



**Al Jamia Mohammediyah
Education Society's
MAULANA MUKHTAR
AHMAD NADVI
TECHNICAL CAMPUS**

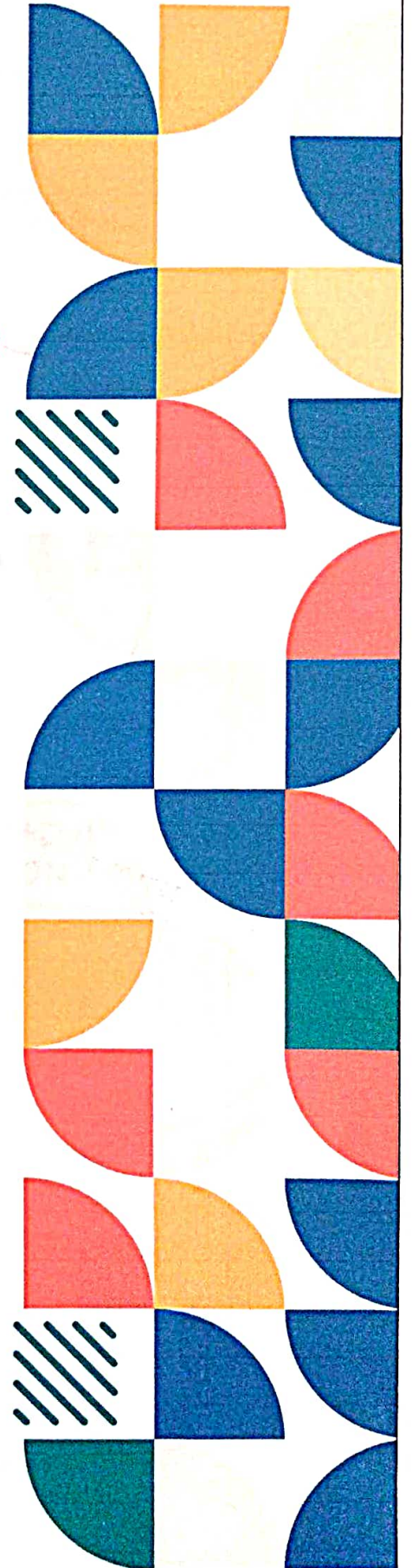
**AUDIT
REPORT
2021-22**



**ENVIRONMENTAL & CIVIL
ENGINEERING SOLUTIONS**
ISO 9001: 2015, IEC 17025: 2017

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**MAULANA MUKHTAR AHMAD NADVI TECHNICAL
CAMPUS MALEGAON Dis Nashik**





CERTIFICATE

ENERGY AUDIT

THIS CERTIFICATE IS PROUDLY PRESENTED TO

**Al Jamia Mohammediyah Education Society's
MAULANA MUKHTAR AHMAD NADVI
TECHNICAL CAMPUS, MALEGAON**

Our team of Environmental Engineers have analyzed Sustainable Energy practices followed by the Institution.

Nikhil N Kamble
CEO



Seema N Kamble
Director

ACADEMIC YEAR 2021-2022



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Environmental and Civil Engineering Solutions, Sangli 39

Editorial

In the Era of global warming and climate change every citizen has to reduce their own carbon foot prints to tackle with the adverse impacts of climate change. A green audit of any academic institution reveals ways in which we can reduce energy consumption, water use and reduction in emission of carbon dioxide in the environment. It is a process to look into and ask ourselves whether we are also contributing to the degradation of the environment and if so, in what manner and how we can minimize this contribution and bring down to zero and preserve our environment for future generation.

Al Jamia Mohammediyah Education Society, Maulana Mukhtar Ahmad Nadvi Technical Campus administration has already taken a step towards the green approach and conducted green audit of campus in the year 2021-2022. As an outcome of this institute has taken green steps to reduce its carbon foot prints by several means in campus viz. sustainable fittings, tree plantation and green computing in the administration and examination. The responsibility of carrying out the scientific green audit was given to Environmental and Civil Engineering Solutions. The organization has followed the rules and regulation of Ministry of Environment and Forest, Govt. of India and Central Pollution Control Board, New Delhi.

A questionnaire was prepared based on the guidelines and format of CPCB, New Delhi to conduct green audit. The information related to consumption of resources like water, electricity and handling of solid and hazardous waste was collected in the formats from main building support services and departments. The data collected was grouped and was tabulated in Excel sheets and analysed. The graphs of the analysed data were prepared for getting quick idea of the status. Interpretation of the overall outcomes was made which incorporates primary and secondary data, references and interrelations within. Final report preparation was carried out using this interpretation to prepare environment management plan of institute for next two years.

During the preparation of the Audit Report Hon. Principal, Dean Academics, Dean Research and consultancy, Dean IQAC encouraged us with their full support and the audit team wants to mention a warm vote of thanks towards them.



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Acknowledgement

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Green Audit Team

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Institutional Audit Committee

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(Principal)

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(Assistant Professor)

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Prof. Tauseef Ansari

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1. Introduction:

The modernization and industrialization are the two important outputs of twentieth century which have made human life more luxurious and comfortable. Simultaneously, they are responsible for voracious use of natural resources, exploitation of forests and wildlife, producing massive solid waste, polluting the scarce and sacred water resources and finally making our mother Earth ugly and inhospitable. Today, people are getting more familiar to the global issues like global warming, greenhouse effect, ozone depletion and climate change etc. Now, it is considered as a final call by mother Earth to walk on the path of sustainable development. The time has come to wake up, unite and combat together for sustainable environment.

Considering the present environmental problems of pollution and excess use of natural resources, Hon. Prime Minister, Shri. Narendra Modiji has declared the Mission of Swachh Bharat Abhiyan. Also, University Grants Commission has mentioned "Green Campus, Clean Campus" mission mandatory for all higher educational institutes. 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.

Green Audit is the most efficient ecological tool to solve such environmental problems. It is a process of regular identification, quantification, documenting, reporting and monitoring of environmentally important components in a specified area. Through this process the regular environmental activities are monitored within and outside of the concerned sites which have direct and indirect impact on surroundings. Green audit can be one of the initiative for such institutes to account their energy, water resource use as well as wastewater, solid waste, E-waste, hazardous waste generation. Green Audit process can play an important role in promotion of environmental awareness and sensitization about resource use. It can create consciousness towards ecological values and ethics. Through green audit one can get direction about how to improve the condition of environment.

1.1 Need of audit:

Green auditing is the process of identifying and determining whether institutions practices are eco-friendly and sustainable. Traditionally, we are good and efficient users of natural resources. But over the period of time excess use of resources like energy, water, chemicals are become habitual for everyone especially, in common areas. Now, it is necessary to check



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whether our processes are consuming more than required resources? Whether we are handling waste carefully? Green audit regulates all such practices and gives an efficient way of natural resource utilization. In the era of climate change and resource depletion it is necessary to verify the processes and convert it in to green and clean one. Green audit provides an approach for it. It also increases overall consciousness among the people working in institution towards an environment.

1.2 Goals of audit:

Institute has conducted a audit with specific goals as:

1. Identification and documentation of green practices followed by college.
2. Identify strength and weakness in green practices.
3. Conduct a survey to know the ground reality about green practices.
4. Analyse and suggest solution for problems identified from survey.
5. Assess facility of different types of waste management.
6. Increase environmental awareness throughout campus.
7. Identify and assess environmental risk.
8. Motivates staff for optimized sustainable use of available resources.
9. The long term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental issue before they become problem.

1.3 Objectives of Audit:

1. To examine the current practices which can impact on environment such as of resource utilization, waste management etc.
2. To identify and analyse significant environmental issues.
3. Setup goal, vision and mission for Green practices in campus.
4. Establish and implement Environmental Management in various departments.
5. Continuous assessment for betterment in performance in green practices and its evaluation.
6. To prepare an Environmental Statement Report on green practices followed by different departments, support services and administration building.





