GREEN AUDIT REPORT

(2022-2023)

M. KUMARASAMY COLLEGE OF ENGINEERING,

Thalavapalayam, Karur-639113, Tamilnadu.

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M.KUMARASAMY
COLLEGE OF ENGINEERING
NAAC Accredited Autonomous Institution
Approved by AICTE & Affiliated to Anna University
ISO 9001:2015 & ISO 14001:2015 Certified Institution
Thalavapalayam, Karur - 639 113.

DEPARTMENT OF CIVIL ENGINEERING

Green Audit Assessment Committee

S.No	Name	Designation
1	Dr.B.S.Murugan, Principal	Chairman
2	Mr.A.C.Prabhu, Director of Operation	Member Secretary
3	Mr.P.Ilango, Manager	Member
4	Dr.S.Sethuraman, Assistant Professor, Dept. of Civil Engineering	Member

M. KUMARASAMY COLLEGE OF ENGG. (AUTONOMOUS) KARUR 639 113.

PRINCIPAL

PRINCIPAL,
M. Kumarasamy College of Engineering,
THALAVAPALAYAM,
KARUR - 639 113.

CONTENTS

1. ABOUT MKCE

M.Kumarasamy College of Engineering is an Autonomous Engineering College, Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai. Established in the year 2000 by M.Kumarasamy Health and Educational Trust with a vision to provide technical education for all sections of the society has made rapid strides on all fronts to achieve academic excellence in a short span of time. The institution with its state-of-the-art facilities and dedicated team of faculty members has become a hub of technocrats and is marching towards new frontiers.

Vision

To emerge as a leader among the top institutions in the field of technical education.

Mission

- Produce smart technocrats with empirical knowledge who can surmount the global challenges.
- Create a diverse, fully-engaged, learner-centric campus environment to provide quality education to the students.
- Maintain mutually beneficial partnerships with our alumni, industry and professional associations.

2. INSTITUTIONAL GREEN POLICY

Mission:

Save our earth for future generations through sustainability initiatives for conservation and scrupulous use of water, soil, air and other natural resources in M.Kumarasamy College of Engineering campus and the greater community.

Goals:

- Be a Socially responsible Institution in promotion of waste management among communities in and around Karur towards Refuse, Reduce, Reuse, Repurpose, and Recycle of waste.
- Be a model in Green Practices and transfer technology in green practices for sustainable practices and Instill best practices among youth
- Awareness about waste management, reducing waste, segregation of waste, recycling, safeguard clean air, water and soil conservation for future generations.
- Promote alternative employment opportunities in Waste management – Plastic, Paper etc.,
- Enactment the cleanliness and hygiene campaign towards Zero waste generation.
- Bring out various models in recognizing clean water accessible for all individuals.
- Model centre in vermi-compost manure by the segregated waste in the campus for showcasing best recycling models
- Ensure community intervention in for understanding the importance of keeping the surroundings clean though various viable technologies
- Pilot affordable technologies which help rural communities for transformation and promotion of sanitation and hygiene indicators.

Charter

- Waste management: Refuse, Reduce, Reuse, Repurpose, Recycle
- E – waste management

- Awareness and capacity building on waste resource management
- Composting
- Water management
- Hygienic surroundings
- Green and Clean environment
- Soil conservation
- Reduction of Pollution

The institution is fully aware of the importance of the green and cleanliness. Even though the institution is located far from the city, we believe in maintaining the lush green in the campus. Our institution is having a green cover of 20%. We are having a very good landscaping and we are recycling the grey water to water the plants within the campus. The institution has planted large number of trees to maintain the carbon dioxide neutrality to the extent possible.

Some of the measures taken for a clean and eco friendly environment are:

Mode of transport: Students are encouraged to use bicycles to commute from the hostel to the institute. Proper care is being taken to restrict the vehicle entry into the campus.

Plastic-free campus: Management believes in promoting plastic free campus. Usage of Plastic cups, plates and covers has been banned inside the campus and we have digital display boards in the academic campus. Solid wastes are collected regularly in bins which are kept in every classroom and in every floor to maintain the cleanliness inside the campus. Degradable and Non-degradable wastes are collected separately and sent for recycling purposes.

Carbon neutral initiatives: Institution oriented Circulars, office orders and letters are released in the online mode only. We developed inhouse Software called CAMS for the purpose of academic and Non Academic purposes for Students, Faculty members and office staff. Our salary bills are processed through ERP tool name as

kumarasamy.wallethr.com. Money transactions for our institution are carried out through digital mode.

Rain water harvesting: The entire campus is equipped with the facility to re-charge the ground water level through the rain. Three separate re-charge pits have been constructed in the main block to collect the rain water for recharging the underground water. One recharge pit is available in PG block which allows the rain water from PG block into it. Then the water will be utilized for the various purposes inside the campus.

The institute promotes sound environmental management policies and practices by following the guidelines legislated by State and Central Government bodies.

Carbon Management: To reduce the carbon foot prints , we are generating electricity to the tune of 600 kW through 250 kW Solar PV system and 350 kW Wind turbine. The institution, in addition to this has replaced / is replacing the CFL and conventional tube lights by LED bulbs and LED tube lights.

Awareness and Training Programs: The institution will ensure that training programmes on environmental related issues to create awareness among students, faculty and the neighboring community through NSS activities.

“Live Green

Since

No other Planet

To live”

3. INTRODUCTION

In the current scenario, the pollution is significantly increasing day-by-day due to the rapid increase in urbanization and industrialisation. It is causing serious health problems to the human being and also affecting the environment. It can also make an adverse effect on the mental, social, and economic ability of the person. It becomes imperative to save the people from dangerous chemicals and waste of the industries because people have to live in the green environment to lead a healthy life. An environmental auditor can examine the activities carried out by the industries and business organizations and make them aware to about the modern cleaning technology.

Green audits are necessary to evaluate the impact of pollutants and their source affects the natural resources. The environmental auditing is an important process to make sure continuous development in the environmental management. The environmental auditor appropriately monitors the system for safe disposal of waste in the institution to ensure the safety of the natural resources. A good environmental auditing system needs a constant effort to monitor and analyze the institutional working system to create the analysis on pollution being generated.

