



ODISHA STATE MARITIME MUSEUM
JOBRA, CUTTACK.

BID DOCUMENT

FOR THE WORK

**“RUNNING MAINTENANCE OF AQUARIUM OF ODISHA
STATE MARITIME MUSEUM, JOBRA, CUTTACK FOR THE
YEAR 2016-17”**

OFFICE OF THE EXECUTIVE ENGINEER MAHANADI SOUTH DIVISION-I,CUTTACK
CUM

MEMBER SECRETARY,ODISHA STATE MARITIME MUSEUM,JOBRA,CUTTACK

NOTICE INVITING TENDER (NIT)

Identification No. OSMM , Jobra,Cuttack.

E mail ID: - www.odishastatemaritimemuseum.org

NIT No. OSMM - 02 / 2015-16.

Sealed Percentage rate tenders (offline) are invited from interested bidder/Trading firms of repute/ Agencies/Firms in association with their dealers/Institutions/ parties having desired experience as per mentioned in detailed tender documents for running maintenance of Aquarium of Odisha State Maritime Museum of the under mentioned work.

Sl. No.	Name of works	Amount put to Tender	Contract Period	Cost of Tender Document	Earnest Money
1.	Running maintenance of Aquarium of Odisha State Maritime Museum, Jobra,Cuttack for the year 2016-17	Rs 24,82,188/-	12 Calendar months	Rs. 6300/- including VAT 5% (in shape of cash /Demand Draft)	Rs.24,822/-

Note: - Earnest Money Deposit should be in shape of TDR/FDR/NSC pledged in favour of **Odisha State Maritime Museum Trust, Jobra, Cuttack** issued by any Nationalized bank / Post Office. No Cheque / Bank Draft / Cash payment will be accepted as EMD.

Important Dates for Tender processing is as under:-

- 1 Date of sale and receipt of Bid document From **17.03.2016 to 26.03.2016** between 10 AM to 4 PM in the office of The Director, Odisha State Maritime Museum, Jobra, Cuttack, in the office of the Superintending Engineer, Eastern Circle 1, Cantonment Road, Cuttack cum treasurer, OSMM and in the office of the Executive Engineer, Mahanadi South Division-I, Cuttack cum Member Secretary, Odisha State Maritime Museum. **The bid document can be downloaded from the official website of Odisha State Maritime Museum, Jobra, Cuttack i.e. www.odishastatemaritimemuseum.org within this above period.**
2. Date of Pre-submission meeting Dated 19.03.2016 in the office of the Director Odisha State Maritime Museum , Jobra ,Cuttack.11.00 AM.
- 3 Date of opening of Bid Dated **28.03.2016** at 11 AM in the office of The Director, Odisha State Maritime Museum, Jobra, Cuttack. If the office happens to be closed on the date of opening of the tender as specified, the tender will be opened on the next working day at the same time and venue.
- 4 Cost of Tender paper to be given along with the tender in shape of Demand Draft in favor of **Odisha State Maritime Museum Trust, Jobra, Cuttack payable at Cuttack** if downloaded from website.
- 5 Other details can be seen from the bid document and the official Website of Odisha State Maritime Museum, Jobra, Cuttack ie (www.odishastatemaritimemuseum.org) and office notice board.

Bidder

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

ODISHA STATE MARITIME MUSEUM ,JOBRA,CUTTACK

DETAILED NOTICE INVITING TENDER

Running Maintenance of Aquarium of Odisha State Maritime Museum, Jobra ,Cuttack for the Year 2016-17.

N I T No. OSMM/02/2015-16.

Date 10.03.2016

Sealed percentage rate bids (offline) are invited from interested Manufacturing/Trading firms of repute/ Agencies/Firms in association with their dealers/Institutions/ parties having desired experience as per criteria mentioned herein for the work "Running Maintenance of Aquarium of Odisha State Maritime Museum, Jobra , Cuttack for the year 2016-17.

1. "Odisha State Maritime Museum, Jobra, Cuttack"

- a) Cost of Tender Document Rs. 6300/-
- b) Amount of Earnest money (TDR/FDR/NSC) pledged in favour of **Odisha State Maritime Museum Trust, Jobra, Cuttack** issued by any Nationalized bank / Post Office. Rs. 24,822/-
- c) Period of contract 12 Calendar months.
- d) Important Dates for Tender processing is as under:-
- (i) Date of sale and receipt of Bid document From **17.03.2016 to 26.03.2016** between 10 AM to 4 PM in the office of The Director, Odisha State Maritime Museum, Jobra, Cuttack, in the office of the Superintending Engineer, Eastern Circle 1, Cantonment Road, Cuttack cum treasurer, OSMM and .in the office of Executive Engineer, Mahanadi South Division-I,Cuttack cum Member Secretary, Odisha State Maritime Museum
- (ii) Date of Pre-submission meeting Date **19.03.2016** in the office of The Director, Odisha State Maritime Museum, Jobra, Cuttack, 11:00 AM.
- (iii) Date of opening of bid document Date 28.03.2016 at 11 AM in the office of the Director, Odisha State Maritime Museum.
- e) Tender document and other details shall be available from:-
-) **Office of the Director, Odisha State Maritime Museum, Cuttack.**
 -) **Office of the Superintending Engineer, Eastern Circle 1 Cantonment Road, Cuttack cum Treasurer OSMM.**
 -) **Office of the Executive Engineer, Mahanadi South Division-I, Cuttack cum Member Secretary, Odisha State Maritime Museum.**
- f) Not more than one bid shall be submitted by a firm.
- g) Bid document consists scope of work, various classes of work to be done, the conditions of contract and other necessary documents.

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Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

- h) Bid Document can be obtained from the office of the Director , Odisha State Maritime Museum, Cuttack, from the office of the Superintending Engineer, Eastern Circle 1, Cantonment Road, Cuttack cum Treasurer, OSMM, from the office of Executive Engineer, Mahanadi South Division-I, Cuttack cum Member Secretary, Odisha State Maritime Museum on deposition of Rs.6,300.00 in cash and can be downloaded from the website www.odishastatemaritimemuseum.org. In case of downloaded Bid documents cost of tender paper should be deposited in shape of DD in favour of **Odisha State Maritime Museum Trust, Jobra, Cuttack and payable in any nationalized banks at Cuttack.**
- i) EMD in original along with the hardcopies of all the eligibility documents shall be submitted in the manner as described in the Bid Document and shall be submitted in person within the specified date and time in the Office of the Director, Odisha State Maritime Museum, Jobra, Cuttack in the specified tender box superscribed as NIT No. **OSMM/02/15-16**. The agency who fails to submit the eligibility documents as mentioned above will be declared as ineligible and the bid submitted by it shall be declared as invalid and his bid will not be taken into consideration.

