INDIAN STATISTICAL INSTITUTE

203, BARRACKPORE TRUNK ROAD

KOLKATA – 700 108

TENDER DOCUMENT

FOR

Repair & rectification of the damaged portion due to severe cyclonic effect 'Amphan' on 20th May 2020 at ISI Campus Kolkata – 700 108.

Price: ₹224.00 (Rupees Two Hundred Twenty-Four) Only.

IN-CHARGE, ENGINEERINGUNIT
P. N. HAKSAR BHAVAN, 1ST FLOOR,
203, B.T. ROAD, KOLKATA – 700108

Name of theTenderer:_____

INDIAN STATISTICAL INSTITUTE
ENGINEERING UNIT
P.N. HAKSAR BHAVAN, 1ST FLOOR
203, B. T. ROAD, KOLKATA – 700 108

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INDIAN STATISTICAL INSTITUTE
ENGINEERING UNIT
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203, B. T. ROAD, KOLKATA – 700 108

NOTICE INVITING TENDER

No.: EU / LT /01/2020-21 **Date:19/06/2020**

1. Sealed tenders in the Institute's contract form are invited from the Enlisted Contractors (Civil Works) of the Institute for the following work:-

Sl. No.	Name of the work	Estimated Cost (₹)	Cost of Tender Document (₹)	Time of Completion
1.	**Repair & rectification of the damaged portion due to severe cyclonic effect 'Amphan' on 20th May 2020 at ISI Campus Kolkata – 700 108.**	**1,70,794.00**	**224.00 (200.00 + GST@12%)**	**30 (Thirty) Days**

2 Tender documents containing Notice Inviting Tender, Instruction to the Tenderer, General Conditions of Contract, Technical Specifications, Form of Tender, Bill of Quantities, etc. can be downloaded from the official website of the Institute **www.isical.ac.in** from **19/06/2020to24/06/2020.**

3. The sealed envelope containing tender document along with the Money Receipt for submission of the cost of Tender Document, subscribing the name of work written on the cover shall be submitted to the **In-charge, Engineering Unit, P.N. HaksarBhavan, 1stFloor, Indian Statistical Institute, 203, B. T. Road, Kolkata –700 108 up to 3.00 P.M. on 24/06/2020 and shall be opened by In charge, Engineering Unit or his representatives on the same day at 3.15 P.M. or thereafter** in presence of the tenderers or their representatives who choose to attend. In caseofclosureofthatdayforsomeunforeseenreason,thesamewillbeopened on the next working day at the same time mentionedabove.

4. Cost of Tender Document of **₹224.00 (Rupees Two Hundred Twenty-Four Only)**shallbedepositedatI.S.I.CashSectiononallworkingdaysfrom**10:45 A.M.to1.45P.M.**againstrequestfordepositoftheamountdulyrecommended by the In-Charge, Engineering Unit or his authorized representative. Thissum is not refundable under anycircumstances.

NOTE: The Money Receipt (in original) shall be enclosed with the Tender, without which the Tender shall be summarily rejected.

5. Each page of the tender document and any corrections in the tender shall have to be signed and stamped by the Tenderer/Authorized Signatory before submission.

6. All rates shall have to be quoted in ink and written both in figures and words. In case of discrepancy in the rate quoted in words & figure, word will prevail. Overwriting/applying correction fluid shall beavoided.

7. The tender shall remain valid for a period of **3 (three) months** from the date of opening and if before expiry of this validity period, the tenderer amends his quoted rates or tender making them unacceptable to the institute and/or withdraws his tender, he shall be liable to be disqualified as an enlisted contractor infuture.

8. In the event of tender being submitted by a partnership firm, it must be signed by each partner thereof or in the even of absence of any partner, it must be signed by a person holding power of attorney authorizing him to doso.

9. The time allowed for completion of the work is **30(Thirty) Days** and will be reckoned from the seventh day after the date of issue ofwork-order.

10. After completion of the work as certified by In-Charge, Engineering Unit, the contractor (successful tenderer) shall maintain the works allotted to him for a period as stated in the Work – Order. Defects arising from supply of faulty materials, bad workmanship etc. during this period shall have to be repaired/mended at contractor's owncost.

11. The acceptance of the tender in part or whole shall rest with the competent authority of the Institute, who does not bind himself to accept the lowest tender and reserves to himself the authority to reject any or all the tenders received without assigning any reasonthereof.

18. Tenders, which do not fulfill any of the above conditions or are incomplete in any respect, are liable to rejection.

In-Charge, Engineering Unit.
Indian Statistical Institute

INDIAN STATISTICAL INSTITUTE
ENGINEERING UNIT
P.N. HAKSAR BHAVAN, 1ST FLOOR
203, B. T. ROAD, KOLKATA – 700 108

INSTRUCTIONS TO THE TENDERER

1. Attention of the tenderer is directed to the conditions of tender and general conditions ofcontract.

2. Thetenderershallvisitandinspectthesiteandonhisownresponsibilityobtain all information, which may be necessary for the purpose of quoting and submitting a tender. No excuse or ignorance as to site conditions and local information will be accepted after awarding of the contract. All costs, charges and expenses that may be incurred in connection with the preparation of his tender shall be borne by him and the Institute accepts no liability whatsoever therefore. The tenderer shall submit in writing if there is any clarification required before the last date & time fixed for submission oftender.

3. The tender specifications, documents and correspondence accompanying the tendershallhavetobesubmitted.Allmeasures,Unitsetc.shownin thetender documents and calculations shall be in metric units. All rates, prices andsums shall be in Indian currency. The language used throughout shall beEnglish.

4. No alteration shall be made by the tenderer in the tender and the tender must be in accordance withspecifications.

5. Tender must be submitted the rates for all the items of work involved and any incompletetenderwillnotbeconsidered.Theitemsforwhichtheratesarenot quotedwillbeconsidered,as'Zero'&theagencyshouldcompletethatitemof work without anyclaim.

6. The time for completion of work is **30 (Thirty) Days** & will be reckoned from the 7thday from the date of receiving Work –Order.

