

SRI KRISHNA INSTITUTE OF TECHNOLOGY

GREEN AUDITING REPORT 2021-2022



Sri Raghavendra Educational Institutions Society
Sri krishna institute of technology

(Approved by AICTE, Affiliated to VTU, Karnataka)
Chimney Hills, No.29, Hesaraghatta Main Road, Post,
Chikkabanavara, Bengaluru, Karnataka 560090

SRI KRISHNA INSTITUTE OF TECHNOLOGY

GREEN AUDITING COMMITTEE

SL NO	NAME OF MEMBER	DESIGNATION
1	DR V. HARISH PROF & HOD, CIVIL DEPT, SKIT	CO ORDINATOR
2	MR. S. B. M. GOMES FOUNDER AND PRINCIPAL CONSULTANT, THE CEMENTOR BENGALURU	EXTERNAL AUDITOR
3	PROF SREENIVASAN HOD MECHANICAL DEPT SKIT	MEMBER
4	PROF MOHANM K T, Asst. Prof, Civil Dept, SKIT	MEMBER
5	PROF PRIYANKASHRI K N Asst. Prof, Civil Dept, SKIT	MEMBER
6	Ms VEDHA U, INSTRUCTOR, CIVIL DEPT,SKIT	MEMBER

GREEN AUDIT

CERTIFICATE

This is to certify that a "Green Audit" for Sri Krishna Institute of Technology, Chikkabanavara, Bengaluru, 560090 has been conducted in May-June 2022 to assess the green initiative planning and efforts implemented in the campus like Green Campus Management, Carbon Footprint, plantations, waste management and rainwater harvesting, conservation of energy. This green audit is also aimed to assess the impact of green initiatives for maintenance of eco-friendly campus.

Place: Bengaluru

Date: 25th June 2022

S.B.M-Gomes

Mr S.B.M. GOMES

EXTERNAL AUDITOR

V. Harish

DR. V. HARISH

CO ORDINATOR

HOD CIVIL SKIT
Bangalore - 560 090

Prof Sreenivasan

PROF SREENIVASAN

INTERNAL AUDITOR

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EXECUTIVE SUMMARY

A nation's growth starts from its educational institutions. Where the ecology is taught as a prime factor of development associated with environment. A clean and healthy environment aids effective learning and provides a conducive learning environment. Educational institutions, now-a-days, are becoming more sensitive to environmental factors and more concepts are being introduced to make them eco-friendly. To preserve the environment within the campus, various viewpoints are applied by several educational institutes to solve their environmental problems such as promotion of the energy savings by installing more efficient electronics and electrical equipment, proper segregation and recycle of waste, water use reduction, water harvesting and conservation etc. The activities pursued by colleges can also create a variety of adverse environmental impacts.

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience. It is otherwise the systematic examination of the interactions between any operation and its surroundings.

1. Green Audit is a systematic approach.
2. Audit is conducted objectively.
3. Auditor obtains and evaluates evidence.
4. Evidence obtained and evaluated by the auditor concerns assertions about economic actions and events.
5. Auditor ascertains the degree of correspondence between assertions and established criteria.
6. Goal, or objective, of the audit is communicating the results to interested users.

Green audit can be a useful tool for a college to determine how and where they are using most of the energy or water or resources. The college can then consider how to implement changes and make savings. It can also be used to determine the type and diversity of flora and fauna, and carbon foot print to improve the total

environmental health of campus. Green auditing and the implementation of mitigation measures is a win-win situation for the college. The learners and the planet. It can also create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. Green auditing promotes financial savings through reduction of resource use. It gives an opportunity for the development of ownership. personal and social responsibility for the students and teachers. Thus, it is imperative that the college evaluates its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation. The role of higher educational institutions in relation to environmental sustainability is more prevalent.

In Sri Krishna Institute of Technology, Bengaluru, the audit process methodology include initial interviews with management to clarify policies, activities, records 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 and the cooperation of staff in the implementation of mitigation measures.

This was followed by staff interviews, collection of data through the questionnaire, review of records, observation of practices and observable outcomes. In addition, the approach ensured that the management and staff are active participants in the green auditing process of the college. campus greening, resource management, Tree Plantation, and Mapping of Biodiversity planning of future projects, and a document for implementation of sustainable development of the college. Existing data will allow the college to compare its programs and operations with those of peer institutions, identify areas in need of improvement, and prioritize the implementation of future projects. We expect that the management will be committed to implement the green audit recommendations.

We are happy to submit this green audit report to Sri Krishna Institute of Technology authorities.

