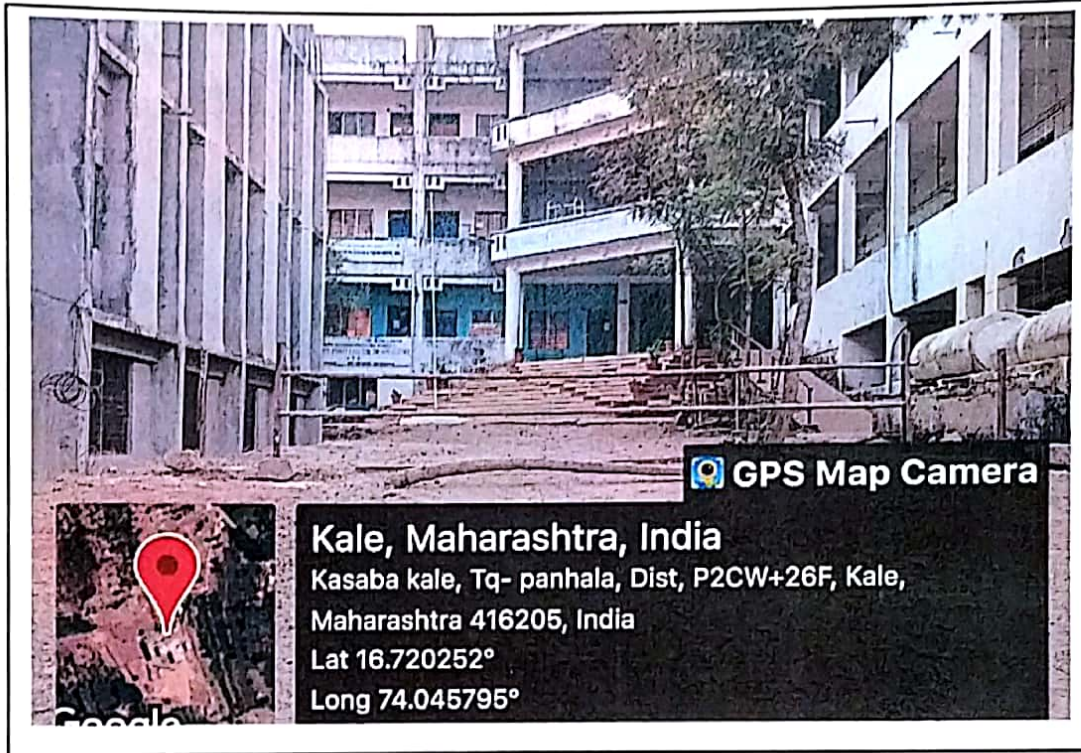


GREEN AUDIT REPORT

Vitthalrao Patil Mahavidyalaya (Arts, Commerce & Science) Kale, Tal-Panhala, Dist-Kolhapur, Maharashtra, Kale



Prepared by
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Vitthalrao Patil Mahavidyalaya Kale
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(Consultants for Environment, Health and Safety)

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TO WHOMEVER IT MAY CONSERN

We , Archana Analytical Services, conducted Green Audit 2021-2022 for Vitthalrao Patil Mahavidyalaya (Arts, Commerce & Science) Kale, Tal-Panhala, Dist-Kolhapur, Maharashtra, 416205. This is declared that Green Audit is conducted as per the norms of Ministry of Environment and Forest, Govt. of India and allied agencies whereas applicable. Green Audit is replication of data given by institution and its actual onsite visit verification.



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College Profile

Vitthalrao Patil Mahavidyalaya[VPM] is a degree [Arts, Commerce & Science] college situated in Kale, the western region (belongs to Konkan Area) of Panhala tahsil in Kolhapur District in Maharashtra State. It was founded on 30th June 2000 by Shri Datta Shikshan Prasarak Mandal, Panutre. The Teachers who worked as I/c Principal and Principal of this college respectively are at a glance.

The college is named after Indian born Shri Vitthal Shankar Patil, the institute founder, who devoted honestly towards education for all (castes, creeds, religions etc.) in society. The college has got Permanent Affiliation by Shivaji University, Kolhapur on 22 April 2014.