7. Should there be any doubt or obscurity as to the meaning of any of the tender documentsorifanyfurtherinformationisrequired,thetenderermustaddress his enquiry in writing in duplicate to In charge, Engineering Unit, Indian Statistic al Institute, 203, B. T. Road, Kolkata –108. Such enquiries must be submitted not later than one week before the date fixed for submission of the tenders.

INDIAN STATISTICAL INSTITUTE
ENGINEERING UNIT
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203, B. T. ROAD, KOLKATA – 700 108

GENERAL CONDITIONS OFCONTRACT

DEFINITIONS :-

1. The 'Contract' means the Conditions of Contract, Instructions to Tenderers, Form of Tender, Schedule of Materials to be supplied by the Institute, the Specification, Schedule of Quantities and Rates and the Drawings attached hereto andsigned.

2. In the contract the following expressions shall, unless the context otherwise requires, have the meaning, hereby respectively assigned tothem.

   a) The expression 'Work' shall mean the works to be executed in accordance withthecontract–temporaryorpermanent,originalorsubstituted,altered oradditional.

   b) The'Site'shallmeanthelandand/orplaceson,intoorthroughwhichwork is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out thecontract.

   c) The 'Contractor' shallmeanMessers .....and shall include their assigns and/or successors, his/their heirs and administrators.

   d) The 'Director' shall mean the Director of the Indian Statistical Institute,203 B. T. Road, Kolkata – 700 108 or his successors who shall sign the contract on behalf of the Director.

   e) The'Engineer'meanstheIn-Charge,EngineeringUnitoftheInstituteorhis representatives authorized by the Institute for the purpose of control and supervisionoftheworkandtoissueinstructionsandmakecorrespondence with the contractor on behalf of theInstitute.

Clause – 1.

EARNEST MONEY :-

Deleted.

Clause – 2.

SECURITY DEPOSIT :-

Security Deposit shall be recovered by deduction from Progressive Bill(including Final Bill, if necessary) @ 10% of the Gross Value of Work in each Bill, so that the total recovery may not exceed 10% of the Total Value of the Work actually done upto the stage of completion. The entire amount of the deposit so deducted shall be returned to the Contractor at the end of the successful completion of Defect Liability Period (12months).

Clause – 3.

NO INTEREST PAYABLE ON EARNEST MONEY/SECURITY DEPOSIT :-

No interest shall be paid to the Tenderers/Contractors on the amount of Earnest Money/Security Deposit held by the Institute at any stage.

Clause – 4.

FORFEITURE OF DEPOSIT :-

The Security Deposit may be liable to forfeiture at the option of the Institute if the contractor fails to carry out the work or to perform/observe any of the conditions of the contract. The Institute shall also be at liberty to deduct any of their dues fromtheSecurityDepositorfromanysumdueortobecomeduetothecontractor under any other contract.

Clause – 5.

INTERPRETATION OF CONTRACT DOCUMENTS :-

Several documents forming the contract are to be taken mutually explanatory of oneanother.Shouldtherebeanydiscrepancy,ambiguity,omissionorerrorinthe variouscontractdocuments,theEngineershallhavethepowertocorrectthesame and his decision shall be final and binding on the parties on thecontact.

Clause – 6.

CONTRACTOR'S PRICE INCLUSIVE OF ALL COSTS :-

Unlessotherwisespecified,thecontractorshallbedeemedtohaveincludedinhis Tender/Offerallhiscostsforsupplyingandprovidingallconstructionalplantand

tools,temporarywork,materialsbothfortemporaryandpermanentworks,labour including competent supervision thereof, transporting to and from the site and in and about the work, including loading, unloading, fencing, watching, lighting, payment of fees, taxes and duties to the appropriate authorities and other things of every kind required for construction, erection, satisfactory execution and maintenance of the work including rectification of badwork.

The contractor's quoted rates shall also be deemed to have been inclusive of the following :-

a. Keeping the site free of unnecessary obstruction and removal from site of constructional plant wreckage, rubbish, surplus earth or temporary works no longerrequired.

b. Cleaningandremovalfromsiteallsurplusmaterialsofeverykindtoleavethe site clean and tidy after completion of the work, without which payment against final bill may be liable to bewithheld.

c. Making arrangements for deployment of all labourers and workers, local or otherwise including payment for their wages, transport, accommodation, medical insurance and all other statutorybenefits.

d. Making arrangements in and around the site, as per the requirements of local authorities or the In – Charge or his representatives for preventing (1) spread ofanyinfectiousdiseaseslikesmallpox,cholera,plague,malariaetc.(2)illegal storage and distribution of Drugs, Narcotics, Alcoholic Liquor, Arms and Ammunitions (3) unlawful or disorderly conduct of the contractor or his sub–contractor'sworkmen.

Clause – 7.

CONTRACTOR TO SUPERVISE THE WORKS :-

Necessary and adequate supervision shall be provided by the contractor during executionoftheworksandaslongasthereaftertheEngineershallconsiderduring the maintenance period. The contractor or his competent and authorized agent or representative shall be constantly at site and the contractor shall inform the Engineer in writing about such representative/agent of him atsite.

Clause – 8.

CONTRACTOR TO SUPPLY ALL MATERIALS AS PER REQUIREMENT :-

Unless stipulated otherwise in the contract, all materials required for the work should be procured and supplied by the contractor with the approval of the Engineer and subject to subsequent testing as may be required by him. The Engineer shall exercise his sole discretion to accept or reject such materials.

Clause – 9.

CONTRACTOR TO ARRANGE FOR TESTING AT HIS OWN COST:-

Unless stipulated otherwise in the contract, the cost of any test required by the Engineerinrespectofmaterialsandworkmanshipdeployedontheworksshallbe borne by thecontractor.

Clause – 10.

CONTRACTOR TO REPLACE MATERIALS/WORK NOT ACCEPTABLE :-

The Engineer shall have the power to inspect any material and work at any time and order at any time --- (1) for removal from the site any material which in his opinion is not in accordance with the contract or his instruction; (2) forthe substitution of proper and suitable materials; (3) the removal or proper execution of any work, which in respect of material or workmanship in not in accordance withthecontractorhisinstructions.Thecontractorshallcomplywithsuchorders at his own expense and within the time specified in order. If the contractor fails tocomply,theEngineershallbeatlibertytodisposeanysuchmaterialsandre-do any work by engaging any outside agency at the risk and expense of contractor after giving him a written prior notice of 7days.