I. INTRODUCTION

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of Flora and Fauna} diversity within the campus. It aims to analyze green practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience. Green Audit provides direction for improvement of the condition of environment, there are various factors that have determined the growth of carrying out Green Audit.

It is the duty of organizations to carry out the Green Audits of their on-going processes for various reasons such as; to make sure whether they are performing in accordance with relevant rules and regulations, to improve the procedures and ability of materials, to analyse the potential duties and to determine a way which can lower the cost and add to the revenue.

Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. The intention of organizing Green Audit is to upgrade the environment condition in and around the institutes, colleges, companies, and other organizations. It is carried out with the aid of performing tasks like waste management, energy saving and others to turn into a better environmentally friendly institute.

ABOUT SRI KRISHNA INSTITUTE OF TECHNOLOGY

Sri Krishna Institute of Technology (SKIT) is situated in the picturesque location of Chimney Hills, Chikkabanavara on Hesaraghatta road and has a serene atmosphere, congenial for the pursuit of studies situated on top of a hillock overlooking vast verdant green land and watersheds enthralls the visitors by its captivating beauty.

The institute has marked a niche in the field of Technical Education with the state-of-the-art teaching equipment, innovative teaching methods, and good infrastructure, highly qualified and experienced teaching faculty committed to imparting quality education. The dedicated teachers interact with every student through the proctorial system to counsel and guide them. The office staff is always ready to help the students in their academic and administrative queries.

The total Number of students is 865 and total numbers of staff are around 76 numbers. SKIT has its own bus facility for students with 2 busses at 6 stops in te city.

SKIT LAYOUT

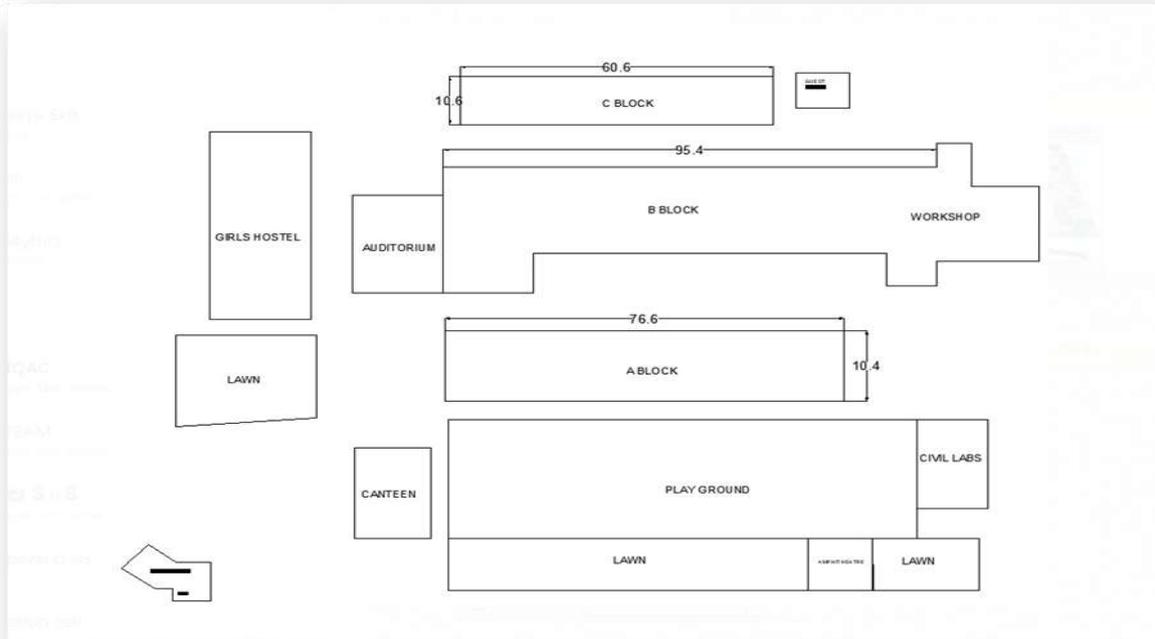


PHOTO: 1 SKIT LAYOUT

SKIT INFRASTRUCTURE:

1. LIBRARY

The college library is fully automated; SKIT has the huge collection of 26,286 books and a subscription of about 257 e- books for engineering. Library can accommodate 100 students. Internets browsing facility provided in digital library with arrangement of 10 computers to make students learning more easy.



