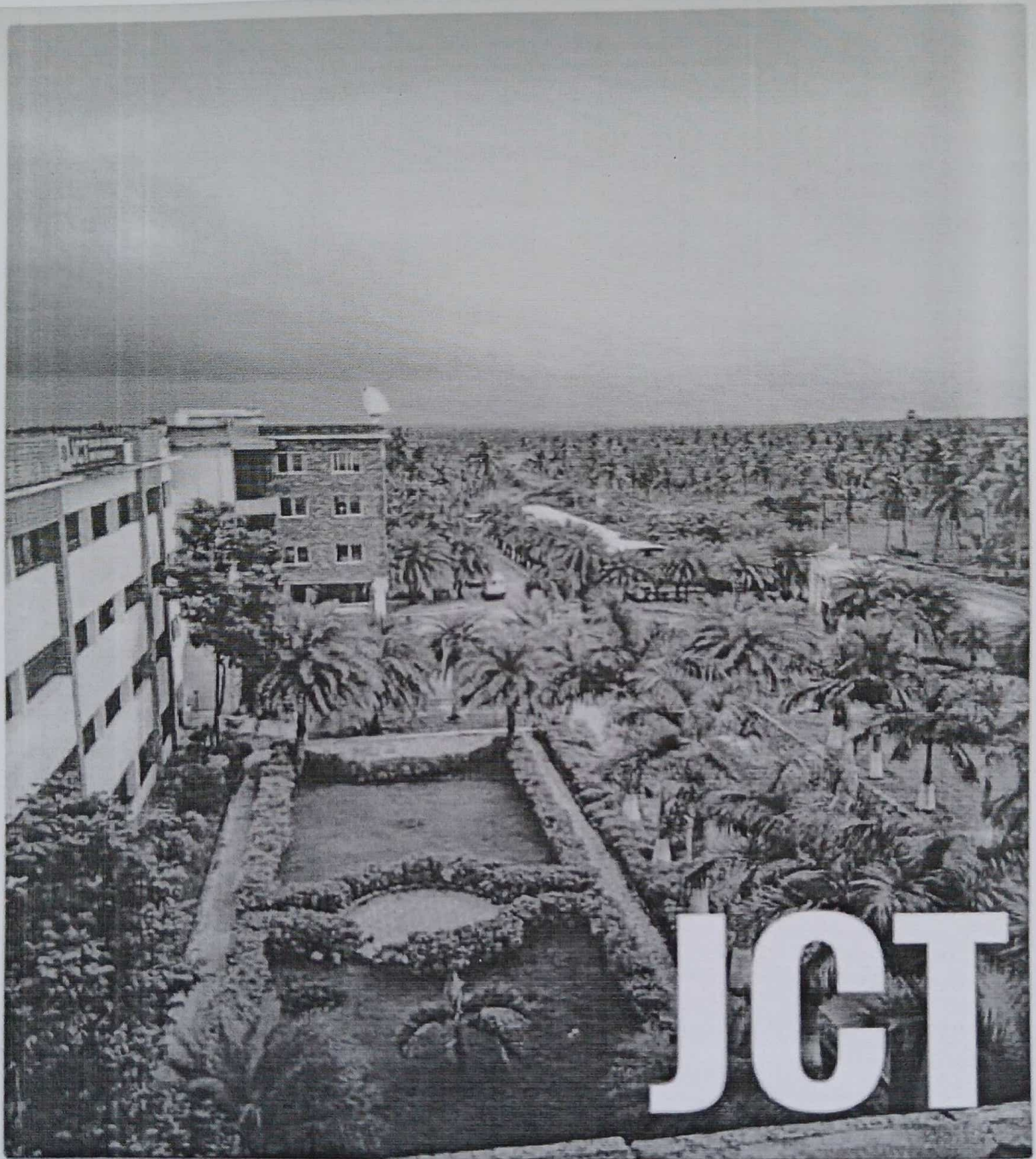




JCT
COLLEGE OF ENGINEERING
AND TECHNOLOGY



JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

GREEN AUDIT REPORT'2020-2021



INTRODUCTION:

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of institute. It aims to analyze environmental practices within and outside of the concerned place, which will have an impact on the eco-friendly atmosphere. Green audit is a valuable means for a college to determine how and where they are using the most energy or water or other resources; the college can then consider how to implement changes and make savings. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that intuitional self-enquiry is a natural and necessary Outgrowth of a quality educational institution. Thus it is imperative that the college evaluate 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. The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institutes which will lead for sustainable development and at the same time reduce sizable amount of atmospheric CO₂ from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through carbon foot print reduction measures.