It is necessary to conduct a green audit in college campus because student aware of the green audit, its advantages to save the planet & they become good citizen of our country. The green audit practically involves use of renewable sources, conservation of the energy, rain water harvesting program, and efforts of carbon neutrality, plantation of trees, E-waste management and hazardous waste management. The national & local governments keeping lots of efforts for maintaining a planet green. Also Environment is a compulsory subject to all batcher student and arrange various programme so that student are much aware of the save planet, keep it green & also save energy.

4. OBJECTIVE

The major objective of performing **green audits** is controlling and monitoring the source of pollution in and around the institution. It also helps in improving the production safety and to making sure the prevention and reduction of the chemical waste.

The key objectives of an environmental audit therefore are to:

- To map the Geographical Location of the college
- To document the floral diversity of the college
- To record the meteorological parameter where situated
- To document the ambient environmental condition of water and wastewater of the college
- To document the waste disposal system
- To estimate the Carbon Footprint - Emission & Absorption

5. GREEN AUDITING

The college has adopted the 'Green Campus' system for environmental conservation and sustainability. There are main three pillars i.e. zero environmental foot print, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The goal is to reduce CO_2 emission, energy and water use, while creating atmosphere where students can learn and be healthy.

6. METHODOLOGY

An audit is usually conducted by a team of people who will assemble information prior to and during a site visit, analyse the facts and compare them with the criteria for the audit, draw conclusions and report their findings. These steps are usually conducted within formal structure (an audit protocol), such that the process can be repeated reliably at other facilities and quality can be maintained. To ensure that an audit is effective, several key steps must be included.

7. GENERAL OVERVIEW OF THE CONCEPT OF LANDUSE

Land use refers to man's activities and the various uses which are carried on and derived from land. Viewing the earth from space, it is now very crucial in man's activities on natural resource. In situations of rapid changes in land use, observations of the Earth from space give the information of human activities and utilization of the landscape.

Remote sensing and GIS techniques are now providing new tools for advanced land use mapping and planning. The collection of remotely sensed data facilitates the synoptic analyses of earth system, functions, patterning, and change in the local, regional as well as at global scales over time. Satellite imagery particularly is a valuable tool for generating land use map.

METHODOLOGY ADOPTED FOR LAND USE MAPPING

Three types of data that are GPS points, field survey data and Google earth data for Geo referencing have been used in this study. Land use map of the study area have been prepared using the above three types of data with the help of ArcGis Prosoftware.

DATA PROCESSING AND ANALYSIS

Land use map preparation is executed through the following steps:

Acquisition of data (Location: 11.0549°N 78.0481°E), Geo-coding and Geo referencing of satellite imageries by extracting the ground control points. Supervised classification was carried out with the aid of ground truth data collected during field survey. Scanning and digitization of maps and editing of all the Georeferenced maps were done using GIS. Data manipulation and analysis and linking the spatial data with the attribute data for creation of topology was carried out using GIS software. Creation of GIS output in the form of land use map showing various land use have been prepared

Aerial View of College Campus Part 1

(Source: GoogleEarth)

Aerial View of College Campus Part 2

(Source: GoogleEarth)

8. TREE DIVERSITY

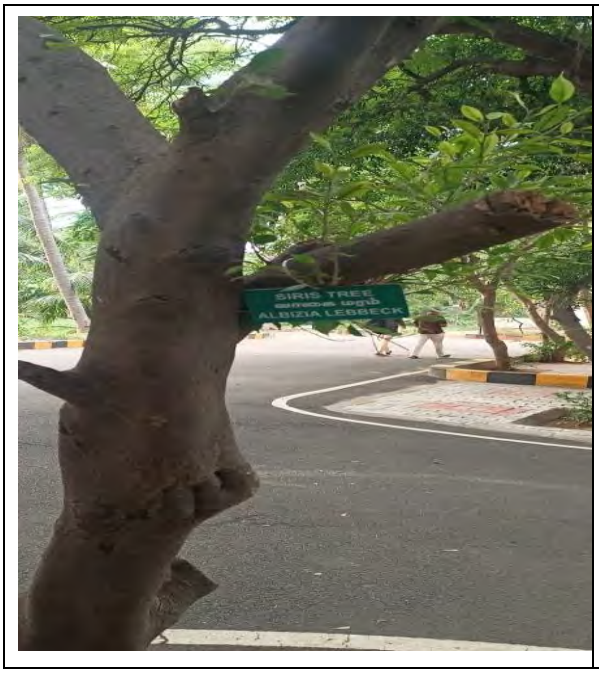
MKCE is within the geo-position between latitude 11.0549°N and longitude 78.0481°E " Karur, TamilNadu, India. It encompasses an area of about 32 Acres. The area is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods 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 spices of birds are dependent on these trees mainly for food and shelter.

The following are the tree species with whom we are being attached

S.No.	Botanical Name	Trees Name /English	Count
1	Azadirachta indica	Neem Trees	72
2	Albizia lebbeck	Siris tree	15
3	Pongamia pinnata	Beech tree	69
4	Roystonea regia	Royal palm Tree	21
5	Terminalia catappa	Indian Almond tree	20
6	Thespesia populnea	Portia tree	18
7	Syzygium cumini L	Black jamun	1
8	Withania Coagulans Dunal	Indian Rennet	1
9	Cycas revoluta	Cycad sago tree	6
10	Araucaria heterophylla	Norfolk Island pine	1
11	Saraca asoca	Ashoka tree	1
12	Delonix regia	Royal poinciana	7
13	"Mangifera indica	Mango Tree	1
14	Aphanamixis polystachya	Redwood tree	1
15	"Cocos nucifera"	Coconut Tree	4
		Total Trees	**238**