PHOTO: 2



PHOTO: 3

2. SEMINAR HALLS:

The Institute has seminar halls in every block for conducting seminars with all the equipments installed necessary for conducting seminars.

3. AUDITORIUM AND AMPHITHEATRE

The Auditorium can accommodate 200-300 students, aimed at conducting events like department functions, club activities and meeting of various support organization.



PHOTO: 4

The Amphi Theater can accommodate about 800 students. This facility is used to conduct various academic and non academic activities of the institute.



PHOTO: 5

4: GYMNASIUM

Gymnasium is provided inside the campus to encourage physical activity amongst students.

Since the COVID lockdown, the Gymnasium has been closed in line with the COVID protocol guidelines.

5: ATM FACILITY

ATM facility is provided outside the campus for easy accessibility to the students and staff.



PHOTO: 6

6: WATER MANAGEMENT

The main source of water is from bore well. The total consumption of water is around 120 KLD. The major consumption of water is in Common Staffroom, Labs, Canteen, Hostel, Rest Rooms & for Gardening. R.O plant is installed at campus which supplies filter water for drinking purpose only. Keeping in mind that the city is facing water crises, SKIT has dug a bore well and it is self-reliant in its water requirement. The sump capacity of 20 KL is built with pump of 7.5 HP to lift the water to overhead storage tank. To avoid power consumption, overhead tank storage tank of capacity 15 KL is built and 9 syntax tanks of capacity 2KL each are installed. The daily water usage is around 120 KLD depending on the nature of academic activity. The domestic wastewater & the canteen wastewater are collected and disposed through soak pit & septic tank. Rainwater harvesting is also been practiced in the campus at near admin block & block C by storing rain water in a sump (Size: 2.5mt dia & 6mt depth). Also ground water recharge points in campus near admin block at such geographical place, where rain water can easily trapped in it and reach the ground water level. Although campus has canopy of trees, huge botanical garden, lawn in front of the building, for this requirement of irrigation water is huge and it is sufficiently met by the bore well water, but by installing STP at campus, treated water can be used for gardening. Garden is watered by sprinklers system to save water & is one of the steps towards greening practices. Water use is not currently monitored by the SKIT and utility bills are based on both estimates & actual reading.

There are no leakages is observed at site inspection of infrastructure after conducting I plumbing survey of water supply lines. Need of monitoring, controlling overflow is essential and periodically supervision drills should be arranged. In campus reuse & recycle of water system is necessary.

Drinking water & Bore well water analysis reports are attached as annexure-1 & 2. The parameters are well within the stipulated limits.



PHOTO:7 WATER STORAGE TANK



PHOTO: 8 R.O.PLANT

2. RAIN WATER HARVESTINGARVESTING

Rainwater harvesting system has been installed at campus .The rainwater harvesting strengthens the water level of sumps and maintains the ground water recharging process.



PHOTO:9 RAINWATER HARVESTING

3. ENERGY MANAGEMENT

Electrical consumption is around 8144.68 kWh/Month which is purchased power drawn from the soladevanahalli. To ensure uninterrupted power, SKIT has installed two generators of capacity 100 KVA and 63 KVA & UPS – 2 No's of 40 KVA, 2 No's of 5 KVA & 1 No of 20 KVA is used for power backup. According to survey all electrical fittings are regularly maintained. The committee members also keep vigilance to avoid unnecessary use of electricity in the college campus. Students & staff are encouraged to switch off lights, monitors & other equipment's. The in house maintenance team carry out lock down of the building at the end of every day and will switch off any lights or equipment's, that have been left on. Since most of the classrooms have cross-ventilation and natural lighting which sufficiently minimizes the use of electricity. Initiatives have been taken to replace the normal lamps and tube lights by CFL & LED. College has purchased "Star rated" electrical appliances to minimize the energy consumption. College has already replaced most of the CRT monitors and DOT matrix printers by, LCD monitors & desk jet printers respectively. The college is planning to install solar panels in the college campus in near future as of now two numbers of solar street lights are installed at campus. Students and staff members are advised to use the college transport thus avoiding the use of private vehicle.

Ambient air quality, DG stack monitoring, Lux level monitoring are reports are enclosed as annexure:3,4 & 5. Readings are well within the limits.