Clause – 11.

CONTRACTOR TO SEEK APPROVAL OF ENGINEER BEFORE COVERINGANY PORTION OF WORK :-

No work shall be covered up and put out of view by the contractor without approval of the Engineer and whenever required by him, the contractor shall uncoveranypartorpartsoftheworkormakeopeningsinorthroughthesameas may be directed by the Engineer from time to time and shall reinstate or make goodthosepartofworksthusaffectedtothesatisfactionoftheEngineer,allatthe cost of thecontractor.

Clause – 12.

MATERIALS AND WORKS :-

Unless stipulated otherwise in the contract, all materials, workmanship and methods of measurement shall be as per PWD (West Bengal) schedule/relevant codes of the Bureau of Indian Standards (Latest Revisions) and the written instructionoftheEngineer.Wherenospecificreferenceisavailableinthecontract, thematerialsandworkmanshipshallbeofthebestoftheirrespectivekindstothe satisfaction of theEngineer.

Clause – 13.

CONTRACTOR TO SUBMIT HIS PROGRAMME OF WORK :-

Whenever required bythe Engineer, the contractor shall submit to him the details of his (a) Programme for execution of the work, (b) Proposed procedure and methodsofwork,(c)Proposeddeploymentofplant,equipment,labour,materials and temporary works. The submission to and/or any approval by the Engineer shall not relieve the contractor of any of his obligations under the contract. If for any reason the contractor be unable to adhere to this earlier programme, he shall submit his revised programme for completion of work with the stipulated time whenever asked to do so.

Clause – 14.

CONTRACTOR CANNOT SUBLET THE WORK :

Thecontractorshallnotdirectlyorindirectlytransfer,assignorsubletthecontract or any part thereof without the prior permission of the Engineer. Even if such permission be granted, the contractor shall remain fully responsible for any default,neglect,badworkmanshipandunsatisfactoryprogressofworkofanysub – contractor or his agents.

Clause – 15.

APPLICABILITY OF LAWS ON THE CONTRACT :-

The contract shall be governed by all relevant Indian Acts as applicable only within the jurisdiction of the High Court at Calcutta including the following Acts:

a) The Indian Contract Act,1872.
b) The Workmen's Compensation Act,1923.
c) The Minimum Wages Act,1948.
d) The contract labour (Regulation and Abolition) Act,1970.
e) The Indian Arbitration Act, 1940 (in case of a definiteArbitration Agreementonly).

Clause – 16.

PAYMENT ON THE BASIS OF MEASUREMENTS AT AGREED RATES :-

All payments shall be made to the contractor on the basis of measurements of actual work done, as recorded in the Institute's Measurement Books and at accepted Tendered or Agreed Rates, as the case may be, except as otherwise providedintheContractandwhentheEngineerdecidesanyotherrateforchange in the scope of work or omission, if any, on the part of thecontractor.

Clause – 17.

RECORDING OF MEASUREMENTS :-

Measurements for works done shall be progressively taken by the Engineer and entered in the Institute's Measurement Book, at intervals deemed suitable and properbyhim.Thecontractororhisdulyauthorizedrepresentativesshallremain present at the time of such measurement and assist the Engineer in every manner required by him. After the measurement taken have been entered in the Measurement Book, the contractor or his authorized agent shall sign & stamp the Measurement Book at the end of such measurement, as a token of acceptance of all such measurements, recorded above and prior to suchsignature.

Clause – 18.

CONTRACTOR TO PREPARE AND SUBMIT HIS BILLS :-

Based on the quantum of work and the value thereof computed in the Measurement Book, the contractor shall type out his bill and submit the same to the Office of the Engineering Unit in duplicate, duly signed & stamped. The Measurement Book will not be handed over to the contractor but he will obtain the abstracts of quantities, amounts and recoveries to type out the bill.

Clause – 19.

RECOVERY FOR OVER-PAYMENT :-

No Certificate of the Engineer shall protect the contractor against or prevent the Institute from obtaining repayment from the contractor, in case of the Engineer over certify for payment or the Institute over-pay the contractor on any account.

Clause – 20.

INTEREST NOT ADMISSIBLE TO THE CONTRACTOR :-

No claim for interest shall be admissible to the contractor at any stage and in respect of any money or balance or Bank Guarantee, which may be due to the contractor from the Institute, owing to dispute or otherwise or for any delay on thepartoftheInstituteinmakingRunningAccountorfinalpaymentorotherwise.

Clause – 21.

ENGINEER'S POWER TO VARY THE WORKS :-

The quantities set out in the Bill of Quantities of the Tender shall be treated as estimated quantities of the work and the Engineer shall have the power to order the contractor in writing to make any variation of the quantity, quality or form of the works or any part thereof that may, in his opinion, be necessary.

Clause – 22.

PAYMENT FOR EXTRA/ADDITIONAL/SUBSTITUTED WORK :-

All extra, additional or substituted work done or work omitted by order of the Engineershallbevaluedonthebasisoftheratesandpricessetoutinthecontract, if in the opinion of the Engineer, the same shall be applicable. If the contract does not contain any rates or prices directly applicable to the extra, additional or substitutedwork, then the Engineer may decide the suitable rates on the basis of P.W.D. Schedule of Rates or current market rates. In all cases the Engineer shall solely determine the suitable rates in the manner deemed by him as fair and reasonable, and his decision shall be final and binding.

Clause – 23.

EXTENSION OF COMPLETION TIME:-

Shouldthequantumofextraoradditionalworkofanykindordelayedavailability of free work site or Institute's material's to be supplied as per contract or exceptionally adverse climatic conditions and natural phenomenon or strikes, lockouts, civil commotions or other special circumstances of any kind beyond the control of the contractor, cause delay in completing the work, the contractor shall apply to the Engineer in writing for suitable extension of completion time within seven (7) days from the date of occurrence of the reason and the Engineer shall thereupon consider the stated reasons in the manner deemed necessary and shall eitherrejecttheapplicationofdetermineandallowinwritingtheextensionperiod as he would deem proper for completion of work with or without the imposition of 'Liquidated Damage' (Clause No. 26 hereof) on the contractor and his decision shall be binding on thecontractor.

