

भाकुअनूप – केन्द्रीय खारा जलजीव पालन अनूसंधान संस्थान ICAR - CENTRAL INSTITUTE OF BRACKISHWATER AQUACULTURE ISO 9001:2008 CERTIFIED WWW.ciba.res.in



(Indian Council of Agricultural Research, Govt. of India) 75, Santhome High Road, Raja Annamalai Puram, Chennai - 600028, Tamil Nadu, India

#### F.NO.1-9/2019-20/EC/HQRS

Date: 28.11.2019

# NOTICE INVITING e-TENDERS (NATIONAL COMPETITIVE BIDDING)

Online bids are invited on single stage two bid systems for the "Renovation of Electrical wiring and Electricals appliances/fixtures in the existing building utilized as trainees hostel at MES of CIBA at Muttukadu" with the General terms & conditions and specifications mentioned in the Annexure II & III respectively.

Tender documents may be downloaded from CIBA web site www.ciba.res.in (for reference only) and CPPP site https://eprocure.gov.in/eprocure/app as per the schedule as given in CRITICAL DATE SHEET as under.

**CRITICAL DATE SHEET :** 

Published Date	29 <sup>th</sup> November 2019 (10.00 AM)
Bid Document Download / Sale Start Date	29 <sup>th</sup> November 2019 (10.00 AM)
Bid Submission Start Date	29 <sup>th</sup> November 2019 (10.00 AM)
Bid Clarification Start Date	29 <sup>th</sup> November 2019 (10.00 AM)
Bid Clarification End Date	10 <sup>th</sup> December 2019 (02.00 PM)
Bid Submission End Date	10 <sup>th</sup> December 2019 (02.00 PM)
Bid Opening Date	11 <sup>th</sup> December 2019 (02.00 PM)

Bids shall be submitted online only at CPPP website:

https://eprocure.gov.in/eprocure/app. Manual bids are strictly not accepted under any circumstances.

E-procurement system ensures locking on the scheduled date and time. The system will not accept any bid after the scheduled date and time of submission of bid. The Tender Inviting Authority has all the rights to retender or cancel the tender at any stage without mentioning the reasons.

Tenderer / Contractor are advised to follow the instructions carefully provided in <u>Instructions to Bidders (ITB ) and General Condition of Contract</u> (GCC), without fail, which are uploaded in our website at <u>www.ciba@res.in</u> under "TENDER", before submission of your bid. For clarification please send mail to stores@ciba.res.in

Care has been taken to avoid contradiction between stipulation in the ITB, GCC and those in the other sections of the bidding documents. But wherever contradiction arises, if any, stipulations contained in the Schedule of Requirements shall prevail.

Tenderer / Contractor are also advised to follow the instructions provided in the 'Instructions to the Contractors/Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e-Procurement at '<u>https://eprocure.gov.in/eprocure/app</u>'

Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

Not more than one tender shall be submitted by one contactor or contractors having business relationship. Under no circumstance will father and his son(s) or other close relations who have business relationship with one another (i.e. when one or more partner(s)/director(s) are common) be allowed to tender for the same contract as separate competitors. A breach of this condition will render the tenders of both parties liable to rejection.

Tenderer who has downloaded the tender from the CIBA website <u>www.ciba.res.in</u> and Central Public Procurement Portal (CPPP) website <u>https://eprocure.gov.in/eprocure/app</u>, <u>https://eprocure.gov.in/epublish/app</u> shall not tamper/modify the tender form including downloaded price bid template in any manner. In case if the same is found to be tampered / modified in any manner, tender will be completely rejected and EMD would be forfeited and tenderer is liable to be banned from doing business with CIBA.

Before the deadline for submission of the online bid, CIBA, Chennai reserves the right to modify the tender document terms and conditions. Such amendment / modification will be notified on website against said tender ID. Intending tenderers are advised to visit again CIBA website <u>www.ciba.res.gov.in</u> and CPPP website <u>https://eprocure.gov.in/eprocure/app</u> at least 3 days prior to closing date of submission of tender for any corrigendum / addendum/ amendment.

#### EMD Payment:

Bid Security EMD | **Rs. 15000/-** | In words Rupees Fifteen Thousand Only.

