

**INTERNAL  
GREEN AUDIT REPORT  
FOR  
SWAMI KESHVANAND INSTITUTE OF  
TECHNOLOGY, MANAGEMENT & GRAMOTHAN,  
JAIPUR**



**Date: 30 June 2019  
By Green Audit Assessment Team**

**SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY,  
MANAGEMENT & GRAMOTHAN,  
JAIPUR**



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**A tribute to tree.....**  
**I think I shall never see**  
**A poem lovely as a tree**  
**Poems are made by fools like me**  
**But only god can make a tree. -Joyce Kilmer**

## 1 INTRODUCTION

Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) inspired from the learnings of Swami Keshvanand, was established in the year 2000 by Technocrats and Managers Society for Advanced Learning.

Today the institute is recognized as one of the canters of academic excellence in Northern India. The Institute is affiliated to Rajasthan Technical University, Kota for offering Postgraduate and Graduate Courses in Engineering and Management. Our sister institution Swami Keshvanand Institute of Pharmacy (SKIP) is affiliated to Rajasthan University of Health Sciences for offering Graduate Course in Pharmacy. Located in the Pink City Jaipur, which is a blend of traditional history and modern outlook, SKIT is putting in efforts for making industry ready engineers and managers through effective Industry –Institute Interface.

Apart from University curriculum SKIT also pursues activities for research and development in various fields. The green landscaping, aesthetic elegance of arches and the vibrant pursuit of knowledge by the young aspirants make the environment serene, pleasant and dynamic. Students joining the institute share the box full of opportunities for professional and personal development through an environment of practical orientation, industrial interaction and student led activities which help the students to develop good communication skills, integrated personality and greater competitive spirit.

### A) Intake under Self Financing Scheme (SFS) as per AICTE Approval:

Name of Branch	Approved Intake	Division of Approved Intake		
		15% seats for Out of Rajasthan Candidates through REAP	70% Seats for Rajasthan Candidates through REAP	15% seats for all states candidates under Management Quota (At Institute Level)
Civil Engineering	120	18	84	18
Computer Science & Engineering	180	27	126	27
Electronics & Communication Engineering	90	14	63	13
Electrical Engineering	120	18	126	18
Information Technology	90	13	63	14
Mechanical Engineering	180	27	126	27
Computer Science & Engineering -II	60	9	42	9
Electronics & Communication Engineering-II	60	9	42	9
Electrical Engineering I	60	9	42	9
Mechanical Engineering	60	9	42	9
<b>Grand Total</b>	<b>1020</b>	<b>153</b>	<b>714</b>	<b>153</b>

## **INFRASTRUCTURE OF SKIT COLLEGE IS AS PER BELOW**

The entire campus combines spacious and technologically driven blocks that are stretched with sprawling green areas. The various blocks are multi-storied buildings empowered with properly ventilated and spacious classrooms, laboratories and tutorial rooms and various seminar halls and auditoriums. The classrooms are equipped with smart classroom applications and audio and visual aids that foster quality training. The various blocks for the functional purposes are:

**THE VIKRAM SARABHAI BLOCK :** This block houses the administrative offices of the Directors, the Departments of Computer Science and Engineering, Information Technology and Electronics, Communication and Training and Placement Cell. The block also has the glorious Amphi Theatre that has held the most memorable events for the last 15 years. 3900 (Sq.Mtr)

**THE DHANVANTRI BLOCK :** The Dhanvantri Block includes the Administrative offices of the Chairman and Director, the Department of Pharmacy and other administrative offices. The Block houses the central library that is The Gyandan Resource Center. Area: 1166 (Sq.Mtr)

**THE VISHVAKARMA BLOCK :** The Vishvakarma Block houses the Department of Mechanical Engineering and the Department of Management Studies. The block also has a seminar hall having a seating capacity of 250 persons and many small halls for student activities. Each block encompasses a disciplined academic environment and provides ample opportunities to organize significant extra-curricular activities. Area : 1540 (Sq.Mtr)

