



**GALGOTIAS
UNIVERSITY**
Uttar Pradesh
CREATING KNOWLEDGE

4.4.2 Maintenance Policy

Galgotias University

Plot No. 2, Yamuna Expressway,
Opposite, Buddha International Circuit,
Sector 17A, Greater Noida,
Uttar Pradesh 203201, India

Maintenance Policy

Response:

There are systems and procedures in place to maintain and use physical and academic facilities, such as libraries, gymnasiums, and computer labs, central facilities etc. in the University. The maintenance of facilities is carried out by the respective departments with the help of in-house staff on a daily basis or periodically and through AMC. A supervisor is in charge of overseeing and maintaining the physical facilities as well as housekeeping. A brief description is presented below on the maintenance and utilization of the facilities.

1. Introduction

Maintenance of Building is to keep, restore or improve the facilities of every part of a building, its services including Horticulture activities to a currently acceptable standard and to sustain the utility and value of the facility.

The objective of maintenance is: -

- To keep machinery, buildings, and services in proper working order.
- To try to restore and maintain it back to its original condition and standards, and
- To upgrade the amenities in accordance with technological advancements in building engineering.

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Despite recent advancements in building technology, all structures decay from the time they are constructed. A variety of factors influence the rate of degradation. The inhabitants do not have complete control over all of the variables. When there are intrinsic flaws in the design and construction of a building, the maintenance costs rise disproportionately, and the expected life of the facility is shortened.

Maintenance seeks to keep the facility and services fully operational in an efficient and cost-effective manner. It necessitates a wide range of abilities, which are determined by the number of people in the building and the required degree of performance. Programming the work that has to be done to keep the building in excellent shape necessitates a high level of expertise. Maintenance feedback should be a continuous process for improving the design and construction stages.

2. Maintenance Services:

These generally consist of operations aimed at keeping buildings, services, and works in regular use in good working order. The purpose for which buildings are created is a major determinant of the required level of care.

Excessive updation should be avoided at all costs. At the same time, maintenance should guarantee the occupant's or the general public's safety while also adhering to legislative standards. The requirement is also determined by the level of consumption. The repair works are classified in under mentioned categories:

- Day to day repairs/service facilities
- Annual repairs
- Special repairs
- Preventive Maintenance

2.1 Day to Day Repairs

On the basis of daily complaints, different engineering sections in all of the buildings and laboratory technicians under its care do day-to-day repairs.

Galgotias University Uttar Pradesh does day-to-day repairs in all of the structures under its care. The activities that need to be done on a daily basis, such as clearing clogs in drainage pipes, manholes, restoring water supply, replacing blown fuses, repairing defective switches, watering plants, grass mowing, hedge cutting, leaf sweeping, and so on, are covered by day-to-day service facilities. The goal of this facility is to ensure that various services in the buildings continue to function properly. These services are offered after the engineering section receives a complaint from the users. Periodical complaints, such as white washing and painting, which are normally handled by contractors and cannot be handled on a daily basis, are transferred to the register of periodic repairs.

2.2 Annual Repairs

Some activities, such as white washing, distempering, painting, cleaning of lines, tanks, and so on, are carried out on a regular basis to maintain the aesthetics of buildings and services as well as to prolong their life.

Annual repair works are those that are done on a regular basis, such as white washing, colour washing, distempering, painting, and so on, and are usually done through a contracting system.

In addition, minor repairs to various pieces of work, replacement of glass panes, replacement of wiring damaged due to an accident, replacement of switches, socket tiles, and gap filling of hedges/perennial beds are all included. Replacement/Replanting of trees, shrubs, planting of annual beds, and trimming/pruning of plants, etc., which are not emergent and are deemed routine, can be collected and attended to for a group of households at a time and specific period of the financial year, depending on the urgency. Such work might also be done as part of routine maintenance.

Following guidelines shall be followed for planning and execution of Annual repair works.

- The annual survey of the buildings shall be such as to highlight defects of structural nature in the buildings which require personal investigation by the University civil Engineer.
- The entire exercise of finishing under annual repair should be carried out in a professional manner.
- School/Department should carry out the annual repair work of Labs, Classrooms, Tutorial Rooms, Seminar Halls, Studios, Moot court, Workshops, etc. send the requirement to central maintenance committee.
- Payment for annual repairs is usually based on standard measures, so division officers should be able to keep an eye on things. The Engineer will make it a point to physically evaluate all of the structures where annual repairs will be performed. The engineer must keep a record of the number of residences where annual repairs are required, the dates of his inspections, and his observations on the quality of the work.