The college has only senior section. The senior wing offers bachelor's degrees in 7 disciplines [Arts], 2 disciplines [Commerce], 6 disciplines [Science], spanning languages, humanities, social sciences, commerce creative sciences. The post-graduation in M A and M Com [Distant Education, Shivaji University, and Kolhapur] degrees are also made available for who deserves for higher education. In addendum, college availed pre preparation for degree and degree courses in Arts and Commerce of Yashawantrao Chavan Maharashtra Open University, Nashik [Maharashtra]. It provide atheletic and culture facilities for students.

Vitthalrao Patil Mahavidyalaya is known for its close association with region need particularly educational. Its founder is amongst the pioneers of love, eagerness for education and society literacy and development. The college has produced thousands of graduates. It is to be noteworthy to state here that this college has been granted as 'Special Case' for Local and Gramin (Rural) Higher Education by Maharashtra Government in year 2000. The college is recognized by UGC New Delhi under 2 (F) and 12 (B) on 2 Dec. 2014. It

receives the financial help from UGC for the construction of campus, buildings and general development.

More than 4 acres campus of the college is located in the heart of the 'Saucer' shaped natural sight covered with mountains, hills, valley, river and hygienic climate in Kale. It is fully pollution free.

During the period 1985-86, there was a pressing need to modernize the education system to fight against ill literacy, traditional education system and to introduce scientific, research oriented higher education throughout India as a Higher Education Policy matter by Govt. of India. The Local educational lover Vitthal Patil put his efforts into the formation of a Sanstha for Kale region [Dhamni and Kasari Khora] people. The result was into New Prathmic Vidyalaya, Vitthal Patil Madhymic Vidyalaya and Jr. College, Shankar Patil English Medium School, Yashawant Semi English School, Mahatama Magasvargiy Vidhyarthi Vastigrah, D Ed College, Vitthalrao Patii Khajgi Audyogic Prashikshan Kendra, Vitthalrao Patil Mahavidyalay, Kale. Boosted by its success, Shri Datta Shikshan Prasarak Mandal was formed on 6th Nov. 1985 and a decade later Vitthalrao Pati IMahavidyalaya (2000) was founded. The V PM in Kale is in between State Sub High Way Kolhapur – Gaganbawda and Bajar-Bhogav on the west side of Panhala Tahsil. The college was inaugurated by Shri Vasant S Alwekar, the local social worker and lover of education.

Vision

To fulfil educational, socio-cultural and economic needs of the society -hilly rural region.

Mission

To impart quality education through conventional and innovative learning process and practices.

Objectives

- To provide a dynamic and creative academic environment to our Staff and Students, to tap and nurture talent for the development of professional skills and an all-round personality.
- To inculcate good moral values and a sense of nationalism in students, to develop as a responsible citizen.

About College

The village Kale is situated at the center of four Talukas, i.e. Panhala, Gaganbawda, Shahuwadi and Radhanagari. This place is a backward, rural and hilly area. The population of Kale village is about 15,000 and Kale is a market place for 60 villages with the population of about 80,000. The famous Anuskara Dam is about 25 Km. away from Kale, and Kale village is surrounded by several mountains. The campus of institute consists a large building and a big play ground, for that we have to dig the hard rocks of mountain.

In the decade of 1980 this Kale region has very limited educational facilities. Student especially girls have to travel 25 Km. distance to reach district place i.e. Kolhapur. Considering this difficulty of society, institution decided to provide K. G. to P. G. education. So far we establish Prathmik Vidyalaya, Vitthal Patil Madhyamic and Junior College (which is earlier known as Girls High School), D. Ed. College, English Medium School, Mahatma Phule Hostel for Backward Class Students. Varishatha Kala Mahavidyalaya Kale was started in 2000-2001, which is now known as Vitthalrao Patil Mahavidyalaya, Kale. Because of rural and hilly nature of region only 11 % students are taking higher education. We want to increase this percentage up to 70 %. For that purpose recently in year 2010-11 we have started B.Sc. and B.Com. We also succeed in gating clearance for P.G. courses of Marathi and Political Science, but because of some technical reasons these courses cannot be started in this academic year. We have started two trades of ITI from year 2012-13 and Institution is now planning for more professional courses like Polytechnic.