Photo 1: Green Campus

Photo 2: Aerial View of College



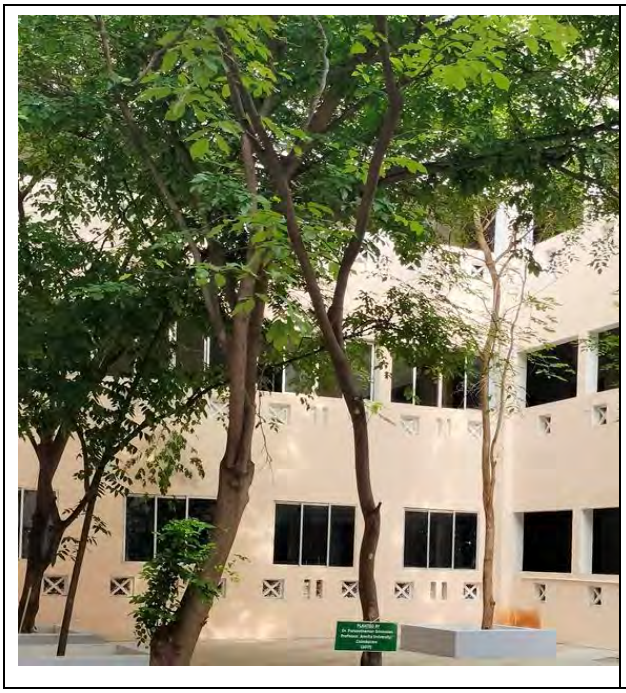


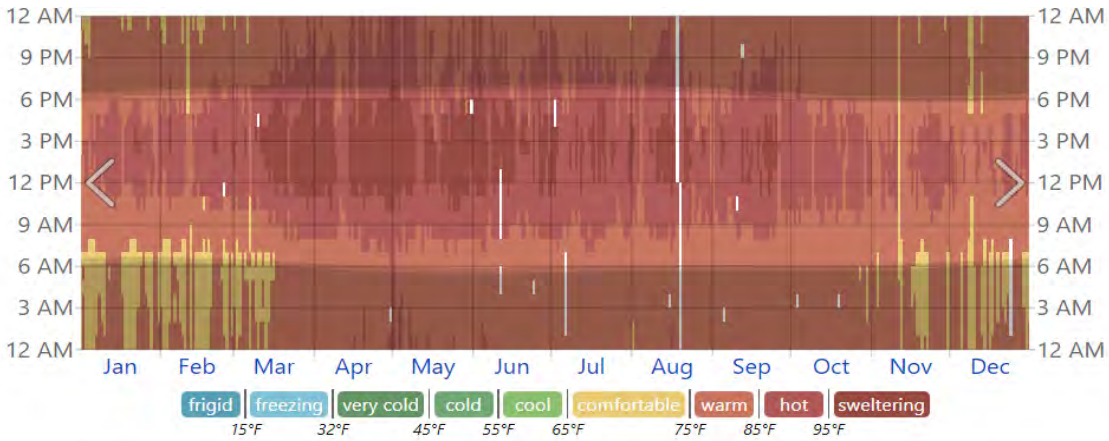
Photo 3: Trees in Campus

Photo 4: Trees in Campus

9. WEATHER DATA OF KARUR

Station: Karur Location: 11.0549°N 78.0481°E

WEATHER DATA MONTH WISE IN YEAR 2022-2023



The hourly reported temperature, color coded into bands. The shaded overlays indicate night and civil twilight.

10. CARBON FOOTPRINT - EMISSION & ABSORPTION

S. No	Source	Consumption / day	Units /kWh / Kg / litres	Emission Factor	CO_2 emission in Tons
1	Electricity used per year in kWh/1000	3500	1277500	0.85	1085.875
2	LPG/PNG used per year in kg/1000	85	31025	2.99	92.76475
3	Diesel used per year in litre/1000	700	255500	2.68	684.74
4	Eectricity generated wind mill/day	1650	602250	12g/kWh	7.227
5	Eectricity generated solar panel/day	1100	401500	50	20.075
6	Petrol used per year in litre/1000	25	9125	2.296	20.951
7	Disel Generator litres/month	800	292000	2.4	700.8
8	Solid waste generation kg per day	300	109500	2.5	273.75
9	Sewage Treatment Plant litres treated	-	2,00,000	0.381	76.2
10	Biogas plant kg	250	1000	81	0.081
Total (tons)					**2962.46**

Total CO_2 emission per year **2962.46 tons**

The total number of trees in the campus **238**. **Hence the carbon absorption 238 x 0.07 tons of CO_2 = 16.66 tons of CO_2**

The lawns on the campus have indigenous grass species and cover a total area of 181145.52 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, **carbon absorption by lawn area 6000 x 365 x 0.1 g CO_2 = 0.219 tons of CO_2**

11. WATER QUALITY ASSESSMENT

Drinking water quality monitoring involves a wide range of water quality assessments encompassing the entire water supply system in the campus. Careful consideration should be given to the water quality characteristics to be analyzed, including sampling location and frequency, analytical method, recording, evaluation, and reporting, with the emphasis on putting more effort into understanding the entire water supply system. Monitoring can be separated into two categories, operational monitoring and performance monitoring. Effective operational monitoring is carried out the director of operation and performance monitoring was carried out by experts in the department of Civil Engineering, MKCE. Performance monitoring includes regular sampling and testing to demonstrate conformance with guideline values and other regulatory requirements. The institution supplies water to stratify the basic needs of the individual in the campus as recommended by IS 1173:1993.

12. WASTEWATER QUALITY ASSESSMENT

Municipal wastewater is mainly comprised of water (99.9%) together with relatively small concentrations of suspended and dissolved organic and inorganic solids. Among the organic substances present in sewage are carbohydrates, lignin, fats, soaps, synthetic detergents, proteins and their decomposition products, as well as various natural and synthetic organic chemicals. The amount of wastewater generation has been calculated and the 85% of the water supplied per day is converted as wastewater.

