



**6.5.3 D Quality Assurance Initiatives of the Institution**



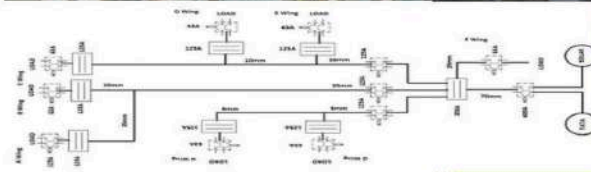
**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.



- Liasoning
- Energy Audit
- Safety Audit
- Electrical Projects
- Solar Projects

Nirmala College of Commerce,  
Municipal School Bldg, Rani sati Marg, Malad, Mumbai.



Report By

M/s. Saur Engineers & Consultants Pvt. Ltd.,  
Mumbai.

- Registered Energy Auditor
- Power Consultant
- Channel Partner-MNRE, Govt. of India.
- Channel Partner-MEDA, Govt. of Maharashtra.
- Solar Grid Engineers, NISE, Govt. of India
- Licensed Electrical Contractor.

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 1



I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**Detailed Report**  
**Energy-Green-Environment Audit**

**Project Beneficiary**  
**2023-2024**

**Nirmala College of Commerce**

Municipal School Bldg,  
Rani sati Marg, Malad, Mumbai.

**Consultants & Auditor**


**SAUR**  
**Engineers & Consultants**  
**Pvt. Ltd.**

REGISTRATION NO. : EA-28

D-8, Plot No. 108, Akshay, Rsc-16,  
Gorai-1, Borivali (west), Mumbai-400092  
MAHARASHTRA  
+919867499812/+919168402909

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.



  
I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.


Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

### INDEX

No.	Topic	Page No.
A	Acknowledgement	04
B	Certificate	05
1	Introduction	06 – 10
2	Topography	11 – 13
3	Floral Diversity	14 – 15
4	Faunal Diversity	16
5	Air Quality	17 – 22
6	Meteorology	23 – 28
7	Water Quality	29 – 30
8	Atmosphere	31 – 32
9	Illumination	33
10	Energy Audit	34 – 39
11	Safety Assessment	40 – 42
12	Wastage Assessment	43 – 44
13	Environmental Impact	45 – 46
14	Best Practices	47 – 50
15	Suggestions	51 – 52
16	Disclaimer	52
17	Conclusion	52
18	Annexure-I	53 – 68

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No, 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 3



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**Acknowledgement**

Energy, Green and Environment Audits have been successfully completed by M/s. Saur Engineers & Consultants Pvt. Ltd. Empanelled Energy Auditor(CLASS-A) MEDA, Government of Maharashtra and an ISO 14001:2015 company.

This activity is jointly executed by auditor and beneficiary to account Environmental diversities and development opportunity without sacrificing it's purpose. The main object was to assess the existing system for Environment concerns, High quality, professional and sustainable Environment management, Adopt best practices and Standard operating procedures.

Beneficiary premise is a leading educational service utility in semi-urban area. The college is run as per the norms and standards and having awareness and approach towards Environment saving. The management and staff are keen on saving greenery and energy on every opportunity available.

We sincerely acknowledge efforts of Management and staff members for smooth execution of audit process. We sincerely acknowledge the leaders and guides of the activity who helped to design and supported to the execution of the process

- |                                |                             |
|--------------------------------|-----------------------------|
| 1. Ms. Dhara Desai             | Trustee & Mentor            |
| 2. Dr. Umeshchandra Yadav      | I/C Principal & Team Leader |
| 3. Mr. Pankaj Maurya           | IQAC Coordinator            |
| 4. Mr. Shrey Yogesh Gala       | Student Representative      |
| 5. Ms. Sonali Sharad Mohite    | Student Representative      |
| 6. Ms. Vidya Dayanand Devadiga | Student Representative      |
| 7. Mr. Himanshu Santosh Shukla | Student Representative      |
| 8. Ms. Forum Tanna             | External Expert (Science)   |
| 9. Mr. Raju Gupta              | Electrical Activities       |
| 10. Mr. Vijay Rever            | Gardening Activities        |
| 11. Mr. Dilip Fatkare          | Administrative Activities   |

and all other technical, teaching, non-technical staff and students of college.

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
saurengineers@gmail.com 9168402909/9867499812/9821116443.....Page | 4



I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**Certificate**

This is to certify that Energy, Green and Environment Audits have been successfully completed by M/s. Saur Engineers & Consultants Pvt. Ltd. Empanelled Energy Auditor(CLASS-A) MEDA, Government of Maharashtra and suggestions for improvements have been given. The Audit activity has been executed for beneficiary with following Details:-

**Name of Beneficiary:** Nirmala College of Commerce

**Registration Number:** F-9751

**Address:** Municipal School Bldg, Rani sati Marg, Malad, Mumbai.

**Contact Person:** Mr. U. M. Yadav

**Contact Number:** 8451031399

**Date of Audit:** 15/04/2024

The report is generated from data, information, answer to asked questions, standards and procedures defined by different and concerned authorities time to time, available site condition, weather condition, operational and availability conditions provided by beneficiary on the day of survey. If any changes on above said measures on any other parameters affecting these measures may lead to change, alter, in-corrections even falsifying calculations, results, recommendations and suggestions. The values, figures, amounts mentioned are indicative to the site situation and condition; it may not reflect each and every aspect of it. The report is generated restricted to given scope and available conditions and measures.



ENERGY AUDITOR "CLASS-A" No. EA-28  
SAUR ENGINEERS & CONSULTANTS PVT. LTD.  
Plot No. 108, D-8, Gorai-1, Borivali (W),  
Mumbai - 400 091.

**Sign & Seal**

**Saur Engineers & Consultants Pvt. Ltd.**

**Registration No:** EA-28

**Empanelled Energy Auditor-CLASS A,  
MEDA, Government of Maharashtra**

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
saurengineers@gmail.com 9168402909/9867499812/9821116443.....Page | 5



I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**1. Introduction**

**1.1. Energy Audit**


Energy Audit is a Basic essential activity to be done for saving in electrical billing and also allied with any energy saving projects like renewable energy project and solar projects. Energy Audit is an assessment of usage, consumption and pattern of energy used in the premises based on all above parameters along with conditions and benchmarks as resource and Building Envelope Analysis, working, operational and Maintenance Procedure Analysis, Utility Data Analysis, Load Data Analysis, Analysis of Energy Consumption, Load Evaluation, consumption pattern and billing history, back-up systems and also the administrative requirements, assessment of safety concerns, assessment of operating and occupancy schedules for Equipment, Power Quality and Environmental Parameters Analysis, Efficiency and Wastage Analysis and assessment of potential risk factors.

Energy Audit is a process of systematic identification, quantification, recording, reporting and analysis of energy usage properties of institute. It aims to analyze within and surrounding the place concerned, which will see interrelation with eco-friendly atmosphere. Energy audit is a valuable means for an Institution related to educational area to determine how and where they are connected with Energy conservation drive of nation. Understanding these conditions the institution can make plans for day to day working, future expansions as well as an eco-friendly view of life while making changes and planning for savings. It provides better understanding of impact of energy consumption on working conditions to staff and visitors. As the Energy availability is becoming an increasingly important issue for the nation, the role of higher education institute is more vital and prevalent in relation with the issue.

The rapid urbanization and economic development at local, regional and global level has led to Energy availability and quality crisis. On this background it becomes essential to adopt the system of Energy efficient and safe Campus for the institution which leads for sustainable development and at the same time persisting the quality of the same while travelling on the growth path. Moreover, it is social responsibility of a High energy consuming institution to ensure that they contribute towards the saving of Energy and thus making it available who are destitute in term of energy availability.

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
saurengineers@gmail.com 9168402909/9867499812/9821116443.....Page | 6



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**1.2. Green Audit**

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of natural diversity properties of institute. It aims to analyse within and surrounding the place concerned, in purview of relationship with natural diversity around. Green audit is a valuable means for an Institution related to educational area to determine how and what natural resources or diversity of nature they are surrounded with or they are living with. Green Audit report includes assessment of premises which refers to nature friendly environment with lesser carbon emission in terms of initiatives, implementation, best practices, working environment, capacity utilization based on all above parameters observed during green audit along with conditions and benchmarks as Air Quality, Water Quality, Noise Data, Weather Data, Tree Diversity, Faunal Diversity as well as biodiversity conditions. Understanding these conditions the institution can make plans for day to day working, future expansions as well as a nature-friendly view of life while making changes and planning for savings.

It can create consciousness and awareness about natural diversities around and helps to standardize practices for working with observation of nature friendly work style. It provides better understanding of green diversity available surrounding conditions to staff and students. As the vanishing diversity of nature is becoming an increasingly important issue for the nation as well as the world, the role of higher education institute is more vital and prevalent in relation with the issue.

The rapid urbanization and economic development at local, regional and global level has led to several greenery and ecological crisis. On this background it becomes essential to adopt the system of Green Campus for the institution which leads for sustainable development and at the same time persisting the quality of the same while travelling on the growth path. The National Assessment & Accreditation Council, New Delhi (NAAC) has made it mandatory to all Higher educational institutions should submit a Green Audit Report. Moreover, it is social responsibility of a Higher educational institution to ensure that they contribute towards the saving of Green areas and maintaining good levels of qualities for natural resources available such as Air, water, atmosphere, flora, faunal, Etc.

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No, 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 7



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**1.3. Environment Audit**


Environmental Audit is a process of systematic identification, quantification, recording, reporting and analysis of impact on components of environmental diversity properties of institute. It aims to analyse within and surrounding the place concerned, which will see interrelation with eco-friendly atmosphere. Environmental audit is a valuable means for an Institution related to educational area to determine how and where they are impacting on natural resources or diversity of nature. Environmental audit report includes assessment of premises which refers to impact on environment with carbon emission, wastages in terms of initiatives, implementation, best practices, working environment, capacity utilization based on all above parameters observed during Environmental audit along with conditions and benchmarks as Wastage types, recycling, Greenery, effect of impact, Carbon footprints as well as biodiversity conditions. Understanding these conditions the institution can make plans for day to day working, future expansions as well as an environment-friendly view of life while making changes and planning for savings.

It can create health consciousness, environmental awareness, practice green values and ethics. It provides better understanding of impact on surrounding conditions to staff and students. If self-enquiry is natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the institution evaluates its own contributions towards a sustainable future. As the pollution and CO<sub>2</sub> is becoming an increasingly important issue for the nation, the role of higher education institute is more vital and prevalent in relation with the issue.

The rapid urbanization and economic development at local, regional and global level has led to several greenery and ecological crisis. On this background it becomes essential to adopt the system of Green Campus for the institution which leads for sustainable development and at the same time persisting the quality of the same while travelling on the growth path. The National Assessment & Accreditation Council, New Delhi (NAAC) has made it mandatory to all Higher educational institutions should submit a Environmental audit Report. Moreover, it is social responsibility of a Higher educational institution to ensure that they contribute towards the saving of environment and reduce level of quantity for impact on natural resources available.