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OBJECTIVES:

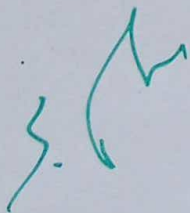
The college has been putting efforts to keep the environment clean since its inception. But the auditing of this non-scholastic effort of the college has not been documented. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize a framework of Environment Sustainability in compliance with the applicable regulations, policies and standards.

The main objectives of carrying out Green Audit are:

1. To document the quality drinking water
2. To document the quality of recycled waste water for gardening
3. To document the solid waste disposal system.
4. To document the ambient environmental condition of air, water and noise in the campus.

METHODOLOGY:

The purpose of the green audit of NMIT is to ensure that the practices followed in the campus are in accordance with the Green Policy adopted at the institution. The methodology includes the preparation, physical inspection of the campus, observation and review of the documentation, green audit parameters at intervals, interviewing key persons and data analysis, measurements and recommendations. Some data have also been taken from the students' project research works carried out by various engineering departments of the college.



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ABOUT THE COLLEGE

Shri Jagannath Educational Health and Charitable Trust was established by renowned and philanthropic people with an objective of providing education to all especially the down trodden and rural population. Considering the growing demands for technical education in the country the trust has started an engineering college namely JCT College of Engineering and Technology in Pichanur in Coimbatore for the academic year 2009-2010.

The Management strives hard to enhance the professional knowledge, skills and attitudes of educators, so that they might in turn improve the learning process of students. The college aims at Developing a deep understanding of the human values and social concerns among the engineering graduates. Students will be courage to get equipped and sensitized to understand full implications of their decisions, actions and ever inactions. Above all the college will promote Technical Education to meet therequirements of a developing nation in the context of global concern at the threshold of the twenty-first century.

A team of educated, enlightened, experienced technocrats with vision, firmly determined to promote high quality of education will strive to provide every facility for achieving excellence.

Our Vision

- ☑ To emerge as a Premier Institute for developing industry ready engineers with competency, initiative and character to meet the challenges in global environment.



Our Mission

- ☑ To impart state-of-the-art engineering and professional education through strong theoretical basics and hands on training to students in their choice of field.
- ☑ To serve our students by teaching them leadership, entrepreneurship, teamwork, values, quality, ethics and respect for others.
- ☑ To provide opportunities for long-term interaction with academia and industry.
- ☑ To create new knowledge through innovation and research.

Water Quality Assessment:

To cater the water requirement for the campus, two bore wells are used for the activities. However, in summer, to cater the additional shortage of water, a tanker from outside is hired to satisfy the needs of campus activities. The total quantity of water required for drinking is assessed for a population of 5000 students is assessed as 25000 liters per day. For hygienic drinking water, RO plants are installed in each block. Civil engineering department tests the water every month. The committee inspects the working of filters monthly and the quality of water is verifying for suitability once in three months.

Drinking water indicators:

The following is a list of indicators often measured by situational category:

- Alkalinity
- Colour of water
- PH value
- Taste and odour
- Dissolved metals and salts (sodium, chloride, potassium, calcium, manganese, magnesium)

Air Quality & Noise Quality Monitoring:

Since air quality plays a vital role for good health. Air Quality monitoring instrument is used to monitor quarterly the criteria pollutants. The most important air quality parameters, which are measured, are NO₂, SO₂ & PM₁₀. The other criteria pollutants such as Ozone, Carbon Monoxide and Lead are not measured because there are no nearby Industries located near the institute, which are emitting these pollutants. Noise equally plays a vital role in the environment; hence noise measurement is also done at the institute quarterly.

Green Audit Assessment Team

Sl. No	Name	Designation
1	Dr.V.J.Arul Karthick Principal, JCTCET	Chairman
2	Dr.K.Geetha Dean Academic,JCTCET	Member
3	A.Chandrasahana Estate Officer,JCTCET	Member
4	Dr.A.Kumar Professor &Head, Dept. of Civil Engg	Member Secretary
5	Dr.V.murugesh Associate Professor, Dept.of Civil Engg.	Member



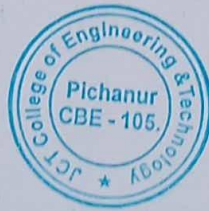
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Water Quality Related Document

&

Assessment Report




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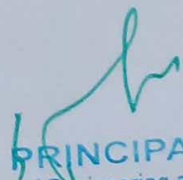
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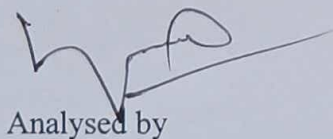