Clause – 24.

LIQUIDATED DAMAGE :-

If the contractor fails to complete the work within the stipulated time or such extensionthereofascommunicatedbytheEngineerinwritingthecontractorshall payascompensation(LiquidatedDamage)totheInstitute@½%(halfpercent)of thetotalvalueofthework(contractvalue)foreveryweekorpartthereofthework remainsunfinishedsubjecttoamaximumof10%ofthesaidvalueofwork.

Withoutprejudicetoanyoftheirlegalrights,theInstituteshallhavethepowerto recoverthesaidamountorcompensation/damagefromanyamountdueorlikely to become due to the contractor. The payment or deduction of such compensation/damage shall not relieve the contractor from his obligation to complete the work or from any of his other obligations/liabilities under the contractandincaseofthecontractor'sfailureandattheabsolutediscretionofthe Engineer, the work may be ordered to be completed by some other agency at the risk and expense of thecontractor.

Clause – 25.

DEFAULT OF THE CONTRACTOR AND TERMINATION OF CONTRACT :-

Without being liable for any compensation to the contractor, the Institute may, in its absolute discretion, terminate the contract and enter upon the site and works and expel the contractor therefrom after giving him a minimum 3 (three) day's notice in writing, due to occurrence of any of the following reasons and decision oftheInstituteinthisrespect,ascommunicatedbytheEngineer,shallbefinaland conclusive.

1. The contractor has abandoned thecontract.
2. In the opinion of the Engineer, either the progress or quality of work is not satisfactory or the work is not likely to be completed with the stipulated time on account of the contractor'slapses.
3. The contractor has failed to commence the works or has without any lawful excuseunderanytheseconditions,haskepttheworksuspendedforatleast15 days despite receiving the Engineer's written notice to proceed with thework.
4. The contractor has failed to remove materials from site or to dismantle or demolishandreplaceworkfor7daysafterreceivingfromtheEngineerwritten noticestatingthatthesaidmaterialsorworkwerecondemnedandrejectedby him under theseconditions.
5. The contractor is not executing the works in accordance with the contract or is persistently or flagrantly neglecting to carry out his obligations under the contract.

In all such cases of termination of work, the Institute shall have the power to complete the work through any other agency at the contractor's risk and expense and the contractor shall be debited any sum or sums that may be expended in completing the work beyond the amount that would have been due to the contractor, had he duly completed the whole of the work in accordance with the contract. The Institute shall have the power to retain all money due to the contractor until the work is completed by other agency.

Clause – 26.

MAINTENANCE OF WORK :-

Oncompletionofexecutionoftheworkthecontractorshallmaintainthesamefor a period, as specified in the work-order, from the date of completion of the work as noted in the Measurement Book. Any defect/default, which may appear in the work during the aforesaid maintenance period, arising, in the sole opinion of the Engineer, from materials or workmanship not in accordance with the contract or the instruction of the Engineer, shall, upon the written notice of the Engineer, be amended and made good by the contractor at his own cost within seven (7) days of the date of such notice, to the satisfaction of the Engineer, failing which the Engineershallhavethedefectsamendedandmadegoodthroughotheragencyat the contractor's risk and cost and all expenses, consequent thereon or incidental thereto, shall be recoverable from the contractor in any manner deemed suitable by theEngineer.

Clause – 27.

REFUND OF SECURITY DEPOSIT :-

On completion of all obligations under the contract including that in the maintenance period, the contractor may apply for the refund of his Security Deposit. Upon recommendation of the Engineer, the Deposit held by the Institute shallbereturnedtothecontractor,aftermakingdeductiontherefrominrespectof any sum due to the Institute from thecontractor.

Clause – 28.

PRICE ESCALATION :-

No price escalation on account of changes in the rates of Materials, Labour, P.O.L. or any other account shall be allowed during currency of the contract.

Clause – 29.

ENGINEER'S DECISION FINAL :-

In all disputes, matters, claims, demands or question arising out of or connected with the interpretation of the contract including the meaning of specifications, drawings, designs and instructions or as to the quality or workmanship or as to the materials used in the work or the execution of the work whether during the progress of the works or after the completion and whether before or after the determination,abandonmentorbreachofthecontractthedecisionoftheEngineer shallbefinalandbindingonallpartiestothecontractandshallforthwithbegiven effect to by thecontractor.

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203, B. T. ROAD, KOLKATA – 700 108

TECHNICAL SPECIFICATIONS

(All I.S. Codes shall be the latest revised ones.)

(A) MATERIALS:

1. BRICKS.

Bricks for general masonry work shall conform to IS : 1077 and for face brick work shall conform to the specifications in IS : 2691.

Bricksforgeneralmasonryworkshallbeof FirstClass(Class–A)quality,kiln burnt, of uniform size, shape and colour, free from cracks, flaws or nosules or free lime and emit clear ringing sound when struck. Fractured surface shall showuniformtexture,freefromgrits,lumps,holesetc..Compressivestrength shall be 105 Kg./Sq. Cm. (minimum). All bricks shall have rectangular faces and sharp straight edges. The bricks shall show no appreciable signs of efflorescence either dry or subsequent to soaking in water. Bricks shall not be dumpedatsitebutshouldbestackedinregulartiers,evenastheyareunloaded to minimize breakage anddefacement.

2. LIME .

Lime shall be stone lime and conform to the specification building lime IS : 712. Lime putty may be prepared from hydrated lime or Quick lime. Hydrated lime shall be mixed with water to form a putty and shall be stored with reasonable care to prevent evaporation for at least 24 hours before use. Quick lime shall be shaked with enough water to make a cream, passed through a No. 0 sieve and then stored with reasonable care to prevent evaporation for at least seven (7) days before use. Lime shall be stored in weatherproof sheds.