**SIR M. VISVESVARAYA BLOCK :** This block is the working space for the Department of Electrical Engineering, Civil Engineering and the Sciences and Humanities Department. Built on an approximate area of two lac sq. feet, the block holds the biggest auditorium called the Gyanmandir Auditorium of a seating capacity of 850 people and a mini auditorium named as J.C Bose Auditorium having a seating capacity of 250 persons. It also has a mini open-air theatre called the C.V Raman Theatre. Area : 3343 (Sq. Mtr)

These four blocks encompass administration offices to the modern classrooms to provide amity of learning to intellectuals. In accordance with the need of engineering courses, labs, classrooms and departments are established.

**During Audit team of internal Audit interacted with following persons**

<b>Name</b>	<b>Designation</b>
Dr CM Choudhary	HOD, CS
Dr Anil Choudhary	HOD, IT
Dr S.K. Bhatnagar	HOD, EC
Dr. N.C.Bhandari	HOD, ME
Dr. D.K.Sharma	HOD, CE
Dr. Akash Saxena	HOD, CE
Mr Mani Ram Choudhary	Purchasing Officer
Mr Jagdish Choudhary	House Manager

**2. OBJECTIVES:** In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The college has been putting efforts to keep our environment clean since its inception. But the auditing of this non-scholastic effort of the college has not been documented. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards.