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liaisoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 8



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**1.4. Objective**

The Energy audit of an institution has becoming the paramount important for self-assessment of the Institution which reflects in the role of the institution in mitigation to current problem of reducing Energy availability and quality. The institution has been putting efforts to keep reducing and standardizing energy usage since its inception. Therefore the purpose of present Energy audit is to identification, quantification, recording, reporting and analysis of components of Energy utilization and electrical safety properties of institute framework of energy conservation in compliance with the applicable regulations, policies and standards. The main objectives to carrying out the energy audit are:-

- To have overview of premises
- To record and document Utility data
- To record and document Load profile data
- To record and document basic Electrical Safety observations data
- To record and document Energy Conservations (if any)

The green audit of an institution has becoming the paramount important for self-assessment of the Institution which reflects in the role of the institution in mitigation to current problem of reducing greenery and natural resources depletion. The institution has been putting efforts to keep clean and green atmosphere since its inception. Therefore the purpose of present green audit is to identification, quantification, recording, reporting and analysis of components of natural diversity properties of institute framework of Green atmosphere sustainability. The main objectives to carrying out the green audit are:-


- To record and document Air quality data
- To record and document Water quality data
- To record and document Weather/Meteorology data
- To record and document Noise Level data
- To record and document Tree Diversity data
- To record and document Faunal diversity data

The Environmental audit of an institution has becoming the paramount important for self-assessment of the Institution which reflects in the role of the institution in mitigation to current problem of reducing greenery and natural resources depletion. The institution has been putting efforts to keep clean and green atmosphere since its inception. Therefore the purpose of present Environmental audit is to identification, quantification, recording, reporting and analysis of components of surrounding environmental properties of institute framework as a part of global environment sustainability. The main objectives to carrying out the Environmental audit are:-

- To record and document Wastage type and management
- To record and document Recycling Procedures
- To record and document Impact on environment
- To record and document Carbon footprints

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
saurengineers@gmail.com 9168402909/9867499812/9821116443.....Page | 9



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**1.5. Methodology**

The purpose of Energy Audit of is to ensure that the practices followed in the campus are in accordance with the Energy Conservation Policy of the Country. The methodology includes: collection of data, physical inspection of the campus, observation and review of the documentation and data analysis.

The report is based on the documents obtained while on site, visual inspection and data collection carried out during the assessment period. All the measurements recorded on site are indicative loads and duties. All readings are collected for analysis and improvement planning. Cost estimates are indicative only as more detailed design and acceptance of suggestions will be required to improve the accuracy of these estimates.


The units are selected from SI (international standards) with meters, Celsius degrees, Etc.

**1.6. Audit Statement**

The building is adopting the "Energy Efficient Campus" system for Energy conservation and sustainability. There are main three pillars i.e. Energy saving by technology and Operation & Maintenance procedures, safe working on occupational health and performance and 100% inmates demonstrating energy efficiency literacy. The goal is to maintain safe working environment, reduce energy consumption, while creating an atmosphere where inmates can work and live healthy.

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 10



  
I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.


**2. Topography**

**2.1. Overview**

SL No	Head	Details
1	Name of Applicant Institution	Nirmala College of Commerce
2	Address	Municipal School Bldg, Rani sati Marg, Malad, Mumbai.
3	Contact Number	8451031399
4	Registration Certificate Number	F-9751
5	Sector Type	College-Education
6	Senior Management Contact	Mr. U. M. Yadav
7	Contact Number	8451031399
8	Status of Institution (Pvt./Public)	Private
9	Company Turnover (Rs. In Lakhs)	Not Applicable
10	Number of Employees	23
11	Year of Establishment	2007
12	Plot Area (ft <sup>2</sup> )	As per given Map
13	No of Buildings	1
14	Building Type	RCC
15	Age of Building	40 Years
16	Leakages/Cracks on wall/roof	Minor
17	No. of workers (Footfall)	23 - 25
18	No. of Customers (Footfall)	1500
19	Day Vs Night activity in %	Only Daytime
20	Shifts per day	1
21	Hours per shift	8
22	DG Set installed	No
23	Inverter Installed	No
24	Renewable Energy System installed	No
25	(Solar/Wind/Biomass/Biofuel/Etc.)	No

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.



  
I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

### 2.2. Location

SL No	Head	Details	Remark
1	Name of Institute	Nirmala college of Commerce	Mumbai city Limit
2	Category	College	Educational Institute
3	Address	Municipal School Bldg, Rani sati Marg, Malad, Mumbai.	
4	State	Maharashtra	
5	Nearest Railway Station	Malad Malad (proposed)	Western Railway Central Railway
6	Nearest Bus Station	Borivali	Interstate/Intrastate
7	Nearest Airport	CSIA, Mumbai	
8	Longitude	19.212716	
9	Latitude	72.865394	

### 2.3. Layouts

#### Sitemap

– Attached

#### Floor Map


– Attached

#### Google Map



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liaisoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.



  
I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

#### 2.4. About Premises

Nirmala College of Commerce, a flourishing institution affiliated to the University of Mumbai made its humble genesis in 2007, through the enlightened vision and guidance of Mr. Thakurbhai Desai.

As an institution its purpose is to impart quality education to students of all creeds in general and the Gujarati Linguistic Minority in particular. The college strives to develop the intellectual powers of students and all concerned, continuously and consistently through methods that are participative, interactive and facilitative in a measurable manner; also to train them to be responsible and worthy citizens by adopting change in its path.

The college offers a number of traditional under graduate course that are affiliated to University Of Mumbai, imparting education to about 1500 students who reside in and around this fast growing suburb. A perfect blend of dedicated and forward looking Management and committed Teaching and Non-Teaching Staff have ensured that the college is on the right trend and have steered it in the right direction.


The greatest strength of the college is that it is managed by academicians, who not only understand and respect the value of education and educationists but also believe that knowledge is power and the value of knowledge lies not in its accumulation but in its utilization.

Nirmala provides excellent infrastructure to facilitate the education process and enhance the learning ability of the students through availing amenities like:

- Fully furnished library with large collection of books, periodicals and journals (both Indian & Foreign) and spacious reading rooms.
- Air-conditioned computer labs with advanced machines and licensed software.
- Well organized and spacious gymkhana.
- Auditorium hall.
- The students' comfort common rooms for girls and boys.
- State-of-art technology, in its teaching process making use of mike systems, LCD projectors.

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 13



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**3. Floral Diversity**

Nirmala College of Commerce, which was established in the year 2007, has eco-friendly environment since then. It has long legacy of healthy environmental practices periodic awareness, preservation and maintenance. As very much common in Mumbai City the college campus is limited to its plot premises hence having very little scope for plantation within. College practices awareness camps, seminars and trails to fulfil the backlog. The campus contains total 62 Trees where 51 existing since earlier period and 11 are planted in last two years. Each Tree is given number for purpose of recording.

**NAME OF THE TREES IN THE CAMPUS**

SR.NO	NAME
1	Gulmohar
2	Ashoka
3	Flower tree
4	Ashoka
5	Gulmohar
6	Ashoka
7	Ashoka
8	Jamun
9	Ashoka
10	Ayahuasca tree
11	Ashoka
12	Ayahuasca tree
13	Ashoka
14	Ashoka
15	Ashoka
16	Hibiscus plant
17	Almond Tree
18	Cluster fig tree
19	Ashoka
20	Ashoka
21	Ashoka
22	Ashoka
23	Kassod tree
24	Ashoka
25	Kassod tree
26	Kassod tree
27	Ashoka
28	Ashoka
29	Ashoka
30	Mango tree
31	Jamun tree
32	Tree of heaven
33	Tree of heaven
34	Kachnar tree
35	Kachnar tree

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 14



I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.


36	Mango tree
37	Ashoka
38	Paras pipa
39	Drumstick tree
40	Paras pipal
41	Paras pipal
42	Paras pipal
43	Paras pipal
44	Paras pipal
45	Papaya tree
46	Gulmohar
47	Drumstick tree
48	Ashoka
49	Ashoka
50	Radhachura tree
51	Ashoka

**New -NAME OF THE TREES IN THE CAMPUS**

SR.NO	NAME
1	Basil
2	Mint
3	Rosemary
4	Sage
5	Aloe Vera
6	Flower tree
7	Flower tree
8	Flower tree
9	Flower tree
10	Flower tree
11	Flower tree

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 15



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.


**4. Faunal Diversity**

The college campus as very much common in Mumbai City the college is limited to its plot premises hence having no scope for plantation within. Since there is negligible plantation within and surrounding of College campus there are very less animal species were observed in including invertebrates and vertebrates (different groups like Beetle, Moth, Bug, Bird, Ant, Spider, Wasp, Millipede, Slug, Louse, Earthworm, Snail, Butterfly, Dragonfly, Grasshopper etc.).

SL No	Scientific Name	Common Name	Family	Category
1	Copelatus haemorrhoidalis	Diving beetle	Dytiscidae	BEETLE
2	Spodoptera exigua	Beet armyworm	Noctuidae	MOTH
3	Dysdercus cingulatus	Red cotton bug	Pyrrhocoridae	BUG
4	Columba livia	Rock pigeon	Columidae	BIRD
5	Streptopelia senegalensis	Laughing Dove	Columidae	BIRD
6	Pycnonotus cafer	Red vented bulbul	Pycnonotidae	BIRD
7	Passer domesticus	House sparrow	Passeridae	BIRD
8	Corvus splendens	Crow	Corvidae	BIRD
9	Phaethontidae psittaciformes	Parrot	Sturnidae	BIRD
10	Camponotus consobrinus	Banded sugar ant	Formicidae	ANTS
11	Eratigena atrica	Giant house spider	Theridiidae	SPIDER
12	Hasarius adansoni	Jumping Spider	Salticidae	SPIDER
13	Acheta domesticus	House cricket	Gryllidae	INSECT
14	Planorbarius corneus	Great ramshorn	Planorbidae	SNAIL
15	Acrida conica	Giant green slantface	Acrididae	GRASSHOPPER
16	Calotes versicolor	Indian garden lizard	Agamidae	REPTILE
17	Ratus ratus	Rat	Muridae	MAMMAL
18	Funambulus palmarum	Indian palm squirrel	Sciuridae	MAMMAL

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections | Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance | Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.