WATER QUALITY ASSESSMENT REPORT

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT				
Report Ref. No: MKCE/CE/2022-23			DATE:	07.06.2022
Client Details		M.Kumarasamy College of Engineering		
Client Ref. /Date:	03.06.2022	Letter Dated:	03.06.2022	
Sample Collected date	03.06.2022	Sample received date	03.06.2022	
Report Handover to		The Manager, MKCE		
Purpose of the Work		Water testing for drinking purpose		
Qty. of sample	1 litre	Test commenced on:	03.06.2022	
Sample Location	PG Block	Test completed on:	07.06.2022	

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.6	1
4	pH@ 25°C	-	IS 3025 : Part 11	8	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	72	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	50	500
7	Total Hardness	mg/L	IS 3025 : Part 21	75	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	48	200
9	Calcium	mg/L	IS 3025 : Part 40	30	75
10	Magnesium	mg/L	IS 3025 : Part 46	08	30
11	Sodium	mg/L	IS 3025 : Part 45	35	200
12	Potassium	mg/L	IS 3025 : Part 45	3	12
13	Chloride	mg/L	IS 3025 : Part 32	65	250
14	Sulphate	mg/L	IS 3025 : Part 24	50	200
15	Nitrate	mg/L	IS 3025 : Part 34	25	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.06.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.06.2022	Letter Dated:	03.06.2022
Sample Collected date	03.06.2022	Sample received date	03.06.2022
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking Purpose	
Qty. of sample	1 litre	Test commenced on:	03.06.2022
Sample Location	Main Block	Test completed on:	07.06.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025: Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025: Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025: Part 10	0.1	1
4	pH@ 25ºC	-	IS 3025: Part 11	8.2	6.5-8.5
5	Conductivity	µS/cm	IS 3025: Part 14	274	-
6	Total dissolved solids	mg/L	IS 3025: Part 16	245	500
7	Total Hardness	mg/L	IS 3025: Part 21	154	200
8	Total Alkalinity	mg/L	IS 3025: Part 23	80	200
9	Calcium	mg/L	IS 3025: Part 40	30	75
10	Magnesium	mg/L	IS 3025: Part 46	03	30
11	Sodium	mg/L	IS 3025: Part 45	42	200
12	Potassium	mg/L	IS 3025: Part 45	4	12
13	Chloride	mg/L	IS 3025: Part 32	60	250
14	Sulphate	mg/L	IS 3025: Part 24	41	200
15	Nitrate	mg/L	IS 3025: Part 34	12	45
16	Fluoride	mg/L	IS 3025: Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

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DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.06.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.06.2022	Letter Dated:	03.06.2022
Sample Collected date	03.06.2022	Sample received date	03.06.2022
Report Handover to		THE MANAGER, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	03.06.2022
Sample Location	Boys Hostel	Test completed on:	07.06.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.2	1
4	pH@ 25°C	-	IS 3025 : Part 11	6.9	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	55	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	70	500
7	Total Hardness	mg/L	IS 3025 : Part 21	90	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	45	200
9	Calcium	mg/L	IS 3025 : Part 40	35	75
10	Magnesium	mg/L	IS 3025 : Part 46	12	30
11	Sodium	mg/L	IS 3025 : Part 45	50	200
12	Potassium	mg/L	IS 3025 : Part 45	5	12
13	Chloride	mg/L	IS 3025 : Part 32	40	250
14	Sulphate	mg/L	IS 3025 : Part 24	35	200
15	Nitrate	mg/L	IS 3025 : Part 34	8	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
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DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.06.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.06.2022	Letter Dated:	03.06.2022
Sample Collected date	03.06.2022	Sample received date	03.06.2022
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	03.06.2022
Sample Location	Mess Block	Test completed on:	07.06.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.3	1
4	pH@ 25°C	-	IS 3025 : Part 11	8.1	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	368	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	172	500
7	Total Hardness	mg/L	IS 3025 : Part 21	192	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	121	200
9	Calcium	mg/L	IS 3025 : Part 40	70	75
10	Magnesium	mg/L	IS 3025 : Part 46	30	30
11	Sodium	mg/L	IS 3025 : Part 45	134	200
12	Potassium	mg/L	IS 3025 : Part 45	4	12
13	Chloride	mg/L	IS 3025 : Part 32	50	250
14	Sulphate	mg/L	IS 3025 : Part 24	45	200
15	Nitrate	mg/L	IS 3025 : Part 34	12	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

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DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.06.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.06.2022	Letter Dated:	03.06.2022
Sample Collected date	03.06.2022	Sample received date	03.06.2022
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	03.06.2022
Sample Location	Well Water	Test completed on:	07.06.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.5	1
4	pH@ 25ºC	-	IS 3025 : Part 11	8	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	554	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	460	500
7	Total Hardness	mg/L	IS 3025 : Part 21	165	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	160	200
9	Calcium	mg/L	IS 3025 : Part 40	72	75
10	Magnesium	mg/L	IS 3025 : Part 46	28	30
11	Sodium	mg/L	IS 3025 : Part 45	132	200
12	Potassium	mg/L	IS 3025 : Part 45	7	12
13	Chloride	mg/L	IS 3025 : Part 32	165	250
14	Sulphate	mg/L	IS 3025 : Part 24	60	200
15	Nitrate	mg/L	IS 3025 : Part 34	15	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are suitable for domestic uses except drinking purpose. It requires advanced method of treatment for drinking and cooking use.

NOTE:
This report is given to the client based on the samples provided by them.