2.3 Special Repairs

These repair projects are carried out to replace existing building parts and services that have deteriorated as a result of the building's age. It is vital to prevent the structure and services from deteriorating and, to the extent possible, to restore them to their original state.

2.4 Preventive Maintenance

Preventive maintenance is done to keep machinery, devices, and equipment from breaking down and causing maintenance issues in buildings and services. Preventive maintenance is done out based on frequent inspections and surveys.

Preventive maintenance is performed to avert mechanical failure or the onset of maintenance issues in structures and services.

In the case of buildings, preventive maintenance, such as against seepage, is essential. Preventive maintenance, on the other hand, is heavily reliant on frequent building and lab inspections and surveys. As previously said, examination of the building is required in order to do preventive maintenance. Before monsoon, the building must be inspected once a year.

Roofs, hutments, and bus shelters disturb power, water, and sewerage systems, bringing tremendous hardship to people as well as massive financial losses to the government and putting lives in jeopardy. To reduce such losses and eliminate threat to life, several specific pre-monsoon preventive steps must be taken:

i) **Door /Window glazing:**

All broken glazing should be replaced, and an adequate supply of glass window panes and ironmonger fittings should be maintained on hand in case of an emergency. The holts, hooks, and eyes on the tower, as well as other wind appliances, should all be in good operating order. During stormy weather, occupants should be reminded to keep doors and windows closed, especially at night.

ii) **Checking buildings against seepage**

All of the buildings' terraces may be inspected and any repairs made well ahead of the monsoon rains in June and December. To avoid clogs in roof gutters and rain water pipes, the roofs should be cleaned and debris cleared. Rainwater inlets should be inspected for damage and repaired if necessary. Vertical rainwater pipes must be securely fastened to the walls.

iii) **Checking of sewers and sewage installations**

To restore sewage flow, all inspection chambers, manholes, and sewer lines should be cleaned and flushed. Grit, sand, and sludge should be removed from sewage sumps. Wherever possible, oxidation pond bunds should be reinforced.

iv) **Checking of electrical installations**

Due to an increase in the groundwater level in some areas, it may be required to temporarily elevate electric pumping sets installed in wells and sump below ground water level to acceptable levels. It is important to ensure the availability of a standby power supply solution in case of a power outage during the monsoon or during cyclones. Diesel generators should be inspected and maintained in good operating order, and wiring should be examined for loose connections.

3. Means of effecting maintenance

3.1 Engineering Section/Substation

The Galgotias University in Uttar Pradesh has been tasked with receiving and resolving maintenance complaints from various schools and departments. The above components are usually overseen by a distinct supervisor.

3.2 Modalities of maintenance

One of the following methods is used to carry out the maintenance work: -

- (i) Staff Employed Directly
- (ii) With Contracts from Third Party

The nature of the following factors determines whether the task should be performed by a contract or by an in-house workforce.: -

- (a) Type of work
- (b) Amount of work
- (c) Urgency.

i) Staff Employed Directly

For ordinary day-to-day maintenance, directly employed labour is the best option. The maintenance work is directly charged with the cost of establishment owed to personnel, such as their salaries, allowances, and so on.

ii) Through contracts

The Annual maintenance tasks such as whitewashing, painting, and small repairs such as replacing glass panes, plaster repairs, and roof tile replacement are typically handled under contract. Special repairs, such as the installation of water proofing treatment, the repair of water supply pump sets, and equipment. The annual maintenance charge is used to outsource the upkeep of central facilities. Under the supervision of the university electrical engineer and relevant supervisor, the approved vendor completes the maintenance of the central facilities covered by AMC, such as RO, Genset, Gardening, STP, UPS, and fire extinguishers.

4. Cleanliness in the Campus

The cleanliness of the campus shall be maintained. Waste accumulated during the execution of repairs in residences/buildings will not be permitted to remain at the worksite.

Suitable sites in the localities will be selected where waste created from day-to-day work will be kept by departmental staff or contractors' workers. It will be assured that waste is collected from the work site and disposed at the designated location after each shift. The agreement will include provisions for lifting waste from this selected location on a regular basis. There will be a safeguard in place to ensure that schools do not put waste on this Waste, as this would create unsanitary circumstances for the pupils.