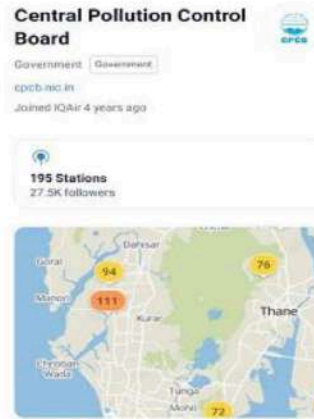
  
I/c Principal  
Dr. Umeshchandra Yadav



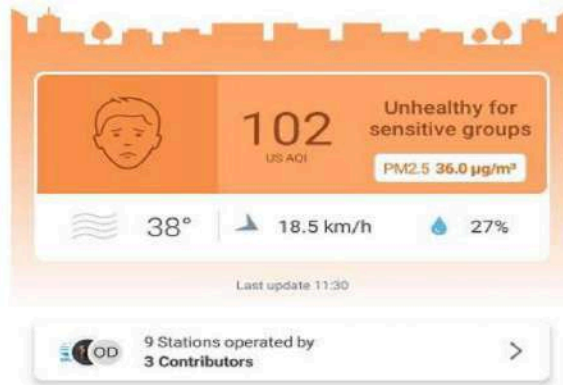
**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**5. Air Quality**  
**5.1. Source**



**5.2. Air Quality**



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
**Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.**  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 17



*Umeshchandra Yadav*  
 I/c Principal  
 Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

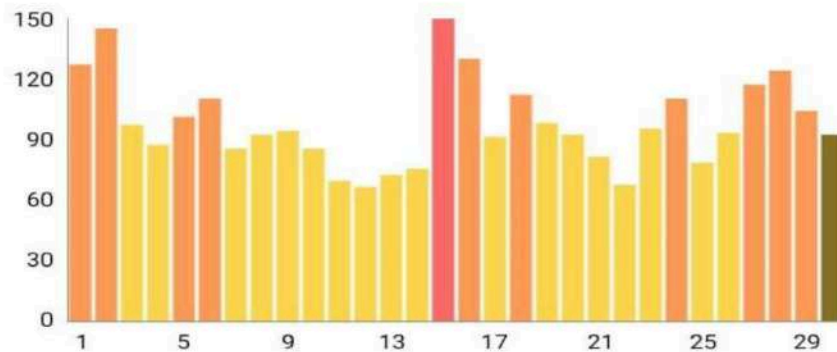
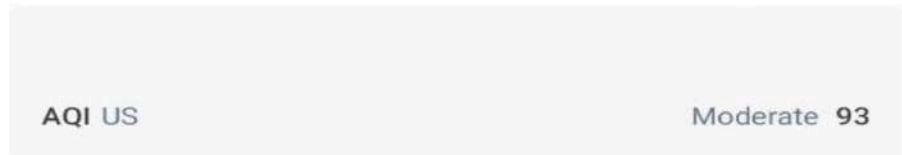
Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**5.3. Pollution**

Pollutants			
PM2.5	µg/m <sup>3</sup>	PM10	µg/m <sup>3</sup>
39.7		90.3	
O3	µg/m <sup>3</sup>	CO	µg/m <sup>3</sup>
60		270.0	
NO2	µg/m <sup>3</sup>	SO2	µg/m <sup>3</sup>
19.0		9.9	

**5.4. History**

- AQI
- PM2.5
- PM10
- O3
- CO
- NO2



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 18



*Umeshchandra Yadav*  
 I/c Principal  
 Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

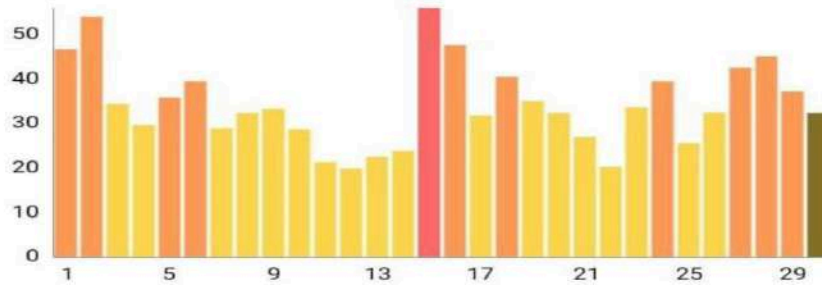


### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

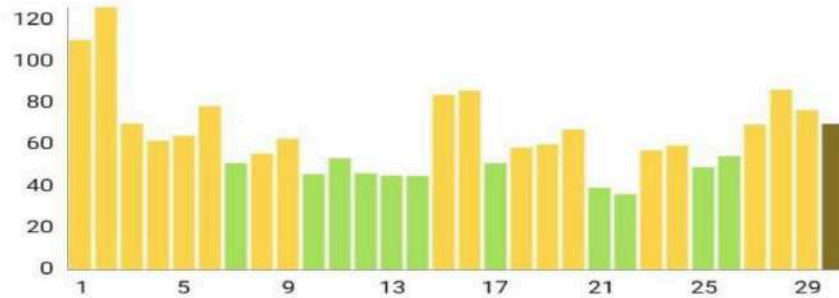
AQI    **PM2.5**    PM10    O3    CO    NO2

PM2.5  $\mu\text{g}/\text{m}^3$  Moderate 32.3



AQI    PM2.5    **PM10**    O3    CO    NO2

PM10  $\mu\text{g}/\text{m}^3$  Moderate 69.7



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 19



I/c Principal  
Dr. Umeshchandra Yadav



**University of Mumbai**  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

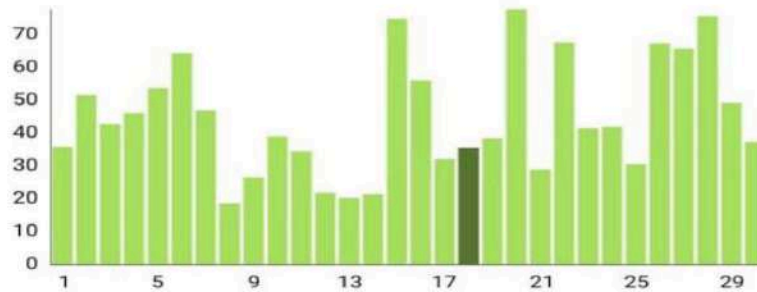


**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

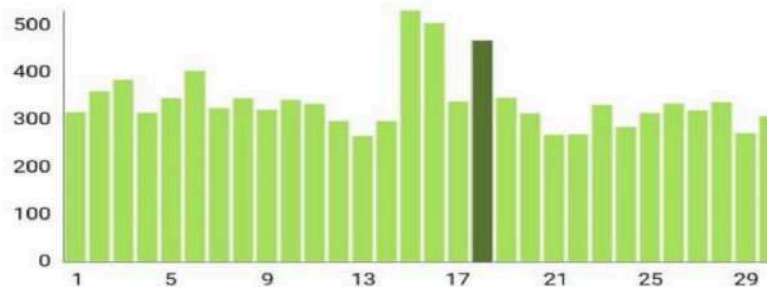
AQI    PM2.5    PM10    **O3**    CO    NO2

O3  $\mu\text{g}/\text{m}^3$  Good 35.5



AQI    PM2.5    PM10    O3    **CO**    NO2

CO  $\mu\text{g}/\text{m}^3$  Good 467.1



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengeiners@gmail.com](mailto:saurengeiners@gmail.com) 9168402909/9867499812/9821116443.....Page | 20



*Umesh Yadav*  
 I/c Principal  
 Dr. Umeshchandra Yadav



**University of Mumbai**  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



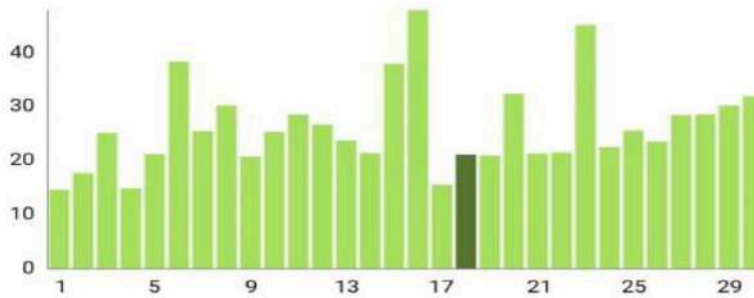
**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

M2.5    PM10    O3    CO    **NO2**    SO2

NO2  $\mu\text{g}/\text{m}^3$

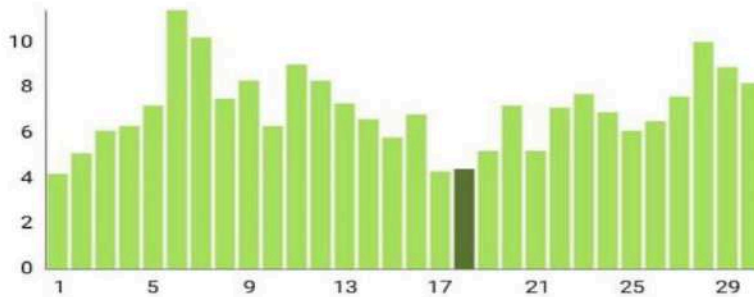
Good 21.1



M2.5    PM10    O3    CO    NO2    **SO2**

SO2  $\mu\text{g}/\text{m}^3$

Good 4.4



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 21



I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**5.5. Health Recommendation**

Health recommendations



Reduce outdoor exercise



Close your windows to avoid dirty outdoor air  
Get a monitor



Sensitive groups should wear a mask outdoors  
Get a mask



Run an air purifier  
Get an air purifier



I/c Principal  
 Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**6. Meteorology**

**1. Weather/Meteorology Data:-**

**Malad (East), Mumbai**

The following are the site co-ordinates.

**Latitude:** 19. 212716

**Longitude:** 72.865394

**Average Altitude:** 50 m

**Annual Solar radiation:** 369.2 kWh/ Sq.m/year

**Sunshine & Daylight Hours**

- Hours of sunshine in range from 2:11 for every day in July to 9:48 per day in December
- The longest day of the year is 13:08 long and the shortest day is 10:51 long.
- The longest day is 2:16 longer than the shortest day.
- There is an average of 2680 hours of sunlight per year (of a possible 4383) with an average of 7:20 of sunlight per day.
- It is sunny 61.1% of daylight hours. The remaining 38.9% of daylight hours are likely cloudy or with shade, haze or low sun intensity.
- At midday the sun is on average 70.1° above the horizon at Mumbai/ Bombay.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Sunlight Hours/Day	09:00	09:24	09:05	09:18	09:17	05:24	02:11	02:36	04:54	08:00	09:12	09:48	07:20
Average Daylight Hours & Minutes / Day	11:06	11:29	12:00	12:33	13:00	13:14	13:07	12:44	12:12	11:40	11:12	10:59	12:00
Sunny & (Cloudy) Daylight Hours (%)	82 (18)	83 (17)	77 (23)	75 (25)	72 (28)	41 (59)	17 (83)	21 (79)	40 (60)	69 (31)	83 (17)	90 (10)	61 (39)
Sun altitude at solar noon on the 21st day (°).	51.1	60.4	71.3	83	88.5	85.4	87.8	83.2	71.7	60.2	51	47.7	70.1

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No, 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 23



I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

#### Rainfall/ Precipitation

- It receives on balance 2168 mm (85.4 in) of rainfall per year, or 180.7 mm (7.1 in) per month.
- On average there are 107 days per year with more than 0.1 mm (0.004 in) of rainfall (precipitation) or 8.9 days with a quantity of rain, sleet, snow etc. per month.
- The driest weather is in January, February & March when an average of 0 mm (0 in) of rainfall (precipitation) occurs.
- The wettest weather is in July when an average of 682 mm (26.9 in) of rainfall (precipitation) occurs.