The vision of the institute is to bring educational revolution in Kale region, channelize the sustainable social development which encompasses social, economic and political development, for that we are committed to

provide quality based education. In recent past years we have achieved many land marks. But lot of work is yet to be done, and for that we need some financial inputs. For Indian donors we have 80G certificate and for foreign donors we have FCRA certificate too. So, I take this opportunity to appeal you for your actively support in political, financial and official matters for this noble cause.

Certain remedies are under consideration to make avail higher education and increase admission of college. For it, the institution has started B.Sc. and B.Com courses (three years) since the academic year 2010 – 2011 onward.

The vision of the institute is to become excellent educational academy and develop human resources in Kale region, and for that we are committed to provide quality based education. It witnesses by many scholarships, honours to students and faculties.

I take this opportunity to appeal you for your actively support for this noble cause. For donors to institute, we have made provisions such as 80G certificate & FCRA certificate (for international donors).

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INTRODUCTION

1.1 Infrastructure

More than 4 acres campus of the college is located in the heart of the 'Saucer' shaped natural sight covered with mountains, hills, valley, river and hygienic climate in Kale. It is fully pollution free.

The village Kale is situated at the center of four Talukas, i.e. Panhala, Gaganbawda, Shahuwadi and Radhanagari. This place is a backward, rural and hilly area. The population of Kale village is about 15,000 and Kale is a market place for 60 villages with the population of about 80,000. The famous Anuskara Dam is about 25 Km. away from Kale, and Kale village is surrounded by several mountains. The campus of institute consists a large building and a big play ground, for that we have to dig the hard rocks of mountain.

1.2 Green audits an overview:

Educational Institutes are playing a key role in continues development of human resources worldwide through teaching and research. Educational institutes conduct various activities with aim to percolate the knowledge among the different levels of society. Likewise, educational institutes also try to give issues related environmental conservation and pollution control. Various types of evolutionary methods are used to identify the environment concerning problem. It includes Environmental Impact Assessment (EIA), Social Impact Assessment (SIA), Carbon Footprint Mapping, Green audit etc.

“Green audit is a tool to highlight general practices accepted and implemented by organization in term of its impact on environment”. Green audit also focuses on adverse practices which are cause and responsible for harm to environment. Green audit shows strength and weakness of organization towards protection and conservation of environment. It also marks and highlight the non-accepted practices of natural resources utilization. Green audit shows the path to continuously run healthy practices, new innovative system for optimum utilization of resource and minimization of waste generation. It helps for protection and conservation of environment, natural resources and lead institution sustainable campus in social, economic and environmental views.

1.3 Need of Green auditing:

Green auditing is the process of assessment of practices accepted by institution in view of whether they are eco friendly and sustainable or not. Traditionally, Indian culture teaches good and efficient users of natural resources. But over the period of time uncontrolled excess use of resources like energy, water, chemicals are become threat to the environment and society also. Now, it is necessary to check whether our accepted practices are consuming more than required resources? Whether we are handling waste carefully? Where we have control over the use of natural resources. Green audit shows all such

practices and gives a well direction to optimize the use of natural resource. In the era of global warming, climate change, pollution and resource depletion it is necessary to verify the accepted practices and convert it in to green and clean one. Green audit provides an approach for it. It also increases overall awareness among the stack holders of institution towards an environmental conservation and green practices to be accepted.

1.4 Goals of Green audit:

College has conducted green audit with following goals.

1. Baseline data collection of environmental parameters and measures over the environmental issue before they become problem.
2. Find out strength and weakness in green practices.
3. Conduct a survey to collect base line ground reality about green practices.
4. Find out the hurdles in green practice, and suggest solution over the hurdles.
5. Check out the facility of different types of waste management.
6. Increase environmental awareness throughout campus with training.

1.5 Objectives of Green audit:

1. To collect the base information over the current practices which can impact on environment?
2. To find out significant environmental issues.
3. Setup goal, vision and mission for environmental conservation and sustainable practices in campus.

METHODOLOGY

This is the first attempt to conduct Green Audit of Vitthalrao Patil Mahavidyalaya(arts, Commerce & Science) Kale Kolhapur. First target was to collect the base line data concern about the green practices. The present report is based on onsite visits, personal observations and questionnaires survey tools. Primarily, based on data requirement, different type of questionnaires were prepared. Questionnaires were provided to all concern asked them to fill the same. The generated data is subsequently gathered and used for further analysis. From the outcome of the overall study, a final report is prepared. Before the survey all the required secondary data were collected from concern departments.