Security deposit 5% value of contract (Interest free) including EMD has to be deposited on receipt of this office letter before commencement of work. Earnest Money Deposit is to be deposited by **Demand Draft** in favour of <u>ICAR Unit, CIBA</u> <u>and payable at Chennai</u> obtained from any Nationalized/ scheduled Bank valid for six months. Bidders are required to submit the details of EMD payment at the time of Bid Preparation.

All applicable bank charges shall be borne by the applicant and he shall not have any claim what so ever on this account on Government.

Tenderer shall likely to be liable for legal action for non-submission of original payment instrument like DD, etc., against the submitted bid.

Bids will be opened as per date/time as mentioned in the **Tender Critical Date Sheet.** After online opening of Technical-Bid the results of their qualification as well Price-Bid opening will be intimated latter.

#### Performance Security Deposit:

The Performance guarantee deposit 5% value of work done will be deducted in the Final bill. The EMD/SD/Performance guarantee (Total 10%) will be refunded to the contractor only after completion of performance maintenance period - **one year** from the date of completion of work. No interest will be paid to these deposits. **Performance Security deposit has to be claimed within three years after completion of work, otherwise it would be forfeited.** 

# Submission of Tender

- 1. The tender shall be submitted online in two parts, viz., technical and price bid.
- 2. All the pages of bid being submitted must be signed and sequentially numbered by the bidder irrespective of nature of content of the documents before uploading.
- 3. The bids submitted through Post/Telegram/Fax/email shall not be considered and will be summarily rejected.
- 4. No correspondence will be entertained in this matter.

# Technical Bid:

The following documents are to be furnished by the bidder/supplier/Contractor along with Technical Bid as per the tender document in the following order, failing which the competent authority reserves the right to regect the bid at the bid opening stage itself without entertaining for further process.

- i) Signed and scanned copy
  - 1. Tender acceptance letter (Annexure-I)
  - 2. Price bid Undertaking(to be given on Company Letter head)
  - 3. Demand Draft pertaining to Earnest Money deposit
  - 4. MSME certificate if claiming EMD exemption
  - 5. PAN card
  - 6. GST certificate
  - Valid registration certificate/copy of enlistment approved by PWD/CPWD or any other Govt dept and the current date value
  - 8. Affidavit of partnership/proprietary firm if applicable
  - The contractor should furnish /enclose the proof of the execution of Electrical work in Govt. dept. in any of last three year value of Rs. 10.00 lakhs and above.

#### Price Bid:

- (a) Price bid undertaking
- (b) Schedule of price bid in the form of BOQ\_XXXX.xls.
- (c) There should not be any deviations from the Price bid template that been uploaded with this e-tender, otherwise the bid will be summarily rejected.

#### PRICE BID UNDERTAKING

From: (Full name and address of the Bidder)

To,

The Director,

Central Institute of Brackishwater Aquaculture,

75, Santhome High Road,

R.A. Puram,

Chennai – 600 028

Dear Sir/Madam,

Sub : Price Bid Undertaking – Reg CIBA Ref.No. : <u>F.No.1- 9/2019-20/EC/Hqrs</u>

I submit the Price Bid for the **"Renovation of Electrical wiring and** Electricals appliances/fixtures in the existing building utilized as trainees hostel at MES of CIBA at Muttukadu" as envisaged in the Bid document.

2. I have thoroughly examined and understood all the terms and conditions as contained in the Bid document, and agree to abide by them.

3. I offer to supply/execute the work at the rates as indicated in the price Bid of this tender.

Place :

Date :

Yours Faithfully,

Signature of authorized Representative

## Schedule of price bid in the form of BOQ\_XXXX .xls:

The below mentioned Financial Proposal/Commercial/Price bid format is a model, provided as BoQ\_XXXX.xls along with this tender document at <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a>. Bidders are advised to download this BoQ\_XXXX.xls as it is and quote their offer/rates in the permitted column and upload the same in the Price bid. Bidder shall not tamper/modify downloaded price bid template in any manner. In case if the same is found to be tempered/modified in any manner, tender will be completely rejected and EMD would be forfeited and tenderer is liable to be banned from doing business withCIBA,Chennai.