2. Instructions to the Bidders

- a) The tender will be in sealed Envelope.
- b) Envelope will contain the following documents:
J) EMD and signed copy of the original tender documents together with original purchase receipt of the tender documents (or original DD incase of downloaded Bid documents).
J) Copies of all documents pertaining (Eligibility Criteria) as mentioned herein.
- c) Bid will be evaluated for bidders who have qualified and also have complied all the qualification criteria and eligibility criteria mentioned herein.
- d) The envelope must be clearly marked the following:
Name of the Work: "Running Maintenance of Aquarium of Odisha State Maritime Museum, Jobra, Cuttack" 2016-17.
i) Background of the organization and experience of the firm in similar projects for the purpose of executing this project–Annexure –1
ii) Qualification criteria and capability to execute works of such type to be given
iii) As per details in Annexure-2 and will form a part of the evaluation process.
- e) In order to obtain first hand information about the assignment the local conditions / constraints and concept of the entire project, it is advisable that the applicant visits the site to acquaint with the site conditions etc.
- f) Selection of the vendor will be made on the basis of evaluation of the bid . A technical committee will finalize the lowest bidder for award of the work.
- g) In case of bidders in association with their dealers, the credentials of their dealer or themselves will hold good while evaluating the bids as per the prequalification criteria laid down in this tender document.
- h) The bidder will have to keep its offer valid for 90 days of the opening of the bid and in the case of withdrawal before that date the earnest money amount will be forfeited.

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- i) The expenses on preparing the bids, visiting the site, attending the pre-submission meeting and negotiating the contract etc. will not be reimbursed.

3. METHOD OF APPLYING

- a) If the application is made by the individual it shall be signed above his full typewritten name and Present address.
- b) If a proprietary firm makes the application, it shall be signed by the proprietor above his full typewritten name and the full name of his firm with its present address.
- c) If the application is made by a firm in partnership, it shall be signed by all the partners of the firm with their full name and present addresses or alternatively by a partner holding power of attorney for signing the documents, in which case, a certified copy of power of attorney shall be enclosed with the prequalification document. A certified copy of partnership deed and present address of all the partners of the firms shall also be enclosed with the prequalification document.
- d) If a limited company or a corporation makes the application, a duly authorized Person shall sign it.

4. SUBMISSION AND OPENING OF TENDER DOCUMENTS

- a) No bid will be opened unless accompanied by the stipulated amount of earnest money Bid envelope.
- b) At the advertised time and place all bids received for the contract shall be opened by the officer inviting the tender (or any other officer authorized by him) in person, in the presence of their representatives who may choose to attend. No over writings shall be done but corrections where necessary shall be neatly scored out and rewritten prior to the submission of the tender.
- c) At the time of opening of tenders, one additional officer/senior clerk shall also be present invariably and sign each of the bids as witness.
- d) Attendance of the bidders or their authorized representatives shall be noted down in the register to be maintained for this purpose. Rates and or conditions of each of the bids shall be read out before the persons present and their Signatures obtained on the bid.
- e) The officer opening the tenders would initial on bid and the serial numbers of such bids with reference to total tenders noted on each bid as numerator/denominator.
- f) Each and every correction or overwriting shall be initialed and the number of such corrections noted on the respective pages. The bidders are advised to properly seal the Tender document in their own interest.
- g) The earnest money of all the bidders shall be refunded if it is decided to reject all the bids on the same day. The earnest money of the remaining bidders whose tender is not accepted shall be refunded after the agreement is executed. However, irrespective of the decision on the tender the earnest money of all the bidders shall be refundable on expiry of the validity period specified in the NIT.

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Jobra, Cuttack.

- h) Each bidder shall provide the name, residence and place of business of the person or persons giving the tender document and shall be signed by the bidder with his usual signature. When a partnership firm gives tender document then the full names of all partners shall be furnished. An attested copy of the constitution of the firm and the registered number of the firm shall be furnished. In such a case the tender document must be signed separately by each partner thereof or in the event of the absence of any partner must be signed on his behalf by a person holding a power of attorney authorizing him to be so. Tender documents by corporation shall be signed with the legal name of corporation followed by the name of the state of in-corporation and by signature and by designation of the resident, secretary or other person authorized to bind it in the matter.
- i) The bidder shall also give the following information invariably on cover containing the Tender document:-
A. Name and address.
B. Amount of earnest money deposited and No. and date of the TDR/ F.D.R. / NSC.
- j) Earnest money which has been deposited for a particular work will not ordinarily be adjusted towards the earnest money for another work.
- k) The tender documents shall be opened at the time and place stated in the notice inviting tender by the officer issuing this NIT in the presence of the bidders or their duly authorized representatives who may choose to attend. The officer under unavoidable circumstances may depute another officer in his absence to receive and open tender documents on his behalf.
- l) The Member Secretary OSMM in the presence of the bidders or their authorized representatives, who choose to be present, will open the bid on **28.03.2016** at 11.00 A.M in the office of the Director, Odisha State Maritime Museum, Jobra, Cuttack. The bid will be opened on a Date & time.
5. The Technical committee comprising of the Member Treasurer, Member Secretary, & Director, Odisha state Maritime Museum, Jobra, Cuttack, will scrutinize the tender documents and reserves the right to recommend for acceptance any of the bids.
6. The particulars of the proposed work given are bare minimum and must be considered only as advance information to assist the applicant.
7. Enhancement or Curtailment in the quantum of the work will not vitiate the contract.
8. The officer opening the tender documents does not bind himself to accept or recommend for the acceptance of the lowest or any tender document or to give any reasons for his decision. In deciding the tender the manifest capability / competence of the bidder his experience in this line will be the main consideration. The Technical committee of The Odisha State Maritime Museum Trust in respect of this project will scrutinize / examine the credentials of the bidders and decide his/their capability to undertake the assignment.
9. Conditional tender are liable to be rejected.
10. Canvassing for support in any form for the acceptance of any bids is strictly prohibited.

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reason whatsoever, earnest money deposited with the tender document shall be forfeited and acceptance of the bids will be cancelled.

