WEST BENGAL LIVESTOCK DEVELOPMENT CORPORATION LIMITED
(A Govt. Of West Bengal Undertaking)
LB-2, Sector-III, Salt Lake City, Kolkata – 700 106
Telefax: (033)-2335 5298 E-mail: info@wbldc.in
Website: www.wbldc.in Toll Free No. 18001208243

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NIT No: WBARD/WBLDC/NIT-599e/2023-24 **Date of Issue: 01/11/2023**

SET OF TENDER DOCUMENTS
For

Establishment of modern laboratory with high end lab equipment with Three Years Comprehensive Annual Maintenance (c-AMC) for translational research on laboratory animal at Kalyani, Nadia -741235 under West Bengal Livestock Development Corporation Limited, LB-2, Sector-III, Salt Lake, Kolkata-700106 for 2023-24 for 2023-24

Each Set Contains:-

1. Notice Inviting e-Tender.
2. General Instruction to Bidders.
3. Eligibility Criteria for Participation in the Tender.
4. Evaluation of Tender.
5. Tender Terms & Conditions.
6. Scope of Work / Job Schedule (Annexure-A)
7. Forms-I, II, III, IV, V & Check List - VI.

DATE OF PUBLICATION OF e-TENDER (ONLINE): 01/11/2023 FROM 06:55 P.M.

STARTING OF BID SUBMISSION (ONLINE): 01/11/2023 FROM 06:55 P.M.

PRE BID MEETING (Mandatory) TO BE HELD ON 10/11/2023 at 1:00 P.M., H.Q.

LAST DATE FOR ON LINE SUBMISSION OF TENDER: 22/11/2023 UP TO 11:30 A.M.

OPENING OF TECHNICAL BID: 24/11/2023 FROM 11:30 A.M. onwards.

OPENING OF FINANCIAL BID: TO BE NOTIFIED LATER ON.
TENDER FEES: NIL

ESTIMATED TENDER VALUE PUT TO TENDER: Rs. 14,65,00,000/-
(including GST, Cess, other taxes & all other charges)

EARNEST MONEY DEPOSIT: 2% OF THE ESTIMATE

(Dr. Gouri Shankar Koner)
Managing Director
W.B.L.D.C. Ltd.

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NOTICE INVITING e-TENDER

The Managing Director, West Bengal Livestock Development Corporation Ltd., LB-2, Sector-III, Salt Lake City, Kolkata–700106 invites on line bids (in two bid system) from reputed resourceful, bonafide State level working agencies, having adequate experience and expertise in similar nature of work specially in Govt./Semi Govt./ Public sector Undertakings, registered under the relevant laws in India and fulfilling requisite eligibility criteria as stated in the e-NIT for ***"e -Tender on Establishment of modern laboratory with high end lab equipment with Three Years Comprehensive Annual Maintenance (c-AMC) for translational research on laboratory animal at Kalyani, Nadia -741235 under West Bengal Livestock Development Corporation Limited, LB-2, Sector-III, Salt Lake, Kolkata-700106 for 2023-24 for 2023-24".***

1) Earnest Money **2% (Two percent) of the amount put to tender** only is to be remitted online through Govt. of West Bengal e-Tender portal (https://wbtenders.gov.in). The payment transaction slip / receipt in pdf format is to be uploaded along with the statutory documents for tender submission.
2) In case bidder wants to be exempted from EMD submission, a valid Exemption certificate is to be scanned & uploaded along with the statutory documents in the e-tender portal for participation in the tender.
3) After publication of e-tender Notice in the Medias, detailed terms & conditions, BOQ (Bill of Quantities) may be obtained from the website https://wbtenders.gov.in at free of cost. Submission of tender by the bidder can be made with the help of Class- 3DSC (Digital Signature Certificate) in this website https://wbtenders.gov.in. Notice inviting e-tender will **only be viewed** in the Corporations website www.wbldc.in simultaneously.
4) Tenders should normally be floated in two parts one Technical Bid (BID-A) and other Financial Bid (BID-B).
5) Tender must be supported by :

A. TECHNICAL BID : 'BID-A'

(a) STATUTORY COVER containing the following documents:

PART 1 (SINGLE FILE MULTIPLE PAGES SCANNED):

1	Upload NIT with Seal & Signature on every pages.
2	Upload Scanned Application in the prescribed format (Form - I)
3.	Upload Declaration by the Tenderer (Form - II)
4.	Upload Certificate from Chartered Firm in the official pad (Form - III)
5.	Upload Affidavit Proforma(Form - IV) and Working (Credential) Format (Form-V)
6.	Upload **Machineries & Technical Brochure** as well as Design / Drawing of Job ***(as per Scope of Work***.) must be provide/upload by the intending bidder(s).
7.	Upload Scanned Check List in the prescribed format (Form-VI) & Upload All Documents / Certificates

(b) NON-STATUTORY COVER/MY SPACE containing the following documents:

Sl. No.	Category	Sub Category Description
1	CERTIFICATES – ✓ All valid up to date. ✓ All certificates are to be furnished in English Vernacular ✓ Affidavit are not valid ✓ Scanned original copy	✓ PAN Card of the authorized signatory ✓ Prof. Tax clearance certificate with challan valid up to **31/03/2024.** ✓ GST Registration certificate. ✓ IT returns of 2022– 2023 Financial year. ✓ Trade License valid upto31/03/2024. ✓ Valid documentary proof of: ✓ The agency / company should have minimum annual turnover of Rs. 600 lakh ✓ Certificate of updated Income tax Return ✓ Audited balance sheet for the last 3 years. √ Work experience including work of Government of West Bengal in last Five years.(as per Form-V). ✓ P.F. & E.S.I. Registration / Declaration
2	COMPANY DETAILS (valid up to Date), scanned original copy	i) Registration Certificate under Company Act. (if any). ii) Registered Deed of partnership Firm, Trade License / Article of Association & Memorandum. iii) In Case Proprietorship & Partnership Firms, the Tax Audited Report in 3CD Form along with Balance Sheet & Profit and Loss A/c. for the last 3 (three) years (year just preceding the current Financial Year will be considered as year-1). The balance sheet, Profit & Loss account should be in favor of applicant's name only. iv) Power of Attorney (For Partnership Firm/ Private Limited Company, if any). v) List of Technical staffs along with structure & organization.
3	Credential	(i) Intending tenderers ***should produce*** credentials of a ***similar nature of work (Machineries)*** of the minimum value of 40% of the estimated amount put to tender during 5 (five) years prior to the date of issue of this tender notice; Or, (ii) Intending tenderers should produce credentials of 2 (two) similar nature of work ***(Machineries)*** each of the minimum value of 30% of the estimated amount put to tender during 5 (five) years prior to the date of issue of this tender notice; Or, (iii) Intending tenderers should produce credentials of one single running work of similar nature of work ***(Machineries)*** which has been completed on the extent of 80% or more and value of which is not less than the desired value at (i) above; In case of running works, only those tenderers who will submit the certificate of satisfactory running work under Govt. department / Govt. sponsored Organization / Govt. Undertaking or equivalent competent authority will be eligible for the tender. In the required certificate it should be clearly stated that the work is in progress satisfactorily and

		also that no penal action has been initiated against the executed agency, i.e., the tenderer. (iv) The joint venture of Civil and electrical Agency is allowed and may participate in the tender, provided civil agency must fulfill the eligibility criteria i.e. 40% of the estimated amount of civil works put to tender and electrical agency also must fulfill the eligibility criteria (30% of the estimated amount of electrical works put to tender) ***N.B:- Estimated amount, tendered amount, date of commencement, date of completion of project and details communicational address of the client (within West Bengal if any also) must be indicated in the Credential Certificate.***
4	The Bidder shall not be under a Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted with any of the Government Agency.	Declaration in this regard by the authorized signatory of the bidder.

The vendor must fulfill the above eligibility criteria/ pre-qualification conditions. Technical bid of vendors fulfilling the pre-qualification conditions will only be evaluated by the duly constituted evaluation committee. Bid of vendors not fulfilling the pre-qualification conditions given above will be summarily rejected. Undertaking for subsequent submission of any of the above documents will not be entertained under any circumstances. The authority reserves the right to verify/confirm all original documentary evidence submitted by vendors in support of above mentioned clauses of eligibility criteria.

B. FINANCIAL BID : 'BID-B' (BOQ)

i) The Contractor is to quote the rate **on Turn-Key basis on Percentage BOQ format** of the components as specified in the BOQ. **The percent rate (less or excess from scheduled rate)** will be quoted in the BOQ in one cover (folder) encrypted in the B.O.Q. under Financial Bid.

ii) **Rate quoted shall be including GST, Cess, other taxes / all other charges.**

iii) **Scope of work As per NIT , Annexure-A & BOQ**

iv) Only downloaded copy of the B.O.Q. is / are to be uploaded quoting the rate, virus scanned and digitally signed by the contractor.

N.B.: ALL STATUTORY & NON STATUTORY DOCUMENTS(S) ARE REQUIRED TO BE UPLOADED IN ORIGINAL. Neither Photocopy nor cyclostyled literature/Brochure will be accepted.

No Hard copy of bid documents will be entertained for consideration for selection of this tender. Bidders must have to participate the tender through online only at www.wbtenders.gov.in.

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NIT No: WBARD/WBLDC/NIT-599e/2023-24 **Date of Issue: 01/11/2023**

NAME OF WORKS:-

Name of the work	Work Details	Estimated Amount put to Tender (Rs.)	Period of completion of the work.
1	2	3	4
e -Tender on Establishment of modern laboratory with high end lab equipment with Three Years Comprehensive Annual Maintenance (c-AMC) for translational research on laboratory animal at Kalyani, Nadia - 741235 under West Bengal Livestock Development Corporation Limited, LB-2, Sector-III, Salt Lake, Kolkata-700106 for 2023-24 for 2023-24"	**Details of work *(both Civil & Mechanical)* schedule item-wise may be found in the Scope of works (Annexure-A)**	**14,65,00,000/- including GST, Cess, other taxes / all other charges.**	**300 (Three Hundred) Days**

MANAGING DIRECTOR, W.B.L.D.C. LTD., RESERVES THE RIGHT TO CHANGE THE ABOVE SCHEDULE IN CASE OF ANY EXIGENCIES. No objection in this respect will be entertained raised by any Bidder. **Bidders or their authorized representatives need not to be present in the office of the undersigned at the time of opening of the Technical or Financial Bid (BID-B).Decision of Tender committee at every stages of evaluation shall be intimated and uploaded on the website (https://wbtenders.gov.in) portal.**

No informal bidder will be entertained in the bid further.

However, at any stage before awarding the contract, the Tender Selection Committee reserves the right to cancel the tender process due to unavoidable circumstances and no claim in this respect will be entertained.

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NIT No: WBARD/WBLDC/NIT-599e/2023-24 **Date of Issue: 01/11/2023**

A. GENERAL INSTRUCTION TO BIDDERS

1) Total work is to be completed positively ***within 300 (Three Hundred) Days*** or the time specified in the order from the date of issue of order.

2) The intending bidders are requested to submit their tender along with prescribed application form in e-tender portal https://wbtenders.gov.in . The software shall make automatic encryption of the Technical as well as Financial Bid and no one shall be allowed to open two Bids prior to the date and time earmarked for opening by the Tendering Authority.

3) After evaluation of Technical Bid, those who will qualify, their Financial Bid shall only be opened. The technical proposal (BID-A) will be opened on line **as per evaluation procedure**.

4) Evaluation summary report of technical evaluation will be uploaded online to the portal from the office of the undersigned immediately after committee arrives at a decision regarding the same.

5) **Intending Bidder(s) must have to attend Pre-Bid meeting held on 10.11.2023 at 1.00 PM at the office of the undersigned.**

6) If any bidder fails to attend the pre-bid meeting , his/her technical bid will be cancelled without assigning any reason behind it .

7) ***The intending Bidder must have executed MOU with a licensed electrical contractor having supervisor SCC relevant parts, readily present at work site during the execution of electrical works after accepting the Award of Contract (AOC).***

8) ***Intending bidder must have to submit/upload preliminary Drawing, Design/Layout of the scope of work on tender document. After Issuing LOA/AOC selected agency must have to submit Final/ Complete Drawing within 14 days from the issue of the LOA/AOC.***

9) The Financial bid may be opened within a very short notice (on the same day afternoon or next day forenoon), once technical evaluation is completed.

10) Bidders having any query / objection / claim regarding the evaluation or any decision taken by the tender selection committee may communicate in writing to the Corporation's official mail id info@wbldc.in within 48 hrs of taking such decision. Communications received after the due time, will not be entertained for consideration in any way.

11) For further information, the bidders are requested to please contact the undersigned.

12) **No Tender will be accepted across the table and no such receipt will be issued thereon.**

13) In the event of any discrepancy between downloaded tender document and master copy of the same available in the office then the latter will be accepted & binding on the bidder. No claim will be entertained.

14) N.I.T. to be downloaded properly and to be uploaded duly digitally signed as a token of acceptance by the bidder with all the general & special (if any) terms & conditions laid down in the tender document.

15) **In case quoting the rate anywhere other than BOQ, the tender is liable to be summarily rejected.**

16) The Bidder is required to carefully study all the tender documents and prepare his tender to comply with all the provisions thereof. Submission of a Tender shall be taken as evidence and confirmation that the Bidder has acknowledged all the provisions of the Tender Documents and has fully acquainted himself with site conditions and all factors which may influence the preparation of his Tender. Negligence of the Bidder to observe instructions in the matter of preparation of his Tender shall be attributable to him and shall not be a ground for securing relief from any error as may be found or discrepancies as may be contained in his Tender and would not give him any liberty to withdraw his Tender after the same being opened.

17) All the tender documents including N.I.T., terms & conditions for submission of tender & B.O.Q. will be the part & parcel of the bid documents.

18) The undersigned reserves the right to cancel the tender at any stage without assigning any reason thereof.

19) **The offer shall remain valid for *300 (Three Hundred)* days from the date of opening of the financial bid. Selected Bidder must have to complete the Job in due time , no extension will be entertained except on emergency . Agency will be penalized in case of unjustified delayed in schedule time frame of work.**

20) Test certificate of cable and other equipment shall have to be submitted at site with the supply.

ELIGIBILITY CRITERIA FOR PARTICIPATION IN THE TENDER

1) The contractors who have been delisted or debarred by any government department shall not be eligible in any way.

2) Contractors must have work credentials lab machineries equipment with at least 5years experience in the field in **similar nature of work**.

3) Intending bidder must have Site Lab facilities with all necessary equipment.

4) Having experience to build up/ Remodeling work **preferably at similar work anywhere in India**.

5) Credentials for ***Mechanical*** works as Prime agency will only be taken into account. That means tie up with one or more company for execution of similar nature of work cannot be claimed as a sole credential of the claimant company.

6) Intending bidder(s) must have to submit Drawing /Design and Lay out as per scope of work during submission of tender (online) , otherwise entire bid will be rejected .

7) Approve rate (percentage BOQ on put to tender amount) based on Final Selection as per criteria including GST , labour Cess, all taxes and Charges . If any changes in GST and other Govt. Taxes as well as charges as per latest Govt. Circular occur during implementation period (Job progressive period) , it will be taken juristically as per Govt rules as decided by the Tender Inviting Authority .