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1.4 NAAC criteria VII Environmental Consciousness:

Institutes are playing a key role in development of human resources worldwide. Higher education institutes campus run various activities with aim to percolate the knowledge along with practical dimension among the society. Likewise different technological problems higher education institutes also try to give solution for issues related to environment. Different types of evolutionary methods are used to assess the problem concerning environment. It includes Environmental Impact Assessment (EIA), Social Impact Assessment (SIA), Carbon Footprint Mapping, Green audit etc

National Assessment and Accreditation Council (NAAC) which is a self-governing organization that declares the institutions as Grade according to the scores assigned at the time of accreditation of the institution. Green Audit has become mandatory procedure for educational institutes under Criterion of NAAC. The intention of green audit is to upgrade the environmental condition inside and around the institution. It is performed by considering environmental parameters like water and wastewater accounting, energy conservation, waste management, air, noise monitoring etc. for making the institution more eco-friendly.

Students are the major strength of any academic institution. Practicing green actions in any educational institution will inculcate the good habit of caring natural resources in students. Many environmental activities like plantation and nurturing saplings and trees, Cleanliness drives, Bird watching camps, No vehicle day, Rain water harvesting, etc. will make the students good citizen of the country. Through Green Audit, higher educational institutions can ensure that they contribute towards the reduction of Global warming through Carbon Footprint reduction measures.

1.5 Benefits of Green Audit to an Educational Institute:

There are many advantages of green audit to an Educational Institute:

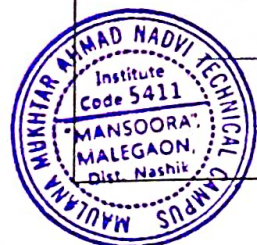
1. It would help to protect the environment in and around the campus.
2. Recognize the cost saving methods through waste minimization and energy conservation.
3. Find out the prevailing and forthcoming complications
4. Empower the organization to frame a better environmental performance.
5. It portrays good image of institution through its clean and green campus.



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2. Overview of Institute:

Al Jamia Mohammediyah Education Society's, Maulana Mukhtar Ahmad Nadvi Technical Campus was established in the year of 2012. Institute has huge area of 4.5 acres and has been serving the mankind in the field engineering and technology.



The landscaped grounds of college are widely admired for their beauty. The most valuable investment any educational institution can make is "Nurturing Future Leaders". With the continuous rise in expectation of essential leadership standards, the institute has torch bearers have taken a responsibility for this investment to nurture the NextGen leaders with a vision to bridge the existing skill gap. With a firm step forward to attain an academic excellence, computer labs, and industry-academia associations has been setup at the College in association with the top leaders. The College believes that its primary stakeholders are the students. All aspects of education focus on the core values of contributing to national development while fostering global competencies among students. The College admits students from all social milieus and empowers them through intensive mentoring and counselling to face the challenges of life and become responsible and sensitized citizens of the country.

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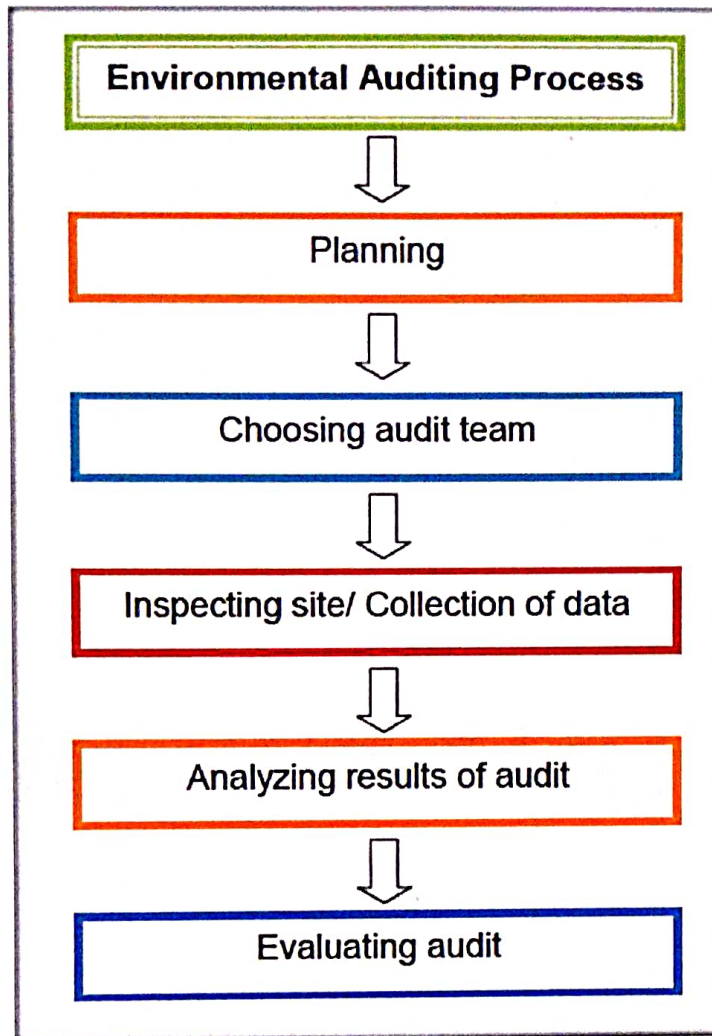
Maulana Mukhtar Ahmad Nadvi Technical Campus (MMANTC) is a premier AICTE and DTE-approved institution located near the bank of Girma River, Malegaon district Nashik, since 2012. The campus offers technology offers degree courses affiliated with Savitribai Phule Pune University (SPPU) in Civil, Computer, Electrical, Electronics & Telecommunication, and Mechanical Engineering. MMANTC collaborated with Siemens India to form the Siemens Centre of Excellence, which constitutes advanced Industrial, Automation, IoT, and Mechatronics Laboratories with a unique experimental setup in Maharashtra state. MMANTC campus consists of world-class infrastructure including state of art laboratories, seminar halls, auditorium, separate girls' and boys' hostel & dining and playground etc.



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3. Methodology:

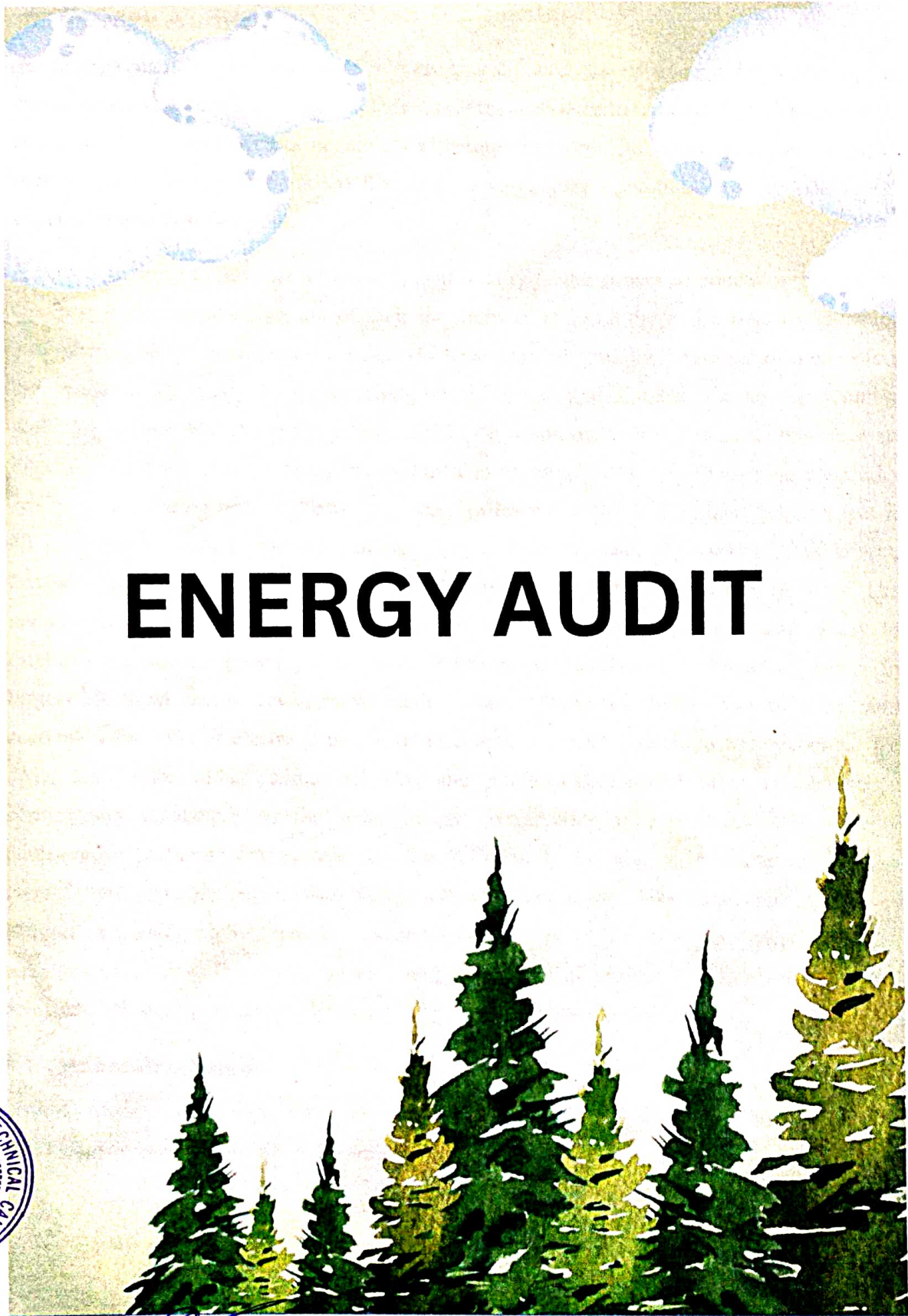


3.1 Audits to be carried out:

- Green and carbon footprint audit
- Energy audit
- Environmental audit
 - Water audit
 - Wastewater audit
 - Solid waste audit
 - Ambient noise audit
 - Ambient air audit

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ENERGY AUDIT



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6. Energy Audit:

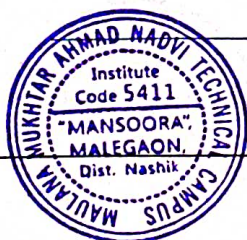
An energy audit is an inspection survey and an analysis of energy flows for energy conservation in a building. It may include a process or system to reduce the amount of energy input into the system without negatively affecting the output. In commercial and industrial real estate, an energy audit is the first step in identifying opportunities to reduce energy expense and carbon footprint.

A nation is tiring to advance in quantity and quality to the spread of education among the common India and development of their intelligence. In India the entire field of education and other fields of intelligent activities had been monopolized by a handful of men before independence. But today we are marching towards the desirable status of a developed nation with fast strides. But the development should be a sustained one. For achieving such an interminable development energy management is essential. As far as concerning electricity crisis, we are facing lack of electricity during office work. So, institutional management is taking design regarding production of electricity and saving electricity for Eco social aspect. Energy requirement of India is growing and incomplete domestic fossil fuel treasury. The country has motivated strategy to enlarge its renewable energy resources and policy to establish the nuclear power plants. India increases the involvement of nuclear power to largely electrical energy development facility from 4.2% to 9%. India's industrial demand accounted for 35% of electrical power requirement, domestic household use accounted for 28%, agriculture 21%, commercial 9%, and public lighting and other miscellaneous applications accounted for the rest. Energy conservation means reduction in energy consumption without making any sacrifice of quantity or quality. A successful energy management program begins with energy conservation; it will lead to adequate rating of equipment's, using high efficiency equipment and change of habits which causes enormous wastages of energy. By observing all these study lack of electricity and huge electricity demands. It is necessary to plan to be self-sufficient in electricity requirement.

6.1 Connection details:

Institute receives electricity from MSEB i.e. Maharashtra State Electricity Distribution Co. Ltd. Following are the details about connection.

- **Type of connection:** LT-X Public Service 20-50 KW
- **Tariff:** 88 LT-VII BI



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- **Contract demand:** 40 KVA- 40%-16
- **Feeder voltage:** 11 KW

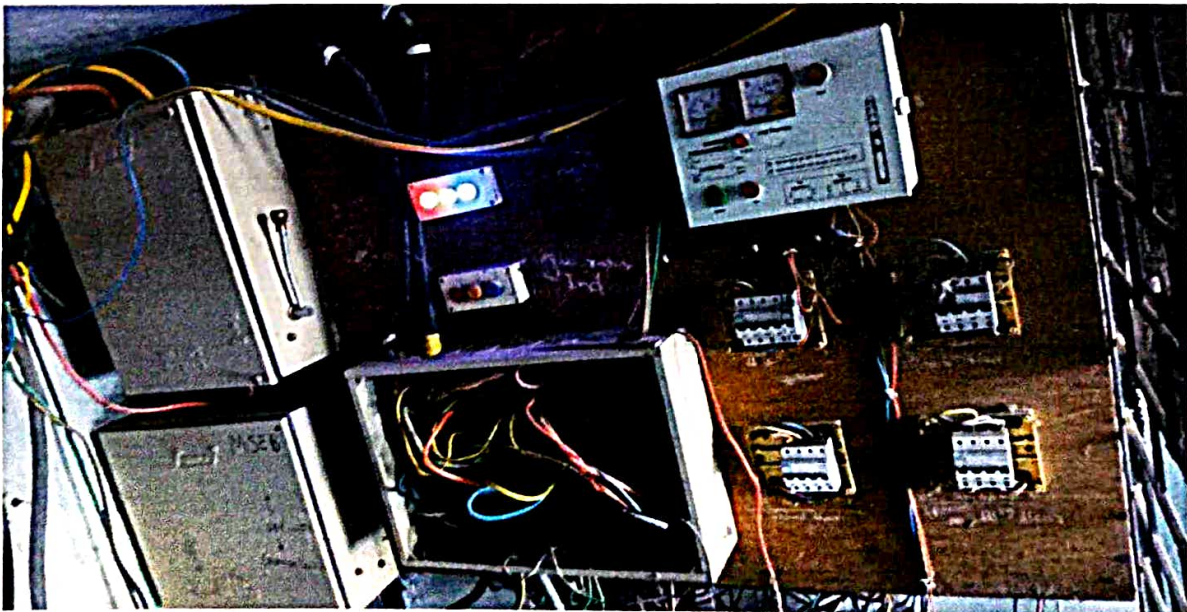
Tariff Structure:

As per Distribution Company, HT and LT consumers have an option to take Time of Day (TOD) tariff instead of the normal tariff. Under TOD tariff electricity consumption and maximum demand in respect of HT consumers for different periods of the day i.e. normal period, peak load period and off-peak load period could be recorded by installing TOD meter. The maximum demand and consumption recorded in different periods could be billed on the following rates of the tariff applicable.

TOD Tariffs	Rate % (Rs./Unit)
0000 Hrs- 0600 Hrs & 2200 Hrs- 2400 Hrs	-1.500
0600 Hrs- 0900 Hrs & 1200 Hrs- 1800 Hrs	0.000
0900 Hrs- 1200 Hrs	0.800
1800 Hrs- 2200 Hrs	1.100

Power Factor:

Power Factor (PF) is an indicator of efficient utilization of power. In an AC (Alternating Current) electrical power system, PF is defined as the ratio of real power flowing to the load, to the apparent power in the circuit and is a dimensionless number.