12. The payment will be made by cheque of the Bank only. No bank commission charges on realizing such payments will be borne by the Odisha State Maritime Museum Trust.
13. Deductions of Income Tax at source shall be done as per the law. It is open to the bidders as the case may be to make an application to the Officer concerned and obtain from him a certificate authorizing the payer to deduct tax at such lower rate or deduct no tax as may be appropriate to his case. Such certificate will be valid for the period specified therein unless the officer concerned cancels it. The bidder whose tender has been accepted will have to execute the agreement in the prescribed form within 15 days of the receipt of the communication of the acceptance of his tender. He will also have to furnish the performance security amount simultaneously. Failure to do so will result in the earnest money being forfeited and his bid being cancelled.
14. In case of delay or extension of the construction work beyond stipulated time period **The Member Secretary, Odisha State Maritime Museum, Jobra, Cuttack** may at its sole discretion issue a time extension letter.
15. All the terms and conditions of the Notice inviting Tender (NIT) and the appendices/ Annexure referred to herein before will be binding on the bidders in addition to the conditions of the contract in the prescribed form.
16. Bidder should submit one affidavit at the time of submission of bid regarding authenticity of the documents submitted with the bid.
17. The qualified bidder shall deposit 1% of the Tender value as initial security deposit in shape of TDR/FDR/NSC pledged in favour of **Odisha State Maritime Museum Trust, Jobra, Cuttack** issued by any Nationalized bank / Post Office at the time of agreement and the earnest money deposit together with initial security deposit should not be less than 2 % of the agreement value which shall be refunded back after **one year** of completion of work.
18. The plans specifications and scope for the work can be seen in the office of the **Member Secretary, Odisha State Maritime Museum** during any working days (excluding Monday)
19. All taxes, fees payable under the local rule including VAT, Income taxes & Surcharges as applicable, Octroi tax, Entry tax etc. will be borne by the contractor as admissible. It is implied that the quoted rates are inclusive of such elements.
20. Request for raising and lowering the rates or dealing with any point in connection with the tender will not be considered.
Conditional tenders will not be taken in to consideration.
21. **No Relation Certificate**
The contractor shall have to furnish certificate along with the tender to the effect that he is not related to any officer in the rank of an Assistant Engineer and above in the State P.W.D. or Assistant Secretary and above in the Water Resources Department., If the fact subsequently proved to be false the contract will be rescinded. The earnest money and the total security will be forfeited and shall be liable to make good the loss or damage resulting from such cancellation.

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22. The tender may not (at the discretion of the competent authority) be considered unless accompanied self attested true copies of Registration of Firms/S.S.I. unit/ EPM rate contract holder certificate, PAN Card, VAT clearance certificate as the case may be and the original certificates are to be produced prior to opening of technical bid as per notification.
23. The earnest money will be retained in the case of successful tenderer and will be dealt with as per the terms and condition of O.P.W.D. code. The earnest money of the unsuccessful tenderer except the three lowest tenderer should be refunded on application. The EMD given by the other two parties except one whose tender is accepted should also be refunded within 15 days of acceptance of tender and drawal of agreement.
24. The EMD will be forfeited in any of the following cases.
 - a) If the bidder withdraws the bid after bid opening during the period of bid validity.
 - b) In the case of a successful bidder if he (bidder) fails within the specified time limit to
 - (i) Sign the agreement or
 - (ii) Furnish the required Initial Security Deposit / Additional performance security.

When the bid amount is up to 10 % less than the estimated cost, no additional performance security is required to be deposited. **Additional performance security** shall be deposited by the successful bidder at the time of signing of agreement when the bid amount is seriously unbalanced. When the bid amount is less than the estimated cost by more than 10 % and within 15%, in such an event the successful bidder will deposit the additional performance security to the extent of 1.5 times of the differential cost of the bid amount and 90% of the estimated cost in shape of **TDR/FDR/NSC** duly pledged in favour of the Odisha State Maritime Museum trust issued by any Nationalized Bank/ post office, which the tender in his favour shall be liable for rejection.

25. Before acceptance of tender, the successful bidder will be required to submit a work programme and milestone basing on the financial achievement so as to complete the work within the stipulated time and in case of failure on the part of the agency to achieve the milestone liquidated damage will be imposed.
26. The date of commencement of work shall be as notified in work order.
27. On signing the agreement the site will be handed over to the contractor for execution and completion of works in all respect.
28. The authority reserves the right to make such increase or decrease in quantity of items of works mentioned in the scheduled attached to the tender notice as may be considered necessary for the satisfactory completion of the contract work. All such increase or decrease shall in no way invalidate/ vitiate the contract rates. The contractor shall not be entitled for any compensation on this account, except grant of extension of time where considered necessary.
29. That for the purpose of jurisdiction in the event of any dispute if any, the contract would be deemed to have been entered into within the State of Odisha and it is agreed that neither party to the contract will be competent to bring a suit in regard to the matter by this contract at any place outside the State of Odisha.

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30. Under section-12 of contract labour (Regulation and Abolition Act 1970) the contractor who undertakes execution of work through labour, should produce valid license from licensing authority of labour department (labour license) to start the work.
31. The contractor shall be liable to fully indemnify the Govt. of any compensation under workmen compensation Act VII of 1993 on account of the workmen employed by the contractor and full amount of compensation paid will be recovered from the contractor. In the event of any claim sub-judice before any court of law, the claim amount shall be kept withheld till final disposal.
32. Contractor is required to abide by the fair wages clauses as introduced by Govt. of Odisha and will not pay less than the Fair wages fixed by Govt. to the labourers engaged by him for the work.
33. In case of any complaint by the labourer about the nonpayment of his wages as per latest minimum wages Act., the Trust will have the right to investigate and if the contractor is found to be in at fault, Trust may recover such amount due in any form from the contractor and pay such amount to the labourer directly under intimation to the local labour office of the Govt. The decision of the Trust is final and binding on the contractor.
34. The contractor should keep himself in touch with the Director, OSMM for smooth execution of the work and arrange adequate labour depending on the workload and working space available. No claim for detention for labour on any account will be entertained.
35. No compensation will be paid by the Trust for any damage done by rain, cyclone & earthquake tide or by any other natural calamities during the execution of the work.
36. It should be understood clearly that no claim whatsoever will be entertained in regard to extra items of work or extra quantity of any item besides estimated amount, unless written order is obtained from the Trust and rates settled before the extra items of work or extra quantity of any item of work is taken up
37. The tenderer shall have to abide by the C.P.W.D. safety code rules introduced by the Govt. of India, Ministry of Works, Housing and Supply in their standing order No.44150 dated 25.1.1957.
38. The tenderer shall bear various incidentals, sundries and contingencies necessitated by the work in full within the following or similar category.
 - (a) Rent, royalties and other charges of materials, octroi duty, entry tax & all other taxes including VAT, ferry tolls, conveyance charges and other cost on account of land and buildings including temporary building and temporary electric connection to work site as well as construction of coffer dam, construction of service road, diversion road and its maintenance till completion of work required by the tenderer for collection of materials, storage housing of staff other purpose of the work. No tenderer will however be liable to pay for temporary occupation of land owned by Govt. at the site of the work.

