

NATIONAL INSTITUTE OF FOOD TECHNOLOGY ENTREPRENEURSHIP AND MANAGEMENT
Kundli, Sonapat, Haryana, Pin-131028



E -TENDER
FOR
“OPERATION & MAINTENANCE” WORK AT NIFTEM CAMPUS, KUNDLI, SONEPAT (HR)



National Institute of Food Technology Entrepreneurship and Management (NIFTEM)
Deemed to be University (De-novo Category) under Section 3 of the UGC Act, 1956 and
an Autonomous Institution under Ministry of Food Processing Industries, GOI,
Plot No 97, Sector-56, HSIIDC Industrial Estate, Kundli-131028, District-Sonepat (Haryana)

Tender No. N/GeA/EC/2021-22/18

Dated: 06.08.2021

NOTICE INVITING E - TENDER

Subject: ONLINE e- TENDER FOR OPERATION & MAINTENANCE WORKS.

(Operation & Maintenance of Civil, Electrical, Plumbing, Centralized RO System, Electrical 33/.433kV Substation, DG Sets, STP, UGWTP, Fire Fighting & Fire detection System, Lifts, Sewerage, Glass façade cleaning and other O&M related Works/Services etc. and Manpower Supply) at NIFTEM Campus, Kundli, Distt.-Sonepat, Haryana.

National Institute of Food Technology Entrepreneurship and Management (NIFTEM) is a registered society and an autonomous organization under Section 3 of the UGC Act, 1956 and an Autonomous Institution under Ministry of Food Processing Industries, GOI. NIFTEM functions as a centre for integrated education, research, enterprise incubation and outreach in area of Food Science, Food Technology & Business Management. NIFTEM has been set up on a 100-acre campus near Delhi Singhu Boarder at Kundli, Distt-Sonepat, and Haryana at a cost of approx Rs. 500 crores.

For and on behalf of NIFTEM online Tenders (Two bid system) are invited on CPPP eProcurement website <https://eprocure.gov.in/eprocure/app from eligible O&M Works Agencies/>Firms at NIFTEM Campus, Kundli, Distt.- Sonepat, Haryana.

Critical Date Sheet

S. No.	Particulars	Important Dates	Time	EMD	Tender processing Fees
1	Issue of Tender documents	06.08.2021	05.00 PM	Rs. 6,50,000/-	Rs. 5900/- (Rs.5,000/-+18% GST)
2	Pre-Bid Meeting (through online - webex)	10.08.2021	11.00 AM		
3	Bid submission start date and time	13.08.2021	04.00 PM		
4	Last date & time for submission of tender	21.08.2021	02.00 PM		
5	Date & time of opening of Technical Bids	23.08.2021	11.00 AM		
	Date & time of opening of Financial Bids	Will be intimated thro to the successful bidders			

Pre-bid meeting (E-Tender for Operation & maintenance work)

Hosted by Purchase NIFTEM

<https://niftemkundli.webex.com/niftemkundli/j.php?MTID=m7f54c93b62c0db22ea4ff37496b434ed>

Meeting number: 170 690 7902

Password: 123456

Access code: 170 690 7902

Mandate of NIFTEM:

NIFTEM is working as - 'Sector Promotion Organization' & 'Business Promotion Organization' of the food processing sector. It is a prime academic institution and offer B.Tech, M Tech and Ph D programmes in the areas of Food Technology and Management. The Institute has been granted Deemed to be University status under De-novo category under Section 3 of the UGC Act, 1956.

Major Objectives of NIFTEM are –

- One Stop Solution Provider
- Skill & Entrepreneurship Development
- Facilitating business incubation services with its ultra modern pilot plant
- Conducting Frontier Area Research
- Developing world class managerial talent
- knowledge repository
- Up gradation of SME Clusters
- Promoting cooperation and networking

2.0

Scope of Work

2.1.

Sub Head-I Civil Maintenance

Maintenance of Civil Work as specified in scope of work and as directed by the Engineer-in-Charge or his authorized representative.

Scope of Work:-

- The work involves maintenance of civil work of the NIFTEM Campus i.e. Institutional, Residential buildings, Hostels Pilot-Plants, CFRA (FTL), Laboratories, such as any kind of civil maintenance work of the building which includes masonry, plastering, concrete, carpentry work, welding, painting work, POP, Gypsum, False ceiling repairing, welding , glazing, sanitary, plumbing works Glass façade cleaning work etc.
 - Maintenance of water tank including tank cleaning, water pipe lines, drainage lines, toilet and washbasin, urinals, WCs, Choke up of flushing, replacement / alteration of components, rectifications of leakage and repair of entire sewage system of the building etc.
 - Check all the area for damaged false ceiling, floor tiles, glazing, wooden doors, Aluminum doors & windows wherever necessary & required repairing to be done.
 - Check the glass doors & its functional aspects i.e. Floor springs, handles, locks, hardware fittings etc. and re fix or replace wherever necessary and replaced / changed damaged/broken glasses.
- 2.2 Staff deployment and their qualifications: - The Agency/contractor shall depute qualified and experienced staff as per requirement. Before starting the work the contractor will submit list of workers with their qualification and address etc. The following staff shall be engaged by the contractor:

A	Supervisor (Complaint Cell)	1No in General Shift
B	Supervisor (Civil)	1No in General Shift
C	Mason	1No in General Shift
D	Mason Helper	1No in General Shift
E	Plumber	4 Nos (1 in each shift + 1 No. In Gen Shift)
F	Plumber Helper	1 Nos in General Shift
G	Water supply Attendant	3 Nos (1 in each shift)
H	Sewer Man	2No in General Shift
I	Carpenter	1No in General Shift
J	Carpenter Helper	1No in General Shift
K	Painter	1No in General Shift
L	Painter Helper	1No in General Shift

M	Welder	1No in General Shift
N	Welder Helper	1No in General Shift
	Total	20

Site Manager: – Should have diploma in Civil/Electrical engineering with 10 years experience in the relevant field.

Supervisor (Complaint cell): – Should have Diploma in computer science/IT with 05 years experience in the line or as per qualification/experience of minimum wages act.

Supervisor Civil: – Should have diploma in Civil engineering and 05 years experience in the line or as per qualification/experience of minimum wages act.

Store Keeper: - Should have diploma in Material Management / Mechanical / Civil / Electrical engineering with 02 years similar experience in the relevant field or as per qualification/experience of minimum wages act.

Mason/Plumber/ Carpenter/Sewer man/ Welder: - should have ITI with 05 years experience Or matriculate with 08 Years experience in the line and helpers Should have matriculate with 05 Years experience in the line or as per qualification/experience of minimum wages act.

Painter should have 05 years experience of painting, POP, work/Gypsum ceiling repairing/False ceiling repairing & Emulsion painting in the line and helpers Should be with 3 Years experience in the line or as per qualification/experience of minimum wages act.

2.3

Details of Comprising Items in Civil Installation:-

Flooring:- Kota stone, Vitrified Tiles, Granite & Italian Marbles

Door: - Glass, Flush Door, Sound Proof Door.

Window: - Aluminum & Glass, Vanishing Blends.

Finishing in institutional, Hostels & residential Building: - Texture paint, Plastic paint, distemper, Emulsion & Synthetic Enamel & polishing etc.

Sanitary items: Health faucet, WC, Cistern, Taps, Water mixer, urinal partition etc.

Note: Material required for maintenance works will be provided by the service provider on approved BOQ rates.

3.0

Sub Head-2 Maintenance of Electrical Installation (External & Internal)

Maintenance of Electrical Installation as specified in schedule of work and as directed by the Engineer-in-Charge or his authorized representative.

3.1

Scope of work

- a. To attend day to day complaints of External and Internal Electrical installation i.e. Compound lights, main boards, DB's, compact station raising mains etc. in buildings of NIFTEM Campus, maintaining of complaint register, worker diaries and doing preventing maintenance as per maintenance schedule.
- b. Checking of DB's main board, rising main etc.
- c. Cleaning of electrical installation and fittings as per schedule or as and when required.

- d. Insulation test as per requirements.
- e. Earth test - Half yearly of all earthing pits.
- f. Maintenance activities carried out as per schedule and recorded in the maintenance register.
- g. Round the clock operation, operational check up, routine cleaning and general maintenance of HT & LT panels, Transformers, Capacitor Bank and UPS, DG Sets etc.

Note: The payment of replacement of faulty cable, jointing kit, consumables, etc. will be made by NIFTEM.

3.2

Staff deployment and their qualifications:-

The contractor shall deployed qualified and experienced staff as per requirement as following:-

a.	Supervisor Electrical	2 No. (1No. in General Shift+1No. In Night Shift)
b.	Electrician	5 Nos. (1 in each shift) + (1 No. in Gen. Shift + 1 No Reliever)
c.	Electrician Helper	4 Nos. [1 in each shift) + (1 No. in Gen. Shift)]
	Total	12

Electrical Supervisor: He should have Diploma in Electrical Engineering with minimum 05 year experience in the line or as per qualification/experience of minimum wages act.

Electrician:-He should have passed ITI certificate with minimum 05 years experience in the line and repairing of Starter electrical control panels, VFD repairing, control wiring & relay settings etc or as per qualification/experience of minimum wages act.

Electrician helper: - He should have minimum 02 years experience in the line after 02 year ITI in Electrician or as per qualification/experience of minimum wages act.

3.3

General Conditions

- i The contractor shall maintain the register for DB checking, Fan checking, UPS checking & earth test.
- ii Maintenance of electrical installation shall be carried out as per schedule and accordingly record shall be maintained.
- iii Earth continuity test and earth electrode resistance test should be conducted during summer season and record shall be maintained accordingly.
- iv Record the test result giving identification reference. If results are not satisfactory in any part of the Installation, reason should be checked and corrective action should take immediately.
- v Contractor is solemnly responsible for all type of liasoning /co-ordination with concern Power corporation office for any type of issue related to the uninterrupted power supply to NIFTEM from concern power corporation office like any type of main line fault, fuses blown, timely collection & deposition of monthly electricity bills, however NIFTEM will provide the cheque/DD for monthly electricity bills, in case of any penalty imposed by the concern Power Corporation office due to the contractors failure/negligence will be recover from Contractor's running O&M bill.
- vi Agency is solemnly responsible for all types of fault finding, tracing & rectification during the entire period of contract or extended period of all types of power cables (HT/LT), no any type of extra cost will be paid by NIFTEM for such works.

3.4

Inventory of External & Internal Electrical Installation

Lightning Points - 7500 Nos.
Street Lights - 214Nos.
Compound light- 80 nos.

High Mast Light – 5 Nos.

Electrical Sockets (5A, 16A & Industrial) -2000 No

HT/ LT Panels, ACBs, DBs, and lifts etc. in buildings.

UPS – 19 Nos.

All general electrical installation of NIFTEM residence, Class rooms, all Laboratory and FTL labs etc.

4.0 Sub Head-3 Fire Fighting System

4.1 Scope of Work

4.1.1 The maintenance agency/contractor shall be solely responsible for the day to day maintenance of Fire Fighting, Fire Alarm, Public Address and Talk Back system on 24x7 hours basis in the entire NIFTEM campus under this contract. Complete Scope of work and maintenance schedules of this work is given elsewhere in the tender document. The maintenance shall include supply of manpower in shifts and organizing periodical fire drills as required by NIFTEM

4.1.2 All prevention and routine maintenance including minor rectification will be the responsibility of the agency. All material including Diesel, oil for Fire Engine Pump will be provided to the agency by NIFTEM for such rectification free of cost except some minor material such as Petroleum Jelly, grass, lubricants, tools & tackles, nuts & bolts, distilled water, old dhoti, log books & stationeries, fuse, rubber packing, threads, indicator lamps, clamps, resistors, diodes etc which are in the scope of this work. Nothing extra shall be paid on account of consumables and small tools & plants required for the work.

4.1.3 The Agency will promptly inform NIFTEM's engineer in charge as soon as occurrence of any major defect in these systems so that the latter can take advance action towards its rectification and procurement of any material required for that purpose.

4.1.4 The Agency will be responsible for keeping a watch on any incident of fire in the entire complex on 24 x 7 hours basis. It will immediately alarm the NIFTEM representative if any smoke or fire is noticed in their premises and will fully cooperate in with them for extinguishing the same. The agency, if required will inform the Haryana Fire Service/Fire Brigade and NIFTEM In charge of the work of such incident.

4.2 Staff deployment and their qualifications:

a	Fire Officer	1No. in General Shift
b	Head Fire men	4No. (1No. in each shift)
c	Fire man/attendant	3Nos. (1No. in each shift)
d	Pump operator	1Nos. (1No. in Night shift) & other shifts WTP pump operator will operate all the pumps including Fire, WTP and Sump Pumps.
Total		08

Note: Pump Operator to look after all the pump operations of Water supply, Fire Pumps, RO, Water Treatment Plant and Sump Pumps etc.

4.2.1 Fire Officer - Must have passed one year diploma in Fire Safety from recognized Fire Institute with a minimum experience of 05 years in related field or As per qualification/experience of minimum wages act.

4.2.2 Head Fireman: - Must have passed one year diploma in Fire Safety recognized Fire Institute with a minimum experience of 02 years in related field or As per qualification/experience of minimum wages act.

4.2.3 Fire Man/ pump operator: Must have passed one year diploma in Fire Safety recognized Fire Institute or As per qualification/experience of minimum wages act.

4.3 The Contractor will conduct periodical fire drills at site after every 2 months as per directions of the engineer in charge including imparting training to the user's staff in the use of fire Extinguishers and other equipments etc. In case the agency fails to conduct the fire drill, a penalty of Rs. 5000.00 shall be

imposed on the contractor.

- 4.4 The checking and maintenance of the batteries for the system shall be done including maintaining specific gravity, distilled water level.
- 4.5 The servicing of the system shall be done smoothly including fire detector system and random checking and heat detectors periodically by heat and smoke.
- 4.6 The demonstration drill of the working of the system shall be given once a month as and when desired by the Engineer-in-Charge or as per his direction.
- 4.7 The firm has to arrange for testing both the fire pumps in the presence of NIFTEM's Engineer once in a fortnight. The test include running of the pressurization pumping set in case of loss of pressure of fire hydrant system and running of diesel engine pump by artificial closure of electricity. Creating the pressure loss in the pipelines shall test the electricity driven pump set. Test Pressure at the farthest end, bottom most ends and at pump set one of the yard hydrants shall be taped for operation on the same day by creating the desired jet, such test shall be done at least once in a month in the presence of Engineer.
- 4.8 The contractor will arrange inspection of all the Fire System in the NIFTEM campus from a Graduate Electrical Engineer having good experience in this field once in a month for the smooth operation of these systems. Nothing extra will be paid to him (contractor) on this account.
- 4.9 Maintaining liaison with security department in case of fire, routine testing/annual testing being conducted to check the operation/readiness of the system shall be contractor's responsibility.
- 4.10 The minor servicing of the fire pumps, jockey pump, motor and engine shall be done twice in a year. The department will also provide H.S. diesel, Water and electricity free of cost for its running and maintenance.
- 4.11 Refilling of Fire Extinguishers will be arranged by agency immediately time to time or as & when required at its own cost on payment basis under the intimation of Engineer In charge.
- 4.12 The Contractor will fully cooperate with all the occupants (space buyers) at the NIFTEM Plaza whenever there is a fire incident in their premises. He will Coordinate the fire fighting and rescue operation whenever required. On the Occurrence of any Fire incident anywhere/anytime in the Plaza, he will immediately inform the occupant in whose premises the fire has taken place. Prompt Fire fighting measures shall be taken by him and information will be given to concern Delhi Fire Brigade office side by side
- 4.13 The firm will engage trained and experienced technical staff and helpers for routine maintenance headed by a qualified Fire Supervisor for 24 x 7 hours.

Note: Quarterly fire mock drill to be arranged by the agency through external trainer.

4.14 **Inventory of Fire fighting system**

- I Main electric pump for firefighting – 02 sets
- II Main Diesel engine set for firefighting – 01 set
- III Jockey pump for firefighting – 02 sets
- IV Pressure gauge, pressure switch, Flow switch, Fire Alarm air Vessel, Sump pumps with control panel etc. in pump house
- V Fire Fighting Installations in Campus Such as, hose reel, hose pipes, hydrant valves, metals branch pipes, MCPs, smoke detectors, sprinklers etc.
- VI Fire extinguisher – 400 Nos., CO2, ABC, AB type(approx)
- VII L.T. Panel for firefighting system – 1 No.
- VIII Fire Hydrants – 61 Nos.

- Ix Sump Pump – 2
- X Nitrogen injection system for transformer – 02No.
- XI Conventional Fire Alarm panel – 43 No.
- XII Addressable Fire Alarm panel – 02 No.
- XIII Smoke/Heat Detectors – 2424 No.
- XIV Heat Detectors – 91 Nos.
- XV Beam Detectors – 02 Nos.
- XVI Overhead Fire Tank with pump and other accessory – 09 Nos.
- XVII Fire Hose Pipe– 280Nos.
- XVIII Sprinkler's & sprinkler line

4.15 **Maintenance Schedule**

Maintenance of Fire Alarm, Fire hydrant and Sprinkler System. The following work/checks are required to be performed on Daily / Fortnight / Monthly / Quarterly / Half Yearly basis and record all the activities in the log book with date and time.

4.16 Daily Checks

Pump system conditions shall be as follows:-

- 1 Pump suction and discharge and bypass valves are fully open.
- 2 Piping is free of leaks.
- 3 Suction line pressure gauge reading is within acceptable range.
- 4 System line pressure gauge reading is within acceptable range
- 5 Suction reservoir has the required water level.
- 6 Water flow Testing valves are in the closed position
- 7 Ventilating louvers are free to operate

Electrical system conditions shall be as follows:-

- 1 Controller pilot light (power on) is illuminated.
- 2 Transfer switch normal pilot light is illuminated
- 3 Isolating switch is closed — standby (emergency)
- 4 Reverse phase alarm pilot light is off, or normal phase rotation pilot light is on.
- 5 Oil level in vertical motor sight glass is within acceptable range.
- 6 Power to pressure Maintenance (jockey) pump is provided.

Diesel system conditions shall be as follows:-

- 1 Fuel tank is at least two-thirds full.
- 2 Controller selector switch is in auto position.
- 3 Batteries' voltage readings are within acceptable range. Batteries' pilot lights are on or battery failure pilot lights are off.
- 4 All alarm pilot lights are off.
- 5 Engine running time meter is reading.
- 6 Oil level in right angle gear drive is within acceptable range.
- 7 Crankcase oil level is within acceptable range.
- 8 Cooling water level is within acceptable range.
- 9 Electrolyte level in batteries is within acceptable range.
- 10 Battery terminals are free from corrosion
- 11 Electrolyte level in batteries is within acceptable range.

12 Battery terminals are free from corrosion

Fire Ring Main

- 1 Main pressure relief valves shall be Inspected during any fire pump Testing
- 2 All sealed Control Valves shall be Inspected weekly.
- 3 The isolation valves on reduced pressure assemblies shall be Inspected weekly to ensure that the valves are in the normal position.

Sprinkler

All valves shall be Inspected weekly. The valve Inspection shall verify that the valves are in the following condition:

- 1 In the normal open or closed position
- 2 Sealed, locked, or supervised
- 3 Accessible
- 4 Free from external leaks.
- 5 All valves should Provide with applicable identification

4.17

Monthly Checks

Pump system conditions shall be as follows:-

- 1 Electrical connections: confirm they are free from damages
- 2 Minimum flow line will be permitted to discharge the water to tank.
- 3 Record the pump starting pressure from the pressure switch or pressure transducer (refer to document)
- 4 Record the system suction and discharge pressure gauge readings
- 5 Inspect the pump packing ,seal for slight discharge
- 6 Inspect for unusual noise or vibration
- 7 Check the circulation relief valve for operation to discharge water
- 8 Check the alarm gong for its defects and damages
- 9 Couplings or swivels are not damaged and rotate smoothly
- 10 Check the flow switch and valve supervisory signals,

Diesel engine system procedure as follows:

- 1 Observe the time for engine to crank
- 2 Observe the time for engine to reach running speed
- 3 Observe the engine oil pressure gauge, speed indicator, water, and oil temperature indicators periodically while engine is running
- 4 Record any abnormalities
- 5 Inspect the heat exchanger for cooling water flow.

Fire Water Storage

- 1 Check the accessibility of all valves and arranged in correct position as per P&ID, Check the valves and piping for any leakages and damages.
- 2 Check the filling connections for its functionality and defects. Make sure the valve tags are available and legible
- 3 Inspect level transmitters, level gauges, are functioning properly and fit for purpose.