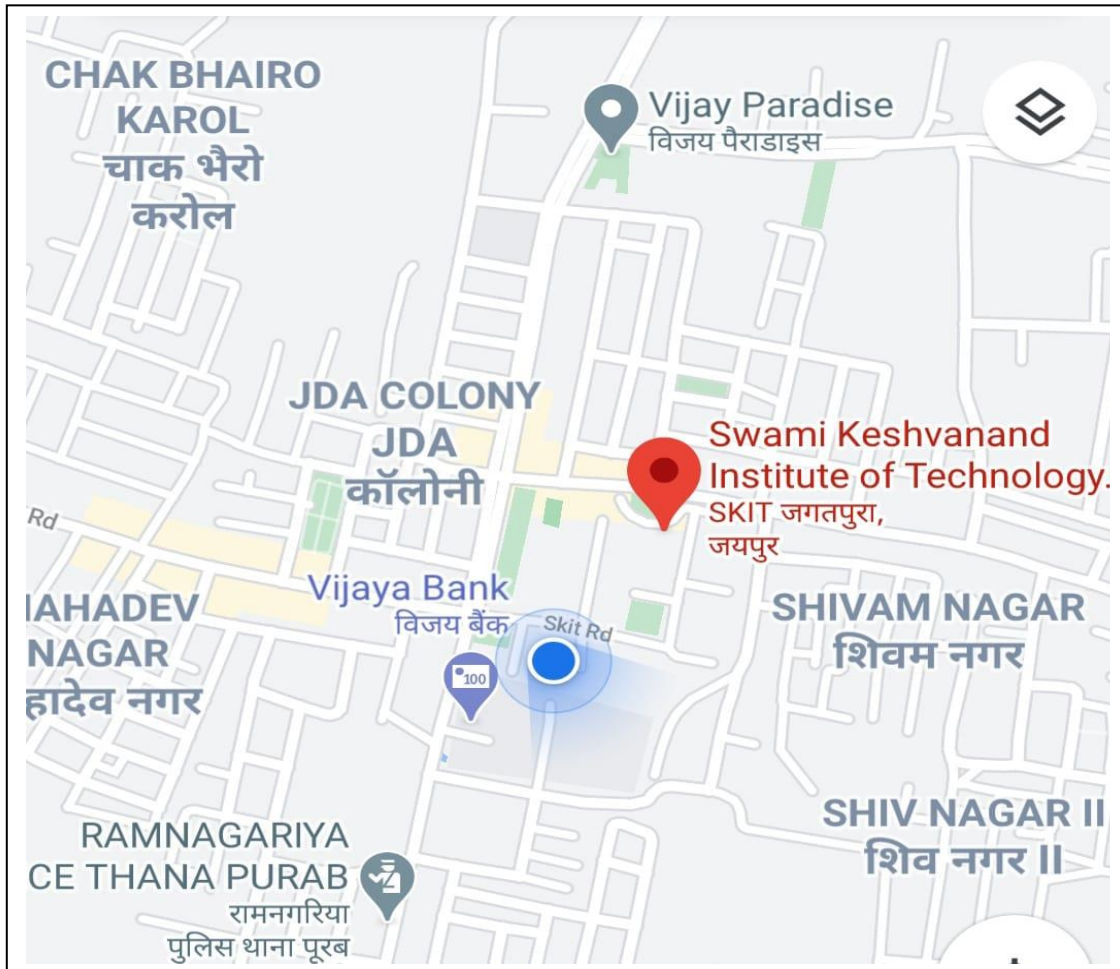
### **3. METHODOLOGY**

The purpose of the green audit of swami keshvanand institute of technology, management & gramothan, Jaipur is to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution. The methodology include: preparation and filling up of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. Some data have also been taken from the students' research works carried out by various departments of the college.

#### 4. GEOGRAPHICAL LOCATION OF THE COLLEGE :



(SKIT Campus)



(Location of SKIT)



## 5. GREEN AUDIT

Green audit forms part of a resource management process. Although they are individual events, the real value of green audits is the fact that they are carried out, at defined intervals, and their results can illustrate improvement or change over time. Eco-campus concept mainly focuses on the efficient use of energy and water; minimize waste generation or pollution and also economic efficiency. All these indicators are assessed in process of “Green Auditing of educational institute”. Eco-campus focuses on the reduction of contribution to emissions, procure a cost effective and secure supply of energy, encourage and enhance energy use conservation, promotes personal action, reduce the institute’s energy and water consumption, reduce wastes to landfill, and integrate environmental considerations into all contracts and services considered to have significant environmental impacts.

### **Target areas included in this green auditing are:**

**5.1 Auditing for Water Management:** Water is a natural resource; all living matters depend on water. While freely available in many natural environments, in human settlements potable (drinkable) water is less readily available. We need to use water wisely to ensure that drinkable water is available for all, now and in the future. A small drip from a leaky tap can waste more than 180 liters of water to a day; that is a lot of water to waste - enough to flush the toilet eight times! Aquifer depletion and water contamination are taking place at unprecedented rates. It is therefore essential that any environmentally responsible institution should examine its water use practices. Water auditing is conducted for the evaluation of facilities of raw water intake and determining the facilities for water treatment and reuse. The concerned auditor investigates the relevant method that can be adopted and implemented to balance the demand and supply of water. It is therefore essential that any environmentally responsible institution examine its water use practices.

The college does not have any automatic leak detection system and all the leakages are controlled by manual observation hence leak quantum water is another issue which shall be considered in designing the water conservation scheme. No leakage of water from pipes is observed from pipes by auditor team but leakages in taps were observed in some urinals. There are 1600 Taps in the college premises from which the water is used for different use. There is no tap maintenance schedule with the maintenance department; the leakage problem will be solved by them only when they get any complaint.

**5.2 Auditing of Wastewater Management:** The waste water produced in this college is about 6000 liters per week per laboratory and there are two such laboratories producing effluent is first year Chemistry Laboratory and the Environment Laboratory in Civil Engineering department. The effluent produced is released to the common drainage without any treatment which is damaging to the environment and have very big concerned with ground water contamination. The Sewage water mainly comes from Toilets of college, hostel, kitchen and canteen. Construction of Sewage Treatment Plant is in progress.