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DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.09.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	02.09.2022	Letter Dated:	02.09.2022
Sample Collected date	02.09.2022	Sample received date	02.09.2022
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	02.09.2022
Sample Location	PG Block	Test completed on:	07.09.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.6	1
4	pH@ 25°C	-	IS 3025 : Part 11	8.5	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	70	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	55	500
7	Total Hardness	mg/L	IS 3025 : Part 21	80	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	52	200
9	Calcium	mg/L	IS 3025 : Part 40	28	75
10	Magnesium	mg/L	IS 3025 : Part 46	10	30
11	Sodium	mg/L	IS 3025 : Part 45	30	200
12	Potassium	mg/L	IS 3025 : Part 45	5	12
13	Chloride	mg/L	IS 3025 : Part 32	60	250
14	Sulphate	mg/L	IS 3025 : Part 24	48	200
15	Nitrate	mg/L	IS 3025 : Part 34	22	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

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Report Ref. No: MKCE/CE/2022-23		DATE:	07.09.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	02.09.2022	Letter Dated:	02.09.2022
Sample Collected date	02.09.2022	Sample received date	02.09.2022
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking Purpose	
Qty. of sample	1 litre	Test commenced on:	02.09.2022
Sample Location	Main Block	Test completed on:	07.09.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025: Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025: Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025: Part 10	0.1	1
4	pH@ 25ºC	-	IS 3025: Part 11	8.2	6.5-8.5
5	Conductivity	µS/cm	IS 3025: Part 14	270	-
6	Total dissolved solids	mg/L	IS 3025: Part 16	235	500
7	Total Hardness	mg/L	IS 3025: Part 21	150	200
8	Total Alkalinity	mg/L	IS 3025: Part 23	85	200
9	Calcium	mg/L	IS 3025: Part 40	335	75
10	Magnesium	mg/L	IS 3025: Part 46	05	30
11	Sodium	mg/L	IS 3025: Part 45	40	200
12	Potassium	mg/L	IS 3025: Part 45	3	12
13	Chloride	mg/L	IS 3025: Part 32	65	250
14	Sulphate	mg/L	IS 3025: Part 24	40	200
15	Nitrate	mg/L	IS 3025: Part 34	11	45
16	Fluoride	mg/L	IS 3025: Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.09.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	02.09.2022	Letter Dated:	02.09.2022
Sample Collected date	02.09.2022	Sample received date	02.09.2022
Report Handover to		THE MANAGER, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	02.09.2022
Sample Location	Boys Hostel	Test completed on:	07.09.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.2	1
4	pH@ 25°C	-	IS 3025 : Part 11	7	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	55	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	70	500
7	Total Hardness	mg/L	IS 3025 : Part 21	95	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	35	200
9	Calcium	mg/L	IS 3025 : Part 40	35	75
10	Magnesium	mg/L	IS 3025 : Part 46	12	30
11	Sodium	mg/L	IS 3025 : Part 45	55	200
12	Potassium	mg/L	IS 3025 : Part 45	5	12
13	Chloride	mg/L	IS 3025 : Part 32	42	250
14	Sulphate	mg/L	IS 3025 : Part 24	35	200
15	Nitrate	mg/L	IS 3025 : Part 34	8	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

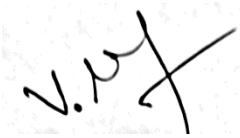
TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.09.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	02.09.2022	Letter Dated:	02.09.2022
Sample Collected date	02.09.2022	Sample received date	02.09.2022
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	02.09.2022
Sample Location	Mess Block	Test completed on:	07.09.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.3	1
4	pH@ 25°C	-	IS 3025 : Part 11	8.1	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	360	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	165	500
7	Total Hardness	mg/L	IS 3025 : Part 21	180	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	120	200
9	Calcium	mg/L	IS 3025 : Part 40	65	75
10	Magnesium	mg/L	IS 3025 : Part 46	30	30
11	Sodium	mg/L	IS 3025 : Part 45	140	200
12	Potassium	mg/L	IS 3025 : Part 45	4	12
13	Chloride	mg/L	IS 3025 : Part 32	54	250
14	Sulphate	mg/L	IS 3025 : Part 24	45	200
15	Nitrate	mg/L	IS 3025 : Part 34	12	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by
		

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.09.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	02.09.2022	Letter Dated:	02.09.2022
Sample Collected date	02.09.2022	Sample received date	02.09.2022
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	02.09.2022
Sample Location	Well Water	Test completed on:	07.09.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.5	1
4	pH@ 25ºC	-	IS 3025 : Part 11	8	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	540	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	450	500
7	Total Hardness	mg/L	IS 3025 : Part 21	160	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	155	200
9	Calcium	mg/L	IS 3025 : Part 40	72	75
10	Magnesium	mg/L	IS 3025 : Part 46	24	30
11	Sodium	mg/L	IS 3025 : Part 45	125	200
12	Potassium	mg/L	IS 3025 : Part 45	7	12
13	Chloride	mg/L	IS 3025 : Part 32	145	250
14	Sulphate	mg/L	IS 3025 : Part 24	60	200
15	Nitrate	mg/L	IS 3025 : Part 34	15	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are suitable for domestic uses except drinking purpose. It requires advanced method of treatment for drinking and cooking use.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.02.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.02.2023	Letter Dated:	03.02.2023
Sample Collected date	03.02.2023	Sample received date	03.02.2023
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	05.02.2023
Sample Location	PG Block	Test completed on:	07.02.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.6	1
4	pH@ 25°C	-	IS 3025 : Part 11	8.3	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	74	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	55	500
7	Total Hardness	mg/L	IS 3025 : Part 21	70	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	45	200
9	Calcium	mg/L	IS 3025 : Part 40	25	75
10	Magnesium	mg/L	IS 3025 : Part 46	05	30
11	Sodium	mg/L	IS 3025 : Part 45	31	200
12	Potassium	mg/L	IS 3025 : Part 45	2	12
13	Chloride	mg/L	IS 3025 : Part 32	60	250
14	Sulphate	mg/L	IS 3025 : Part 24	45	200
15	Nitrate	mg/L	IS 3025 : Part 34	20	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.02.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.02.2023	Letter Dated:	03.02.2023
Sample Collected date	03.02.2023	Sample received date	03.02.2023
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking Purpose	
Qty. of sample	1 litre	Test commenced on:	05.02.2023
Sample Location	Main Block	Test completed on:	07.02.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025: Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025: Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025: Part 10	0.1	1
4	pH@ 25°C	-	IS 3025: Part 11	8	6.5-8.5
5	Conductivity	µS/cm	IS 3025: Part 14	274	-
6	Total dissolved solids	mg/L	IS 3025: Part 16	240	500
7	Total Hardness	mg/L	IS 3025: Part 21	150	200
8	Total Alkalinity	mg/L	IS 3025: Part 23	85	200
9	Calcium	mg/L	IS 3025: Part 40	35	75
10	Magnesium	mg/L	IS 3025: Part 46	04	30
11	Sodium	mg/L	IS 3025: Part 45	49	200
12	Potassium	mg/L	IS 3025: Part 45	5	12
13	Chloride	mg/L	IS 3025: Part 32	62	250
14	Sulphate	mg/L	IS 3025: Part 24	42	200
15	Nitrate	mg/L	IS 3025: Part 34	10	45
16	Fluoride	mg/L	IS 3025: Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.02.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.02.2023	Letter Dated:	03.02.2023
Sample Collected date	03.02.2023	Sample received date	03.02.2023
Report Handover to		THE MANAGER, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	05.02.2023
Sample Location	Boys Hostel	Test completed on:	07.02.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.2	1
4	pH@ 25°C	-	IS 3025 : Part 11	6.8	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	58	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	75	500
7	Total Hardness	mg/L	IS 3025 : Part 21	94	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	42	200
9	Calcium	mg/L	IS 3025 : Part 40	38	75
10	Magnesium	mg/L	IS 3025 : Part 46	13	30
11	Sodium	mg/L	IS 3025 : Part 45	52	200
12	Potassium	mg/L	IS 3025 : Part 45	4	12
13	Chloride	mg/L	IS 3025 : Part 32	45	250
14	Sulphate	mg/L	IS 3025 : Part 24	37	200
15	Nitrate	mg/L	IS 3025 : Part 34	7	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT				
Report Ref. No: MKCE/CE/2022-23			DATE:	07.02.2023
Client Details		M.Kumarasamy College of Engineering		
Client Ref. /Date:	03.02.2023	Letter Dated:	03.02.2023	
Sample Collected date	03.02.2023	Sample received date	03.02.2023	
Report Handover to		The Manager, MKCE		
Purpose of the Work		Water testing for drinking purpose		
Qty. of sample	1 litre	Test commenced on:	05.02.2023	
Sample Location	Mess Block	Test completed on:	07.02.2023	

