

# YENEPOYA DEEMED TO BE UNIVERSITY

## MAINTENANCE POLICY & PROCEDURES

### Basic Services

Facilities Management includes all activities necessary to operate, maintain, and provide services for University buildings, mechanical equipment and utilities to keep them in good operating condition. All of these services are provided to all University colleges and departments. Activities which are classified as building Management, maintenance and services are performed by Facilities Management. These activities include building operational maintenance, custodial servicing, refuse removal and recycling, utilities services and distribution and other university services.

### Basic Services includes:

- Repairing heating, cooling, ventilation, and building air conditioning systems. Building HVAC systems are designed to keep room temperatures at comfortable levels throughout the year. While Facilities Management has an extensive monitoring system for building system Management, not all room space in campus buildings is monitored. In the event there is a problem with the temperature in a building, it should be reported to the FAST Coordination Center at 687.2500.
- Repairing plumbing systems, stopped drains, drinking fountains, etc.
- Custodial services.
- Performing housekeeping and cleaning services. Facilities Management is responsible for cleaning offices, classrooms, circulation space, restrooms, laboratories, studios, auditoriums, gyms and conference rooms. These services are accomplished on a set Schedule to ensure the facility is clean, stocked and usable to accomplish University Management.
- Providing routine custodial services include cleaning public spaces, pest control, trash removal and recycling. The Building Services Department and the Building Coordinator Works together to develop cleaning specifications for each building that are unique to

its operating requirements.

- Repairing electrical systems, defective lights, etc.
- Repairing interior and exterior doors, windows, etc.
- Repairing roofs, masonry work, plazas, etc.
- Maintaining general classroom furniture
- Repairing elevators
- Removing solid waste, recycling, and surplus materials (except hazardous waste requiring special disposal)
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For Emergencies, please call the FAST Coordination Centre at 5033. Emergencies would be classified as anything that would cause structural damage to the building, or may cause a safety hazard, or uncomfortable conditions.

### **Service Requests**

Service Requests are required to arrange for services not included in Basic Services.

The cost of these services will be charged to the department requesting the service.

These services include:

- Non-scheduled window washing
- Carpet/upholstery installation and cleaning
- Special events set ups (contact Conference Services). The Building Services Department performs support services for special events indoors. Clean up before and after special events is provided Monday through Friday until 5:00 p.m. Events ending after 5:00 p.m. or on weekends will be charged for clean up at the current labor rates. The Grounds Department performs support services for special events outdoors. These services are subject to the current labor charges.
- Requests for moving services will be submitted on a Service Request to Facilities Management. The request shall include a listing of all department-owned furniture and equipment to be moved. Moving should be scheduled in advance to permit completion of arrangements through Facilities Management or contractor, as required estimates for moving may be initiated by calling the Building Services Department at 687.6973.

- All waste that is not recyclable, recoverable or surplus worthy is the responsibility of the Department and will be charged for this service. For additional information contact Building Services at 687.6973, or Environmental Health, Safety & Fire at 687.9306 for Hazardous Waste disposal.
  
- Furniture repair.
  
- Emergency Repair when there is imminent danger of functional loss to the department or the University, or where the broken equipment is essential to the operation of the department; emergency repair service may be initiated by calling the Facilities Management Dispatch Office at 687.2500, 7:45 a.m. - 4:45 p.m. and 687.2020 nights and weekends.
  
- Repairing departmental equipment, (i.e., electric fans, heaters, teaching  
Installing equipment which requires only minor structural changes (pictures, wall brackets, wall clocks, etc.) or changing the location of established equipment.
  
- Other special requests for service including, but not limited to:
  - o Building shelves and equipment
  - o Painting
  - o Changing ventilation equipment
  - o Adding electrical service
  - o Carpeting
  - o Window treatments

## **Repair of Equipment and Requests for Service Requires:**

- Submitting a Service Request to Facilities Management.
- Departments may request a cost estimate and an estimate of time for completion of the service by indicating the need for this information.
- If the service will be completed by Facilities Management they will assume overall responsibility for completing the service. This includes arranging any required bids through the Purchasing Department.
- All charges for services performed will be accumulated against the Service Request number assigned by Facilities Management.

## **Grounds & Utilities**

The Grounds Department of Facilities Management is responsible for the repair, maintenance and upkeep of all grounds and associated plant materials, the selection and propagation of plant materials, maintenance of Facilities Management vehicles and equipment, disposal process of solid waste and support services for University special events.