2.1 Survey by Questionnaire:

Baseline data for green audit report preparation was collected by questionnaire survey method. Questionnaires were prepared based on the guidelines, rules, acts and formats prepared by Ministry of Environment and Forest, New Delhi, Central Pollution Control Board and other statutory organizations. Green audit report of Shivaji University, Kolhapur is used as format for the report preparation. Most of the guidelines and formats based on broad aspects and some of the issues or formats were not applicable for educational institutions. In fact, questionnaires were prepared, using these guidelines and formats, combinations, modifications and restructuring them, sets of questionnaires were prepared as solid waste, energy, water, hazardous waste, and e-waste.

All the questionnaires comprise of group of modules. Questionnaires were prepared in such a view that it will be easy to extract the general

information of the concerned department, which broadly includes name of the department, total number of students and employees, visitors of the department, average working days and office timings etc. Another part of the questionnaires extracts the present consumption of resources like water, energy, or the handling of solid and hazardous waste. Maintaining records of the handling of solid and hazardous waste is much important in green audit. Last part of the questionnaires shows possibilities of loss of resources like water, energy due to improper maintains.

2.2 Onsite visit and observations:

Vitthalrao Patil Mahavidyalaya, (Arts, Commerce & Science) Kale campus has vast built up area comprising of various departments, administrative building, Library, Class rooms. All these amenities have different kind of infrastructure as per their requirement. All these buildings were visited by the surveyors. Presents conditions were checked by specific check list. Personal observations were made during the onsite visit.

2.3 Data analysis and final report preparation:

Required primary and secondary data were collected by different ways live questioners, check list etc. Collected data were crossed checked during the personal onsite visit. In case of green audit, the filled questionnaires of the survey from each group, were tabulated in excels spreadsheets. The tabulated data is then used for further analysis. SPSS software is used to find out the frequency distribution and results in percentile format. For better understanding of the results and to avoid complications, averages and percentages of the Tables were calculated. Interpretation of the overall outcomes is included in Final report.

OVERVIEW OF GREEN AUDIT

Audit Criteria

- 3.1 Green Cover
- 3.2 Waste Management
- 3.3 Electricity and Energy Audit
- 3.4 Water Conservation
- 3.5 Health and Hygiene
- 3.6 Training and Awareness

3.1 Green Cover

The college continuously conducts tree plantation drives as a mission through their NSS. Every year, NSS arranges plantation programmes in selected villages with public environmental awareness activities. The college has developed a garden on the college premises. The college premises indicate the awareness level on floral biodiversity among the staff and students of the college.

Counting of trees and shrubs in the college premises was done by Botany Department student volunteers.

The plantation movement is conducted three times during the year, i.e. before the arrival of monsoon, during monsoon and post monsoon. The college has developed a garden with 2000 sq. ft. The college premises indicate the awareness level on floral biodiversity among the staff and students of the college.

Counting of trees and shrubs in the college premises was done by student volunteers. A project on identification of plants in campus was undertaken with the help of Botany Department students. Volunteer students have maintained PANPOI for the birds in the campus; however, these efforts may be further improved by display of information. College students are also encouraged for bird watching within the campus. Records of such surveys on floral & faunal biodiversity are maintained and were available during the audit.

List of Flora and fauna

With the help of Botany Department students, a project on identification of plants in campus was undertaken and a list of floral diversity is listed. Likewise,

with the help of Botany Department students a project on identification of fauna which includes, birds, reptiles etc. in campus was undertaken and list of fauna biodiversity is listed.

Plantation with villagers at different villages

College has started a unique movement of plantation, motivational approached are developed in local people to plant more and more tree. As a part of this movement villagers from surrounding villages are motivated to plant a tree in front of their house and nourish the same.

Drinking water system for birds and animals

College comes in arid zone and facing the problem of water scarcity. As a part of conservation of biodiversity college have make separate drinking water system for birds and animals. Specific water bowels are placed at typical location considering the less human interferes. This practise shows very good results and bird and animal count is increased because of availability of water and secure place.

