

FACILITY MANAGEMENT AT NMIMS, MUMBAI

DESIGNATION: MAINTENANCE ENGINEER (1)

NAME: MANOJ GAWDE

SHIFT: GENERAL

Maintenance Engineer will supervise over all Building Management System. He will be responsible for the proper functioning and operations of the Facility Management Team. His responsibilities include the following:

Supervise all the works mentioned below:

1. Maintenance and proper functioning of Fire Fighting Alarm and Safety System
2. Maintenance and proper functioning of Public Address system
3. Maintenance and proper functioning of CCTVs
4. Maintenance and proper functioning of ACCESS CONTROL SYSTEM
5. Maintenance and proper functioning of Sewage Treatment Plant and Water Treatment Plant
6. Overall Repair and Maintenance of the building which includes Plumbing, Electrical work, carpentry work and other work as required.
7. Repair and maintenance of ACs.
8. Vendor management
9. Ensure the supply of safe drinking water in the building.
10. Proper Functioning of Lifts.

DESIGNATION: ELECTRICIAN (2)

1. NAME: Shankar	SHIFT: 7:00-16:00	Weekly Off: Saturday
2. NAME: Ashok	SHIFT: 13:00-22:00	Weekly Off: Sunday

Roles and responsibilities of Electrician:

1. Electrical Panel DB maintenance
2. Checking of daily operation of Transformer.
3. Operation of HT System

SOP FOR ELECTRICIAN:

(A) Procedure for Electrical Panel DB maintenance: The operation of Panel, DB maintenance should be safe, smooth and trouble free.

PROCEDURE:

1. Switch off the feeder to be serviced.
2. Clean the compartment with vacuum cleaner & clean the dust, carbon.
3. Clean the contactors, fixed & moving contacts, plunger, air vents with CTC
4. Clean the connection terminals & screws.
5. Check the loose connections of power & control cables & tighten the same.
6. Open and clean the MCB, MCCB & timer connection terminals.
7. Check & clean the fuse & fuse base if any.
8. Check the settings of MCCB & Timer.
9. Check the voltage measurement of Ph-Ph, Ph-N, Ph-E & N-E.
10. Check the Current measurement of R, Y, B phase.
11. Switch on the supply & observe the operation of control starters on no load & load.

FREQUENCY:

During shut down/Quarterly

RECORDS:

History card.

(B) Procedure for daily operation of Transformer. The operation of Transformer should be safe and correct.

Procedure:

1. Note the readings of voltage, current, frequency, KW, power factor & unit consumption the transformer supply in the unit consume at load manager or at Kiosk at an appropriate intervals.
2. Checking all the parameters whether are within the acceptable limits & checking the load.
3. If any voltage fluctuation or power cut is observed contact Supply Company on noting the KWH readings every day morning through the meter.

4. Taking the necessary steps to keep the power factor within the required limits. Monitor per day electrical consumption.

FREQUENCY-

Daily

RECORD:

Log sheet.

(C) To understand the basic concept & working of UPS and to get Uninterrupted Power Supply

Procedure:

1. Take readings every after two hours.
2. Take parameter from display board and log in log Book.
3. Maintained temperature in the room should be between 22°C to 25°C
4. The 10 KVA UPS system shall be operated in parallel redundant load sharing mode & shall have inbuilt circuitry to facilitate such operation.
5. Each UPS shall have inbuilt internal static switch and maintenance bypass switch with a provision to disable the same when required.
6. The 20 KVA UPS system shall be operated in isolated, redundant mode with a dual bus distribution system meant for servers.
7. All the server loads shall be supplied dual power through the use of rack mounted static transfer switches.(Interface).
8. If anything goes wrong, an alarm will be received on remote display & annunciation panel located in the BMS room, acknowledge the alarm & run to the UPS room for exact problem & contact concerned person as per the escalation matrix.
9. If UPS trips by any reason, first check that load is properly transferred on stand by UPS & also tackle Tripped UPS Load, then check the display & find out on which alarm UPS got tripped, immediately contact concerned person as per the escalation matrix.
10. Check the battery status on load as per schedules in the year.
11. Any unusual reading indication to be informed to Electrical Engg/FM.

(D) The procedure for operating Capacitor Bank in Auto, Manual & Checking and to Understand the Operations of Capacitor for maintenance purpose.