8) Valid up to date clearance of Income Tax return, Professional Tax Clearance Certificate, P.T. (Deposit Challan), PAN Card, GST Registration Certificate, PF & ESI certificate / declaration, Valid Trade License with the Technical Bid Documents, Income Tax Acknowledgement Receipt for latest assessment year to be submitted. [Non statutory Documents].

9) Registered Partnership Deed (for Partnership Firm only) along with Power of Attorney to be submitted along with application, if applicable. (Non-Statutory documents)

10) Registered Unemployed Engineers' Co-operative Societies are required to furnish valid Bye Law, Current Audit Report, Current N.O.C. from A.R.C.S., Minutes of last A.G.M. and also submit documents of the society consists at least 10 (ten) members out of which at least 60% should hold degree or diploma in any branch in Engineering.

11) Prevailing safety norms has to be followed so that LTI (Loss of time due to injury) is zero.

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EVALUATION OF TENDERS

EVALUATION METHODOLOGY OF PROPOSALS

Bids will be evaluated on Quality-cum-Cost Basis (QCBS) to ensure a fair and transparent method of selection.

Evaluation of Technical Proposal

Pursuant to the qualification of Bidders as per the Minimum Eligibility Criteria, and Responsiveness of the bids, the Evaluation Committee intends to evaluate the Technical Proposals, by applying the evaluation criteria as detailed below. Each responsive Proposal shall be given a technical score.

PROCESS OF EVALUATION AND SELECTION

Bids will be evaluated on Quality-cum-Cost Basis (QCBS) to ensure a fair and transparent method of selection. The credentials of the bidders as uploaded online will be examined first. The credentials will broadly cover the following areas –

• Competence in all the credential activities and sectors noted in the campaign outline at invitation for bid section of this document, in case a bidder does not meet the criteria for eligibility, his Technical Bids will not be opened.

• For all bidders eligible according to the prescribed criteria, ***the forthcoming proposals based on site visit as per scope of works*** will be evaluated by a technical Committee ***after opening of Technical Bid*** that may include external expert/s. The qualified bidders will be given the opportunity to make presentation/s to the Committee on a specified date onward. The criteria for evaluation of the Technical / scope proposal are at below.

• This is a very important matter which is expected to be evaluated after Technical presentation Hence, while the technical Bid would be evaluated as per the rules, it is deem necessary that the ability to perform all such work should be verified with utmost care.

Sl. No.	Bid Component (Technical Offer Evaluation)	Total Marks	Marks Scored
1.	Presentation/Demonstration of machineries, drawing , designing or layout of ***forthcoming works and one similar work*** in Govt Sector/Private sectors **on specific date to be circulate later after opening of Technical Bids** for evaluation)	**50**	
2.	The agency/company should have turnover of 3 Cr. Yearly with State Government. Financial turnover during the last financial year (either 2021-22 or 2022-23 FY) : (1) Rs.6,00,00,001and above=20 marks (2) Rs. 5,00,00,001 to Rs. 6,00,00,000/- = 14 Marks (3) Rs. 3,00,00,001to Rs. 5,00,00,000/- = 6 Marks (4) Rs. 1,50,00,000/- to Rs. 3,00,00,000/- = 4 Marks (5) Rs. below 1,50,00,000/- = 2 Marks	**20**	
3.	The agency/company should have experience under any department of State Government for similar works (satisfactory completion certificate to be provided).	**10**	
4	Details drawing , planning & programme diagram for implementing the work within schedule time period with technical service support team	**10**	
5	Supplied machineries/equipment detailing with Make (specifications)	**10**	
	Total: Marks for Technical Evaluation :	**100**	

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Intending bidder(s) must have to attend Pre-Bid meeting held on 10.11.2023 at 1.00 P.M at the office of the undersigned , if any bidder fails to attend the meeting but participate in the said tender his/her bid will be rejected as decided by the tender Inviting Authority (TID) without showing any reason. Demonstration/ Presentation as stated above will be conducted on the day after opening Technical Bids.

The Evaluation Committee shall evaluate and rank each Technical Proposal on the basis of the Proposal's responsiveness to the scope using the evaluation criteria and score system specified above. Each Technical Proposal shall receive a technical score. The Proposal shall be rejected if it does not achieve the minimum technical mark of 50 (Fifty) out of maximum of 100 (Hundred) marks.
Final selection based on weightage of 80:20 (Technical : Financial) based on highest scoring in Technical Part as well as Lowest Scoring in Financial bid . financial bid will be opened only technically qualified bidders.

Scoring will be evaluated only after qualifying the criteria for submission of Statutory & Non-Statutory documents as stated in NIT by the intending Bidder(s).

TENDER TERMS & CONDITIONS

01. OPENING OF THE TECHNICAL PROPOSAL:

(a) Technical proposal will be opened by the authorized officer of the undersigned, electronically from the website using their Digital Signature Certificate (DSC).
(b) Cover (folder) for Statutory Documents and non statutory documents will be opened. If there is any deficiency in the **Statutory Documents** the tender will summarily be rejected.
(c) Decrypted (transformed into readable formats) documents of the Statutory & Non statutory Cover will be downloaded and handed over to the Tender Evaluation Committee.
(d) Pursuant to scrutiny & decision of the Tender Evaluation Committee the summary list of eligible bidders will be uploaded in the web portals.
(e) The Financial Cover (BID-B) of those bidders passing the technical requirements will only be opened. THE DECISION OF UNDERSIGNED/TENDER COMMITTEE WILL BE FINAL &BINDING UPON THE BIDDER IN THIS RESPECT.

02. PENALTY FOR SUPPRESSION / DISTORTION OF FACTS:-

If any bidder fails to produce the original hard copies of the documents (specially Completion Certificates or Work Orders as proof of credential) or any other documents on demand of the Tender Opening Authority within a specified time frame or if any deviation is detected in the hard copies from the uploaded soft copies or if there is any suppression of facts, the bidder will be suspended from participating in the tenders on e-Tender platform for 3 (three) years.
The Contractors are bound by the terms and conditions of W.B.F No. 2911 with relevant changes'

03. AWARD OF CONTRACT:-

The Tender Inviting Authority reserves the right to accept or reject any tender and to cancel the tendering process and reject all tenders at any time and prior to the issue of Award of Contract without incurring any liability to the affected Tenderer or Tenderers thereby or shall have any obligation to inform the affected Bidder or Bidders of the ground for Employer's action. The Bidder who's Bid has been accepted will be notified by the Tender Inviting & Accepting Authority through acceptance letter cum Award of Contract.

04. PERFORMANCE GUARANTY:

(i) Upon selection of the bidder in the Financial evaluation and after issuance of 'Letter of Acceptance' the successful bidder have to produce a Performance guaranty in shape of Bank Guarantee (as per specimen format) ***for 1 (one) Year*** of an amount of **3 % of the Tender Value**, payable to the West Bengal Livestock Development Corporation Ltd., Kolkata.

(ii) It may be noted by the intending bidders that, deposit of Performance guaranty is a pre-requisite for executing the agreement and issuance of 'Award of Contract' thereafter.

05. AGREEMENT

The corporation will execute an agreement with the successful bidder ***as per the prescribed format or as will deem fit as per the condition in a Non-judicial Stamp Paper worth Rs.100/-*** (Rupees One Hundred) only to be provided by the successful bidder. The notification of award will constitute the formation of the Contract or the agreement between the Tender Accepting Authority and the successful Bidder. All the tender documents including NIT & B.O.Q. will be the part & parcel of the Contact Documents. Prescribed Agreement must be signed by the both parties, the Authorized Signatories of the Corporation &Tendering firm concerned. The Original agreement will be retained by the Corporation in the concerned case file and the photocopy of the same will be provided to the concerned firm.

06. SECURITY MONEY DEPOSIT

Successful tenderer shall be required to deposit Security Money at the rate of 3% (Three P.C.) of the contract value. However earnest money of the successful tenderer may be converted/adjusted with the Security Money and the balance Security Money (1% of contract value) to be deducted from deducted from each and every submission of "running" bill to make ***10% security deposit*** as per terms of the contract. (As per G'0. No. 201-F(Y) Dated-18/01/202l of Finance Department Govt. of WB. The Security Money will not carry any interest.

In the event of non-completion or defective work by the contractor the Corporation will have the right to get the work done through any agency at the risk and cost of the contractor and also the Corporation will have the right to forfeit the security money in full or part at its discretion which will be binding upon the contractor.

The security money will be released ***on one month after the satisfactory completion*** of the defect liability period (***Three Years***) and satisfactory remedy or rectification or amendment or modification or all, and settlement of accounts.

07. PENAL MEASURE

If the firm withdraws tender as a whole or for any particular item at any stage during the tenure of tender or fails/refuses to enter into written agreement once the rate for any/all items(s) is/are accepted within the time specified when requested to do so by this Corporation. Such firms offer will not be taken into consideration in future & shall liable to be black listed for 3 (three) years.

i) The security money deposit furnished by a bidder is liable to forfeit in full along with cancellation of order without prejudice in the event of failure/refusal to maintain the terms &

conditions of tender and/or contracted specification and/or quality/quantity and the authority will be at liberty to terminate the contract as a whole or part.

ii) In consequence of submission of false or fabricated documents by any firm/ company for participating in the tender, if proved later on shall liable to be Black Listed for 3 (three) years.

iii) Quoting absurdly high or low rate in opinion of tender selection committee, with the intention to vitiate the tender process will be dealt with in the context of existing tender rules/ norms under Govt. of W.B.

iv) Any legal dispute arising during the tender process shall be dealt only under the jurisdiction of Calcutta High Court.

v) **Total work including supply is to be completed positively within 270 (Two Hundred Seventy) Days or the time specified in the order from the date of issue of order.**

08. PAYMENT

Any request for Advance Payment will not be entertained. However, in exceptional cases, advance amount up to 10% advance may be allowed against 110% Bank Guarantee.

1. Bills to be produced in DUPLICATE.
2. ***The payment shall be made as per projected Performance Chart both Physical and Financial submitted by the Agency within 14 days of Issuing of Award of Contract based on Job completion period on approved Design/Lay-Out.***
3. However, as per instruction of the authority from time to time, the successful bidder shall have to produce the **BAR CHART** in terms of % of completion of work and Physical progress of the work accordingly
4. Payment shall be made ***after executing the order satisfactoryly as per projected performance chart***. However, no interest shall be paid to the firm, if the payment is delayed due to whatsoever reasons. The payment of bills shall be withheld in case of violation of any tender terms & conditions.

5. For Plant and Machineries : All payment will be made as per performance Chart (Physical & Financial) submitted by the agency prior to start the Job as above. However on prior approval from Competent Authority ,

a) 75% Payment may be made after receiving the equipment's at site.

b) 15% Payment may be made after successful installation & commissioning.

c) 10% Payment may be made after one month of successful running of the equipment's.

However, no interest shall be paid to the firm, if the payment is delayed due to whatsoever reasons. The payment of bills shall be withheld in case of violation of any tender terms & conditions.

09. GENERAL:

Unless otherwise stipulated all the works are to be done as per general conditions and general Specifications of the "Departmental Schedule" which means the Public Works Department, Schedule of Rates for works in West Bengal for the working area including up to date addenda and corrigenda, if any. The project should be executed as per IS code/IRC/MOST/MORTH standards regarding the quality of materials and various item of works. For general conditions and general specifications of items of works related to supply and carriage works, not appearing in the aforesaid Schedule of Rates in force including up-to-date addenda and corrigenda, if any, issued by the competent authority as applicable for the working at the time of submission of tender for the working area will be considered.

10. TERMS & CONDITIONS IN ORDER TO PRECEDENCE:

If the stipulations of the various components of the contract documents be at variance in any respect, one will override the other (only in so far as those are at variance) in the order of precedence as given below:

(a) Special terms and conditions
(b) Special specifications (Scope of work)
(c) General instructions.
(d) Notice Inviting e-Tender
(e) Schedule of probable items with approximate quantities
(f) Tender Form.

All works covered in the clause appearing hereinafter shall be deemed to form a part of the appropriate item or items of works appearing in the schedule whether specifically mentioned in any clause or not and the rates quoted shall include all such works unless it is otherwise mentioned that extra payment will be made for particular works.

11. ENGINEER-IN-CHARGE AND COMMENCEMENT OF WORK:

The word "Engineer-In-Charge" means the Executive Engineer, WBLDC Ltd. The word "Department" appearing anywhere in the tender documents mean WBLDC Ltd. (A Government of West Bengal Undertaking). The word "approved" appearing anywhere in the documents means approved by the Engineer-In-Charge. The work shall have to be taken up within seven days of the receipt of the work order. Failure to do so will constitute a violation of the contract stipulation as regards proportionate progress and timely completion of work and the contractor will thereby make himself liable to pay compensation or other penal action as per stipulation of the printed tender form.

12. CONDITION IN EXTENDED PERIOD:

When an extension of time for completion of work is authorized by the Engineer-in-charge , it will be taken for granted that the validity of the contract is extended automatically up to the extended period with all terms and conditions rates , etc. remaining unaltered , i.e the tender is revalidated up to the extended period .

The head of the corporation may allow maximum period of *28 days after the stipulated* date of completion . After that a penalty of 0.50 % which will be deducted from his R/A bill / Final bill as the case may be for each week of delay up to a maximum of 2.0 % on the amount put to tender .

13. CO-OPERATION AND DAMAGES AND COMPLETION OF WORK:

All works are to be carried out in close co-operation with the Department and other contract or contracts that may be working in the area of work. The work should also be carried out with due regard to the convenience of the road/building users and occupants, if any. All arrangements and programme of work must be adjusted accordingly. All precautions must be taken to guard against chances of injury or accidents to workers, road users, occupants etc. The contractor must see that all damages to any property which, in the opinion of the Engineer-In-Charge are due to the negligence of the contractor are promptly rectified by the contractor at his own cost and expenses and according to the direction and satisfaction of the Engineer-In-Charge.

14. CONTRACTOR'S SITE OFFICE:

The contractor shall have an office adjacent to the work as may be approved by the Engineer-In-Charge where all directions and notice of any kind whatsoever which the Engineer-In-Charge or his representative may desire to give to the contractor in connection with the contract may be left and same when left at or sent by post to such office or delivered to the Contractor's authorized agent or representative shall be deemed to the sufficiently served upon the contractor. ***The contractor shall have Site Lab facilities with all necessary equipment.***

15. INCIDENTAL AND OTHER CHARGES:

The cost of all materials, hire charges to Tools and plants, Labour, Corporation/Municipal Fees for water supply, Royalty or road materials (if any), Electricity and other charges of Municipalities or statutory Bodies, Ferry charges, Toll Charges, Loading and unloading charges, Handling chargers overhead charges etc. will be deemed to have been covered by the rates quoted by the contractor except G.S.T. (Central and/or State), Income Tax, Terminal Tax, Turnover Tax etc. All other charges for the execution of the complete or finished work or in case of supply of materials and for carriage to the entire satisfaction of the Engineer-In-charge of the work. No claim whatsoever in this respect will be entertained.