3.2 Waste Management

Solid waste management is a burning issue in current days. The rate of generation of solid waste is very high management technology are too adequate. Unscientific handling of solid waste is also a burning issue which can create threats to public health and environment. It is necessary to manage the solid waste properly to reduce the load on waste management system. The purpose of this audit is to find out current management practice of solid waste generation in the campus. Paper waste is a major solid waste generated in the campus. Most of the departments including office, library are major contributing in the paper waste generation. Followed by paper. Plastic is secondary contributing solid waste generated in large quantity in the campus. Office staff are using one side papers for printing and writing. Biodegradable

waste generated in campus is mostly from canteen. The college have well established protocol to recycling and reuse of resources such as paper in the form of annual sale of stored newspapers and waste papers to scrap dealer. Very few departments are categorizing the plastic and sending it for recycling. Metal scraps and waste is segregated separately and sent for recycling yearly. Canteen waste is collected and some biodegradable waste is treated with vermicomposting process. It was observed that e-wastes were collected and recycled with outside vendor.

3.3 Electricity and Energy Audit

Major energy sources utilized include Solar Energy and electricity. Major use of the energy is at office, laboratories, and library canteen and class rooms for lighting, transportation. Electricity is supplied to the campus by Maharashtra State Electricity Board. The NAAC Cell conducted an Energy Audit as a part of green. Prime aim of audit was to find a way of energy conservation It is documented that Play cards and posters are displayed near electricity supply and rooms however it was nowhere to be seen during the walk through. The peon switched off all power supply in non-lecture hours and was confirmed during the site walk through visit. Lab In charge of all laboratories conveyed that electricity during nonworking hours are put to off. Different awareness programmers were conducted for peons, staff and Students. The College initiated to install LED bulbs in the college campus the initiative could be strengthened with help of a action plan. The college targets to reduce electricity out of total electricity consumed in college as per the documents. This may be supported by maintaining proper relevant records and benchmarking the present consumption.

3.4 Water Conservation

For the purpose of water audit an on-site walk through survey and assessment was conducted to determine the efficiency of water use and to develop recommendations for improving water use efficiency. Overall agenda of conducting a water audit is to identify opportunities to make water use more efficient. Water audit includes tracking, assessing and validating all components of flow from distribution system in to the consumer's properties. On the other hand, water audit of a campus review direction and quantity of water used for domestic, laboratory, drinking, gardening, sanitary and land scalping processes.

Drinking water is provided on assessable place in the campus. Drinking water is currently not being tested for the water parameters according to prescribed BIS standards for drinking water. Toilets were checked for leakages and spillage. These toilets were checked at random and found to be maintained in leakages and spillage free. Although it is highly appreciated that the college has initiated Rain Water Harvesting on site. The NSS conducts water conservation drives inside the campus and also at public places. College incited to reduce water consumption by raising awareness in students & staff members and having periodic check on leaks. Displays of signage and message for Good Practices in the College premises and Gavashi village for Water Conservation. It is needed for the continuous highlight of the issue. The college incited to recycle and reuse the wash water of wash basin for gardening purposes. The college also planning for the rain water harvesting system as a conservation practices.

3.5 Health and Hygiene

The college incited to promotes Swachh Bharat Abhiyaan by maintaining cleanliness on campus. It is well concentrated on housekeep. Toilets were checked for hygiene, leakages and spillage. These toilets were checked at

random and found to be maintained in hygienic condition also students were found to be satisfied with hygiene level. It is documented that Sweeper cleans the floor and toilets regularly Swachh Bharat Abhiyaan are promoted by the NSS. For a good hygiene practices college run following activities.

Yoga Camp

As a part of personal health Program College has organized International Yoga day on 21 June. Program was instructed and conducted by Prof. V. S. Yamagekar and participated by 70 peoples.

Campus as Oxygen Park

By covering maximum area under green cover i.e. under plantation college has been Oxygen Park for the human as well as birds and plants also. College campus works as an oxygen park because campus it provides good, fresh and non-contaminated air. Considering the conditions local people enjoying the campus ride at morning and evening time.

Illumination and ventilation

College buildings are more spacious and class room and all other rooms are good ventilated. Natural illumination and ventilation is too good. There is no need of artificial ventilation and illumination.

Sanitation drive

College conducts sanitation drive, which motivated student and staff about the cleanliness practices and give them exposer for the voluntary work.