- (b) Labour camps or hutments including conservancy and sanitation arrangements upto the satisfaction of the local health authorities should be arranged by the contractor.
 - (c) Suitable water supply including pipe water supply wherever available for the staff and labour as well as for the work.
 - (d) Suitable equipment and wearing apparatus for the labour engaged in risky operations and medical aid to the labourer engaged for the work.
 - (e) Suitable fencing, barriers, signals including paraffin and electric signals where necessary at work and approaches in order to protect public and employees from accident.
 - (f) Compensation including cost of any suit for injury to persons or property due to neglect of any major precautions also become payable due to operation of the workmen compensation Act.
 - (g) The contractor has to arrange adequate lighting arrangement for the work wherever necessary at his own cost.
39. Deduction of income tax at source and surcharge on income tax will be made from each running account bill for the work at the rate as per Income Tax Act and as amended from time to time. (Present rate 2% + surcharge)
40. (a) The rates quoted by the contractor shall be deemed to be inclusive of VAT on all the materials that he will have to purchase for performance of this contract.
- (b) The rates quoted by the contractor in the tender for works shall include VAT that may be levied on turnover on works contract according to the Laws and Regulations as applicable from time to time.
- (c) Deduction of VAT at source will be made from each running account bill for the work at the rate of 5% prescribed in the Value Added Tax (Amendment) Ordinance-2005 or as amended from time to time (Presently @ 5% on the bill amount).
41. If the rate quoted by the bidder is less than 15% of the tendered amount then such a bid shall be rejected and the tender shall be finalized basing on merits of rest bids. But if more, than one bids is quoted at 14.99 % (Decimals up to two numbers will be taken, for all practical purposes) less than the estimated cost, the tender accepting authority will finalize the tender through a transparent lottery system, where all bidders / their authorized representatives, the concerned Member Secretary, OSMM will remain present.
42. **The Bidder has to mention Percentage excess over or less than the amount put to Tender.**
43. To rescind the contract (of which rescission notice in writing to the contractor under the hand of the Member Secretary, Odisha State Maritime Museum, Jobra ,Cuttack shall be conclusive evidence) 20% of the value of left over work will be realized from the contractor as penalty.

Bidder

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44. The Bidder has to submit an Affidavit for authenticity of documents at the time of submission of tender.
45. If the contractor shall desire an extension of time for completion of the work, on the ground of his having been unavoidable hindrances in its execution or any other ground he shall apply in writing to the Member Secretary, Odisha State Maritime Museum, Jobra ,Cuttack within 30 days of the date of the hindrance on account of which he desires such extension as aforesaid and the Member Secretary, Odisha State Maritime Museum, Jobra ,Cuttack shall, if in his opinion (which shall be final) reasonable be shown therefore, authorize such extension of time if any, as may in his opinion, be necessary or proper. The Member Secretary, Odisha State Maritime Museum, Jobra, Cuttack shall at the same time inform the contractor whether he claims compensation for delay.
46. The bidder will prepare detail drawing with exact specification as per the required provision and available area specified for the theatre hall and submit to the Member Secretary, Odisha State Maritime Museum, Jobra,Cuttack for approval prior to signing of agreement.
47. All the bidders need to provide unconditional acceptance of this bid document by signing each page as a token of acceptance. Non compliance to this will lead to rejection of the bids without assigning any reasons thereof and the tenders will not be considered for further evaluation.

Annexures – 1 to 6

Bidder

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Jobra, Cuttack.

STRUCTURE AND ORGANISATION

1. Name of the applicant :
2. Office Address :
3. Telegraphic Address :
4. Telephone Numbers :
5. Fax Number / Email id:
6. Date and location of establishment :
7. The applicant is
 - a) An individual
 - b) A proprietary firm
 - c) A partnership firm (if yes, give name and address of each of the partners)
8. Bidder should have minimum three years experience of maintaining public aquarium.
9. How many years have your organization have been in this business of design, supply, installation, commissioning, of the work specified herein under the present name?
10. Were you ever required to suspend the work for a period of more than six months continuously after you started? If so give the names of projects and reasons.
11. Have you ever not completed any assignment given to you? (If so, give name of project and reasons for not completing the work)
12. In how many of your project were penalties imposed for delays? Please give details.

Signature of the Applicant

Bidder

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

EXPERIENCE STATEMENT

Information regarding experience of the applicant.

S.No.	Details of Work executed	Amount (Rs. In Lac.)	Remarks
(1)	(2)	(3)	(4)

1. Maintenance of similar type of aquarium for minimum two years is required.

Signature of the Applicant

Bidder

Member Secretary
Odisha State Maritime Museum
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Terms and conditions:

1. If any new taxes or levies are imposed by the GOI, then the additional taxes will be included in the invoice.
2. The invoices will be raised on the first week of every month for the previous months work.
3. The OSMM will hold 1% of the Total AMC amount as security deposit that will be refunded at the termination of the contract.
4. The above AMC amount will be in force for a period of one year i.e. year end March 31st 2017 after which both parties will decide a mutually agreed sum.
5. The applicable TDS can be deducted and payment made into the contractors account.
6. The cheque/DD will be payable at Contractor Address
7. The payment will have to be made before the 10th of every preceding month after receipt of Invoice.

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ANNEXURE -4 (A)

Background

Government of Odisha, Water Resources Department under the guidance of the Honourble Chief minister of Odisha had envisioned the construction of a gallery for housing live fish and the biotopes of Odisha inside the Odisha State Maritime Museum (OSMM).

The public aquarium has an area of about 3000 sq.ft. and is located in the heritage building of the OSMM premises and is adjacent to the office of the Director, OSMM.

The public aquarium was envisaged as it would add charm and color to the artefacts at the OSMM. The exhibits would also showcase the rich biodiversity of the aquatic flora and fauna present in Odisha to the visitors. It would also serve as an education and conservation tool to the people of the state of Odisha to conserve the rich biodiversity available in the state.

The Foundation stone for the aquarium was laid on – April 1st 2013

The aquarium was opened to the public by the Honorable CM Shri Naveen Patanaik on- August 21st 2014

Bidder

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**Annexure -4 (B)
Scope of Works**

SCOPE OF WORK TO BE PERFORMED BY _____ (Contractor)
hereby referred to as agency

In consideration of the payments made by Customer as specified in Paragraph III, And subject to Customer meeting its responsibilities as specified below in Paragraph II, agency agrees to perform maintenance and inspection services as noted below for the equipment as per below details:

Exhibit no	Exhibit name	Maintenance type
Exhibit no 1	Jelly fish	Electronics and DATA
Exhibit no 2	Nature Aquarium	Flora & Fauna, Life support system , lighting, Co2 , water quality
Exhibit no 3	Japanese Koi pond	Fauna , life support, lighting and water quality management
Exhibit no 4	The mighty Amazon	Flora & Fauna, Life support system, Lighting, water quality management.
Exhibit no 5	Deep Sea World	Flora & Fauna, Life support system, Lighting, water quality management
Exhibit no 6	Lake Tanganyika	Flora & Fauna, Life support system, Lighting, water quality management
Exhibit no 7	Mahanadi Biotope	Flora & Fauna, Life support system, Lighting, water quality management
Exhibit no 8	Bittarkannika Biotope	Flora & Fauna, Life support system, Lighting, water quality management
Exhibit no 9	Baitarani Biotope	Flora & Fauna, Life support system, Lighting, water quality management
Exhibit no 10	Chilika Biotope	Flora & Fauna, Life support system, Lighting, water quality management
Exhibit no 11	Lionfish or special fish biotope	Flora & Fauna, Life support system, Lighting, water quality management

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The scope also demands the maintenance of additional flora and fauna to replace any unforeseen death of fish due to territorial fights between fish or death as a result of old age.