4. WASTE MANAGEMENT

The waste management is in order with the installation of dust bins. All rooms & common areas contain bins for both general waste and mixed recyclables (plastic bottles, cards, cans and paper). Daily cleaning is carried out and most non- biodegradable waste is lifted by the local municipal service. Due to pandemic the canteen facility is made unavailable in the campus. An average of 28- 35 Kg of food waste is generated per day. It is necessary to adopt environmentally sound practice of converting the food waste from main canteen and mess and other (biodegradable waste) into organic manure. The importance of handling and disposal of hazardous waste is recognized, though the amount of waste is very minimal. The clinical wastes are disposed safely using standard methods and staffs are well trained in this. Various types of chemical wastes are collected and disposed by department of chemistry. Few glass bottles are reused in the laboratories. The obsolete yet working computers, printers and other equipment's discarded by the institute are given to the government schools. The e- waste generated in the campus is collected in a scientific manner & disposed through authorized vendor. Used spent oil is disposed through local vendor. College is taking initiative to make plastic free campus. Very less plastic waste is generated by departments, office etc. but neither categorized at point source nor sent for recycling. Metal waste and wooden waste are stored and given to authorized scrap dealers.



PHOTO: 10 WASTE COLLECTION BIN

5. **BIO DIVERSITY:**

This includes the flora and fauna present in the campus. Landscaping is well maintained in the campus with garden area of 5435 sq mts. 23 species of various small plant categories as listed in below table are present in the campus.

SL NO	SPECIES	NUMBER
1	COCONUT TREES	10
2	PEEPAL TREE	2
3	JACK FRUIT TREE	4
4	GOOSBERRY TREE	1
5	MANGO TREE	3
6	CHICKOO TREE	1
7	BADAM TREE	2
8	JAMUN TREE	3
9	NEEM TREE	2
10	BANANA PLANTS	20
11	TEAK WOOD	15
12	NILGIRI	2
13	SILVER OAK TREE	70
14	PALM TREE	70
15	MAST TREE	25
16	GOOSE BERRY	1
17	CASHEW NUT	1
18	GAUVA TREE	2
19	SRIGANDHA TREE	2
20	BAMBOO BUSHES	3
21	GOLDEN BOTTLE BRUSH TREE	20
22	BOTTLE BRUSH	120
23	ELANGI	3
24	SMALL PLANTS OF VARIOUS CATEGORY	128

TABLE 1: LIST OF PLANTS IN THE CAMPUS



PHOTO: 11 LANDSCAPING

6. SAFETY MANAGEMENT

SAFETY MEASURES

Safety drills are periodically conducted in college for student's safety and emergency preparedness. Each block and floor has fire extinguishers.



PHOTO: 12 FIRE EXTINGUISHERS

7. HEALTH CENTRE

The Health centre facility is provided in the campus to provide medical aid to students on emergency treatment and preventive care.

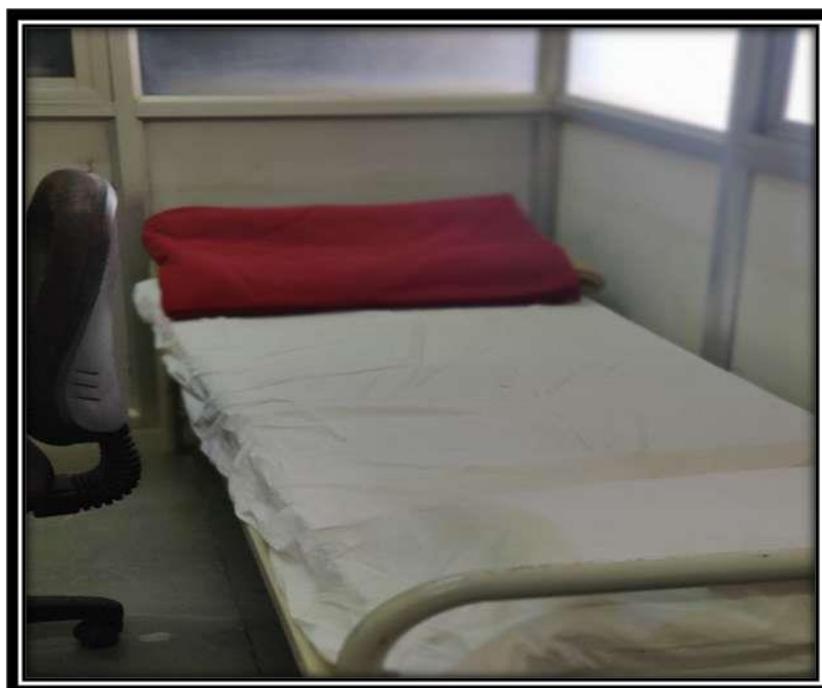


PHOTO 13. HEALTH CARE CENTRE

8. SIGN BOARDS IN THE CAMPUS:

Various signages are displaced in the campus with respect to water conservation, energy conservation and health and safety