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annua
	Average													
	Mm	0	0	0	2	12	592	682	487	307	61	23	2	2168
	Liters/m <sup>2</sup>													
		0	0	0	2	12	592	682	487	307	61	23	2	2168
	Number of Wet Days													
		0	0	0	1	2	20	29	27	21	5	2	0	107
	Percentage of Sunny (Cloudy) Daylight Hours													
		82 (18)	75 (25)	77 (23)	72 (28)	72 (28)	40 (60)	17 (83)	21 (79)	39 (61)	69 (31)	80 (20)	90 (10)	61 (39)

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 24



I/c Principal  
 Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

#### Average Temperatures

- The average temperature is hot at 27.5 Degree Celsius.
- Mean monthly temperatures have a variation of 5.7 Degree Celsius.
- Mean daily temperatures have a variation of 7.6 Degree Celsius.
- The hottest month (May) having mean temperature of 30.2 Degree Celsius.
- The coolest month (January) having mean temperature of 24.5 Degree Celsius.

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
+	Average Max Temp °C	29.6	29.6	31.1	32.3	33.4	32	30.1	29.6	30.5	32.5	32.9	31.6	31.3
⊖	Average Temp °C	24.5	24.8	26.9	28.7	30.2	29.2	27.7	27.3	27.7	28.7	28	26.3	27.5
-	Average Min Temp °C	19.3	20	22.6	25	27	26.3	25.3	24.9	24.9	24.8	23	20.9	23.7

#### Relative Humidity

- The average annual relative humidity is 74.9% and average monthly relative humidity ranges from 67% in February to 86% in July.

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
💧	Relative Humidity (%)	69	67	69	71	70	80	86	86	83	78	71	69	74.9
🌿	Average Dew Point Temp °C	18.4	18.3	20.7	22.9	24.1	25.4	25.1	24.7	24.5	24.5	22.2	20.2	22.6

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
**Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.**  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 25



I/c Principal  
 Dr. Umeshchandra Yadav



# University of Mumbai

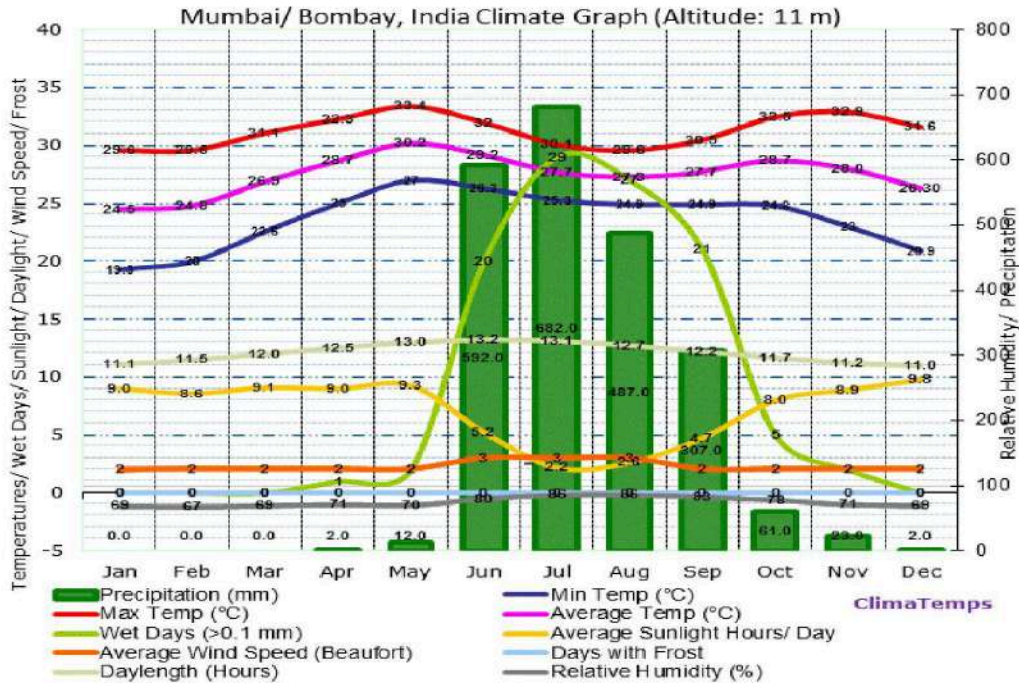
## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 26



*Umeshchandra Yadav*  
 I/c Principal  
 Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

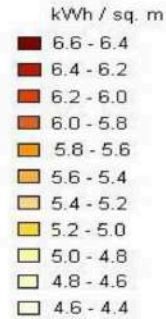
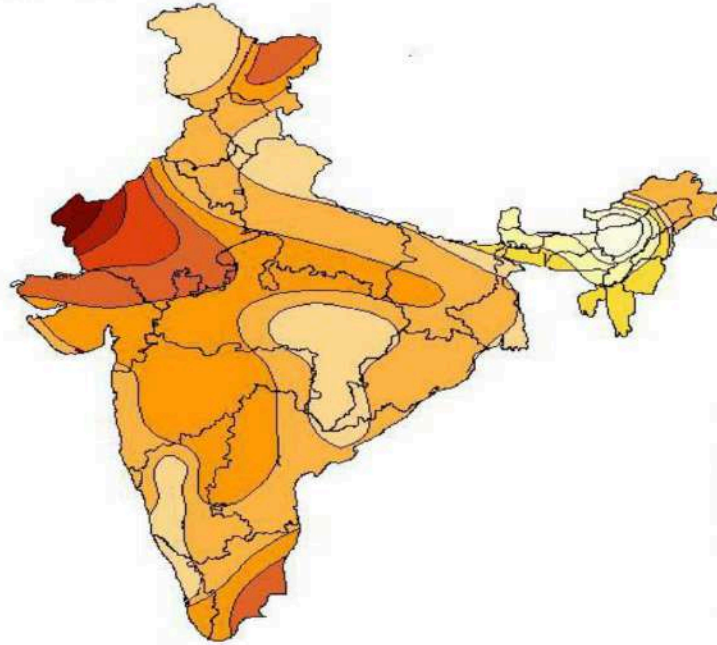
Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**Radiation Data**



Month	Irradiation(KWh)
Jan	5.32
Feb	6.25
Mar	7.05
Apr	7.38
May	7.33
Jun	5.64
Jul	5
Aug	5.12
Sep	5.65
Oct	5.72
Nov	5.38
Dec	5

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No, 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 27



*Go Gadev*  
 I/c Principal  
 Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

#### Sun Position Report

Values obtained as:

#### Sun Position

Latitude:	19 5' N	Time zone: UTC +5.5
Longitude:	72 51' E	No DST
Magnetic declination:	0 37' W	

Magnetic North was used for this calculation.  
Do not correct compasses for Magnetic declination, this has been accounted for in the calculations.

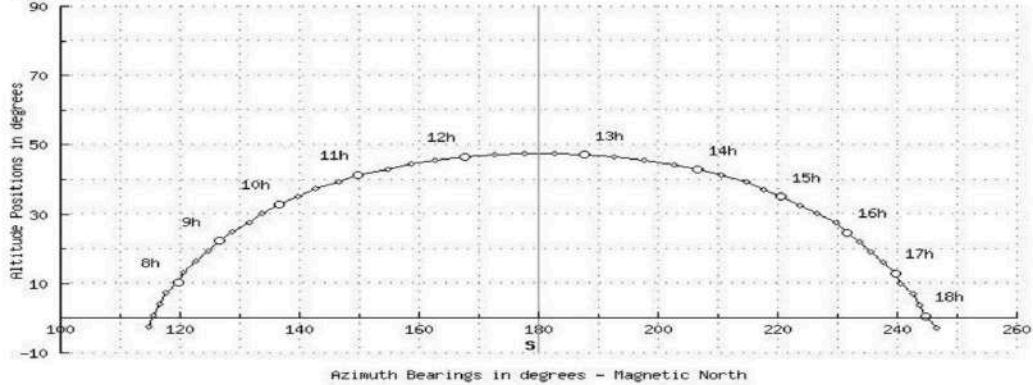
Daily Summary		C Dawn	Az'	Sunrise	Day Length	Sunset	Az'	C Dusk
<b>Thu</b>	<b>21/12/2020</b>	06:42	114.6°	<b>07:06</b>	<b>10:60</b>	<b>18:05</b>	245.6°	18:29
Fri	22/12/2020	06:43	114.6°	07:06	10:60	18:05	245.6°	18:29
Sat	23/12/2020	06:43	114.6°	07:07	10:59	18:06	245.6°	18:30
Sun	24/12/2020	06:44	114.6°	07:07	10:60	18:06	245.6°	18:30
Mon	25/12/2020	06:44	114.6°	07:08	10:60	18:07	245.6°	18:31
Tue	26/12/2020	06:45	114.6°	07:08	10:60	18:08	245.6°	18:31
Wed	27/12/2020	06:45	114.6°	07:09	10:60	18:08	245.6°	18:32

#### Thursday, 21st December 2020

Az'	Alt'	*Shadow	Az'	Alt'	*Shadow	Az'	Alt'	*Shadow	Az'	Alt'	*Shadow	
07:00	115°	-2°	-	10:00	137°	33°	1.54	13:00	188°	47°	0.93	
	116°	1°	57.29		140°	35°	1.43		193°	46°	0.97	
	117°	4°	14.3		143°	37°	1.33		198°	46°	0.97	
	118°	7°	8.14		147°	40°	1.19		203°	44°	1.04	
08:00	120°	10°	5.67	11:00	150°	41°	1.15	14:00	207°	43°	1.07	
	121°	13°	4.33		155°	43°	1.07		211°	41°	1.15	
	123°	16°	3.49		159°	44°	1.04		215°	39°	1.23	
	125°	19°	2.9		163°	46°	0.97		218°	37°	1.33	
09:00	127°	22°	2.48	12:00	168°	47°	0.93	15:00	221°	35°	1.43	
	129°	25°	2.14		173°	47°	0.93		224°	33°	1.54	
	132°	28°	1.88		178°	47°	0.93		227°	30°	1.73	
	134°	30°	1.73		183°	47°	0.93		230°	27°	1.96	
									16:00	232°	25°	2.14
										234°	22°	2.48
										236°	19°	2.9
										238°	16°	3.49
										240°	13°	4.33
										241°	10°	5.67
										243°	7°	8.14
										244°	4°	14.3
										245°	0°	-
										247°	-3°	-

Calculation intervals: Every 15 minutes :: Shadow length = (\*Shadow x Object height)

Sunrise: 07:06 - Az' 114.6° Sunset: 18:05 - Az' 245.6°



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
**Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.**  
www.saureng.com | 022-4000000/022-4000001/022-4112443 Page 1/20



*Go Gadev*  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

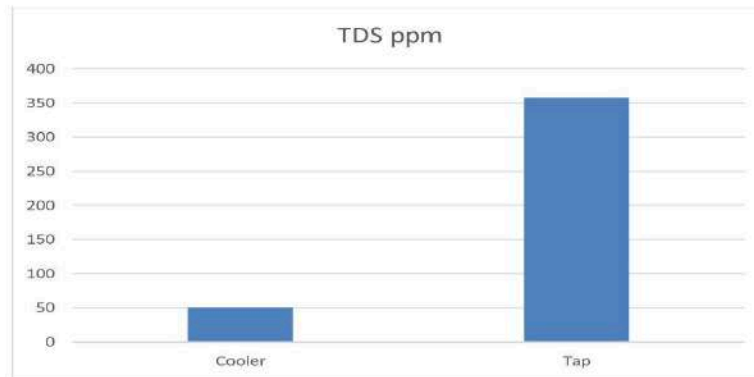
**7. Water Quality**

**7.1. Water Resource**

Institute has only water resource; provided connection by Brihanmumbai Mahanagar Palika (BMC-MCGM).

