



Royal
COLLEGE OF ENGINEERING & TECHNOLOGY
(APPROVED BY AICTE AND AFFILIATED TO UNIVERSITY OF CALICUT /
APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY)



MAINTENANCE SYSTEM AT RCET



WAB
PRINCIPAL
ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY
AKKIKAVU



ROYAL COLLEGE OF ENGINEERING AND TECHNOLOGY

MAINTENANCE SECTION (ELECTRICAL AND PLUMBING)

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MAINTENANCE SECTION - ELECTRICAL AND PLUMBING

Maintenance section consists

- 3 Electrical Technicians
- 2 Plumbing Technicians

Under the control a Maintenance Engineer

Technicians are engaged on shifts:- day shift and night shift (round the clock shift duty is assigned)

ELECTRICAL MAINTENANCE

- Royal College of Engineering Technology (RCET) is provided with 11kV supply.
- 11kV substation consists of 1No. 315kVA, 11kV/400V Transformer and 11kV Load Break Switch.
- Connected load of college is 625kW.
- Contract demand is 125kVA.
- Static Capacitor Bank manages power factor by APFC relay.
- Average Power Factor of college is 0.99.

BACK UP SUPPLY

Item	Purpose	Quantity
180kVA Diesel Generator(DG) set	Campus Load	1
50kVA DG set	Base Load	1
15kVA DG set	Boys Hostel	1

SOLAR PV PANEL

Solar PV panel of 1kWp is installed on roof top of main building to cater the light loads in the following Labs:

Laboratory	Floor	Department
Electrical Measurements Lab	II	EEE
Circuit Lab	II	ECE
Internet Lab	I	CSE

MAINTENANCE ACTIVITIES

- Technicians attend routine maintenance and day to day breakdown works
- Daily redressal of complaints in boys and ladies hostels (both plumbing and electrical)
- Routine checkups of vital equipments and functional tests of
 - i. 11kV/400V, 315kVA Transformer.
 - ii. 11kV load Break Switch.
 - iii. 180kVA, 50kVA and 15kVA DG set.

Contd.

- iv. Two passenger lifts.
- v. UPS system in computer labs.
- vi. Break down maintenance and trouble shooting of faults in labs and college buildings.
- vii. Modification to the existing system by providing addition/deletion of installation.
- viii. Periodic maintenance of circuit related equipments shall be carried out under AMC.

PLUMBING SECTION

Water Supply in Campus

- Main source of water is from two bore wells.
 - One bore well is exclusively for boys hostel.
 - Other bore well is for college and ladies hostel.

- A third bore well is used for gardening and land scaped area

DRINKING WATER

- Drinking Water is filtered and treated through R.O system
- The raw water passes through iron and carbon filters.
- Then chlorine is added using dosing pump
- The filtered water then passes through UV light and goes to storage tank.

ACTIVITIES

- Daily back washing of filters done by duty technicians.
- Functioning of dosing pump and pressure pumps checked periodically.
- Filtered and treated water is tested in civil engineering department environmental lab for various parameters.
- Treated water is supplied to college and hostels through water coolers for drinking purpose.
- Plumbing technicians attend the complaints in hostels regarding water leakage and blocks in drainage systems.

Contd.

- Sufficient stock of spares like valve, taps, plumbing connectors, electrical bulbs, tubes, breakers etc have been maintained
- Regular cleaning of roof top water storage tanks are carried out.
- Pumping operations are controlled by technicians.

A separate register is maintained for electrical and plumbing maintenance activities.

CIVIL MAINTENANCE

- Maintenance section consists
 - Site Supervisor :- 1No.
 - Assistant Site Supervisor :- 1No.
 - Casual Laborers :- 2No.

- Major activities of this section is to handle works related to civil nature in college and hostel premises.
- Repairs to buildings are undertaken by them

FIRE FIGHTING SYSTEM

- A well defined fire hydrant systems has been installed and tested in PG block.
- DCP type fire extinguishers have been kept in various labs and buildings.
- Sand buckets are kept in laboratories.

RAIN WATER HARVESTING SYSTEM

- The rain water is collected from roof top of PG block.
- This Water is directed to flow through pipe (4”) to the nearby open well for storage.
- The collected Water is used for gardening and irrigation purpose.

BIO-WASTE TREATMENT

- A bio-mass gas plant is available in college.
- The bio waste from hostels and canteen is fed to the plant.
- The biogas from the plant is used for cooking in canteen kitchen.