

**JAGAN NATH UNIVERSITY, JAIPUR
STANDARD OPERATING PROCEDURE
MAINTENANCE DEPT**

AIM:

The Maintenance Department works under the guidance of Estate Manager and assisted by Supervisors to look after the maintenance work (Electrical, Plumbing, Monitoring function of STP/ETPs). The aim of this "SOP" is to provide the services (Operation as well as repair and maintenance) in most effective manner. To achieve this aim, the following operating procedure has been devised and followed by all concerned members. The procedure is based on the requirements, available resources and in line with the policy of Jagan Nath University, Jaipur. The maintenance services are provided for 24x7 round the clock.

Scope of Work:

1. Operation, Repair and Maintenance of total Water Management System that includes.
 - Bore Well Pumps
 - Submersible / Mono Block / Sump Pumps
 - Water purifier (RO System)
 - Water Coolers
 - Water Geysers
 - Monitoring function of STP
 - Up keeping of all underground/ over head water tanks
 - Periodical water testing analysis.
 - Conservation of water by implementing rain harvesting system.
2. Repairing of all plumbing and sanitary items.
3. Repairing of all Offices, Hostels & Faculty Flats furniture.
4. Repair and Maintenance of all Electrical Fittings/ Equipments, main panels and Generators.

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5. Civil Work:

- Masonry work
- Water leakage/Seepage repairing work
- Periodical Color wash/OBD/Painting of Buildings
- Replacement of broken glass panes
- Overall updating of buildings of University Campus

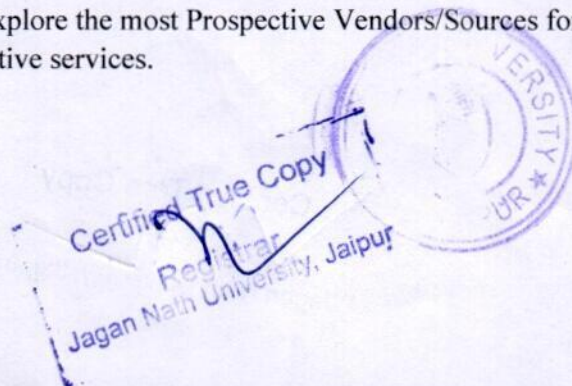
6. To supervise implementation of all Annual Maintenance Contracts like:

- AMC for Air Conditioners
- AMC for Neon Lights
- Pest Control as per the policy lay down
- AMC for RO

Roles and Responsibilities:

1. **Estate Manager:** Over all coordination, supervision and support of Maintenance activities. That mainly includes.

- Responsible to provide all the maintenance related services
- Routine monitoring of the complaint status and immediate solution/action plan for the unsolved problems.
- Monitoring and providing the required inputs for completion of work.
- Submission of proposal of Monthly/quarterly requirements of Electrical, Plumbing and Fitment/Carpentry items to higher authorities to obtain necessary approvals.
- Timely proposal for awarding the AMCs.
- Routine monitoring of Store/Stock Position including inventory and Material Consumption.
- To explore the most Prospective Vendors/Sources for achieving, better and cost effective services.



2. Supervisors Maintenance (Mechanical):

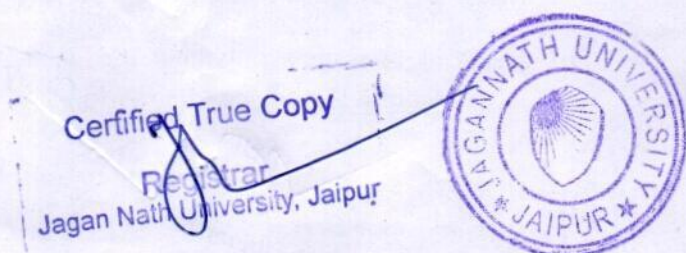
(RO plant, Pump Room, STP plants, Water Bodies, Plumbing/Sanitary, carpentry/Fitment and Civil related work).

1. Check the main water tank per shift per day.
2. Check the overhead tank level.
3. Check the RO system, softener plant.
4. Check the pump room all equipment and fountain/water body properly.
5. Attend the complaints timely.
6. Maintain the preventive maintenance i.e. TDS, Water tank cleanliness for sedimentation.
7. Periodical check of RO water from relevant labs as per the parameters.
8. Repair and maintain all plumbing equipment.
9. Keep the record of all plumbing equipment.
10. Monitors work done by outside contractors for adherence and report back to Estate Manager.
11. Responds to routine and emergency calls for repairs and service.

3. Supervisors Maintenance (Electrical):

(Electrical, EPABX & Phone Lines, Air Condition, Water Cooler & Lifts)

1. Complete repair, maintenance of electrical services.
2. Look after allotment of new telephone connections and lines where required repair and maintenance of telephone services in campus.
3. Maintenance of electrical services in hostels.
4. Note the all sub meter readings and preventive of monthly Electricity charges list for all vendors and residents of campus in log books.
5. Maintain the repairing job of electrical equipment.
6. Check all area lights and repair and change the fuse Bulbs Fans, Tubes, CFLs etc.
7. Supervise the outside vendor for electrical job work and confirm work completed satisfactorily.