**5.3 Auditing for Energy Management:** Energy is one of the major inputs for the economic development of any country. The fundamental goal of energy management is to produce goods and provide services with the least cost and least environmental effect. It can be said as “the strategy of adjusting and optimizing energy, using system and procedure so as to reduce energy requirements per unit of output while holding constant or reducing total costs of producing the output from these systems”. The energy audit is key to a systematic approach for decision making in the area of energy management. It attempts to balance the total energy inputs with its use, and serve to identify all the energy streams in a facility. This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliance, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment.

Aim and objective:

- 1) To save conventionally produce electric energy
- 2) Use of non- conventional source of energy
- 3) Use carbon neutral electricity
- 4) Minimization of electric expenses Observations

Following Energy Sources are used in the college:

- Solar
- Electrical
- Diesel
- Petrol
- LPG

Use of LED bulb is promoted and florescent Tube Lights and CFL are getting replaced, 85% of the present bulbs and tubes are replaced to LED. Energy saving fans is also evident and encouraged in use.

#### **5.4 Auditing for on-site energy generation:**

1. Solar power of Played a key role in establishment and commissioning of 400 kW, Roof Top Solar Power Plant at SKIT in 2016.
2. Chemistry lab, Environmental lab and canteen have LPG pipeline.
3. Institute have diesel generators for energy backup.



#### **5.5 Auditing for Temperature Control:**

The climate of SKIT College campus located in Jaipur District of Rajasthan is Sub-humid Region in nature and temperature varies from 7° C in January and highest 45° C in June. The coldest month during winter is January and warmest month during summer is June.

1. SKIT mostly has green area which helps in reducing temperature. The Leaves of plants absorb and filter the sun's radiant energy, keeping things cool in specially in summer.
2. Walls of different buildings have light reflecting colours.

## 5.6 Auditing of E-Waste Management:

E-waste can be described as consumer and business electronic equipment that is near or at the end of its useful life. This makes up about 5% of all municipal solid waste worldwide but is much more hazardous than other waste because electronic components contain cadmium, lead, mercury, and Polychlorinated biphenyls (PCBs) that can damage human health and the environment.

**Observations** E-waste generated in the campus is very less in quantity. Administration conducts the awareness programmes regarding E-waste Management with the help of various departments. The E-waste and defective item from computer laboratories are being stored properly. The institution has decided to contact approved E-waste management and disposal facility in order to dispose E-waste in scientific manner.

**5.7 Auditing for Solid Waste Management:** Wastes cannot be avoided in any environment. Wastes can be classified as Biodegradable and Non- biodegradable wastes. Biodegradable wastes include food wastes; which can be easily decomposed by the bacteria in soil. But nonbiodegradable wastes are those which cannot be degraded by any organism and remain as such for many years. Much amount of waste is generated from the SKIT college campus.

**1 Canteen** – The food waste generated from the canteen is collected and given to pigs. Plastic waste is generally less generated from the canteen. The plastic waste generated is burned inside the ring near the dog kennel. Some organic waste is used in biogas plant.

**2. Library** - The most generated waste is paper waste. It is taken for recycling.

**3. Store-** Not much waste is generated. But the paper waste and plastic covers are burned in the ring.

**4. Office-** Paper waste generated are recycled and reused.

**5. Garden-**Plastic and paper waste is comparatively less.

**6. Auditorium** -The wastes are collected after each programme and are burned in the ring.

**7. Bathroom-**The wastes are collected and burned in an incinerator behind the convent.

**8. laboratory-**The broken glass wastes and the useless instruments are disposed for recycling after thorough washing.

**9. College Premises-**Plastic waste generated is usually less. But paper waste is generated in a larger amount.

**5.8 Auditing for Paper Wastes:** Paper Wastes are collected in the waste basket and recycled. College using paperless work by promoting email, whatsapp and SMS. Used papers are given to vendors for further recyclization. Prints are taken on both the sides.