The Quarantine area is enclosed in a room adjacent to the Public aquarium and it has 16 tanks where fish is isolated and quarantined before release into the exhibits.

Bidder

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

Livestock Feeding schedule

Exhibit no	Exhibit name	Feeding schedule
Exhibit no 1	Jelly fish	Electronic goods (No feed)
Exhibit no 2	Nature Aquarium	Feeding twice a day
Exhibit no 3	Japanese Koi pond	Feeding three times daily
Exhibit no 4	The mighty Amazon	Feeding Three times daily
Exhibit no 5	Deep Sea World	Feeding four times daily
Exhibit no 6	Lake Tanganyika	Feeding two times daily
Exhibit no 7	Mahanadi Biotope	Feeding once a day
Exhibit no 8	Bittarkannika Biotope	Feeding once a day
Exhibit no 9	Baitarani Biotope	Feeding Once a day
Exhibit no 10	Chilika Biotope	Feeding twice a day
Exhibit no 11	Lionfish /special fish biotope	Feeding twice a day

Different fish required different feed as with their dietary requirements and mouth size. various multivitamins are added to the feed to supplement essential requirements of the fish.

Feeds mainly used in the Aquarium are as follows:-

1. Spirulina based dry pellet
2. Spinach, carrots, tomato
3. Fresh chicken
4. Fresh Fish/prawn
5. Live brine shrimp
6. Organic earth worms
7. Micro pellets
8. Artificial plankton based foods
9. Prepared Dry food

(Note: The contractor may change the Type/Brand and feeding schedule of food as deemed necessary for the benefit of fish health.) Taking prior permission of the client.

Bidder

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Odisha State Maritime Museum
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Glass cleaning Process

Exhibit no.	Exhibit name	Job - Glass
Exhibit no 1	Jelly fish	Only on outside
Exhibit no 2	Nature Aquarium	Inside and outside
Exhibit no 3	Japanese Koi pond	No glass
Exhibit no 4	The mighty Amazon	Inside and outside
Exhibit no 5	Deep Sea World	Inside and outside
Exhibit no 6	Lake Tanganyika	Inside and outside
Exhibit no 7	Mahanadi Biotope	Inside and outside
Exhibit no 8	Bittarkanika Biotope	Inside and outside
Exhibit no 9	Baitarani Biotope	Inside and outside
Exhibit no 10	Chilika Biotope	Inside and outside
Exhibit no 11	Lionfish /special fish biotope	Inside and outside

Glass cleaning is important as there can be oily stains from visitors touching the glass and also from algae that occurs naturally due to fish excrement. The glass has to be carefully cleaned using the right tools to prevent scratches and also to not scare the fishes.

(Note: The contractor may change the Type/Brand of cleaning tools as deemed necessary by the contractor for the efficiency of the process) taking prior permission of the client.

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Photo period

Exhibit no	Exhibit name	Lighting duration
Exhibit no 1	Jelly fish	Electronic device – 8 hours
Exhibit no 2	Nature Aquarium	Half intensity – 12 hours, full intensity- 5 hours
Exhibit no 3	Japanese Koi pond	14 hours
Exhibit no 4	The mighty Amazon	14 hours
Exhibit no 5	Deep Sea World	12 hours
Exhibit no 6	Lake Tanganyika	12 hours
Exhibit no 7	Mahanadi Biotope	8 hours
Exhibit no 8	Bittarkanika Biotope	8 hours
Exhibit no 9	Baitarani Biotope	8 hours
Exhibit no 10	Chilika Biotope	10 hours
Exhibit no 11	Lionfish /special fish biotope	10 hours

The lights are specified based on the exhibits and these are important to help the plant to perform photosynthesis where applicable. The lights also highlight the fishes in the biotope. The lux levels have been calculated to specifically suit the requirements of the various fishes that come from different parts of the world.

(Note: The contractor may change the Duration of lighting as deemed necessary by the contractor for the best health of the livestock) taking prior permission of the client.

Bidder

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Odisha State Maritime Museum
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LUX levels

Exhibit no	Exhibit name	Lux
Exhibit no 1	Jelly fish	NA
Exhibit no 2	Nature Aquarium	576
Exhibit no 3	Japanese Koi pond	26
Exhibit no 4	The mighty Amazon	35
Exhibit no 5	Deep Sea World	50
Exhibit no 6	Lake Tanganyika	35
Exhibit no 7	Mahanadi Biotope	26
Exhibit no 8	Bittarkanika Biotope	30
Exhibit no 9	Baitarani Biotope	12
Exhibit no 10	Chilika Biotope	22
Exhibit no 11	Lionfish /special fish biotope	32

The lux levels are monitored to see if the aquatic plants are growing in the right condition and also to give the fish the most suitable light for their optimum health.

(Note: The contractor may change the Lux levels as deemed necessary by the contractor for the best health of the livestock and public visibility) taking prior permission of the client.

Bidder

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Filter cleaning schedule

Exhibit no	Exhibit name	Filter cleaning
Exhibit no 1	Jelly fish	NA
Exhibit no 2	Nature Aquarium	One every month
Exhibit no 3	Japanese Koi pond	Daily twice
Exhibit no 4	The mighty Amazon	Daily twice
Exhibit no 5	Deep Sea World	Every alternate day
Exhibit no 6	Lake Tanganyika	Every Alternate day
Exhibit no 7	Mahanadi Biotope	Once a week
Exhibit no 8	Bittarkanika Biotope	Once a week
Exhibit no 9	Baitarani Biotope	Once a week
Exhibit no 10	Chilika Biotope	Once a week
Exhibit no 11	Lionfish /special fish biotope	fortnightly

The filters are the life support mechanism for the exhibits and is the heart of the system. The filters have to be cleaned to remove mechanical debris from the system which cause the biological media to clog. The biological filtration system convert the toxic ammonia to harmless nitrate which is absorbed by algae and plants. Different filters have different methods of cleaning as would be applicable for the exhibits.

(Note: The contractor may change the Filter cleaning schedule as deemed necessary by the contractor for the efficiency of filtration, water quality and livestock health.) Taking prior permission of the client.