Any leaks in the water supply line, sewers, or unfiltered water supply line that are discovered on campus shall be fixed as soon as possible. Water shall not be permitted to stagnate on roofs, courtyards, or roadside to serve as a mosquito breeding ground.

5. Civil Maintenance: The civil maintenance department is headed by the University Civil Engineer. This section-maintained the plumbing, building, carpentry, and whitewashing work. Each division is headed by a supervisor and is employed by the respective skilled workers. Civil work, such as whitewash and mason's work are complete before the semester begins.

6. Electrical Maintenance:

The University has an electrical section to ensure uninterrupted power supply and maintenance of electrical assets. The electrical maintenance section is headed by the University Electrical Engineer and supported by the Electrical Supervisor and Electricians. The maintenance of equipment like General Lighting, Power Distribution System, electric motors and machines, Solar Panels etc. are undertaken as per their preventive maintenance schedules and guidelines by the equipment supplier.

7. Computers and IT Maintenance: The University Central Maintenance Committee (CMC) is responsible for the maintenance of computers and smooth functioning of network and Wi-Fi facilities in the Campus. Maintenance of computers, LCD projectors, printers, scanners, CCTV, and other IT related items repair work collected from all departments and is resolved by the IT team headed by the IT manager. EPBX systems are maintained with the help of external agencies. In the case of major issues of maintenance vendors are hired for maintenance of IT facilities.

8. Laboratory Equipment: The equipment, devices, and machineries in the laboratory/workshop are maintained by the lab In-charge /workshop In-charge with the advice of the Dean/HOD with the help CMC team. Utilization of labs is maintained by lab technicians. For maintenance of equipment/devices/machines which are not repairable in house, Deans/HODs are asked to collect the quotations from the supplier and forward them to CMC for further action.



Class Rooms: The class rooms are cleaned on a daily basis and monitored by the faculty in charge of the respective school.

9. Sport complex/ground/equipment: A sport officer has been appointed to look after the all-sports related activities in the campus. The sports equipment/items (indoor and outdoor) are issued to the captain of the team as per the schedule of the events and to students for individual practice. If any equipment or ground gets damaged or needs repairs, the sports officer submits the requirement for maintenance to the CMC. Grounds-men and Grade IV staff are assigned for day-to-day maintenance and repair work.

10. Library:

A Librarian with supporting staff has been appointed to maintain the library. Academic year stock verification is done. In addition, the assistant librarian, and attenders helps the students for searching and lending of the books in the library. The maintenance requirements of library items submitted to CMC by the librarian and a recommended list for the binding of old books and a list of condemned books. The librarian places an order with an approved vendor to bind the old books.

Medical Centre:

The medical center of the university is governed by the School of Medical and Allied Sciences Dean. The doctor is supported by a team of pharmacists and nurses. The nurses are deployed by the school of nursing. The health center has well equipped medical facilities and has enough space to cater to the needs of the patients. It is utilized by students, staff of the university and by the village around the university campus.

Engineering Section.....

COMPLAINT REGISTRATION FORM

1. Room No./Labs/other
2. Name of the school/deptt
3. Nature of Complaint

Date

Signature & Name of the complainant

Received Complaint for Room No./ Labs/Other

Date

Signature of Receiving Officer

Inspection of Buildings (Civil)

(a) Block No.:

(b) Date of Last Inspection:

(c) Date of Present Inspection:

S. No.	Item Name	Needs Replacement		Priority		
		Cost	Quantity	Immediate	Annual	Routine Repairs
1	Wall					
1.1	Cracks					
1.2	Repair to plaster					
1.3	Repair to brick work					
1.4	Dampness					
2	Floors					
2.1	Cracks					
2.2	Settlement					
2.3	Slopes					
2.4	Skirting cracks					
2.5	Dados cracks					
3	Doors, Windows, Ventilators & Cupboards					
3.1	Glass panes broken					
3.2	Panels in shutters broken					
3.3	Panels fit improperly					
3.4	Improper/missing fittings					
3.1.1	Hinges					
3.1.2	Handles					
3.1.3	Tower Bolts					
3.1.4	Aldrops					
3.1.5	Floor door stopper					