### **5.9 Auditing for Green Campus Management:**

The area is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programmes organised by the authority and have become an integral part of the college. The trees of the college have increased the quality of life, not only the college fraternity but also the people around of the college in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, and supporting wildlife, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Many animals are dependent on these trees mainly for food and shelter. Flowers and fruits are eaten by monkeys, and nectar is a favorite of birds and many insects. Leaf – covered branches keep many animals, such as birds and squirrels, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, texture and vibrant colors. Even individual trees vary their appearance throughout the course of the year as the seasons change. The strength, long lifespan and regal stature of trees give them a monument – like quality. They also remind us the glorious history of our institution. We often make an emotional connection with these trees and sometime become personally attached to the ones that we see every day. A thick belt of large shady trees in the periphery of the college have found to be bringing down noise and cut down dust and storms. A recent study has revealed that the rich diversity of tree species of about 48 species belonging to 27 families have sequestrated a total of 362.65 ton of organic carbon. Thus, the college has been playing a significant role in maintaining the environment.

**5.10 Auditing for Air Quality Management:** The plants, greenery and sustainability of the campus to ensure that the quality of air.

**5.11 Auditing for Green belt:** The Green Belt Area is meant for conservation of nature value of the college premises, As per the requirement of National Green Tribunal the green belt shall be developed as per the guide lines of Central Pollution Control Board. The Green Area in the college includes the plants,

greenery and sustainability of the campus to ensure that the buildings conform to green standards. This also helps in ensuring that the Environmental Policy is enacted, enforced and reviewed using various environmental awareness programmes. Observations Campus is located in the vicinity of approximately 80 types (species) trees. Various tree plantation programs are being organized during the month of July and August at college campus and surrounding villages through NSS unit. This program helps in encouraging eco-friendly environment which provides pure oxygen within the institute and awareness among villagers. The plantation program includes various types of indigenous species of ornamental and medicinal. Instead of maintaining biodiversity the similar species planted is observed for example “NEEM”. The dominant species in green belt are Neem, Pongam Tree, Amaltash, Copperpod and Sita Ashok.



**Green Campus**



**Green Campus**



**Green Campus**

### **5.12 Good Daylight design:**

1. All the buildings having large windows. Windows are kept open to adequate light.
2. Building designed of according to good light.
3. All the buildings are white washed. Which can enhance daylight.

**5.13 Green Initiative by College Management and students:** conducts regular trainings to staff and faculty. Use of bicycles, controlled use of paper, plantation target and implementation are some of the initiatives. Display of environment protection banners, posters like save water, save energy at prominent places, waste disposal bins for wet and dry waste disposal are some of the initiatives taken.

### **Routine Green Practices**

World Environment Day – June 5 Awareness seminars are organized on various environmental problems. Planting trees, poster exhibition etc. are some activities on that day.

Ozone Day – September 16 Invited lectures, Painting competitions

Nature awareness programmes in the campus

Eco friends club

- Engaging students in maintaining garden
- Engaging students in maintaining herbal garden and medicinal garden.
- Plastic free campaign
- Workshop on eco-friendly carry bags
- Nature camps, field trips
- Switching from flex to cloth banners





**Green Initiative**



**Green Initiative**



**Green Initiative**



**Green Initiative**

### **5.14 Auditing for Noise pollution management:**

A. Silence zones in the college: - Various display boards have been placed in the library and other places for awareness to maintain silence in the college.

B. Noise control in the college: - The college adopts no honking policy and prevents use of any honk and noise in campus. Certain areas like library, class room are declared as Silence zone and noise pollution is kept to minimum on college campus.

### **6 GOOD POINTS OBSERVED:**

1. College has prepared Green Environmental policy and has taken efforts for sustainable development on the college campus.
2. College has formed the clubs of faculty and student which works to maintain biodiversity on the campus and also participates in preventing pollution in society through various drives.
3. College has installed solar panels and has further plans of its expansion.
4. College has a system of Hazardous waste disposal through Jaipur Nagar Nigam.
5. College has included environment protection and management a curriculum more particularly in Civil Engineering.
6. College has conducted Environment. Awareness trainings and workshop for faculty and students.

