

UNIT 1: MAINTENANCE

Why Hotel Engineering?

- Hotel is dependent on sophisticated engineering equipment's.
- Examples: Air conditioning system, Ventilation, Water treatment plant, Sewage treatment plant, Sensors, Detectors, Fire-fighting system and a lot more.
- As a Hospitality professional you need to have basic knowledge of these equipment's.

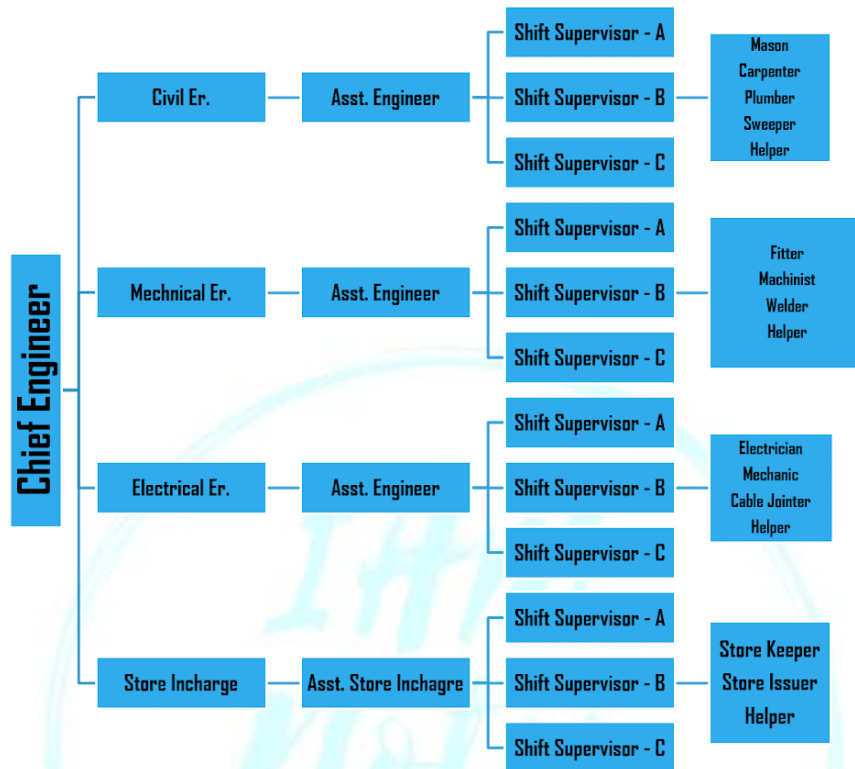
Importance of the Maintenance Department

- Keeping engineering facilities in optimal operating conditions is vital for the business of a hotel.
- Non-availability of a facility reduces the revenue and loss of future business potential.
- The maintenance department aims at keeping all the engineering facilities in the best operating condition.
- The department also helps in the up gradation of technology.
- It is not wrong to refer to it as the Engineering department.

Role of the Maintenance Department

- Headed by the Chief Engineer.
- It comprises of a Civil Engineer, Mechanical Engineer, Electrical Engineer and a Stores Officer.
- Repair and construction of buildings and roads, plumbing, sanitation etc.
- Repair, maintenance and operation of boilers, gen sets, refrigeration etc.
- Repair, maintenance and installation of electrical equipment's.
- Maintenance and control of Inventory of spare parts and consumables.
- Equipment Replacement and purchase of new equipment's through proper tendering.
- Vendor development for supply of spare parts, equipment's and contract maintenance
- Maintenance of an engineering office for administrative work.
- Negotiation with employee's union.
- Look after the recruitment, training, and proper placement of human power.
- Coordination with other departments of the hotel.

Organization Chart of the Maintenance Dept.



Duties and Responsibilities of the Chief Engineer

- Chief Engineer has to ensure the smooth functioning of the Maintenance Department.
- The Chief Engineer is authorized to request various types of reports from his sub ordinates and analyse the same.
- To ensure smooth daily operation and guest appeal of the hotel.
- Organize and manage maintenance workers and participate in hiring, training and mentoring the staff.
- Supervise the maintenance work.
- Planning and scheduling of maintenance.
- Inviting tenders for contract maintenance.
- Budgeting of the maintenance department.
- Evaluation of the cumulative performance of the engineers.



- The Chief Engineer is answerable to the management in case of any negligence by the maintenance Department.

Civil Engineer

Areas of Concern

- Building
- Renovation
- New Construction
- Sanitation
- STP – Sewage Treatment Plant
- WTP – Water Treatment Plant
- Drainage
- Water Works
- Roadways

Mechanical Engineer

Areas of Concern

- Boiler
- Refrigeration
- AC Plant
- Generators
- Swimming Pool
- M/C (Machine) Installation
- Fire Fighting
- Gas bank

Electrical Engineer

Areas of Concern

- Electric Motor
- Alternator Wiring
- Illumination
- Switch Gear
- Sensor and Detectors
- Communication
- UPS