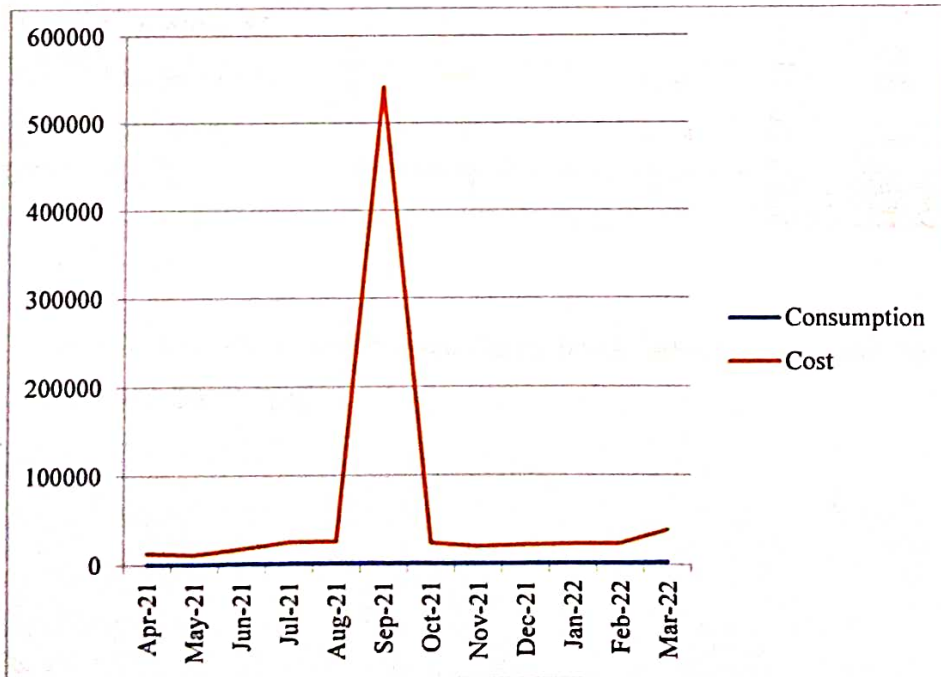


6.2 Bill analysis:

Bill analysis for MMANTC had been done for academic year 2021-2022.

Main Building

Sr. No.	Month	Consumption (Kw)	Bill Amount
1	Apr-21	966	13199.7
2	May-21	710	11241.56
3	Jun-21	1702	18402.99
4	Jul-21	1996	26215.11
5	Aug-21	2024	26709.5
6	Sep-21	2123	540917.37
7	Oct-21	1797	24428.85
8	Nov-21	1417	20603.29
9	Dec-21	1553	22223.38
10	Jan-22	1665	23306.83
11	Feb-22	1712	23695.99
12	Mar-22	3215	38971.46



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6.3 ILER analysis:

Lighting is provided in industries, commercial buildings, indoor and outdoor for providing comfortable working environment. The primary objective is to provide the required lighting effect for the lowest installed load i.e. highest lighting at lowest power consumption. The purpose of performance test is to calculate the installed efficacy in terms of lux/watt/m² (existing or design) for general lighting installation. The calculated value can be compared with the norms for specific types of interior installations for assessing improvement options.

Range	Condition
0.5 or less	Urgent activity required (UAR)
0.51 - 0.70	Review Suggested (RS)
0.70- above	Good

ILER analysis for various sections in MMANTC were carried out. Firstly using LUX meter illumination was measured and then numerical analysis was carried out. ILER gives idea about lighting conditions and measured regarding improving them.

Main Building analysis

Sr. No.	Section	LUX reading	ILER	Condition
1	Library	166	0.71	Good
2	Study room	124	0.71	Good
3	Classroom S1	128	0.77	Good
4	Classrooms S2	107	0.58	RS
5	Laboratories	147	0.84	Good
6	Office	166	0.74	Good

Reasons for Good ILER:

- Proper placement of windows and doors so that natural light is available well.
- Good ventilation system.



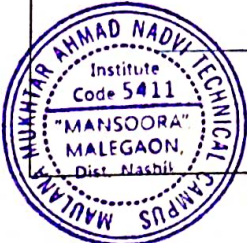
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6.4 Sustainable practices:

Solar Street lights



Ramps



Physically Challenged Toilets



Pedestrian Friendly Pathways

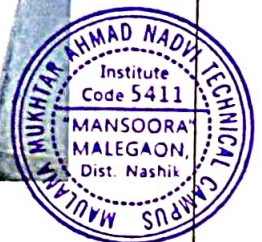


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Rain water harvesting

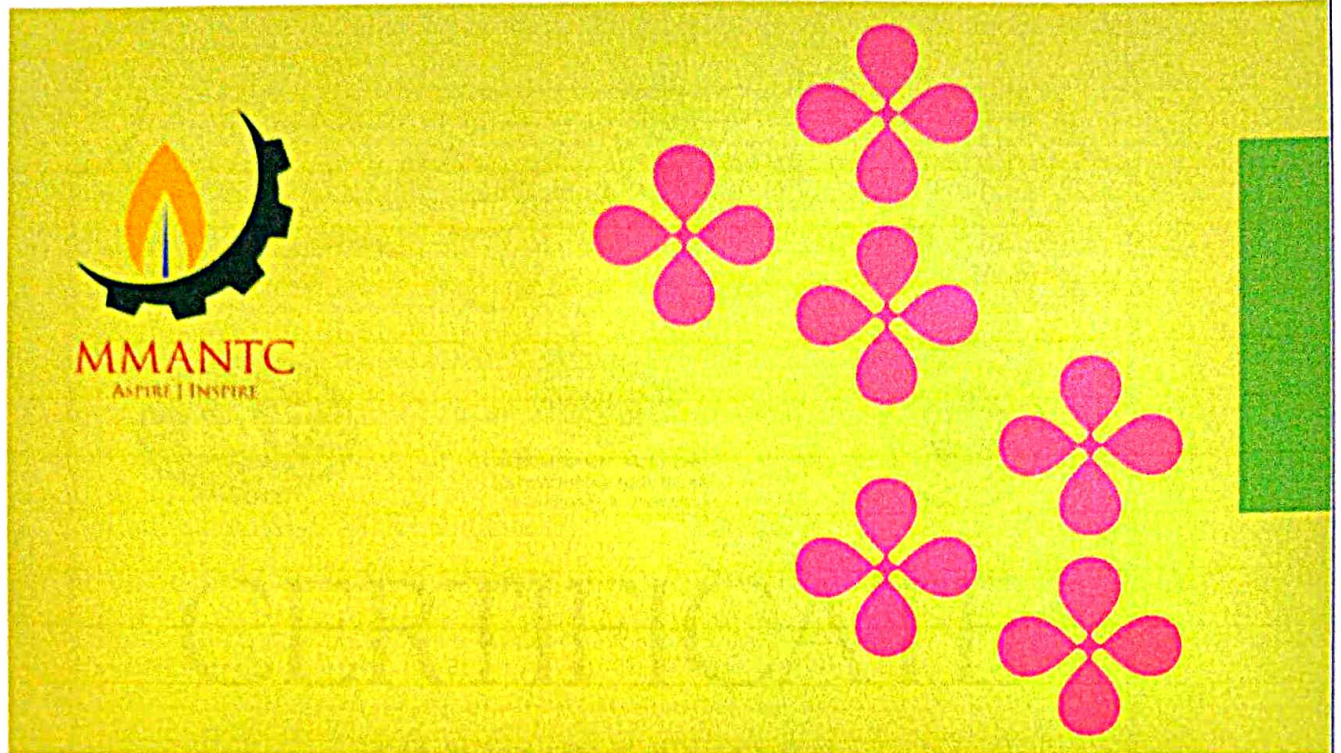


RO System



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AUDIT REPORT

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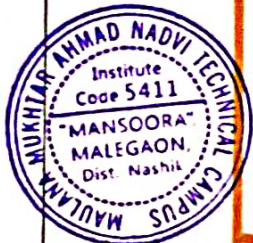
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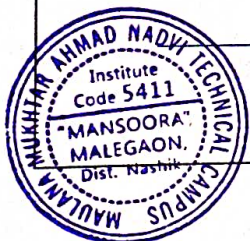
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CAMPUS MALEGAON Dis Nashik



2. Overview of Institute:

Al Jamia Mohammediyah Education Society's, Maulana Mukhtar Ahmad Nadvi Technical Campus Malegaon was established in the year of 2012. Institute has huge area of 4.5 acres and has been serving the mankind in the field engineering and technology.