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.3	1
4	pH@ 25°C	-	IS 3025 : Part 11	8.1	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	368	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	172	500
7	Total Hardness	mg/L	IS 3025 : Part 21	192	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	121	200
9	Calcium	mg/L	IS 3025 : Part 40	70	75
10	Magnesium	mg/L	IS 3025 : Part 46	30	30
11	Sodium	mg/L	IS 3025 : Part 45	134	200
12	Potassium	mg/L	IS 3025 : Part 45	4	12
13	Chloride	mg/L	IS 3025 : Part 32	50	250
14	Sulphate	mg/L	IS 3025 : Part 24	45	200
15	Nitrate	mg/L	IS 3025 : Part 34	12	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.02.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.02.2023	Letter Dated:	03.02.2023
Sample Collected date	03.02.2023	Sample received date	03.02.2023
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	05.02.2023
Sample Location	Well Water	Test completed on:	07.02.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.5	1
4	pH@ 25°C	-	IS 3025 : Part 11	8	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	554	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	460	500
7	Total Hardness	mg/L	IS 3025 : Part 21	165	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	160	200
9	Calcium	mg/L	IS 3025 : Part 40	72	75
10	Magnesium	mg/L	IS 3025 : Part 46	28	30
11	Sodium	mg/L	IS 3025 : Part 45	132	200
12	Potassium	mg/L	IS 3025 : Part 45	7	12
13	Chloride	mg/L	IS 3025 : Part 32	165	250
14	Sulphate	mg/L	IS 3025 : Part 24	60	200
15	Nitrate	mg/L	IS 3025 : Part 34	15	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	20.04.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	17.04.2023	Letter Dated:	17.04.2023
Sample Collected date	17.04.2023	Sample received date	17.04.2023
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	17.04.2023
Sample Location	PG Block	Test completed on:	20.04.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.4	1
4	pH@ 25°C	-	IS 3025 : Part 11	8.2	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	72	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	50	500
7	Total Hardness	mg/L	IS 3025 : Part 21	72	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	45	200
9	Calcium	mg/L	IS 3025 : Part 40	28	75
10	Magnesium	mg/L	IS 3025 : Part 46	08	30
11	Sodium	mg/L	IS 3025 : Part 45	31	200
12	Potassium	mg/L	IS 3025 : Part 45	3	12
13	Chloride	mg/L	IS 3025 : Part 32	65	250
14	Sulphate	mg/L	IS 3025 : Part 24	44	200
15	Nitrate	mg/L	IS 3025 : Part 34	25	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	20.04.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	17.04.2023	Letter Dated:	17.04.2023
Sample Collected date	17.04.2023	Sample received date	17.04.2023
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking Purpose	
Qty. of sample	1 litre	Test commenced on:	17.04.2023
Sample Location	Main Block	Test completed on:	20.04.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025: Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025: Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025: Part 10	0.2	1
4	pH@ 25°C	-	IS 3025: Part 11	8.1	6.5-8.5
5	Conductivity	µS/cm	IS 3025: Part 14	274	-
6	Total dissolved solids	mg/L	IS 3025: Part 16	245	500
7	Total Hardness	mg/L	IS 3025: Part 21	155	200
8	Total Alkalinity	mg/L	IS 3025: Part 23	80	200
9	Calcium	mg/L	IS 3025: Part 40	33	75
10	Magnesium	mg/L	IS 3025: Part 46	03	30
11	Sodium	mg/L	IS 3025: Part 45	44	200
12	Potassium	mg/L	IS 3025: Part 45	3	12
13	Chloride	mg/L	IS 3025: Part 32	70	250
14	Sulphate	mg/L	IS 3025: Part 24	40	200
15	Nitrate	mg/L	IS 3025: Part 34	8	45
16	Fluoride	mg/L	IS 3025: Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	07.02.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	17.04.2023	Letter Dated:	17.04.2023
Sample Collected date	17.04.2023	Sample received date	17.04.2023
Report Handover to		THE MANAGER, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	17.04.2023
Sample Location	Boys Hostel	Test completed on:	20.04.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.2	1
4	pH@ 25°C	-	IS 3025 : Part 11	6.8	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	58	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	75	500
7	Total Hardness	mg/L	IS 3025 : Part 21	94	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	42	200
9	Calcium	mg/L	IS 3025 : Part 40	38	75
10	Magnesium	mg/L	IS 3025 : Part 46	13	30
11	Sodium	mg/L	IS 3025 : Part 45	52	200
12	Potassium	mg/L	IS 3025 : Part 45	4	12
13	Chloride	mg/L	IS 3025 : Part 32	45	250
14	Sulphate	mg/L	IS 3025 : Part 24	37	200
15	Nitrate	mg/L	IS 3025 : Part 34	7	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT				
Report Ref. No: MKCE/CE/2022-23			DATE:	20.04.2023
Client Details		M.Kumarasamy College of Engineering		
Client Ref. / Date:	17.04.2023	Letter Dated:	17.04.2023	
Sample Collected date	17.04.2023	Sample received date	17.04.2023	
Report Handover to		The Manager, MKCE		
Purpose of the Work		Water testing for drinking purpose		
Qty. of sample	1 litre	Test commenced on:	17.04.2023	
Sample Location	Mess Block	Test completed on:	20.04.2023	