3. CEMENT.

Cement used shall generally be Ordinary Portland Cement conforming to IS: 269. If the cement is issued to the contractor by the Institute, the former shall satisfy himself at the time of taking delivery that the quality, quantity and freshnessofcementareuptothespecifiedstandards. Nocomplainlateron

regarding the cement supplied by the Institute shall be entertained and all rectification work done on this account shall be done by the contractor at his own expense. If the cement is supplied by the contractor, the same shall be fresh when delivered and procured from reputed and approved manufacturers. The contractor shall submit the manufacturer's test-certificate for each consignment of cement procured for the works. Cement shall be stored above the ground level in perfectly dry and watertight sheds. The bags shall be stacked in a manner so as to facilitate removal on First-in-First-out basis. Any material considered defective by the Engineer shall not be used by the contractor and shall be removed from the site immediately.

4. COARSEAGGREGATES.

Coarseaggregatesforconcreteshallbeasper IS:383 consistingofhard,strong, durable and well graded pieces of crushed stone (available from quarries of Pakur or Chandil areas) and shall be free from Organic or Clay coatings and otherimpuritieslikedisintegratedstones,softflakyparticlesetc.andanyother material likely to affect the strength, durability or appearance of concrete. Washing of aggregates by approved means shall be carried out, if desired by theEngineer.

Coarse aggregates shall be stored on brick soling or on an equivalent platform so that they do not come in contact with grass, clay, dirt or otherinjurious substances at any stage. Aggregates of different sizes shall be kept in separate stacks.

5. FINEAGGREGATE.

Fine aggregate shall be hard, durable, clean sand obtained from approved source and free from adherent coatings or organic mattersandshall not containclayballs,pelletsandimpuritiesasIronPyrities,Alkalis, Salts, Coal, Micz. shale or other laminated materials in such form or quantities as to adversely affect the strength, durability or appearance of mortar, plaster or concrete. All sand shall be well graded. Sand for concrete shall conform toIS : 383.

6. STEEL.

Reinforcement steel shall be clean and free from loose mill scales, dust, loose rust,oil,greaseorothercoatingswhichmayimpairproperbond.Coldtwisted steelbarsshallconformtoIS:1786,mildsteeltoIS:432andstructuralsteelto IS : 226.

Reinforcement bars shall be stored off the ground and under cover, if desired by the Engineer. If necessary, a coat of cement wash shall be given to the bars to guard against rusting.

7. WATER.

Water shall be clean, fresh and free from organic matters, acids or soluble and other deleterious substances which may cause corrosion, discolouration, efflorescenceetc.

8. SURKI.

Surkishallbemadefromwellburnt1st classbrickbats,groundtopassthrough amesh2mm.eachwayandshallbepreferablycleanandfreefromanyforeign matter.

9. GLASS.

All glasses shall be of specified type, colour visibility and shall be free from cracks, flaws, spick bubbles and blemishes and shall not weight less than7.4 Kg./Sq.Cm. unless otherwise specified.

10. PLYWOOD.

Plywood shall be commercial quality or with decorative surface veener. Unless specifically permitted otherwise, the adhesive used in plywood shall be phenol formaldehyde synthetic resin of B.W.R. type conforming toIS:848.

11. DECORATIVELAMINATES.

Laminate sheets shall be 1.5 mm./1.0 mm. thick and the colour, pattern, finish, texture and source shall be approved by the Engineer.

12. FLUSHDOORS.

Unless otherwise specified, flush doors shall be solid core doors with commercial or decorative faces and hardwood edges. The core shall be of block-board or wood particle board. The thickness shall be as specified the Schedule of Items.

13. PANELDOORS.

Panel doors shall be of teakwood shutter frame unless otherwise specified and panels with teakwood/commercial ply/teakwood particle board as per Schedule of Items.

14. PIPES, VALVE, COCKS, TAPS AND OTHERFIXTURES.

Allpipes,valves,stopcocks,tapsandotherfixturesshallconformtorelevant Indian Standard Specification and shall be of best quality from approved manufacturers. Working pressure, Nominal size and material shall be as per schedule.

15. WHITEWASH.

Whitewashing is to be done with 5 parts of stone lime and one part of shell limewithgum(2Kg./Cu.M.oflime)andindigoasnecessaryandtobemixed as per standardpractice.

16. DRYDISTEMPER.

Dry distemper shall be made from suitable pigments, extenders, lime proofrinters, water soluble binders etc. and shall conform to IS : 427.

17. OIL BOUND WASHABLEDISTEMPER.

O.B. washable distemper shall be of oil emulsion type containing suitable preservatives and shall conform to IS : 428.

18. WATERPROOF CEMENT PAINT.

Waterproof cement paint shall be made from best quality white cement and lime resistant colours with accelerators, waterproofing agents and fungicides. The paint shall conform to IS : 5410.

19. SYNTHETIC ENAMELPAINT.

Synthetic enamel paint shall be made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give a smooth, hard,durableandglossyfinishtoallexteriorandinteriorsurfaces.Thepaint shall conform to IS : 2932 and IS :2933.

20. FRENCHPOLISH.

French polish shall be made from best quality shellac, denatured spirit and other suitable alcohol soluble ingredients and made by a well known approved manufacturer. The material shall conform to IS : 348.

21. SOLINGBRICKS.

SolingbricksshallcomplywithIS:5779.BricksshallbefreefromcracksandotherflawsandlimemodulesThebricksshallhaveasfarassible,plainrectangularfacesandstraightrightanglededgesTheaverage compressive strength shall not be less that 50 Kg./Sq.Cm..

22. OVERBURNT BRICKMETAL.

Brick metal for use in road works shall be made out of over burnt bricks or brick bats and shall be free from dust and other foreign matter.

23. SCREENINGS.

Screeningstofillvoidsinthecoarseaggregatesshallgenerallybeofthesame material as the coarse aggregate. However, where indicated, predominantly non-plastic material as such as Kankar modules, moorum or gravel (other than river-borne rounded aggregate) may also beused.

24. BINDINGMATERIAL.

Binding material to prevent ravelling of water bound macadam shall consist ofafinegrainedmaterialpossessingplasticityindexofbindingmaterialupto 6 which is used as sub-base/base course with bituminoussurface.

