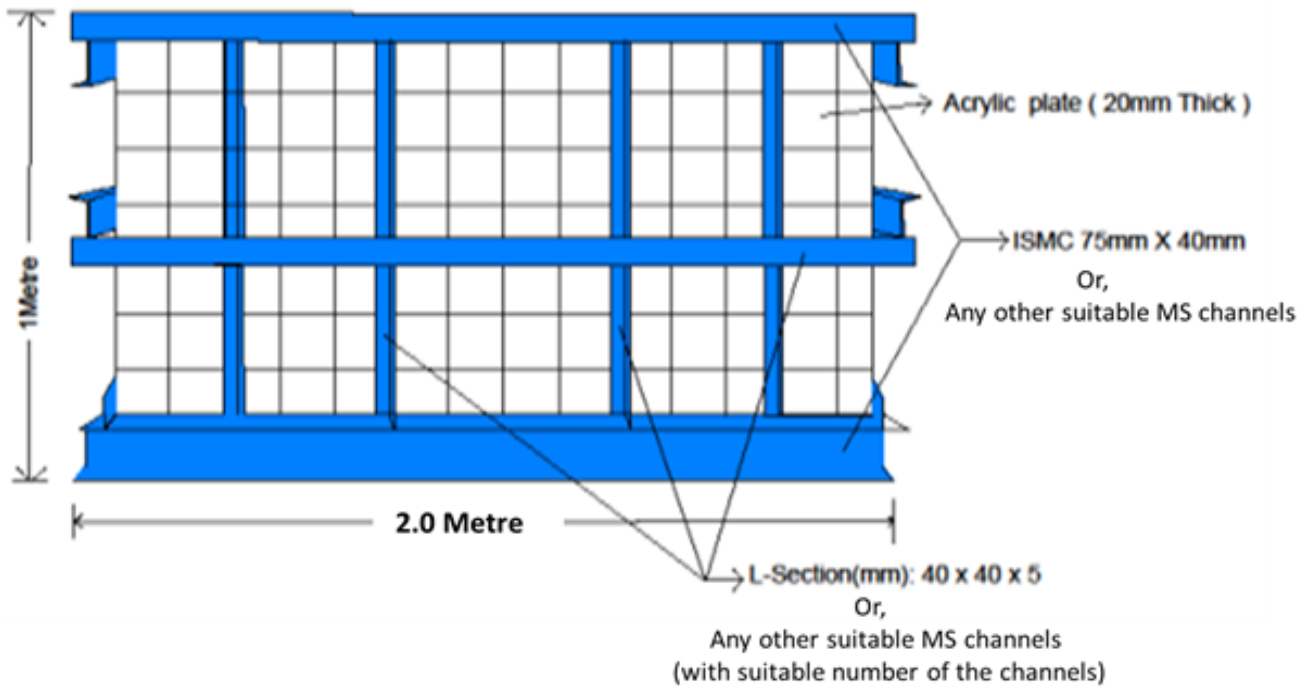
*Figure 1. Cyclic Loading Jack with Servo Cylinder*



*Figure 2. Soil box (this picture is for indication purpose only. Please ignore soils and model inside the soil box)*