Fire Hydrant

- 1 Visual Inspection to confirm no visible damage to the hydrant
- 2 No leakage from coupling locations
- 3 Tag number of hydrants should be clearly visible.
- 4 All valves should be in the correct position (CLOSED)
- 5 Hydrant hose cabinet content shall be visually confirmed as being provided in quantity and visually fit for purpose.
- 6 Hydrant hose cabinet shall be in good working condition
- 7 Hydrant hose cabinet Tag no. clearly labeled.

Hose Reels

- 1 Inspect and confirm that main valves and PRV's are lined up and hose reels are ready to operate.
- 2 Inspect and confirm that bypass valves are in closed position.
- 3 Visually check that hose reels are accessible.
- 4 Hose reel cabinet shall be visually checked for damages and defects and fit for purpose.
- 5 Inspect the hose reel mechanism; confirm that hose reel swing mechanism is in good condition.
- 6 Visual Inspect to confirm no visible damage to the hose reel or leakage from swivel joints locations,
- 7 Tag no. of Hose reel shall be clearly visible

Fire Extinguishers

- 1 Confirm that Fire Extinguishers are located in the designated place, can be easily obtained in an emergency.
- 2 Confirm that no obstruction to access or visibility
- 3 Check and conform safety seals and pressure indicators not broken or missing.
- 4 Check and conform Fullness determined by weighing or lifting the extinguishers without pressure gauge (replace extinguisher to a weight loss of 10% or more).
- 5 Check pressure gauge reading or indicator in the operable range or position (Replace any Extinguisher on which the gauge indicates RED).
- 6 Check and conform any physical damage, corrosion, leakage or clogged nozzle (Replace if physical damaged),
- 7 Check the Condition of tires, wheels, carriage, hose, and nozzle for wheeled extinguishers
- 8 Check operation instruction on nameplate label and facing outward.

4.18

Yearly

Fire Hydrant

- 1 Hydrants and hose cabinet are accessible.
- 2 Hydrant outlets are slightly more than hand tight (loosen and re tighten)
- 3 There are no leaks in the top of the hydrant when hydrant valve is opened.
- 4 There are no leaks in the gasket under the caps when hydrant valve is opened.
- 5 There are no cracks in the hydrant barrel.
- 6 Operating nuts is not worn and does not have rounded corners.
- 7 Nozzle threads are not damage.
- 8 Check hydrant cabinet to ensure that all equipment is in good condition
- 9 Inspect the Hydrant body for corrosion and paint damage.
- 10 Inspect the Hydrant sinkage due to soil erosion or embankment changes.
- 11 Lubricate the operating nuts and valve packing.

- 12 Maintenance of hydrant hose, hydrant cabinet and hydrant hose nozzles as required by Inspection findings
- 13 Nozzle- confirm no visible damage; ensure rubber buffer ring has not perished
- 14 Hose--if any visible signs of damage replace hose.
- 15 Rubber seal rings in the end couplings shall be checked, if perished replace.
- 16 Lubricate the thrust collar.

Hose Reels

- 1 Lubricate the gate valves.
- 2 Lubricate the hose reel water stop valves.
- 3 Lubricate the hose reel swing mechanism.
- 4 Clean the hose reel cabinet internally including vents,
- 5 Confirm the door opens freely and that content is in good condition. Replace hoses that failed to the Testing.

Fire Extinguishers

- 1 Check the hose, nozzle, and couplings for any damage.
- 2 Check the discharge hose is not obstructed
- 3 Check the Extinguisher is the correct type like ABC or BC and that there are no foreign materials or caking.
- 4 Clean exposed extinguisher surfaces to remove any foreign material.

Diesel system conditions shall be as follows:-

- 1 For electric motor-driven pumps, do not shut down the pump until it has run for 10 minutes. For diesel motor-driven pumps, do not shut down the pump until it has run for 30 minutes
- 2 A preventive Maintenance program shall be established on all components of the pump assembly in accordance with the manufacturer's recommendations
- 3 Records shall be Maintenance on all work performed on the pump, driver, controller, and auxiliary equipment.

5.0 Sub Head-4 Operation and maintenance of water treatment plant, water supply, RO, water body system and Sump Pumps etc.

5.1 Scope of work:

5.1.1 The following activities are intended to be covered under this contract:-

- I Operation and maintenance of water treatment plant installation, water supply, Centralized RO, water body system and Sump Pumps as specified in Schedule of Work or as directed by the Engineer-in-charge or his authorized representative.
- ii Performing the daily/weekly/monthly /quarterly/six monthly/annually checks & taking remedial action for proper maintenance shall be carried out by deployed manpower and its records also to be maintained.
- iii Cleaning of plant, Control Panel and oiling/greasing as required shall be done by deployed manpower.
- iv Collecting samples of treated water to determine the quality of water and performance of the water treatment plant shall be taken by agency and test shall be arranged.
- V Running & preventive maintenance shall be done by the agency by deployed manpower. However major repairing of water treatment plant, its pumps, water body system, centralized RO system & routine test as required shall be arranged by agency and its cost shall claimed from NIFTEM.
- Vi Operation of submersible pumps is to done alternately with due care.
- Vii Chlorination also to be done during treatment of water.

- Viii Proper care is to be taken while operation of raw water transfer and treated water transfer pumps.
- ix Operators must take proper care of control panels while operating the system.
- X Painting of entire plant once in a year with good quality paint (Epoxy Paint) shall be carried out by deployed manpower and the material cost shall claim to NIFTEM.
- xi Hardness kit/ TDS Meter / PH Paper shall be arranged by agency as per requirement cost shall claim to NIFTEM.
- xii Collection of water samples from hostels, Institutional Building & Residential area and same shall be send to NIFTEM testing laboratory on weekly basis.
- 5.1.2 **Deployment of Man Power:-**
The contractor shall depute the following staff with minimum qualification and experience as detailed here under for Operation of water treatment Plant.
- | | |
|--------------------------|---|
| WTP & Pump operators – | 3 Nos. (One for each shift) |
| Water body operators | 1 nos. For water body operation. |
| RO operator cum Mechanic | 02 Nos (1 no in 6AM to 2PM & 01No in 2PM to 10PM) |
- 5.1.3 Pump Operators & Water body operators should have ITI certificate and 2 year experience and helper should be matriculate and 2 years experience in the operation and maintenance of water supply pumps and water body system or as per qualification/experience of minimum wages act.
- 5.1.4 RO Operator cum mechanic should have ITI certificate and 3 year experience and helper should be matriculate and 2 years experience in the operation and maintenance/Repairing of RO Plant or as per qualification/experience of minimum wages act.
- 5.2 **Inventory of Water Treatment Plant**
- | | | |
|----|--------------------------------|-------|
| 1 | Main control panel | 1No |
| 2 | Raw water Transfer Pumps | 3Nos. |
| 3 | Dual Media Filters | 3Nos. |
| 4 | Domestic water transfer pumps | 5Nos. |
| 5 | Domestic water transfer panels | 1No |
| 6 | Air Vessels tank 100 Ltr | 1No |
| 7 | Soft water pump transfer pumps | 2Nos. |
| 8 | Sump pumps for drainage | 2Nos. |
| 9 | Sump pumps panel | 1No |
| 10 | UV Filter | 3Nos. |
| 11 | RO Plant | 1Set |
- 6.0 **Sub Head-5 OPERATION & MAINTENANCE OF D.G. SETS AND 33/11kV & 33/.415 kV Substation**
- 6.1 **Scope of work**
- A Operations and routine maintenance of sub-station equipment comprising of Transformers, HT Panel/LT Panel, compact substations, 33KV Isolator switch & Capacitor Panel etc. and DG Sets.
- B All installations, meter room and Sub-Station rooms shall be kept clean and safe from risk of fire/theft/accidents and damage etc.
- C It shall be ensured that Contractor who would enter into the contract with NIFTEM for O&M activities i.e HT/LT installation shall designate persons for the purpose to carry out the work on the above electrical apparatus.

- D A register shall be maintained by the Contractor wherein names of the designated persons and the purpose for which they are engaged, shall be entered.
- E Contractor shall ensure periodic inspection of electrical apparatus of the HT/LT electrical apparatus get them tested and keep a record thereof and shall made these records available to the Electrical Inspector as and when required.
- F It shall be ensured by the Contractor that no person shall be designated unless he possesses a certificate of competency issued by the appropriate Government and requisite qualification and experience as specified under this CEA Regulation.
- 6.1.2 The major repair of following nature shall be undertaken as directed by Engineer In charge and its cost will be payable.
- i Major repair of switch gears cables & Isolator 33kv Switch.
- ii Major repair of Sub-Station equipment/ installation such as ACB's switch gears, change of HRC Fuses, repair of transformers, HT cables bus trucking, PT & CT's
- iii However, the contractor shall intimate immediately without loss of time to site Engineer for occurrence of such faults.
- 6.1.3 Periodical Inspection Clearance:-Agency has to provide the periodical inspection clearance of our sub-station from Central Electricity Authority, Govt. of India. All liasoning has to be done by the agency on behalf of NIFTEM. The charges for Inspection Fee/Govt. Fee will be borne by NIFTEM, on production of original bills.
- 6.2 **Deployment of staff & their qualifications**
 Senior Substation Shift Attendant - 1 No. In General Shift
 DG operator - 04Nos. (01 in each shift)
 Substation Shift Attendant- 04 Nos (One in each shift)
 Helper - 01 No. (General Shift)
 Total - 09
- 6.2.1 **Qualifications :-**
 Senior Substation Shift Attendant – Same as above but Diploma holder with 8 years practical experience in HT (33KV) power system and specialist in PLC logic operation / automation preferably PLC system or as per qualification/experience of minimum wages act.
- Substation Shift Attendant. - ITI certificate holder with suitable skilled licensee and experience in carrying out operation and maintenance of 33KV substations with 8 years practical experience in LTPCC/HTPCC or as per qualification/experience of minimum wages act.
- DG Operator: Diploma / ITI certificate holders having minimum of 3 years experience in carrying out normal operation, routine maintenance and repairs of DG set or as per qualification/experience of minimum wages act.
- Helpers: Two years experience in similar work or as per qualification/experience of minimum wages act.
- 6.3 **Execution of Work:-**
 The contractor should keep the FOLLOWING minimum tools, tackles, furniture and calibrated instruments at site for carrying – out the, operation maintenance and other jobs as required.
- I. INSTRUMENTS
1. Multimeter - 2Nos.
 2. Tong Tester (AC/DC) - 2Nos.
 3. L.T. Meggar – 1KV - 1No.

4. H.T. Meggar – 5KV - 1No.
5. Earth resistance tester - 1No.
6. Phase sequence meter - 2Nos.
7. Working computer & printer laser - 1Set.
8. Mobile/Cell Phones – pre paid type – 2Nos, one with site in charge & one in MSDS – for emergency contact.
9. Taco meter - 1No.
10. Vibration meter - 1No.
11. Vacuum cleaner (Heavy duty) -1No (Industrial type)
12. Low voltage detector - 2Nos
13. ELCB test kit - 1No
14. Earth discharge rod - 2No
- II. Tools & Tackles
1. Screwdriver set – all sizes - 4Nos.
2. Cutting pliers set – all sizes - 4Nos.
3. Nose pliers set – all sizes - 4Nos.
4. Cutter – all sizes - 4No.
5. Spanners set (DE, O.E & ring) - 4Nos.
6. Crimping cable tool both manual & hydraulic type – 1Nos, each (Total) from 4sqmm to 1000sqmm
7. Torgue wrench - 1No.
8. Drilling & hammering machine -1No.
9. Air blower – Industrial type - 1No.
10. Working tables – 4Nos & Sitting chairs – 6Nos.
11. Grease Gun - 1No.
12. Pocket multimeter - 1No
13. Torch lights (Big) – 4 cells type - 4Nos
14. Lead and soldering iron - 1No - 64 -
15. Fuse puller - 1No
16. DC tester to check Battery, Voltage- 1No
17. Hydrometer - 1No
18. Tong tester to measure 4 to 20MA- 1No
19. Lead & soldering Iron - 1set
20. Pocket multi meter - 1No
- III. Safety personal protective equipment (PPE):- Safety shoe, Helmets, Safety belts, Goggles, Gloves, Ear plug etc.
- IV. Shock treatment chart

- 6.4 The routine preventive maintenance of Sub-Station equipment set shall be carried out during holiday/Sunday without disturbing the office working of NIFTEM.
- 6.5 The following work should be carried out once a year through special technical staff:-
General servicing of HT Panel & LT Panel.
All LT panels and HT panels will be opened after getting shut down and cleaned thoroughly.
All nut & bolts of LT & HT panel, bus trucking shall be tightened.
Proper insulating tape to be used where the PVC insulation is worn out.
- 6.6 The D.G. Set operator shall test the D.G. Set on no load basis daily in the morning for 5 minutes run and D.G. Set shall operate in case of failure of normal electric supply from DHBVN. Cleaning of D.G. Set, checking of battery connection level of water in radiator & battery etc.
- 6.7 Operation and maintenance for 1 year on 24 hrs x 7days basis. The basic objectives of the Annual

Maintenance Contract is:

To achieve ZERO breakdowns.

Efficient utilization of assets and seeking for lowest life cycle cost.

Continuous condition monitoring for all transformers, VCBs, ACBs, 33KV, 11KV, LT switch gear, DG sets, special tools & optimum spares inventory management.

Reduction in overall running cost.

Protecting Environment and maintaining Housekeeping.

Safety of man & machinery.

Note: Annual service servicing of LT/HT braker & 02 Nos. B-check of DG sets, is being done by NIFTEM and rest other services or routine maintenance are in scope of service

6.8 Agency is solemnly responsible for co-ordination, obtaining of NOC, deposition of annual fee related to safety inspection of concern Electrical Inspectorate Office. However NIFTEM will pay such expenses on production of such bills.

6.9 Inventory of D.G. Sets and Sub Station

All following Electrical items should maintain as per their respective O.E.M. maintenance schedules.

List of Equipments/ items for AMC

1. Main Step Down Substation (MSDS) – 33KV consisting :-

- I. 33KV 2pole outdoor structure with equipment.
- II. Disconnecting switch.
- III. Earth / grounding switch.
- IV. Interlocks between earthing and grounding switch.
- V. 33KV HTXLPE cables between DP to Incomer.
- VI. 2MVA, 33/.433KV Power Transformer -2nos.
- VII. 1250kVA, 33/11kV Power transformer – 01nos.
- VIII. 1250kVA, 33/.433kV Power transformer – 01nos.
- IX. 33KV CTs & PTs.
- X. 33KV Indoor Switchboard Panel consisting of 1nos VCBs
- XI. 33kV Indoor Switchboard Panel consisting of 05nos VCBs
- XII. 33KV HT XLPE cables between 33KV panel board and transformers.
- XIII. 11KV HT XLPE cables between transformer and 11KV RMU panels.
- XIV. 33/11KV Control Relay Panel consisting of different protection relays.
- XV. 24V Battery Bank and float cum boost charger panel.
- XVI. 24V DC outgoing feeders - 12nos.
- XVII. 11KV Outdoor Switchboard RMU 03nos.
- XVIII. 11KV CTs and PTs.
- XIX. RTCC panel - 4nos.

2. LT Substation I – 33kV/.433kV consisting of

- I. 11KV XLPE HT cables from 11KV RMU panel (MSDS) to 11KV RMU Compact transformer (2nos).
- II. 415V Bus Duct – 3nos
- III. LTPCC consisting of 17nos 415V ACBs
- IV. DG MEDB Panel along with 3nos 415V ACBs & 415V 03nos out going feeders & 01nos bus coupler.
- V. 415V LDB - 1no
- VI. 415V PDB - 1no

- VII. Capacitor Panels 03nos (02-600kVAR & 400kVAR)
- 3. L T Substation II – 11KV / 433V consisting of
 - I. 11KV XLPE HT cables from 11KV panel (MSDS) to OFF Load Break Switches (2nos).
 - II. 11KV XLPE HT cables from OLBS to Power Transformers (2nos).
 - III. 1250 kVA, 11KV/433V Compact Transformer- 2nos
 - IV. Compact Transformer consisting of 2nos 415V ACBs & control panels.
- 4. 3000KVA CPP Plant consisting of
 - I. 500KVA DG Sets -2Nos (with parallel mode operation)
 - II. 1010KVA DG Set-2No (with parallel mode operation)
 - III. DG Auto Synch. & Auto Load Sharing Power panel consisting of 4Nos 415
 - IV. ACB's (DG incomer-3nos, DG outgoing-3no)
 - V. DG Control & PLC Panel-1No
 - VI. Remote ET200L PLC Panel – 3nos
 - VII. 415V DG Auxiliary Panel-1no
 - VIII. 415V PDB-1No
 - IX. 110V, 180 AH Battery charger cum battery bank 04 nos.
 - X. 415V power (total) cables, PLC incoming & outgoing cable, communication cables such as MODBUS, PROFIBUS, CAT cables, RS232/RS486 49

6.10 Daily, Weekly, Monthly & Quarterly Schedules

Daily Schedule

Monitor:

The daily P. F. above 0.996, so that the monthly cumulative P. F. should not be less than 0.996 lag.

- I. Controlling contract maximum demand (KVA) by switching ON the DG sets.
- II. Conditioning monitoring of all substation equipments.
- III. Note the peak hour readings from all substations as per schedule.
- IV. Note down energy meter readings for all substations for analysis and report the same to NIFTEM.
- V. Cleaning of HT/LT substation rooms, transformer room, Battery room, CPP room etc as per schedule by deploying own sweeper.
- VI. Monitoring and recording of the all power transformer parameters such as
- VII. Winding temperature
- VIII. Oil temperature
- IX. Oil level
- X. Checking of oil leakage, if any, and take immediate action to stop leakage.
- XI. Cleaning of HT and LT substation panels externally.
- XII. Check auxiliary supply and control voltages.
- XIII. Check condition of indication lamps provided on HT, LT panels.
- XIV. Check condition of RTPFC panel for each substation for proper working.
- XV. Check the batteries and battery chargers for proper functioning.
- XVI. Test annunciation reset, take corrective action whenever necessary.
- XVII. Check the condition of DG sets (Alternator Side) and DG House panels for proper working.
- XVIII. Operation of DG sets as and when required and ensure power duly synchronized, is available from all the installed DG sets at incomer breaker of DG Hse LT Panel (Single line diagram enclosed).
- XIX. To carry out preventive maintenance of the DG set including the entire panels such as DG control panel, Relay metering, Control with Auto Sync & Auto Load sharing panel, Power

- panel, Neutral grounding panel and their allied accessories.
- XX. To carry out necessary repairs, adjustments of assemblies, sub assemblies, etc for keeping good health of the installation for 24 x 7 days working.
- XXI. Replace parts, components and assembly, sub-assemblies as and when necessary from NIFTEM stock.
- XXII. Electrical and Mechanical repairs after any breakdown during the period of contract and keep all the set ready to start conditions.

Weekly Schedule

- I. Carry out preventive maintenance as per the check – list, Equipment manuals and the instructions of NIFTEM Engineer.
- II. Prepare list of spares and material required for carrying maintenance work and submit it to NIFTEM Engineer in advance for better material management.
- III. Arrange for proper storage of material / spares. (Storing space provision will be provided by NIFTEM)
- IV. Operate the battery charger in float and boost mode as per schedule.
- V. Check the specific gravity and battery voltage in all substations.
- VI. Rectify the faults / causes of faults.
- VII. Check earth pits for substations and water the earth pits as per schedule of preventive maintenance or as and when required. Submit a report.
- VIII. Carry out battery and battery charger preventive maintenance as per schedule.

Monthly Schedule

- I. Checking individual capacitor currents, checking of cable end terminations, and RTPFC panels.
- II. Checking the discharge devices and fuses.
- III. Carry out preventive maintenance of battery charger and load test for chargers in both Float and Boost mode.
- IV. Temperature measurement of various switchgears/equipments as specified points and take corrective actions in case of abnormality.
- V. Monthly energy report and evaluation of power efficiency.
- VI. Preparing Breakdown from and upon certification of NIFTEM, submitting to concerned.
- VII. Monthly performance review report comprising – Records of PM done on rotary and static equipments, breakdowns occurred and subsequent root cause analysis, corrective and preventive measures. Safety initiatives and report. R& M expenses incurred. Analysis and action plan for next month.