25. AGGREGATE FOR BITUMINOUS SURFACEDRESSING.

Aggregatesshallconsistofcrushedstoneorcrushedgravel,asspecified,and shall have clean, strong, durable and fairly cubicle fragments freefrom disintegrated pieces, salt, alkali, vegetable matter, dust and adherent coatings.

26. AGGREGATES FOR BITUMENCARPET.

Aggregatesshallconsistofangularfragmentsandshallbeclean,hard,tough, durable and of uniform quality throughout. They shall be crushed rock or gravel and shall be free of soft and disintegrated material, vegetable orother deleteriousmatter.

27. BITUMEN.

Paving bitumen shall conform to IS : 73 and cut back bitumen to IS : 217. Bitumen emulsion shall conform to IS : 3117.

(B) WORKMANSHIP:

1. SITECLEARING.

The area to be excavated shall be cleared out of fences, trees, logs, bush, stumps, rubbish etc. and leveled up. Before excavation work and after setting out,initiallevelsofthegroundshallbetakenbytheContractorjointlywiththe Engineer.

2. EXCAVATION ANDBACKFILLING.

All excavation shall be as per drawings or as directed and kept free of water and slush by use of adequate dewatering methods and shall not be carriedout below the foundation level of structure close by until required precautions have beentaken.

All back filling shall be done using approved materials free from lumps and clods, roots, vegetations brick bats etc. and compacted in layers not exceeding 250 mm.

3. BRICKSOLING.

Bricks used for soling shall be firmly laid in position over a thick cushion of sand on the ground which has been dressed and consolidated by ramming or light rolling. The surface shall be free from undulations. After laying of each layerofbricks,sandshallbespreadoverandworkedintothejointstopackthe brickstight.

4. BRICKMASONRY.

Bricks soaked by submergence in clean water for at least two hours before use shall only be used. Broken bricks shall not be used. Bricks shall be laid with frogs upwards over full mortar beds. All masonry work shall be true to lines and levels as shown on the drawings or as directed and shall cured for atleast seven days from the date oflaying.

5. POINTING TOMASONRY.

Alljointsofbrickworkshallberakedouttoadepthof10mm.whilethemortar isstillgreen.Afterremovingofallloosedustfromthejoints,mortarconsisting of 1 part cement and 3 parts clean, well graded sand shall be pressed carefully into the joints and finished suitably. The pointed surface shall be cured for at least 3days.

6. PLASTERING.

Mortarforplasteringshallbeasspecifiedintheschedule ofitems.Cementand sand shall be mixed dry on a watertight platform and minimum water added toachieveworkingconsistency.Noplasterwhichhasstoodformorethanhalf an hour shall be used. Plaster when more than 12 mm. thick shall be applied in two coats – the base coat to be thicker than the finishing coat. The basecoat shall be allowed to dry and shrink before applying the second coat of plaster. All plastered surfaces after laying shall be watered for a minimum period of seven (7)days.

7. NEAT CEMENTFINISH.

Immediatelyafterachievingatrueplasteredsurfacewiththehelpofawooden straight edge, the entire area shall be uniformly treated with a paste of neat cement at the rate of One Kg./Sq.M. and rubbed smooth with atrowel.

8. CONCRETE.

Concreteplainorreinforced,shallbeoftheGradeorproportionasmentioned intheschedule.Thespecifiedproportionisbyvolumeindryroddedcondition of the different constituents. Well graded and washed aggregates measuredin suitable boxes shall be used. The unit of measurement for cement shall be bag of cement weighting 50 kgs. and this shall be taken as 0.035 cubic metre. Normally all structural concrete shall be mixed in mixer machine for duration notlessthan2minutesandsuitablyvibrated.Thequantityofwatertobeused foreachmixof50Kg.cementtogivetherequiredconsistencyshallnotbemore than34litresfor1:3:6mix.,32litresfor1:2:4mix.,30litresfor1:1.5:3 mix and 27 litres for 1 : 1 : 2 mix.

9. LIME TERRACING.

Lime terracing on roof shall be composed of brick aggregate of 25 mm. (nominal) size unless otherwise specified, surki and bisra lime in the specified proportion. Lime concrete shall be laid (and not thrown) in a single layer and spread and rammed with wooden rammers of weight not exceeding 2 kgs. to the specified average thickness, slopes and levels. The concrete shall be used when it is quite fresh. The concrete shall then be further consolidated by two beatingtheconcreteinunisionwithwoodenthappies(weight1to2kgs.)for3 or more days until the mortar is almostset.

10. WHITEWASHING.

The surface shall be cleared of all loose materials and dust. All holes and irregularities of the surface shall be filled up with lime putty and allowed to drybeforeapplicationofthewash.Onecoatofwhitewashshallconsistoffour consecutive strokes of the brush – one horizontally from right to left and the next from left to right and the third stroke from bottom to upward and the fourth from top to downward before the previous stroke dries. Each coat shall be allowed to dry before the next coat isapplied.

11. WATERPROOF CEMENTPAINT.

Surface to be coated with cement paint shall be washed and brusheddown. As soon as the moisture has disappeared, the surface shall be given one coatofpaint.Careshallbetakensothatthepaintdoesnotdryouttoorapidly. After4to6hours,thewatershallbesprinkledoverthesurfacetoassistcuring and prevent cracking. After the first coat has dried (24 to 48 hours) the second coat shall be applied in a similar manner. The finished surface shall be kept moist by occasional sprinkling with water for seven days afterpainting.

12. DRYDISTEMPER.

New plastered surface shall be allowed to dry for at least two months. For cement plastered surface, the surface shall be washed with a solution of 100 gms. of Zinc Sulphate to One litre of water and then allowed to dry. Dry distempering shall be done as per the manufacturer's instruction.

13. OIL BOUND WASHABLE DISTEMPER/SYNTHETIC ENAMELPAINT.

These shall be applied on properly primered surface and shall be carried out strictly as per the manufacturer's instructions.

14. CONTROL OF LAYER THICKNESS (ROADWORKS).

Average thickness of a layer shall not be less than the specified thickness. In addition, spot reduction in thickness shall not exceed 15 mm. in case of sub-bases and base courses of water bound macadum and bitumen macadum and 6 mm. in case of surface wearing courses of bitumen carpet.