**7.2. Water Quality**

SL No	Use	TDS	ORP	Alkalinity
No	Activity	ppm	Mg/L	pH
1	Cooler	50	11	10.8
2	Tap	355	412	9.1



I/c Principal  
 Dr. Umeshchandra Yadav



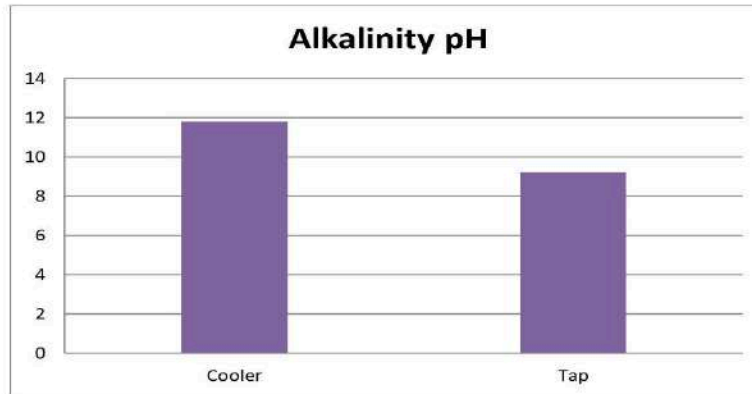
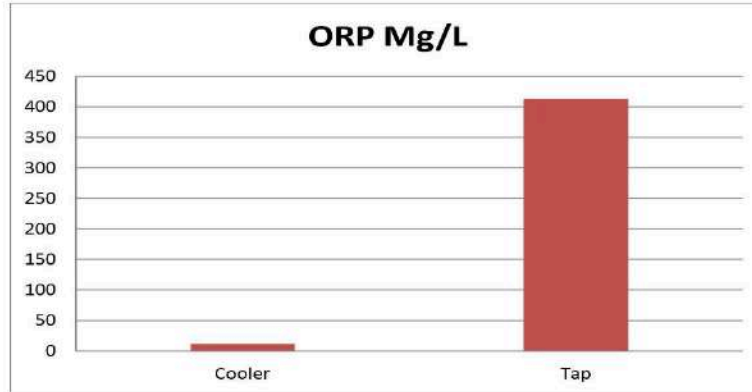
University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
saurengineers@gmail.com 9168402909/9867499812/9821116443.....Page | 30



I/c Principal  
Dr. Umeshchandra Yadav

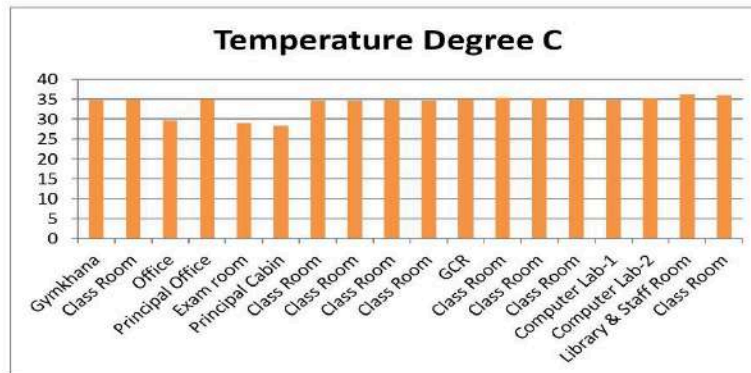


**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**8. Atmosphere (Temperature, Humidity and Noise)**

Floor	Room	Temperature	Humidity	Noise
		Degree C	%	dB
Ground	Gymkhana	34.8	67.7	50
Ground	Class Room	34.9	67.8	47
Ground	Office	29.7	52.7	52
Ground	Principal Office	35	67.4	47
Ground	Exam room	29	58.1	49
Ground	Principal Cabin	28.2	57	49
Second	Class Room	34.7	66.5	50
Second	Class Room	34.6	66.6	48
Second	Class Room	34.8	67	49
Second	Class Room	34.7	67.3	49
Second	GCR	35	66.3	47
Third	Class Room	35.3	66.2	45
Third	Class Room	35.2	66.5	49
Third	Class Room	34.8	68.1	44
Third	Computer Lab-1	34.8	70	47
Third	Computer Lab-2	35.2	66.5	44
Fourth	Library & Staff Room	36.2	62.9	47
Fourth	Class Room	36	64.9	46



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No, 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 31



I/c Principal  
 Dr. Umeshchandra Yadav



# University of Mumbai

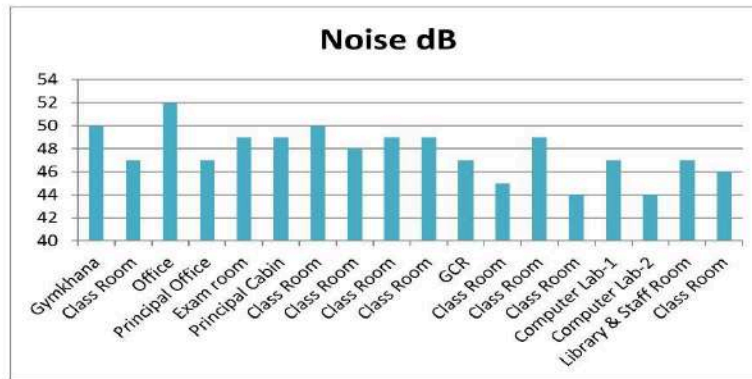
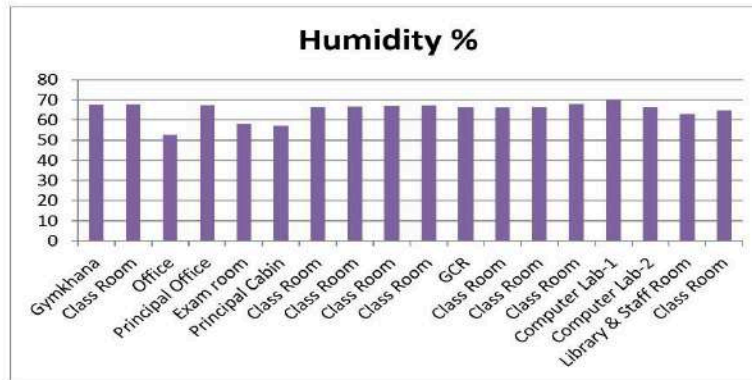
## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengeers@gmail.com](mailto:saurengeers@gmail.com) 9168402909/9867499812/9821116443.....Page | 32



*Umeshchandra Yadav*  
 I/c Principal  
 Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

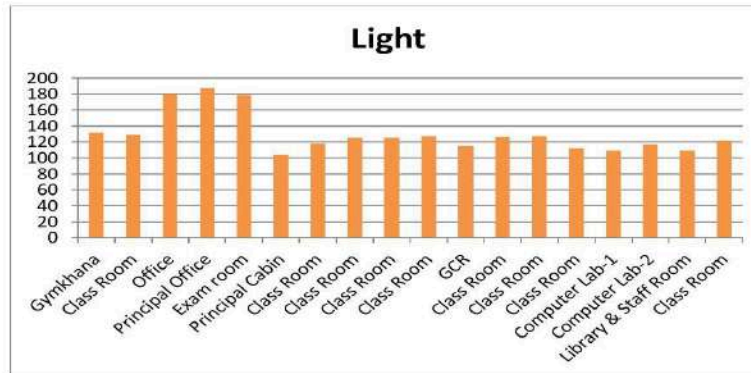


### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

### 9. Illumination

Floor	Room	Light
Ground	Gymkhana	132
Ground	Class Room	129
Ground	Office	180
Ground	Principal Office	188
Ground	Exam room	179
Ground	Principal Cabin	104
Second	Class Room	118
Second	Class Room	125
Second	Class Room	125
Second	Class Room	127
Second	GCR	115
Third	Class Room	126
Third	Class Room	127
Third	Class Room	112
Third	Computer Lab-1	109
Third	Computer Lab-2	117
Fourth	Library & Staff Room	109
Fourth	Class Room	122



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 33



I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**10. Energy Audit**

**9.1 Electrical Energy System**

Sl No	CA No	Meter No	Sanctioned Load	DISCOM	Phase
1	101420992	4919670	1.36	AECL	Single
2	101424003	8798700	1.36	AECL	Single
3	101424013	10023004	1.36	AECL	Single
4	101424024	10023565	1.36	AECL	Single

**9.2 Electrical Bill Analysis**

Meter	101420992	
Month	22-23	23-24
January	226	162
February	142	177
March	451	118
April	394	112
May	320	118
June	437	266
July	545	199
August	620	206
September	295	147
October	432	292
November	436	109
December	473	158

Meter	101424003	
Month	22-23	23-24
January	190	210
February	216	160
March	263	176
April	186	94
May	180	15
June	202	114
July	158	254
August	139	290
September	132	222
October	91	345
November	137	180
December	139	183

Meter	101424013	
Month	22-23	23-24
January	100	222
February	192	244
March	203	145
April	104	86
May	80	41
June	177	236
July	278	324
August	301	298
September	202	181
October	109	276
November	165	141
December	181	175

Meter	101424024	
Month	22-23	23-24
January	324	533
February	767	565
March	435	1268
April	693	1093
May	504	1494
June	521	1209
July	466	693
August	584	617
September	327	665
October	335	1310
November	453	613
December	443	515