16. AUTHORISED REPRESENTATIVE OF CONTRACTOR:

The contractor shall not assign the agreement or sublet any portion of the work. The contractor, may however, appoint and authorize representative in respect of one or more of the following purpose only-

a) General day to day management of work.
b) To attend measurements when taken by the Departmental Officers and sign the records of such measurements which will be taken of acceptance by the Contractor. The selection of the authorized representatives subject to the prior approval of the Engineer concerned and the contractor shall in writing seek such approval of the Engineer giving therein the name of work, Tender No., the Name, Address and the specimen signature of the representative he wants to appoint and the specific purposes as specified the representative will be authorized for even after first approval, the Engineer may issue at any subsequent date.

Revised directions about such authorized representative and the contractor shall be bound to abide by such directions. The Engineer shall not be bound to assign any reason for any of his directions with regard to the appointment of authorized representative. Any notice correspondence etc. issued to the authorized representative or left at his address, will be deemed to have been issued to the contractor himself.

17. POWER OF ATTORNEY:

The Provision of the power of attorney, if any, must be subject to the approval of the Department. Otherwise the WBLDC Ltd. shall not be bound to take cognizance of such of attorney.

18. EXTENSION OF TIME:

For cogent reasons over which the contractor will have no control and which will retard the progress, extension of time for the period lost will be granted on receipt of application from the contractor before the expiry date of contract. No claim whatsoever for idle labour, additional establishment, cost of materials and labour and hire charges of tools & Plants etc., would be entertained under any circumstances. The contractor should consider the above factor while quoting his rate. Applications for such extension of time should be submitted by the contractor.

19. MATERIALS TO BE USED:

Suggested Brand Name/ names of different type of materials are to be use for this work as specified in PWD (WB) Schedule of Rate or as per direction of Engineer-In-Charge.

20. CONTRACTOR'S GODOWN:

The contractor must provide suitable godowns for cement and other materials at the site of work. The cement godown is to be sufficient in capacity and it must be water tight with either an elevated floor with proper ventilation arrangement underneath the floor or if solid raised flooring is made, cement is to be stored on bamboo or timber tonnage to the satisfaction of the Engineer-In-Charge. No separate payment will be made for these godowns or for the store yard. Any cement which is found at the time of use to have been damaged shall be rejected and must immediately to remove from the site by the Contractor or deposited as directed by the Engineer-In-Charge.

21. ARRANGEMENT OF LAND:

The contractor will arrange land for installation of his Plants and Machineries, his godown, store yard, labour camp etc. at his own cost for the execution of the work. Departmental Godown, if available may be spared for the purpose on usual charges as fixed by the Competent Authority.

22. USE OF GOVERNMENT LAND:

The contractor shall make his own arrangements for storage of tools, plant, equipments; materials etc. of adequate capacity and shall clear and remove on completion of work and shed, huts etc. which he might have erected in Government Land. Before using any space in Government Land of any purpose whatsoever, approval of the Engineer-In- charge should be needed.

23. CLEARING OF MATERIALS:

Before starting any work, work site, where necessary, must be properly dressed after cutting clearing all varieties of jungles shrubs, bamboo clusters or any undesirable vegetation from the alignment or site of works on completion of works all temporary structure or obstruction including some pipes in underground work, if any, must also be removed. All scars of construction shall be obliterated and the whole site shall be left in a clear and neat manner to the satisfaction of the Engineer-In-Charge. No separate payment shall be made for all these works, the cost thereof being deemed to have been included in the rates of various items of works quoted by the contractor in the schedule of probable items of works.

24. SUNDRY MATERIALS:

The contractor must erect temporary pillars, master pillars etc. as may be required in suitable places as directed by the Engineer-In-Charge at his own cost before starting and during the work by which the departmental staff will check Levels, layout different works and fix up alignment and the contractor shall have to maintain and protect the same till completion of the work. All petty and sundry material like, pegs, strings, nails, flakes instruments etc. and also skill labour require for setting out the levels for laying out difference structures and alignment shall also be supplied by the contractor as per direction of Engineer-in-Charge at his own cost without any extra claim towards the department.

25. SUPPLEMENTARY/ADDITIONAL ITEM OF WORKS:

Notwithstanding the provisions made in the related tender Form any item of the work which can be legitimately be considered as not stipulated in the specific schedule of probable items of work but has become necessary as a reasonable contingent item during actual execution of work will

have to be done by then Contractor if so, directed by the Engineer-In-Charge and the rates will be fixed with manner as stated below:-

(a) Rate of Supplementary items shall be analyzed in the 1st instant extended possible from the rates of the allied items of work appearing in the tender schedule.

(b) Rate of supplementary items shall be analyzed to the maximum extent possible from rates of the allied items of work appearing in the P.W Department schedule of rates for Building and S&P along with all addenda and corrigenda of probable items of work forming part of tender document Rates for the working area enforce at the time of N.I.T.

(c) In Case, addition items do not appear in the above P.W Department Schedule of Rates, such items for the works shall be paid at the rates entered in the Public Works (Roads) Department Schedule of Rates along with all addenda and corrigenda for the working area enforce at the time of N.I.T.

(d) In case of any change in quantity due to any kind of alteration during actual work, the contractor will not be liable to put up any claim against any shortfall of quantity in execution. However if it is needed to take up any item in excess or supplement to the priced quantity, the payment for the extra work will be paid as per the prevailing govt. rule.

Unbalanced market rates shall never be allowed Contractual percentage shall only be applicable with regard to the portions of the analysis. It may be noted that the cases of supplementary items of claim shall not be entertained unless supported by entries in the Measurement Book or any written order from the tender accepting authority.

26. COVERED UP WORKS:

When one item of work is to be covered up by another item of work the latter item shall not be done before the formal Item has been measure up and has been inspected by the Engineer-in-charge as the authorized representatives of the Engineer-In-Charge and order given by him or proceeding with the latter item of work. When however, this is not possible for practical reasons, the Sub-assistant Engineer, if so, authorized may do this inspection in respect of minor works and issue order regarding the latter item.

27. APPROVAL OF SAMPLE:

Samples of all materials to be supplied by the contractor and to be used in the work shall have to be approved by the Engineer-in-charge and checking the quality of such materials shall have to be done by the concerned Department prior to utilization in work.

28. INCIDENTAL AND OTHER CHARGES :

The contractor shall have to arrange for their own source of energy for operation of equipment and machineries, driving of pumping set, illuminating work site, office etc. that may be necessary in difference stages of execution of work. No facility of any sort will be provided for utilization of the departmental sources of energy existing at site of work. Arrangement for obtaining water for the work should also be made by the contractor at his own cost. **All cost for getting energy (Electricity) and / or for any purpose whatsoever will have to be borne by the contractor for which no claim will be entertained.**

The cost of all materials, hire charges to Tools and plants, Labour, Corporation/Municipal Fees for water supply, food staff, medical aids ,Royalty or road materials (if any), Electricity and other charges of Municipalities or statutory Bodies, Ferry charges, Toll Charges, Loading and unloading charges, Handling chargers overhead charges etc. will be deemed to have been covered by the rates quoted by the contractor inclusive of Sales Tax (Central and/or State), Income Tax, Terminal Tax, Turnover Tax etc., all other charges for the execution of the complete or finished work or in case of supply of materials and for carriage to the entire satisfaction of the Engineer-In-charge of the work. No claim ***except GST and Labour Cess*** whatsoever in this respect will be entertained.

29. DRAWINGS:

Intending Bidder must have to submit Drawing/Design and Lay out of the entire Job based on Site visit as per Scope of Work in tender documents .All works shall be carried out in conformity with *the drawings /Lay Out approved by this Department*. After Selection the Approved Agency have to Submit projected Lay out of Plan (Planning of job completion) both Physical as well as Financial based on approved Drawing within 14 Days from the issuing of Award of Contract . Necessary Payment will be made based on such projection as per payment terms and conditions. However, the Contractor shall have to carry out all the works according to the departmental general arrangement drawing and detail working drawings to be supplied by the Department from time to time.

30. UNSERVICEABLE MATERIALS:

The Contractor shall remove all unserviceable materials, obtained during execution at place as directed. The contractor shall dressed up and clear the work site after completion of work as per direction of the Engineer-in-Charge. No extra payment will be made on this account.

31. CONTRACTOR'S RISK FOR LOSS OR DAMAGE:

All risk on account of railway or road carriage or carriage by boat including loss or damage of vehicles, boats, barges, materials or labour, if any, will have to be borne by the contractor without any extra claim towards department.

32. IDLE LABOUR:

Whatever the reasons may be no claim of idle labour, enhancement of labour rate additional establishment cost, cost of TOLL and hire and labour charges of tools and plants Railway freight etc. would be entertained under any circumstances.

33. CHARGES AND FEES PAYABLE BY CONTRACTOR:

a) The contractor shall be all notices and pay all fees required to be given or paid by any statute or any regulation or by law and any local or other statutory authority which may be applicable to the works and shall keep the department against all penalties and liability of every kinds for breach of such statute regulation or law.

b) The Contractor shall have save harmless and indemnify the department from and against all claims demands suit and proceedings for or an account of infringement of any patent rights design, trade mark of name of other Protected write in respect of any constructional Plant machine, work, materials, thing or process used for or in connection with works or temporary works or any of them.

34. ISSUE OF DEPARTMENTAL TOOLS AND PLANTS:

All Tools and Plants required for the work will have to be supplied by the Contractor at his own cost, all cost of fuel and stores for proper running of the Tools and Plants must be borne by the Contractor.

35. REALISATION OF DEPARTMENTAL CLAIMS:

Any some of money due and payable to the contractor (including security deposit returnable to him) under this contract may be appropriated by the Government and set off against any claim of Government for the payment of sum of money arising out of this contract or under any other contract made by the contractor with the Government.

36. COMPLIANCE OF DIFFERENT ACTS:

The contractor shall comply with the provisions of the Apprentices Act, 1961, Minimum Wages Act, 1848. Contact Labour (Regulation and Abolition) Act 1970 and the rules and orders issued hereunder from time to time. If he fails to do so, the Engineer, may at his discretions, take necessary measure over the contract. The Contractor shall also make himself for any pecuniary liabilities arising out on account of any violation of the provision of the said Act(s). The Contractor must obtain necessary certificate and license from the concerned Registering Office under the Contract Labour (Regulation & Abolition) Act, 1970. The contractor shall be bound to furnish the Engineer-In-Charge all the returns particulars or date as are called for from time to time in connection with implementation of the provisions of the above Acts and Rules and timely submission of the same, failing which the contractor will be liable for breach of contract and the Engineer-In-Charge may at his discretion take necessary measures over the contract.

37. SAFETY, SECURITY AND PROTECTION OF THE ENVIRONMENT:

The Contractor shall, throughout the execution and completion of the Works and the remedying of any defects therein:

a) Have full regard for the safety of all persons and the Works (so far as the same are not completed or occupied by the department),
b) Provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or required by the Engineer-in-Charge for the protection of the Works or for the safety and convenience of the public or others,
c) Ensure that all lights provided by the Contractor shall be screened so as not to interfere with any signal light of the railways or with any traffic or signal lights of any local or other authority.

d) Take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

38. TRANSPORTATION ARRANGEMENT:

The contractor shall arrange for all means of transport including Railways Wagons required for carriage and supply of materials and also the materials required for the construction work. The Department may however, at their own discretion grant necessary certificates, if required, for procurement of railways Wagons. But, in case of failure of the Department to help the Contractor in this respect, the contractor will have to procure wagons at his own initiative and no claim whatever on the ground of non-availability of wagons shall be entertained under any circumstances. If Railways Wagons are not available, the Contractor will have to depend on transport of materials by road as necessary to complete the work in time and the contractor must consider this aspect while quoting rate.

39. PROGRAMME OF WORK:

Before actual commencement of work the contractor shall submit a programme of construction of work clearly showing the materials men and equipment. The contractor will submit a programme of construction in the pattern of Bar Chart or Critical Path Method and a time table divided into four equal periods of progress of work to complete the work within the specific period for approval of the Engineer-In-Charge who reserves the right to make addition, alterations and substitutions to such programme in consultation with the contractor and such approved programme shall be adhered to by the contractor unless the same is subsequently found impracticable in part or full in the, opinion of the Engineer-In-Charge and is modified by him. The contractor must pray in writing, showing sufficient reasons therein, for modification of programme.

The conditions laid down tender form regarding the division of total period and progress to work and the time table therefore as provided in the said clause shall be deemed to have been sufficiently complied with it the actual progress of work does not fall short of the progress laid down in the approved time table for one fourth, half and three fourth of time allowed for the work.

40. SETTING OUT OF THE WORK:

The contractor shall be responsible for the true and perfect setting out of the work and for the correctness of the position, levels, dimensions and alignments of all parts of work, if any, rectification or adjustment becomes necessary the contractor shall have to do the same at his own cost according to the direction of the Engineer-In-Charge during progress of works. If any, errors appears or arise in respect of position, level, dimensions or alignment of any part of the work contractor shall at his own cost rectify such defects to the satisfaction of the Engineer-In-Charge. Any setting out that may be done or checked by either of them shall not in any way relieve the contractor or their responsibility for correctness and rectification thereof.

41. PRECAUTIONS DURING WORKS:

The contractor shall carefully execute the work without disturbing or damaging underground or overhead service utilities viz. Electricity, Telephones, Gas, Water pipes, Sewers etc. in case disturbances of service utilities is found unavoidable the matter should immediately be brought to the notice of the Engineer-In-Charge and necessary precautionary measures as would be directed by the Engineer-In-Charge shall be carried out at the cost and expenses of the contractor. If the service utilities are damaged or disturbed in any way by the contractor during execution of the work, the cost of rectification or restoration of damages as would be fixed by the Engineer will be recovered from the contractor.

42. NIGHT WORK:

The contractor shall not ordinarily be allowed to execute the work at night. The contractor may however, have to execute the work at night, if instructed by the Engineer-in-Charge. For true technical or emergent reasons the work may require to be executed during the night also according to the instruction of the Engineer-in-Charge. In that case the contractor shall have to arrange for separate set of labour with sufficient and satisfactory lighting arrangement for the night work. No extra payment whatever, in this respect will be made to the contractor.

43. TESTING OF QUALITIES OF MATERIALS & WORKMANSHIP :

All materials and workmanship shall be in accordance with the specifications laid down in the contract and the Engineer-In-Charge reserves the right to test, examine and measure the materials/workmanship direct at the place of manufacture, fabrication or ***at the site of works*** or any suitable place. The contractor shall provide such assistance, instrument machine, labour and materials as the Engineer-In-Charge may require for examining, measuring and testing the works and quality, weight or quantity of materials used and shall supply samples for testing as may be selected and required by the Engineer- In-Charge without any extra cost. Besides this, he will carry out tests from outside Laboratory as per instruction of Engineer-In-Charge. ***The cost of all such tests would be borne by the agency irrespective of Site Lab facilities with all equipment.***

44. TIMELY COMPLETION OF WORK:

All the supply and the work must have to be completed in all respects within the time specified in Notice Inviting Tender from the date of work order. Time for completion as specified in the tender shall be deemed to be the essence of the contract.