### **7 RECOMMENDATION/ SUGGESTIONS**

**Water Quality:** Taps needed to be repaired. The water coolers which are not working need to be repaired immediately.

**Air Quality:** More plants need to be planted. More of shade trees to be planted inside the college campus. Plastic wastes should not be burned that leads to pollution. Instead, they could be given to different organizations on a monthly basis.

**Energy:** Consumption Energy consumption could be reduced. Unnecessary lights and fans could be switched off. During daylight, lights can be switched off. Energy conserving methods like usage of LED and CFL bulbs can be appreciated

College has many areas where lighting is not required at all times. Installing sensor-based lighting in such areas can generate massive rewards. This is one of

the easiest ways to save energy in college. If most systems in computer laboratory and instrumentation laboratory are based on old technology, they might be consuming more power than new technology. Replacing old computers and instruments with ones having energy efficiency certifications is the easiest way to conserve energy in college. By installing more solar energy panels generate more electricity and minimize their electricity bill. In the hostels increases use of solar water heater is needed.

Investment in solar lights for outdoor lighting can generate long term benefits. A huge amount of energy is wasted because no one really cares about switching off the fans and lights when not required. Hence, planning workshops on energy conservation to educate students, faculty and staff can generate huge results. Unplug overhead projectors, computers, and smart boards when not in use. This simple way to conserve energy can help save large amount of power and money in the long run. Recycle or safely dispose of white goods, computers and electrical appliances. Use reusable resources and containers and avoid unnecessary packaging where possible. Always purchase recycled resources where these are both suitable and available

**Solid waste:** The management of college shall consider the following recommendations on top priority: -

- 1) The solid waste generated in the collage premises to be be collected in scrap Yard (Notified Area) and segregated as per the category of solid waste management and stored in the well labeled area.
- 2) Plastic waste to be given to either recycler vender registered with Rajasthan State Pollution Control Board as per “The Plastics Manufacture, sale and Usage Rules, 1999 and all its Amendments.
- 3) Hazardous Waste to be disposed by identified disposal pathway within 90 days from its generation as per the guidelines of “Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2008 with all the Amendments.
- 4) To avoid wooden waste generation the furniture to be transferred from wooden to metallic in future and today’s wooden waste shall be reused in the college through carpentry shop of workshop in mechanical engineering department.
- 5) Metal Waste to be reused in the college and workshop department shall be engaged for it, if they prove that the waste cannot be reused will be sale out to the venders who will recycle and reuse the same.
- 6) Unused food waste to be used as cattle feed, as on today some unregistered persons take away these wastes, the one who uses it shall come regularly and

should be registered with the college concern department and its record shall be maintained .

7) Non- Biodegradable waste shall be disposed to the registered vender with Rajasthan State Pollution Control Board.

8) Biodegradable waste to be compost in the college premises in technical manner, it is observed that the vermin culture pans are present in the college but in technical institute it is expected that the composting shall be done in perfect technical manner.

9) Municipal Solid Waste to be disposed as per the guidelines “The Municipal Solid Wastes (Management And Handling) Rules, 2000 with its all Amendments.

10) Bio- Medical Waste is generated in very large amount and this waste to be disposed within 48 hours from the generation as per the guidelines of “The Bio-Medical Waste (Management And Handling) Rules 1998 and its all Amendments.

11) The replaced or used batteries which could not be recharge as the life get exhausted shall be disposed as per the guidelines of “The Batteries (Management and Handling) Rules, 2001 and all its Amendments.

12) The E-Waste Produced in the collage to be disposed of as per the guidelines in “E-Waste Management and Handling Rules, 2011 and all its Amendments.