15. PREPARATION OF ROADSURFACE.

Surface to be primed shall be swept clean, free from dust, dirt or other deleterious matter by hand brushing, with wire brushing – brass brooms and finally by fanning the cleaned surface with gunny bags and for best results be dry. Large irregularities, pot-holes, depressions etc. shall be repaired prior to priming.

16. APPLICATION OF BITUMINOUSPRIMER.

Bituminousprimershallnotbeappliedonawetsurfaceorduringduststorms or when the weather is foggy or rainy. After the surface to be primed hasbeen prepared the bituminous primer shall be sprayed uniformly over the dry surface using mechanical sprayers. The primer shall be applied at the rate indicated.

17. CURING.

The primed surface shall be allowed to cure for not less than 24 hours or till it is cured. During this period, the traffic shall be kept off the primed surface.

SUGGESTED BRAND NAME OF MATERIALS ARE TO BE USED (BUILDING)

SL. NO.	ITEM	SUGGESTED BRAND NAME OR SIMILAR (APPROVED BY THE AUTHORITY)
01.	Cement	Ultratech / Lafarge-Concreto / ACC Super
02.	White Cement	Birla White / JK White
03.	Steel	TATA / SAIL
04.	Ceramic Tiles	Kajaria / Johnson / Somani / Orient
05.	Vitrified Tiles	Marbonite / Kajaria Plus / Somani / Orient
06.	Vinyl Flooring	Tuskar / Poly Floor/ Armstring / Marblex
07.	Bonding Agent	SIKA Highbond / CICO Bond EPO
08.	Water Proofing Admixture	SIKA Plastocrete Super / CICO Superplast
09.	Rust Removing Agent	SIKA Rust off
10.	Anticorrosive Paint	SIKA Rust top
11.	Tile Fixing Polymerised Adhesive	SIKA Tilofix
12.	Epoxy Grout for filling Tile joint	SIKA Tilogrout
13.	HMHDPE Felt	Multiplus / Indolit
14.	White Cement Based Wall Putty	Birla White Wall care
15.	Acrylic Distemper	ICI Maxilite Distemper / Berger Bison / Asian Paints Tractor Acrylic Distemper
16.	Interior Acrylic Emulsion	
	Standard Acrylic Emulsion	ICI Dulux 3-in-1 Stayclean / Barger Breathe Easy / Asian Paints Premium Emulsion
	Luxury Acrylic Emulsion	ICI Dulux Velvet Touch / Barger Silk /Asian Paints Royale luxury Emulsion
17.	Synthetic Enamel Paint	
	Standard	ICI Dulux Gloss / Berger Luxol High Gloss Enamel/ Asian Paints Premium Semi Gloss Enamel
	Luxury	ICI DuluxSupergloss 5-in-1
18.	Exterior Cement Based Paint	Snowcem Plus / Durocem plus / Seacem Plus
19.	Exterior Acrylic Emulsion	
	100% Premium Acrylic	ICI Dulux Weather Shield / Berger Weather Coat All Guard / Asian Paints Apex
	Super Protective 100% Acrylic	ICI Dulux Weather Shield Max / Berger Weather Coat Smooth / Asian Paints Apex Ultima
20.	P.V.C. Door	Sintex / Duroplast
21.	Medium Density Fibre Board	Century
22.	Particle Board	Century / Alishan
23.	Boiling Water Resistant (BWR) Ply	Greenply (Greenclub) / Century / Alishan
24.	Decorative Laminate	Greenlam / Century
25.	Mortice / Cylindrical Lock	Godrej
26.	Floor Spring	Garnish
27.	Hydraulic Door Closure	Garnish / Ranjan / Godrej
28.	Aluminium Section	Indal
29.	Non Asbestos Fibre Cement Board Ceiling	Everest
30.	Fly/Mosquito proof nylon net	NetlonPolybit (256 meshes per Sq. Inch.)

SUGGESTED BRAND NAME OF MATERIALS ARE TO BE USED (PLUMBING)

SL. NO.	ITEM	SUGGESTED BRAND NAME OR SIMILAR (APPROVED BY THE AUTHORITY)
01.	G.I. Pipes	TATA (Medium Duty), Jindal (Non-TATA)
02.	G.I. Fittings	HB / R
03.	P.V.C. Pipes	Oriplast / Supreme / Dupal (Schedule-80)
04.	P.V.C. Tank	Sintex / Patton
05.	P.V.C. Cistern	ParrywareSlimline
06.	P.VC. Closet Seat Cover	ParrywareSlimline
07.	P.V.C. Connector Pipe	Prayag
08.	P.V.C. Ball Cock	Prayag
09.	P.V.C. Bib Cock / Stop Cock/ Angular Stop Cock / Pillar Cock	Prayag
10.	P.V.C. Shower	Prayag
11.	P.V.C. Waste Fittings	Prayag
12.	I.P.W.C. / E.PW.C. / Urinal	Parryware / Nycer / Hindware
13.	Basin / Sink	Parryware / Nycer / Hindware
15.	Gate Valve	Leader / Zoloto
16.	C.P. Bib Cock / Stop Cock/ Angular Stop Cock / Pillar Cock	Essco / Jaquar / Marc
17.	C.P. Shower & Shower Arm	Essco / Jaquar / Marc
18.	C. P. Waste Fittings	Essco / Jaquar / Marc
19.	C. P. Bottle Trap	Essco / Jaquar / Marc

FORM OF TENDER

Name of the work:Repair & rectification of the damaged portion due to severe cyclonic effect 'Amphan' on 20th May 2020 at ISI Campus Kolkata – 700 108.

NIT No.: EU / LT / 01 /2020-21Date:19/06/2020

To
The In-Charge
Engineering Unit
Indian Statistical Institute
203, B. T. Road, Kolkata – 700 108.

I/We_____
of_____
havingexaminedthesiteofworks,inspectedthedrawingsandreadtheSpecifications,General Conditions of Contract and Conditions of Tender, hereby tender and undertake to execute and complete all the works required to be performed in accordance with the Specifications, Bill of Quantities, General Conditions of Contract and Drawing (s) at the rates and prices set out in the annexed Bill of Quantities within the stipulated completion period and in the event of out tender being accepted in full or part, I/We also undertake to enter into a Contract Agreement in the Format approved by theInstitute.