45. PROCUREMENT OF MATERIALS:

All materials required for complete execution of the work shall be supplied by the contractor after procurement from authorized and approved source.

46. REJECTION OF MATERIALS:

All materials brought to the site must be approved by the Engineer-In-Charge. Rejected materials must be removed by the Contractor from the site within 24 hours of the issue of order to that effect. In case of non-compliance of such order, the Engineer-In-Charge shall have the authority to cause such removal at the cost and expense of the contractor and the contractor shall not be entitled to claim for any loss or damage of that account.

47. IMPLIMENTS OF WORK IN ITEMS:

Except of such items as are included in the Specific Priced Schedule of probable items and approximate quantities no separate charges shall be paid for traffic control measures, shoring, shuttering, dewatering, curing etc. and the rates of respective items or works are to be deemed as inclusive of the same. **Intending Bidders is solely responsible for Temporary Electric Connection as well as Consumption (Energy) unit with his own discretion.**

48. DAMAGED CEMENT:

Any cement lying at contractor's custody which is found at the time of use to have been damaged shall be rejected and must immediately be removed from the site by the contractor or disposed of as directed by Engineer-In-Charge at the costs and expenses of the contractor.

49. FORCE CLOSURE:

In case of force closure or abandonment of the works by the Department the contractor will be eligible to be paid for the finished work and reimbursement of expenses actually incurred but not for any losses.

50. TENDER'S RATE:

The contractor should note that the tender is strictly based on the rates quoted by the Contractor on the priced schedule of probable item of work. The quantities for various other items of works as shown in the priced schedule of probable items of works are based on the drawing and design prepared by the Department. If variations become necessary due to design consideration and as per actual site conditions, those have to be done by the contractor at the time of execution at the rate prescribed in the tender clause. No conditional rate will be allowed in any case.

51. DELAY DUE TO MODIFICATION OF DRAWING AND DESIGN:

The contractor shall not be entitled for any compensation for any loss suffered by him due to delays arising out of modification of the work due to non-delivery of the possession of site. The whole work will have to be executed as per Departmental drawings available in this connection at the tender rate.

52. ADDITIONAL CONDITIONS:

a) As per Finance (Taxation) Department of Income Tax Will be made from each bill of the contractor as per applicable rate in force.
b) Labour welfare Cess will be deducted @ 1(one) % of gross bill value as per rule. The Contractor will remain liable for following with West Bengal Contract Labour(Regulation & Abolition) Rules in force &necessary. Certificates from appropriate authority to be submitted within 7 (Seven) days from the date of the work order'

53. DEFECT LIABILITY PERIOD:

Full security Deposit should be refunded to the contractor on ***expiry of Three years*** from one month after the actual date of completion of the work. If any defect/ damage is detected during this period as mentioned the Contractor shall make the same good at his own expense to the satisfaction of the Engineer-In-Charge or in default the Engineer-In-Charge may cause the same to be made good by other agency and deduct the cost (of which the certificate of the Engineer-In-Charge shall be final) from his security deposit or any sums that may be then, or at any time thereafter become due to the Contractor.

54. There shall be no provision of Arbitration. Hence clause 25 of the West Bengal Form No. 2911(ii) shall not be allowed vide memo no. 558/SPW dated 13.12.2011 of P.W.D Establishment Branch.

55. Cement Procure & Supply by the Contractor shall be of ordinary Portland cement 53 grade, 43 grade, conforming (IS 8112) or PPC/PSC the grade to be decided by the Engineer-In-Charge or as per instruction on specified in the approved drawing of this department or as stipulated in the departmental schedule of rates.

56. During opening of bid Managing Director may call open bid/ sealed bid after opening of the said bid to obtain the suitable rate further, if it is required. No objection in this respect will be entertained if raised by any bidder present or absent during opening of tender.

57. In case of any unscheduled holiday on the aforesaid dates [Sl. (v)], the next working day will be treated as schedule/ prescribed date for the same purpose.

58. No Adjustment of Price or Price Escalation of any kind will be allowed. Notification No. 23-CRC/2M-61/2008 dated 13.03.2009 & Notification No. 38-CRC/2M-61/2008 dated 20.04.2009 shall not be applicable for the job included in this NIT.

59. If more than one Bidder quoted same rate and which are found lowest at the time of opening, such similar multiple rates will not be entertained / accepted. Lowest offer will be ascertained by sealed bid amongst the lowest bidder.

60. The Earnest Money may be forfeited if ;-

a) If the Bidder withdraws the Bid during the period of Bid validity.
b) In case of successful Bidder, if the Bidder fails to execute formal agreement within the stipulated time period.
c) During scrutiny, if it is come to the notice of tender inviting authority that the credential or any other document which were uploaded & digitally signed by the Bidder are incorrect / manufactured / fabricated.

62. All intending bidders should be appointed one Civil / Electrical Engineer during execution of work as the case may be.

(Dr. Gouri Shankar Koner)
Managing Director
W.B.L.D.C. Ltd

WEST BENGAL LIVESTOCK DEVELOPMENT CORPORATION LIMITED
(A Govt. Of West Bengal Undertaking)
LB-2, Sector-III, Salt Lake City, Kolkata – 700 106
Telefax: (033)-2335 5298 E-mail: info@wbldc.in
Website: www.wbldc.in Toll Free No. 18001208243

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NIT No: WBARD/WBLDC/NIT-599e/2023-24 **Date of Issue: 01/11/2023**

SCOPE OF WORK :

JOB: *Establishment of modern laboratory with high end lab equipment with Three Years Comprehensive Annual Maintenance (c-AMC) for translational research on laboratory animal at Kalyani, Nadia -741235 under West Bengal Livestock Development Corporation Limited, LB-2, Sector-III, Salt Lake, Kolkata-700106 for 2023-24 for 2023-24*

Intending bidder must have to provide technical expert/Operator for smooth running of the installed machineries for One year after successful trail run/ hand over. Salary /accommodation and other amenities will have to provide by the approved bidder for one year.

A) Histology Setup with Confocal & Live cell Imaging facility:

Technical Specification for the instruments required for complete imaging workflow from sample preparation till image documentation of different biological samples including cells and tissues of varing shapes and sizes. The workflow solution should include all the essential instruments preferebaly from the same manufacturer for better compatibility and service support.

- **Specification for instruments of sample preparation workflow**

I Manual Rotary Microtome Specifications:

1. Designed for effortless manual sectioning via a counter-balanced, exceptionally smooth-running hand wheel.
2. Instrument with X/Y specimen orientation
3. Fast exchange system for specimen clamps, Both Universal & Standard types
4. Personalized User Selectable Coarse Feed wheel turn direction, either Clockwise or Anti-Clockwise to suit user's preference—a must have feature
5. Retraction on/off function
6. Two mechanical trim steps: 10 µm & 50 µm
7. Blade holder for disposable blades –must be suited for both High & low profile blades and standard specimen clamp.
8. The object head with +/-8° X/Y orientation equipped with a fast specimen clamp exchange system for improved workflow.
9. Storage space on top of the instrument housing provide room for sectioning tools and

accessories.

10 The instrument feature a low-maintenance micrometer feed system with backlash

11 Maintenance-free vertical cross-roller guides and horizontal specimen feed via precision cylinder guide system.

12 Distortion-resistant base plate ensure optimum overall stability.

13 The vertical stroke of 59 mm

14 Horizontal specimen travel range of 25 mm

15 Allow to section specimens up to a size of 50 mm x40 mm x 40 mm.

16 Ergonomically designed hand wheel grip.

17 Hand wheel lockable in any position via brake lever attached to base plate

18 Lockable hand wheel in upper position via hand wheel grip.

19 Location conditions

a. Operating temperature range 10°C to 35°C

b. Temperature range during storage 5°C to 55°C

c. Relative humidity max. 80%, non–condensing

d. Storage humidity < 80%

Technical information

20 Section thickness setting range 0.5–60 µm

21 Section thickness selection from 0.5–2 µm in 0.5 µm-steps

a. from 2–10 µm in 1 µm-steps

b. from 10–20 µm in 2 µm-steps

c. from 20–60 µm in 5 µm-steps

d. Total horizontal specimen feed 25 mm

22 Vertical specimen stroke 59 mm

23 Specimen retraction ON/OFF

24 Specimen orientation

a. Horizontal 8° & Vertical 8°

b. Rotation ± 90°

25 Dimensions and weight (Preferred)

a. Width 438 mm 17.24”

b. Depth 472 mm 18.58”

c. Height 265 mm 10.43”

28 Should have more than 50 installations only in East India, with 50% being in reputed Govt Institutions

29 Certified: Must be European CE & USFDA Approved

30 Should have dedicated Service Support only for East India with a team of Company’s own service engineers (at least 3 persons—NOT of distributor’s) headquartered in Kolkata/EAST for effective service across users in East

II	AUTOMATED TISSUE PROCESSOR Specifications

1 Carousel type Instrument with 12 stations
2 Capacity- 80-100 cassettes, single basket : must have provision to upgrade to double basket
3 Ergonomic control panel with foil-protected keyboard and LCD
4 Tissue baskets made of metal, should be tough & sturdy with varying capacities of up to 100 cassettes
5 Reagent container should be made of Transparent HARD GLASS, so its easy to monitor the volume & quanlity of reagents from outside, and sometimes small sample displaced during processing can be monitored easily
6 Reagent container for this normal processor must NOT be of Aluminium or metal, being corrosive in nature it may react to certain chemicals & also chance of leakage of the jar.
7 Enhanced Safety FEATURE: Mandatory—MUST BE present:

a) The tissue specimens are protected from drying out even during a power failure since the tissue baskets are automatically immersed in a station. The program is resumed where interrupted once mains power is restored. After a long-term power failure, the wax will be liquefied.
If the programmed infiltration time for any of the stations is exceeded a warning message is displayed indicating the station number and the time in excess of program.

b) Should be able to lift-up the carousal by manually unlocking lever to pull out the cassettes during power failures or instrument breakdown

8 Infiltration time separately programmable for each station
9 Delayed start functions up to 9 days
10 Possibility of interrupting an automatic process for reloading or removing cassettes for special applications before the end of a run
11 Easy editing and changing of programs, even during a processing run—this is mandatory
12 Audible alarms, error messages and warning codes
13 Advanced safety concept with Wide range of accessories should be available
14 Nominal voltage:100 / 120 / 230 / 240 V AC ±10%
15 Nominal frequency: 50 / 60 Hz
Programs:
16 Number: 8 to 9, freely selectable
17 Programmable infiltration time per station: 99 h 59 min
18 Delayed start: 9 days
19 Drain time should be: 60 secs
20 Should have at least 50 installations of similar technology Automatic Tissue Processor in Eastern India, with 50% being in reputed Govt Institutions. Detailed User list for Eastern

India as Proof of installations must be attached.

21 Should have dedicated Service Support only for East India with a team of company's own service engineers (at least 3 persons- not of Distributor's) based in Kolkata/East , to support customer timely.

22 MUST have both European CE & US-FDA validation with certification

23 At least 1500 pcs of White Jet Cassettes with lids must be given with instrument

III PARAFFIN Embedding Module - Automated Embedding Station (Hot + Cold)

1. Hot Plate—Must have specs:

Microprocessor controlled two piece tissue embedding system consisting of heated paraffin station and separate cold plate.

Should have symmetrical and unobstructed workspace: The 100% symmetrical and unobstructed workspace with equal left & right working spaces from the dispense nozzle in between

Should have Easy-to-open spacious trays for efficient access to cassettes and molds. Tray lids should be half opened to keep the temperature stable.

Should have bright white LED for contrast and visibility of the most transparent samples- Easily Controllable by the key on LCD control panel: The bright white LED improves contrast and visibility of the most transparent samples.

Provide the error message for operation condition monitoring.

Large heated working surface and integrated mold tray and cassette bath with temperature adjustment from 50 to 75°C in 5° increments.

Cassette bath and mold tray should be interchangeable to accommodate changes in embedding work flow.

Should have Easy to clean metal frame and silicon coated wristpads. The ergonomic wrist pads increase hand stability and precision, even when embedding the most difficult biopsies.

Programmable for weekly timer, work days, work starting time, work end time, real time and day of week for automatic switch on and off of the instrument.

Should have RAPID Heating: to boost heating if wax in needed to refill in between instrument run, then rapid heating allows wax granules to melt within 15 minutes

Removable tray must hold: approx. 150 cassettes

Paraffin tank must have at least 4 L capacity

Large peltier element cold spot to assist tissue orientation, the Rectangular shaped Peltier cooling unit in front of the nozzle—for immediate freezing of the molten paraffin

Display: 5.7 inch capacitive LCD touch screen--MANDATORY

Two Heated removable waste tray & Heated removable forceps 6 nos. holder easily accessible from either side.

Power supply: 110-120 V AC, 220-240 V AC, 50/60Hz, Power consumption: 1000 VA max

2. Cold Plate—Must have specs:

Operating temperature: -6 °C (self-regulating) to hold up to 70-80 standard cassettes.
Temperature should strictly MUST NOT go BELOW -6 °C to avoid tissues getting hard & brittle where chances of tissue destruction & tissue breakage are high
Min. guaranteed workload capacity: 65 blocks solidified in 30 minutes
Adjustable work surface height for optimum ergonomics.
Provision for Self-Regulation so that no need to turn down the temperature in summer or worry about too fast cooling in winter.

IV Common Specs for both units:

Both HOT & COLD Instruments Should have CE and USFDA certificates with proven certified quality
Should have minimum 30 nos. of installation only in East India for similar model, out of which 50% should be in government institutions
Should have dedicated Manufacturer/Brand's own Company Service Support only for East India (not of distributor's) with team of at least 3 Company's own factory Trained service engineers based in East to provide prompt support at User's lab

- **Specification for instruments of observation and documentation of prepared samples**

I Facility for cell observation in slides/petriplates with imaging attachment

1. Microscope body / Optical system: Inverted Microscope for Bright field & Phase contrast with LED illumination and Infinity corrected Optical system.
2. Automatic adjustment of illumination to the contrast methods, Auto-off function, LED with service life of 50,000 hours, constant color temp
3. Auto adjustment of intensity changing from Bright field to Phase contrast
4. Magnification range: 40X-1000X
5. Eyepiece: 10X/20 with diopter adjustment for both eyes.
6. Coarse and fine focusing: Coaxial double knob for coarse and fine focus on both sides
7. Nose Piece: Quadruple revolving nosepiece
8. Condenser: High Numerical aperture of 0.45 or better
9. Objectives: Plan Achromat 4x/0.10, Plan Achromat 10x/0.20 PH1, Plan Achromat 20x/0.30 PH1, Plan Achromat 40x/0.50 PH1. All the Phase objectives should have common PH1 phase ring so that no change of phase ring is required in condenser while changing objective. 100X objective will be included.
10. Camera: Stand should have side port/back port/front port for camera to get unobstructed view of specimen from front. High Definition approx. 12 MP and 60 fps at 4K resolution with suitable PC, Provision to transfer the images to any PC through memory card, memory card of at least 8GB to be included with supply.

The microscope, camera and software should be from the same manufacturer for seamless integration.