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
saurengineers@email.com 9168402909/9867499812/9821116443.....Page | 34



I/c Principal  
Dr. Umeshchandra Yadav



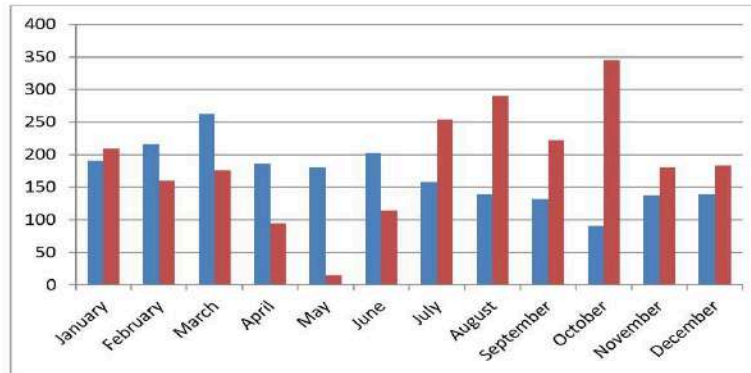
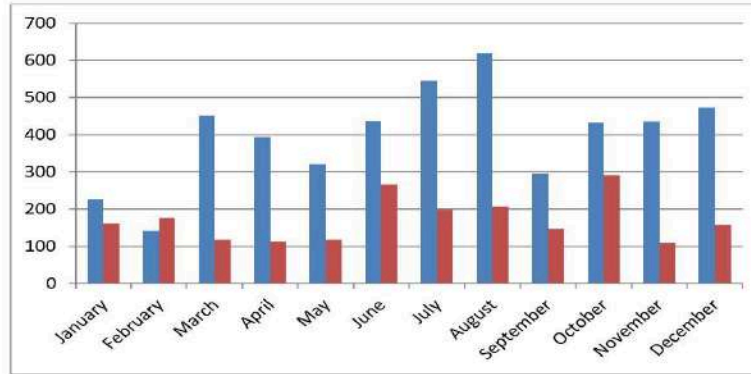
**University of Mumbai**  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No, 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 35



*Go Gadev*  
 I/c Principal  
 Dr. Umeshchandra Yadav



# University of Mumbai

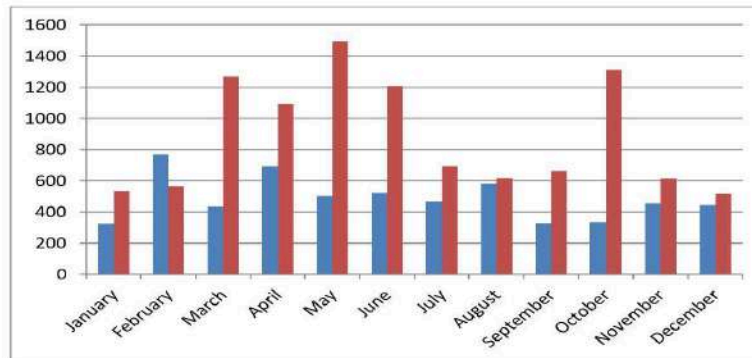
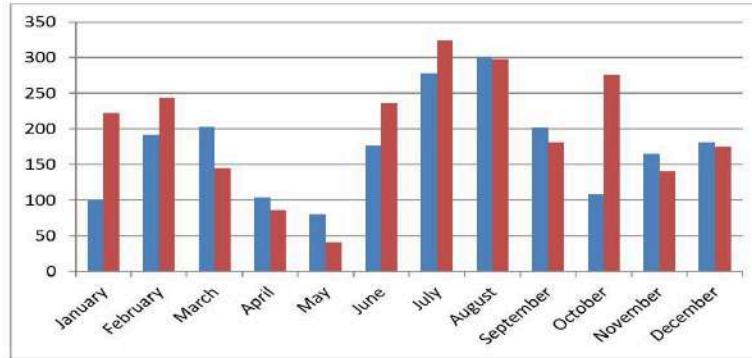
## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liaisoning  
**Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.**  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 36



I/c Principal  
 Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**9.3 Consumption Scenario**

Meter	101424013	
Year	22-23	23-24
Total	2092	2369
Consumption Growth	11.69	

Meter	101424024	
Month	22-23	23-24
Total	5852	10575
Consumption Growth	44.66	

Meter	101420992	
Month	22-23	23-24
Total	4771	2064
Consumption Growth	-131.15	

Meter	101424003	
Month	22-23	23-24
Total	2033	2243
Consumption Growth	9.36	

Year	22-23	23-24
Total	14748	17251
Consumption Growth	14.51	

It is found that Total consumption is increased by 14.5%; which is not negligible. Meter-1 and Meter-4 have found moderate increase but Meter-2 has drastic increase. Meter-3 has decreased the consumption.

It is recommended that

1. All the connected loads in each room has to be listed down
2. All rooms working time has to be noted down.
3. Any extra activity such as program/function/gathering, Etc. has to be recorded in terms of connected load, extra load, running time.
4. Extra consumption in particular month and reason for the same.
5. Manual and remote monitoring of consumption.



I/c Principal  
Dr. Umeshchandra Yadav

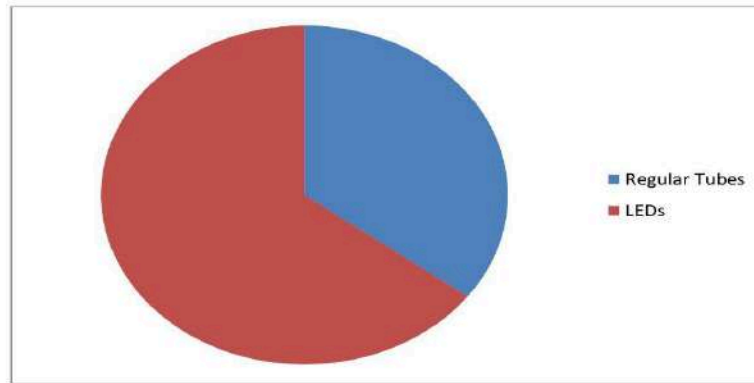



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**9.4 Assessment of Lighting System**

Lights	Regular Tubes	LEDs
Nos	50	92
Load(Kw)	2.0	1.84
Percentage	52.08	47.92



  
I/c Principal  
Dr. Umeshchandra Yadav

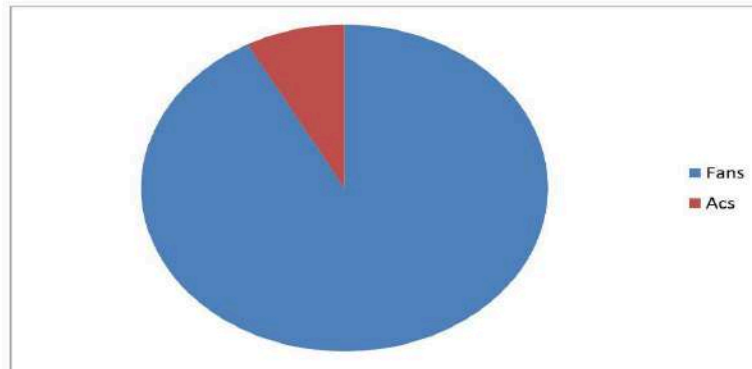


**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**9.5 Assessment of Cooling System**

Cooling	Fans	Acs
Numbers	93	8
Load(Kw)	6.98	8
Percentage	46.58	53.42



**9.6 Use of Renewable Energy System**  
**Not Available**



*Umeshchandra Yadav*  
 I/c Principal  
 Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.


**11. Safety Assessment**

**11.1. Status of presence of electrical safety hazards:**

SL No	Safety Hazard Yes/No Remarks	Yes/No	Remarks
1)	Existence of non ISI/standardized appliances	No	
2)	Whether the existing wiring is more than 20 years old.(Wiring more than 20 years old must be recommended for replacement)	No	
3)	Whether Fire detection and Alarm system is installed?	NA	
4)	Whether sufficient number of fire extinguishers is installed?	Yes	
5)	Segregated UPS room with proper ventilation/exhaust is provided?	NA	
6)	Is their display of emergency telephone number of nearest fire station, hospital and key person?	Yes	
7)	Whether frequent sparking at certain place(s) reported	No	
8)	Whether switches found with burnt marks	No	
9)	Existence of non standardized tube lights/CFLs/Bulbs and TL starters and chokes	No	
10)	Dampness in walls and ceiling	No	
11)	Loose switches/plugs	No	
12)	Naked wiring or connections	No	
13)	All Electrical cables/wiring are in conduits and are protected by a fire proof insulation	Yes	
14)	Seepage /Leakage of water in walls or on and around electrical installations	No	
15)	Whether connection to each AC is provided through an individual MCB of appropriate rating & of standard make and ISI approved.	Yes	
16)	Whether there are frequent tripping due to overloads ?	No	

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 40



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**11.2 Safety Survey:**

- 10.1.1 Actual Cable Size (at meter): 35 Sqmm
- 10.1.2 Year of Installation: 2018
- 10.1.3 Actual Available Cut-out Size: 100A
- 10.1.4 Year of Installation: 2018
- 10.1.5 Actual Required ELCB Size: Present at Branches
- 10.1.6 Meter Cabin Condition: Average
- 10.1.7 Availability of Fire extinguisher/ Sand Buckets: **No (In Meter cabin)**
- 10.1.8 Water proofing/Seepage: No
- 10.1.9 Damages/Tampering: No
- 10.1.10 Adequacy in connections/Termination/Joints: Good
- 10.1.11 Ease of accessibility: Good
- 10.1.12 Danger Signs: **Yes**
- 10.1.13 Smoke detectors : Good
- 10.1.14 Alarm system: Yes
- 10.1.15 Emergency Entry/Exit door: Yes
- 10.1.16 Emergency evacuation plan: **NO**
- 10.1.17 Fire extinguishers: Yes
- 10.1.18 Public Address system : YES
- 10.1.19 Rodent arrester: **NO**
- 10.1.20 CCTV: Yes
- 10.1.21 Meter cabin: Average Condition
  - 10.1.21.1 Leakage: **NO**
  - 10.1.21.2 Damaged/tempered/cracks: **NO**
  - 10.1.21.3 Name plate: **No**
  - 10.1.21.4 Water logging possibility: **No**
- 10.1.22 Physical Inspection of Power source : Average Condition
  - 10.1.22.1 Adequacy as per standards **OK**
  - 10.1.22.2 Rusting of panel **OK**
  - 10.1.22.3 Visible scaling **OK**
  - 10.1.22.4 Scaled/ Unclean wires breakers **OK**
  - 10.1.22.5 Wet / Dampness **NO**





**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**11.3 Following Regulations have been breached by electric connections present**

**1. Regulation 16: Separate Earthing**

**Not provided**

**2. Regulation 27: Generation station Fire Bucket with clean Dry sand**

**No**

**Additional Fire Extinguisher nearby**

**No**

**Training of staff**

**No**


**3. Regulation 41: Earth Resistance**

**No**

**Record of Registered value**

**No**



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**12. Wastage Types and Management**

**12.1 Do the premises generate wastage?**

Yes-Very Low

**12.2 What type of wastage and quantity is generated? What are actions taken on it?**

SL No	Wastage Type	Quantity	Action
1	Biomass	1-2Kg per week (as observed) 50-60Kg approx. tree, grass and other cuttings	Composting
2	Paper	400Kg approx.	Cleaned by housekeeping and sent to Recycling
3	Water	100-200Ltrs approx. per year due to leakage	Awareness
4	E-Waste	Unrecognized	Cleaned by housekeeping and sent to Recycling through external agency
5	Bio-Hazardous	NA	NA
6	Fuel	Electricity Wastage by running fans and lights for uncounted time after room cleaning	Awareness and Centralized switch off practice
7	Production	NIL	NIL
8	Process	Process analysis can be done under detailed energy Audit	NIL
9	Food	NA	NA
10	Man-Hours	NIL	NIL

**Notes:**

- Paper Waste can be picked up after 1 to 2 years (as per availability and size of quantum) by external agency for recycling or can be sold to vendors.
- E-waste can be picked up after 5 to 6 years (as per availability and size of quantum) by external agency for recycling.