Procedure:

1. Capacitor in bank form for individual ACP.
2. Normally all are in auto mode, Electronic controller sense the PF of that particular ACP & switch ON Capacitor bank in Auto.
3. It is maintain 0.99 PF for the system according load it switching capacitors On & Off.
4. On display panel, we able to change the setting of desire PF.
5. Normal current of system is for 1 KVR = 1.39 Amps (Thump Rule)
6. As per check list maintain all reading, if any thing found wrong contact concern vendor as per escalation Chart.
7. while OFF load condition, it's automatically goes to Stand by mode.
8. If anything goes wrong contact concern Vendor as per Escalation cart.
9. We can keep capacitor panel ON by using display unit as it have three option 1.AUTO,2 MANUAL,3 PROGRAM.
 1. Auto:-Normal Condition
 2. Manual: - If it is not working in Auto we can put ON capacitors,
 3. Program: - To change the setting.

(E) Procedure for normal operation of High Tension system. The operation of HT System should be safe, smooth and trouble free.

Procedure:

1. Check position of all VCBs ON/OFF.
2. Check position of spring charged/ discharged.
3. Check for the relay flags setting.
4. Check voltage/ current of all the feeders.
5. Check proper functioning of voltmeter, ammeter and other indicating instruments.
6. Check all the indicator lamps.
7. Check if all light in the room are functioning.
8. Check the cleanliness of the room.
9. Inspect the entire panel for any visible abnormality.
10. Check tightness of electrical connections at VCB, SFU relays, tighten if loose. (check during maintenance).
11. Open and clean the inner side of panel. (Check during maintenance).

DESIGNATION: CARPENTER (2)

1. NAME: Amit	SHIFT: General	Weekly Off: Sunday
2. NAME: Sunil	SHIFT: General	Weekly Off: Sunday

Roles and responsibilities of Carpenter:

1. Disconnect and lock out the electrical supply before commencing any electrical work on the carpentry assets unless directed differently in the instructions below
2. Proper personal protective equipment is worn at all times
3. Upkeep and repair of facilities and buildings in terms of carpentry.
4. Check all ceiling for any damages (tiles or solid ceiling), repair/replace as required
5. Fits and installs prefabricated window frames, doors, doorframes, weather stripping, interior and exterior trim, and finish hardware, such as locks, letter drops, and kick plates, work stations.
6. Replaces damaged ceiling tile, Carpeted floor tile, and wall coverings.
7. Check all wooden works (doors, door jamb, cabinets etc.), repair/replace damaged portion or whole part as required
8. May install items, such as window shades, venetian blinds, and curtain rods, wall fans, and door locks for tenants.
9. Maintained and updated knowledge of techniques tools and materials to ensure high standard of execution with every project Experience
10. Conducted finishing touches to rough carpentry
11. Perform repair on windows floors and fixtures
12. Replace locks and hinges where required
13. Ensure safety protocols were met
14. Window hinges/Doors Lock repairs include External Façade windows and doors.
15. Fits and installs prefabricated window frames, doors, doorframes, weather stripping, interior and exterior trim, and finish hardware, such as locks, letter drops, and kick plates
16. General Carpentry works, Furniture repair, Furniture assembly, bolt and latch repair
17. Door and floor closers repair and replace
18. Maintain Checklist of cabin/classrooms in terms of carpentry.

DESIGNATION: BMS OPERATOR (2)

1. NAME: Kalpesh Patil	SHIFT: 7:00-16:00	Weekly Off: Sunday
2. NAME: Rajesh	SHIFT: 13:00-22:00	Weekly Off: Saturday

Key responsibilities of BMS Operator:

BMS operator will be responsible for the overall management of the following:

1. Proper functioning of the Fire Fighting Alarm and Safety System along with the fireman.
2. BMS operator will look after the proper functioning of Public Address system.
3. BMS operator will operate CCTV cameras of the building and keeps record of the proper functioning of camera installed in the building. He will also responsible for storing the backups of the footages.
4. BMS operator will keep track on the proper functioning of ACCESS CONTROL SYSTEM.
5. He will also look after Sewage Treatment Plan and Water Treatment Plant.
6. BMS operator will keep track on the preservation of water Supply in the building.
7. Drinking water in the building will be managed by BMS operator.
8. Any deviation in the functioning of the abovementioned operation will be immediately informed to Maintenance Engineer and the Deputy Registrar of Admin Dept.