Description of sample taken

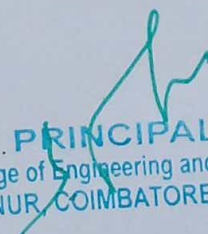
Date of sample taken	Time	Tested on	Venue
12.06.2021	11.30 a.m.	12.06.2021	Main Block

Parameter	Result	Standard Limit
Colour	< 5	5
Odour	agreeable	agreeable
Taste	agreeable	agreeable
Turbidity(NTU)	1	5
Total Dissolved Solids(mg/l)	225	500
pH	6.7	6.5to 8.5
Chloride (mg/l)	72	250
Free residual Chlorine(mg/l)	<0.2	0.2
Hardness (mg/l)	80	200
Iron(mg/l)	0.3	0.3
Nitrate (mg/l)	5.08	45
Ammonia(mg/l)	<0.5	0.5
TotalAlkalinity(mg/l)	60	200



Analysed by

Dr.C.Siva kumar
Associate Professor/Chemistry
JCT College of Engineering and Technology



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NOISE LEVEL IN THE SURROUNDING OF JCTCET:

The human ear is constantly being assailed by man-made sounds from all sides, and there remain few places in populous areas where relative quiet prevails. There are two basic properties of sound (loudness) and frequency.

Loudness is the strength of sensation of sound perceived by the individual. It is measured in terms of Decibels. Just audible sound is about 10 dB, a whisper about 20 dB, library place 30 dB, normal conversation about 35-60 dB, heavy street traffic 60-80 dB, boiler factories 120 dB, jet planes during take-off is about 150 dB, rocket engine about 180 dB. The loudest sound a person can stand without much discomfort is about 80 dB. Sounds beyond 80 dB can be safely regarded as pollutant as it harms hearing system. The WHO has fixed 45 dB as the safe noise level for a city. For international standards a noise level up to 65 dB is considered tolerable. Loudness is also expelling. One sound equals the loudness of 40 dB sound pressure at 1000 Hz. Frequency is defined as the number of vibrations per second. It is denoted as Hertz (Hz).


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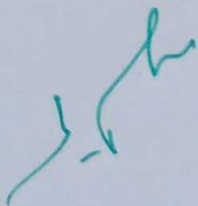
Report for Noise monitoring analysis

Date of sampling: 10.10.2021

Noise Limits for the college are given below:
Night:10Pm ----- 6am: 40 dB
Day:6am ----- 10Pm:50dB
Permissible Limits as per standards are given below:
Night:10Pm-----6am:40 dB
Day:6am ----- 10Pm:50dB

Summary:

The campus is having noise standards under permissible limits because it is coming under silence zone. JCTCET campus is located away from city centre and also from the highway, so noise is less



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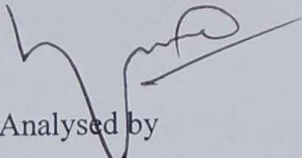
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Description of sample taken

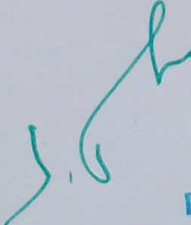
Date of sample taken	Time	Tested on	Venue
05.07.2021	10.45 a.m.	05.07.2021	Main block

Parameter	Result	Standard Limits
Colour	< 5	5
Odour	agreeable	agreeable
Taste	agreeable	agreeable
Turbidity(NTU)	3	5
Total Dissolved Solids(mg/l)	250	500
pH	7.2	6.5 to 8.5
Chloride(mg/l)	85	250
Free residual Chlorine(mg/l)	<0.2	0.2
Hardness(mg/l)	90	200
Iron(mg/l)	nil	0.3
Nitrate (mg/l)	8	45
Ammonia(mg/l)	<0.5	0.5
Total Alkalinity(mg/l)	82	200



Analysed by

Dr.C.Siva kumar
 Associate Professor/Chemistry
 JCT College of Engineering and Technology

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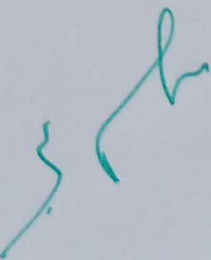
AirPollutants	Values	PermissibleLimits
Particulate Matter PM ₁₀ ,(μg/m ³)	80	100
Sulphur Dioxideas SO ₂ (μg/m ³)	2.0	80
Nitrogen Dioxide as NO ₂ (μg/m ³)	18	80

Date of sampling: 17.07.2021

Noise Limits for the college are given below:
Night:10Pm-----6am:40 dB
Day:6am ----- 10Pm:50dB
Permissible Limits as per standards are given below:
Night:10Pm-----6am:40 dB
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