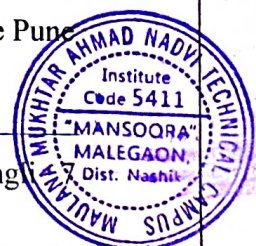
The landscaped grounds of college are widely admired for their beauty. The most valuable investment any educational institution can make is "Nurturing Future Leaders". With the continuous rise in expectation of essential leadership standards, the institute has torch bearers have taken a responsibility for this investment to nurture the NextGen leaders with a vision to bridge the existing skill gap. With a firm step forward to attain an academic excellence, several Centres of Excellence, computer labs, and industry-academia associations have been setup at the College in association with the top leaders. The College believes that its primary stakeholders are the students. All aspects of education focus on the core values of contributing to national development while fostering global competencies among students. The College admits students from all social milieus and empowers them through intensive mentoring and counselling to face the challenges of life and become responsible and sensitized citizens of the country.

Maulana Mukhtar Ahmad Nadvi Technical Campus (MMANTC) is a premier AICTE and DTE-approved institution located near the bank of Girma River, Malegaon district Nashik, since 2012. MMANTC technology offers degree courses affiliated with Savitribai Phule Pune

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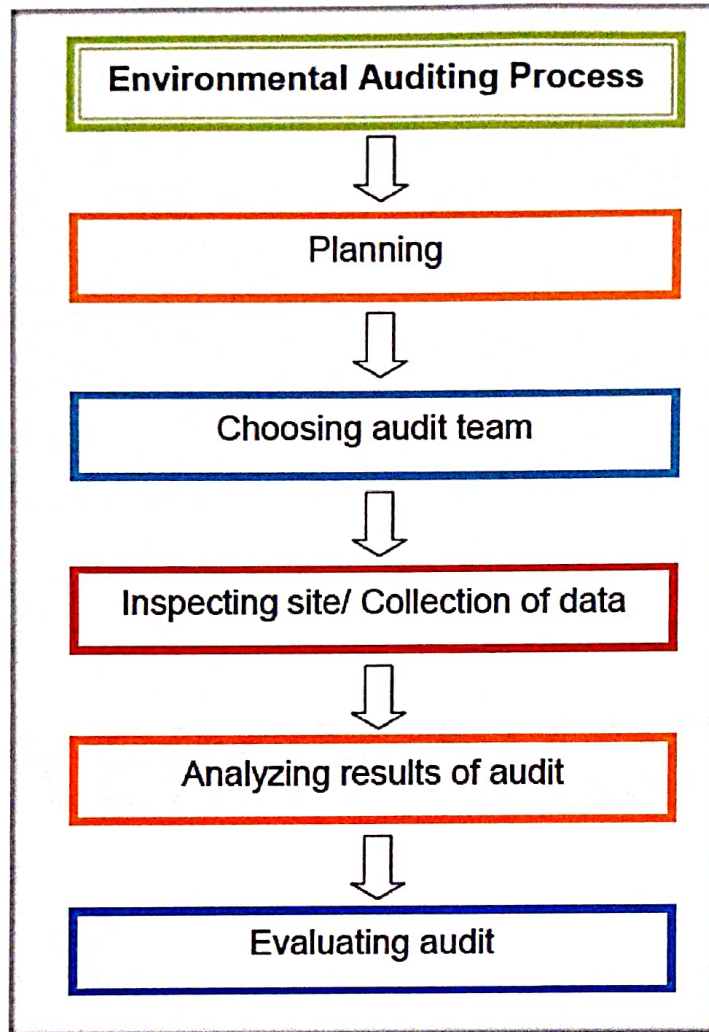
University (SPPU) in Civil, Computer, Electrical, Electronics & Telecommunication, and Mechanical Engineering. MMANTC collaborated with Siemens India to form the Siemens Centre of Excellence, which constitutes advanced Industrial, Automation, IoT, and Mechatronics Laboratories with a unique experimental setup in Maharashtra state. MMANTC campus consists of world-class infrastructure including state of art laboratories, seminar halls, auditorium, separate girls' and boys' hostel & dining and playground etc.



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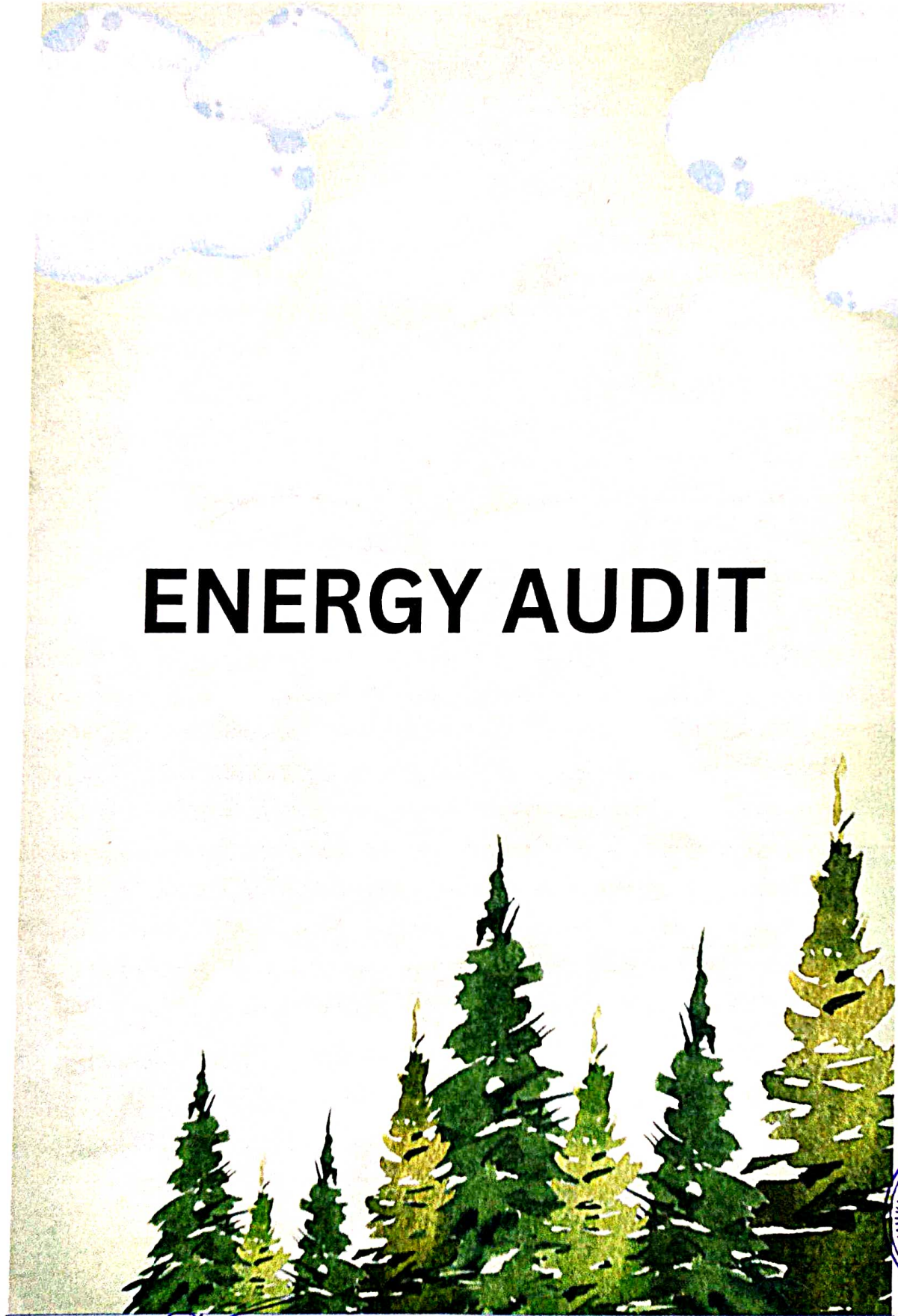
3. Methodology:



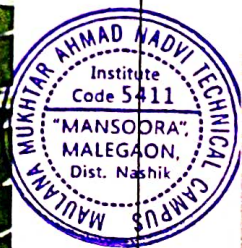
3.1 Audits to be carried out:

- Green and carbon footprint audit
- Energy audit
- Environmental audit
 - Water audit
 - Wastewater audit
 - Solid waste audit
 - Ambient noise audit
 - Ambient air audit





ENERGY AUDIT



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6. Energy Audit:

An energy audit is an inspection survey and an analysis of energy flows for energy conservation in a building. It may include a process or system to reduce the amount of energy input into the system without negatively affecting the output. In commercial and industrial real estate, an energy audit is the first step in identifying opportunities to reduce energy expense and carbon footprint.

A nation is tiring to advance in quantity and quality to the spread of education among the common India and development of their intelligence. In India the entire field of education and other fields of intelligent activities had been monopolized by a handful of men before independence. But today we are marching towards the desirable status of a developed nation with fast strides. But the development should be a sustained one. For achieving such an interminable development energy management is essential. As far as concerning electricity crisis, we are facing lack of electricity during office work. So, institutional management is taking design regarding production of electricity and saving electricity for Eco social aspect. Energy requirement of India is growing and incomplete domestic fossil fuel treasury. The country has motivated strategy to enlarge its renewable energy resources and policy to establish the nuclear power plants. India increases the involvement of nuclear power to largely electrical energy development facility from 4.2% to 9%. India's industrial demand accounted for 35% of electrical power requirement, domestic household use accounted for 28%, agriculture 21%, commercial 9%, and public lighting and other miscellaneous applications accounted for the rest. Energy conservation means reduction in energy consumption without making any sacrifice of quantity or quality. A successful energy management program begins with energy conservation; it will lead to adequate rating of equipment's, using high efficiency equipment and change of habits which causes enormous wastages of energy. By observing all these study lack of electricity and huge electricity demands. It is necessary to plan to be self-sufficient in electricity requirement.

6.1 Connection details:

Institute receives electricity from MSEB i.e. Maharashtra State Electricity Distribution Co. Ltd. Following are the details about connection.

- **Type of connection:** LT-X Public Service 20-50 KW
- **Tariff:** 88 LT-VII BI



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- **Contract demand:** 40 KVA- 40%-16
- **Feeder voltage:** 11 KW

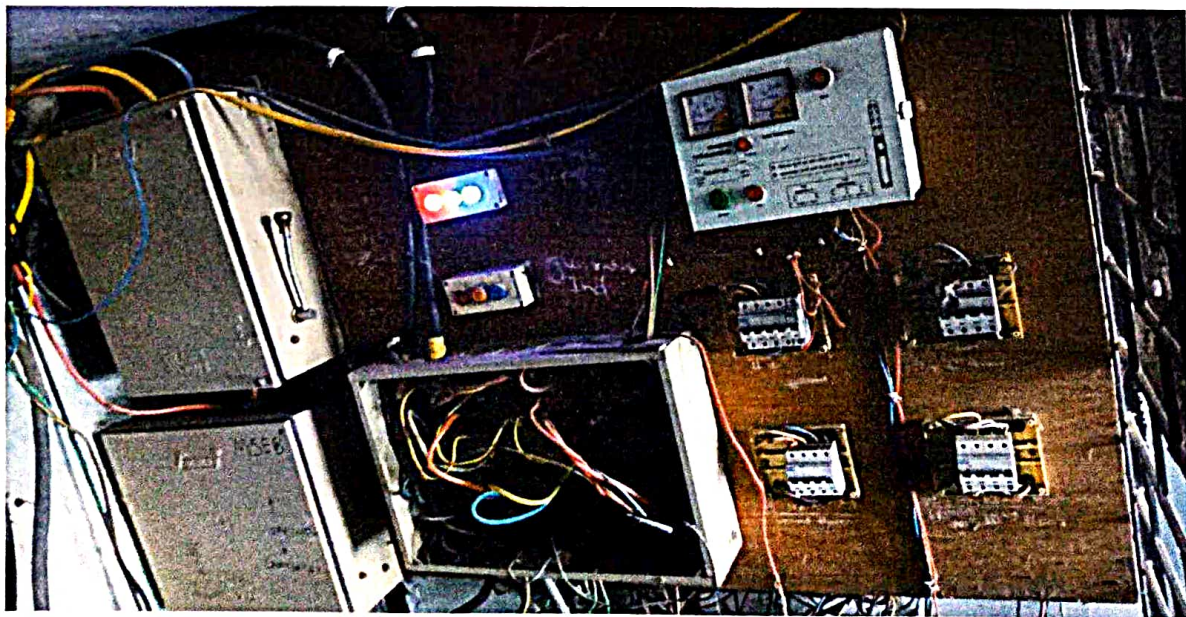
Tariff Structure:

As per Distribution Company, HT and LT consumers have an option to take Time of Day (TOD) tariff instead of the normal tariff. Under TOD tariff electricity consumption and maximum demand in respect of HT consumers for different periods of the day i.e. normal period, peak load period and off-peak load period could be recorded by installing TOD meter. The maximum demand and consumption recorded in different periods could be billed on the following rates of the tariff applicable.

TOD Tariffs	Rate % (Rs./Unit)
0000 Hrs- 0600 Hrs & 2200 Hrs- 2400 Hrs	-1.500
0600 Hrs- 0900 Hrs & 1200 Hrs- 1800 Hrs	0.000
0900 Hrs- 1200 Hrs	0.800
1800 Hrs- 2200 Hrs	1.100

Power Factor:

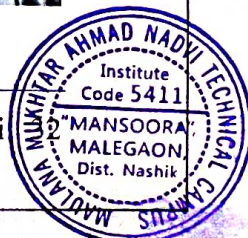
Power Factor (PF) is an indicator of efficient utilization of power. In an AC (Alternating Current) electrical power system, PF is defined as the ratio of real power flowing to the load, to the apparent power in the circuit and is a dimensionless number.



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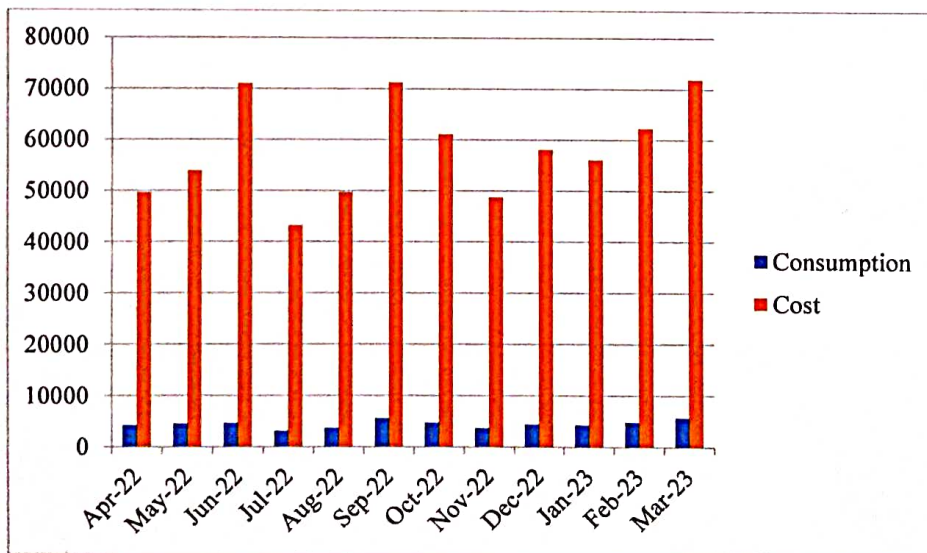


6.2 Bill analysis:

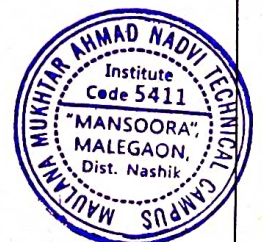
Bill analysis for MMANTC had been done for academic year 2022-2023.