II Facility for high sensitive Spectral and High Resolution Microscope for high-end imaging documentation of fixed and live cells

1. Fully Motorized Inverted Fluorescence Research Microscope:

a. Fully Motorized Inverted Fluorescence Research Microscope for BF/DIC/Fluorescence with built-in LCD/TFT display for full and easy control of all motorized microscope functions.
b. Programmable motorized XY scanning stage with universal sample holders for slides, 35/60 mm Petri dish and multi-well plates, and chambered coverslips with multipoint, tile and mosaic imaging software must be included.
c. The microscope should be equipped with Vis LED illumination for transmitted light and appropreiate LED illumination for Fluorescence with a guaranteed 20,000 working hours lifetime or better. Any light source with lower lifetime should quote in multiple numbers to match the required working hours.
d. The microscope body should have built-in motorized Z movement with IR/LED based drift compensator and a total travel range 12 mm or better to accommodate bigger samples.
e. It should have motorized side port for camera attachment and motorized beam path selection between eye observation and confocal imaging.
f. A binocular observation tube with pair of 10X eyepieces of **FN 22** or more should be a standard supply.
g. The system should have at least 6 positions motorized DIC nosepiece, and high-resolution confocal grade Plan Apochromat objectives; **10X** (**NA 0.4** or higher), **20X** (**NA 0.75** or higher), **40X** (**NA 0.95** or higher), **60X/63X** oil (**N.A 1.4** or higher). A 4/5x objective with 0.15 NA or better.
h. Universal Motorized 6 positions condenser with **NA 0.55** or better DIC condenserprisms for all objectives, motorized DIC turret for objective prisms, motorized polarizer and motorized analyzer should be included. All the DIC components, including polarizer, analyzer and prisms should be motorized to get complete motorized DIC benefits.
i. A 6 positions motorized fluorescence turret with inbuilt shutter and individual band-pass fluorescence filters for DAPI, FITC/GFP ,TRITC/Rhodamine/Cy3 and Cy5 should be quoted.
j. An anti-vibration table to be supplied with the Confocal system from the microscope manufacturer. Also, a computer table and rack for lasers to be provided preferably from the confocal manufacturer.
k. For H & E stained samples, and wide field based multi-channel, z stack, time lapse imaging, a dedicated scientific grade dual mode (colour and monochrome) camera should be offered. The camera should have **2/3'' CCD/CMOS chip, 2.6 million** or better net effective pixel resolution, FireWire or USB III based connectivity, at least **30 FPS** or better capturing speed at full frame and must be controlled by the same confocal software.

2. Confocal scanning and detection system:

a. The state-of-the-art confocal system should have a set of galvo-scanners for precise high – resolution imaging with different scan resolution formats from at-least 16x16 to **8K x 8K** or better.
b. The scanner should have the ability to scan in various scan areas such as rectangle, clip, polygon, line etc. and scanning zoom of **1-40 times** or better with ROI Scan should be

achieved.

c. Scan speed of the galvo-scanner should be up to **10 FPS** (frames per second) or better at 512x512 resolution without any line-skipping or interpolation.

d. Confocal scan FOV should be at least **20 mm** or better.

e. The system should have continuously variable pinhole and should also be equipped with laser power monitor to maintain the same laser intensity for error free intensity measurement of live cell imaging.

f. The system should have at least 5 **filter-free spectral** detectors with independent voltage and gain controls and each detector must be able to work in both, intensity mode and spectral mode. The system must be upgradable to **5 or more** filter-free spectral detectors.

g. All the fluorescence detectors **must be filter-free spectral type** and should be in built inside the scan head for better sensitivity and should be able to be used in analogue as well as in true **photon-counting** mode.

h. All these spectral detectors should be of high-sensitive GaAsP/HyD type with **QE/PDE of 50 ± 5 %** or better.

i. The minimum detectable spectral bandwidth of each detector should at least be **5 nm** or better throughout the spectral range of 410-850 nm, and maximum spectral bandwidth at one go must be at least 400 nm or higher for each detector.

j. The spectral tuning resolution or detectable bandwidth should be adjustable at every 3 nm or better increments. Shorter bandwidth adjustment would be needed for samples having lot of autofluorescence and background fluorescence.

k. A dedicated transmitted light detector should be provided for DIC imaging.

l. The system must come with an online resolution enhancement module to achieve a resolution of up to 120-140 nm or better in XY without manual interventions and 200-300 nm or better in Z. The super resolution detection should be based on multi-pixel detector format only, either with very high sensitive detectors (QE/PDE must be more than 55%) or dedicated honeycomb type array detector. Super resolution Imaging should be at 10 fps at 512X512 pixels.

m. The super-resolution technique should be able to apply on at least 4 or more colors simultaneously. The super-resolution image capturing speed should be same as the confocal capturing speed and should be optimized for all the quoted objectives including 10X, 20X, 40X and 60/63X.

n. The standard confocal dyes varying throughout the visible spectrum range should be able to be used in the super-resolution mode and for live samples as well.

3. Lasers and Combiner:

a. Following lasers should be stable solid-state lasers controlled by acousto-optic tunable filter (AOTF) for precise switching and swift selection of the desired laser lines. The laser lines should be 488nm, 514/515nm, 561nm and 635/638/640 nm.

b. The system must have a 405/408 nm laser through dedicated UV port and a 405nm laser with minimum 30mW output power. It should have intensity adjustment and ROI imaging

capability.

4. System control and Imaging Software:

a. Imaging software should be capable of controlling Motorized components of microscope, digital camera, confocal scan head, laser control including AOTF and Image acquisition & processing for confocal and super resolution imaging. It should have the capability of multi-dimensional acquisition namely XT, XZT, XYT, XYZ, XYλ, XYZT, XYλT, XYλZ, XYλZT, along with 3D re-construction.

b. Advanced software for 3D reconstruction and processing of 3D data having features like Transparent, Maximum Intensity and Depth Coding, shadow projection, clipping, Orthogonal Sectioning and Annotation tool to add comments to 3D volume.

c. Real time/online Spectral imaging and unmixing, Navigation, Tiling and Multi point imaging, image stitching/auto montage; Macro imaging capabilities, Calcium imaging, deep tissue imaging should be included.

d. The software should have analysis function such as intensity measurement (online & offline) over time, over depth and over lambda.

e. Advance measurements like FRET (Ratio, acceptor photobleaching and sensitized emission), FRAP, Co-localization should be possible for all samples.

5. Workstation and Monitor:

The system should be supplied with latest computer workstation tried & tested in factory by the confocal manufacturer. It should have at least the following specifications: Windows 10 Professional (64 bit) operating system, Intel 10-Core Xeon processor, minimum 32 GB RAM, NVIDIA 8GB graphic card, 1TB SSD, 4 TB SATA HDD, Slim Super Multi DVD Writer, Ethernet Controller, 2 x USB 2.0, 8 x USB 3.0, IEEE 1394 Firewire with Key Board and Mouse with curve 37-38" High resolution LED HD 4K Monitor.

6. Facility for live cell imaging:

A microscope stage top CO_2 incubator for imaging live cells with control of CO_2, temperature & humidity should be provided. It should have a gas mixer so that 100% CO_2 gas cylinder can be attached to it. The entire working system, including CO_2 cylinder & regulator, should be included in the quote.

7. ManPower: Technical Operator Should be Provided by Vendor for the period of 12 months

8. Warranty:

The system should be quoted with 36 months warranty from the date of installations or 37 months from the date of shipment whichever is earlier

B) Analytical Chemistry Laboratory Setup:

Technical Specification for : LC-MS MS (HRMS) (Liquid chromatography spectrometer)	
A complete HRMS workstation capable to analyze DMPK, BA/BE in a Discovery model. Metabolites, Nitrosamine applications	
Descriptions	**Required Technical Specifications**
Mass Analyzer	The HRMS should be suitable hybrid analyzer, High Resolution accurate Mass Spectrometry with a combination of Quadrupole with Ultrahigh resolution MS with UHPLC. The complete workstation with all the required Softwares and all pre - requisites for operation of the system.
Ion Source	The system should be supplied with API source hosing with A. ESI probe compatible with flow rate from 1ul/min to 2ml/min with desolation temperature up to 500^{0}C B. APCI probe compatible with flow rate from 50ul/min to 2ml/min with desolation temperature up to 5000C C. Nano ESI source compatible with flow rate from 50nl/mi to 1000nl/min without flow splitting. D. Direct infusion Syringe with syringe pump and divert valve for calibration and direct infusion of sample. E. Ion Sources: The instrument should have at least ESI/APCI, APCI,. Polarity switching options for detecting both molecular mass ions (positive/negative). F. The system should be capable of performing Qualitative and relative Quantitative analysis Conclusions The results of these experiments demonstrate: G. • Rapid separation of fifteen nitrosamines in <12 minutes H. • Excellent linearity over four orders of magnitude (0.2–2,000 ng/mL) I. • Sub-ppb levels of sensitivity with MDLs ranging from 51 to 550 fg OC (corresponding to 0.2–1.8 ng/g in sample) and MQLs ranging from 0.6 to 3.0 ng/g in metformin drug substance, easily surpassing FDA regulatory limits of 30 ppb (ng/g) J. • Precise and confident quantification as demonstrated through accuracy and precision of 70–130% recovery and amount % RSD <20% for triplicate extracted standards ranging from 1 to 20 ng/g K. • Excellent method and instrument robustness was demonstrated over a period of 2 weeks with over 100 matrix injections with minimal inlet maintenance
Quadrupole MassRange	Shall have mass range from 50m/z to 3000m/z or better. Segmented mass filter, providing variable and step-less precursor isolation width selection from 0.4 Da to full mass range

Mass Resolution	Quadruple Mass range: 50-3000 Da or better to work with different molecules. Minimum resolution at m/z 900 (approximately) should be greater than 1,00,000 FWHM
Mass Accuracy	Should have excellent mass accuracy less than 1 ppm without frequent calibration for 5-7 days.
Sensitivity	Sensitivity Full MS: MS/MS: 200 fg reserpine on column S/N 100:1 tSIM: 200 fg reserpine on column S/N 250:1
Acquisition speed	Should and scan speed of 20hz or higher. System must have Advance collision cell for effective fragmentation of analytes like EAD/HCD etc. specially for the low mass region of
Scan Functions	• Full Scan, SIM Scan, Data dependent MSn, DIA with variable quadrupole isolation window from 10Da to 100Da or better, Parallel reaction monitoring etc. • Should have Data Dependent Acquisition (DDA), MS2 scan by DDA with Top N experiments. in targeted SIM manner based upon a sample dependent, Triggered MS2 by exclusion mass list .M2 Scan by Data Independent Analysis. • The mass spectrometer must be capable of fast polarity switching acquiring one spectrum in positive and one in negative with <1.4hz cycle time or better. Or One full cycle in <1 sec (one full positive mode scan and one full negative mode scan • On-the-fly charge state deconvolution for intelligent ddMS2 on intact proteins applying Smart HCD.
Dynamic Range	The system should have in-spectrum dynamic range of 5000:1or 4 order of linear dynamic range

Fast and High- Resolution LC System (For discovery phase andvalidation phase)		• Fully biocompatible Quaternary gradient system with Vacuum Degasser, Auto sampler and Column Oven for Ultrafast separations. • Flow accuracy of ±0.1% or better • Injection volume accuracy of +/- .0.5% or better. • Gradient precision 0.15% RSD or +/- 0.04 min SD, whichever is greater. • Auto sampler should be available with capacity of at least 80 vials of 1.8 ml/2 ml and should be capable of accommodating 96 well plate with injection volume.
		• The system should have sample temperature control from 4 –40 Deg C programmable in 1 Deg C increments (ambient temp: 20 Deg C).
		• System should have max: Pressure equal or more than 15000PSI or better.
		• Both the HPLC systems should be from same manufacturer & have single point software-based control with Mass Spectrometer.
		• Suitable mechanisms for the degassing of solvents. • LC maintenance kit and tool kit should be provided. • System should come with required quantity of strong ion • exchange columns, C18 columns.

Workstation andSoftware	Suitable workstations and all interfacing hardware and software for instrument (s) control, data acquisition and data processing must be provided. The latest model of computer necessary to handle, analysis and store such data should be provided. For each of the mass spectrometers a minimum of 2 work stations (One for acquisition & one for processing) should be provided, one for controlling the mass spectrometer, the LC and auto-sampler the others for data analysis and storage. All workstations should be having a network enabled laser color printer. All hardware and software including drivers, monitor, device interface cards / network card must be preinstalled and preconfigured on the computer provided. Complete software for protein identification, quantification and characterization, peptide mass fingerprinting, data base search and biomarker studies. Complete advanced software for proteomics, and metabolomics analysis, database searches, quantification, well as all relevant metabolite databases should be provided including relative & absolute Quantitation. List of software with their application details should be provided. All the software must be original and with perpetual license. Software updates including newer versions should be provided free of cost during warranty period. Software should allow discrimination of false discovery and allow grouping of proteins to reduce complexity in results. Processing software for unattended batch processing of data files for protein identification and expression analysis from LC / MS-MS,gel-based experiments. Output of the data analysis/processing software should meet the data required to submit for publication in major journals. Advanced software for data analysis and publication like scaffold and peaks studio software etc. should be included. Proteomics integrated software to understand the biological context of identified proteins including pathways.
Columns:	Sub 2-micron particle size C18 column -2 Qty Suitable MS Columns for HILIC Application -2 Qty Suitable MS Column for Metabolomics Application-2 Qty.
Nitrogen Generator	A suitable imported Nitrogen Generator with inbuilt compressor. A suitable imported gas generator with compressor capable of providing nitrogen gas at the required 99% purity, pressure and flow rate for the Mass Spectrometer must be quoted. The compressor should be noise-free. UHP Grade N2 Cylinders 2Nos N2 Regulators (S.S.) 2 Nos Moisture / hydrocarbon trap 1 Nos must be supplied
UPS	15 KVA UPS with 1 hr Battery back and isolation transformation inbuilt.
Gases	If any additional gasses required should be quoted with regulator

References	Should provide at least 4 references from reputed institutes where itis being Installed and working well.
Manpower	Vendor Should provide Technical Operator for the Period of 12 months
Accessories	pH meter, Vortex, Micro pipette set, Analytical balance, Vacuum pump, 4°C refrigerator, Speed Vac, Refrigerated Centrifuge to be supplied.
Warranty	Comprehensive 3 year of warranty
Installation andtraining	Details should be clearly given for the installation, performance verification, operation manual and on-site training part necessary forthe system (as free of cost) Note: Necessary items or chemicals required for the installation, demonstration and calibration of the system should be arranged bythe supplier
Other condition on service/maintenance and user list	a. Please provide address of your local service office with the availability of number of trained engineers to attend any service issue in HRMS. b. Also mention the anticipated down-time of the machine, if there is any service call from us (in minimum days) c. A user list containing minimum of 5 installations of HRMS (in reputed govt organization R&D centers for Nitrosamines, Metabolites.