1	A	В	D	E	F	м	BA	BC	
	Validate	Print Help			Rate BoQ				
1									
4	Tender Invitin	Tender Inviting Authority:							
5	Name of Work	Name of Work:							
6	Contract No:								
8	Name of the Bidder/ Bidding Firm / Company :								
				PRIC	E SCHEDULE				
	(This BOQ ter	nplate must not be modified/replaced by the	bidder and th			ded after filling th	e relevent column	s, else the bidder is liable to be rejected	
9		for this ten	der. Bidders a	ire allowed	to enter the	Bidder Name and	Values only )		
10	NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	NUMBER #	TEXT #	
	SI.	Item Description	Quantity	Units	Estimated	BASIC RATE In	TOTAL AMOUNT	TOTAL AMOUNT	
	No.				Rate	Figures To be	Without Taxes	In Words	
					in	entered by the	in		
					Rs. P	Bidderin Rs. P	Rs. P		
11						Rs. P			
11	1	2	4	5	6	13	53	55	
28	1	Item 1							
29									
	Total in Figure	28	1				0.00	INR Zero Only	
30									
Quoted Rate in Words				INR Zero Only					
32									

- 1. The rates shall be quoted in Indian Rupee only.
- The rates has to filled at the particular cells in the BoQ\_XXXX.xls such as taxes, fees, levies, etc. and any revision in the statutory taxes, fees, etc will be the responsibility of the Bidder.
- 3. The payment will be made to the Consultant/Bidder/Supplier at any Bank Account maintained in India by way of ECS/RTGS after deducting the TDS as applicable.
- 4. The quoted rates shall remain firm throughout the tenure of the contract and no revision is permissible for any reason.

## Instructions for Online Bid Submission:

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

More information useful for submitting online bids on the CPP Portal may be obtained at: <u>https://eprocure.gov.in/eprocure/app</u>.

#### **Registration :**

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

#### Searching for tender documents :

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

#### Preparation of bids:

- 1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Deviations from these may lead to rejection of the bid.
- 3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such

documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

#### Submission of bids:

- Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3. Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4. Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 6. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

- 7. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 9. Upon the successful and timely submission of bids (ie after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 10. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

## Assistance to bidders :

- 1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

The Director, Central Institute of Brackishwater Aquaculture, No.75.Santhome High Road, R.A.Puram, Chennai –600028.

# ANNEXURE - I TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:

To, The Director, Central Institute of Brakishwater Aquaculture, No.75. Santhome High Road, R.A.Puram, Chennai – 600 028.

 Subject : Acceptance of Terms & Conditions of e-Tender – Reg

 CIBA Ref No : F.No.1- 9/2019-20/EC/Hqrs

 Tender ID: \_\_\_\_\_\_

 Name of Tender / Work: "Renovation of Electrical wiring and Electricals appliances/fixtures in the existing building utilized as trainees hostel at MES of CIBA at Muttukadu"

\*\*\*\*\*\* \*\*\*\*\*\*\* \*\*\*\*\*\*

Dear Sir,

 1. I/ We have downloaded the tender document(s) for the above mentioned

 'Tender/Work'
 from
 the
 web
 site(s)
 namely:

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

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from **Page No. 1 to 16** (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organization too has also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety and also unconditionally accept that CIBA, Chennai has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