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Water change Regime for exhibits

Exhibit no	Exhibit name	Filter cleaning
Exhibit no 1	Jelly fish	NA
Exhibit no 2	Nature Aquarium	One every month
Exhibit no 3	Japanese Koi pond	Daily twice
Exhibit no 4	The mighty Amazon	Daily twice
Exhibit no 5	Deep Sea World	Every alternate day
Exhibit no 6	Lake Tanganyika	Every Alternate day
Exhibit no 7	Mahanadi Biotope	Once a week
Exhibit no 8	Bittarkanika Biotope	Once a week
Exhibit no 9	Baitarani Biotope	Once a week
Exhibit no 10	Chilika Biotope	Once a week
Exhibit no 11	Lionfish /special fish biotope	Fortnightly

Fertilizer for Aquatic plants

Aquatic plants need a wide variety of macro and micronutrients to support their growth in a closed environment. Potassium is always found to be in short supply in the aquarium and hence it is to be dosed on a daily basis along with iron and certain natural plant hormones that promote plant growth.

Addition of water conditioner to lower stress levels of fish.

Fishes can exhibit stress under various conditions, which may be the result of territorial fight between fish of the same species or different species or due to sudden change in water parameters. This stress will subdue the color of the fish in the exhibit and it may cause injury. Hence this condition needs to be spotted and various stress relieving water conditioner has to be added into the water to support the slime coating of the fish (Note:- The contractor can change the water change frequency depending on the filtration and best interest of the Livestock housed in the exhibits) taking prior permission of the client.

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Life support system flow rate check

Exhibit no	Exhibit name	Checking frequency
Exhibit no 1	Jelly fish	NA
Exhibit no 2	Nature Aquarium	Visual - daily
Exhibit no 3	Japanese Koi pond	Using flow meter- daily
Exhibit no 4	The mighty Amazon	Using flow meter- daily
Exhibit no 4	Deep Sea World	Using flow meter- daily
Exhibit no 5	Lake Tanganyika	Using flow meter- daily
Exhibit no 6	Mahanadi Biotope	Visual - daily
Exhibit no 7	Bittarkannika Biotope	Visual - daily
Exhibit no 8	Baitarani Biotope	Visual - daily
Exhibit no 9	Chilika Biotope	Visual - daily
Exhibit no 10	Lionfish /special fish biotope	Visual - daily

The flow rates are important to check and make note of as these will determine if the life support system is functioning correctly as otherwise toxic ammonia will kill the fishes.

Bidder

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Nitrate removal filter cleaning

Exhibit no	Exhibit name	Frequency
Exhibit no 1	Jelly fish	NA
Exhibit no 2	Nature Aquarium	NA
Exhibit no 3	Japanese Koi pond	Once every three days
Exhibit no 4	The mighty Amazon	Once in three days
Exhibit no 5	Deep Sea World	Once in 4 days
Exhibit no 6	Lake Tanganyika	Once in 2 days
Exhibit no 7	Mahanadi Biotope	Once in 7 days
Exhibit no 8	Bittarkannika Biotope	Once in 7 days
Exhibit no 9	Baitarani Biotope	Once in 7 days
Exhibit no 10	Chilika Biotope	Once in 4 days
Exhibit no 11	Lionfish /special fish biotope	Once in 4 days

The biological filter converts the Ammonia to Nitrates but the Nitrates in large quantity can cause the health of the fish to deteriorate. Hence the Nitrate removal filtration system is employed to provide the best water quality for the fish. The Nitrate filters are working only after nightfall. The nature aquarium has a large volume of aquatic plants that remove the Nitrates and hence we do not need a Nitrate removal filter in this system.

(Note:- The contractor can change the Nitrate Removal filter frequency depending on the filtration and best interest of the Livestock housed in the exhibits)

Skimmer cleaning

Exhibit no 5	Deep Sea World	Once in 4 days
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The skimmer is employed in the marine water exhibit, this system needs cleaning once every 7 days. The skimmer is deployed to remove organic matter from the system. The organic matter if left unchecked will cause a detrimental effect on the sensitive eco system.

Bidder

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Bottom syphon of substrate

Exhibit no	Exhibit name	Frequency
Exhibit no 1	Jelly fish	NA
Exhibit no 2	Nature Aquarium	Once every 4 days
Exhibit no 3	Japanese Koi pond	NA
Exhibit no 4	The mighty Amazon	Once every 7 days
Exhibit no 5	Deep Sea World	Once every 6 days
Exhibit no 6	Lake Tanganyika	Once every 5 days
Exhibit no 7	Mahanadi Biotope	Once in every 10 days
Exhibit no 8	Bittarkannika Biotope	Once every 4 days
Exhibit no 9	Baitarani Biotope	Once every 15 days
Exhibit no 10	Chilika Biotope	Once every 7 days
Exhibit no 11	Lionfish /special fish biotope	Once every 4 days

Uneaten food and other detritus accumulate on the substrate from time to time, these have to be removed as they cannot be removed by the biological filter system. The detritus is removed manually using a syphon principle and the exhibit is made to look clean and sparkling.

Sometimes if the situation demands, this process will need to be done more frequently.

(Note:- The contractor can change the Bottom Syphon frequency depending on the Substrate condition in the exhibits) taking prior permission of the client.

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Addition of beneficial bacteria and probiotics into the system.

Exhibit no	Exhibit name	Frequency
Exhibit no 1	Jelly fish	NA
Exhibit no 2	Nature Aquarium	Once in 15 days
Exhibit no 3	Japanese Koi pond	Once in 10 days
Exhibit no 4	The mighty Amazon	Once in 10 days
Exhibit no 5	Deep Sea World	Once in every 12 days
Exhibit no 6	Lake Tanganyika	Once every 12 days
Exhibit no 7	Mahanadi Biotope	Once in 12 days
Exhibit no 8	Bittarkannika Biotope	Once every 8 days
Exhibit no 9	Baitarani Biotope	Once every 8 days
Exhibit no 10	Chilika Biotope	Once every 7 days
Exhibit no 11	Lionfish /special fish biotope	Once every 8 days

(Note:- The contractor can change the Bacteria and Probiotic frequency depending on the Water quality condition in the exhibits)

In addition to the above-mentioned system the staff employed will have to maintain cleanliness of the entire area. The staffs also double up as fish guides to help the visitors with the identification of name of fish and plants in the various exhibits.

Aquatic Specialist Engineer Visit

It is mandatory to have a specially trained aquatic systems engineer to visit the site once a month to analyze the exhibits in details and understand the requirements of the fish and flora. As these are live creatures certain deficiencies are noticed only by a trained specialist and if timely correction is not undertaken it will harm the life of the aquatic creature or aquatic plant. The specialist/engineer will also do a detailed check on the life support system and make sure there is no undue stress on the life support system thereby preventing breakdown. Certain timely course corrections in diet and water quality management will be suggested to the maintenance staff after the site visit. A detailed checklist will be provided to the appointed coordinator for records.