C) Mammalian Cell Culture Setup with Complete Drug Screening Laboratory:

Technical Specification for the instruments required for complete Mammalian Cell Cuture Setup : 01 set	
I	**Technical Specifications for Class II A2 Biosafety Cabinet : 01 qty**
	1 The Bio safety cabinet should be Type A2 in which 70% Air should be re- circulated and 30% of the air should be exhausted 2. The Bio Safety Cabinet must include two DC motors. High power consuming AC motors should not be used 3. The motor must automatically adjust the airflow speed without the use of a damper to ensure continuous safe working conditions, even without maintenance adjustments. 4. In order to preserve safety to the user and the environment, the exhaust blower on the cabinet must continue operating when the supply blower stops working. If the exhaust blower should fail, the supply filter will also be turned off. 5. In order to ensure consistent and reliable down flow velocity across the supply HEPA filter over the life of the cabinet, the cabinet must use a pressure sensor (rather than anemometer) to detect pressure drop across the supply filter, rather than in just one point across the down flow. The pressure sensor must be encased in order to protect the sensor from temperature, humidity and other environmental phenomena that can impact the sensor's performance.

	6. The cabinet Should be provided with Microprocessor controller and large LED display for inflow and Down flow air velocity and hours of operation, Audible and visual Alarms for HEPA filter failure, blower failure, airflow speed failure, Incorrect window position. 7. The BSC must incorporate an LED Indicator to indicate filter loading and should provide visual and audible alarm to indicate excessive HEPA filters loading which can result in unsafe airflows deviation from the NSF recommended inflow and down flows air velocity values measured in meters per second or foot per minute. 8. The front window must be a 10" sash opening and be made of laminated safety glass to ensure containment of potentially hazardous samples in the case of accidental glass breakage. 9. All interior and exterior parts must be painted or smooth to ensure no risk of cuts to users or maintenance personnel. 10. The front of the cabinet must be angled 10º to help minimize glare on the window to the user, and to ensure that the user's posture is comfortable during a working session. Inadequate user ergonomics in a safety cabinet may lead to excessive fatigue, unsafe working habits and harmful consequences to user safety or product contamination. 11. The cabinet noise level must be less than 63 dB(A) for a 4 foot cabinet as measured in a sound proof room 12 inches in front of the cabinet and 15 inches above the work surface. Lower noise levels promote more comfortable and safer working habits of the user. 13. The biological safety cabinet must be capable of achieving current state-of-the-art in energy efficiency. A biological safety cabinet with lights on and fan at operating speed should consume less than 200 watts for a nominal four foot width and have a reduced energy mode for non-operational maintenance on containment in the work area. 14. The cabinet must automatically reduce fan/blower motor speed to 30% when the front window sash is in closed position to ensure reduced energy consumption when the cabinet is not is use. 15. In order to provide maximum effectiveness, efficiency and safety to laboratory Personnel, UV light must be programmable to allow for specific exposure times from 0 to 24 hours. The automatic shut off feature on the UV light saves money on replacement of the bulbs. 16. The Cabinet should have option to fit taps for Vacuum, Combustible and Non Combustible Gas. 17. The Bio Safety Cabinet **should come with individual NSF certificate** with listing on NSF website. NSF Certificate Need to be submit with Offer. 18. The Bio safety cabinet should incorporate HEPA filter of the class H 14 EN 1822 or better and having minimum efficiency of 99.995% at 0.3 µm particle size. 19. Approximate Dimension : Exterior 1500 H x 1300 W x 800 D; Interior 800 H x 1200 W x 500 D 20. Ventilation System Exhaust and Inflow air volume approx.: 300-350 CFM 21. Heat Emissions at 25ºC should be approx 0.2 KW or lesser. 22. The cabinet should be provided with fixed / adjustable Height Stand, UV Light and one set of detachable arms rest and one / two electrical outlet. 23. The Drain Pan of the BSC should be made of Stainless Steel. The drain pan should not be painted or power coated. 24. The Bio safety cabinet should have dual side wall with negatively pressurized interstitial space. Bio Safety Cabinet with single glass side walls should not be quoted. 25. Suitable voltage stabilizer need to be quoted as optional.

	26.	Warranty minimum 3 years must have service facility at Kolkata
II	**Single Chamber-CO2 Incubator : 01 qty**	
	A) Technical Specifications for Incubator :	
	1.	Chamber volume should be at least 160 lts
	2.	Relative Humidity (rH): ≥90% at 37°C
	3.	CO_2 & O2 management
		➢ range: 1-20% or better. ➢ control: ±0.2% or better. ➢ Sensor: TC.
	4.	Temperature
		➢ range: 4°C above ambient to at least 50°C or better. ➢ control: ±0.2ºC or better. ➢ Uniformity: less than ±0.3ºC.
	5.	Rapid Recovery of all critical parameters as follows:
		Must be fan assisted chamber air circulation to recover of all parameter under 10 min ➢ Temperature recovery: in < 5 mins ➢ %RH recovery: < 10 min ➢ % CO2 recovery with TC Sensor: < 6 min
	6.	The incubator should be equipped HEPA air filtration system that achieves ISO class 5 chamber air quality in less than 5 min of door opening and filters entire chamber volume every 60 seconds or less.
	7.	Systemic sterilization capability: 180 degree C (12 hours or less) High Temperature Sterilization or automated chemical sterilization (H_2O_2) without user intervention.
	8.	Inbuilt water pan with drainage valve in front.
	9.	Water pan directly heated by chamber's bottom heater.
	10.	Guided air circulation passing the chamber air above the surface of water.
	11.	Humidification of gases (CO2) before they reach the cells / culture.
	12.	Temperature probe and gas sensors should be located inside the chamber to allow precise monitoring of conditions as the cells.
	13.	Dual temperature probe for over temperature protection.
	14.	Interior chamber: electro-polished stainless steel
	15.	Exterior chamber: powder coated steel with minimum thickness.
	16.	Access port: 40-45 mm diameter
		➢ Number of shelves: at least 3 ➢ Max. load per shelve / total load at least 10/30 kg ➢ Input voltage 230-240V, 50/60Hz (without transformer)
	17.	The CO2 Incubator should feature a water level sensor and alarm to alert user when humidification water refill is required.
	18.	The unit should incorporate touch screen user interface, a bright, and easy to read control module display. **Must be supplied with suitable Co2 and LN2 gas regulator.**
	19.	Warranty: 2 years of comprehensive warranty for the whole system.
	20.	Service centre in or around Kolkata.
III	**Portable Sample Storage Vessel with Level Monitor: 01 qty**	
	Features:	

	• Compact design to minimize space requirements while maximizing storage capacity • Must be suited for both manual and computerized inventory record-keeping methods • Should have Outstanding temperature uniformity: samples are stored below -180°C, even when less than 2 in. (5cm) of liquid nitrogen remains in the vessel • Audible alarm that sounds when nitrogen level falls below safe range; should have option of dry remote alarm contact for remote monitoring • Should have advanced vacuum insulation to minimize liquid nitrogen evaporation and reduces operating costs • Secure locking to prevent unauthorized entry • LN2 capacity of not less than 184 liters • Neck diameter of not more than 8.5” • Static holding time of not less than 185 days • Built-in Ultrasonic level monitor • 2mL vial capacity of 6000 vials • 5mL vial capacity of 2430 vials • Shipping weight of not more than 160 lbs (72.6 kg) • Empty weight of not more than 105.3 lbs (47.9 kg) • Full weight of not more than 180.3 lbs (82 kg) • Exterior dimensions of 26 x 37.5 in/ 66 x 95.3 cm (Diameter x height) • (6) Stainless steel racks, each rack designed to hold (10) boxes of 1.2/2.0 mL vials • CE and cCSAus certification • Must be supplied with wheeled accessory cart (5 in. high) and SS Racks to hold boxes. • Should have service facility at Kolkata • Warranty minimum One year
IV	**Fluorescent Cell Imaging System : 01 qty**
	Classification: Should be a high-performance automated system for inverted multi-channel fluorescence and transmitted light (bright field and phase contrast) cell imaging applications **Illumination:** Digitally controlled LED light sources for transmitted & fluorescent light applications with greater durability (≥48,000 hours lifespan). Should include fluorescent LED light sources with hard coated bandpass optical filters for DAPI, GFP and TX Red. The illuminators should have independent intensity control and system should be upgradable up to four fluorescent channels **Objectives:** Should have infinity corrected optics. Five Position objective turret. Plan Fluorite objectives – 4X, 10X, 20X & 40X should be included **Condenser:** Should have bright-field and phase contrast annuli. Working distance 60 mm or more **Stage:** Motorized X-Y scanning stage, travel range 120mm x 80 mm travel stage with submicron resolution. Should be compatible with all commonly used cell culture vessels (viz. slides, flasks, petri dishes, multi-well plates etc.). It should have option to upgrade with onstage incubator for live cell time lapse imaging with precise control of temperature, humidity, gas flow (viz. CO_2, air) **Camera:** Should be integrated with dual cameras - High sensitivity 3.2MP (2,048 x 1,536) monochrome CMOS sensor with 3.45 µm pixel resolution; High-sensitivity 3.2MP (2,048 x 1,536) color CMOS sensor with 3.45 µm pixel resolution with auto switching capabilities. Camera should support autofocusing to optimize speed and accuracy

	Display: Should be provided with 23-inch high-resolution touch screen LCD color monitor (1,920 x 1,080 resolution) and other relevant accessories **Interface:** USB ports for connecting with PC **Live Cell Imaging Capability (upgradation):** System must be upgradable to Live Cell Imaging using On Stage Incubation System ideal for long term monitoring with fully integrated on stage cell culture incubator with temperature (ambient to 40°C), humidity (at least up to 80% at 37°C), CO_2 (0-20%), O_2 (0 – ambient), control – normoxic to hypoxic conditions. All accessories of On-Stage Incubator (CO2 cylinder, tubing, regulator, humidity chamber, etc.) must be included. On Stage Incubator, **Software:** • Should have integrated software with intuitive GUI for operation • Captures publication quality images in JPEG/TIFF/PNG formats • Compatible with single click multi-channel overlay • High-speed image acquisition coupled with multi-position well-scanning. Should be able to scan 96-well plate in three fluorescent channels in less than 10 min • Should have a vessel selection wizard and vessel map under live mode • Should have features for time-lapse imaging and creating videos in AVI formats • Z-stacking feature to capture a series of images along the Z-axis that can be saved individually or combined into a Z-stack projection with a greater depth of field • Should have tool for image stitching and montage, cell count, time-lapse live cell imaging • Single software should be able to control microscope, camera & on-stage incubator with automation between low magnification single field mode and high magnification scan mode to easily define & capture the area of interest • Automated scanning & imaging capabilities in defined region (e.g. fields & wells) in different vessel options with at least 4 fluorescent channels & transmitted light applications (Bright-field & Phase Contrast) **Data Processing Unit:** External PC with 16 GB RAM and instrument having intel core i7 processor, 1 TB hard disk, Optical mouse, keyboard, DVD writer, 23" high-resolution color monitor (also fully controllable via mouse); 1920 x 1080 pixel resolution, 1 GB NVIDIA Graphic Card, Multimedia kit, 64 bit Windows as. Options for USB and networking support and storage. **Vessel Holders:** Vessel holders for glass slides, T-25/T-75 Flasks, 35,60, 100 mm petri dishes, 96/384 multi-well plates must be included along with the imaging system
V	**Specification for High Speed refrigerated Centrifuge : 01 qty**
	1. Maximum Capacity of centrifuge: 4 x 400 ml. but Max capacity should not be less than 4x750ml,4x4 MTPs 2. Maximum speed (RPM): 15200 rpm with fixed angle rotor and 5500 with swinging out rotor 3. Temperature Range: -10 °C to +40 °C 4. Must have pre-cooling option 5. Should have Customizable pulse button for quick on-the-fly spins 6. Acceleration/ Deceleration Rates: 9 / 10 7. Maximum Timer Range: 9h, 59min + continuous 8. Time Setting: Both Countdown from start and countdown from set speed 9. The Centrifuge should have an auto lock feature to install and remove rotor without tool in less than 5 seconds with just a push of a button for quick and easy change of rotors for different applications 10. The display must be with full colour touch screen having menus including settings, saved programs and alarms/alerts. Must 100 programs Memory. Should have USB port for data transfer. Must have Data Logging facility. Alarm messages in the case of an unexpected

	situation with direct user instructions for further actions. Clear graphical representation of centrifuge health, indicating any existing alarms or alerts, including preventative maintenance cues to limit downtime. Centrifuge Health Alarm Status Icons give clear indication of the problem and corrective steps to be taken. 11. The centrifuge must be able to display both air/chamber temperature as well as temperature in the sample. 12. Dual Timer mode- At Start and at Speed 13. The centrifuge must have capability of password protection for the programs. 14. The centrifuge must have capability of password protection for lid opening. 15. The centrifuge must be able to display set parameters together with actual values, and parameters must be readable at a distance of at least 5 meters. 16. The centrifuge must be CE, CSA and UL certified for safety containment. 17. The Centrifuge should be *certified and maintained in accordance to the ISO 13485 international standards.* 18. The centrifuge should confirm to IVD directives. 19. The angle rotors must be manufactured from a highly corrosion and fatigue resistant Fiber material. The Fixed Angle rotors should be warranted for at least12 to 15 years 20. The bucket lids for Swing out rotors must operate in a safe manner without spring clips or metal components. The buckets and rotor sealing lids must be certified for bio-containment by a 3rd party lab of worldwide recognition. 21. Should have imbalance detection system 22. should have pre-cooling system with direct button 23. The centrifuge must be capable of running a minimum of 48 x 2 ml microtubes at speeds of at least 25000 x g in certified sealed conditions. 24. Warranty: Minimum 2 years on whole machine and 5 years on compressor and motor and should have minimum 100 installation in India (user list need to be upload) Must have service centre at Kolkata (Supporting documents need to be uploaded) **ROTORS TO BE SUPPLY:** • The centrifuge must be supplied with a Fixed Angle rotor with capacity 8 x 50ml conical tube with speed not less than 14500 RPM and 24000 x g standards along with adapter for 15ml conical tube. • Fixed angle micro rotor having capacity 30 x 2ml tube with speed not less than 14000 rpm and RCF not less than 21693 x g. The rotor should have facility to do Spin Column. • Plate rotor having capacity of 2 x 3 Standard Microplate and 2 x 1 Deepwell with speed minimum 4000 rpm. Rotor should be supplied with Biocontainment lead. • Should provide adapter for 48 x 5ml, 48 x15ml and 20 x 50ml conical tube and 16 x MTP/PCR plates
VI	**Freezer -80c Spec : 01 qty**
	CONSTRUCTION • The freezer must be constructed using 1" thick vacuum panel insulation in conjunction with environmentally-friendly water blown foam • Door gasket must provide 7 independent insulation zones along with 4 points of contact to ensure sample security. • Freezer shall be painted with high-impact, scratch resistant powder coat finished interior and exterior to ensure long term viability and premium temperature uniformity. • To reduce condensation, the perimeter heater shall be on the door side not on the cabinet size to limit heat introduction into the sample storage area.

- The thermal breaker shall be made of plastic to limit heat leakage into the cabinet
- Door latch allows one-handed opening and closing. Handle must include door key lock as well as padlock provision for added security.
- Freezer shall have 4 internal storage compartments with a minimum of 2 polystyrene insulated inner doors to ensure sample security. Inner doors should have no latches or external magnets and must be removable for easy cleaning without the use of tools.
- Freezer shall have an automatic heated pressure equalization port which allows for rapid re-entry to cabinet.