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

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

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

# ANNEXURE - II

#### **GENERAL TERMS & CONDITIONS**

- 1. The quotation/ tender should be submitted through online mode only at <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a> on or before 10.12.2019 14.00hrs.
- The right to accept the rates and bidding the work based on the quality and reputation of the firms rests with the DIRECTOR, CIBA and it cannot be challenged. The DIRECTOR, CIBA reserves the right to accept or reject any one or all the quotations without any reason.
- 3. Quotation may be furnished for "Renovation of Electrical wiring and Electricals appliances/fixtures in the existing building utilized as trainees hostel at MES of CIBA at Muttukadu"
- 4. No advance and any part payment will be made for this work.
- 5. The rates are to be quoted to have a minimum validity for a period up to **31-03-2020**.
- 6. Two point two percent (2%) of the total billed amount will be deducted towards income tax and the same will be remitted to the IT Department concerned.
- 7. A demand draft for an amount of Rs.15,000/- (Rupees Fifteen Thousand only) as Earnest Money Deposit may be drawn in favour of "ICAR UNIT, CIBA, CHENNAI" payable at Chennai and the same should be scanned and uploaded along with the technical bid.
- 8. Security deposit 5% value of contract (Interest free) including EMD has to be deposited on receipt of this office letter before commencement of work.
- 9. The Performance guarantee deposit 5% value of work done will be deducted in the Final bill. The EMD/SD/Performance guarantee (Total 10%) will be refunded to the contractor only after completion of performance maintenance period one year from the date of completion of work. No interest will be paid to these deposits. Performance Security deposit has to be claimed within three years after completion of work, otherwise it would be forfeited.
- 10. During executing of work any loss/Hazard due to any reason for the men and materials will be borne by the contractor. The Institute will not be responsible for any loss or damage /Hazard.
- 11. While executing the work, the executing agency is fully responsible for any damage to Institute materials and the same may be replaced (including materials & labour charges for the replacement) by the Contractor at his own cost.
- 12. The work should be completed on or before 45 days from the date of issue of work order to the satisfaction of the authority concerned.
- 13. The rates are to be quoted in the BoQ which is available with the e-tender, and tampering it in any way would lead to the rejection of the bid summarily.
- For inspection of the site,1).Sandeep K P, Scientist,MES of CIBA, (Mobile No.8056946604) 2).Shri S.Saminathan, Senoir Technical Assistant (Mobile No.9003106083) 3).Shri.R.Puthiavan, Asst. Chief Technical Officer, Engg.Cell (Mobile No.9841656547) may please be contacted between 10.00 hrs to 16.00 hrs on all working days.
- 15. Payment will be made based on the actual measurements recorded in the 'CMB'
- 16. The contractor should furnish/enclose the proof of the execution of work in Govt. dept. in any of last three year value of Rs.**10.00** lakhs and above.

# ANNEXURE-III

# Schedule for Renovation of Electrical wiring and Electricals appliances/fixtures in the existing building utilized as trainees hostel at MES of CIBA at Muttukadu.

S.No	Description of Item	Qty	Unit	
1.	Wiring for light point/ fan point/ exhaust fan point/ call bell	95	Points	
	point with 1.5 sq.mm FRLS PVC insulated copper conductor			
	single core cable in surface / recessed steel conduit, with			
	modular switch, modular plate, suitable GI box and earthing			
	the point with 1.5 sq.mm FRLS PVC insulated copper			
	conductor Single core cable etc. as required.			
	Group A			
2.	Wiring for circuit/ submain wiring alongwith earth wire with	300	Mtrs	
	the following sizes of FRLS PVC insulated copper conductor,			
	single core cable in surface/ recessed steel conduit as required.			
	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire			
3	Wiring for circuit/ submain wiring alongwith earth wire with	80	Mtrs	
	the following sizes of FRLS PVC insulated copper conductor,			
	single core cable in surface/ recessed steel conduit as required.			
	2 X 6 sq. mm + 1 X 6 sq. mm earth wire			
4	Wiring for light/ power plug with 2X4 sq. mm FRLS	350	Mtrs	
	PVC insulated copper conductor single core cable in			
	surface/ recessed medium class PVC conduit alongwith 1 No. 4			
	sq. mm FRLS PVC insulated copper conductor single core			
	cable for loop earthing as required.			
5	Supplying and fixing suitable size GI box with modular plate	24	Each	
	and cover in front on surface or in recess, including providing			
	and fixing 3 pin 5/6 A modular socket			
	outlet and 5/6 A modular switch, connections etc. as			
	required.			
6	Supplying and fixing suitable size GI box with modular plate	24	Each	
	and cover in front on surface or in recess, including providing			
	and Fixing 6 pin 5/6 & 15/16 A modular socket outlet and			
_	15/16 A modular switch, connections etc. as required.			
7	Supplying and fixing DP sheet steel enclosure on surface/	12	Each	
	recess along with 25/32 A 240 V "C" curve DP MCB			
	complete with Connections, testing and commissioning etc. as			
-	required.			
8	Supplying and fixing following way, horizontal type three pole	2	Each	
	and neutral, sheet steel, MCB distribution board,415 V, on			
	surface/ recess, complete with tinned copper bus bar, neutral			
	bus bar, earth bar, din bar, interconnections, powder painted			
	including earthing etc. as required. (But without			
	MCB/RCCB/Isolator)			
	4 way (4 + 12), Double door			