8. Attend the all common vendor area and cafeteria electrical fault and complaints.
9. Check the all exhaust and fresh air fans in all blocks, cafeteria, labs etc.
10. Carry out preventive maintenance.
11. Keep the record of all equipment.
12. Attend all the break downs maintenance and emergency maintenance co-ordinate with assigned task to electrician.
13. Arrange the electrical connection for party function and conference area.
14. Providing necessary physical arrangement during training programmers, seminars and workshop of the institute i.e. logistic support.
15. Day to day repair and maintenance work in the institute Hostels and office buildings as per the complaints received from the users.
16. The buildings shall also be inspected at regular intervals and the necessity of the repairs and replacement shall be recorded and action taken accordingly since these are minor repairs and replacements the material shall be procured through authorized vendor / local market as per the store procurement procedure. After the materials are procured the same shall be entered in the stock register by store.
17. The work shall be executed in house through the available manpower i.e. electrician under the Electrical supervisors. Other than the above type of repairs regular maintenance likes air conditioner (duct, split, water cooler, and lift EPABX) to be done with coordination of outsourced vendors.

Operational Procedure:

1. Operation of Water Supply System.

- a) 24 Hrs water supplies are to be provided (Drinking Water, Domestic Water and STP water).
 - i. All Academic Blocks
 - ii. All Hostel Blocks
 - iii. All Faculty Flats
 - iv. Mess and Cafeteria
 - v. Other locations in the campus like ADA, AIMC, MTC, Security Office etc.
- b) The drinking water supply in all the locations will be through water purifier (RO System) and water cooler.



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- c) Water Tanks cleaning schedule:
- i. Underground tanks – once in year (during summer vacation)
 - ii. Over head drinking water tanks – every 3 months
 - iii. Water Cooler Tank – every 15 days
 - iv. Over head tanks (Domestic & STP) – every 6 months or earlier if required

2. To provide the maintenance services in most effective manner the following input system is being followed:-

(a) For Hostel Blocks-

Three separate complaint registers in each Hostel office for

- Electrical
- Plumbing
- Civil / Furniture/Fitment

(b) For Faculty Flats (Including Hostel Faculty Flats, Academic Blocks, Security gates / Security Barracks).

Three separate complaint registers in Maintenance office for

- Electrical
- Plumbing
- Civil/Furniture/Fitments

(c) Maintenance Problems observed during the **inspection round** by “Maint/Admin Team”.

(d) Information through telephonic calls/ verbal.

(e) Daily Feedback regarding working of “Water purifiers & Water coolers” of all the locations.

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Methodology of Monitoring the Complaints:

- a. Job allotment is done to respective operators for the above complaints.
- b. The material/parts required to execute the repairing work is issued from Maintenance store after approval by Estate Manager. The format of issue voucher is given below.
- c. The material is issued from the store against exchange of faulty material.
- d. At the end of the shift the status of repairing are entered in respective complaint register.
- e. The analysis is done on day to day basis by Supervisors. For un resolved complaints, appropriate action is initiated at earliest i.e. raising of Purchase Indent for requirement of parts/ materials and other action like coordinating with AMC provider etc to resolve the problem.



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SOP of Risk Management (Short Circuit and Electrocutation)

Short Circuit:

A short circuit is a situation in which insulation failure due to overloading of line/poor & damage joints causes excessive heating and damaged to electrical devices. A short circuit is generally an unintended electrical connection between current carrying parts. The short circuit may cause burning of equipments, fire in the building/damage of other assets, Electrocutation etc.

Main Cause of Short Circuit:

- Overloading of electrical wiring
- Poor/damage of insulation of wires
- Loose joints connection of wires
- Presence of moisture/ water near electrical connection

Prevention of Short Circuit:

- It is most important to prevent overloading/overheating /humidity, which are causes of dielectric breakdown. It is necessary to separate the live part and insulating material from the structure member/water pipe /gas pipes frames of different buildings. To prevent short circuit fires, electric fire alarms (short circuit fire alarms) should be installed in the necessary locations.
- Waterproof the moist/humid locations where electric facilities are set up.
- Use tape or the prescribed connection apparatus that allows sufficient insulation effectiveness for wire connections.
- Frequent inspection of the presence of short circuit and the installation of a circuit breaker.
- Shut off the power when electricity is not being used.
- To ensure optimum capacity fuses and circuit breaker for every load.
- Prohibition of use of several plugs/extension cords for heavy load in single socket.
- Periodical inspection in order to prevent overheating due to faulty connection at the switch.
- Prohibition the insertion of several wires in same conduit.
- Use of ISI rated/approved electrical equipments/cables/spares.

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Prevention of Electrocutation:

- Switching off the wires/circuit in which the repairing works are to be carried out.
- Use of proper tools for repairing work
- Use of ISI mark safety gloves and shoes for working on live wires
- Make sure that all components are working and functioning properly after repair work
- Make sure that earthing is properly connected to all the apparatus

Immediate action in case of Short Circuit:

- Supply related to short circuited area is switched off
- Fault identification and isolation of faulty portion
- Restoration of supply after isolation of faulty portion
- Cause identification and repairing action of short circuit area

Immediate action in case of Electrocutation:

- Immediate Switching off the power of the electrocuted area
- Immediate Medical Aids are provided to victim
- Accident report is communicated and investigation is carried out by authorized team.



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