Main Building

Sr. No.	Month	Consumption (Kw)	Bill Amount
1	April 22	4306	49578.35
2	May 22	4603	53956.6
3	June 22	4679	71012.26
4	July 22	3186	43199.25
5	August 22	3723	49625.41
6	September 22	5578	71228.38
7	October 22	4751	61129.57
8	November 22	3673	48749.26
9	December 22	4479	58076.79
10	January 23	4330	56111.85
11	February 23	4873	62233.161
12	March 23	5709	71854.66



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6.3 ILER analysis:

Lighting is provided in industries, commercial buildings, indoor and outdoor for providing comfortable working environment. The primary objective is to provide the required lighting effect for the lowest installed load i.e. highest lighting at lowest power consumption. The purpose of performance test is to calculate the installed efficacy in terms of lux/watt/m² (existing or design) for general lighting installation. The calculated value can be compared with the norms for specific types of interior installations for assessing improvement options.

Range	Condition
0.5 or less	Urgent activity required (UAR)
0.51 - 0.70	Review Suggested (RS)
0.70- above	Good

ILER analysis for various sections in MMANTC were carried out. Firstly using LUX meter illumination was measured and then numerical analysis was carried out. ILER gives idea about lighting conditions and measured regarding improving them.

Main Building analysis

Sr. No.	Section	LUX reading	ILER	Condition
1	Library	177	0.81	Good
2	Study room	131	0.79	Good
3	Classroom S1	136	0.77	Good
4	Classrooms S2	111	0.59	RS
5	Laboratories	145	0.84	Good
6	Office	145	0.78	Good

Reasons for Good ILER:

- Proper placement of windows and doors so that natural light is available well.
- Good ventilation system.



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DETAILS OF LAB EQUIPMENT'S**Power Electronics Lab Room 141**

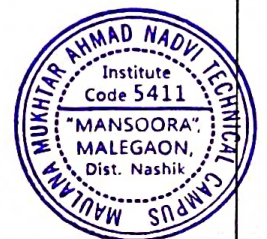
Sr. No.	Name of Equipment
1	Separately Excited DC Motor
2	Braking and Plugging DC motor Kit
3	1 Phase cascade Multilevel Inverter Kit
4	B-H Curve and Hysterisis loop Kit
5	3 phase IM
6	3Phase IM controller Kit with IGBT Inverter
7	Step Down Chopper
8	Chopper circuit using Power MOSFET/IGBT
9	DC Series Motor
10	DC Separately Excited Motor
11	1 phase fully controlled bridge converter
12	1 phase Half and Fully controlled bridge converter
13	SCR/MOSFET/IGBT characteristics Part-1
14	SCR/MOSFET/IGBT characteristics Part-2
15	1 Phase PWM Inverter
16	AC voltage regulator kit
17	RTD controller(PLC application)
18	RTD controller(PLC application)trainer kit
19	Data Acquisition System
20	3 phase PWM inverter
21	DC drive trainer

PLC and SCADA Lab Room 140

Sr. No.	Name of Equipment
1	Bottle filling Control Equipment
2	PLC trainer -10 kit
3	Verification of Superposition Theorem Kit
4	10 PCs

Electrical Measurement and Instrumentation Lab Room 138

Sr. No.	Name of Equipment
1	Kelvin's Double Bridge
2	Calibration of single phase wattmeter
3	Lissajous Figure
4	Display board on transformers
5	Digital IT strain gauge
6	Liquid Level measurement Capacitive probe

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7	Three phase Power using 1 wattmeter
8	Lissajous Figure
9	Three phase Power using 2 wattmeter
10	Three Phase Power using 3 CTs and 2 Wattmeter
11	Measurement of Resistance
12	Single phase Energy Meter
13	Linear Variable Differential Transducer
14	Looping system wiring
15	Starling system wiring
16	CRO
17	Maxwell bridge
18	Digital IT LVDT
19	DDS Function generator
20	Galvanometer as Voltmeter& Ammeter
21	Standard Cell Calibration of Voltmeter

DC Machine Lab Room 32

Sr. No.	Name of Equipment
1	3 phase IM
2	DC Shunt generator(*2)
3	Inductive Load Bank
4	DC shunt motor alternator set Test kit
5	DC Motor
6	Alternator
7	DC motor
8	Alternator
9	DC shunt motor alternator set Test kit
10	DC Motor
11	Alternator
12	Synchronising Panel
13	DC Motor
14	Induction Load Bank
15	DC Motor (*2)
16	Load Bank
17	1 phase isolation transformer(*3)
18	3 phase isolation TF

AC Machine Lab Room 33

Sr. No.	Name of Equipment
1	3 Phase IM
2	3 Phase IM dynamic braking Kit
3	1 phase Isolation TF (*2)



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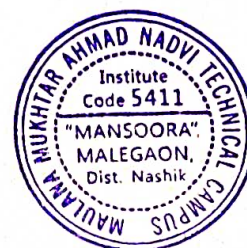
4	AC Series Motor
5	1 phase IM
6	3 phase Capacitive Load
7	1 phase SC IM test Kit
8	Synchronous Motor
9	3 phase auto synchronous motor
10	3 phase variac (*2)
11	Three Phase Resistive Load
12	3 Phase AC voltage regulator kit
13	IM Protection Kit
14	Lamp Load Bank
15	1 phase TF (*2)
16	Variac
17	Variac
18	Induction Motor (*2)
19	Capacitor Load Bank
20	Overcurrent Relay Kit
21	Synchronous AC machine
22	Air Circuit Breaker Demo Kit

Switchgear and Protection Lab Room 139

Sr. No.	Name of Equipment
1	Temperature measurement Trainer Kit
2	Relay Testing Kit
3	Fuse and MCB testing Kit
4	Transmission line training System
5	Insulating Oil Tester
6	Digital Micro ohm meter
7	Sphere Gap Assembly
8	HV Break down Tester