3.1.6	Knobs					
3.1.7	Cleats					
3.1.8	Hooks& Eyes					
3.1.9	Curtain Rods					
3.1.10	Pelmets					
4	Roofs					
4.1	Leakages/D amp patches					
4.2	Water proofing treatment					
4.3	Brick drip course					
4.4	Rain water pipe					
4.5	Regrading					
4.6	Top Layer of tiles					
5	Water Supply & Sanitary fittings					
5.1	Leakages in pipe joint					
5.2	Functionin g of washers					
5.3	Functionin g of traps in fittings					
5.4	Functionin g of floor traps					
5.5	Functionin g of overhead/lo w level cistern					
5.6	Air Locking					
5.7	Leakages in pipe joints					
5.8	Condition of overhead tank					
5.9	Cleaning of overhead tank					
5.10	Fittings					
5.10.1	Wash basin					
5.10.2	Soap container					
5.10.3	Mirror					
5.10.4	Glass shelf					
5.10.5	Towel rail					
5.10.6	Hangers					
5.10.7	Sinks					
5.10.8	Taps					

5.10.9	Pillar cocks					
5.10.10	Showers					
5.10.11	Cisrerns					
5.10.12	Ball Valves					
5.10.13	Seat Cover					
5.10.14	Step					
6	External Services					
6.1	Manhole covers					
6.2	Covers to gully traps					
6.3	Cleaning of manholes					
6.4	Plinth protection					
6.5	Cleaning of storm water drain					
6.6	Approach roads					
6.7	Service lanes					
7	Finishing					
7.1	White washing/co lour washing/dis temper					
7.1 (a)	When was it done last?					
7.1 (b)	When is it due?					
7.1 (c)	Existing condition.					
7.2	Painting					
7.2 (a)	When was it done last?					
7.2 (b)	Existing conditions					
7.2 (c)	When is it due					
8	Common Areas					
8.1	Railing to staircase					
8.2	Staircase steps					
8.3	Staircase nosing					
8.4	Shafts					

Inspection of Buildings (Electrical)

(a) Block No.:

(b) Date of Last Inspection:

(c) Date of Present Inspection:

S. No.	Item Name	Needs Replacement		Priority		
		Cost	Quantity	Immediate	Annual	Routine Repairs
1	Switch Boards					
1.1	Regulator					
1.2	Switches					
1.3	Fixing of tiles					
2	Fans					
2.1	Canopy fixing					
2.2	Speed and noise					
3	Socket outlet points and connection					
3.1	Tile					
3.2	Switch					
3.2	Outlet connection if any					
4	Fittings					
4.1	Reflector					
4.2	Louvers/Perspex cover					
4.3	Suspension rod					
5	Exhaust Fans					
5.1	Speed and noise					
5.2	Louvers					
5.3	Connecting wires i/c. ceiling rose					
6	Call bells					
6.1	Bell push					
6.2	Ball Buzzer					
7	Sub distribution boards/BDB/Main Board					
7.1	Switch covers					
7.2	Fuse Kit Kats					
7.3	Earth connection					
7.4	Fuse rating					
7.5	Inter connection					
7.6	Boards					

Inspection of Gardens

(A) LAWN:

- i) Weeding
- ii) Patch repair
- iii) Renovation
- iv) Regressing

(B) HEDGE:

- i) Gap filling
- ii) Replacement

(C) PLANTING BEDS:

- i) Needs Replacement
- ii) Gap filling

(D) GARDENS:

- i) Gap filling of dead one
- ii) Replacement of damaged, weak
- iii) Replacement of stones
- iv) Thinning, trimming
- v) Redesigning of paths, Maintenance of paths

(E) ROAD SIDE PLANTATION

- i) Gap filling Nos.
- ii) Trimming, pruning
- iii) Tree Guards not required & to be removed/repair/painting etc.
- iv) New plantation, Digging of holes etc.
- v) Misc.