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.4	1
4	pH@ 25°C	-	IS 3025 : Part 11	8.15	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	365	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	170	500
7	Total Hardness	mg/L	IS 3025 : Part 21	194	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	125	200
9	Calcium	mg/L	IS 3025 : Part 40	71	75
10	Magnesium	mg/L	IS 3025 : Part 46	30	30
11	Sodium	mg/L	IS 3025 : Part 45	135	200
12	Potassium	mg/L	IS 3025 : Part 45	3	12
13	Chloride	mg/L	IS 3025 : Part 32	55	250
14	Sulphate	mg/L	IS 3025 : Part 24	40	200
15	Nitrate	mg/L	IS 3025 : Part 34	11	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are within the permissible limit and it is suitable for drinking purpose as per IS 10500: 2012 recommendation.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2022-23		DATE:	20.04.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	17.04.2023	Letter Dated:	17.04.2023
Sample Collected date	17.04.2023	Sample received date	17.04.2023
Report Handover to		The Manager, MKCE	
Purpose of the Work		Water testing for drinking purpose	
Qty. of sample	1 litre	Test commenced on:	17.04.2023
Sample Location	Well Water	Test completed on:	20.04.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	Odour	-	IS 3025 : Part 05	Acceptable	Acceptable
2	Taste	-	IS 3025 : Part 08	Acceptable	Acceptable
3	Turbidity	NTU	IS 3025 : Part 10	0.4	1
4	pH@ 25ºC	-	IS 3025 : Part 11	7.9	6.5-8.5
5	Conductivity	µS/cm	IS 3025 : Part 14	550	-
6	Total dissolved solids	mg/L	IS 3025 : Part 16	450	500
7	Total Hardness	mg/L	IS 3025 : Part 21	160	200
8	Total Alkalinity	mg/L	IS 3025 : Part 23	165	200
9	Calcium	mg/L	IS 3025 : Part 40	70	75
10	Magnesium	mg/L	IS 3025 : Part 46	25	30
11	Sodium	mg/L	IS 3025 : Part 45	130	200
12	Potassium	mg/L	IS 3025 : Part 45	5	12
13	Chloride	mg/L	IS 3025 : Part 32	150	250
14	Sulphate	mg/L	IS 3025 : Part 24	50	200
15	Nitrate	mg/L	IS 3025 : Part 34	17	45
16	Fluoride	mg/L	IS 3025 : Part 60	<0.1	1

REMARKS: The Collected water sample characteristics are suitable for domestic uses except drinking purpose. It requires advanced method of treatment for drinking and cooking use.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

WASTEWATER QUALITY ASSESSMENT REPORT

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2021-22		DATE:	07.06.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.06.2022	Letter Dated:	03.06.2022
Sample Collected date	03.06.2022	Sample received date	03.06.2022
Report Handover to		The Manager, MKCE	
Purpose of the Work		Waste water testing	
Qty. of sample	1 litre	Test commenced on:	03.06.2022
Sample Location	STP outlet	Test completed on:	07.06.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	pH	-	IS 3025: Part 11	8.2	5.5-9.0
2	Temperature	°C	IS 3025 : Part 09	20	40
3	Residual Free chlorine	mg/L	IS 3025 : Part 26	0.35	1
4	BOD_5 @ 27°C	mg/L	IS 3025 : Part 44	20	30
5	Total dissolved solids	mg/L	IS 3025 : Part 16	1250	2100
6	Total suspended solids	mg/L	IS 3025 : Part 17	75	100
7	COD	mg/L	IS 3025 : Part 58	115	250

REMARKS: These standards shall be applicable only if such sewer leads to secondary treatment including biological treatment system; otherwise, the discharge into sewers shall be treated as discharge into inland surface water.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2021-22		DATE:	07.09.2022
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	02.09.2022	Letter Dated:	02.09.2022
Sample Collected date	02.09.2022	Sample received date	02.09.2022
Report Handover to		The Manager, MKCE	
Purpose of the Work		Waste water testing	
Qty. of sample	1 litre	Test commenced on:	02.09.2022
Sample Location	STP outlet	Test completed on:	07.09.2022

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	pH	-	IS 3025: Part 11	8.2	5.5-9.0
2	Temperature	°C	IS 3025 : Part 09	20	40
3	Residual Free chlorine	mg/L	IS 3025 : Part 26	0.34	1
4	BOD_5 @ 27°C	mg/L	IS 3025 : Part 44	20	30
5	Total dissolved solids	mg/L	IS 3025 : Part 16	1100	2100
6	Total suspended solids	mg/L	IS 3025 : Part 17	70	100
7	COD	mg/L	IS 3025 : Part 58	125	250