13) The records of proper disposal of all the solid wastes to be maintained with its manifests at one central place.

a. Management of College may encourage the staff and students: -

1) To use Common or public Vehicle instead individual vehicle to conserve fossil fuel

2) Maximum Solar energy is recommended to use in mess and canteen

b. Management of College may consider implementing on top priority:-

1) Carbon Sequestration study shall be carried out before plantation of Green Belt.

2) Energy Consumption for each building should be estimated to design the energy conservation plan.

3) Instead of out-sourcing the Annual Maintenance of Electrical Equipment college concern department staff shall take that responsibility

4) Energy saving awareness shall be done by displaying the boards at appropriate place

5) Encourage natural ventilation and illumination by alteration in the building structures whenever going for new constructions.

**Noise:** Level Monitoring shall be done as per the guideline of “Noise Pollution (Regulation and Control) Rules 2000 2) Vehicular exhausts shall be examined regularly in the collage as per Central Motor Vehicle Act 1988. Vehicular movement shall be restricted by putting boundary limit and beyond that limit bicycles usage shall be promoted to all students and staff.

## OVERALL RECOMMENDATIONS

- 1) Lab waste water quantity is not measured and drained to municipal drainage system.
- 2) Solid waste segregation is not done in lab as well as store room before final disposal. Green chemistry methods- Like solvent extraction are to be practiced.
- 3) Planning of chemical consumption and purchase to be ensured.
- 4) Calibration of instrument in lab to be done.
- 5) Composting of bio degradable waste to be scientifically done.
- 6) Septic tank sewage water analysis is to be done.
- 7) Plan for green belt development to be prepared.
- 8) Drinking water analysis shall be done as per IS 10500.
- 9) Rain water Harvesting (RWH) is to be done technically.
- 10) Reduction of wood policy.
- 11) Department wise electrical load consumption is to be done.
- 12) Energy used by each appliance is to be estimated.
- 13) List of equipment/instrument and their consumption of (energy/water) is to be estimated.
- 14) Awareness for energy and water conservation among students and staff by displaying boards.
- 15) Automatic leak detections in water flowing pipeline
- 16) Water usage reduction techniques to be used.
- 17) No previous for disposal of sanitary napkins. As per the Biomedical waste disposal Act.

19) Tree plantation shall be done to maintain biodiversity as well as artificial nesting shall be installed.

20) Awareness among students and staff about green environment shall be done use tools like display boards.

## **8 CONCLUSIONS**

We, the Department of Chemistry, believe that we have successfully completed the analysis of various environmental components. We hope that the suggestions put forward by us would be considered by the college and implemented as soon as possible.

## **9 ACKNOWLEDGEMENTS**

We would like to thank our Director (Academics) Dr S.L. Surana for her consent to conduct this audit. We would like to sincerely thank all the Departments, students, teaching and nonteaching staff for their kind cooperation with us during this survey. We would also like to specially thank the Laboratory Assistants who helped us a lot in furnishing this information.

**ANNEXURE 1**  
**GARDENING DETAILS**

<b>S.NO</b>	<b>Common Name</b>	<b>Botanical Name</b>	<b>Family</b>
1	Neem	Azadiracata indica	Meliaceae
2	Shisam	Delbergia sisso	Fabaceae
3	Gulmohar	Delonex regia	Caesalpiaceae
4	Seeta Ashok	Saraca asoca	Caesalpiaceae
5	Bel	Aegle marmelos	Rutaceae
6	Awala	Emlica officinalis	Phyllanthaceae
7	Bor	Zizipus mauritiana	Ramhnaceae
8	Jamun	Syzygium cumini L	Myrtaceae
9	Anar	Punica protopunica	Lythraceae