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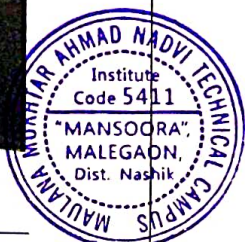
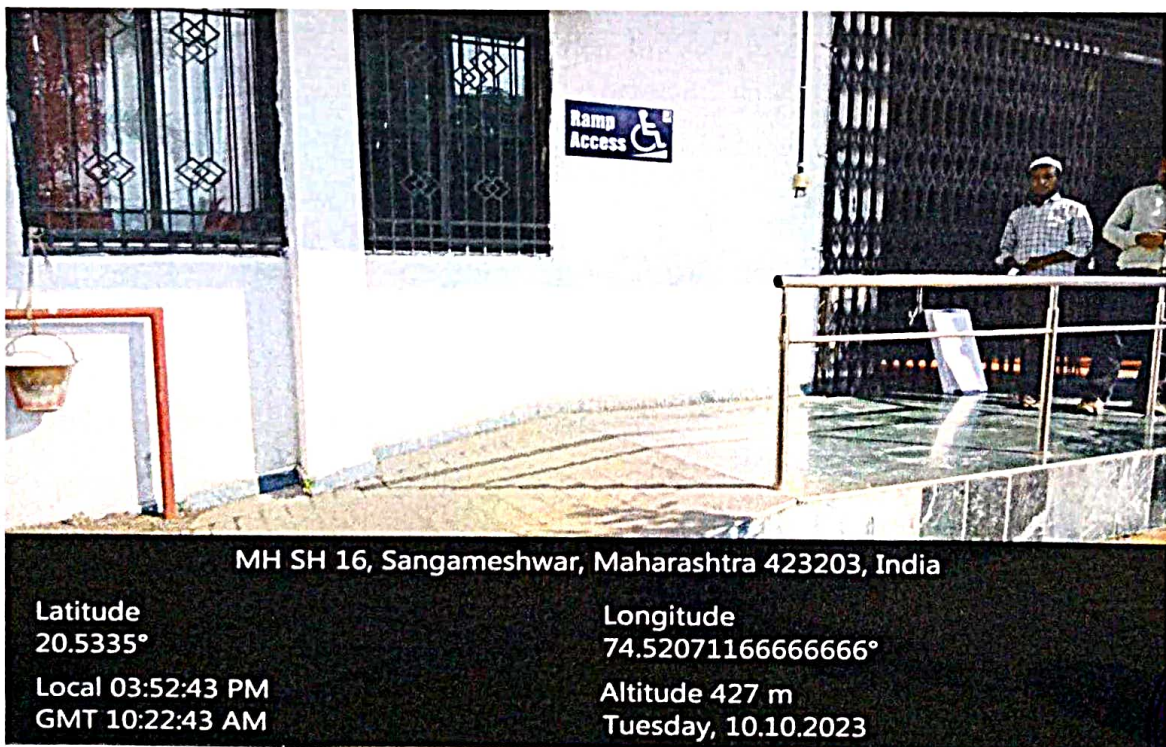


6.4 Sustainable practices:

Solar Street lights



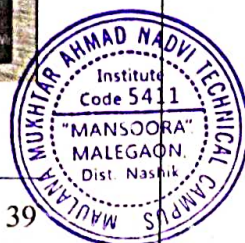
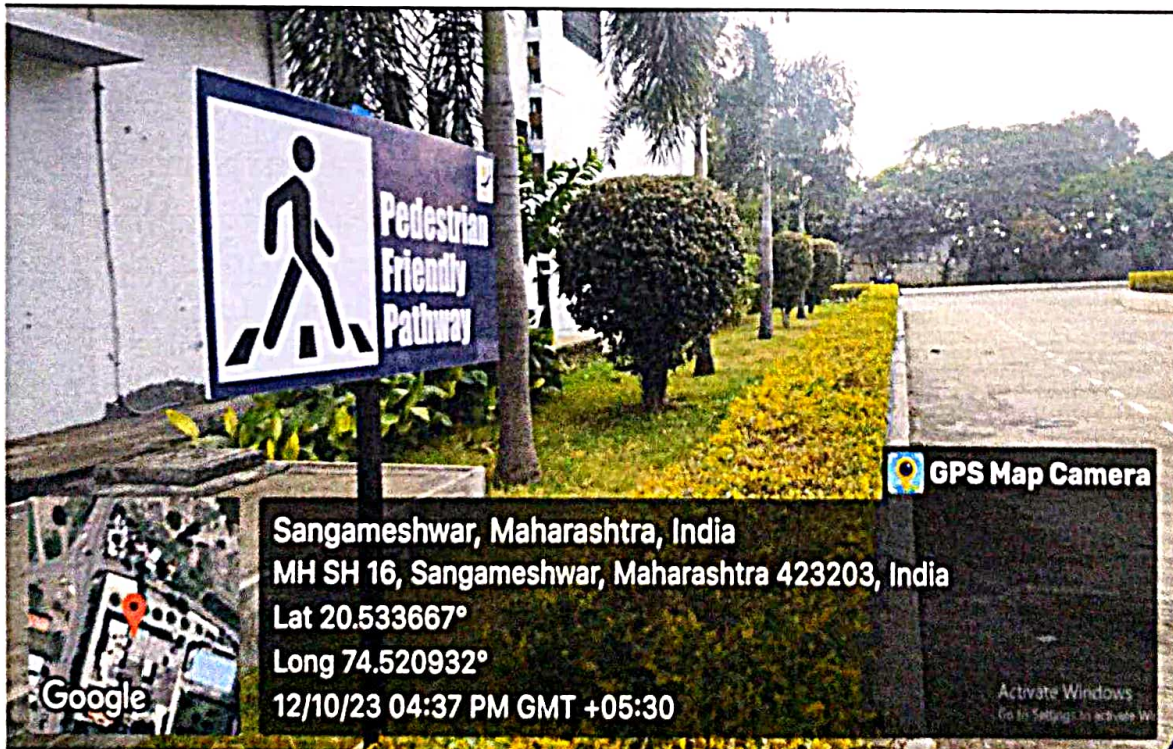
Ramps



Physically Challenged Toilets



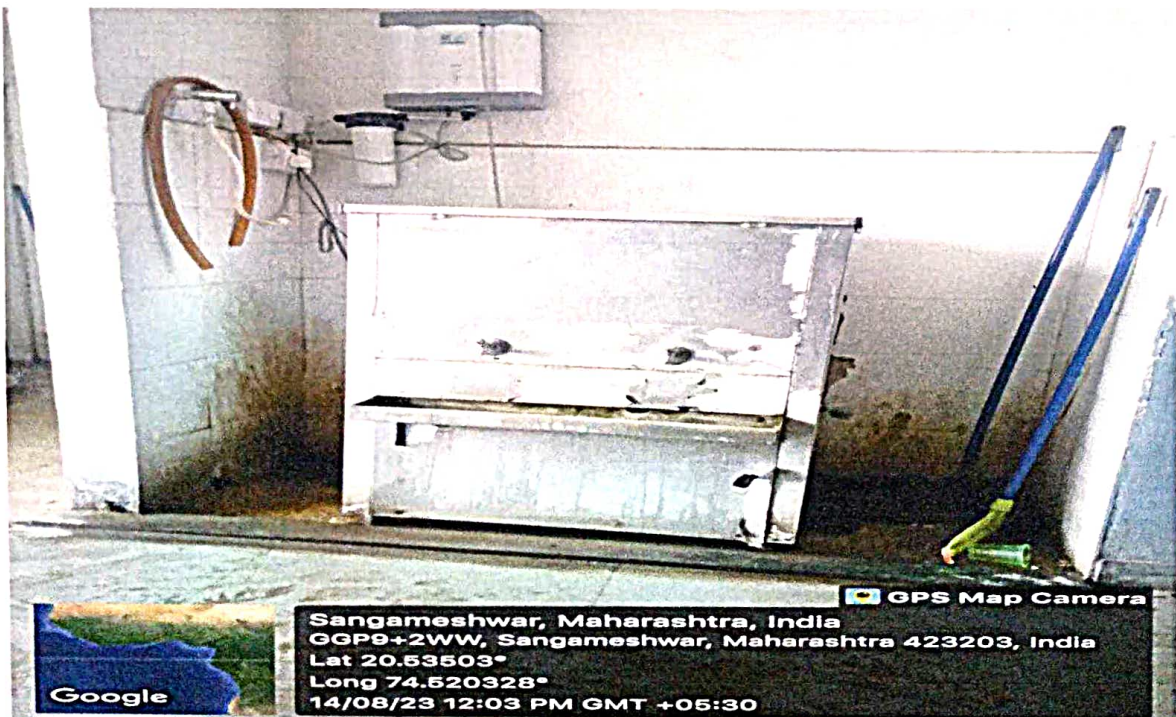
Pedestrian Friendly Pathways



Rain water harvesting



RO System



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