Quarterly Schedule

- I. Quarterly preventive maintenance of section PDB's SLDB's LDB's etc as per schedule.
- II. Checking the overall condition of radiators and transformer main tank and cleaning the same if required.
- III. To carry out mock drill operation for restoration of emergency power supply / change over procedures.

Half Yearly / Yearly Schedule

- I. Implementation of Zero Accident Plant at site. To Safety Trainings for employees at site.
- II. Prepare schedule for carrying out relay testing and calibration and submit the schedule within 6 months from the date of contract.
- III. Regular checking of transformer safeties such as Buchholz relay, winding temperature, oil temperature indication, oil gauges during routine preventive maintenance.
- IV. Earth resistance measuring for earth pits of general building, using own instruments and

submits report for the same.

- V. To submit half yearly & annual report to top management inclusive of Uptime, Reduction in breakdowns, Actions for ZERO BREAKDOWNS, Major overhauls, Consumption of spares, Manpower turnover & suggestions, if any.

General

- I. To carry out all such jobs to ensure proper health of installations and to ensure uninterrupted power supply.
- II. It is the responsibility of contractor to check all substations & outer area of substations inclusive of MSDS for maintaining cleanliness.
- III. Calibration test reports of the equipment used for the testing of the system shall be submitted along with the test results, after completion of testing.
- IV. Since the captive power plant is operated on sophisticated logic and controls. The deployed staff should be very careful during their presence's / on duty.
- V. Negligence/ malfunction of operator is noted which reflected in a loss monetary/ material and etc. should be recovered from the contractor bills & encashment of security B.G will be taken by depending by the nature of fault and how depth the operated/ supervisor is neglect/is responsible/ careless. The recoverable amount is decided by the NIFTEM, which will be final and no correspondence, or communication will be entertained from the contractor.
- VI. NIFTEM will be supplying all the spares & consumables required for Maintenance.
- VII. Safety of men and material should be ensured during operations.
- VIII. Manning, operation and maintenance of 33KV & 11KV system including transformers, switchgears, incoming/outgoing cables, panel boards with all accessories.
- IX. Operation and maintenance of generator sets (4nos) of 3000KVA capacitive plant in synchronizing mode.
- X. Operation and maintenance of batteries, battery chargers, DC supply system and DC control system at MSDS & Captive Power Plant.
- XI. Operation and maintenance of LT PCC switch board, at substations and power distribution boards at industrial R&D area in NIFTEM.
- XII. Maintenance and repairing of HT underground cable,(between DP structure of UHBVNL to double pole structure of NIFTEM).
- XIII. Periodical testing of all equipments of power system as per OEM schedule.
- XIV. Preventive maintenance of equipments as per the OEM schedule for all the equipments such as daily, weekly, monthly, quarterly and yearly.
- XV. Periodical testing, maintenance and repair of earthing and lighting arrestors and recording the results (including proper maintenance of earthing system and repairing of earth electrodes and lighting arrestors if required).
- XVI. Recording of day-to-day reading and activities of manning, operation, maintenance, breakdown of all sub station equipments & DG sets as per OEM's standard practice.
- XVII. The contractor on receiving any complain shall attend to it and complete the job immediately to the satisfaction of the NIFTEM.
- XVIII. The contractor personnel will be required to attend the duty round the clock on all day of the week as per duty chart prepared in consultation with concerned Engineer of the NIFTEM.
- XIX. Tools and tackles, which are involved in the job are to be brought by contractor only.
- XX. If the articles "Free for Fixing only" are lost or damaged while under the custody of the contractors the recovery in respect of such article will be made double the market rate the market rate shall be decided by NIFTEM.

- XXI. The contractor has to prepare a detailed maintenance schedule for each equipment, 12 months maintenance schedule and get it approved by NIFTEM & adhere to same. This has to be completed before the submission of the first RA bill.
- XXII. All major repairs / overhauls to equipments are excluded from contractor scope, unless it is due to negligence of contractor.
- XXIII. Rewinding of Motors, Transformers and Generators is excluded from contractor scope, unless it is due to negligence of contractor.
- XXIV. Safety operating procedure for each and every equipment should be adhered during operations.
- XXV. All the log book registers will be arranged by agency. Log book register duly paged and bound will be as per practice of reputed firms and will be maintained in good condition by agency.
- XXVI. Normally repairs/servicing works should be done by agency at site up to maximum possible extent. However in case any equipment or accessories is essentially required to be taken by agency out of NIFTEM premises for repairing/servicing; all necessary arrangements including to and for transportation will be the responsibility of agency. Agency will also inform concerned engineer of NIFTEM for doing procedural formalities (like issue of gate pass etc); prior to taking out the materials out of NIFTEM premises.
- XXVII. The Agency shall be fully responsible for any kind of accident / mis-happening to their staff as well as machineries while attending the complaints or at work in the NIFTEM premises.
- XXVIII. The staff of the Agency has to be courteous and maintain good behaviour at site with NIFTEM authorities. Any person found discourteous or misbehaving shall have to be replaced within 24 hrs.
- XXIX. After the expiry of the contract, the firm shall have to hand over complete installation to the department in proper working order. All defect and deficiencies shall have to be rectified by the firm to the entire satisfaction of Engineer-in-Charge failing which the work shall be got done at the risk and cost of the firm.

TIME FRAME FOR MAINTENANCE (BOTH PREVENTIVE AND BREAK DOWN)

Breakdown rectification works shall be classified into following three categories

Normal Breakdown -within 24hours from the time of break down

Abnormal Breakdown -1week to 4 week from the date of break done

Emergency Breakdown -Immediate without any break.

Note: - The contractor is presumed to be conversant with the system and be able to decide. The category under which the type of fault/breakdown falls. However, owner's decision shall be final.

Preventive Maintenance for every six months. Such maintenance shall not last for more than two to four days, generally.

Liquidated Damages Penalty:- In case the Contractor fails to repair/ rectify, the equipment (including replacement of spare parts) or fails to restore the supply, on war footing, without any intermediary break (like holidays) the owner reserves the right to levy penalty @ 0.5% of monthly bill, per week of delay or part there of, subject to a maximum 5% of monthly bill. The word Penalty under this contract shall be read as Liquidated Damages

However, where such delays are due to force majeure (i.e. beyond the contractor's control), no penalty shall be imposed.

The decision of NIFTEM / competent authority, NIFTEM shall be final and binding. Any unjustified delay in repairing of equipments shall be treated as breach of contract and suitable penalty shall be

imposed which may be recovered from the monthly bill.

The number of operational and maintenance staff shall always be as per institute requirement. Every staff shall be allowed one rest day/weekly off after every six days of working as per Govt. of India rules. For this purpose suitable relievers shall be arranged by the Firm at no extra cost.

No person shall be designated unless he possesses a certificate of competency or electrical work permit issued by the appropriate government

7.0 **Sub head-6 Operation and maintenance of Lifts.**

7.1 Scope of work involves Operations and routine maintenance lifts.

7.2 The scope of work includes operation of 13 Nos. (Twelve) passenger lifts i/c general up keep of lifts and lift panels.

7.3 The lift car shall be cleaned daily.

7.4 The lift operator should take care for operation, running maintenance of lifts all the time during duty hours. The lift operators working in shift duties shall not leave the lift till his reliever turns up for duty.

7.5 After checking the safety operator shall make necessary entries in log book of lift (supplied by the agency).

7.6 Necessary remarks regarding Non-functioning of lift, repair carried out etc. should be recorded by the operator and reported to the NIFTEM officer concerned.

7.7 Any break down should be immediately reported to the firm to whom maintenance contract is awarded by the NIFTEM, and the matter should be immediately reported to NIFTEM officer concerned. Necessary entries in the maintenance register indicating time of occurrence of fault; nature of fault, time of its rectification etc. should be recorded.

7.8 Checklist as per logbook should be filled as per schedule i.e. daily check, weekly check, monthly check, quarterly check, annual check etc.

7.9 Lift Operator in General Shift (9.30 AM to 6.00 PM) on all 6 days in a week.

7.10 Lift Licenses Renewal: - Agency is solemnly responsible for co-ordination, timely renewal of Lift Licenses (13 Nos.), any issue pertaining to lifts from concern Electrical Inspectorate Office, However NIFTEM will pay such expenses on production of original bills.

7.10 **Deployment of lift operators: -**

The lift operators should be polite and courteous to users of lift. In the event of any complaint about the misbehavior, contractor shall replace the operator with another suitable operator.

7.11 Lift operators should have ITI with two years experience OR should have matriculate with three years experience in operation & maintenance of lifts or as per qualification/experience of minimum wages act.

7.12 Total Lift Operator: - 2 Nos.

Institutional area – 01 Nos. in General Shift

Hostel area - 01 Nos. in General Shift.

8.0 **Sub head-7 Operation and maintenance of HVAC (Heat Ventilation & Air Conditioning)**

8.1 Scope of Work and General terms & conditions:-

- a. The scope of work shall cover daily operation and all routine, breakdown / preventive and special maintenance works as required from time to time for Operational manpower and material (Screw chillers of York - Make 3 X 325 TR). All the equipments/installations shall always be kept in good and trouble free operating conditions. All the required record for break-downs/repairs and maintenance etc. shall be maintained in the form of history books and logbooks. All the maintenance works shall be carried out in accordance with the manufactures specifications, maintenance schedule and instructions of the Engineer-In-

Charge.

- b. To operate and maintain Central Air Conditioning System (Screw Chillers York - Make 3 X 325 TR) along with the Equipment like Cooling towers, Pumps, Motors, AHU, FCU, Starter Panels, VDFs, BMS System, DDC Panels, PLC & Various Sensor etc.
- c. All the necessary tools and other materials, required for operation of AC Plant should be kept by agency in a cupboard under the control of AC Plant operator. Cupboard will be arranged and provided by agency. Required testing instruments like refrigerant leak detector, Multi Meter (for Electrical portion of AC Plant); Sling shycrometer, Line Tester, Tool Kit, Torch etc. should also be always available with Plant Operator.
- d. Preventive Maintenance, servicing of AC plant equipments and accessories etc. should be done by agency on holidays in a planned manner in consultation with concerned engineer of NIFTEM. Preventive maintenance, repairing and service should be done as per the recommendations/guidelines of various OEMS and no any extra payment made by NIFTEM.
- e. Agency will arrange and maintain separate logbook register for services/maintenance of AC System. (This will be in addition to logbook register for operation of AC Plant). Record of work done for services/maintenance repairs etc will be recorded by agency engineer in this register. This register should be always with updated records & should be produced to NIFTEM engineer on weekly basis or as & when required by him.
- f. Agency should arrange and maintain sufficient stock of spares, specially consumable at site (AC Plant room) which can be kept by agency in cupboards to be arranged by them. Similarly all necessary tools & instruments required for the purpose of servicing / maintenance; routine testing etc should be arranged by agency and should be available at site at all times.
- g. Agency will be fully responsible for safety of his personal at all times. Agency will also be responsible for all the safety precautions at all the times especially during servicing/preventive maintenance and repairs of AC Plant equipments and Electrical Panel Boards etc.
- h. Central AC plant is meant for providing Air conditioning to various labs, offices, conference rooms, seminar room, cafeteria, auditorium etc. at NIFTEM. For labs, AC environment is to be maintained on daily basis throughout the year. For lab areas, inside design conditions are $23\pm1^{\circ}\text{C}$ (RH $45\pm5\%$). For office areas, conference rooms and auditorium etc. it is $25\pm1^{\circ}\text{C}$ (with RH $\leq 60\%$).
- i. De-scaling of condensers, valves etc. shall be carried out twice in a season and also 'as and when' required to maintain refrigerant pressure within allowable limits. Arrangement for de-scaling pump, replacement of gaskets / packing, chemicals etc., shall be the firm's responsibility on his own expenses.

8.2 Details of AC Plant along with its related equipments and accessories are indicated under:-

Sr.	Description of equipment	Make	Qty
1.	325 TR Screw chilling machine including the condenser, evaporator, associated valves, controls, refrigerant, water piping pressure gauges, compressor motor etc, including all related accessories.	M/s. York	03
2.	Primary chilled water pump with motor 10 HP capacity including all related accessories.	M/s. ABB	04
3.	Secondary chilled water pump with motor 15 HP, VFD controlled including all related accessories.	M/s. Armstrong	02

4.	Secondary chilled water pumps with motor 10 HP, VFD controlled including related all accessories.	M/s. Armstrong	02
5.	Secondary chilled water pump with motor 20 HP, VFD controlled including all related accessories.	M/s. Armstrong	02
6.	Secondary chilled water pumps with motor 7.5 HP, VFD controlled including all related accessories.	M/s. Armstrong	02
7.	Secondary chilled water pumps with motor 5.5 HP, VFD controlled including all related accessories.	M/s. Armstrong	02
8.	Secondary chilled water pumps with motor 10 HP, VFD controlled including all related accessories.	M/s. Armstrong	03
9.	Condenser water pumps with motor 40 HP, capacity 152m3/h at 24 M head including related accessories.	M/s. ABB	04
10.	Hot water Generators capacity 500 KW.	M/s. Rapid cool	01
11.	Cooling tower 325 TR forced draft by fan with accessories.	M/s. Bell	03
12.	Air handling units with Motors VFD controlled including blowers and filters of capacity 4200 VFM to 39950 CFM with accessories.		
14.	Air handling units with Motors Starter/VFD controlled including blowers and filters of capacity 26000 CFM with accessories.	M/s WAVE AIRCON	04
15.	Air handling units with Motors Starter/VFD controlled including blowers and filters of capacity 20000 CFM with accessories.	M/s WAVE AIRCON/HI-TECH	04
16.	Air handling units with Motors Starter/VFD controlled including blowers and filters of capacity 17000 CFM with accessories.	M/s WAVE AIRCON	01
17.	Air handling units with Motors Starter controlled including blowers and filters of capacity 15000 CFM with accessories.	M/s WAVE AIRCON	03
18.	Air handling units with Motors Starter/VFD controlled including blowers and filters of capacity 12000 CFM with accessories.	M/s WAVE AIRCON	06
19.	Air handling units with Motors Starter controlled including blowers and filters of capacity 10000 CFM with accessories.	M/s WAVE AIRCON	13
20.	Air handling units/Ceiling suspended units with Motors Starter controlled including blowers and filters of capacity 8000 CFM with accessories.	M/s WAVE AIRCON/HI-TECH	32
21.	Air handling units/Ceiling suspended units with Motors Starter controlled including blowers and filters of capacity 6000 CFM with accessories.	M/s WAVE AIRCON	10
22.	Air handling units/Ceiling suspended units with Motors Starter controlled including blowers and filters of capacity 5000 CFM with accessories.	M/s WAVE AIRCON	06
23.	FCU with Motors Starter controlled including blowers and filters of capacity 1200/1000/800/600 CFM with accessories.	M/s WAVE AIRCON/HI-TECH	52
24.	Air washer/exhaust with Motors Starter controlled including blowers and filters of capacity 5000 CFM with accessories.	M/s. Ambassador Coolers	02
25.	BMS system with PLC, Various Sensor, DDC panels, motorized valves and other accessories of BMS system.	M/s. Honeywell	01

8.3 Manpower to be deployed and their qualifications:-

S. No.	Description of manpower	Duty timings	Manpower to be deployed	Qualifications
1.	AC Plant Operator cum mechanic (Skilled) 2 - (6.00AM - 2.00PM) 2 - (2.00PM - 10.00PM)	In 1 shifts	2 Nos. (Two operator in each shift)	All the operators cum mechanic should be ITI in Air conditioning and refrigeration/ Electrical and having 2 years relevant experience in similar type of plant or as per qualification/experience of minimum wages act.
2.	AC Plant Helper (Semi-Skilled) 2 - (6.00AM - 2.00PM) 2 - (2.00PM - 10.00PM)	In 1 shifts	2 Nos. (Two helper in each shift)	Should be at least matriculate and having experience of 5 years in similar type of plant or as per qualification/experience of minimum wages act.

8.4 MAINTENANCE SCHEDULE - CENTRAL AIR CONDITIONING PLANT

a. Daily Routine: -

1. Check the compressor oil level in bearing oil pressure. Also check the oil level in the oil reservoir. Drain or add oil as necessary.
2. Check for abnormal sound in compressor, related pumps and accessories.
3. Check for cleaning of all equipments.
4. Check for gas leakage, oil leakage and water leakage if any.
5. Drain sediments from cooling towers.
6. Check the motor, starter and bearings for overheating.
7. Check for water level and ensure flow of make-up water (condenser and chilled water system) and maintain the TDS level of cooling tower water with the dosing of Anti-scaling /other required chemical.
8. Verify proper water treatment.

b. Weekly Routine: -

1. Carryout daily routine.
2. Cleaning of AHU filters by Air/Water.
3. Clearing of AHUs' drain pipes.
4. Cleaning of Cooling towers assembly.
5. Check tightness of AHU/Air washer for assembly belts and replacement of defective belts.
6. Clean condenser water strainer.
7. Check for refrigerant leak with halide torch.
8. Check for water distribution.
9. Clean float valve operation in water tank and expansion tank.
10. Check pump gland and solenoid valve.
11. Drain/flush water tank and troughs.
12. Check oil ring/ oil level (for all lubricated bearing)
13. Check the refrigerant charge.

c. Monthly Routine: -

1. Cleaning of oil filter of compressors.

2. Inspect control panel, checking for loose wires, burned contacts and signs of overheated wires etc.
3. Check compressor in manual control and time of loading and unloading. Adjust needle valves as necessary to get load and unload time of 40+ 10 sec.
4. Check feed line sight glass for proper refrigerant charge level.
5. Check effects of fouling of condenser heat transfer surface by recording full load performance data as specified in operation and maintenance manual.
6. Check operation of Air dampers stimulating fire exercise and cutting of AHU.
7. Carryout analysis of AC plant parameter readings for any preventive maintenance and for performance of AC plant.
8. Checking of correctness and calibration of all safety and automatic controls, replacement of defective ones.
9. Any other routine if not specified in Annexure-VI.
- d. Quarterly Routine: -
Perform chemical analysis of oil.
- e. Annual Routine: -
 1. Cleaning of condenser and evaporator tubes manually and chemically for removal of scale.
 2. Changing of compressor oil, if required.
 3. Painting of chilled water system and condenser water system and all related equipment such as pumps, motors, expansion tank etc.
 4. Testing, calibration and overhauling of breakers, relays, MCCBs etc.
 5. Testing, calibration and overhauling of chillers Machine, compressor, compressor panel, and chillers machine sensor.
 6. Remove water boiler heaters, clean related parts and replace if required.
 7. Replacement/repair of humidifier heaters and related system.
 8. Cleaning and greasing of all bearings.
 9. Remove grease from all bearings, clean and repack.
 10. Overhauling of complete air conditioning and allied works.
 11. Cleaning of cooling tower coil fills and replacement of cooling tower fills, if required.
 12. Drain & replace the oil in the separate oil sump.
 13. Evaporator and Condenser:-
 - f. Inspect and clean water strainers.
 - g.. Inspect & clean tubes as required.
 - h. Inspect end Sheet.
 14. Inspect & service electrical component as necessary.
 15. Perform chemical analysis of system.
 16. If any other work not specify in Annexure – VI then Operation/Inspection/Maintenance required of all HVAC system is to be carried out or maintained as per O&M manual of OEM's.

8.5 **Technical Terms & Conditions**

8.6 The prescribed complaint register and workers diary shall be provided by the contractor and these shall be neatly maintained by contractor and staff. All complaints are to be attended promptly and the complaints not attended in the same day shall be reported to NIFTEM representative and carried forward to next day with necessary entry in register till these are not attended. The complaint register should be got checked regularly from the NIFTEM representative. The completed complaint registers, worker dairy, insulation and earth test shall be the property of department and shall be deposited with NIFTEM representative.