SOP FOR BMS OPERATOR

(A) Fire Alarm System

1. Ensuring all related equipment are operating properly.
2. In case of faults coordinate with Maintenance Engineer to ensure timely completion of repairs
3. Ensure reports as required for operations are submitted.
4. Adhere to Corporate Risk requirements and documenting system interventions, including the coordination of fire watches when required.
5. Any ABNORMALITIES in the system to be brought to notice of Administration function of NMIMS.
6. All safety norms to be adhered to at all times

(B) Public Address system

1. Check / test system performance.
2. Check loose connections if any.
3. Attend any faults/ system hardware problems and rectify the same.
4. Any ABNORMALITIES in the system to be brought to notice of Administration function of SVKM.
5. All safety norms to be adhered to at all times.

(C). CCTV

Procedure:

1. For correct reporting and maintain the CCTV. We have total 376 cameras in our Classrooms, Service area, Canteen, Staircase, essential areas, exits, and other facility area.
2. Monitoring the CCTV which is installed in BMS room
3. Daily checks and summary logs for CCTV break down and any other maintenance.

4. On every day basis Security officer/Maintenance Engineer comes in the BMS room and take the over view the all CCTV system.
5. On every day basis we send the CCTV status to security officer as well as to Deputy Registrar, Admin.
6. If any defect is found in the recording or camera inform immediately to the Maintenance Engineer and the Deputy Registrar, Admin to resolve the issue.
7. Keep 30 days recording space in the CCTV servers.
8. Check the recording of events on daily basis.
9. If any incident happens the operator will check & trace the object with security officer.
10. Operation and Maintenance - Following to be ensured by Maintenance Engineer.
11. Ensuring all related equipments are operating properly.
12. In case of faults coordinate with Administration Department to ensure timely completion of repairs.
13. Ensure reports as required for operations are submitted.
14. Any ABNORMALITIES in the system to be brought to notice of Administration Department.
15. All safety norms to be adhered to at all times.

(D). ACCESS CONTROL SYSTEM

1. Operation and Maintenance - Following to be ensured by BMS Operator and Maintenance Engineer.
2. Ensuring all related equipments are operating properly.
3. In case of faults coordinate with Maintenance Engineer to ensure timely completion of repairs.
4. Ensure reports as required for operations are submitted.
5. Any ABNORMALITIES in the system to be brought to notice of Administration Department of NMIMS.
6. All safety norms to be adhered to at all times.

The basic objective of Access Control System is to improve the quality of security system, keep track of each individual maintain record of all staff & all process.

Procedure:

1. Keep the details of the employees/ students in the software and explain the use of ID card in accessing in and exiting from the building.
2. Registering the new ID card in Access Control System
3. If any agent's Access card is not working that will be resolved by BMS operator with the help of IT Department.
4. When Employee/Student Leaves the Organization or Resigns their Access card details will be deleted from the database.
5. When Employee's Card is Lost then that moment His/Her Card will be De-activated from the database.

(E). Sewage Treatment Plant

The main process involves treating of sewage and other waste related to kitchen and reusing the treated water for Chillers; flushing and gardening if required.

1. Operate and maintain common effluent treatment plant as per OEM instructions and recommendations.
2. Ensure that all the domestic (urinal/toilet/canteen etc) outlets are connected to collection tank through the bar screen Ensure that bar screen cleaned at regular intervals.
3. Ensure that continuous air is supplied to collection tank to keep the contents homogenized and aerated.