I/We have deposited with the Cash Section,ISI, ₹_____ _____(Rupees _____ _____) vide receipt No._____dated_____as Cost of Tender Document.

I/Weagreethattheperiodforwhichthetendershallremainopenforacceptanceshallnotbe less than 3 (three)months.

Date:_____ _____
(Signature of theTenderer)

_____
(Seal of the Tenderer)

Name ofthetenderer:_____

PhoneNo.:_____

_____

MobileNo.:_____

E-mailID: _____

Address:_____

_____

_____

Percentage BOQ

Tender Inviting Authority : In-charge, Engineering Unit.

Name of the work:Repair & rectification of the damaged portion due to severe cyclonic effect 'Amphan' on 20th May 2020 at ISI Campus Kolkata – 700 108.

NIT No.: EU / LT / 01 /2020-21 Date : 19/06/2020

Bidder Name :_____

Sl No	Description of Items	Unit	Quantity	Rate (₹)	Amount (₹)
1	Galvanised corrugated iron sheet work (excluding the supporting frame work) fitted and fixed with 10 mm. dia J or L hook-bolts, limpet and bitumen washers and putty completewith 150 mm. end lap and one corrugation minimum side lap. (Payment to be made on area of finished work)(GCI sheet to be supplied by contractor) With 0.60 mm thick sheet	SqM	40.00	605.00	24200.00
2	Bamboo walling made of crushed bamboo or split bamboo or bamboo twigs(kanchis) as directed and tied with necessary stiffners of split bamboo (in pairs) made of 100mm dia. Bamboo fitted and fixed complete (but excluding the cost of supporting frame work)	SqM	40.00	127.00	5080.00
3	Removal of rubbish,earth etc. from the working site and disposal of the same beyond the compound, in conformity with the Municipal /Corporation Rules for such disposal, loading into truck and cleaning the site in all respect as per direction of Engineer in charge	Cum	20.00	166.00	3320.00
4	Supplying, fitting & fixing of Aluminium fixed partion wall of all aluminium sections viz top, bottom and side member, intermediate member, glazing clip made of Aluminium Alloy Extrusions conforming to IS: 733-1983 and IS: 1285-1975, annodized conforming to IS:1868-1983, fitted with all other accessories viz. EPDM gusket,cleat, angle screws etc. including labour charges for fitting and fixing of aluminium fixed partition wall with glass / panel board all complete as per architectural drawings and direction of Engineer-in-charge.(Excluding cost of glass/ panel board, 10-12 Micron thickness nnodizing film.Natural white.	Kg	80.00	391.00	31280.00

5	Supplying, fitting & fixing of partly glazed partly panelled or fully glazed single leaf Aluminium swing door of all aluminium sections viz door frame (top and side frame), shutter(top rail, bottom rail, lock rail, door vertical) , glazing clip made of Aluminium Alloy Extrusions conforming to IS: 733-1983 and IS: 1285-1975, annodized conforming to IS:1868-1983, fitted with all other accessories viz. EPDM gusket,cleat, angle screws etc. including labour charges for fitting and fixing of aluminium door with door spring,/aluminium hinges, glass / Panel board all complete as per architectural drawings and direction of Engineer-incharge.(Excluding cost of glass/ panel board, door spring/ Al hinges, door closer, door stoper, handle, tower bolt and locking arrangment etc) 10-12 Micron thickness Annodizing film Natural white	Kg	75.00	385.00	28875.00
6	Supplying bubble free float glass of approved make and brand conforming to IS: 2835-1987.12mm thick cleared toughened glass coforming to IS: 2553-1992	SqM	5.00	3,235.00	16175.00
7	Supplying best Indian sheet glass panes set in putty and fitted and fixed with nails and putty complete. (In all floors for internal wall & upto 6m height for external wall, 4 mm thick	SqM	70.00	536.00	37520.00
8	M.S.or W.I. Ornamental grill of approved design joints continuously welded with M.S, W.I. Flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor.Grill weighing above 10 Kg./sq.mtr and up to 16 Kg./sq. mtr.	Kg	115.00	72.38	8323.70
9	Supplying, fitting and fixing of false ceiling framework with powder coated exposed G.I. grid suspension system (E-Grid T 2430/1510 or equivalent load carrying capacity with mid span deflection not exceeding 1/360 span with hanger spacing of 1200mm c/c) consisting of Main Runner 3600 mm long, Cross Tee 1200 mm / 600 mm long and Wall Angle. The Wall Angle shall be fixed on PVC Dash Fasteners on the perimeter of the wall by steel screws with distance 300mm c/c. The Main Runners to be placed @ 1200 mm. The Cross Tee 1200mm will be inserted in the pre-cut slots of Main Runner at regular interval of 600 mm to form a modular grid of 1200mm X 600mm. Additional Cross Tees of 600 mm shall be placed perpendicular to the Cross Tee 1200 mm long to finally form a grid of 600 mm X 600 mm. Grid of module size 600 mm X 600 mm shall be supported by 6 mm dia G.I. wire from purlins / soffit. all complete as per drawing & directions of Engineer in- charge.	SqM	15.00	341.00	5115.00

10	Supplying, fitting & fixing OW Acoustic Board (mineral Fibre Acoustic Ceiling Tiles) of approved patern and size595mm X595mm with NRC value > 0.65 should be placed in the Grid module to form a false ceiling all complete as per drawing & direction of Engineer - in- Charge.False ceiling with 15mm thick OW Acoustic Board/Tiles.	SqM	15.00	727.00	10905.00
	Total Amount in Words :				**170793.70**
Total Amount in Figure: Rupees One Lakh Seventy Thousand Seven Hundred Ninety Three Paisa Seventy Only.					

Quoted Percentage in Figure :_____

(Below/At par/ Above)

Quoted Percentage in Words :_____

Quoted Amount in Figure :_____

Quoted Amount in Words : Rupees_____

_____**Only.**

_____

Date : **Signature of the Tenderer**

_____

Seal of the Tenderer

Name of the Tenderer:_____

Address :_____

_____

_____