REMARKS: These standards shall be applicable only if such sewer leads to secondary treatment including biological treatment system; otherwise, the discharge into sewers shall be treated as discharge into inland surface water.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2021-22		DATE:	07.02.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	03.02.2023	Letter Dated:	03.02.2023
Sample Collected date	03.02.2023	Sample received date	03.02.2023
Report Handover to		The Manager, MKCE	
Purpose of the Work		Waste water testing	
Qty. of sample	1 litre	Test commenced on:	05.02.2023
Sample Location	STP outlet	Test completed on:	07.02.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	pH	-	IS 3025: Part 11	8	5.5-9.0
2	Temperature	°C	IS 3025 : Part 09	20	40
3	Residual Free chlorine	mg/L	IS 3025 : Part 26	0.4	1
4	BOD_5 @ 27°C	mg/L	IS 3025 : Part 44	25	30
5	Total dissolved solids	mg/L	IS 3025 : Part 16	1200	2100
6	Total suspended solids	mg/L	IS 3025 : Part 17	70	100
7	COD	mg/L	IS 3025 : Part 58	110	250

REMARKS: These standards shall be applicable only if such sewer leads to secondary treatment including biological treatment system; otherwise, the discharge into sewers shall be treated as discharge into inland surface water.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

DEPARTMENT OF CIVIL ENGINEERING

TEST REPORT			
Report Ref. No: MKCE/CE/2021-22		DATE:	20.04.2023
Client Details		M.Kumarasamy College of Engineering	
Client Ref. /Date:	17.04.2023	Letter Dated:	17.04.2023
Sample Collected date	17.04.2023	Sample received date	17.04.2023
Report Handover to		The Manager, MKCE	
Purpose of the Work		Waste water testing	
Qty. of sample	1 litre	Test commenced on:	17.04.2023
Sample Location	STP outlet	Test completed on:	20.04.2023

RESULT:

S.No	Parameters	Units	Test method	Result	IS 10500:2012
1	pH	-	IS 3025: Part 11	9	5.5-9.0
2	Temperature	°C	IS 3025 : Part 09	20	40
3	Residual Free chlorine	mg/L	IS 3025 : Part 26	0.33	1
4	BOD_5 @ 27°C	mg/L	IS 3025 : Part 44	25	30
5	Total dissolved solids	mg/L	IS 3025 : Part 16	1250	2100
6	Total suspended solids	mg/L	IS 3025 : Part 17	78	100
7	COD	mg/L	IS 3025 : Part 58	120	250

REMARKS: These standards shall be applicable only if such sewer leads to secondary treatment including biological treatment system; otherwise, the discharge into sewers shall be treated as discharge into inland surface water.

NOTE:
This report is given to the client based on the samples provided by them.

Tested by	Verified By	Approved by

WASTEWATER, SOLIDWASTE MANAGEMENT AND DISPOSAL AT MKCE

Water conservation facilities available in the Institution

- The entire campus buildings are facilitated to re-charge the ground water through the rain water and utilize it for different purposes.
- The proper River water storage tank was constructed near the ground to supply the flow of water after filtration.
- Treated water has been filtered by using sand Filter and the filtered water storage of 100m3 is used for the irrigation and gardening purposes.

Photo 1: .River intake structure

Photo 2: Rain water harvesting system

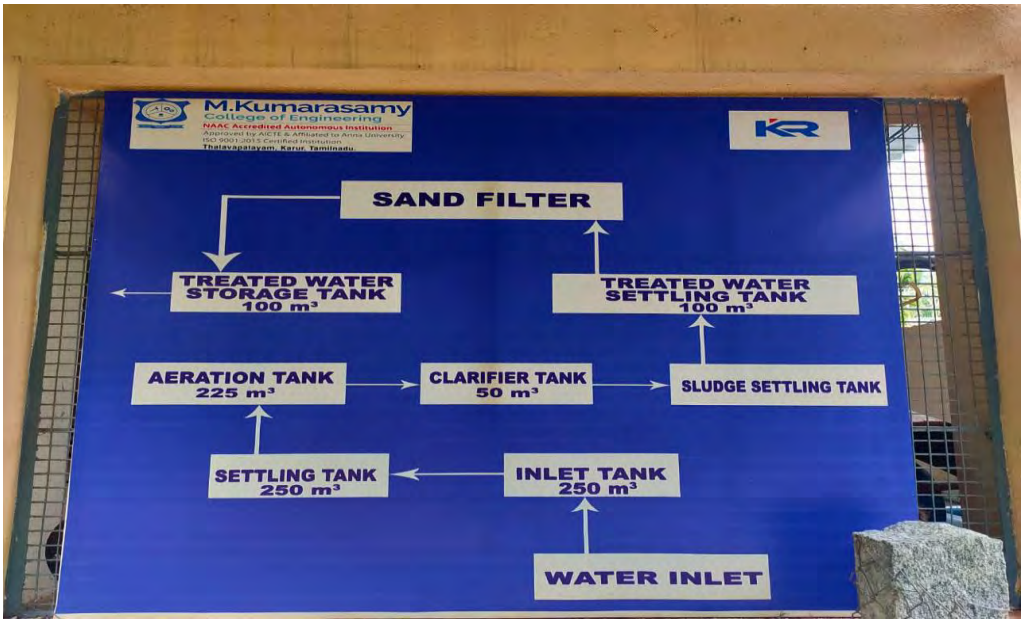


Photo 3: Waste water treatment flow

Photo 4: Waste water treatment system

Solid Waste Management

Food waste, night soil and flush water from hostels are digested in anaerobic digester is used for biogas production in the premises.

- Non-biodegradable plastic and metal wastes are sent to nearest recycling centres and paper wastes are recycled through paper manufacturers.

Photo 5: Bio Gas plants

Photo 6: Solid waste management system

Renewable Energy Sources

- To reduce the carbon foot prints, we are generating electricity to the tune of 600 kW through 250 kW Solar PV system and 350 kW Wind turbine.
- To reduce the carbon emission inside the campus electric powered sweeping vehicle is encouraged.

Photo 7: Solar panels installed in top roof

Photo 8: Wind mill set up

Photo 9: Battery powered vehicles

Photo 10: Signage board to avoid entry of vehicle inside the campus