## ANNEXURE 2

### GREEN AUDIT CHECKLIST

#### Wastewater Management & Waste water Management

Sr. No.	Design Feature	Status	Remarks (If any)
1	Drip irrigation (This refers to plant watering system)	✓	
2	Efficient plumbing system from maintenance & operation point	✓	
3	Display of signboards at appropriate places for water conservation	✓	
4	Use of bore-well water in the toilet for flushing	×	We should discourage use of ground water
5	Rainwater harvesting	✓	
6	Sewage treatment plant for treated sewage recycle	✓	

#### Energy management & On-site energy management

Sr. No.	Design Feature	Status	Remarks (If any)
1	Use of natural day light	✓	
2	Use of energy efficient equipment	✓	
3	Use of energy saving bulbs (LED lights)	✓	Installation of LED lights have been proposed in the entire institute however at the entrance CFL lights are installed.
4	On-site energy generation	✓	
5	Photocell occupancy sensor for automatic light control	✓	
6	Regular maintenance of electrical system	✓	
7	Computerized monitoring of electrical system	×	
8	Solar panel	✓	
9	Display of signboards at appropriate places for energy conservation	✓	

### Temperature Control

Sr. No.	Design Feature	Status	Remarks (If any)
1	Use of daylight design (Building is constructed in such a way that diffused sunlight allows light but not the heat )	✓	
2	Special walls for temperature control and noise barrier (Thick/ Double/ Composite/ Acoustic control)	✓	
3	Earth air tunnel (cools air in summer and heat it in winter)	×	
4	Roof with reflective glass	×	
5	Use of cool roofing material during construction (mineral wool, rock wool, vermiculite, foams, expanded polystyrene, extruded polystyrene etc.)	✓	
6	Use of insulation material (e.g. autoclaved aerated blocks, hollow blocks etc.	×	
7	Use of water bodies/fountain	×	
8	Use of landscaping as sound barrier	✓	

### Waste Management

Sr. No.	Design Feature	Status	Remarks (If any)
1	Segregation of dry and wet waste	✓	
2	Use of coloured bins with code to collect garbage	✓	
3	Setting up recycling area/ composing area	×	
4	Avoid use of paper by going digital (Paper)	✓	
5	Printing on both sides of paper	✓	
6	Reuse of printed paper/ envelops for other applications	✓	
7	Donation of books to store or other library	✓	
8	Donation of weeded books to needy students	✓	
9	Donation of computers to NGO's to refurbish and give it to needy schools/people	✓	
10	Creation of specified junctions for collection of E waste(E-waste)	✓	
11	Implementation of any recycling project or program	✓	
12	Purchase of electronic products from company's which have after sales service for the disposal of product with take back policy	✓	
13	Reusing waste to produce new sustainable products	✓	
14	Hand over to the organization or recycler who knows proper disposal system	✓	

**Environmental Audit**

Sr. No.	Design Feature	Status	Remarks (If any)
1	Water and waste audit (includes water quality, solid waste generation, solid waste disposal process)	✓	
2	Fire Safety audit	✓	
3	Energy audit (includes energy consumption, thermal emission, visual comfort)	✓	

**Green Program**

Sr. No.	Design Feature	Status	Remarks (If any)
1	Green education to improve environmental awareness	✓	
2	Outreach relationships with local groups interested in environmental concern and satisfy their information needs	✓	
3	Reduce, Reuse and recycle the products such as books, electronic appliances etc. (e.g. At the time of de-selection and disposal of library material)	✓	
4	Digitization of majority of processes	✓	
5	E-archiving	✓	
6	E-resources : E books, Online Journals, membership of consortium	✓	
7	Subscription to databases	×	
8	Contribute library information on sustainability resources to a institute publication, blog or website	✓	
9	Selection of material content of which informs and assesses green practices (green computing, energy conservation etc.)	✓	
10	Use of eco-friendly reading material	✓	
11	Creation of “Green Team” in the institution	✓	
12	Recycling beyond paper i.e. Plastic, e-waste	✓	
13	Disseminating expert advice about sustainability to other colleges to make their own college greener	✓	
14	E Publishing reviews of new green resources in the newsletter or news	✓	