- Freezer shall have two-1 inch access ports as standard.
- Freezer shall have a RS485 output, dry contacts and 4-20mA output for remote monitoring purposes.
- Freezer door must open at least 180 degrees for easy sample access.

CAPACITY

- *Freezer shall hold 600 2" boxes or 60000 2ml Vials with a vial to footprint ratio of 7078 2ml vials per Square feet of floor space. More than 800 lt.*

CONTROLS

- Freezer shall allow for set-point security control that blocks specific users from changing freezer set point or alarms through the use of a user name and password control. Unit shall allow for up to 150 users.
- Freezer shall have a high performance operating mode that can be activated by the user without loss of power to the freezer.
- Freezer shall have an on-board data logger that allows for a minimum of 4GB of data storage
- Data must be available from the display for a minimum of 7 days. Data must also be downloadable via a USB port.
- Power management system shall show incoming line voltage, indicate low or high line voltage, and provide voltage correction of up to +/- 10% of rating. Line voltage should be logged for a period of up to 15 years and be downloadable via a USB port.
- Freezer shall log all power interruptions and provide audio and visual notifications.
- Freezer shall have adjustable power recovery time delay that allows user to set a time delay between 1 second and 20 minutes after power failure.
- Freezer shall have an adjustable extreme ambient alarm to protect against unsafe ambient operating conditions. Ambient alarm shall have a visual and audible notification when active.
- Freezer shall display temperature in Celsius or Fahrenheit
- Freezer shall have a graphical display of temperature in the form of a graph that is adjustable for a period of 2, 4 or 6 hours.
- Freezer shall have a screen auto-off selection that allows the screen to darken between the hours of 9pm and 6am.
- Freezer shall have a graphical indication of operating status as well as a redundant LED light.
- Freezer shall record number of door openings and date/time of last opening. This counter shall be resettable by the user.
- Freezer shall record temperature excursions including actual temperature, warmest temperature and coldest temperature. This indicator shall be resettable by the user.
- Freezer shall display temperature of evaporator inlet, evaporator outlet, heat exchanger, first

stage suction, second state suction, second stage sump, liquid line and condenser air inlet. This display shall present in a graphical to allow for diagnostic troubleshooting.

- Freezer shall record events in an event log viewable on the freezer display. This log shall include the event type, date and time. Event log data shall be downloadable via a USB port and viewable in standard programs such as MS Excel.
- Freezer shall support temperature profile and event log on-demand pdf reporting downloadable via a USB port.
- Freezer shall notify customer to perform preventative maintenance tasks including filter change and backup battery test.
- Display language shall be selectable between English, Spanish, Italian, German and French.
- Display shall notify user if a power failure, high temperature, or low temperature alarm occurred in the past and has since corrected itself. User must acknowledge past alarm to ensure cargo security.
- Freezer must recognize if line voltage and frequency does not match freezer specification and alert user.

- Freezer must work on line voltage of 208-230V/ 50Hz and have an instrument current rating of no more than 4 Amps.

THERMAL PEFORMANCE

- Freezer shall control temperature to within an average peak variation from set point of +6.9/+1.8 at a -80C set point in an empty freezer of 208-230V/60Hz voltage supply. Supplier must provide test data to verify freezer performance.
- Empty freezer shall recover from door opening to -75°C set point in under 24 minutes. Supplier must provide test data verify freezer performance.
- Empty freezer should not warm to -50°C from -80°C set point in under 303 minutes during a power failure in a 20°C room

Sound

- Freezers must maintain a sound level no louder than: 45.5 dB(A)

REFRIGERATION SYSTEM

- Freezer shall use only natural, commercially available refrigerants (Hydrocarbon) with no special blends required.
- Freezer shall utilize variable speed controls to optimize temperature performance and energy.
- Freezer refrigeration system shall incorporate a brazed plate heat exchanger. Heat exchanger shall be placed in a thermal box in the deck of the freezer to optimize freezer storage capacity.
- Induction brazing shall be used on refrigeration connections to minimize leaks
- Refrigeration system shall contain a liquid line/suction line heat exchanger to ensure freezer temperature stability.

REGULATORY

- Freezer must be built to and contain the registration mark for UL, cUL, and CE standards for safety and performance.

	Additional Items • Suitable voltage stabilizer and fully loaded (all compartment) sliding drawer and racks including box needs to be offered Warranty: 5 years on overall freezer and additional 7 years on compressor, hence total 12 years on compressor. Must have service center at Kolkata. Product Must be available at Company website
VII	**Water Bath 10 Lt: 01 qty**
	Water baths should be are rugged, high performance that are designed to maintain water temperature from ambient to 100°C. Ideal for a wide range of lab applications. Over-temperature safety circuitry is designed to prevent thermal runaway, while new auto-on and auto-off timers allow you to optimize operation schedules. Benefit from outstanding chemical and corrosion resistance with epoxy powder-coated exterior, and easily clean the chamber with its seamless stainless-steel interior. Additional features: • Smaller footprint, compared to previous models, frees up valuable benchtop space • Advanced microprocessor controller is designed for extended functionality • Protect your work with audible alarms • Conveniently save commonly used settings with four temperature presets • Baths come with clear polycarbonate gable cover, diffuser tray, drain hose and rubber duck • UL Listed and CE Marked **TECHNICAL SPEC:** Chamber Capacity: 10 LT Temperature range: Amb. to 100°C Temperature Stability / Uniformity @ 70°C: ±0.1°C / ±0.2°C Work Area 11.7 x 19.7 x 7.9 in.(297 x 500 x 200 mm) Overall Dimensions Without Cover (L x W x H 15.4 x 21.8 x 11.1 in.. (392 x 555 x 282 mm) Global Voltage: 100-115V/200-230V, 50/60Hz Heater Output : 1200W
VIII	Refrigerated Microcentrifuge : 01 qty
	1. Must be refrigerated model. 2. Maximum RCF: Not less than 21,000xg 3. Maximum Speed above 14,600 RPM 4. 24x1.5ml/2ml Fixed angle rotor with click seal lid. The rotor should be tested and approved by HPA, Porton Down, UK for Biocontainment. 5. Large LED display for Time, Speed and Temperature 6. Max Noise Level: 50 dBA 7. Temperature set range from minus 9 °C to plus 40°C 8. Accelaration/Deccelaration time 12Sec/13 Sec 9. Time set range 1 to 99 min, 1 min increments 10. Toggle between RPM and RCF. 11. Induction maintenance free motor 12. Wide selection of following rotors for future upgrade - Dual Row rotor 18x2 plus 18x0.5ml for simultaneous run of two different volumes without using adapters.

	- 36x0.5ml rotor - PCR4x8 (32x0.2ml) rotor with Click seal Biocontainment lid. - PCR 8x8(64x0.2ml) rotor 13. Warranty: 2 years 14. Suitable voltage stabilizer need to be offer. 15. Must have service center at Kolkata
IX	**Technical Specification for Stackable Incubated and Refrigerated Shakers : 01 qty**
	Product description: • The spacious chamber must holds Four four-liter flasks or two Six-liter flasks • Units should be stacked two high on the floor. • Should have two adjustable-height shelves to provide added storage. • Large viewing window and internal light offer sample visibility. • Temperature range shouldbe 15°C below ambient to 80°C. • Should have Electrical outlet inside chamber provides power for safe operation of shakers, stirrers rotators. Corrosion-resistant stainless-steel chamber Operation • Drive should be Triple eccentric, so that the drive handles heavy loads, provides uniform agitation continuous 24-hour operation, even at high speeds. • Monitor and control chamber temperature range with ±0.1°C accuracy at 37°C in Flask. **Digital Operating Systems** • Variable speed control must be from 15 to 500 rpm. • Continuous/timed operation from 0.1 hour to 999 hours or 0.1 minute to 999 minutes. • View speed, operating time and temperature simultaneously on three individual LED displays. • Visual/audible alarms alert you if temperature deviates ±1°C of set point. • Shaker shuts down and visual/audible alarms signal if unit operates ±10% of set speed, preventing from walking. • User-adjustable speed calibration can be performed using a digital handheld tachometer, where ve is required and protocols can be standardized. • Should have Unbalanced load sensor stops platform motion when excess vibration is detected and visual/audible alarms signal until condition is corrected. • Soft start feature eliminates sudden starts and stops, splashing of vessel contents or wetting of flas • Should Retains parameters during power failure and restarts unit automatically after power is rest **Safety** • Over-temperature safety feature with independent thermostat provides additional backup by contr heat if main temperature controller fails. • Safety interlock stops shaking motion when the door is open. **Technical Specification:** Speed Range (RPM): 15 – 500 ± 1rpm Orbit Diameter in. (cm): 0.75 (1.9) Max. Load Lb / Kg: 50 / 22.7 Temperature Range & Accuracy: 15°C below ambient to 80°C; ± 0.1°C at 37°C in Flask Volt: 240, 50/60 Hz. Required Amps: 20 Need to be supply Universal 18”x18” Platform to accommodate different capacity flask. Stacking Kit

	Set of clams to be supply: (1) microplate clamps, (2) 125 ml flask clamps, (4) 250 ml flask clamps, (4) 00 ml flask clamps, (8) 1L flask clamps, (4) 2L flask clamps, (2) Test tube rack clamps". ➢ Warranty should be for one year labor, Five years on parts, and 10 years on drive mechanism ➢ Should be CE marked ➢ Should have minimum 50 installation at eastern region. ➢ Must have Service centre in or around Kolkata.
X	**Specifications for Water Purification System : 01 qty**
	I. Two Stage Water Purification System **1. Prefiltration System:** Three stage pretreatment system with 10, 5 & 1 micron spun filters 10" long for removal of suspended particles and to take care of F.I. in water. Feed Water Conductivity upto 2000 micro siemens **2. R.O. Grade Water Purification system:** • should have three purification technologies, **Pretreatment**, **Reverse Osmosis, Deionization, Photo Oxidation** and should have recirculation facility to maintain purity of water. • Pretreatment cartridge with anti scaling compound and silver impregnated carbon • Conductivity meter after RO and after DI Cartridge to find out the performance of RO and DI cartridge. • Purified water should be re-circulated up to the point of use to maintain optimum purity Instrument should display Graphical and numerical reservoir level display. Conductivity after RO, Temperature compensated resistivity at point of use water, Temperature of water, Life of cartridges and UV lamp, Alarms (Audio / Visual), Low water quality, Cartridge change reminder, Reservoir level **Product Water Specifications** **Flow rate: 12 L/ hr., Resistivity: 10 - 15 Meg Ohm.cm**, Conductivity: < 0.2uS/ cm (typically 0.067 to 0.10), **TOC: < 30 ppb, Bacteria: <1cfu / 1 mL** **STORAGE TANK** A 30 Liter cylindrical tank to store the R.O. water constructed (from the same manufacturer of the system) which should made up of pigment free polyethylene. The tank should be cylindrical to minimize surface area and should have conical bottom to avoid dead volumes and ease of cleaning and complete emptying. It should be supplied with a vent filter to avoid air borne contaminations. **3. Ultrapure Water Purification system** Sleek design to occupy very less space, should have polishing cartridge and dual wavelength UV lamp with recirculation facility and should have **volumetric dispense** to give pyrogen free water for life science and analytical applications. Display should show product water quality (MΩ-cm or uS/ cm), product water temperature, and consumable change reminders. **Product Water Specifications** **Resistivity: 18.2 Meg Ohm.cm** (@ 25 degree C), Conductivity: < 0.055uS/ cm, **TOC :< 5 ppb**, Bacteria: <0.1cfu/ mL, Flow Rate: 2 L / min, Particulates: 0.2 um, RNase: <0.003 ng/mL DNase: <0.4 pg/µL, Endotoxin: <0.001 EU/ml
XI	Single Channel Variable Pipette Set : 0.2-2ul,2-20ul,20-200ul,100-1000ul : 01 set

XII	Multi-Channel Variable Pipette Set : 10-100ul, 30-300 ul: 01 set
XIII	Benchtop cell counter: 01 qty
	1. Instrument type: Benchtop cell counter and suspension cell-based assay platform 2. Should be compatible with a wide variety of eukaryotic cells. 3. It should have bright-field 4. **Camera**: 5 megapixels, 2.5X optical magnification. 5. Instrument should be able to autofocus the samples and should be able to save different profiles for different cell types. 6. Processing time should be ≤ 30 seconds. 7. Required sample volume should not be more than 10µl. 8. It should have reusable slide option. 9. Instrument should have a dilution calculator for the calculating the number of cells required for an assay based on the live/total cell count and a cell splitting calculator 10. Software should be able to gate cells based on the size, shape and intensity 11. Instrument should able to count sample, cell concentration range to be detected should range from $1 \times 10^4 - 1 \times 10^7$cells/ml. 12. Should be able to count particle/cell diameter ranging from 4–60µm. 13. The counting algorithms should be able to identify clear delineations of cell boundaries within clumps of cells, thereby giving precise, accurate cell counts even with clumpy samples. 14. The instrument should contain a Firmware (Cell imaging software). 15. Instrument should be able to do rapid captur and autosave, thereby eliminating the need for additional menu selections to quickly get the results which are automatically saved. 16. The instrument should be complete system designed for stand-alone use with processor, software, and data storage, to process, analyze, and store data generated on the instrument. 17. Display interface should be user friendly with the touch screen display (LCD), located in the front of the instrument and should contain buttons for all the functions needed and displays data from the cell count. 18. Instrument should save the results and images as TIF, JPEG or PNG. Should also support PDF, CSV and FCS file type. 19. The data stored in the instrument should be able to be transferred to computer using the USB drive and should have Wi-Fi–enabled cloud connectivity 20. The instrument should be compatible with reusable slides as well as disposable slides with a chamber volume of 10µl for cell counting. 21. It should come with 1 reusable & 50 disposable slides.
XV	**Complete Automation Workflow for Cell Culture System: High Content Analysis Imaging and Analysis Platform :01 QTY**
	An advanced, fully automated high-content confocal imaging microscope system with the following system configuration should be offered. The vendor should supply the entire system from a single source with all necessary accessories and complete system integration of hardware and software components for ideal integration and functionality. The vendor should be responsible for the complete system installation, functioning and maintenance. **Required specifications:** 1. The system should be table top type high-content confocal imaging platform and with no need for dark room for imaging. 2. The system should have confocal and wide field imaging along with brightfield imaging

capability.