8.7 The installation shall be handed over, as is where basis and nothing extra shall be paid towards its repairing the same and any material required shall be arranged by the contractor after receiving

- necessary financial approval from the NIFTEM. The same shall be replaced /repaired by the contractor for which nothing extra shall be paid.
- 8.8 After the expiry of the contract, the firm shall have to hand over complete installation to the department in proper working order. All defect and deficiencies shall have to be rectified by the firm to the entire satisfaction of Engineer-in-Charge failing which the work shall be got done at the risk and cost of the firm
- 8.9 Material required for repair / replacement shall be supplied by the department free of cost and also to be supplied by the Contractor on payable basis as per DSR Rates/Market Rates, as directed by NIFTEM. Contractor shall make arrangement for receiving the material from the NIFTEM store. Contractor shall maintain daily issue register & shall submit requisition for material required for day to day maintenance and also submit monthly consumption record of material.
- 8.10 **Penalty Clause:** Any staff found missing from duty shall be marked absent and recovery shall be made for the day at the rates given below. (It is the responsibility of the contractor to make alternative arrangement, in case any staff proceeds on leave/ for reliever duty), on failure, the recovery shall be made from bill at the rate given below:-
Electrician/Operators/Mason/Plumber/Carpenter/Sewerman/RO Operator/Painter/welder/ etc. @ Rs. 100/- per day and Helpers@ Rs. 50/- per day. Manager/Supervisor/Fire officer @ 150/= per day.
- 8.11 Tools, tackles, uniform & safety kits/personal protective equipments required for O&M works shall be provided by contractor for which 1% payment of total monthly bills of manpower will be paid. After the closing of contract all tools shall be property of the NIFTEM.
- 8.12 Materials (consumables) used shall be ISI mark or of approved quality from NIFTEM.
- 8.13 Duration of one shift will be eight hours. The shifts hours will be from 6 AM to 2 PM, 2 PM to 10 PM and 10 PM to 6 AM next day. The duty hours and shifts will be fixed by NIFTEM as per its requirement and the agency may note that the above proposed requirement is purely tentative and may change as per requirements of NIFTEM from time to time. Means the deployment of Manpower shall be strictly as per NIFTEM's direction. Few categories of manpower may not be required at a particular time for which decision of NIFTEM shall be binding on the agency.
- 8.14 The agency should maintain a stock register for material purchased and consumed for maintenance work. This register should indicate date wise receipts of material and material consumed on work. The agency should also maintain a register for unserviceable material received during repair work.
- 8.15 The agency should depute a Supervisor in the maintenance office for coordination with NIFTEM and their maintenance team for smooth functioning of maintenance work and he should be a Diploma Holder/Engineer with minimum five year experience in maintenance field.
- 8.16 The firm will maintain the logbook for maintenance as detailed below.
- 8.17 After each maintenance/Testing, the test detailed to be entered in the maintenance register with dates and result achieved.
After carrying out each test, the entry in the register to be got counter signed from the NIFTEM Engineer. Without prior approval, no fitting/material will be removed for repairs; it will be contractor's responsibility to provide alternative temporary arrangement of such items for the period. The item is repaired and put back in to position so that the system remains fully functional all the time.
- 8.18 The system shall be kept in fully working condition till completion of contract. The firm will arrange handing over of the total system in fully functional condition on completion of the contract.
- 8.19 All the material to be supplied for replacement of parts shall be ISI make/approved.
- 8.20 The firm shall depute one qualified Electrical Engineer to check the whole system once in every month and shall maintain a test record signed by them and got countersigned by their visit from the

- 8.22 Engineer of the employer i.e. NIFTEM. The firm shall submit a list of person deployed for the work. For minor repairs and maintenance work, minor consumables, oil, grease, oil shall be arranged by contractor at his own cost.
- 8.23 The critical equipments availability/serviceability shall be maintained round the clock i.e Fire Pumps, sump pumps, water supply pumps, Electric supply, Sump Pumps, RO System and major penalty shall be imposed if found the negligence of the contractor.
- 98.24 Agency will provide the yearly preventive maintenance schedule or Plan of all electro mechanical equipments installed in the campus. After approval contractor should adhere/ follow strictly the maintenance schedule or plan as approved.
- 9.0 For renewal of Fire License, HSPCB for consents, Electrical Inspectorate, agency will coordinate with the concerned authority and arrange to get the license renewal. License fee shall be reimbursed towards submission of receipts by NIFTEM.
- 10.0 **Bidding Procedure**
Bids shall be submitted online only at CPPP website: <https://eprocure.gov.in/eprocure/app>.
Tenderer/Contractor is advised to follow the instructions “Instructions To Bidder for Online Bid Submission”.
 Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
 Bidding Application must be accompanied by the following:-
- 10.1 **Eligibility Criteria (Please attach supporting signed and stamped documents)**
- 10.2 **Proof for payment of Tender Fees/ Earnest Money Deposit.**
- 10.3 The bidders shall be an Indian based ISO certified Agency/Firm/Organization/ engaged in providing Operation & Maintenance. Kindly submit documents relevant to formation/ constitution of company and attached valid ISO certification in its own name.
- 10.4 The contractor should have valid government licenses of Operation & maintenance, Supervision and execution of 33 KV and above, mentioning on license “License of “ A” class electrical contractor granted under rule 45 of the Indian Electricity Rules, 1956 and Authorized for electrical works of Exceeding 33 kV.
- 10.5 The bidder should have experience of minimum 05 Years as on closing date of tender in similar nature of works in Operation & Maintenance in Govt. Sector/PSU/Autonomous body/ Central/state Govt. organizations/ CPWD/PWD/DDA, reputed private organization. Out of which 03 years experience should be of Govt. Organizations. Work order and completion certificates must be enclosed in support, for last 05 Years (2015-16, 2016-17, 2017-18, 2018-19 & 2019-20).
NOTE: Similar work experience includes Annual Operation and Maintenance Contract of HT & LT Electrical Sub-stations 33/.433kV & above and Building maintenances/works.
The agency should have works experience of :-
01 similar works of 80% of total contract value i.e. Rs. 3.25 Cr. in last three years.
or
02 similar works of 50% of total contract value i.e. Rs. 3.25 Cr. in last three years.
or
03 similar works of 40% of total contract value i.e. Rs. 3.25 Cr. in last three years.
- 10.6 Average Annual turnover of the firm under its name should be minimum Rs. 9.00 Cr. in each financial year i.e. 2017-18, 2018-19 & 2019-20. As per audited Profit & Loss account and submit audited annual reports (Copy of audited Balance Sheet to be attached).

- 10.7 The bidder must submit the copies of IT return for last three years 2017-18, 2018-19 & 2019-20 with Audited Profit-Loss Statement & Balance sheets for financial year 2017-18, 2018-19 & 2019-20.
- 10.8 The bidder should have GST Registration Number. Kindly submit copy of GST Registration number.
- 10.9 Address proof of agency/contractor.
- 10.10 Details of Bank Account of Bidder i.e. Account No., IFSC Code, MICR No., Bank Name and address, PAN/GST, Registration number, EPF & ESI Registration, Contract Labour Registration, if any.
- 10.11 An authorization letter from the firm in favour of the person signing the tender documents.
- 10.12 The applicant should furnish an undertaking to the effect that the firm has not been black listed in India or abroad by any government department /agency in the attached Performa.
- 10.13 The bidder should have valid ESI and EPF registration certificate. The copy of ESI and EPF registration certificate should be enclosed.
- 10.14 An attested copy of the certificate of registration/incorporation pertaining to the legal status of the Bidder/Firm/Agency.
- 10.15 Annexure – I, II, III should be enclosed.
- Note- The bidder has to submit all the relevant documents as mentioned above in eligibility criteria. The bids received without the above required documents will be rejected out rightly and the bidder will be declared technically not eligible and no shortfall documents will be invited.**
- 11.0 Instruction to Bidders**
- 11.1 Bidders are expected to examine carefully the contents of all the documents provided. Failure to comply with the requirements of tender will be at the Bidder's own risk.
- 11.2 It would deemed that prior to the submission of the Proposal, the Bidder has:
- 11.2.1 Made a complete and careful examination of requirements and other information set forth in this tender document.
- 11.2.2 Received all such relevant information as it has requested from NIFTEM.
- 11.2.3 Made a complete and careful examination of the various aspects of the Project.
- 11.2.4 NIFTEM shall not be liable for any mistake or error or neglect by the Bidder in respect of the above.
- 11.2.5 The bidder shall bear all costs associated with the preparation or delivery of its Bid, participating in discussions. NIFTEM will in no case be responsible or liable for those costs and expenses regardless of the outcome of the bidding process.
- 11.2.6 The bid and all correspondence incidental and related to bid shall be written in English language. Any printed literature and document submitted in any other language shall be accompanied by authenticated English translation, in which case, for the purpose of interpretation of the bid, English translation shall govern. Responsibility for correctness in translation shall lie with the agencies.
- 11.2.7 Bidder shall not disclose confidential information to any third party without prior written approval of NIFTEM.
- 11.2.8 NIFTEM reserves its right to call for original of the supporting documents for verification if so deemed fit and also cross-check for any details as furnished by the bidder from their previous clients etc. Bidder shall have no objection whatsoever in this regard.
- 11.2.9 NIFTEM reserves the right to make use of available in-house data for evaluation of the bids that have submitted against this request.
- 11.2.10 NIFTEM will examine the Bids for its completeness, whether the documents have been signed, whether they are complete and whether the details furnished are generally in order.
- 11.2.11 Bidders may note that mere issuance of tender document/or submission of Bids shall not entitle automatic qualification in the bid.
- 11.2.12 Canvassing in any form by the agency or by any other agency on their behalf may lead to disqualification of their bids.
- 11.2.13 NIFTEM reserves the right to accept or reject any Bid and to annul the Bidding process and reject all

- Bids at any time without thereby incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the ground for the NIFTEM's action.
- 11.2.14 NIFTEM reserves the right to invite fresh proposals with or without amendment of the tender at any stage without any liability or obligation for such invitation and without assigning any reason thereof.
- 11.2.15 NIFTEM reserves the right to reject any Proposal if:
At any point of time, a material misrepresentation is made or uncovered for a bidder
The bidder does not respond promptly and thoroughly to requests for supplemental information required for the evaluation of the Proposal.
- 11.2.15A **Bidders has to submit the Hard Copy of Technical Bid along with DDs of Tender Processing Fees and EMD in Tender Box, kept at Reception, before, last date and time of bid submission. Only Technical Bid, not financial bid. Uploading of Technical & financial bids on CPP portal is mandatory otherwise tender will be treated as cancelled.**
- 11.2.16 Incomplete offers are likely to be rejected. NIFTEM reserves the right to accept or reject the offers without assigning any reason
- 11.2.17 **Tender Processing Fee:**
Rs. 5900/- (Non-refundable) is required to submit along with technical documents in the form of demand draft in favour of NIFTEM, payable at New Delhi, which will be non refundable.
- 11.2.18 **Earnest Money**
Tenderers have to submit an EMD of Rs. 6, 50,000.00 in the form of DD payable at New Delhi.
The EMD shall be forfeited in case:-
If the Bidder withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
If the bidder having been notified of the acceptance of his tender by the buyer during the period of its validity,
If the Bidder fails to furnish the Performance Security for the due performance of the contract.
If the Bidder fails to sign the contract.
Fails or refuse to execute the contract.
Fails to respond to queries by the buyer.
The EMD of unsuccessful bidder will be returned after receipt of application, without interest at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of contract.
- 11.2.19 **Release of EMD:**
The EMD of unsuccessful bidders will be returned immediately after the award of work. However, EMD of successful agency will only be returned after submission of performance security in the form of DD/bank guarantee within 30 days from the issue of work order and in case of Bank Guarantee it will be accepted only after verification from bank.
- 11.2.20 Only such firms need to submit tender who do meet with the eligibility criteria laid down in the tender as well as have to produce satisfactory evidence that they fulfill the requirement of Pre-qualifying criteria.
- 11.2.21 All pages of tender documents, addition, alternations and over writing in the tender must be clearly initialed by the authorized signatory of the bidder.
- 11.2.22 Any tender not accompanied with Tender Fee & EMD amount to the National Institute of Food Technology Entrepreneurship & Management payable at State Bank of India (SBI), New Delhi, are liable for rejection.
- 11.2.23 Request for adjustment/appropriation of earnest money/deposits if any already lying with the NIFTEM in connection with some other tender/orders/works shall not be entertained.

- 12.0 Bidding Procedure
Bids shall be submitted online only at CPPP website: <https://eprocure.gov.in/eprocure/app>.
Tenderer/Contractor is advised to follow the instructions "Instructions To Bidder for Online Bid Submission".
Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 12.1 Bidding Application must be accompanied by the following:-
- 12.1.1 **Technical Bid (Attached signed and stamped copy of each document)**
The following documents are to be furnished by the Contractor along with Technical Bid as per the tender document (Scan Copies):
Proof for payment of Tender document Cost (Tender Fee) / Earnest Money Deposit and permanent address of the Firm/Agency/Person.
A complete list of clients including clients from Govt. /Semi Govt./Autonomous Bodies/PSUs Institutions served during last three years with Name, Telephone No, etc along with copies of supply order.
Details of Bank Account of Bidder i.e. Account No., IFSC Code, MICR No., Bank Name and address, PAN/GST Registration No., EPF & ESI Registration, Contract Labour Registration, if any.
Copies of Income Tax Return of last 3 years (2017-18, 2018-19 & 2019-20).
Copies of audited balance sheet for the last 3 years (2017-18, 2018-19 & 2019-20).
An authorization letter from the firm in favour of the person signing the tender documents.
- 13.0 Validity of the offer
The bid or proposal shall be valid for a period of 180 days from the date of opening of the bid.
- 14.0 Obligation of NIFTEM
NIFTEM shall provide all information and authority letter etc. as may be reasonably required by the tenderers in the performance of their services under this assignment. However, the contractor will not be relieved of its obligations to complete the work due to non-availability of any information.
- 15.0 **Performance Security**
- 15.1 Agency has to deposit the performance security of 10 % amount of awarded value of works, in the form of DD/Bank Guarantee only, within 30 days from the date of award of works.
Release of performance security- will be released within 03 months after satisfactory completion of contract period.
- 15.2 The CONTRACTOR shall be required to execute an AGREEMENT with NIFTEM within 45 days of the receipt of the Work Order (WO) for carrying out the work according to the tender documents and/or as per agreed scope of work and terms and conditions. This AGREEMENT to be executed as per the prescribed form on a Rs.100/= (Rupees one hundred) non-judicial stamp paper. The cost of Stamp paper shall be borne by CONTRACTOR. The payment of bill shall only be released after signing the Agreement as per contract terms & conditions. Until signing of agreement, the payment second months will not be made.
- 15.2.1 Though the AGREEMENT shall be signed within 45 days of receipt of LOI, the effective date of the Contract shall be the date when LOI is issued by the NIFTEM

Note: If the agency is registered with MSME in the applied category (O&M) and having valid Udhhyog Adhaar, the prescribed exemptions as per Govt. Guidelines will be extended, subject to claim along with supportive document. However ncase of award of work, the agency has to submit a Security of 10% of awarded work value within 15 days after issue of such communication (LI). LOI will be given after the receipt of Security.

16.0

REGISTRATION

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

16.1

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / 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.

16.2

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which

helps in reducing size of the scanned document.

- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

16.3

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as “offline” to pay the tender fee / EMD 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.

- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) Upon the successful and timely submission of bids (i.e. after Clicking “Freeze Bid Submission” in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 9) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

16.4

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.

Queries to be addressed to:

Mr. S.K.S Singh Chandel, AR Admin
NIFTEM, Kundli, Sonapat (Hr.) 131028
Phone No.- 0130 2281060
E-mail ID- skchandel@niftem.ac.in

16.5

Instructions for Online Bid Submission

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

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

16.6

Financial Bid

1. Price bid format in the form of BOQ_XXXXX.xls.

17.0

Evaluation procedure

17.1

The bidder has to submit their bids in two bid system i.e. Technical Bid (part 1) and Financial Bid (part-2). In technical bid (part-1), the bidder has to submit, EMD, Tender processing fees DD and other eligibility criteria documents as per Annexure- I. The financial bids of technically eligible bidders only will be opened. After opening of financial bids, if the rates quoted same of more than 01 bidder then the work will be awarded to that agency whose financial turnover would be high or as decided by the TEC/ institute in the best possible manner with higher evaluation criteria such as years of experience, reputed clients.

18.0

General terms & Conditions

18.1

Joint venture shall not be acceptable.

18.2

The contractor shall take all precautions for safety of the workmen deployed for O&M work. If any

accident / miss-happening occur NIFTEM shall not be responsible for the same. If any compensation is to be paid to the victim, the contractor shall pay the same and no claim in this account shall be entertained by the NIFTEM. Consequently any compensation payable shall be at the contractor cost.

- 18.3 The contractor shall maintain attendance through biometric system and at main gate of NIFTEM in support of the attendance of the O&M manpower and the same shall be got periodically checked from NIFTEM officer concerned. Failure to which bill will not be processed for payment.
- 18.4 In case of any damage to any equipment due to negligence of the contractor's staff the same will have to be made good by the contractor at his cost. Failure to which suitable recovery will be made from the contractor bill as decided by the Engineer-in-charge
- 18.5 Before the start of contract, the contractor is bound to submit the following details of the workers proposed Sub Head wise to be engaged by him. After receipt of confirmation of their suitability from Engineer-in-charge or his authorized representative, they shall be deployed on duty.
- 18.6 If the contractor fails to furnish the list of the workers the work shall not be treated as started at site.
- 18.7 The contractor shall replace the staff immediately, in the event of misconduct by him, found sleeping during duty time and not performing his duties.
- 18.8 It shall be entirely the responsibility of the contractor to ensure that no unlawful act is done by his employee while on duty. In case any theft/ loss of departmental property take place due to the negligence or carelessness of his employee, the contractor will be held responsible and shall make good the same.
- 18.9 The firm shall have to provide round the clock communication system to workers. This communication system is meant for lodging/conveying & solving complaints as well as with their supervisors/workers posted for this project as well as the In charge, NIFTEM.
- 18.10 No employee/manpower deployed for the said job shall consume alcohol, cigrate/bidies/cigar/gutka and use chew gum etc. or do any such act that spoils the housekeeping & Fire Fighting work. If anybody is found to be consuming the same, then a suitable financial penalty will be recovered from the agency without forfeiting NIFTEM's right to expel the defaulting person from campus forever.
- 18.11 Manpower mentioned in the contract is tentative and may be increase or decrease with one day notice by NIFTEM. Additional manpower required by NIFTEM if any shall be provided by the agency at the same individual trade rates as quoted by them. Similarly deduction shall be made for the manpower not required by NIFTEM.
- 18.12 Manpower is to be deployed in shift wise as per the requirement of NIFTEM. Only Weekly off and 08 holyday (National holiday & festival) will be provided to the manpower deployed. However if required manpower deployed on weekly off / holidays shall be paid extra.
- 18.13 The Contractor shall have to carry out all types of Civil/ Electrical additional works as and when required, which payment will be done by NIFTEM on production of original bills.
- 18.14 Department shall be in no way be involved in any dispute of whatever kind between the contractor & the staff engaged by him.
- 18.15 Contractor would be bound to execute such additional item which can be termed as logical essential & necessary (even though not listed in schedule of work) for the effective execution of the work in totally rates for such extra items of work shall be rationally analyzed / derived & would be binding on the contractor.
- 18.16 The contractor undertaking the job is advised to verify the particular as detailed in annexure & satisfy itself as regards to the conditions & quantity. On termination of the contract the contractor shall have to hand over the installation in good working condition.
- 18.17 The Stationery, registers, log books, pens & pencils, PC System, Printers, Scanners, and Photocopier etc. required for maintaining reports & record will be arranged by the contractor on its own cost.
- 18.18 In case due to some reason any of the work force is required to be replaced by the agency it should

- be done with the prior approval of NIFTEM.
- 18.19 The agency should ensure that their all employees while on duty should be in proper uniform along with I-Card, If any employee is found without uniform & I-Card at site, a penalty @ Rs.100/- per day shall be imposed on the contractor. 15 days grace period will be provided to arrange ID cards, Uniforms, and Safety Shoes etc. After that penalty will be imposed.
- 18.20 The Contractor shall provide two sets of uniforms with the Firms logo & name badges, to all the employees, the pattern of which will be different than that of the NIFTEM as followed for its employees and they shall wear them at all times while at work and maintain such uniforms. The contractor shall also provide all safety items such safety shoes, gumboots, gloves, masks, etc to its employees. No expenses for the same will be payable by NIFTEM.
- 18.21 The Contractor shall get Police Verification done for all its employees. A copy of Police verification Report (PVR) duly attested by a Gazetted officer of all the employees shall be deposited with the respective NIFTEM Officer along with a copy of bio-data, within 02 month time, from the award of works.
- 18.22 The Contractor shall give the services on all working days during the period of contract as per the NIFTEM's requirement and the required manpower should be available on all days of the week. It is clearly understood by the contractor that the persons employed by the contractor for providing services as mentioned herein, shall be the employees of the contractor and not of the NIFTEM and in no case they claim their employment in NIFTEM. The Contractor shall be liable to make payments to its said employees towards their monthly wages/salaries and other statutory dues like EPF, ESI, minimum wages, bonus, gratuity etc. The payment of minimum wages will be in accordance with Central Wages Zone-C.
- 18.23 The prescribed complaint register and workers diary shall be provided by the contractor and these shall be neatly maintained by contractor and staff. All complaints are to be attended promptly and its closure should ensure by the contractor in NIFTEM's specially designed ERP module and the complaints not attended in the same day shall be reported to NIFTEM Officer concerned and carried forward to next day till these are not attended.
- 18.24 NIFTEM have full discretion to award the work in full or part i.e. Man power or supply of spares required for day to day maintenance.
- 18.25 The essential or emergent nature works/items which are not included in the BOQ/Price-bid format may be carried out thorough O&M agency on latest DSR item rates. No extra payment/overhead charges will be provided on Latest DSR items scheduled rates. The payment will be made on production of original bills.
- 18.26 In certain circumstances the agency may be asked to procure all the required material, component and spare parts for keeping the installations in good working condition the same shall be arranged by the agency and purchase amount will be reimbursed to him as per actual consumption at prevailing market rates on production of original bill. The contractor profit and transportation charges incurred in this regard will not be payable.
- 18.27 Supply of consumable material, tools required for maintenance which included machining process, cleaning, dusting, cotton, battery, water, grease, oil, small nuts and bolts. Sealing material, gland, packing, gasket, old dhoti, duster, broom etc. or any other such material required in day to day maintenance works are deemed to be included in Agency scope. No extra payment towards these shall be made.
- 18.28 In case equipment / machinery are required to be repaired outside from NIFTEM the loading, unloading and transportation charges will not be paid extra other than material cost.
- 18.29 The agency has to provide the accidental insurance of all employees.
- 18.30 The agency has to deploy 01 Manger in General Shift having suitable experience for the post on the

remuneration of Rs. 35,000/-(Approximately) will be paid by NIFTEM to monitor execution and supervision of all O&M related day to day works.