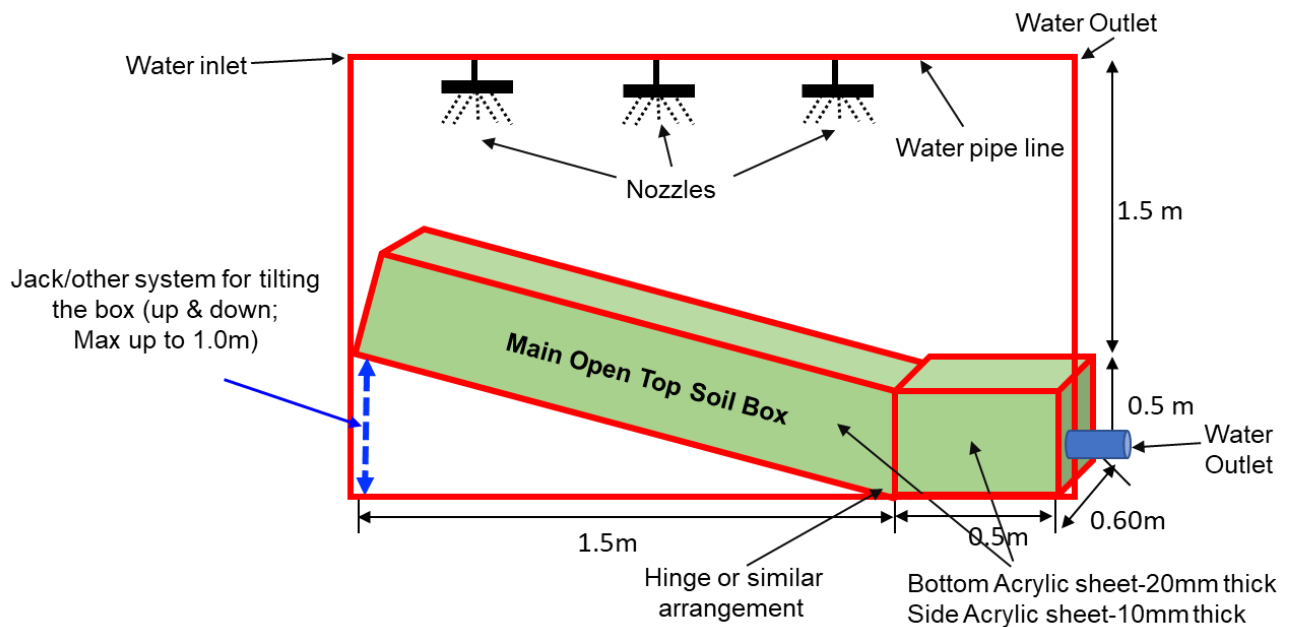


*(a) Top View*

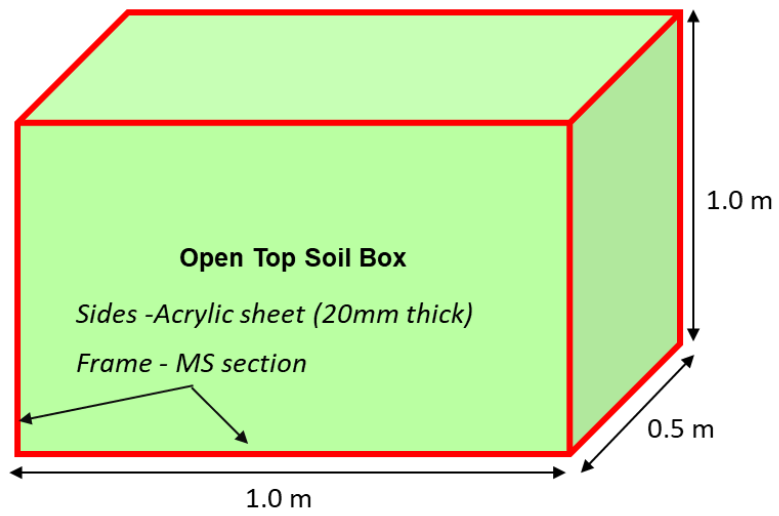


*(b) Front view*

**Figure 3. Drawing of Open Top Soil box [size -2.0m(L) x 1.0m(H) x 0.5m(W)]**



**Figure 4. Tilting Soil box (Open Top)**



**Figure 5. Open Top Soil Box [size - 1.0m(L) x 1.0m(H) x 0.5m(W)]**

**Annexure-'I'****Checklist for BIDDERS**

BIDDERS are to indicate whether the following documents are uploaded by striking out the non- relevant option and the relevant technical bid documents should be in order.

Sl. No.	Documents	Content	Document Attached
1	<b>Technical Bid</b>	Signed copy of tender document should be uploaded	(Yes /No) Pg. No.
2		Self-Attested copy of GST & PAN Number	(Yes /No) Pg. No.
3		Licence certificate for manufacture /supply of the item &Factory license. Registration with EPF and ESI	(Yes /No) Pg. No.
4		Undertaking that the successful BIDDER agrees to give a 3% Performance Security.	(Yes /No) Pg. No.
5		Catalogue of the Product with detailed product specifications.	(Yes /No) Pg. No.
6		Copy of the Balance Sheet	(Yes /No) Pg. No.
7		List of Owner/partners of the firm and their contact numbers (Bidder Information)	(Yes /No) Pg. No.
8		The contract form is given in section 5	(Yes /No) Pg. No.
9		Format of compliance statement of specification as per <b>Annexure-'A'</b>	(Yes /No) Pg. No.
10		Previous Supply Order as per <b>Annexure-'B'</b>	(Yes /No) Pg. No.
11		Declaration of abandoned or suspended any awarded service & Blacklist Certificate. <b>Annexure 'C'</b>	(Yes /No) Pg. No.
12		Integrity Pact. <b>Annexure 'D'</b>	(Yes /No) Pg. No.
13		Bank details of the bidder. <b>Annexure 'E'</b>	(Yes /No) Pg. No.
14		Undertaking that the BIDDER agrees to give " <b>BID SECURITY DECLARATION</b> " <b>Annexure -G</b>	(Yes /No) Pg. No.
15		Document as per specification (if any)	(Yes /No) Pg. No.
1	<b>Financial-Bid</b>	Price bid	( Yes /No )

Seal and Signature of the bidder