3. The system should have an inbuilt spinning disc confocal with a single high speed spinning disc and multiple pin hole sizes, with the options of 40 or 70 micron pinholes, to allow high-resolution multi-colour confocal imaging of both thin and thick tissue samples.
4. High resolution CCD/ sCMOS camera with large field of view of at least 2200 x 2200 pixel array (atleast 4.5 um/pixel), and with high quantum efficiency (≥ 70%).
5. The system should have both Laser-based autofocusing and image-based software autofocus.
6. Should be provided with Air-objective lenses of 4x, 10x, 20x, 20x (High NA), 40x and 60x.
7. Equipped with minimum 5 multi-Color LEDs for transmitted light imaging to enhance contrast for quantitative analysis of non-labelled or colorimetric stains, for Brightfield imaging.
8. The system should be able to image and quantitate chromogenically stained samples.
9. The system should have minimum 7 solid state Lasers to cover Violet to Near IR (405 nm to 785 nm) range Fluorescence illumination for confocal and widefield imaging.
10. Should come with filter wheel with at least 5 Color dichroic and emission filter to allow multiple fluorophores.
11. Plate formats: Compatible with SBS standard microplates (6, 24, 96, 384 &1536 well) and glass slides. All imaging modalities should be compatible with any type of imaging types/ objectives.
12. System should be capable of performing On-the-fly phenotyping, ie, parallel image acquisition and analysis for on-the-fly population calculation of specific cell phenotypes in real time
13. System should be provided with a Live Cell Module, for enabling environmental control with control of temperature, humidity and dual gases (CO_2 and N_2) for true-hypoxia experiments. Should include built in imaging scheduling for well level and cell level kinetic analysis software.
14. Image analysis software should have predesigned assays for common assays for imaging and analysis like receptor internalization assays image segmentation, background correction, spot detection, co-localization, multi parameter cytotoxicity, neuronal profiling, cell cycle, tube formation, cell motility measurements, toxicity, dot measurements in the nucleus and cytoplasm, ROI analysis tools etc. for ease of setting up assay protocols along with ability to build custom-designed assays for automated image acquisition and analysis setup. Ability to image and analyse single cells of a specific phenotype as defined by the end user.
15. Software must be capable of providing cell level cut-outs to perform quality control by backtracking the data to each individual cell/event and excluding the artifacts in data while performing single-cell analysis.
16. Analysis software should offer quantitative information and display a graph of plot and histogram. All the cellular features being reported in charts or tables should be available for

	viewing at the touch of a button. 17. Software should be capable of analysing Z-prime assay performance to allow the identification of best performing assays in terms of signal to noise ratio or background. 18. The provided software must be able to perform multiple-pass scans, such as identifying samples at low magnification across large surface areas and capturing samples at higher magnification to evaluate rare events, to drastically reduce the total scan time and corresponding file memory consumption. 19. Work station with Windows-10 operating system, high-speed processor, 64-bit computing capacity, 64-GB RAM, 2-TB storage space with possibility for expansion, key board, mouse and at least 24-27" high-resolution widescreen monitor. 20. The workstation should include software to control equipment and analyse the images on the same computer without the need for external servers. 21. System Should be Supplied with compact benchtop cell-analyzers that can be configured with up to 4 spatially-separated lasers to flexibly design, run, and analyze panels of up to 14 colors. 22. System Should be Supplied with Electronic Microinjector and Manipulator 23. System should be supplied with: Freezer -20c , Refrigerator , Fine Balance , Ph meter , Vortex, Rocker , Magnetic Stirrer , of Reputed company need to be supplied 24. System should have option to upgrade with robotic capabilities and plate-handler from same provider (no third-party integration). 25. System must be able to be upgraded with Stacker Storage with 360-degree bi-directional arm for fast efficient movement. Automatic loading and unloading of plates with Orbitor RS Mover, Orbitor Hotel Mount, 3 Plate-feeder Hotels, with Stackers of 80 plate capacity. 26. Bidder should have at least 10 installations of their HCS platform in India. ***27.*** Bidder must provide the after sales service and application support capabilities locally though factory trained service engineers and application scientists

(Dr. Gouri Shankar Koner)
Managing Director
W.B.L.D.C.Ltd.

APPLICATION FORMAT

(FORM – I)

(To be furnished in the Company's Official Letter Head Pad with full Address with Contact No., Telephone No., FAX No., e-mail address, Website etc.)

To
Managing Director
West Bengal Livestock Development
Corporation Limited,
LB-2, Sector-III, Salt Lake City,
Kolkata – 700 106.

Sub: "e -Tender on ***Establishment of modern laboratory with high end lab equipment for translational research on laboratory animal at Kalyani , Nadia -741235 under West Bengal Livestock Development Corporation Limited, LB-2, Sector-III, Salt Lake, Kolkata-700106 for 2023-24 for 2023-24".***

Ref: NIT No: WBARD/WBLDC/NIT-599e/2023-24 Date of Issue: 01/11/2023

Dear Sir,

With reference to your NIT under reference, I am/we are furnishing my/our rates tendered for as per your specification, terms & conditions.

Should this tender be accepted, the work shall be completed within stipulated period from the date of work order.

I/We further declare that I/we have inspected the site and are fully conversant with all aspects of the site and appraised the condition of the site in regards to the execution of this contract.

I / We understand that: -

a) Tender Inviting and Accepting Authority can amend the scope & value of the contract bid under this NIT.
b) Tender Inviting and Accepting Authority reserve the right to reject any tender without assigning any reason.

I/We also agree that the decision of the Managing Director, West Bengal Livestock Development Corporation Ltd. in all matters in respect of this tender will be final & binding on me.

Yours faithfully,

Date: Signature & office seal:

Name of the Firm:

Address with PIN:

DECLARATION BY THE TENDERER
(FORM-II)

(To be uploaded under Company letter head with full address, phone no., mail id etc., duly signed & sealed)

I/We have inspected the site of work and have made myself/ourselves fully acquainted with local conditions in and around the site of work. I /We have carefully gone through the Notice Inviting e-Tender and other tender documents mentioned therein along with the drawing attached if any. I/We have also carefully gone through the 'Priced schedule of Probable Items and Quantities'.

I/We must have *executed MOU with a licensed electrical contractor having supervisor SCC relevant parts, readily present at work site during the execution of electrical works after accepting the Award of Contract (AOC)*

My/Our tender is offered taking due consideration of all factors regarding the local site conditions stated in this Detailed Notice Inviting e-Tender to complete the proposed construction as per drawings referred to above in all respects.

I/We promise to abide by all the stipulations of the contract documents and to carry out and complete the work to the full satisfaction of the Engineer-In-Charge.

I/We also agree to procure tools and plants, at my/our own cost required for the work.

Signature & Seal of the Bidder
with Date

Certificate from Chartered Firm

(To be furnished in the Chartered Firm Official Letter Head Pad with full Address with Contact No., Telephone No., FAX No., e-mail address, Website etc.)

(FORM – III)

This is to certify that I/We have examined the audited Balance Sheet & P/L accounts and other records of M/S ..... having its official address at ..... It is also certified that Annual Turnover of the firm for the Financial years 2020-21, 2021-2022 & 2022-2023 are Rs.....lakh.,Rs.....lakh. & Rs.....lakh respectively (as per P/L accounts & Balance Sheet of the firm submitted)

Signature of the Chartered Firm with Registration No

Countersigned

Signature of the authorized signatory (bidder)

Affidavit Proforma

(On Non Judicial Paper worth Rs. 100/-)

(FORM – IV)

(Sworn before the Notary Public / Judicial Magistrate/Executive Magistrate on or after the date of publication of the Quotation Notice)

I, Sri/Smt. …… the Managing Director/Proprietor (etc.) of the Firm. ,…… (Name of the firm)

At (address)……..…

P.O… ……

P.S……Dist……

do hereby solemnly affirm and declare as follows:

1. That I have not ever been convicted of any offence making myself liable to be disqualified for any work of Govt. or Govt. undertaking Organization /Institution in the State of West Bengal or other State or States.

2. That no case is pending against me or against my firm in any criminal court of law in the State of West Bengal or other State or States .

3. That my firm is not debarred/blacklisted as a whole or part thereof at present by any Govt. or Govt. undertaking Organization / Institution in the State of West Bengal or other State or States of India.

4. That, I also declare that if any information subsequently found incorrect or false will it automatically render the quotation submitted by me cancelled and make me liable for penal/legal action as per law of the country.

5. That I do further affirm that the statements made by me in this quotation are true to the best of my knowledge and belief and all the documents attached are genuine & correct.

Signature of the Deponent(s).

Name in Block letters :

Designation :

(FORM-V)

(To be furnished in the Official Letter Head of Firm/Bidder with full Address with Contact No., Telephone No., FAX No., e-mail address, Website etc.)

WORKING (CREDENTIAL) DETAIL
(Mandatory)

1. Name of Applicant:

2. List of similar type of work completed / ongoing:

Name of Employer	Name, location and nature of work	Reference of Work Order (Memo. No. and Date)	Contract Value	Date of Start of Work	Present Status (If completed, please mention date of completion

Note :Copy of Work Order or Completion Certificate from the employer to be attached.

Signature of applicant including title and capacity in which applicant is made

CHECK LIST (FORM – VI)

Information about Bidders under Company Letter-Head (To be uploaded with the Technical Bid)

Sl.	Description	Particulars
1	Name of the Firm	
2	Registered Address with PIN, Phone No, Fax No. E-mail address etc. Sole owner or Partnership Firm/Company	
3	Name of the Person authorized to enter into & execute contractual agreement	
4	Earnest Money Transaction slip, whether uploaded, if not, Exemption Certificate to be uploaded	
5	Application Form as per FORM-I whether uploaded.	
6	Self-declaration as per FORM-II whether uploaded.	
7	Original PAN Card whether uploaded.	
8	Original Prof. Tax Clearance Cert./Paid Challan (valid up to 31/03/2024) whether uploaded	
9	Original GST registration Certificate whether uploaded.	
10	IT returns of **2022 – 2023 Financial year** whether uploaded.	
11	Trade License valid up to 31/03/2024 whether uploaded	
12	Credential of similar nature of work whether uploaded.(FORM-V)	
13	P.F. & E.S.I. Registration Certificate / Declaration whether uploaded.	
14	Certificate from Chartered Firm in the official pad whether uploaded. (The agency / company should have minimum annual turnover of Rs. 300 lakh) (FORM-III)	
15	Audited balance sheet for the last 3 years whether uploaded.	
16	Lab Layout as well as Design / Drawing of ***(as per*** Scope of Work) must be provided/uploaded .	
17	The Bidder shall not be under a Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted with any of the Government Agency whether uploaded. (FORM-IV)	

Signature & Seal of the Bidder with Date

(BANK GUARANTEE SAMPLE FORMAT)

To,
W.B.L.D.C Ltd. LB-2, Sector-III
Salt Lake City
Kolkata- 700-106

Tender Ref. No: NIT No: WBARD/WBLDC/NIT-599e/2023- 24 dt.: 01/11/2023

At request of our Client _____ having its Registered Office at _____ (hereinafter called the supplier) who has accepted the tender, for "***e -Tender on Establishment of modern laboratory with high end lab equipment with Three Years Comprehensive Annual Maintenance (c-AMC) for translational research on laboratory animal at Kalyani, Nadia -741235 under West Bengal Livestock Development Corporation Limited, LB-2, Sector-III, Salt Lake, Kolkata-700106 for 2023-24 for 2023-24".***" with reference to the Offer letter **(Memo No.: _____; Dated: _____)**. The supplier has requested us for a performance guarantee of **Rs._____(Rupees _____) only** (Including Tax, Insurance and Packing).

We _____ **BANK** having its branch office _____ situated at _____, hereby agree as follows:

In the event of the supplier failing to perform their obligations under the contract for any reason what-so-ever we shall pay without any demur a sum of **Rs._____only**. Your receipts for the sum claimed accompanied by your statement that the contractor failed comply with contract terms notwithstanding any contestations by the supplier or any other party.

Unless a demand or claim is made in writing by you to us under this guarantee and reaches us on or before due date, all our obligations hereunder shall cease and we shall not entertain any claim after the due date _____.

In issuance of said Bank Guarantee our guarantee is unconditional and valid in your favor until _____ including the mailing period. We indemnify you against any loss or damage whatsoever and the same will be remitted as per your advices.

Notwithstanding anything contained hereinabove, our liability under this guarantee is restricted to _____ and will remain in full force up to _____. All your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities hereunder unless a written claim for payment under this guarantee is lodged on us within zero months from the date of expiry of the guarantee i.e. on or before _____, irrespective of whether or not the original guarantee is returned to us.

Notwithstanding anything contained under the said BG

1. Our liability under this Bank Guarantee shall not exceed Rs._____(Rupees _____) only.
2. This Bank Guarantee shall be valid up to _____ 2024.
3. We are liable to pay to guarantee amount or part thereof under this Bank Guarantee only if you serve upon us a written claim or demand on or before _____, 2024.

Place: _____

Date: _____

PROFORMA FOR AGREEMENT OF CONTRACTUAL CONTRACT

This Agreement is signed and executed on this …… day of……., 2023 At Kolkata.

BY AND BETWEEN

West Bengal Livestock Development Corporation Limited, A Company registered under the Companies Act, 1956 and having its registered office at LB-2, Sector-III, Salt Lake City, Kolkata – 700106 represented by its Managing Director unless his rights and obligation relating to the objects and purports of these presents are delegated, to any other officer(s) of WBLDCL hereinafter referred to as the **First Party** (which expression shall, unless excluded by or repugnant to the context, means and includes his successors, representatives, permitted assignees, liquidators and administrators) of the ***ONE PART*****.**

A N D

……., a company registered under the Company's Act/a partnership firm/Proprietorship Firm (delete whichever is not applicable) having its Registered Office at …… represented by its …… unless his rights and obligation relating to the objects and purports of these presents are delegated, to any other officer(s) of…… hereinafter referred to as the **Second Party** (which expression shall, unless excluded by or repugnant to the context, means and includes his successors, representatives, permitted assignees, liquidators and administrators) of the ***OTHER PART*****.**

WHEREAS the **First Party** is desirous that the work of **"e -Tender on *Establishment of modern laboratory with high end lab equipment with Three Years Comprehensive Annual Maintenance (c-AMC) for translational research on laboratory animal at Kalyani, Nadia -741235 under West Bengal Livestock Development Corporation Limited, LB-2, Sector-III, Salt Lake, Kolkata-700106 for 2023-24 for 2023-24*"** wanted to execute the said work and for the purpose floated open Tender on line.

A N D

WHEREAS the **Second Party** offered his price against the said Tender and being eligible, his Tender having been accepted agreed to execute and complete the said work as detailed in the tender document along with bill of quantities and all other conditions.

Now, therefore, this agreement witnessed as follows:-

That the word and expression shall have same meanings as are respectively assigned to them in the general condition of the contract hereinafter referred to.

That the **Second Party** shall abide by all statutory obligations and payment statutory dues as are obligatory on the part of the **Second Party** and that any failure on his part if attracts any liability on the **First Party** the **Second Party** will, on intimation from the **First Party**, immediately compensate the same.

If any dispute or question arises any time between the parties about the rights and liabilities of each of them relating to the terms and conditions stated hereinabove shall unless and otherwise mutually resolved between the parties, the aggrieved party may refer the matter to the sole Arbitrator as may be appointed by the Govt. of West Bengal, ARD Department on reference from either Party for arbitration and the decision of the Arbitrator shall be final and binding on both the parties.

In witnesseth whereof:

The parties have set and subscribed their hands on this Agreement on the day, month and year first written.

Contractor	Managing Director. W.B.L.D.C.Ltd.
Seal	*Seal*
Witness and address: –	Witness and address: –
1.	1.
2.	2.