These grounds, including plant material, provide an aesthetically pleasing landscape for the University community. To ensure the integrity of the landscape, scheduling grounds for special events is handled through and with the approval of the Director of Conference Services and Grounds division.

Spraying and chemical application on University grounds conforms to Department of Agriculture Guidelines.

Repair of sidewalk is handled by Building Maintenance. Report any tripping hazards to Facilities Management Dispatch Centre.

The Utilities division of Facilities Management plans, maintains and distributes energy services to campus buildings. Facilities Management is responsible for delivering the following utilities to all campus building and grounds:

- High-voltage electricity
- Campus lighting
- Domestic water
- Storm water removal
- Sanitary waste removal

### **Energy Management**

The Utilities division of Facilities Management continuously engineers methods to increase efficiency of energy or utility systems resulting in cost and utility consumption savings to the campus Community.

### **Utility Outages**

When it is necessary to upgrade, modify, or repair equipment, such work may require temporary interruptions of utility service to buildings. Whenever possible, such outages are scheduled when they will be the least disruptive to building Management. Building occupants will be notified in advance of planned outages so that they may take measures to prevent loss due to the outage. When unplanned outages occur, Facilities Management personnel will work to restore service as soon as possible. When an unplanned outage occurs, the Dispatch Office should be notified immediately. If a department is working on a special project that involves a utility service (i.e., request for closing or opening water or compressed air valves, turning off power, etc.), it is necessary to contact the Dispatch Center at 687.2500.

### **Construction & Renovation**

Facilities Management works hand-in-hand with the University Architect's Office on many projects. The Architect's Office handles minor in-house construction and renovation.

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**POLICY GUIDELINES**

**LECTURE HALL SUPERVISOR – YMC**

The equipments in the lecture hall include audio – visual facility, CPU with key board and mouse, collar mic, Black and white boards, chalk and marker pens, duster/Eraser, Desk and Benches, Biometric device, CCTV and AC.

**Maintenance of lecture Halls:**

The Class schedules are sent to the classroom in-charge well in advance from different departments for making prior arrangements for lectures in-time.

Unscheduled extra classes are also informed to the concerned personnel for making the arrangements. After each lecture, the hall is cleaned with support from housekeeping department and made ready for the next schedule.

If any of the equipments are not working properly, the same is addressed to the Maintenance department. The Maintenance department handles the repair and maintenance of audio visual equipments. Software updating (antivirus) and other applications are handled by the IT section.

Occasionally – CME, guest lectures, Seminars, workshops, etc are conducted in the lecture hall. Arrangements are to be done for the above mentioned programs as per the requirement.

## **RULES OF THE LECTURE HALL**

- Students are not permitted to remain in the lecture room except during the prescribed hours of lectures.
- Every student is required to attend punctually at the hours notified for lecture.
- Biometric attendance for students and faculties.
- Students should maintain discipline and strict silence inside the lecture hall.
- Smoking, eating, drinking, chewing gum, possession and use of cell phones, camera, iPods, MP3 players or any other electronic gadgets in the lecture hall is strictly prohibited.
- No student is allowed to leave the lecture room without the permission of the teacher or until the class is dismissed.
- Any student breaking or damaging of the lecture hall property shall be required to pay the cost of repair or replacement.

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## EQUIPMENT POLICY-DEPARTMENT OF BIOMEDICAL ENGINEERING

### POLICY GUIDELINES

#### LIST OF ABBREVIATIONS USED

<b>BM</b>	<b>Breakdown Maintenance:</b> It is a maintenance performed on equipment that has broken down.
<b>AMC</b>	<b>Annual Maintenance Contract:</b> AMC can be provided by the manufacturing company or through other service providers. The contract is for a period of 1 year and can be renewed as per the agreement. AMC covers unlimited breakdown calls without service charges but spare replacement will be charged.
<b>CMC</b>	<b>Comprehensive Maintenance Contract:</b> The contract period is 1 year and can be renewed as per the agreement. It includes both repairs and replacements of faulty parts. Contract amount is higher compared to AMC.
<b>PPM</b>	<b>Planned Preventive Maintenance:</b> It is maintenance performed on an equipment to prevent unexpected breakdowns as per the schedule.
<b>BME</b>	<b>Biomedical equipment</b>

#### Roles and Responsibilities

Biomedical Engineer supports and advances patient care by applying engineering and managerial skills to health care technology. The department functions round the clock to render emergency service support on breakdown/ failure of equipment's. Department of Biomedical Engineering provides safe, calibrated and operational equipment for delivery of the best health care possible reducing the inconvenience caused by malfunctioning equipment and the time lost because of non-availability of equipment.