4. Output Monitoring – As effluent from plant will be utilized for AC make up water, parameters such as PH, Chloride, Iron, TSS, TDS, Hardness needs to be monitored as per schedule.
5. Water test reports to be submitted to the management periodically.
6. Keep Water test reports ready to be checked by Govt. bodies like BMC,MPCB,PWD etc...
7. Pump the raw sewage water from collection/equalization tank to the aeration tank.
8. Ensure that the flow is uniform and last for at least 16 hours a day.
9. Enter the start time and end time in the log book and maintain membrane checklist.
10. Ensure the flow of aerated water to the clarifier and allow the clarified water to over flow to the settling tank.
11. Return the settled sludge from the clarifier to the aeration tank to maintain sludge volume.
12. Ensure that all the filter cloth is set properly.
13. Pump the sludge to the filter press.
14. Direct the filtrate to the equalization tank.
15. Remove the sludge from the filter press and use it as manure for gardening.
16. Clean the filter cloth after each use or as and when required.
17. Preventive Maintenance of MBR,MCC Panel and other electromechanical equipment's to be done every month. Preventive Maintenance Schedule to be prepared.
18. To ensure all automatic valves, pumps, blowers, level switches etc. are working as per PLC logic programmed.
19. Ensure mixing blower is running continuously in Equalization tank, process blower is running bioreactor tank and Membrane blower is running in MBR tank.
20. Ensure Anoxic mixer is running continuously while plant is running in auto mode.
21. Check diffuser performance every day in equalization tank.
22. Check MINI screen operation, if required clean it or Clean as per schedule given (Fortnight).
23. Check the Oil level of Compressor and blower and top up as required. Clean the Air filter of Compressor on weekly basis.

(E). Water Treatment Plant

The main process involves treating of water to make it potable.

1. Operate and maintain common effluent treatment plant as per norms.
2. Ensure that all the potable water tape are cleaned at regular intervals.
3. Water test reports to be submitted to the management periodically.
4. Keep Water test reports ready to be checked by Govt. bodies like BMC,MPCB,PWD etc...
5. Enter the start time and end time in the log book and maintain membrane checklist.
6. Ensure the flow of aerated water to the clarifier and allow the clarified water to over flow to the settling tank.
7. Ensure that all the filter cloth is set properly.
8. Direct the filtrate to the equalization tank.
9. Clean the filter as and when required.
10. Preventive Maintenance Schedule to be prepared.
11. To ensure all automatic valves, pumps, blowers, level switches etc. are working as per PLC logic programmed.
12. Clean the Drinking water tank at regular interval.

DESIGNATION: CHILLER OPERATOR (2)

1. NAME: Rahul Kumar Yadav	SHIFT: 7:00-16:00	Weekly Off: Saturday
2. NAME: Rajamanikam	SHIFT: 13:00-22:00	Weekly Off: Sunday

Key responsibilities of Chiller Operator:

1. Troubleshoot, repair, inspect and maintain HVAC systems. Maintain the operator work station & laptop.
2. Perform maintenance and service repairs on pneumatic controls, electric controls and humidity controls
3. Develop and implement Chiller plant technical support for both controls and mechanical.
4. Maintenance and service repairs on split system air conditioning units such as: accidents, acid wash coils, pressure and temperature controls, setting mechanical unloaders, Glycol feeders, Thermal energy storage plants, and CFC data recordings to comply with EPA.
5. Perform maintenance and service repairs for heating systems such as: hot water boilers, steam boilers, glycol feeder, boiler combustion efficiencies and all gas fired resolving problems.
6. Perform maintenance and service repair on custom and packaged air handling units, unit ventilators, cabinet unit heaters, chilled and hot water fan coils units and exhaust fans.
7. Perform maintenance and service repairs on control air compressors and refrigerated air dryers
8. Perform maintenance and service repairs on pumps, variable frequency drives, soft starts and speed controls.
9. Monitor and test water conditions in hot water and chilled water systems using chemical treatment and glycol.
10. Perform maintenance and service repairs on hot water and chilled water piping, along with air and hydronic balancing.
11. May assist other trades as needed. Perform other duties as assigned.

DESIGNATION: FIREMAN (2)

1. NAME: Vishal Patil	SHIFT: 7:00-16:00/ Night	Weekly Off: Friday
2. NAME: Pratik Morajkar	SHIFT: 13:00-22:00/Night	Weekly Off: Thursday

Fireman will be responsible for maintaining and proper functioning of Fire and safety system of the building. Key Responsibilities of Fireman are as follows:

1. Ensuring all related equipment related to fire safety are operating properly.
2. In case of faults coordinate with Maintenance Engineer and Fire Safety Officer to ensure timely completion of repairs
3. Ensure reports as required for operations are submitted.
4. Adhere to Corporate Risk requirements and documenting system interventions, including the coordination of fire watches when required.
5. Any ABNORMALITIES in the system to be brought to notice of Administration function of NMIMS.
6. All safety norms to be adhered to at all times.
7. Follow the checklist on daily basis.