PHOTO: 14



PHOTO: 15



PHOTO: 16

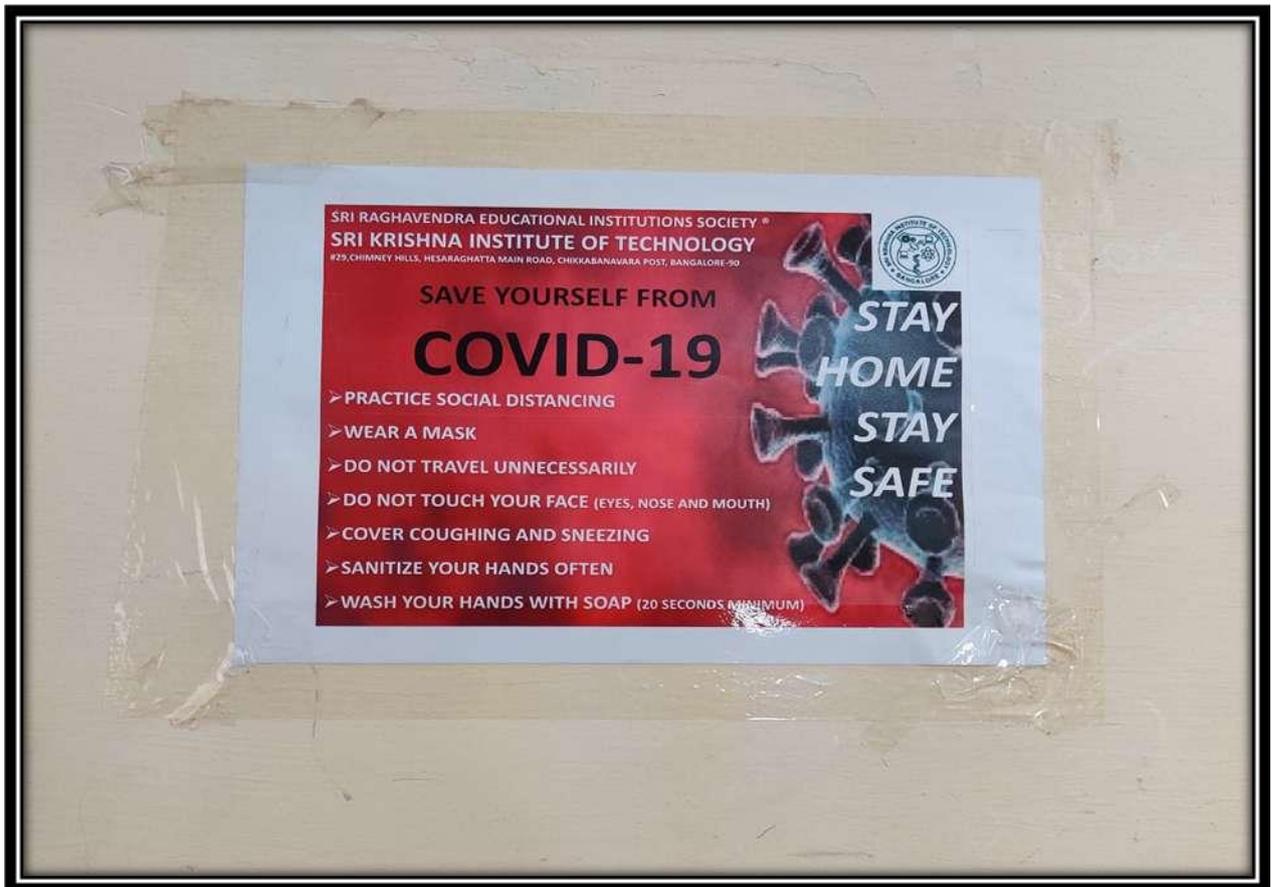


PHOTO: 17

SRI KRISHNA INSTITUTE OF TECHNOLOGY

STOP!
RAGGING, EYE TEASING

SAY NO TO RAGGING

RAGGING IS A PUNISHABLE OFFENCE!
DON'T INDULGE IN RAGGING.
DON'T BE A MUTE SPECTATOR TO RAGGING.
REPORT RAGGING INCIDENTS IMMEDIATELY.

STOP RAGGING!