The responsibilities include testing, repairing, and maintaining the hospital's diagnostic and therapeutic equipment in proper and safe operating condition by carrying out daily rounds, planned preventive maintenance and calibration as per planned schedule.



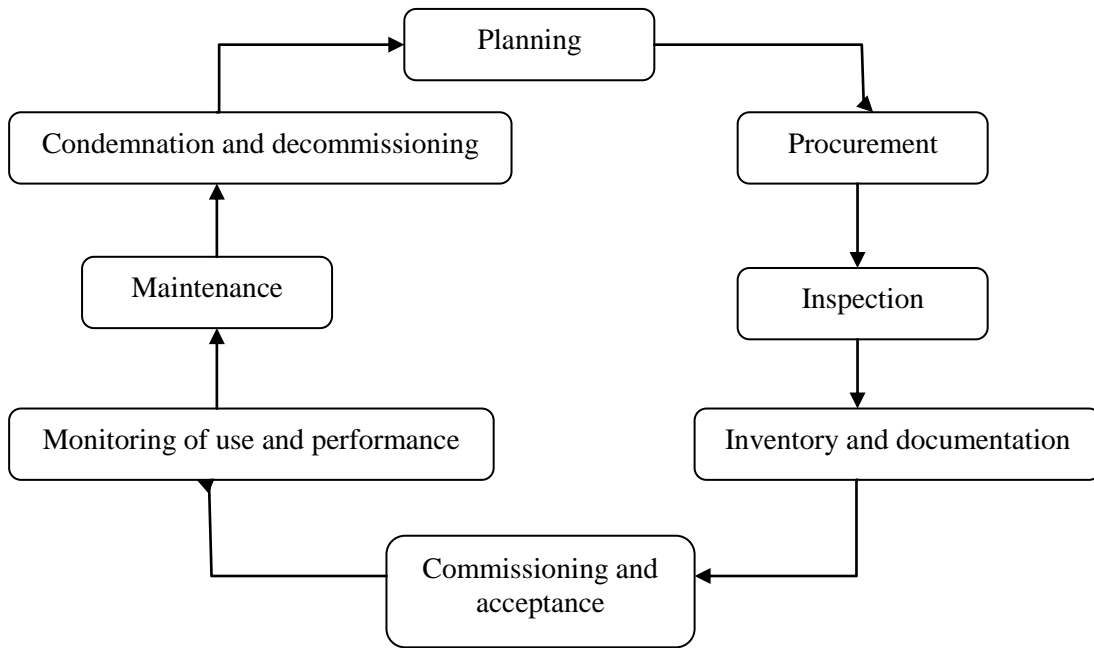


Fig 1: Life cycle of Medical equipment

## PURCHASE POLICY

- The Medical Equipment Purchase committee include:
 

Chief Operating Officer	: Chairman
Purchase Director	: Member
Concerned Dept HOD	: Member
Biomedical Engineer	: Member
- The needed medical equipments, their types are identified, quantities compiled and locations are marked.
- Once we place the order for new machine with the vendor they will supply the machine as per the PO mentioned. The management process guided by BME includes:
  - a. Accepting delivery
  - b. Supervising Installation & Commissioning
  - c. Planning & conducting training (technical & operational)
  - d. Tagging of equipment (Unique ID)
  - e. Testing for safety
  - f. Entering BME Maintenance Management

## MAINTENANCE OF THE EQUIPMENT:

Medical equipment must be maintained in working order and periodically calibrated for effectiveness and accuracy of the results.

The Maintenance consists of:

1. Planned Preventive Maintenance
2. Breakdown Maintenance
3. Calibration

## **1. Planned Preventive Maintenance (PPM)**

PPM is performed to extend the life of the equipment and prevent its failure. It is scheduled at specific intervals and includes specific maintenance activities such as lubrication, calibration, cleaning (e.g. filters) or replacing parts that are expected to wear (e.g. bearings) or which have a finite life (e.g. tubing). It will enhance the efficiency, effectiveness and reliability of medical equipment and must be carried out at appropriate frequency as suggested by the manufacturer/service provider/Biomedical department.