INSPECTION LIST**Substation equipment's, Generating Sets, Supply Co., Service Connection.Place**

Date of Check

Name of Electrical Engineer

Time of start

Time of completion

Division No

H.S. Voltage

S.No. Item

(A) SUB STATION EQUIPMENTS	Position	Remarks
1. General look of HT panels		
2. How many incoming and outgoing panels?		
3. How many in 'ON' position?		
4. When were the contracts checked last?		
5. When was the oil tested/replaced?		
6. When were the Relays Calibrated/tested?		
7. General cleaning of panel		
8. Functioning of Meters in panel		
9. If trickle charger is provided, state of the same and battery and Maintenance of Battery.		
10. Is there alternate Source of Supply and if so when was it tested?		
11. Has DESU/NDMC been informed in advance of the programme/function?		
12. Are the voltage and supply and frequency within Limits of IE Rules. If not, any intimation given to supply Co.?		
13. No. and capacity of transformers?		
14. How many of them are in operation at a time?		
15. How often the transformers are switched 'ON' and 'OFF'?		
16. How often the tap changers have been used?		
17. When was the oil tested and if found not in order.		
18. General condition of transformer i/c oil leakages if any?		
19. How often the transformer is cleaned?		
20. Oil level check		
21. Silica Gel check		
22. Bucholtz Relay check if provided		
23. Heating/Temperature Rise		

(B) GENERATING SETS (SAND BY SUPPLY)

Yes/No

Date

Change-over switch operated checked
(weekly)

Cable terminals connection checked

Cleaned/checked all terminals(weekly)

Generator operated

On no load

On connected load

Driving/V- belt checked

Radiator filled/no leakage

Filters clean

HSD oil tank full

Mobil oil checked

Battery fully charged

Terminal checked

Distilled water checked

AMF panel-relays contacts, terminals

Checked and for its operation.

Stand by water filling arrangement is available

INSPECTION LIST

Electrical installations, lifts, water supply pumps, sewage pumps, Filtration Plants

Place:

Date of check:

Name of Electrical Engineer

Name of civil Engineer

Division:

A. Electrical Installations:

S. No.	Position	Remarks
1.	Power outlets for metal detectors	
2.	Power outlets for PA system	
	(i) Normal	
	(ii) Standby	
3.	Power supply	
4.	Power outlet	
5.	Power supply for security lights.	
	(i) Main	
	(ii) Stand by	
6.	State of	
	(i) Lamps	
	(ii) Fittings	
	(iii) Fans/Regulator	
	(iv) Power/Light socket outlets	
7.	Whether alternate source of supply available?	
8.	All cables test for insulation & healthiness from substation to feed pillar/outlets.	
9.	(i) Cable connections, terminals checked.	
	(ii) Overheating at joints?	
10.	Sub Distribution Boards checked for	
	(i) Cleanliness	
	(ii) All MCBs/MCCBs in working order	
	(iii) Neutral/earth properly connected	
	(iv) Signs for overheating/sparking	

B. Lifts

1. No. of Lifts
2. Make/Passenger capacity
3. Type (manual/automatic with or without Attender)
4. Type of control
5. No. of floors served
6. Whether under comprehensive/service

Name of Firm:

7. Operation
- (i) Landing call buttons
- (ii) Car buttons
- (iii) Emergency stop

8. Functioning of all safety devices

9. Car light/fan

10. Intercom working & checked

Car to M/c Room

Car to Control Room

Car to JE Room

11. Condition of rope (s)

12. Condition of trailing cable

13. Condition of sheave

14. Governor functioning

15. Smooth/Jerkfree operation

16. Levelling accuracy

17. Doors opening key availability

18. Overload safety for Car

19. Last servicing done in machine room. Date

20. Proper illumination in the lift shaft

21. Seepage in the lift pit

22. Condition of Buffers

23. Working of limit switches

24. Proper lighting ventilation in M/c Room & proper approach

25. Proper illumination at all car landing

26. Operation of controller

27. Operation of floor detector

28. Whether switch available in the car to prevent any unauthorized person from operating the Lift in the case of attendant operated Lifts.

C. Water Supply Pumps

1. No. of Pumps

2. (i) Electric Drive

(ii) Diesel Drive

3. Make, H.P. of each

4. Rated current actually drawn

5. Voltage at terminals

6. Type of starter

7. Foot Valve Condition

8. Priming arrangement

9. Condition of flexible coupling

10. Greasing of bearings

11. Vibration of Motor

12. Overheating of Motor

12.No. of hours normally run

13. Sump water level indicator

14. Pressure at pump delivery

'D' Sewage Pumps

1. Type of Pump

2. Make

3. H.P./rated current

4. Current actually drawn

5. Type and condition of Starter

6. Last service on:

'E' Filtration Plants

1. Type of Plants

2. Make

3. Medium used for filtration

4. Frequency of change of filter medium

5. Motor H.P. rated current