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ANNEXURE -5 (A)
MONTHLY DETAIL REQUIRMENT FOR RUNNING MAINTENANCE OF AQUARIUM OF
ODISHA STATE MARITIME MUSEUM, JOBRA, CUTTACK FOR THE YEAR 2016-17

Sl. No	Description	Quantity	Rate	Amount
1	New fish	100	200	20000
2	Water conditioners and fish medication and water test kits	10	1500	15000
3	Sea salt(Kg)	200	140	28000
4	Algae removal tools	20	150	3000
5	Mopping cloths	50	40	2000
6	Filters service and maintenance	1	2500	2500
7	Fish food	1	8000	8000
8	Plastic wares for maintenance	10	450	4500
9	Movable tank with trolley and aeration system	1	729	729
10	Replacement for light tubes (T5 26W)	7	225	1575
11	Water filter for inlet water and RO system	1	2300	2300
12	Glass cleaning liquids (coin)	10	65	650
13	Spurge(200 ml)	2	350	700
14	Brighty K (500ml)	2	1450	2900
15	Step series (500ml)	2	1450	2900
16	ECA (50ml)	1	1450	1450
17	Green Gain (50ml)	1	1450	1450
18	Green Bacter (50ml)	1	1450	1450
19	Phyton git (50ml)	1	1450	1450
20	Rio Base (5000ml)	1	17000	17000
21	Manpower-senior	1	22000	22000
22	Manpower-senior asst	1	11000	11000
23	Manpower-junior	2	8800	17600
24	Aquatic system engineer visit	1	12500	12500
	Total		Rs.	1,80,654.00

Bidder

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

ANNEXURE 5 (B)
Work flow plan

TIME	Daily Routine tasks
8:00 am	LIGHTS IN EXHIBIT II TURN ON TO 30% FOR BASIC MAINTENANCE
8 TO 8.30 AM	EXHIBIT II PLANT TRIMMING AND WATER TOP UP AND GLASS CLEANING IF NECESSARY
8 TO 9 AM	EXHIBIT 7, EXHIBIT 8, EXHIBIT 9, EXHIBIT 10 MAINTENANCE
8.30 AM	EXHIBIT III FILTER CLEANING (5 MIN.)
8.35 AM	EXHIBIT III SURFACE SKIMMER CLEAN (5 MIN.)
8.45 AM	RO SYSTEM WATER ON (MONDAY)
9:00 AM	FLOOR MOPPING 2 TIMES (30 MIN)& GLASS CLEAN
9.30 AM	ALL GLASS CLEANING (OUTER)
9.30 AM	EXHIBIT 3,4,5,6 LIGHTS TURN ON
9.45 AM	LIGHTS IN EXHIBIT II TURN ON TO 80% AND CO2 TURNED ON.
9.50 AM	REMOVE ALL WASTE FROM MAINTENANCE AREA I, II AND III
10:00 AM	VISITORS ENTER TO AQUARIUM
10 TO 10.15 AM	EXHIBIT 9 FEEDING
10 TO 10.15 AM	LIQUID PLANT FERTILIZER FOR EXHIBIT II
10.15 TO 10.25	EXHIBIT II FEEDING
10.30 TO 10.40 AM	EXHIBIT III FEEDING
10.45 TO 10.55 AM	QURANTINE FISH FEEDING IN QURANTINE AREA
11 TO 11.15 AM	EXHIBIT 4 FEEDING
11.20 TO 11.25 AM	EXHIBIT 6 FEEDING
11.30 TO 11.45 AM	EXHIBIT 5 FEEDING
11.50 TO 11.55 AM	EXHIBIT 10 FEEDING, EXHIBIT 11 FEEDING
12 TO 12.10 PM	EXHIBIT 7 FEEDING AND EXHIBIT II LIGHTS TURNED ON TO 100%
12.15 TO 12.20 PM	EXHIBIT 8 FEEDING
12.30 TO 12.45 PM	EXHIBIT 9 FEEDING
1 TO 1.15 PM	EXHIBIT 3 FEEDING
1.30 TO 1.40 PM	EXHIBIT 5 FEEDING
2 TO 2.15 PM	EXHIBIT 6 FEEDING, EXHIBIT 11 FEEDING
3 TO 3.15 PM	EXHIBIT 4 FEEDING
4 TO 4.15 PM	EXHIBIT 3 FEEDING
4.30 TO 4.45 PM	QURANTINE FISH FEEDING IN QURANTINE

	AREA
4.50 TO 5 PM	EXHIBIT 9 FEEDING
5:00 pm	LIGHTS IN EXHIBIT II TURNED DOWN BY 50% AND CO2 SWITCH OFF
5.15 PM	VISITORS EXIT AQUARIUM
5.30 TO 5.45 PM	EXHIBIT 3 FILTER CLEANING
5.45 TO 6 PM	EXHIBIT 4 FILTER CLEAN AND BACK WASH
6 TO 6.15 PM	EXHIBIT 5 FILTER BACKWASH
6.15 TO 6.30 PM	EXHIBIT 5 GLASS CLEANING
6.30 TO 6.45 PM	EXHIBIT 6 FILTER CLEANING
6.45 TO 7 PM	EXHIBIT 6 GLASS CLEANING
7 TO 7.30 PM	EXHIBIT 7, EXHIBIT 8, EXHIBIT 9, EXHIBIT 10 , EXHIBIT 11 GLASS CLEANING
7.30 TO 8.30 PM	QUARANTINE ROOM MAINTENANCE

Bidder

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

Weekly checklists

Exhibit 2 - Maintenance chart - Nature Aquarium

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Photos every 2 days and send to SWA office							
Water top up daily							
Fish Feed daily							
Clean steel frame morning and night							
Glass cleaning morning and night							
Remove 5 buckets (100L) of water every night							
Rock cleaning every 3 days							
Clean hose once a week - Thursday							
Clean diffuser once in a week, clean each on different days at night							
Clean lily pipe once a week carefully, no breakages							
Clean light once a week							
Clean filter once in 3 months, enter last cleaning date in this sheet							
CO2 cylinder for change, enter last refill date in this sheet							

Brighty K - 50ml - Morning							
Step 1 - 20ml - Morning							
ECA - 40 drops - Weekly Monday Morning							
Green Gain - 40 drops - After cutting plants only - Morning							
Python Git - 40 drops - Weekly Monday Night							
Green Bacter - 40 drops - Weekly Thursday Night							
Penac W - 8 spoons - Weekly once Friday Night, mix in water & put in tank							
Bacter Ball - 2 balls - After filter cleaning - Night							