9	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) <b>12 way , Double door</b>	6	Each
10	Supplying and fixing following rating, four pole, 415 V, isolator in the existing MCB DB complete with connections, testing and Commissioning etc. as required. (63A)	2	Each
11	Supplying and fixing following rating, double pole, 240 V, isolator in the existing MCB DB complete with connections, Testing and commissioning etc. as required. (40 A)	6	Each
12	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Single pole	60	Each
13	Supply, installing, testing and commissioning of following size ceiling fan complete with all accessories including wiring the down rod of standard length (upto 30 cm) with PVC insulated PVC Round Sheathed copper conductor flexible cable etc., as required. (but without regulator) (1200 mm sweep (BEE 5 star rated)	18	Each
14	Supply, installation, testing and commissioning of 300 mm sweep exhaust fan made upof metal body including connections with 1.5 sq.mm FR PVC insulated copper conductor wiring etc, as required	6	Each
15	Supplying and fixing of following indoor IP20 ingress protected RoHS & EMC complaint LED light fixtures suitable for 230 VAC, 1 Phase 50 Hz input power supply, including making connections etc. complete as required 24.1 (1200 mm Industrial Batten, 2000 Lumen), Industrial Batten type LED Fitting with CRCA housing, high efficiency diffuser cover, surface mounting, 1200 mm long, directly mounted on ceiling/wall with suitable mounting accessories etc., having the following specification. System Lumen output : 2000,Minimum system lumen efficiency : 100 lm/W, THD: <10%, PF:>0.90, CRI : 80 Color Temperature : 5700K/6500 K L70B50 > 50,000 Hrs.	24	Each
16	Supplying , Installation, testing and commissioning of 9 watts LED fitting with all accessories directly on ceiling including wiring with 1.5 sq. mm PVC insulated FRLS copper conductor single core cable, ETC., as required,	12	Each

17	Supplying and testing of following size one number XLPE	50	Mtrs
	insulated and PVC sheathed armoured aluminium conductor		
	power cable of 1.1 KV grade conforming to IS 7098 (Part-1)		
	1988 as required		
	4 x 25 Sq.mm		
18	Supplying and making straight through joint with cast	1	Set
	resin compound including		
	ferrules and other jointing materials for following size of		
	PVC insulated and PVC sheathed / XLPE aluminium		
	conductor cable of 1.1 KV grade as required.		
	(4 X 25 sq. mm)		
19	Supplying and making end termination with brass compression	3	set
	gland and aluminium lugs for following size of PVC		
	insulated and PVC sheathed / XLPE aluminium conductor		
	cable of 1.1 KV grade as required		
	4 X 25 sq. mm (28mm)		
20	Supplying and laying of following size DWCHDPE pipe ISI	40	Mtrs
	marked along with all accessories like socket, bend,		
	couplers etc. conforming to IS 14930, Part II complete with		
	fitting and cutting, jointing etc.direct in ground (75 cm below		
	ground level) including excavation and refilling the trench but		
	excluding sand cushioning and protective covering etc.,		
	complete as required.		
	63 mm dia (OD- 63 mm & ID-51 mm nominal)		
21	Providing and fixing PVC drain pipe 19 mm dia for AC drain	50	Mtrs
	water etc. as required.		
22	Supply and fixing of 15 liter storage water heater i/c inlet and	6	Each
	outlet connection complete as required.		

**केन्द्रीय खारा जलजीव पालन अनुसंधान संस्थान** (भारतीय कृषि अनुसंधान परिषद) #75, संथोम हाई रोड, राजा अण्णामलैपुरम, चेन्नई - 600028, तमिलनाडु, भारत



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