Health checkup Campaign

As a part of health and hygiene practices college arranges different awareness camping on different dates. As a routine activity Awareness and health checkup campaign includes Blood Checkup etc. were arranged.

3.6 Training and Awareness.

The college runs nature club which conducts invited guest lecture on various environmental issues. NSS wings actively participate to promote Swachh Bharat Abhiyaan, and awareness rally.

3.7 Corporate Social Responsibilities

Plantation with Campus

College has started a unique movement of plantation, motivational approaches are developed in local people to plant more and more trees. As a part of this movement villagers from surrounding villages are motivated to plant a tree in front of their house and nourish the same. Basically primary schools are involved in this activity.

**Media gallery of
events carried out
2021-2022**

Water Conservation

Vitthalrao Patil Mahavidyalaya, Kale

Check Dam Construction at Patrewadi - Gashi



Water Conservation Tank



Waste Management



Yoga Camp



Health checkup Campaign



Plantation



Vitthalrao Patil Mahavidyalaya, Kale.

Use of Sensor Bulb



Vitthalrao Patil Mahavidyalaya, Kale

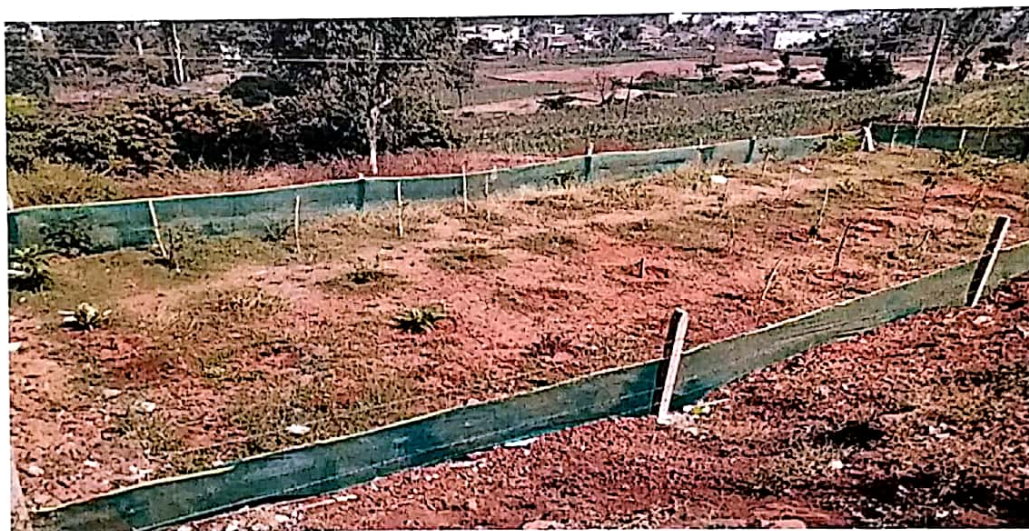
Campus Cleaning by Students and Staff



Solar Lamp



Botanical Garden



SUMMARY AND AUDIT FINDING

1. College takes efforts for solid waste management by proper methods.
2. Recycling and reuse practice is followed strongly.
3. Electricity consumption is controlled by managerial practices.
4. Use of LED lamps/tub lights are encouraged.
5. Good watershed management program is implemented on campus.
6. Well adequate water filtration and Water treatment plants system is observed.
7. E-waste segregation, handling and disposal is done properly.
8. Good housekeeping is maintained throughout the premises.
9. Visual signage boards for generating awareness about conservation of water and electricity are displayed.

RECOMMENDATIONS

Following are some of the key recommendation for improving campus environment.

1. Vision Mission and Goal to be prepared with all the recommendations and current practice carried by institution.
2. The college should develop internal procedures to ensure its compliances with environmental issues.
3. Leakages and corrosion of pipes, overhead takes be maintained timely and promptly.
4. The college should improve its monitoring and reporting system for of water usage, electricity consumption etc.
5. The college should develop a segregation protocol for the segregation of different type of solid waste.
6. To achieve the target of reduction in electricity and water consumption, there should be proper documented management programs to achieve the same.
7. College should arrange special drive to check of PUC and should be made mandatory for students who use and park personal vehicles in the college premises.