18.31 The agency is bound to provide the material which is not included in BOQ, on market rates (on (M.R.P) on which agency charges will be paid for arranging supply.

18.32 The agency has to provide hiring charges JCB / Hydra /Pockland / Loader etc of prevailing market rates as & when required and on which agency charges will be paid for hiring of the same.

18.33 **The bidder has to quote minimum 2% agency charges while quoting the prices online in financial bid. The rates quoted by any bidder less than 2%, shall be treated unresponsive and the bid will be rejected out rightly and will not be evaluate.**

18.34 **Award of work:**

The selection of the Agency/Contractor will be made on the basis of L1 (Lowest quote) rates. After opening of financial bids, if the rates quoted same of more than 01 bidder then the work will be awarded to that agency whose 1st financial turnover would be high, 2nd Experience in years & 3rd Ongoing similar Operation & Maintenance works in IIT/NIT/Central university/IIM & PSU's or as decided by the TEC/Institute in the best possible manner.

18.35 **PRE-BID MEETING:**

In case, after pre-bid meeting (wherever applicable) any modification(s)/ addition(s)/deletion(s) or any alternation in the requirement(s)/ specification(s)/ condition(s) etc, the same will be placed only on e-CPP Portal, therefore all the bidders are advised to visit e-CPP Portal website before filling their Tender. Corrigendum/addendum in respect of this Tender, if any, shall only be uploaded only at NIFTEM's website and shall not be advertised in the newspapers. All the prospective bidders are advised to keep themselves updated for such corrigendum before submitting their tender. The bidders are advised to be in touch our website regularly. In this regard, the Institute will not be responsible in any manner.

18.36 The bidder should take care that the rate and amount should be written in such a way that interpolation is not possible & rates must also written in words.

18.37 If the agency is registered with SME/NSIC/DIC or any other Govt. authority, where the Govt. has granted some exemptions to such units and if the agency is claiming for any exemption, is required to submit relevant documents/Govt. orders along with tender. In such cases, only EMD & BID security will be exempted but not tender processing fee.

18.38 Person signing the bid or other documents connected with Tender must clearly write his/her name and specify the capacity in which signing.

18.39 Before submitting the filled in Tender document to the Institute, the bidders may seek clarifications, if any in Pre Bid Meeting or by visiting on any working day. They can meet Engineering In-charge.

18.40 The Agency has to make their own arrangement for stay of the workforce nearby area as the Institute is not having any such facility.

18.41 In the case of extension beyond one year of those workers, who does not cover under Minimum wages, will be entitled for 10% increase in their wages annually subject to satisfactory performance and on completion of twelve months continuous working.

18.42 In case, if it is observed that the maintenance is not proper and to the required standard, during the period of contract, payment will be deducted for sub standard work and agency may be debarred to undertake the work.

19 **LABOUR LAWS**

19.1 The Agency shall abide by all the rules and regulations related to labour laws, accident, workmen compensation act, workmen insurance, ESI, PF, etc. This will be the sole responsibility of the agency. NIFTEM will not be a party at any stage in any of the disputes relating to the above. In case, any liability arises due to non-conformance by the agency, under no circumstances NIFTEM will be liable

for the same.

19.2 He will maintain a wage register and attendance register which will be produced by the contractor whenever required by NIFTEM. The contractor will deposit the EPF and ESIC contribution and furnish challans to NIFTEM for its verification with monthly bills.

19.3 The contractor shall comply with all the provisions of the minimum wages Act, 1948, contract Labour Act (R & A) 1970, and rules framed there under and other labour laws / local laws affecting contract labour that way be brought into force from time to time.

19.4 The contractor will be solemnly responsible to co-ordinate with concern labour office for all types of issues pertaining to concern labour commissioner office like NOC, renewal etc.

20 **PAYMENT :**

20.1 The contractor is bound to distribute the salary/ wages to his workers up to 7th of each month. The payment of wages shall be made through online or account payee cheques only. Direct payment in the form of cash should be in very exceptional.

20.2 The agency has to made 100% digital payment. No cheques or chash is allowed for payment. The agency has to provide proof of payment of wages at the time of claiming of monthly bills.

20.3 The contractor shall deduct worker subscription towards Provident Fund and ESI, as per rules, he shall deposit the same along with his contribution into the respective accounts of the worker and submit the detail to this office for verification along with the bill/salary slips.

20.4 The agency will submit a computerized bill to NIFTEM for the O&M work done. The bill shall be submitted monthly after making the payment to deployed manpower & all work executed in previous months. The agency will submit three numbers of hard copies and one soft copy for the bills.

20.5 There is no linkage between payment of wages and payment of bills. Therefore, agency will be make payment first to their workers and then only submit their bills for payment along with required supportive documents. In case delay payment of their bills from NIFTEM, the agency has to pay wages timely.

20.6 The payment shall be made to the agency for its work executed on monthly basis as per actual, on submission of bill.

21 **LABOUR LAWS TO BE COMPLIED BY THE AGENCY**

21.1 The contractor shall obtain a valid labour license under the contract labour (R & A) Act central rules 1971 and amended from time to time, and continue to have a valid license until the completion of the work. The contractor shall also abide by the provision of the child labour (prohibition and regulation) Act, 1986 and amended from time to time. Any failure to fulfill this requirement shall attract the penal provisions of this contract arising out the resultant for non execution of the work before the commencement of work. No labour below the age of 18 years shall be employed on the work.

21.2 The NIFTEM shall have full power and without giving any reason to the contractor, immediately to get removed any representatives, agent, servant, and workmen and employees on account of misconduct negligence or incompetence or whose continued employment may in his opinion be undesirable. The contractor shall not be allowed any compensation in this account.

22 **PERIOD OF CONTRACT**

22.1 The duration of contract will be 12 months from the date of start of work subject to satisfactory performance of the agency. However, NIFTEM has a right under this contract to foreclose the contract at any time. The contract can also be terminated by NIFTEM by giving one month notice at any time. However, the agency has to continue his work with due diligence during the period of notice of termination or until the handing over of the site. No claim whatsoever in this regard shall be entertained by NIFTEM. The contact can be extended further upto maximum 02 more years on

- the basis of satisfactory performance and on mutual consent on existing rates.
- 22.2 In case in the opinion of the NIFTEM, the performance of the agency is not satisfactory or agency is not discharging its responsibility with due diligence in terms of the contract, or performance is not found up to the mark, not paying the workers as per min. wages act not extending other labour welfare measures as applicable. NIFTEM can terminate the contract of the agency by giving a notice of one month in writing by forfeiting the security deposit and performance guarantee if any of the contractor. However in case of foreclosure of the contract his Security Deposit or Performance Guarantee will not be forfeited.
- 23 **SUBLETING OF O & M OF FIRE FIGHTING, STP WORK, MAINTENANCE OF CENTRALISED RO SYSTEM & CLEANING OF GLASS FAÇADE WORK TO A SPECIALISED AGENCY**
- 24 The successful agency / contractor will engage a specialized agency for carrying out the specialized O&M works i.e. routine inspection of Fighting, Fire Alarm, Public Address Systems O & M of Water Treatment Plant and O & M of Sewage Treatment Plant, CENTRALISED RO SYSTEM and cleaning of glass façade work having good experience in the relevant field, with prior approval of NIFTEM after submitting the credentials of the same. However, full responsibility towards this work shall lie with the main contractor only. Nothing extra shall be paid to the agency / contractor for deploying specialist Fire Fighting, WTP, and STP sub contractor.
- 24.1 The wages of manpower will be varying only as per minimum wages implement by Central govt.
- 24.2 The agency has to issue uniform, photo I-card for this all working employees deputed for maintenance work at this complex.
- 24.4 The complete bio-data of all the manpower deployed by the agency should be submitted with NIFTEM for approval.
- 25.0 **FORCE MAJEURE CONDITIONS:-**
If at any time during the currency of contract the performance in whole or in part is prevented or delayed or the contractor is not able to arrange execution of the work due to reasons of any war, hostility, acts of public enemy, civil commotion, sabotage, fire, floods, explosion, epidemics, quarantine, restrictions, strikes, lock outs or acts of god (here in after referred to as event) then provided a notice and adequate proof of execution / performance of work having suffered on account of these events is given within 24 hours from the hour of occurrence and further in case of strike / labour dispute prolongs beyond a period of 48 hours, the contractor shall immediately inform to the NIFTEM. NIFTEM reserves the right to get the work done from any other agency at the risk & cost of the contractor.
- 26.0 **Arbitration Clause**
- 26.1 In case of any dispute between Agency and NIFTEM, arising out of or in relation to the agreement, the dispute shall be referred to arbitration of a sole arbitration to be appointed by the Hon'ble Vice Chancellor, NIFTEM. The award of the said arbitrator shall be binding on both parties. The seat of the arbitration shall be at Sonapat & Haryana territory.
- 26.2 In additions to clauses above, other terms & conditions, which have not been mentioned in the Tender, can be added and the same will be mentioned in the award of work. If the agency is not agree with any terms, which has been included later date, may communicate in writing before accepting the offer. After acceptance, no protest will be considered.
- 26.3 The tender can be cancelled at any stage without assigning any reason.
- 27.0 **DEPLOYMENT OF A STATION MANAGER**
The Agency will deploy a Station Manager full time to coordinate with NIFTEM officers at site and also to supervise the operation & maintenance work and manpower. He should be a computer literate and must be a B.Tech in Electrical/Civil/Mechanical along with five years professional experience in relevant field. No extra payment will be made by NIFTEM.

28.0 **EVENTS OF DEFAULT**

- 28.1 In the event of any breach of the said terms and conditions of the Contract, the NIFTEM shall be entitled to forfeit the whole or the part of the security deposit/ Performance Security besides terminating or revoking the contract.
- 28.2 NIFTEM may initiate process for termination of Contract in the following event of default:-
- 28.2.1 Breach of any of the terms or conditions or obligation of Contract on part of Manufacturer/Supplier/His employees/Agents.
- 28.2.2 Any major alteration in the agreed upon scope of work without the authorization of NIFTEM.
- 28.2.3 The contractor being adjudged bankrupt/ insolvent or a trustee/receiver being appointed on the Manufacturer/Supplier.
- 28.2.4 Repudiation of Agreement by Manufacturer/ Supplier or otherwise evidence of intention not to be bound by the agreement.
- 28.2.5 Persistent closure of business by the contractor for consecutive 45 days or more in any business year. If the due dates for supply specified by NIFTEM.
- 28.2.6 NIFTEM at its discretion may call for any record to satisfy them regarding the contractual obligations of the contractor and the contractor shall provide every help/document related to NIFTEM, failing which it may amount to breach of condition of the contract.

Tender Form (Technical Bid)
(To be submitted by the tenderer on their letter head)

Sl. No.	Particulars	(T be filled by the tenderer)
a.	The bidders shall be an Indian based ISO certified Agency//Firm/Organization/ engaged in providing Operation & Maintenance. Kindly submit documents relevant to formation/ constitution of company and attached valid ISO certification in its own name.	
b.	The contractor should have valid statutory government licenses for Operation & maintenance, Supervision and execution of 33 KV line and above.	
c.	The bidder should have experience of minimum 05 Years as on closing date of tender in similar nature of works in Operation & Maintenance in Govt. Sector/PSU/Autonomous body/ Central/state Govt. organizations/ CPWD/PWD/DDA, reputed private organization. Out of which 03 years experience should be of Govt. Organizations. Work order and completion certificates must be enclosed in support, for last 05 Years (2015-16, 2016-17, 2017-18, 2018-19 & 2019-20). NOTE: Similar work experience includes Annual Operation and Maintenance Contract of HT & LT Electrical Sub-stations 33/.433kV & above and Building maintenances.	
d.	The agency should have works experience of :- 01 similar works of 80% of total contract value i.e. Rs. 3.25 Cr. in last three years. or 02 similar works of 50% of total contract value i.e. Rs. 3.25 Cr. in last three years. or 03 similar works of 40% of total contract value i.e. Rs. 3.25 Cr. in last three years.	
e.	The bidder should have GST Registration Number. Kindly submit copy of GST Registration number.	
f.	The bidder must submit the copies of IT return for last three years i.e 2017-18, 2018-19 & 2019-20 with Audited Profit-Loss Statement & Balance sheets for financial year 2017-18, 2018-19 & 2019-20.	
g.	The applicant should furnish an undertaking to the effect that the firm has not been black listed in India or abroad by any government department /agency in the attached Performa.	
h.	The bidder should have valid ESI and EPF registration certificate. The copy of ESI and EPF registration certificate should be enclosed.	
i.	Average Annual turnover of the firm under its name should be minimum Rs. 9.00 Cr. in each financial year i.e. 2017-18, 2018-19 & 2019-20. As per audited Profit & Loss account and submit audited annual reports (Copy of audited Balance Sheet to be attached).	
j.	Address proof of agency/contractor.	

k.	Details of Bank Account of Bidder i.e. Account No., IFSC Code, MICR No., Bank Name and address, PAN/GST, Registration number, EPF & ESI Registration, Contract Labour Registration, if any.	
l.	An authorization letter from the firm in favour of the person signing the tender documents.	
m.	An attested copy of the certificate of registration/incorporation pertaining to the legal status of the Bidder/Firm/Agency.	
n.	Annexure-I, III, IV should be enclosed.	

A Processing Fee and EMD demand draft bearing Nos..... dated drawn onis enclosed with Technical bid.

Signature.....

Name

Address

Mobile:.....

Seal of firm.

Date:

.....

Price Bid format
(To be submitted online on CPP portal only)

S. No.	Description of works	Manpower	Months	Total tentative Cost of Manpower & Material for 01 year/per Annum
01.	Supply of Manpower for Operation & Maintenance works, including ESIC, EPF, etc.) for Operation & maintenance works.	12,29,950/- per month (Estimated)	12	1,47,59,400/-
02.	Tentative Material requirement per month as per tender/BOQ	10,00,000 Per Month (Estimated)	12	1,20,00,000/-
	Total Amount			2,67,59,400/-
	Quote the percentage rate above(+) (Not less than 02% otherwise bid will be treated unresponsive.)			
	Gross Total			

NOTE:

1. GST will be paid extra as applicable.
2. The rate should be quoted inclusive of all taxes, insurance and freight etc.
3. The bidder has to quote minimum 2% agency charges, the agency charges in percentage quoted by the agency below 2% will be treated as unresponsive and their bid will be reject out rightly. Over and above 1 % will be payable towards for tools & kit, Uniform, shoes, ID card, other safety equipments, insurance from accident, etc. after the closing of contract these tools shall be property of the Institute.
4. If more than 01 agency found quoted rates same% than the higher turnover agency will be considered as L1 or as decided by the TEC/ institute in the best possible manner with higher evaluation criteria such as years of experience, reputed clients.

(Name & Signature)
Official Seal of the agency

(Place & Date)

UNDERTAKING

To,
Registrar,
National Institute Of Food Technology Entrepreneurship and Management,
Plot no 97, sector-56, HSIIDC industrial estate,
Kundli-131008,
District-Sonepat (Haryana)

Sir,

I/we the undersigned, certify that I/we have gone through the terms and conditions mentioned in the tender documents and undertake to comply with them.

It is further certified that our firm has not been blacklisted by any agency in India or abroad.

Dated:

SIGNATURE OF THE TENDERER
WITH SEAL

NAME OF THE TENDERER
WITH ADDRESS

NOTE: Certificate as per above must be submitted only on non-judicial stamp paper of Rs. 100/- (Rs One Hundred only)

TENDER CONDITIONS ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: -

Dear Sir,

1. I/ We have downloaded / obtained 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).

I / We hereby certify that I / we have read entire terms and conditions of the tender documents from Page No. 01 to 68 (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby the terms / conditions / clauses contained therein.

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

I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

In case any provisions of this tender are found violated , your department/ organisation shall be at liberty to reject this tender/bid including the forfeiture of the full said Earnest Money Deposit absolutely and we shall not have any claim/right against deptt in satisfaction of this condition.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

PERFORMANCE SECURITY GUARANTEE BOND

In consideration of National Institute of Food Technology, Entrepreneurship and Management (herein after called the "PURCHASER" which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having agreed to award the contract to(Herein after called "the said Supplier /Supplier/ Contractor(s) " which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) and the same having been unequivocally accepted by the Supplier / Supplier/ Contractor resulting in a Contract bearing No. _____ dated _____ valued at _____ for agreed to provide contract performance guarantee for the faithful performance of entire contract equivalent to the said value of the contract to the PURCHASER.

We _____ (name and address of Bank) having its head office at _____ (hereinafter referred to as the 'Bank' which expression shall unless repugnant to the context or meaning thereof, include the successors administrators, executors and assigns) do hereby guarantee and undertake to pay the PURCHASER, on written demand any and all money payable by the Supplier/ Contractor to the extent of Rs.....(Rupees.....Only) before..... (Date of expiry of guarantee). Without any demur, reservation, contest, recourse or protest and /or without any reference to the Supplier /Supplier/ Contractor. Any such written demand made by the PURCHASER on the Bank shall be conclusive and binding notwithstanding any difference between the PURCHASER and Supplier /Supplier/ Contractor or any dispute pending before any court tribunal or any authority.

The Bank undertakes not to revoke this guarantee during its currency without previous consent of the PURCHASER and further agrees that the guarantee here in contained shall continue to be enforceable till the PURCHASER discharges this guarantee or till (exact date of expiry of Bank guarantee). The PURCHASER shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Supplier/ Supplier/ Contractor, and to exercise the same at any covenants, contained or implied, in the Supplier/ Supplier/ Contractor between the PURCHASER and Supplier/ Supplier/ Contractor or any other course of or remedy or security available to the PURCHASER.

The Bank shall not be released of its obligations under these presents any exercise by the PURCHASER of its liberty with reference to the matters aforesaid or any of them or by reason of any other acts of omission or commission on the PURCHASER or by any other matters or thing whatsoever which under law would, but for this provision, have the affect of relieving the Bank.

The Bank also agrees that the PURCHASER at its option shall be entitled to enforce this guarantee against the Bank as principal debtor, in the first instance without proceeding against the contract and notwithstanding and security or other guarantee that the PURCHASER may have in relation to the Supplier/ Contractors liabilities. The Bank further agree with the PURCHASER that the PURCHASER shall have the fullest liberty without our consent any without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance of the said Supplier/ Contractor from time to time or to postpone for any time or from time to time any of the powers exercised by the company against the said Supplier/ Contractor and to forbear or enforce any of the terms and conditions relating the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted by the said corporation to the said Supplier/ Contractor or any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Supplier/ Contractor.