Aquarium Manager

Aquarium Coordinator

Exhibit 3 - Maintenance chart - Koi Pond

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Check for Koi health							
Feed Koi - 3 times - 150 - 250 grams each time Morning/Afternoon/Night							
Filter Backwash - Morning and Night							
Pre filter back wash - Morning and Night							
Surface cleaning using finenet*							
Cleaning of lawn with towel (everyday)							
Skimmer sponge clean - 3 times - Morning/Afternoon/Night							
FW probiotic 15th of every month - write last date							
Cleaning of brush in the filter, once a week, remove and clean in tap water							
Water change 20% once in 3 days, depending on water quality							
UV Filter							
Flowrate check 6000 ltrs/hour							

Aquarium Manager

Aquarium Coordinator

Exhibit 4 - Maintenance chart - Amazon Aquarium

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Surface skimming 10 minutes everyday morning							
Filter backwash morning / night							
Prefilter backwash and clean brush morning / night							
Water top up morning / night							
Check aeration in the tank - morning / night							
Aeration in the sump - morning / night							
Flowrate check - morning / night - 5000 plus ltrs per hour, less clean debris in pump							
Glass cleaning in front everyday							
Feeding 200 grams of prawns every day - afternoon							
Spray water on plants, once a week - morning							
Clean debris under corner stone below the wood - morning							
Check waterfall everyday - morning							
Clean waterfall pump once a week							
Bottom syphon once in 3 days - morning							
UV timer							
Money plant health check							

Aquarium Manager

Aquarium Coordinator

Exhibit 5 - Maintenance chart - Saltwater / Marine

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Saltwater to be full always in storage tank							
Filter backwash							
Protein skimmer check							
Sump check for fish							
Wave maker check							
UV timer							
Glass cleaning							
Feeding fish Morning and Evening							
Backlight check with position							
No2, NO3 and PO4 check							
Bottom syphon to be done once a week or as needed							
Aeration pump							

Aquarium Manager

Aquarium Coordinator

Exhibit 6 – Maintenance Chart- Lake Tanganyika

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Glass clean							
Filter backwash							
pH check							
Sump water level check - Morning and evening							
Bottom sand syphon							
UV timer							
Wave maker check							
Feed fish - Morning and evening							
NO2 check							
Money plant in sump							
Add salt after every water change - 700 gms							
Aeration in sump and tank							
Flowrate check							

Aquarium Manager

Aquarium Coordinator

Exhibit 7 - Maintenance chart - Mahanadi

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Check Aeration							
Ehiem filter cleaning every month, record date							
Water change once a month							
Water top up daily							
Money plant							
Glass cleaning							
Fish food*							

Aquarium Manager

Aquarium Coordinator

Exhibit 8 - Maintenance chart - Baitarani

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Check Aeration							
Water change 30% once in 15 days							
feeding every alternate day							
Tank for Black Molly							
Money plant and light							
Glass cleaning							
Fish food*							

Aquarium Manager

Aquarium Coordinator

Exhibit 9 - Maintenance chart - Bittarkannika

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Feed fish once in 3 days							
Water change once in 15 days - 20%							
Plants / floating							
Glass cleaning							
Mud to be wet always							
Light in sump							
Bottom syphon							

Aquarium Manager

Aquarium Coordinator

Exhibit 10 - Maintenance chart - Chilika

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Salinity check							
Water change weekly							
Glass cleaning							
Skimmer fix							
UV timer							
Light in sump							
Aeration							

Aquarium Manager

Aquarium Coordinator

Exhibit 11 - Maintenance chart - Lion Fish/ Exotic fish

Date from - _____ to _____	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Lion Fish							
Glass cleaning							
Skimmer clean							
Fish feeding once in 3 days							
Salinity							
Sump water level							
Aeration							

Aquarium Manager

Aquarium Coordinator

ANNEXURE 5 (C)
Tools and Materials

Cleaning Tools
NA substrate system(Spare)
Bacteria Additives
Plumbing tools
Step down transformers
Fish trapping system
Drilling tools
Silicon tube
Safety tools
TDS Meter
UV lamp spares
BATLA LADDER 4 STEP
BATLA LADDER 2 STEP

Bidder

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

ANNEXURE 5 (D)
Staff Details
(Table furnished by the agency)

NAME OF STAFF	DOB	EDUCATIONAL QUALIFICATION	BLOOD GROUP	DESIGNATION	WORK EXPERIENCE	ID NO

Bidder

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

Bill of quantities

For the work "Running maintenance of Aquarium of Odisha State Maritime Museum, Jobra, Cuttack for the year 2016-17".

Sl. No	Description	Quantity	Rate	Amount
1	New fish	100	200	20000
2	Water conditioners and fish medication and water test kits	10	1500	15000
3	Sea salt(Kg)	200	140	28000
4	Algae removal tools	20	150	3000
5	Mopping cloths	50	40	2000
6	Filters service and maintenance	1	2500	2500
7	Fish food	1	8000	8000
8	Plastic wares for maintenance	10	450	4500
9	Movable tank with trolley and aeration system	1	729	729
10	Replacement for light tubes (T5 26W)	7	225	1575
11	Water filter for inlet water and RO system	1	2300	2300
12	Glass cleaning liquids (coin)	10	65	650
13	Spurge(200 ml)	2	350	700
14	Brighty K (500ml)	2	1450	2900
15	Step series (500ml)	2	1450	2900
16	ECA (50ml)	1	1450	1450
17	Green Gain (50ml)	1	1450	1450
18	Green Bacter (50ml)	1	1450	1450
19	Phyton git (50ml)	1	1450	1450
20	Rio Base (5000ml)	1	17000	17000
21	Manpower-senior	1	22000	22000
22	Manpower-senior asst	1	11000	11000
23	Manpower-junior	2	8800	17600
24	Aquatic system engineer visit	1	12500	12500
	Total		Rs.	1,80,654.00
	Add Tax 14.5%		Rs.	26,194.83
	Grand Total per month in		Rs.	2,06,848.83
		Say	Rs.	2,06,849.00
	Total annual maintenance for the year		Rs.	24,82,188.00

(Rupees Twenty four lakh eighty one thousand one hundred eighty eight) only

Bidder

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

Annexure-6

My/ Our quoted rate is _____% (in figure) _____ percent
(in word) excess over the amount put to tender.

My/Our quoted rate is _____% (in figure) _____ percent
(in word less) than the amount put to tender.

My/ Our quoted rate is at par with the amount put to tender.

Signature of the Contractor

Note:- Please tick mark the appropriate box. The contract should not write anything except quoting of percentage excess over/ equal to the estimated cost in his own hand writing.

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

FOR OFFICE USE ONLY

All formalities to be maintained at the timing of opening

1. No of correction
2. No of over writing
3. E.M.D deposit
4. Diff. of rates in figure & words
5. Condition if any
6. VAT clearance certificate
7. No relationship certificate
8. Original Affidavit.

Bidder

Member Secretary
Odisha State Maritime Museum
Jobra, Cuttack.