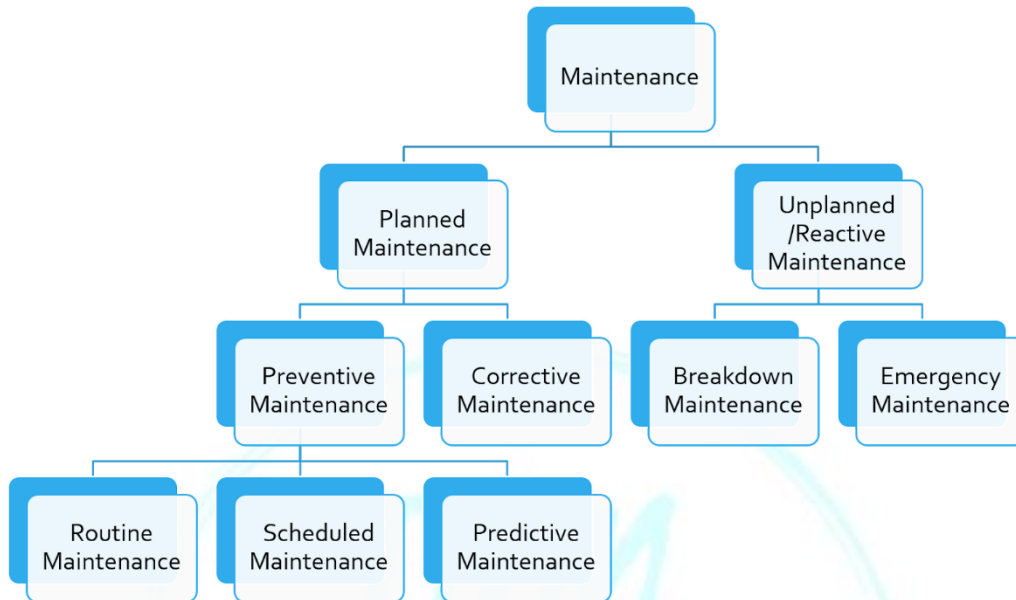
Store In charge

Areas of Concern

- Inventory Control
- Spare parts Management
- Bin Card Stock Control

Part number A 1234			Bin number/location A1284			
Description 30cm brackets						
Receipts			Issues			Balance
Date	Goods received note number	Quantity	Date	Requisition number	Quantity	
						b/f 100
15/1/2013	1235	200				300
			29/1/2013	1929	140	160
			3/2/2013	1955	120	20
10/2/2013	1384	500				520

TYPES OF MAINTENANCE



Preventive Maintenance

- Preventive Maintenance is the maintenance action carried out on time based and condition-based schedule.
- This type of maintenance is carried out before a fault is detected.
- It involves scheduling maintenance activities at predetermined time intervals.
- It also involves repairing or replacing damaged equipment's before obvious problems occur.
- It is further sub divided into a. Routine Maintenance b. Scheduled Maintenance c. Predictive Maintenance.

Routine Maintenance

In this type of maintenance, regular cleaning, lubrication of movable parts of machine and facilities is carried out.

Scheduled Maintenance

- This category of maintenance is prepared and followed using experience and following manufacturer's maintenance manual.
- Maintenance schedules of all machines are prepared, logbooks are maintained and minor repairs are routinely carried out before major breakdown occurs.
- It is a time-consuming type of maintenance as it requires professional knowledge and skill.
- It aims at reducing machine stoppage due to sudden breakdown.

Predictive Maintenance

- This is a method in which the service life of important parts is predicted based on inspection or diagnosis, in order to use the parts to the limit of their service life.
- Machinery conditions are periodically monitored and this enables the maintenance crew to take timely action.
- It monitors the machinery periodically for excessive vibration, temperature, lubrication or other unhealthy trends.
- When the condition deteriorates to some predetermined unacceptable level, the equipment is shut down to repair or damaged components are replaced.
- This helps to prevent occurrence of a more costly failure.

Corrective Maintenance

- Also known as Running Maintenance



- This is a maintenance procedure where minor repair work is carried out on machines, initiated by a formal work order from the machine user department.
- The maintenance crew inspects the machine and does the repair work to run the machine in a short time.

WORK ORDER FORM

Requester Name: _____ Date: _____

Department: _____ Telephone: _____

Location: _____ Urgent: Yes _____
No _____

Room: _____

Description of Work Order Requested:

-----Maintenance Use Only-----

Description of completed Work Order and Material Used:

Breakdown Maintenance

- It involves performing maintenance activities after a breakdown or malfunction has occurred and then must be repair on an emergency or priority basis.
- Breakdown maintenance includes repairs, replacement of parts or even overhaul to ensure that the machine is out back in operating condition.
- Breakdown maintenance is applicable to sophisticated machinery which proves very advantageous from cost point of view to allow them to run till they fail.

Emergency Maintenance

- It is carried out when a piece of equipment suddenly fails.
- Increases cost due to unplanned downtime of equipment's.
- May involve prolonged downtime if proper human power and components are not easily available.
- May increase costs associated with repair or replacement of equipment on urgent basis.
- Increases labour cost, especially if overtime is needed.

Preventive Maintenance v/s Breakdown Maintenance

Preventive Maintenance

- High Cost.
- Increases operational life of equipment.
- Results in an estimated 12 to 18 per cent cost saving as compared to breakdown maintenance.
- Maintenance activities that are not required are carried out.



Breakdown Maintenance

- Lower Cost.
- Allows the equipment to run up to the point of failure.
- May increase costs associated with repair or replacement of equipment on an urgent basis.
- No maintenance is carried out until a breakdown

Conclusion

- In the end it should be clear that maintenance of engineering and other facilities is one of the most critical activities in a hotel.
- It is both very complex and elaborate in the present era of highly developed technology in the hotel industry.
- It is not a revenue generating activity directly, such as F&B or accommodation, proper and regular maintenance definitely saves a lot of money by reducing down time of machines and equipments.
- It ensures guest satisfaction and high staff morale.
- Ultimately contributing immensely to the business of a hotel.