The Bank lastly undertakes not to revoke this guarantee during its currency except with the previous consent of the PURCHASER in writing.

10. Notwithstanding anything contained herein:

Our liability under this Guarantee shall not exceed Rs. (Rupees Only).

This Bank Guarantee shall be valid upto; and

We are liable to pay the guaranteed amount or any part thereof under the bank guarantee only and only if you serve upon us a written claim or demand on or before

Dated this _____ Day of

For _____

(Signature)

(Name & Title)

Signing on behalf of the Bank

Item rates with Technical specifications at NIFTEM**CIVIL, SANITARY, ELECTRICAL, FIRE, HVAC & PLUMBING MATERIAL**

Sr. No	Description of Work / Item(s) & Makes	Qty	Units	Rate(without GST)
CIVIL, SANITARY & PLUMBING MATERIAL				
1	Door Stopper M.S., ISI Marked	1	Nos	60
2	Tower Bolt s.s size 12" , ISI Marked	1	Nos	80
3	Tower Bolt s.s size 10 " , ISI Marked	1	Nos	58.5
4	Tower Bolt Aluminum size 12" , ISI Marked	1	Nos	100
5	Tower Bolt Aluminum size 10" , ISI Marked	1	Nos	40
6	L-drop s.s. 12 " , ISI Marked	1	Nos	190
7	L-drop s.s. 10 " , ISI Marked	1	Nos	160
8	L-drop Aluminum . 12 " , ISI Marked	1	Nos	140
9	L-drop Aluminum 10 " , ISI Marked	1	Nos	100
10	Piano Hinges SS, ISI Marked	1	mtr	250
11	SS cupboard Hinge, ISI Marked	1	Nos	50
12	Almirah/ Cupboard lock, Godrej	1	Nos	350
13	Toughned Door Cylindrical lock make Dorma, Doorset	1	Nos	1500
14	6 MM plyboard Century, swastik, make,	1	Nos	40
15	12 MM plyboard Century, swastik, make,	1	sq.ft	50
16	25MM commercial boardCentury make	1	sq.ft	70
17	19 MM commercial boardCentury make	1	sq.ft	60
18	Aluminum Sheet 1 mm thick, ISI Marked	1	sq.ft	180
19	Leminate 01 MM, Greenlam	1	sq.ft	50
20	Bidding	1	ft	20
21	Daraz lock (Godrej Make)	1	ft	250
22	Albihahari Hinges, ISI Marked	1	Nos	80
23	Drawer/Daraj Nobs SS, ISI Marked	1	Nos	40
24	Drawer/Daraj Nobs wooden, ISI Marked	1	Nos	18

25	False Ceiling tiles (Armstrong Make)	1	sq.ft	50
26	Curtain Rod bracket, ISI Marked	1	Nos	40
27	Curtain Rod Socket, ISI Marked	1	Nos	40
28	Curtain Rod MS ISI Marked	1	ft	40
29	Pivot, make Dorma, doorset	1	Nos	400
30	Floor Spring Machine, make Dorma DOORSET	1	Nos	2500
31	Health Fauset , make Jaquar	1	Nos	900
32	Health Fauset , Hindware.	1	Nos	700
33	Bottle Trap complete, Hindware	1	Nos	900
34	Bottle Trap complete, Parryware	1	Nos	800
35	Bottle Trap complete, Jaguar	1	Nos	1000
36	Cistern . make Hindware	1	Nos	1200
37	Cistern, make Jaquar	1	Nos	1800
38	Cistern, make Parryware	1	Nos	1400
39	Cistern SS push Plate, make Roca	1	Nos	3600
40	Cistern SS push Plate makeJaquar	1	Nos	2000
41	Cistern SS push Plate, make HINDWARE	1	Nos	2500
42	PVC Connection Pipe 24 ", ISI Marked	1	Nos	100
43	PVC Connection Pipe 18 ", ISI Marked	1	Nos	80
44	PVC Connection Pipe 30 , ISI Marked	1	Nos	120
45	Angle Valve, make Parryware, jaquar	1	Nos	600
46	Angle Valve , make Jaquar	1	Nos	450
47	Angle Valve, make seiko delux	1	Nos	455
48	Angle Valve Face, Make as per fixture	1	Nos	85
49	Conceled Mixture Face (Jaquar Make)	1	Nos	350
50	Waste Pipe (Flexible) ISI Marked	1	Nos	60
51	Waste Pipe PVC, ISI marked	1	Nos	45
52	Ball Valve 15 MM, Zolota	1	Nos	320
53	Ball Valve 20 MM ,Zolota	1	Nos	350
54	Ball Valve 25-32MM ,Zolota	1	Nos	650

55	Ball Valve 40-50 MM , Zolota	1	Nos	955
56	Ball valve 32mm pvc, ISI Marked Heavey Duty	1	Nos	750
57	Ball valve 50 mm pvc , ISI Marked Heavey Duty	1	Nos	459
58	Ball valve 63 mm pvc, ISI Marked Heavey Duty	1	Nos	1255.5
59	Ball valve 15 mm upvc, ISI Marked Heavey Duty	1	Nos	49.01
60	Ball valve 20 mm upvc, ISI Marked Heavey Duty	1	Nos	99.5
61	Butterfly valve 40 mm, Zoloto Make	1	Nos	460.85
62	Butterfly valve 50 mm, Zoloto make	1	Nos	881.1
63	Butterfly valve 65 mm, Zoloto make	1	Nos	3600
64	40mm Union Valve PVC, ISI Marked	1	Nos	2745
65	50mm Union Valve PVC, ISI Marked	1	Nos	4050
66	63mm Union Valve PVC, ISI Marked	1	Nos	4365
67	Gate Valve 15mm , make zoloto (Brass)	1	Nos	1701
68	Gate Valve 25mm , make zoloto (Brass)	1	Nos	2745
69	Gate Valve mm 32mm , make zoloto(Brass)	1	Nos	1800
70	Gate Valve mm 40 mm, make zoloto(Brass)	1	Nos	2250
71	Gate Valve mm 50 mm , make zoloto(Brass)	1	Nos	2700
72	Gate Valve mm 65 mm, make zoloto(Brass)	1	Nos	2880
73	Shower head 3", make Hinware, Parryware	1	Nos	360
74	Telephone Shower with shower tube 1 meter , ISI Marked	1	Nos	189
75	Towel rail 36", ISI Marked	1	Nos	315
76	Towel rail 24", ISI Marked	1	Nos	270
77	CPVC Pipe 15 MM, Prince, Astral, Supreme	1	mtr	27
78	CPVC Pipe 20MM, Prince, Astral, Supreme	1	mtr	36
79	CPVC Pipe 25MM, Prince, Astral, Supreme	1	mtr	45
80	CPVC Pipe 32 MM, Prince, Astral, Supreme	1	mtr	54
81	CPVC Pipe 40 MM, Prince, Astral, Supreme	1	mtr	63
82	CPVC Pipe 50 MM, Prince, Astral, Supreme	1	mtr	72
83	CPVC Pipe 65 MM, Prince, Astral, Supreme	1	mtr	81
84	CPVC Pipe 80MM, Prince, Astral, Supreme	1	mtr	90

85	CPVC Socket 15MM, ISI Marked	1	Nos	9
86	CPVC Socket 20MM, ISI Marked	1	Nos	10.8
87	CPVC Socket 25MM, ISI Marked	1	Nos	13.5
88	CPVC Socket 32 MM-80 MM ISI Marked	1	Nos	27
89	CPVC elbow 15 mm- 80MM ISI Marked	1	Nos	9
90	CPVC CROSS ELBOW 15 MM, ISI Marked	1	Nos	76.5
91	CPVC mta 15 mm -80MM, ISI Marked	1	Nos	7.65
92	CPVC FTA 15 mm-50MM, ISI Marked	1	Nos	10.8
93	CPVC BUSH 25/15 MM, ISI Marked	1	Nos	13.5
94	CPVC BUSH 32/25 MM, ISI Marked	1	Nos	16.2
95	CPVC BUSH 32/15 MM, ISI Marked	1	Nos	25.2
96	CPVC BUSH 25/20 MM, ISI Marked	1	Nos	9.9
97	CPVC BUSH 65/50 MM, ISI Marked	1	Nos	115.2
98	CPVC RAIDUSRE 65/50 MM, ISI Marked	1	Nos	324
99	CPVC RAIDUSRE 50/50 MM, ISI Marked	1	Nos	103.5
100	CPVC ENDPLUCK 15 MM-80MM ISI Marked	1	Nos	5.4
101	15 MM-32 PIPE GI, Jindal, TATA	1	mtrs	45
102	50MM-75 MM PIPE GI, Jindal, TATA	1	mtrs	55
103	75MM-100 MM PIPE GI, Jindal, TATA	1	mtrs	65
104	32 MM PIPE GI, Jindal, TATA	1	mtrs	76.5
105	40 MM PIPE GI, Jindal, TATA	1	mtrs	81
106	50 MM PIPE GI, Jindal, TATA	1	mtrs	90
107	65MM PIPE GI, Jindal, TATA	1	mtrs	99
108	80MM PIPE GI, Jindal, TATA	1	mtrs	108
109	100 MM PIPE GI, Jindal, TATA	1	mtrs	121.5
110	150 MM PIPE GI, Jindal, TATA	1	mtrs	126
111	100 MM TANK NIPPLE, ISI Marked Heavey Duty	1	Nos	360
112	65mm Flange , ISI Marked Heavey Duty	1	Nos	180
113	80mm Flange , ISI Marked Heavey Duty	1	Nos	180
114	100mm Flange, ISI Marked Heavey Duty	1	Nos	225

115	150mm Flange, ISI Marked Heavey Duty	1	Nos	225
116	200 mm Flange, ISI Marked Heavey Duty	1	Nos	225
117	Concelaed cistern side lock, ROCA	1	Nos	765
118	Teflon tape, Champion	1	Nos	36
119	M Seal	1	Kg	351
120	CPVC Solvent	1	Kg	1080
121	Mixture Phase, Jaguar	1	Nos	675
122	Concelaed Phase, As per fixture make, ISI Marked	1	Nos	765
123	Mixture set, Jaguar	1	Nos	2565
124	Door closer, Dorset	1	Nos	1125
125	Long body Bib cock CP, Hindware, Parryware	1	Nos	652.5
126	Long body Bib cock PVC, Hindware, Parryware	1	Nos	832.5
127	WC seat cover, hindware/parryware/JAQUAR	1	Nos	900
128	Indian WC, (HINDUSTAN), Hindware, Parryware	1	Nos	675
129	UPVC FITTINGS. (PRINCE)	1	Nos	90
130	Wall mounted WC seat, parryware	1	Nos	2700
131	Wash-basin, (Hindware, parryware, Hindustan), with pedestal	1	Nos	1800
132	Sink (Steel) 24 InchesX24 Inches with angles, Hindware, Parryware	1	Nos	1980
133	Bib- cock long body, Hindware, Parryware	1	Nos	1350
134	Bib- cock short body, Hindware, Parryware	1	Nos	900
135	Counter mixture	1	Nos.	1950
136	Sanitary items face, as per fixture make	1	Nos	45
137	Float valve 15MM, 20MM,25MM, ISI Marked	1	Nos	405
138	Mortice lock, (Godrej)	1	Nos	1350
139	Cylindrical LOCK (Tumbler lock), Godrej	1	Nos	600.3
140	Flinker lock, ISI Marked	1	Nos.	1350
141	Urinal Sensors complete fittings, (U Tech Make)	1	Nos	3600
142	Wall mounted WC seat Connection pipe, buffer washer, Parryware	1	Nos	2250
143	Jet Spray, ISI Marked	1	Nos	225
144	Shower Tube 1Meter, ISI Marked	1	Nos	315
145	Wall Mixture set Seiko make with shower head, ISI Marked	1	Nos	3150

146	Handles SS 20" , ISI Marked	1	Nos	1080
147	Water meter Kranti make 2"	1	Nos	5220
148	Water meter Kranti make 2 1/2 "	1	Nos	7380
149	Water meter Kranti make 3 "	1	Nos	7425
150	Water meter Kranti make 4"	1	Nos	11902.5
151	Water meter Kranti make 6"	1	Nos	13500
152	Distemper, Nerolac, Asian, Berger	1	ltr.	36
153	Enemal Paint, Nerolac, Asian, Berger	1	ltrs.	180
154	Plastic Emulsion paint, Nerolac, Asian, Berger	1	ltrs.	90
155	Texture paint, Nerolac, Asian, Berger	1	ltrs.	450
156	Stainer Colour tube	1	Nos.	220
157	Apex Paint	1	litre	350
158	Terracotta Paint	1	Litre	300
159	Varnish	1	Litre	70
160	Thinner	1	Litre	100
161	Touchwood	1	Litre	150
162	Laker Polish	1	Litre	220
163	White Dhoti new cotton	1	Nos.	20
164	Old Cotton Dhoti	1	Nos.	15
165	Putty patti 6"	1	Nos.	40
166	Putty patti 9"	1	Nos.	60
167	Powder colour	1	Nos.	70
168	Paint Brush 3"	1	Nos.	90
169	Paint Brush 5"		Nos.	150
170	Paint Roller 9"	1	litre	130
171	Tarpin oil , ISI Marked	1	ltrs.	27
172	Primer (waterproff), Nerolac, Asian, Berger	1	ltrs.	67.5
173	Red Oxide , Nerolac, Asian, Berger	1	ltrs.	81
174	Emry paper 5"	1	Nos.	90
175	Floor Tiles 2ft X2ft, Kajaria, Johnson	1	Sq.ft.	63

176	Ball Cock (Hindware) Concealed, Hindware, Parryware	1	Nos.	585
177	Gypsum Board, ISI Marked	1	sq.ft.	90
178	Helex Board, ISI Marked	1	sq.ft.	135
179	Acrylic Sheet 5 mm, ISI Marked	1	Nos	90
180	POP, ISI Marked	1	Kg	18
181	False ceiling chanel all types, ISI Marked	1	rft.	45
182	Gypsum screw, ISI Marked	1	PKT	90
183	wooden screw, ISI Marked	1	PKT	90
184	Gypsum tape, ISI Marked	1	Nos	72
185	Compund, ISI Marked	1	Kg	45
186	Wire Mess Jali S.S. , ISI Marked	1	sq.ft.	36
187	Wire Mess Jali M.S. , ISI Marked	1	Sq.ft,	36
188	Masking tape 2", ISI Marked	1	Nos	72
189	Epoxy Paint, Nerolac, Asian, Berger	1	Ltrs.	63
190	40mm NRV (Non Returning Valve), Zoloto	1	Nos	1386
191	50mm NRV, Zoloto	1	Nos	1575
192	65mm NRV, Zoloto	1	Nos	1620
193	80mm NRV, Zoloto	1	Nos	1710
194	100mm NRV, Zoloto	1	Nos	1800
195	150 mm NRV, Zoloto	1	Nos	2000
196	200mm NRV, Zoloto	1	Nos	2250
197	250mm NRV, Zoloto	1	Nos	2340
198	500ltr Tank Cover, Sintex	1	Nos	225
199	1000ltr Tank Cover, Sintex	1	Nos	252
200	1500 ltr Tank Cover, Sintex	1	Nos	270
201	3000 ltr Tank Cover, Sintex	1	Nos	288
202	5000ltr Tank Cover, Sintex	1	Nos	306
203	10000ltr Tank Cover, Sintex	1	Nos	324
204	15000ltr Tank Cover, Sintex	1	Nos	342
205	15mm -32 mm Ball valve CPVC, ISI Marked Heavey Duty	1	Nos	250

206	Urinal Copper Pipe, ISI Marked Heavey Duty	1	Nos	162
207	Urinal Pot ,(Perryware & Hindware)	1	Nos	1440
208	Urinal Partition (Ceremic) , Hindware, Parryware	1	Nos	720
209	Urinal sensor (Hindware, Utech)	1	Nos	3600
210	Cistern Ball Cock (Indian), ISI Marked Heavey Duty	1	Nos	270
211	Cistern Handle (Indian), ISI Marked	1	Nos	162
212	Chucknut Washer, ISI Marked Heavey Duty	1	Nos	225
213	Push Cock, ISI Marked Heavey Duty	1	Nos	127.8
214	Fountain Sprinkler, ISI Marked Heavey Duty	1	Nos	765
215	Syphon Connection pipe, ISI Marked Heavey Duty	1	Nos	225
216	Cistern Push Plate (Hindware)	1	Nos	2250
217	Screw 35x8, ISI Marked	1	PKT	27
218	Screw 50x8, ISI Marked	1	PKT	36
219	Gitty, ISI Marked	1	PKT	18
220	White Cement (JK)	1	5Kg	300
221	Washbasin Jali	1	Kg	150
222	Sink Jali	1	Nos.	250
223	Urinal Jali	1	Nos.	150
224	Grinder cutting Wheel	1	Nos.	150
225	Fastner Pin & Ring type 08 mm	1	Nos.	70
226	Fastner Pin & Ring type 10 mm	1	Nos.	90
227	Hexa Blade double side	1	Nos.	40
228	Welding Rod Adwani 08 no.	1	Pkt.	450
229	Welding Rod Adwani 10 no.	1	Pkt	500
230	Hamering Bit 6mm	1	Nos.	120
231	Hamering Bit 8mm	1	Nos.	150
232	Hamering Bit 10mm	1	Nos.	70
233	Hamering Bit 12mm	1	Nos.	90
234	Hamering Bit 16mm	1	Nos.	150
235	Drill Star Bit	1	Nos.	90

236	Self screw bit 8mm	1	Nos.	45
237	Self screw bit 10mm	1	Nos.	60
238	Star Self screw 1"	1	Pkt	90
239	SS sheet (304)	1	ft	70
240	MS sheet	1	ft	56
241	MS sheet	1	ft	35
242	Acrylic Sheet 5 mm, ISI Marked	1	ft	40
243	Mixture Leg	1	Nos	82
244	Extension nipple 15mm	1	Nos.	55
245	Hex nipple 15mm	1	Nos.	65
246	Hex nipple 20mm	1	Nos.	75
247	Hex nipple 25mm	1	Nos.	80
248	Hex nipple 32 mm	1	Nos.	85
249	CP Elbow 15 mm	1	Nos.	190
250	CP Hex nipple 15 mm	1	Nos.	220
251	conciold sistern ball cock(Roka,Jaquar)	1	Nos.	180
252	conciold sistern siphon(Roka,Jaquar)	1	Nos.	1850
253	conciold sistern angle valve(Roka,Jaquar)	1	Nos.	1950
254	Push Plate (Jaquar)	1	Nos.	3600
255	flush command plate(Jaquar)	1	Nos.	3200
256	Central Hole mixture set	1	Nos.	4500
257	kitchen mixture set	1	Nos.	3500
258	pillor cock mixture set	1	Nos.	2800
259	Float Valve with ball 32mm	1	Nos.	350
260	Float Valve with ball 40mm	1	Nos.	450
261	Float ball with rod all 25mm	1	Nos.	300
262	PVC Flexible pipe	1	ft.	45
263	Rubber gasket	1	Nos.	70
264	Quick release Coupling 32mm	1	Nos.	350
265	Urinal Sprider	1	Nos.	850

266	Copper pipe with chuck nut washer 1/4"	1	Nos.	220
267	Cockroch trap 4"	1	Nos.	450
268	floor trap 4"	1	Nos.	650
269	Divertar mixture (Jaquar)	1	Nos.	2230
270	Glass corner set	1	Nos.	750
271	Bottle Trap with Long Pipe 12"	1	Nos.	1250
272	Bottle Trap with Long Pipe 18"	1	Nos.	1550
273	CP Push Cock	1	Nos.	850
274	CP Pop-up waste jali	1	Nos.	650
275	Double side tape	1	Nos.	950
276	Silicon white	1	Nos.	250
277	Silicon Black	1	Nos.	280
278	Silicon Gun	1	Nos.	250
279	Multipurpose Grease	1	Kg	250
280	Harrison PadLock (Normal)	1	Nos.	150
281	Glass Window Putty 10 kg	1	Pkt.	1250
282	Bleaching Powder	1	Kg	70
283	SR (Bond Set)	1	Kg	270
284	Sunmica, Greenlam, Marino Make	1	Sqft,	45
285	Telescope Channel 14", ISI Marked Heavey Duty	1	Nos	90
286	Telescope Channel 16", ISI Marked Heavey Duty	1	Nos	108
287	Telescope Channel 18", ISI Marked Heavey Duty	1	Nos	135
288	Sand	1	Cuft.	27
289	Dust	1	Cuft.	31.5
290	Aggregates 20 MM	1	Cuft.	45
291	Aggregates 10 MM	1	Cuft.	36
292	Zera Rodi	1	Cuft.	40.5
293	1st class Bricks	1	Nos	8
294	2nd class Bricks	1	Nos	7
295	3rd class bricks	1	Nos	6