There are two types of planned preventive maintenance

1. In-house maintenance done by department of BME - Half yearly
2. Maintained by manufacturer or external agency- As per their policy

## **2. Breakdown Maintenance Policy**

It is performed to identify, isolate, and rectify a fault so that the out of order equipment, machine, or system can be restored to an operational condition. All medical equipment in use should be free from any fault or defect and all repair work should be carried out to accepted standards by competent person(s). Faulty or defective equipment shall not be used regardless of how minor is the problem and must be reported in the first instance to the manufacturer/supplier/agency hired for maintenance of the equipment as soon as possible.

- In case of breakdown, the user department reports to BME department.
- The Biomedical Engineer enters the details in the Biomedical Equipment Breakdown record register.
- BME inspects the equipment, check whether it is repairable, if possible repair, if not BME identifies whether the equipment is under annual maintenance contract (AMC) or not. If the equipment is under AMC, the contract agency is informed. Time and date of the same is noted.
- The contract agency personnel will report to the BME who is then escorted to the location of the faulty equipment.
- The personnel from the contract agency rectify the defect. The equipment history record is updated with the required information and is validated by the service engineer.
- The time at which the equipment started functioning is recorded in the Biomedical Equipment History Record Register by the Biomedical Engineer.
- In case the equipment is not under AMC, the BME informs the Chief Medical Superintendent /Medical Superintendent and the same time authorized service centers of the company are informed about the breakdown.
- The service center engineers will report to the BME who then escorts the engineers to the location of the equipment.

- In case the fault can be repaired on the spot, the service engineer rectifies the fault. The service engineer validates the equipments fitness for use in the equipment history record register.
- In case of spare replacement, the cost of the spare needed to be calculated, if it is less than 01 lakh, the purchase department will be requested to procure the item. If it is above 01 lakh the requirement should go through proper channel for approval.
- The time at which the equipment started functioning is recorded in the Biomedical Equipment History Record Register.
- If the machine cannot be repaired at the hospital and is required to be taken to the service center, a receipt for the equipment is provided by the service center with details of the equipment. The same is recorded by the BME.
- After the fault is rectified and the equipment is brought back to the hospital, the BME ensures that the equipment is installed at the site of the user department by the service engineers.
- The time at which the equipment is installed and starts functioning is recorded in the Equipment History Record Register.
- Downtime of major equipments such as in OT, ICU, Imaging, Dialysis and Laboratory etc. needs to be compared monthly.

Formula: Downtime of equipment = (Total Breakdown time / Total Uptime) X 100

### **3. Calibration Policy**

- Master calibration plan is prepared by BME once in a year or twice in a year depending on manufacturer recommendation.
- Calibration needs of various bio-medical equipments and their monitoring devices shall be undertaken to ensure the accuracy of their outputs/measurements.
- Calibration to be undertaken by each department is intimated to concerned department and calibration report maintained in bio-medical department. A sticker with date of calibration, due date and the company name is pasted on the equipment after calibration.
- Calibration is carried out with the help of external calibration agencies and calibration protocols and traceability maintained.
- The calibration or traceability shall be taken into consideration to appropriate national standards wherever applicable.
- In case of any doubt about the accuracy and measurements given by the equipment, the same will be tested verified then only used for actual diagnosis.

## **CONDEMNATION POLICY & DISPOSAL**

- On finding out that equipment is beyond economical repair, an official letter is given to the administrator describing its status and cost of repair.
- Once the request for condemnation is approved by the higher authorities the equipment is brought back to Biomedical department.
- The equipment then undergoes a process called cannibalization where as far as possible the spare parts are used up.
- On receiving intimation from General Stores that e-waste disposal is going to take place in the institution, a list of all the equipments to be disposed is made.
- The equipments are then sent to general stores from where it is given out for disposal to the vendors authorized by the Pollution Control Board to buy e- waste.

## **RECALL POLICY**

The procedure addresses medical equipment recalls based on letters / hazard notice issued from manufacturer and or from regulatory authorities. It should be immediately acted upon and the said medical equipment should not be put into further clinical use till the time is resolved.

## **ORIENTATION, TRAINING AND EDUCATION**

It is the responsibility of the end user department manager or designee to provide training that addresses the capabilities, limitations and special applications of the equipment included in the Equipment Management Program.

- Training is provided for major equipment's once in six months and the records are maintained.
- The orientation training program provided for all end users (Doctors, Staff nurse, Technicians, etc)
- Basic training will be provided periodically based on the number of newly joined staffs.