<p>WHAT IS RAGGING ? ANY ACT RESULTING IN :</p> <ul style="list-style-type: none"> ✓ MENTAL / PHYSICAL / SEXUAL ABUSE ✓ VERBAL ABUSE ✓ INDECENT BEHAVIOR ✓ CRIMINAL INTIMIDATION / WRONGFUL RESTRAIN ✓ UNDERMINING HUMAN DIGNITY ✓ FINANCIAL EXPLOITATION / EXTORTION ✓ USE OF FORCE 	<p>A STUDENT INDULGING IN RAGGING CAN BE :</p> <ul style="list-style-type: none"> ✓ EXPELLED FROM THE INSTITUTION ✓ BANNED FROM THE HOSTEL ✓ HIS / HER SCHOLARSHIP CAN BE WITHDRAWN ✓ DEBARRED FROM EXMINATIONS ✓ DENIED ADMISSION TO ANY INSTITUTION ✓ PROSECUTED FOR CRIMINAL ACTION ✓ INSTITUTIONS HAVE BEEN ASKED TO FILE THE FIR WITH LOCAL POLICE AGAINST THOSE WHO RAG.
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JOIN HANDS TO MAKE YOUR CAMPUS RAGGING FREE
CONTACT ANTI RAGGING COMMITTEE IF NECESSARY

PHOTO: 18

14.DISABLED FRIENDLY AND BARRIER FREE ENVIRONMENT

College has provisions of ramp and wheel chairs to assist the disabled students and also provisions of handrails are made in restrooms.



PHOTO: 19

15 GREEN CAMPUS INITIATIVES

Awareness programs

Awareness programmes are organized time to time to sensitize students and staffmembers about energy conservation, environment, public health and environment trending topics such as rally for rivers, swatch bharat andolan, environment day celebration etc. The college has totally banned the use of Tobacco in the college campus and has been declared as free from plastic zone.

Webinars on awareness programme conducted by college:

- 1.Rise for nature- webinar on world environmental day- June 5th, 2021
- 2.Electric vehicles- new generation transportation – webinar to avoid carbon foot print – 12th October 2021.



PHOTO: 20

16. SUMMARY

Green audit is one of the important tools to check the balance of natural resources and its judicious use. Green auditing is the process of identifying and determining whether institutional practices are eco-friendly and sustainable. It is the process of regular identification, quantification, documenting, reporting and monitoring of environmentally important components in a specified area.

Sri Krishna Institute of technology has conducted "Green Audit" in the academic year of 2020-21. The main objective of green audit is to check the green practices followed by SKIT and to prepare a well - defined audit report.

17. CONCLUSIONS:

The following best green practices are observed in the campus.

1. Good maintenance of landscaping.
2. Students are encouraged to make the campus the plastic free zone, which is a good practice.
3. Environmental, Health and Safety awareness signages are displayed appropriately in the campus.
4. Rainwater is collected from rooftop to recharge the ground water level.
5. E waste generated is segregated, handled and disposed properly in an eco-friendly manner.
6. Students are using public transport & also trains are used as railway station is near to the campus for commuting which avoids carbon emissions.

18. RECOMMENDATIONS

Following are some key recommendations for improving campus environment.

1. Environmentally applicable rules and regulations can be implemented.
2. The options for solid waste reuse and recycle can be considered. Like for food waste, composting can be useful, as the campus has maintained greenery.
3. Install a water meter to record proper water usage in the SKIT premises.
4. Students and staff can be encouraged for more awareness programs.

ANNEXTURES

WATER QUALITY ANALYSIS

Water quality refers to the chemical, physical and biological, characteristics of water. The following parameters are used to analyze water quality for six months.

SL.NO	PARAMETER	UNIT	METHOD
1	pH	-	Glass electrode
2	Electrical Conductivity	$\mu\text{S/cm}$	Conductivity meter
3	Suspended solids	mg/l	Filtration
4	Dissolved	mg/l	Filtration
5	Total Hardness	mg/l	EDTA Titration
6	Total Alkalinity	mg/l	Titration
7	Chloride	mg/l	Titration
8	Dissolved Oxygen	mg/l	Azide modification
9	Biochemical Oxygen Demand	mg/l	Dilution method
10	COD	mg/l	Digestion method
11	Turbidity	mg/l	Nephelo-turbidity meter

TABLE 2: WATER QUALITY ANALYSIS PARAMETERS

2 WATER QUALITY ANALYSIS REPORT

Water analysis of Borewell-1

Analysis carried out in Environmental Engineering Laboratory, Department of Civil Engineering, SKIT, Bengaluru, Karnataka

Description of sample taken

Date: 22/5/2022

Time: 10:00 AM

Type: Borewell-1

Tested on:

25/05/2022

Sl.No	Parameter	Unit	Result	Standards, limits as per IS:10500/2012
1	Colour	-	<5	5
2	Odour	-	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable
4	Turbidity(NTU)	mg/l	5	5
5	Total dissolved solids	mg/l	250	500
6	Ph	mg/l	6.5	6.5-8.5
7	Chloride	mg/l	75	250
8	Free residual chlorine	mg/l	<0.2	0.2
9	Hardness	mg/l	252	200
10	Iron	mg/l	NIL	0.3
11	Nitrate	mg/l	5	45
12	Ammonia	mg/l	<0.5	0.5
13	Total alkalinity	mg/l	75	200

TABLE 3: WATER QUALITY ANALYSIS PARAMETERS

WATER ANALYSIS OF BOREWELL-2

Analysis carried out in Environmental Engineering Laboratory, Department of Civil Engineering, SKIT, Bengaluru, Karnataka.

Description of sample taken `

Date: 25/05/2022 Time: 11:00 AM

Type: Borewell-2

Tested on:

25/05/2022

Sl.No	Parameter	Unit	Result	Standards, limits as per IS:10500/2012
1	Colour	-	<5	5
2	Odour	-	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable
4	Turbidity(NTU)	mg/l	5	5
5	Total dissolved solids	mg/l	260	500
6	pH	mg/l	6.5	6.5-8.5
7	Chloride	mg/l	75	250
8	Free residual chlorine	mg/l	<0.2	0.2
9	Hardness	mg/l	285	200
10	Iron	mg/l	NIL	0.3
11	Nitrate	mg/l	5	45
12	Ammonia	mg/l	<0.5	0.5
13	Total alkalinity	-	90	200

TABLE 4 : WATER QUALITY ANALYSIS PARAMETERS

WATER ANALYSIS OF BOREWELL-1

Analysis carried out in Environmental Engineering Laboratory, Department of Civil Engineering, SKIT, Bengaluru, Karnataka.

Description of sample taken

Date: 01/06/2022 Time: 10:00

Type: Borewell-1 Tested on: 01/06/2022

Sl.No	Parameter	Unit	Result	Standards, limits as per IS:10500/2012
1	Colour	-	<5	5
2	Odour	-	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable
4	Turbidity(NTU)	mg/l	4	5
5	Total dissolved solids	mg/l	245	500
6	pH	mg/l	6.0	6.5-8.5
7	Chloride	mg/l	95	250
8	Free residual chlorine	mg/l	<0.2	0.2
9	Hardness	mg/l	256	200
10	Iron	mg/l	0.1	0.3
11	Nitrate	mg/l	8	45
12	Ammonia	mg/l	<0.5	0.5
13	Total alkalinity	-	95	200

TABLE 5 : WATER QUALITY ANALYSIS PARAMETERS

Water analysis of Borewell-2

Analysis carried out in Environmental Engineering Laboratory, Department of Civil Engineering, SKIT, Bengaluru, Karnataka

Description of sample taken

Date: 01/06/2022 Time: 10:30 AM

Type: Borewell-2

Tested on:

01/06/2022

Sl.No	Parameter	Unit	Result	Standards, limits as per IS:10500/2012
1	Colour	-	<5	5
2	Odour	-	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable
4	Turbidity(NTU)	mg/l	4	5
5	Total dissolved solids	mg/l	250	500
6	pH	mg/l	6.5	6.5-8.5
7	Chloride	mg/l	106	250
8	Free residual chlorine	mg/l	<0.2	0.2
9	Hardness	mg/l	286	200
10	Iron	mg/l	NIL	0.3
11	Nitrate	mg/l	6	45
12	Ammonia	mg/l	<0.5	0.5
13	Total alkalinity	-	78	200

TABLE 6 : WATER QUALITY ANALYSIS PARAMETERS

Water analysis of Borewell-1

Analysis carried out in Environmental Engineering Laboratory, Department of Civil Engineering, SKIT, Bengaluru, Karnataka

Description of sample taken

Date: 08/06/2022 Time: 10:30 AM

Type: Borewell-1

Tested on:

08/06/2022

Sl.No	Parameter	Unit	Result	Standards, limits as per IS:10500/2012
1	Colour	-	<5	5
2	Odour	-	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable
4	Turbidity(NTU)	mg/l	5	5
5	Total dissolved solids	mg/l	280	500
6	pH	mg/l	6.0	6.5-8.5
7	Chloride	mg/l	95	250
8	Free residual chlorine	mg/l	<0.2	0.2
9	Hardness	mg/l	254	200
10	Iron	mg/l	NIL	0.3
11	Nitrate	mg/l	6	45
12	Ammonia	mg/l	<0.5	0.5
13	Total alkalinity	-	90	200