296	Birla White Putty 5Kg	1	Nos	300
297	Portland Pozzolana Cement 53 Grade (50 Kg), Ambuja, JK, ACC	1	Bag	350
298	Portland Pozzolana Cement 43 Grade (50 Kg), Ambuja, JK, ACC	1	Bag	340
299	PVC gitty 6 mm, ISI Marked	1	Pkt	22.5
300	30X7 drilling screw, ISI Marked	1	Pkt	45.9
301	30X8 drilling screw, ISI Marked	1	Pkt	49.5
302	1" gypsum screw, ISI Marked	1	Pkt	232.2
303	1.5" drilling screw, ISI Marked	1	Pkt	406.8
304	1" 17 No. Nails, ISI Marked	1	Kg	220.5
305	1.5" 14 No. nail, ISI Marked	1	Kg	69.3
306	3" 10 No. nails , ISI Marked	1	Kg	69.3
307	3" 12 No. Nails, ISI Marked	1	Kg	69.3
308	2" 12 No. nails , ISI Marked	1	Kg	69.3
309	Drill bit 6 MM For Drilling in M.S. , ISI Marked	1	Nos	162
310	Drill bit 8 MM For Drilling in M.S. , ISI Marked	1	Nos	216
311	Drill bit 12 MM For Drilling in M.S. , ISI Marked	1	Nos	306
312	Drill bit 6 MM For Drilling in wooden , ISI Marked	1	Nos	162
313	Drill bit 8 MM For Drilling in wooden , ISI Marked	1	Nos	216
314	Drill bit 12 MM For Drilling in wooden , ISI Marked	1	Nos	306
315	Veneer 4MM thickness , Greenlam, Century, Vergo	1	Sqft,	67.5
316	Wooden cutter Blade 5"	1	Nos.	150
317	Tile Cutting Blade 4"	1	Nos.	120
318	Tower Bolt ss 4"	1	Nos.	170
319	Tower Bolt ss 6"	1	Nos.	140
320	Almirah handle 6"	1	Nos.	150
321	Almirah handle 8"	1	Nos.	200
322	Door Handle 8"	1	Nos.	150
323	Tikora 4"	1	Nos.	200
324	Tikora 6"	1	Nos.	450
325	Glass cutter pensil	1	Nos.	650

326	Butt Hinge ss 4"	1	Nos.	250
327	Steel Electrical Planer Blade	1	Nos.	350
328	Aluminum Door Lock 150 mm	1	Nos.	750
329	Self screw 8mm*1"	1	Pkt.	350
330	Self screw 10mm*1"	1	Pkt.	250
331	Mortise lock with handle complete set	1	Nos.	2550
332	Toughen Glass Door lock complete set	1	Nos.	3550
333		1		
Painting works				
334	Acrylic emulsion paint interior paint works including manpower and material old works 02 or more coat	1	sqft.	12
335	POP works including manpower and material	1	sqft.	10
336	Exterior Painting works including manpower and material	1	sqft.	20
337	Enamel painting works including manpower and material	1	sqft.	15
338	Scaffolding works	1	sqft.	20
339	Epoxy painting works including manpower & material	1	sq.ft.	220
Flooring works				
340	Vitrified floor tiles including manpower and material	1	sq.ft	125
341	Kota stone flooring works including manpower and material	1	sq.ft	110
342	Wall tiles Ceramic including manpower and material	1	sq.ft	90
343	Decorative brick facia including manpower and material	1	sq.ft	70
Façade works				
344	Silicon filling works in ACP cladding including manpower and material	1	sq.ft.	120
345	Silicon filling works in Glass works including manpower and material	1	sq.ft	120
Pipeline works				
346	Supply & installation of 25-50mm CPVC pipeline with fittingworks including manpower and material (pipe make-prince astral)	1	ft.	60
347	Supply & installation of 50-75mm CPVC pipeline with fitting works including manpower and material (pipe make-prince astral)	1	ft.	70
348	Supply & installation of 50-75mm CPVC pipeline with fitting works in including manpower and material (pipe make-prince astral)	1	ft.	90
349	Supply & installation of 75-100mm CPVC pipeline with fitting works in including manpower and material (pipe make-prince astral)	1	ft.	100

350	Supply & installation of 25-50mm UPVC pipeline with fittingworks in including manpower and material (pipe make-prince astral)	1	ft.	80
351	Supply & installation of 50-75mm UPVC pipeline with fittingworks in ACP claddingincluding manpower and material (pipe make-prince astral)	1	ft.	100
352	Supply & installation of75-100mm UPVC pipeline with fitting works in including manpower and material (pipe make-prince astral)	1	ft.	120
353	Supply & installation of 100-150mm UPVC pipeline with fitting works in ACP cladding including manpower and material (pipe make-prince astral)	1	ft.	140
354	Supply & installation of 100mm Alley water-supply pipeline with fitting works including manpower and material	1	ft.	550
355	Supply & installation of 150mm Alley water-supply pipeline with fitting works including manpower and material	1	ft.	650
356	Installation of wello in pipeline 100-150 mm including manpower and material	1	ft.	220
357	providing and fixing of ACP cladding sheet including scaffolding works including manpower and material	1	Sq.ft.	350
WTP & RO MATERIAL				
358	Hardness Kit, ISI Marked	1	Nos	540
359	Dosing Chemical, ISI Marked	1	ltr	180
360	Primary Filter, ISI Marked	1	Nos	4050
361	Membrane Cleaning Chemical, ISI Marked	1	ltrs	180
362	TDS meter	1	Nos.	300
363	Membranes make Dow- Model-BW30-400	1	Nos.	30000
364	Pressure Guage0-24 Kg, Dial -65mm Bottom connection 1/4 "	1	Nos.	1450
365	Solenoid Valve Size 1.5 ", NC type, ss 316 falcon make	1	Nos.	15000
366	PP wound cartridge filter 5MX20", long big blue	1	Nos.	1000
367	Dosing pump0-6 LPH, Model ECO dose	1	Nos.	9500
368	Descalling works of membrane/ Membrane cleaning works	1	Nos.	5000
STP MATERIAL				
369	Chlorine	1	ltr	36
370	Gear oil, HP, Indian Oil	1	Lit	351
371	Rubber Gasket, ISI Marked	1	Kg	135
372	V Belt, ISI Marked	1	Nos	400.5
373	Urea, Kirbco, ISI Marked	1	Kg	18
374	DAP, ISI Marked	1	Kg	22.5

375	Blower Filters, ISI Marked	1	Nos	2250
376	Filter Media (Plastic) as per manufacturer specification	1	CUM	11250
377	Carbon stone , ISI Marked	1	Nos	1125
378	Defuser, ISI Marked	1	Nos	1125
379	Exhaust fan blades (M.S.) 24 inches , Crompton	1	Nos	225
380	Activated Carbon Filter (Complete with casing/Housing)	1	CUM	225000
381	Check Valves 1.5", ISI Marked	1	Nos	2286
382	Automatic Pressure Switch Valves , DANFOSS, ISI Marked	1	Nos	6795
383	Grease Jali, ISI Marked	1	Kg	441
384	Filter Press Cloth, ISI Marked	1	Nos	801
385	Suction-Gasket , ISI Marked	1	Nos	405
386	Pressure Gauge , ISI Marked	1	Nos	1836
387	Pressure Gauge Siphon , ISI Marked Heavy Duty	1	Nos	1836
388	Hydro- pneumatic Pressure Vassel 100 Ltrs. (10 Bar)	1	Nos	14283
389	Air Blower Pressure Gauge 15 Bar, ISI Marked	1	Nos	2250
390	Nut-Bolt	1	kg	70
Cleaning and antibacterial treatment of overhead water & fire tank.				
391	500 ltr. Capacity	1	Nos	250
392	1000 ltr. Capacity	1	Nos	500
393	1500 ltr. Capacity	1	Nos	750
394	3000 ltr. Capacity	1	Nos	1000
395	12000 ltr. Capacity	1	Nos	1500
396	15000 ltr. Capacity	1	Nos	2000
Cleaning and antibacterial treatment of underground water & fire tankat STP & UGWTP				
397	STP sewage storage tanks 50000 ltrs. (5Nos), Total Capacity- 250 KL	1	Nos	30000
398	STP treated water tanks 50000 ltrs. capacity -250KL	1	Nos	20000
399	WTP Raw Water-Tanks 200KL X2=400KL	1	Nos	10000
400	WTP treated Water-Tanks 200KLX2=400 KL	1	Nos	10000
401	WTP Fire tanks 100KLX2=200 KL	1	Nos	3000
402	WTP -HVAC Tank 100KL	1	Nos	5000

Glass Façade & ACP cleaning both sides internal and outer area as per requirement.				
403	Internal Side	1	sqf.ft	4
404	Outer Side	1	sq.ft.	5
Painting, False Ceiling and glass works				
405	Providing & applying of painting works with repairing (making the even surface of wall by joint/crack filling with putty) works of wall on old works.(2 OR MORE COATS)	1	Sq.ft.	12
406	Grid False ceiling repairing with material	1	sq.ft.	35
407	Fixing of Gypsum board false ceiling repairing with material	1	sq.ft.	68.4
408	providing and fixing grid false ceiling of armstone make or equivalent with hangers,, mains, channels	1	sq.ft.	150
409	providing and fixing METAL false ceiling of armstone make or equivalent with hangers,, mains, channels	1	sq.ft.	200
410	providing & fixing of 5 mm plain glass in windows, doors, with material make saint gobain or equivalent	1	sq.ft.	110
411	Fixing of toughened glass of 12 MM thickness with Material	1	sq.ft.	450
412	Fixing of twin glass of 10 thickness with material	1	sq.ft.	550
413	Fixing of mirror with babling & installation	1	Sqft,	450
FIRE FIGHTING WORKS				
414	Refilling of fire extinguisher Type- ABC, CO2 , AFFF,DCP (5Kg)/4.5 Kg.	1	Nos	630
415	Refilling of fire extinguisher Type- ABC, CO2 (2Kg)	1	Nos	360
416	Refilling of fire extinguisher Type- CO2 clean agent (2Kg)	1	Nos	4500
417	Hydrostatic pressure test of fire extinguishers with certificate - CO2 type, 9kg Extinguisher	1	Nos	950
418	Hydrostatic pressure test of fire extinguishers with certificate - ABC type	1	Nos	450
419	Hose pipe of 30mts. With SS coupling (make- Life gourd/Omex)	1	Nos	5400
420	Hose pipe of 15mts. B-Type (make- Life gourd/Omex)	1	Nos	3150
421	Fire extinguisher Safety pins, ISI Marked	1	Nos	13.5
422	Fire extinguisher horn, ISI Marked	1	Nos	227.7
423	Fire extinguisher Clamps , ISI Marked	1	Nos	36
424	Fire extinguisher Pressure indicator, ISI Marked	1	Nos	180
425	Brasso	1	ltrs.	108
426	Sprinkler, ISI Marked	1	Nos	202.5
427	MCP glasses	1	Nos	18

428	Fire Hydrant Lugs - Gun metal , ISI Marked	1	Nos	450
429	Hydrant Blank cap, ISI Marked	1	Nos	54
430	Hydrant gate valve 63mm, Sant, Zoloto, Ledar	1	Nos	2430
431	Smoke Detector with built in LED, mounting base complete with all connection etc. (Make - cooper/Agni/Dakush/honewell)	1	Nos	1320
432	Heat Detectors of electronic Rate of Rise cum fixed temperature (Dual Thermistor) type with mounting base complete with all connection etc. (Make - cooper/Agni/Dakush/honewell)	1	Nos	1250
433	Response indicator on surface/recessed MS Box having two LED's metallic covers complete with all connections etc.	1	Nos	150
434	Sector panels suitable for following zones, complete with visual indications for short circuit fault, open circuit fault fire conditions and all other standard facilities as per IS:2189, mimic diagram for all area/zone covered complete with all connections, interconnections:-			
435	4 Zone fire alarm control panel as per IS: 2189 with backlit LCD Display	1	Nos	6875
436	6 Zone fire alarm control panel as per IS: 2189 with backlit LCD Display	1	Nos	9375
437	10 Zone fire alarm control panel as per IS: 2189 with backlit LCD Display	1	Nos	12100
438	Cost of Fire alarm armoured FRLS cable 2 x 1.5 sqmm	1	mtr	68
439	Cost of manual call point	1	Nos	500
440	SS Shut-off Nozzle 18mm to 25mm,	1	Nos	440
441	Automatic Air release valve	1	Nos	425
442	Rubber Star-Coupling L-110	1	Nos	150
443	Rubber Bellow (80mm to 100mm)	1	Nos	1200
444	Hydrant lock	1	Nos	80
445	Fire Hydrant cabinet lock	1	Nos	300
446	Hydrant rubber ring	1	Nos	45
447	MS Flanges 6" & 4", ISI Marked Heavy Duty	1	Nos	675
448	MS Long Bend 6" & 4", ISI Marked Heavy Duty	1	Nos	2205
449	MS Short Bend 6" & 4", ISI Marked Heavy Duty	1	Nos	1845
450	Pressure Gauge (4kg/cm ² to 14 kg/cm ²)	1	Nos	450
451	Pressure Switch	1	Nos	1485
452	Distilled Water	1	Ltrs.	13.5
453	Petroleum Jelly	1	Kg.	252
454	NRV 80 mm (Uttam/Zollotto) dual plate	1	Nos	5247

455	NRV 100 mm (Uttam/Zollotto) duel plate	1	Nos	6336
456	NRV 150 mm (Uttam/Zollotto) duel plate	1	Nos	8415
457	NRV 250 mm (Uttam/Zollotto) duel plate	1	Nos	14355
458	Butterfly valve 80mm (Uttam/Zollotto)	1	Nos	6500
459	Butterfly valve 100mm (Uttam/Zollotto)	1	Nos	8500
460	Butterfly valve 150mm (Uttam/Zollotto)	1	Nos	10000
461	Butterfly valve 150mm (Uttam/Zollotto)	1	Nos	12500
Electrical Materials & Works				
462	Halogen Tube 500 watt	1	Nos	60
463	Choke EBW236 Philips	1	Nos	408.38
464	Tube Light T5-28W Philips	1	Nos	111.38
465	Choke EBE(Slim) 128TL5 Philips	1	Nos	198
466	Chock ,C8 913X/11, Philips	1	Nos	148.5
467	CFL, PL-L 36W/865/4P, Philips	1	Nos	111.38
468	Battery terminal	1	Nos	50
469	CFL, PL-C/4P 18W, Philips	1	Nos	99
470	Choke, PL-C/4P/2P 18W, Philips	1	Nos	173.25
471	CFL, PL-C/2P 11W -18W, Philips	1	Nos	92.82
472	Chock, PL-C/2P 18W, Philips	1	Nos	173.25
473	0.5W LED Bulb, Osram/ Phillips/Anchor or equivalent	1	Nos	40
474	Pendant bulb holder	1	Nos	20
475	Cable ties 200mm	1	pkt.	110
476	Tube Light for Fly Caughter Machine	1	Nos	198
477	Chock or Fly Caughter Machine	1	Nos	680.63
478	Switch (Modular Type), 6A , ABB/legrand/precision	1	Nos	62
479	Switch (Modular Type), 16A , ABB	1	Nos	69
480	Socket (Modular Type), 6A , ABB	1	Nos	95
481	Socket (Modular Type), 16A , ABB	1	Nos	148
482	Fan regulator in two modular, ABB	1	Nos	295
483	Modular Box PVC 8X3, ABB/legrand/precision	1	Nos	95

484	Modular Box PVC 4X3, ABB/legrand/precision	1	Nos	30.94
485	Modular Box PVC 5X3, ABB/legrand/precision	1	Nos	50
486	Modular phase plate PVC 8X3, ABB/legrand/precision	1	Nos	56.93
487	Modular phase plate PVC 8X6, ABB/legrand/precision	1	Nos	102.72
488	Modular phase plate PVC 4X3, ABB/legrand/precision	1	Nos	38.37
489	Modular phase plate PVC 5X3, ABB/legrand/precision	1	Nos	28.47
490	Combined Unit Box Switch Socket With 2 Fixing Holes, 20A,Anchor	1	Nos	123.75
491	Four-Way power Extension Board , 6A Anchor/Philips/Havells	1	Nos	334.13
492	12 module extension board with socket & switch of 6 & 16 amp, Anchor/ABB	1	Nos	603
493	16 A 3-pin Top, Anchor/ Havells	1	Nos	68.07
494	6 A 3-pin Top, Anchor/ Havells	1	Nos	43.32
495	HT/LT Panel Indicator, ISI Marked	1	Nos	68.07
496	Round type down Light Glass Cover, ISI Marked	1	Nos	99
497	Complete Chemical Earthing, ISI Marked	1	Nos	12375
498	PVC Batten (10Ft), ISI Marked	1	Nos	40.5
499	Batten gitty ,	1	pkt.	18
500	PVC Gitty 6mm,	1	pkt.	27
501	PVC Conduit, ISI Marked	1	RM	19.8
502	MS Flexible conduit, ISI Marked	1	RM	55
503	M S Conduit 25 mm ISI Marked	1	RM	50
504	PVC Tapes, ISI Marked	1	Nos	9.9
505	Cotton Tapes, ISI Marked	1	Nos	86.63
506	Amp Tape, ISI Marked	1	Nos	86.63
507	Capacitor 2.5 mfd	1	Nos	18
508	Capacitor 3.5 mfd	1	Nos	27
509	Heavy Duty Capacitor, EPCOS	1	Per KVAR	400
510	Thimble, Copper, Ring type ,16mm, ISI Marked	1	Nos	8.1
511	Thimble, Copper, Ring type , 35mm, ISI Marked	1	Nos	11.7
512	Thimble, Copper, Pin type , 16mm, ISI Marked	1	Nos	7.2
513	Thimble, Copper, Pin type , 35mm, ISI Marked	1	Nos	11.7

514	3 Pole Contactor 25A to 32A , (Siemens/L&T/Schneider)	1	Nos	1361.25
515	3 Pole Contactor 40A (Siemens/L&T/Schneider)	1	Nos	2722.5
516	3 Pole Contactor 50A, (ABB/Siemens/Schneider)	1	Nos	4321.35
517	Auxiliary contact block 2no 2nc , (Siemens/L&T/Schneider)	1	Nos	400.95
518	Thermal overload relay 0.11 to 16 Amp,(Siemens/L&T/Schneider)	1	Nos	1242.45
519	Thermal overload relay 16 to 40 Amp , (Siemens/L&T/Schneider)	1	Nos	1249.88
520	Single phase preventer , (Minilec)	1	Nos	928.13
521	Connector Strip, 12 Terminal, 6A, ISI Marked	1	Nos	37.13
522	Connector Strip, 12 Terminal, Heavy duty, 100A, ISI Marked	1	Nos	1361.25
523	Single Phase Energy Meter, Electricity Consumption KWH Meter 1 Yr Manufacturer Warranty, 5-30 Amps - ISI Marked	1	Nos	1113.75
524	Three Phase Energy Meter, 4 Wire ,Electricity Consumption KWH Meter 1 Yr Manufacturer Warranty, 10-60 Amps - ISI Marked	1	Nos	2000
525	Three phase Digital multifunction energy meter Schneider/L&T/Siemens	1	Nos	9000
526	CT 2000/5, AE	1	Nos	556.88
527	CT 1600/5 AE	1	Nos	556.88
528	CT 400/5, AE	1	Nos	433.13
529	CT 60/5 ,200/5, AE	1	Nos	433.13
530	Photocell sensor for street light make –Schneider, L&T, Siemens	1	Nos	2500
531	Digital timer for street lights (Daily, Weekly Programmable) Make-Siemens/L&T/Schneider	1	Nos	1700
532	Batteries under buy back scheme , 3.5AH (Exide/Amron/Su-kam or equivalent)	1	Nos	788.4
533	Batteries under buy back scheme (Exide/Amron), 7AH (Exide/Amron/Su-kam or equivalent)	1	Nos	866.25
534	Batteries under buy back scheme (Exide/Amron/Su-kam or equivalent), 12AH	1	Nos	1856.25
535	Batteries under buy back scheme (Exide/Amron/Su-kam or equivalent), 100AH	1	Nos	6558.75
536	Batteries under buy back scheme (Exide/Amron/Su-kam or equivalent), 150AH	1	Nos	10147.5
537	Transformer Oil	1	Lit	145
538	20 mm dia. ISI marked, PVC conduit	1	Metre	15
539	20 mm PVC bends	1	each	5.7
540	20 mm PVC junction box, two way	1	each	13
541	20 mm dia. ISI marked, steel conduit	1	Metre	53
542	Modular GI box for 4 module	1	each	47.5