# Fire Safety Policy

## Introduction

The University is committed to providing a safe environment for its staff, students and visitors. Part of this safety responsibility is in the provision and management of fire safety systems and procedures. All members of the University, their visitors and contractors, have a statutory responsibility in ensuring compliance with the law and complying with the fire safety provisions defined within this policy.

Fire is recognized as a major threat to the activities of the University. An outbreak of even a small fire creates risk to both life and property, damage to the environment and may compromise our normal business activities.

The aim of this policy is, therefore, to provide a robust fire safety framework which will be implemented to secure the safety and wellbeing of everyone within the University Community and to protect the University's assets.

1. Safety management is a very important aspect of planning in every form of infrastructure. Safety management as a whole includes aspects of not only fire safety, but also security measures in terms of safety from other unsafe encounters like thefts, pilferages, extortion riots and natural calamities.
2. Safety measures should, therefore, be designed in such a way that safety of all service renderers, service recipients, infrastructure (property, other fixed assets), etc., is ensured. However let us focus on one major aspect of safety management and that is fire safety.
3. The hospital, as an infrastructure, has many heat-dissipating equipments, combustible gasses / fuel, chemicals, a lot of electrical wiring, etc., that are prone to hazardous incidents, if proper precautions are not taken while planning the infrastructure. Adequate measures need to be considered, designed and practiced to ensure safety to all. Indicators like architectural designs, interior designs, electrical wiring, and appropriate equipment planning and proper waste management are considered.
4. Essential Fire safety Features - This Hospital Building incorporate features of prevention of fire and fire loss:

- 4.1 There is sufficient open space around the building to minimize fire spread possibilities from or to neighboring structures.
- 4.2 There is enough space for movement and parking of fire fighting vehicles, ambulances, etc., in the premises.
- 4.3 Considering the type & density of occupancy, lobbies, staircases, etc., are sufficiently wide to ensure easy movement of traffic at all times and at the same time to permit easy and orderly evacuation during emergencies.
- 4.4 Adequate emergency rescue aids and suitable refuge area is provided. The critical areas were well protected with measures and extra precautionary measures are implemented in such critical areas, for e.g. use of fireproof doors.
- 4.5 Safe and easy means of access is provided to and in every place of work / occupancy. This enables access to all including the disabled to move easily.
- 4.6 In case of an emergency, safe and rapid egress are provided for all occupants.
- 4.7 The floor is free from obstructions, are slip-resistant & even.
- 4.8 Staircases, ramps & aisles are provided with substantial handrails and other suitable support means to prevent slipping, wherever necessary.
- 4.9 The electrical wiring is enclosed in metal / heavy gauge screwed conduits.
- 4.10 The cable passing from one floor to the other is sealed off effectively to minimize fire-spread possibilities.
- 4.11 A master control switch for each floor is located at Cellar easy switching off of systems in case of emergency.
- 4.12 Air-conditioning systems for each floor in independent and dampers for each ducting system provided.
- 4.13 Proper cooling facilities to dissipate heat are provided for overheated equipments / plants / machinery.
- 4.14 All equipment are bonded and earthed properly to dissipate the static charges to the earth pit.
- 4.15 Incorporate totally enclosed switchgear systems / miniature circuit breakers.
- 4.16 Emergency power supply arrangements are designed & incorporated for total system switch-offs during emergency.
- 4.17 Appropriate fire fighting equipments, fire detection, smoke and heat detection alarms are incorporated in the design.
- 4.18 The fire-fighting equipment is provided as per standards and norms of NBC and IS standards.

- 4.19 Entire staff is trained in basic fire fighting operations and emergency escape procedures.
- 4.20 All the security, housekeeping, general maintenance are trained in fire fighting operations by employing fire hydrants, landing valves, hose reel etc.,
- 4.21 A guideline manual is followed in the case of fire emergency / Evacuation.

## **5. Staff Fire and safety training**

Employees are provided with adequate fire safety training. To comply with this statutory requirement, Heads of Management Unit shall ensure that all employees within their management control receive regular fire safety training and all new employees undertake fire safety training as soon as is practicable after commencement of employment. (Note: induction information relevant to fire safety provisions within the University is available on the SEPS web pages). Account must also be taken of circumstances that may impact on fire safety provision such as the introduction of new work equipment, new technology, new or changed risks etc;

Where young persons (under the age of 18) are employed account must be taken of their lack of awareness, inexperience and immaturity when assessing work based tasks and the impact this may have on fire safety arrangement.