TABLE 7 : WATER QUALITY ANALYSIS PARAMETERS

Water analysis of Borewell-2

Analysis carried out in Environmental Engineering Laboratory, Department of Civil Engineering, SKIT, Bengaluru, Karnataka

Description of sample taken

Date: 08/06/2022 Time: 11:30 AM

Type: Borewell-2

Tested on:

08/06/2022

Sl.No	Parameter	Unit	Result	Standards, limits as per IS:10500/2012
1	Colour	-	<5	5
2	Odour	mg/l	Agreeable	Agreeable
3	Taste	mg/l	Agreeable	Agreeable
4	Turbidity(NTU)	mg/l	5	5
5	Total dissolved solids	mg/l	280	500
6	pH	mg/l	6.0	6.5-8.5
7	Chloride	mg/l	95	250
8	Free residual chlorine	mg/l	<0.2	0.2
9	Hardness	mg/l	289	200
10	Iron	mg/l	NIL	0.3
11	Nitrate	mg/l	6	45
12	Ammonia	mg/l	<0.5	0.5
13	Total alkalinity	mg/l	95	200

TABLE 8 : WATER QUALITY ANALYSIS PARAMETERS

Water analysis of Borewell-1

Analysis carried out in Environmental Engineering Laboratory, Department of Civil Engineering, SKIT, Bengaluru, Karnataka

Description of sample taken

Date: 15/06/2022 Time: 10:00 AM

Type: Borewell-1 Tested on: 15/06/2022

Sl.No	Parameter	Unit	Result	Standards, limits as per IS:10500/2012
1	Colour	-	<5	5
2	Odour	-	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable
4	Turbidity(NTU)	mg/l	5	5
5	Total dissolved solids	mg/l	270	500
6	pH	mg/l	6.5	6.5-8.5
7	Chloride	mg/l	90	250
8	Free residual chlorine	mg/l	<0.2	0.2
9	Hardness	mg/l	260	200
10	Iron	mg/l	NIL	0.3
11	Nitrate	mg/l	6	45
12	Ammonia	mg/l	<0.5	0.5
13	Total alkalinity	mg/l	95	200

TABLE 8 : WATER QUALITY ANALYSIS PARAMETERS

Water analysis of Borewell-2

Analysis carried out in Environmental Engineering Laboratory, Department of Civil Engineering, SKIT, Bengaluru, Karnataka

Description of sample taken

Date: 15/06/2022 Time: 11:00 AM

Type: Borewell-2

Tested on:

15/06/2022

Sl.No	Parameter	Unit	Result	Standards, limits as per IS:10500/2012
1	Colour	-	<5	5
2	Odour	-	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable
4	Turbidity(NTU)	mg/l	4	5
5	Total dissolved solids	mg/l	250	500
6	pH	mg/l	6.0	6.5-8.5
7	Chloride	mg/l	95	250
8	Free residual chlorine	mg/l	<0.2	0.2
9	Hardness	mg/l	292	200
10	Iron	mg/l	NIL	0.3
11	Nitrate	mg/l	6	45
12	Ammonia	mg/l	<0.5	0.5
13	Total alkalinity	mg/l	95	200

TABLE 9 : WATER QUALITY ANALYSIS PARAMETERS

Water analysis of Borewell-1

Analysis carried out in Environmental Engineering Laboratory, Department of Civil Engineering, SKIT, Bengaluru, Karnataka

Description of sample taken

Date: 22/06/2022 Time: 1:00 PM

Type: Borewell-1

Tested on:

24/06/2022

Sl.No	Parameter	Unit	Result	Standards, limits as per IS:10500/2012
1	Colour	-	<5	5
2	Odour	-	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable
4	Turbidity(NTU)	mg/l	4	5
5	Total dissolved solids	mg/l	300	500
6	pH	mg/l	6.0	6.5-8.5
7	Chloride	mg/l	98	250
8	Free residual chlorine	mg/l	<0.2	0.2
9	Hardness	mg/l	258	200
10	Iron	mg/l	0.1	0.3
11	Nitrate	mg/l	15	45
12	Ammonia	mg/l	<0.5	0.5
13	Total alkalinity	mg/l	58	200

TABLE 10 : WATER QUALITY ANALYSIS PARAMETERS