543	Modular GI box for 2 module	1	each	32
544	Modular base & cover plate for 2 module	1	each	47
545	Modular base & cover plate for 4 module	1	each	65
546	Brass pendant holder	1	each	38
547	Call bell/ buzzer, single phase	1	each	85
548	PIR Occupancy sensor	1	each	3200
549	Visiting charges of service engineer for 500KVA Diesel Generator	1	Visit	5500
550	Visiting charges of service engineer for 1010KVA Diesel Generator	1	Visit	7500
551	LED light Driver for outdoor lights, 50W, IP66, Efficiency>88%, BIS Certified, Constant Current driver	1	Nos	550
552	LED light Driver 2x18W, Efficiency>88%, BIS Certified	1	Nos	350
553	LED light Driver 18W, Efficiency>88%, BIS Certified	1	Nos	100
554	LED light Driver 16W, Efficiency>88%, BIS Certified	1	Nos	95
555	LED strip	1	Nos	100
556	B' Series MCB, 63A TPN, legrand	1	Nos	1324.13
557	RCCB, 40A FP, legrand	1	Nos	2993.52
558	RCCB, 63A FP, legrand	1	Nos	3393.23
559	6 amps. to 32 amps. ratings , SP MCB, "C" curve,10 KA breaking capacity	1	Nos	138
560	6 amps. to 32 amps. ratings , DP MCB, "C" curve,10 KA breaking capacity	1	Nos	390
561	6 amps. to 32 amps. ratings , TP MCB, "C" curve, 10 KA breaking capacity	1	Nos	595
562	6 amps. to 32 amps. ratings , TPN MCB, "C" curve, 10 KA breaking capacity	1	Nos	835
563	40 amps., 2 pole isolator	1	Nos	260
564	63 amps., 2 pole isolator	1	Nos	290
565	40 amps., 4 pole isolator	1	Nos	536
566	63 amps., 4 pole isolator	1	Nos	695
567	25 amps. rating, 2 pole RCCB, 30mA	1	Nos	1420
568	40 amps. rating, 2 pole RCCB, 30mA	1	Nos	1720
569	63 amps. rating, 2 pole RCCB, 30mA	1	Nos	2000
570	40 amps. rating, 4 pole RCCB, 30mA	1	Nos	1995
571	63 amps. rating, 4 pole RCCB, 30mA	1	Nos	2000
572	3 pole MCCB, 110A, 16KA, ABB	1	Nos	3450

573	4 pole MCCB, 200A, 36KA, ABB	1	Nos	14200
574	4 pole MCCB, 400A, 50KA, ABB	1	Nos	25600
575	20 amps. SPN, industrial type socket outlet, with plug top and metal chained cover in sheet steel enclosure	1	Nos	695
576	30 amps. TPN, industrial type socket outlet, with plug top and metal chained cover in sheet steel enclosure	1	Nos	1985
577	2+6 way, SPN, single door, MCB DB	1	Nos	990
578	2+10 way, SPN, single door, MCB DB	1	Nos	1205
579	12 way, SPN, double door, MCB DB	1	Nos	1495
580	4 way (4+12), TPN, MCB DB, double door, horizontal type	1	Nos	2580
581	Brass compression gland for (35 mm) 3½ X 50 sq. Mm 1.1 KV grade cable	1	Nos	95
582	Brass compression gland for (45 mm) 3½ X 95 sq. Mm 1.1 KV grade cable	1	Nos	150
583	Brass compression gland for (57 mm) 3½ X 185 sq. Mm 1.1 KV grade cable	1	Nos	290
584	Aluminium lugs for 10 sq. mm cable	1	Nos	4
585	Aluminium lugs for 16 sq. mm cable	1	Nos	5
586	Aluminium lugs for 25 sq. mm cable	1	Nos	6
587	Aluminium lugs for 50 sq. mm cable	1	Nos	7
588	Aluminium lugs for 95 sq. mm cable	1	Nos	9
589	Aluminium lugs for 120 sq. mm cable	1	Nos	19
590	Aluminium lugs for 185 sq. mm cable	1	Nos	29
591	Aluminium lugs for 300 sq. mm cable	1	Nos	65
Earthing material, Nuts & bolts etc.				
592	Lightning finial, 25 mm dia X 300 mm long, G.I.	1	each	327
593	20 mm X 3 mm G.I. Tape (0.461 kg/mtr)	1	kg	78
594	25 mm X 5 mm G.I. strip (1.0 kg/mtr)	1	kg	74
595	600 mm X 600 mm X 6 mm thick G.I. Plate	1	each	1938
596	8 SWG copper wire (4.0 mm dia)	1	kg	640
597	600 mm X 600 mm X 3 mm thick copper plate (10.5 kg)	1	each	6548
598	50 mm X 5mm copper strip (2.30 kg/mtr)	1	kg	680
599	6 SWG G.I. Wire	1	kg	81
600	GI saddle 20mm x 3mm	1	each	2.5
601	GI saddles 19mm x 0.55mm for conduit	1	each	1.2

602	16 mm X 125 mm bolts and nuts with washers	1	each	25.25
603	16 mm X 40 mm bolts and nuts with washers	1	each	8.3
604	Funnel	1	each	25
605	G.I. nuts and through bolts with washer	1	each	38
606	15 mm long X 6 mm dia G.I. bolts and nuts	1	each	6.5
607	10 mm X 25 mm long G.I. bolt with nut etc	1	each	12.5
608	6 mm dia rivet/ stud/ bolts and nuts	1	each	4.25
609	25mm X 3mm bolts & nuts	1	each	3.1
610	38mm X 10mm bolts & nuts	1	each	9.25
611	G.I. plate (10 cm X 10 cm X 5 mm)	1	kg	65
612	250 mm X 200 mm H.T. danger notice plate	1	each	72
613	32 mm dia G.I. Pipe (light class)	1	metre	325
614	Charcoal	1	kg	8
615	Coke	1	kg	10
616	Salt	1	kg	8
617	PVC sleeve	1	metre	7
618	Complete Chemical Earthing (Including nuts & bolts, Strip etc) ISI Marked	1	Nos	12375
619	PVC, 20mm Flexible Pipe	1	Rm	30
Geyser material				
620	Electric Geyser Heating elements, 2KW make-Thetta	1	Nos	250
621	Electric Geyser Heating elements, 3KW make-Thetta	1	Nos	390
622	Thermostat, sundek	1	Nos	250
623	Thermocut, sundek	1	Nos	115
624	Geyser Assembly, 25ltr. sundek	1	Nos	450
625	Geyser outer Body, Thermoking, 03Ltr	1	Nos	700
626	Geyser outer Body, Thermoking, 25ltr	1	Nos	900
627	Rubber gasket-ISI Marked	1	Nos	290
628	03Ltr. Instant Geyser complete fitting, 3000watt, Thetta	1	set	2150
629	Geyser Drum , 03 litre, Khaitan/ Thermoking	1	Nos	650
630	Geyser Drum , 25 litre, Khaitan/ Thermoking	1	Nos	900

631	Geyser element with assembly, 25 litre, Racold	1	Nos	750
632	Thermocut, Racold	1	Nos	1550
633	Geyser Indicators, Racold	1	Nos	150
634	Geyser Indicators	1	Nos	27
635	Geyser Fastner, 10mm	1	Nos	12
Motors Rewinding				
636	Charges for motor rewinding 1 HP to 5 HP including bearing, seal, packing, cartage etc.	1	Nos	4455
637	Charges for motor rewinding 7.5 to 10 HP including bearing, seal, packing, cartage etc.	1	Nos	8316
638	Charges for motor rewinding 12.5 to 15HP including bearing, seal, packing, cartage etc.	1	Nos	14850
639	Charges for motor rewinding 12.5 to 15HP including bearing, seal, packing, cartage etc.	1	Nos	24750
640	Charges for submersible motor rewinding 5HP to 7.5 HP including bearing, seal, packing, cartage etc.	1	Nos	8217
641	Charges for submersible motor rewinding 15HP including bearing, seal, packing, cartage etc.	1	Nos	5346
642	Charges for Sump Pump rewinding 01 HP to 3HP including bearing, seal, packing, cartage etc.	1	Nos	4050
643	Charges for Sump Pump oil filling 3 HP to 5 HP including bearing, seal, packing, cartage etc.	1	Nos	4455
644	Charges for Exhaust Fan rewinding of 12" with bearing etc. under buyback	1	Nos	810
645	Charges for Exhaust Fan rewinding of 14" with bearing etc. under buyback	1	Nos	540
646	Charges for Exhaust Fan rewinding of 18" with bearing etc. under buyback	1	Nos	720
647	Charges for Exhaust Fan rewinding of 24" with bearing etc. under buyback	1	Nos	900
648	Charges for ceiling fan rewinding with bearing etc.	1	Nos	330
649	Charges for pedestrian fan rewinding with bearing etc.	1	Nos	945
650	Charges for air curtain rewinding with bearing etc.	1	Nos	882
651	Exhaust Fan Blade 14" to 18"	1	Nos	225
Cables & jointing kits				
652	1.5 SQMM CU. FRLS PVC insulated Wire, KALINGA/Havells/Finolex	1	RM	11.7
653	2.5 SQMM CU. FRLS PVC insulated Wire, KALINGA/Havells/Finolex	1	RM	18.9
654	1.5 sqmm 3 core cu cable FRLS PVC insulated, KALINGA/Havells/Finolex	1	RM	43.2
655	1.5 sqmm 2 core cu cable, KALINGA/Havells/Finolex	1	RM	31.5
656	2.5 sqmm 3 core cu cable, KALINGA/Havells/Finolex	1	RM	70.2

657	4.0 sq. mm ISI marked, FRLS PVC insulated, single core copper conductor cable	1	RM	32
658	4 sqmm 3 core cu cable, KALINGA/Havells/Finolex	1	RM	103.5
659	6 sqmm 4 core cu cable, KALINGA/Havells/Finolex	1	RM	202.5
660	10 sq. mm ISI marked, FRLS PVC insulated, single core copper conductor cable	1	RM	67
661	16 sq. mm ISI marked, FRLS PVC insulated, single core copper conductor cable	1	RM	110
662	35 sq. mm ISI marked, FRLS PVC insulated, single core copper conductor cable	1	RM	170
663	16 sqmm 4 core Al Armad cable, KALINGA/Havells/Finolex	1	RM	103.5
664	25 sqmm 4 core Al Armad cable, KALINGA/Havells/Finolex	1	RM	139.5
1.1 KV, Aluminum conductor, PVC insulated, Inner sheathed, armoured PVC sheathed cables conforming to IS: 1554 as below size:-				
665	3.5 C X 50 Sq.mm, polycab/Havells/Finolex/Kalinga	1	RM	246.27
666	3.5 C X 95 Sq.mm, polycab/Havells/Finolex/Kalinga	1	RM	417.04
667	3.5 C X 185 Sq.mm, polycab/Havells/Finolex/Kalinga	1	RM	768.49
668	3.5 C X 240 Sq.mm, polycab/Havells/Finolex/Kalinga	1	RM	968.97
669	3.5 C X 300 Sq.mm, polycab/Havells/Finolex/Kalinga	1	RM	1188
Supply and jointing St thru cable termination Kit as per below rating:-				
670	3.5 core cable of size 50-95	1	Nos	3870
671	3.5 core cable of size 120-185	1	Nos	5850
672	3.5 core cable of size 225-300	1	Nos	7830
Supply & Making straight through joint & end termination joint for 11 KV grade XLPE cables of following sizes:-				
673	3C X 300 sq.mm. XLPE cable	1	Nos	3330
Supply & Making straight through joint & End termination joint for 33 KV grade XLPE cables of following sizes:-				
674	1C X 400 sq.mm. XLPE cable	1	Nos	7200
Making outdoor End termination joint for 33 KV grade XLPE cables of following sizes:-				
675	1C X 400 sq.mm. XLPE cable	1	Nos	7200
Making End termination joint for 33 KV grade XLPE cables of following sizes:-				
676	1C X 400 sq.mm. XLPE cable	1	Nos	7200
Making Indoor End termination joint for 33 KV grade XLPE cables of following sizes:-				
677	1C X 400 sq.mm. XLPE cable	1	Nos	7200
678	Charges for cable fault tracing of LT cable & HT cable	1	Nos	8100

679	Attestation cost of Form-C from Govt. approved Electrical Contractor for each Form-C	1	Nos	1500
HVAC (Heat Ventilation and Air Conditioning)				
680	De - scaling Chemical (Scale Foe)	Kg	1	150
681	Refrigerant R-134a	1	kg	700
682	Grease (Castrol)	1	Kg.	550
683	Nut and bolt	1	Kg.	250
684	Motor Coupling set	1	Nos.	1926
685	Contacto 3Pole Make :- L&T/ Siemens or equivalent Model :- MNX-40 Coil Voltage 240 V,	1	Nos.	4321
686	Contacto 3Pole Make :- L&T/ Siemens or equivalent Model :- MNX-25, (18) Coil Voltage 240V	1	Nos.	2720
687	OLR Relay (5-20 Amps.) Make- L&T/ Siemens or equivalent	1	Nos.	1600
688	Motor Terminal pate	1	Nos.	350
689	Thimble (cu) 150 mm	1	Nos.	85
690	Auxiliary Contactor NO NC (L&T ,Siemens)	1	Nos.	200
691	Electrical Panel lock	1	Nos.	65
692	Insulation tape	1	Nos.	10
693	V-belt for AHU	1	Nos.	400
694	Pry Filter for AHU	1	Nos.	550
695	Single Phase preventer (MPR D2)Make – Minilec or equivalent	1	Nos.	1850
696	Analog Amper/Volt Meter Make- L&T/ Siemens or equivalent	1	Nos.	750
697	Digital ampere/Volt meter Make- L&T/ Siemens or equivalent			
698	ON/OFF indicator 220V/24V	1	Nos.	70
699	Pressure gauge 0 – 6 kg/cm2 Make-Guru	1	Nos.	400
700	AHU blower bearing set	1	Nos.	8200
Cooling tower chemicals & spare parts				
701	Antiscalant & Corrosion Inhibitor	1	kg	255
702	Non Oxidizing BioZcide	1	kg	235
703	Non Oxidizing Biocide - Special effective for Legionella bacteria	1	kg	245
704	Bio Dispersant	1	kg	225
705	Glycol	1	Ltr.	120

706	PVC Fills (600X300X150)	1	Nos.	152
707	PVC Eliminator D-15 (5'x2')	1	Nos.	1513
708	Splash Cups	1	Nos.	19
709	Lock Spacer	1	Nos.	9.5
HVAC Services & Works				
710	Servicing of Cooling Tower Model ID – 14' X 15'	1	Per tower	13000
711	AHU coil cleaning with pressurized pump & chemical	1	Per AHU	800
712	FHU coil cleaning with pressurized pump & chemical	1	Per FCU	450
713	Charges for De-Scaling activities for Condenser including De-scaling chemical. Note - This includes: Isolating the condenser shell by closing Butterfly Valves, Opening of End cover, circulation of chemical in tubes, Brushing with soft nylon brushes, recirculation of chemical, flushing with fresh water and then closing of end cover including De-scaling chemical.	1	Per Machine	35000
714	Dismantling of pump at site i/c taking out the back pull out assembly from pump casing i/c to and fro cartage from site to works and back, dismantling and overhauling (including bearing, M seal etc.) of pump at works, reinstallation at site i/c., as required and Alignment of Condenser water pumps with motor 40 HP, capacity 152m3/h at 24 M. Make- ABB	1	Per Pump	19500
715	Dismantling of pump at site i/c taking out the back pull out assembly from pump casing i/c to and fro cartage from site to works and back, dismantling and overhauling (including bearing, M seal etc.) of pump at works, reinstallation at site i/c., as required and Alignment of Secondary chilled water pumps with motor 15 HP to 20 HP & VFD controlled. Make - M/s. Armstrong	1	Per Pump	14500
716	CARTRIDGE MECHANICAL SEAL of Condenser water pumps with motor 15HP 40 HP.	1	No's	9500
717	SET OF BEARINGS of condenser pump & Secondary Pump (1SET=2NOS.) Make - SKF/FAG/NBC	1	Set	2500

Liasoning Charges for Renewal of Lift License, Fire NOC & NOC for Pollution Control Board.				
718	Liasoning charges with Electrical Inspector for renewal of 12 nos LIFT License including testing of Lifts from licenced contractors & fee.	1	Nos	50000
719	Liasoning charges with Fire Inspector for renewal of FIRE NOC	1	Nos	50000
720	Liasoning charges with HSPCB for renewal "Consent to operate" and submiision of periodcal water test, sewerage and DG testing reports as required.	1	Nos	50000
721	Liasoning charges with Electrical Inspectorate (CEA) for renewal of 33/.433kV sub-station, Pilot plants etc. License including fee etc..	1	Nos	50000

Annexure -VII

Category	Designation	Basic	Bonus 8.33%	Total (3+4)	EPFO 13% (Basic+Bonus)	LWF	ESIC 3.25% (Basic + Bonus)	Total CTC (5+6+7+8)	EPFO 12%(Basic+Bonus)	ESIC 0.75% (Basic+Bonus)	LWF	Total Dedu (10+11+12)	Net Pay Per Person (5 - 13)	No. of staff required	Total CTC As per required qty (9x15)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
un-skilled	Mason Helper	12810	1067	13877	1804	50	451	16182	1665	104	25	1794	12083	1	16,182
	Plumber Helper	12810	1067	13877	1804	50	451	16182	1665	104	25	1794	12083	2	32,364
	Water Supply Attendant	12810	1067	13877	1804	50	451	16182	1665	104	25	1794	12083	3	48,546
	Carpenter Helper	12810	1067	13877	1804	50	451	16182	1665	104	25	1794	12083	1	16,182
	Electrical Helper	12810	1067	13877	1804	50	451	16182	1665	104	25	1794	12083	4	64,728
	Painter Helper	12810	1067	13877	1804	50	451	16182	1665	104	25	1794	12083	1	16,182
	HVAC operator helper	12810	1067	13877	1804	50	451	16182	1665	104	25	1794	12083	2	32,364
	Welder cum Fitter Helper	12810	1067	13877	1804	50	451	16182	1665	104	25	1794	12083	1	16,182
semiskilled	Complaint cell attendant	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	1	18,940
	Mason	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	1	18,940
	Sewer Man	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	2	37,880
	Fireman/Attendant	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	3	56,820
	WTP Operator/ Fire Pump Opt.	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	3	56,820
	Water body operators	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	1	18,940
	RO operators	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	2	37,880
	DG operator	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	3	56,820
	Welder cum Fitter	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	1	18,940
	AC plant operator	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	2	37,880
	Lift Operator	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	2	37,880
	Fire Pump Operator cum machnic	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	1	18,940
	Electrician	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	5	94,700
	Carpenter	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	1	18,940
	Plumber	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	4	75,760
	Painter	15000	1250	16250	2112	50	528	18940	1950	122	25	2097	14153	1	18,940
skilled	Substation Shift Attendant	18090	1507	19597	2548	50	637	22831	2352	147	25	2524	17073	4	91,326
	Electrical Supervisor	18091	1507	19598	2548	50	637	22833	2352	147	25	2524	17074	1	22,833
	HVAC supervisor	18092	1507	19599	2548	50	637	22834	2352	147	25	2524	17075	1	22,834
	Civil Supervisor (Civil)	18093	1507	19600	2548	50	637	22835	2352	147	25	2524	17076	1	22,835
	storekeeper	18094	1507	19601	2548	50	637	22836	2352	147	25	2524	17077	1	22,836
	Head Firemen	18091	1507	19598	2548	50	637	22833	2352	147	25	2524	17074	4	91,331
Highly Skilled	Senior Substation Shift Attendant	21210	1767	22977	2987	50	747	26761	2757	172	25	2955	20022	1	26,761
	Fire Officer	21210	1767	22977	2987	50	747	26761	2757	172	25	2955	20022	1	26,761
	Manager	27500	2291	29791	3873	50	968	34682	3575	223	25	3823	25967	1	34,682
	Total												491,567	63	1,229,950