I/c Principal  
 Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**12.3 Recycling Procedures**

1. Does Premises users aware about Recycle or Re-use of resources used?  
YES Paper and E-waste
2. Does institute run wastage and recycling awareness campaign for users?  
YES
3. Does institute have SOP for wastage and recycling procedures?  
Under preparation
4. Does Premises Recycle or Re-use resources used?  
YES Rain Water Harvesting

**12.4 Wastage Recovery & Conservation:**

- 12.4.1 Any Energy conservation method applied?  
YES 65% of Total lights are replaced with LEDs
- 12.4.2 Any SOP on operation and maintenance is defined?  
Under Process
- 12.4.3 Any Energy conservation devices installed?  
YES LED Lights
- 12.4.4 Any alternative Energy source is installed?  
No
- 12.4.5 Does the SWITCH OFF Drills conducted regularly?  
NO
- 12.4.6 Are electronic and smart devices run on power saving mode?  
(computers,Etc)  
Yes
- 12.4.7 Does electronic & other equipment run standby mode? How many  
NO hours?
- 12.4.8 Does institute perform Water quality monitoring?  
NO
- 12.4.9 Have you installed rain water harvesting system?  
YES
- 12.4.10 Any SOP on operation and maintenance of plumbing system is  
defined?  
NO
- 12.4.11 Any SOP on Water utilization is defined?  
NO
- 12.4.12 Does institute record water usage?  
NO
- 12.4.13 Are rooms well ventilated?  
YES
- 12.4.14 Does institute perform Air quality monitoring?  
NO
- 12.4.15 Any vehicles used? Type of Fuel? Quantity of fuel consumed?  
NO

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengeers@gmail.com](mailto:saurengeers@gmail.com) 9168402909/9867499812/9821116443.....Page | 44



I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**13.Environment Impact on Natural resources**

13.1. Table-1: Overall

Environmental Impact Analysis Report		
Annual Consumption	17251	KWh
Annual Green- Impact		
Co2 Generated	11256	Kg
Coal Burned	10231.2	Kg
Diesel Burned	5422.2	Ltr
Natural Gas Burned	206878	Cub Ft
Trees Cut	512.4	Nos
Water Consumed	36906.8	Ltr
Life Time Green- Impact		
Co2 Generated	204946	Kg
Coal Burned	588329	Kg
Diesel Burned	98737.8	Ltr
Natural Gas Burned	3767248.8	Cub Ft
Trees Cut	9331	Nos
Water Consumed	672072.8	Ltr

13.2. Table-2: Occupational Area Based

Environmental Impact Analysis Report		
Annual Consumption	17251	KWh
Annual Green- Impact		
Co2 Generated	1.13	Kg
Coal Burned	1.02	Kg
Diesel Burned	0.54	Ltr
Natural Gas Burned	20.69	Cub Ft
Trees Cut	0.05	Nos
Water Consumed	3.69	Ltr
Life Time Green- Impact		
Co2 Generated	20.49	Kg
Coal Burned	58.83	Kg
Diesel Burned	9.87	Ltr
Natural Gas Burned	376.72	Cub Ft
Trees Cut	0.93	Nos
Water Consumed	67.21	Ltr

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 45



I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**13.3. Table-3: Footfall Based**

Environmental Impact Analysis Report		
Annual Consumption	17251	KWh
<b>Annual Green- Impact</b>		
Co2 Generated	0.03	Kg
Coal Burned	0.03	Kg
Diesel Burned	0.01	Ltr
Natural Gas Burned	0.52	Cub Ft
Trees Cut	0.00	Nos
Water Consumed	0.09	Ltr
<b>Life Time Green- Impact</b>		
Co2 Generated	0.51	Kg
Coal Burned	1.47	Kg
Diesel Burned	0.25	Ltr
Natural Gas Burned	9.42	Cub Ft
Trees Cut	0.02	Nos
Water Consumed	1.68	Ltr

**13.4. Table-4: Carbon Footprints**

Head	General	Per Square Foot	Per Person
Per Year	11256	1.13	0.03
Lifetime (20Years)	204946	20.49	0.51

**Ranges:**

Best: (Below 1800/Per Person per year)  
Average: (Below 3000 and Above 1800/Per Person per year)  
Bad: (Above 3000/Per Person per year)

**Carbon Footprint found best category.**



I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

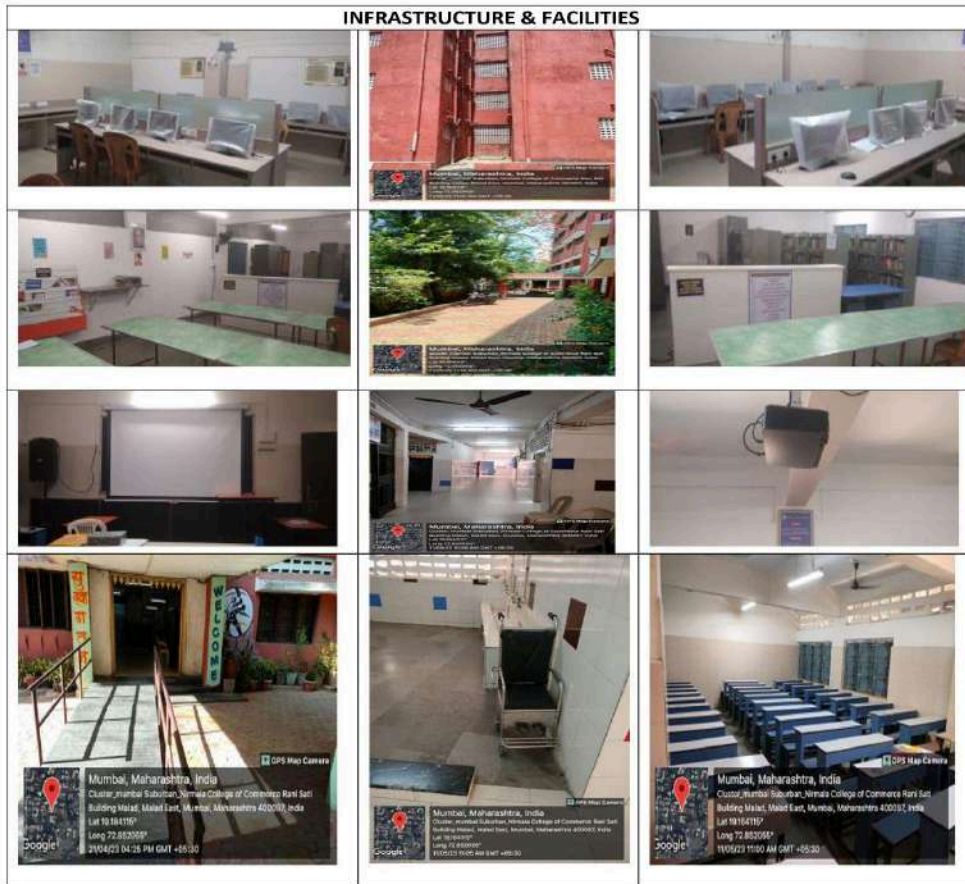
Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

#### 14. Best Practices



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liaisoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 47



*Go Gadev*  
 I/c Principal  
 Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**PLANTATION DRIVE & GREENARY**



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 48



*Go Gadev*  
 I/c Principal  
 Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**WASTE MANAGEMENT**



Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengeers@gmail.com](mailto:saurengeers@gmail.com) 9168402909/9867499812/9821116443.....Page | 49



*Umeshchandra Yadav*  
 I/c Principal  
 Dr. Umeshchandra Yadav



# University of Mumbai

## NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



### SAUR ENGINEERS & CONSULTANTS PVT. LTD.

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

#### CONSERVATION & SAFETY



Refer Annexure-I for AWARENESS PROGRAMS ANDACTIVITIES FOR CLEAN, GREEN AND SAFE ENVIRONMENT

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
 Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
 Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
 Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 50



*Go Gadev*  
 I/c Principal  
 Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**


Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

**15. Suggestions**

1. Air quality is found moderate. There is scope to increase in Tree diversity; Plants like Tulsi, Camphora, Etc. can be planted for getting more pollution-free atmosphere. Also to increase the quality more greenery can be implemented. This can be done through gardening in empty places, terrace gardening and Green walls.
2. Water quality if found average. Quality is observed from RO output. To maintain the quality, water testing has to be done in every season (after every four months). A standard operating process has to be defined, documented and observed for tank and pipeline cleaning and maintenance.
3. Noise level is appropriate.
4. Illumination level found good. To maintain accurate level, windows to be cleaned regularly, obstacles on windows to be moved, Proper capacity and efficiency of luminaries to be used and luminaries also to be cleaned once in a week. For details refer illumination section.
5. Arrange Exhibitions and identification programs for students and locals to understand medicinal plants.
6. Start a planting drive with students outside campus.
7. Gift small plants or seeds/seed-balls to students leaving or going to native place and encourage them to plant at their own premises.
8. There should be display of emergency telephone number of nearest fire station, hospital and key person.
9. ELCBs found faulty or bypassed, those need to be replaced immediately.
10. Fire extinguisher/ Sand Buckets to be installed in meter cabin.
11. Emergency evacuation plan to be prepared and displayed at centre place.
12. Generate awareness among user about environment conservation.
13. Prepare and observe SOPs for the same.
14. Put "SWITCH OFF" boards on back side of Doors.
15. Keep AC temperature to 26° C.
16. Clean Luminaries, Fans, ACs regularly to increase efficiency.
17. Prepare and observe SOPs for maintenance of equipments.
18. Avoid Draft printing, use email/Whatsapp maximum.
19. Following tests are to be conducted at-least annually
  - Neutral Current
  - Load Unbalance
  - Earth Resistance
  - Insulation Resistance
  - Illumination
  - Power Quality
  - Thermography

Energy, Electrical & safety Audits | Solar and Electric Consultation | Power Management by IOT  
Solar Rooftop EPC | New Electric Connections| Meters (New, Shifting, additional)  
Load Management | Electrical Installation & Maintenance| Permissions, approvals, liasoning  
Plot No. 108 / D - 8, Akshay Co. op. Society, Gorai- 1, Borivali (W), Mumbai-400092.  
[saurengineers@gmail.com](mailto:saurengineers@gmail.com) 9168402909/9867499812/9821116443.....Page | 51



  
I/c Principal  
Dr. Umeshchandra Yadav



**SAUR ENGINEERS & CONSULTANTS PVT. LTD.**

Registered Energy Auditor "CLASS-A" -MEDA, Govt. of Maharashtra, Licensed Electrical Contractor - IE&L Govt. of Maharashtra, Registered Electrical Contractor CLASS-A, ISO 14001:2015, Certified Solar Grid Engineers NISE-MNRE, Govt. of India.