All new employees must to be informed of the fire safety provisions that are relevant to the work place. The department HOD is responsible for ensuring that arrangements are made to ensure new employees are advised of the following;

- Fire action arrangements, including the Fire Safety Policy
- Means of escape within the premise
- Location of fire exits
- Location of firefighting equipment

Details in relation to relevant findings of the fire risk assessments and dangerous substances Fire Wardens entraining will be provided as and when deemed necessary. Notwithstanding the requirement as dictated by demand, the maximum period for refresher training should not exceed 3 years. The wardens training will include safe evacuation and zone clearance procedures as well as detailed fire safety guidance.

- General fire safety awareness
- Means of escape
- Fire extinguisher awareness
- Relevant fire safety risk assessments
- Raising the alarm and personal safety
- Fire Warden training will be provided as and when deemed necessary.

Notwithstanding the requirement as dictated by demand, the maximum period for refresher training should not exceed 3 years. The wardens training will include safe evacuation and zone clearance procedures as well as detailed fire safety guidance.

## **MAINTAINING FIRE RELATED EQUIPMENTS**

(Fire Fighting Equipment Available in university)

<b>SN</b>	<b>Name of the Equipment</b>	<b>Quantity</b>	<b>Frequency</b>
1	Portable fire extinguishers	300 NO	Daily and monthly
2	Sprinklers in each floor & cellar –1 & 2	Complete occupancy	Monthly
3	Wet risers	5 Nos. in each floor	Daily and monthly
4	Hose Reels	5Nos. in each floor	Daily and monthly
5	Landing Valves	5 Nos. in each floor	Daily and monthly
6	Fire fighting delivery hose pipe	10 lens in each floor	Monthly
7	Fire fighting branch / nozzles	5 Nos. in each floor	Monthly
8	Fire water pumps Jockey pump 15 HP Sprinkler pump 60 HP Hydrant pump 60HP Stand by pump 60 HP	1 no 1no 1no 1no	Daily and weekly
9	Static water tank (Underground)	1 Lakh Ltrs.,	Monthly
10	Static water tank ( up tank)	1 lakh ltrs	Monthly



11	Automatic detection & alarm system	in each floor	Monthly
12	Manual call points	In each floor	Daily and monthly
13	Fire blanket	In each floor	daily
14	Fire alarm control panel	3 no	Daily and monthly

## **POLICY ON MAINTAINING FIRE RELATED EQUIPMENTS**

### **1.0 PURPOSE:**

The purpose of this policy is to document YMCH strategic and operational maintenance plan for fire related Equipments.

### **2.0 SCOPE:**

Maintenance department & user department.

### **3.0 RESPONSIBILITY:**

Maintenance Staff ensures that all the activities mentioned below are carried out by monitoring log books/registers and periodic inspections.

### **4.0 POLICY:**

4.1 The Hospital has installed and portable fire-related equipment.

4.2 All the equipment is maintained by an agency contracted for this purpose.

4.3 The details and maintenance plans of all this equipment is as follows:

<b>Sl. No.</b>	<b>Equipment/System</b>	<b>Maintenance</b>	<b>Done By</b>
1	ABC type extinguishers	a) Pressure checking: routine, with pressure gauge. b) Cleaning: weekly. c) Refilling: as per validity	a) In-house b) In-house c) Agency
2	BC type extinguishers (CO2)	a) Refilling: as per validity. b) Cleaning: weekly.	a) Agency b) In-house
3	A type extinguishers (H2O)	a) Refilling: As per validity.	a) Agency

Sl. No.	Equipment/System	Maintenance	Done By
		b) Cleaning: weekly.	b) In-house
4	Smoke and Heat detecting system. Components: Smoke detectors. Heat detectors. Floor-wise fire alarm panel. Central fire alarm panel.	a) Checking of each smoke and heat detector and panel every three months. Replacing, if necessary.	a) In-house

5	Hydrant system. Components: Sprinklers. hose pipes. Fire pump house with 1 jockey pump (automatic, for maintaining pressure), 1 diesel engine pump (automatic, if power supply is cut, or in case of fire), main pump (for filling sprinkler lines), 3 underground water tanks and pipes.	a) Checking valves every 3 months. b) Checking hose pipes every 3 months. c) Checking pumps every day.	a) In-house
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