20. Saving Opportunities (considering current average rate and six hours daily usage)
- A. Replacing Regular Tube lights with LED will save approximately Rs. 10,000 per month.
  - B. Replacing Regular Fans with BLDC Energy saving Fans will save approximately Rs. 25,000 per month.


**16.Disclaimer**

The report is generated from data, information, answer to asked questions, standards and procedures defined by different and concerned authorities time to time, available site condition, weather condition, operational and availability conditions provided by beneficiary on the day of survey. If any changes on above said measures on any other parameters affecting these measures may lead to change, alter, in-corrections even falsifying calculations, results, recommendations and suggestions. The values, figures, amounts mentioned are indicative to the site situation and condition; it may not reflect each and every aspect of it. The report is generated restricted to given scope and available conditions and measures.

**17.Conclusion**

We hereby conclude report for "Energy Audit, Green Audit and Environment Audit" of the Work done under scope of work for "Nirmala College of Commerce, Municipal School Bldg,Rani sati Marg, Malad, Mumbai.". Please study it thoroughly and implement recommendations and suggestions at earliest.



  
I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

**AWARENESS PROGRAMS AND ACTIVITIES**  
**FOR CLEAN, GREEN AND SAFE ENVIRONMENT**



College Seal

I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

21st June 2023

WORKSHOP ON YOGA AND MEDITATION

GIRLS VOLUNTEERS: 20  
 BOYS VOLUNTEERS: 22

Our college hosted a transformative Yoga and Meditation Workshop on June 21, 2023, led by instructor Mr. Sanjay Vishwakarma. Attendees, including students and faculty, engaged in practical sessions and interactive discussions, fostering a sense of community. The workshop highlighted the benefits of yoga and meditation for well-being, providing both theoretical insights and practical techniques. In total, 42 students benefited from this impactful and transformative workshop.



*Umeshchandra Yadav*  
 I/c Principal  
 Dr. Umeshchandra Yadav



**"Drug Addiction and Trafficking"**  
**June 27, 2023**

GIRLS VOLUNTEERS:17  
BOYS VOLUNTEERS:11

On June 27, 2023, our college's Counseling Cell and N.S.S Unit collaborated with Dindoshi Police Station to host a seminar on "Drug Addiction and Trafficking," marking the International Day against Drug Addiction and Illicit Trafficking. The event, starting at 10:00 a.m., aimed to raise awareness about the challenges posed by drug abuse and trafficking, featuring expert speakers and interactive sessions for students to learn about prevention and intervention strategies. Through this collaboration, attendees gained valuable insights into recognizing signs of addiction and the importance of community involvement in addressing these pressing issues.



*Umeshchandra Yadav*  
I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

## Yuva Sanvad with Education Minister and the collector of Mumbai Suburban 2nd Aug,2023


GIRLS VOLUNTEERS:1

BOYS VOLUNTEERS:1

LOCATION: Chetana College Bandra

A "Yuva Sanvad" event the great initiative was organised , aimed at fostering dialogue and engagement with the youth. Having both the Education Minister and the collector of Mumbai Suburban involved indicates a commitment to addressing youth concerns and involving them in decision-making processes



  
I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**


Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

**Rally On Majhi Mati Majha Desh And Har Ghar Tiranga**  
**14th Aug,2023**

GIRLS VOLUNTEERS:1  
BOYS VOLUNTEERS:1  
LOCATION: **KES College**

Organizing a rally on "Majhi Mati Majha Desh" (My Soil, My Country) and "Har Ghar Tiranga" (Flag in Every Home) on August 14, 2023, by KES College sounds like a patriotic and community-building event. Such rallies are excellent opportunities to instill a sense of pride and unity among citizens, emphasizing the importance of both environmental conservation and national identity. It's heartening to see educational institutions like KES College taking the initiative to promote these values within their communities. Events like this can help foster a strong sense of belonging and civic responsibility among participants.



  
I/c Principal  
Dr. Umeshchandra Yadav



**Rakhi Celebration with Community Helpers**  
**August 29<sup>th</sup>, 2023**

GIRLS VOLUNTEERS: 28  
BOYS VOLUNTEERS: 05

The "Rakhi Celebration with Community Helpers" organized by the Women Development Cell and N.S.S. unit on August 29<sup>th</sup>, 2023, was a heartwarming event that brought together students to create self-made Rakhis in groups of four. Emphasizing gratitude towards community helpers, the event encouraged students to appreciate their contributions. Interested participants had submitted their names to Class Teachers, ensuring broad involvement. The celebration, marked by creativity, laughter, and a strong sense of community spirit, concluded at 1:00 pm, successfully fostering unity and highlighting the significance of acknowledging those who play vital roles in our lives.



*Go Gadev*  
I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

## Mega Beach Cleanup Drive. This Noble Initiative, Organised By For Future India

16th Sep,2023


GIRLS VOLUNTEERS: 14

BOYS VOLUNTEERS:8

LOCATION: Uttan Beach, Mira Bhayandar

NSS unit in collaboration with For Future India organized a Mega Beach Cleanup Drive on September 16th, 2023, at Uttan Beach in Mira Bhayandar. This noble initiative aimed to promote environmental awareness and community involvement in preserving coastal ecosystems. Participants joined hands to clean up the beach, contributing to a cleaner and healthier environment for all.



  
I/c Principal  
Dr. Umeshchandra Yadav



**One Hour Shramdaan For Swachhta By Nss Unit**

**1st Oct,2023**

GIRLS VOLUNTEERS: 16

BOYS VOLUNTEERS:11

**LOCATION: College Premises**

On October 1st, 2023, the NSS Unit organized a one-hour Shramdaan for Swachhta (voluntary work for cleanliness) within the college campus. This initiative aimed to instill a sense of responsibility for cleanliness among students and contribute to maintaining a clean and hygienic environment. Participants dedicated their time to cleaning and tidying up the campus, promoting a culture of cleanliness and civic engagement.



**Go Gadev**  
I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

## Samvidhan Diwas In conference Hall


26th Nov.2023

GIRLS VOLUNTEERS:1

BOYS VOLUNTEERS:3

"Samvidhan Diwas" refers to Constitution Day, which is celebrated in India on November 26th each year to commemorate the adoption of the Constitution of India. Holding an event in the conference hall at LTP Camp on November 26th, 2023, was a fitting way to honor this important day in Indian history. The event included discussions, lectures, or activities focused on the significance of the Indian Constitution, the rights and duties of citizens, and the principles of democracy and governance. Celebrating Samvidhan Diwas helps reinforce the values enshrined in the Constitution and promotes civic awareness and participation.



  
I/c Principal  
Dr. Umeshchandra Yadav



**Choo Macchar Volunteers Program**  
**8th Jan.2024**

GIRLS VOLUNTEERS: 17  
BOYS VOLUNTEERS:25

On 8<sup>th</sup> January 2024,NSS volunteers were motivated to take participation in Choo-Macchar Program ,wherein students have to create awareness on various diseases due to mosquito by visiting household and details related to the same was to be filled in prescribed form .Kits were distributed on 8<sup>th</sup> January 2024 and was collected back duly filled on 19<sup>th</sup> January 2024.



*Go Gadev*  
I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

**Workshop on Self Defence**  
**20th January,2024**

GIRLS VOLUNTEERS: 28  
BOYS VOLUNTEERS:04

Women development cell of Nirmala College of Commerce, Malad (E) organised a workshop on Self Defence which was conducted by Mr. Bharat and Mr Anish Shaikh on 20th January,2024 at 10.00 am. Block 11. This workshop was organised to provide a platform around issues of common interest of women welfare for the betterment of girl's students and to take preventive steps against the contemporary issues like sexual harassment.



*Go Gadev*  
I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai NIRMALA COLLEGE OF COMMERCE


Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083

## Rally 26<sup>th</sup> January 2024

GIRLS VOLUNTEERS: 7  
BOYS VOLUNTEERS: 11

A rally on January 26th, 2024, focused on voter's awareness was a significant initiative coinciding with India's Republic Day. This event aimed to educate and mobilize citizens about the importance of voting, their rights as voters, and the significance of participating in the democratic process. Participants marched through streets carrying banners, distributed informational materials, and delivered speeches emphasizing the role of voting in shaping the nation's future. Such rallies play a crucial role in promoting civic engagement and strengthening democracy by encouraging active participation in elections.



  
I/c Principal  
Dr. Umeshchandra Yadav



# University of Mumbai NIRMALA COLLEGE OF COMMERCE

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083




## CPL-2 Cleanup Premier League 23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup> February 2024

GIRLS VOLUNTEERS: 9  
BOYS VOLUNTEERS: 11  
LOCATION: Manori Beach, Malad

The CPL-2 (Cleanup Premier League) inter-college competition organized by For Future India at Manori Beach in Malad on February 23<sup>rd</sup>, 24<sup>th</sup>, and 25<sup>th</sup>, 2024, was an inspiring initiative aimed at engaging college students in environmental conservation efforts. This competition involved teams representing different colleges competing to clean up the beach and surrounding areas, promoting a sense of camaraderie and friendly competition while addressing pressing environmental issues. By organizing such events, For Future India not only fosters a spirit of community service and environmental stewardship among youth but also raises awareness about the importance of preserving natural habitats.



  
I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



*Go Gadev*  
I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



*Go Gadev*  
I/c Principal  
Dr. Umeshchandra Yadav



University of Mumbai  
**NIRMALA COLLEGE OF COMMERCE**

Municipal School Bldg., Rani Sati Marg, Malad (East), Mumbai - 400 097. • Tel.: 2844 1083



*Go Gadev*  
I/c Principal  
Dr. Umeshchandra Yadav