Mudalgi Education Society's

ARTS AND COMMERCE COLLEGE

MUDALGI-591312

Dist: Belagavi) (State: Karnataka

Affiliated to Rani Channamma University, Belagavi

Phone/Fax: 08334-251238 Mob: 9448860675

E-mail: mudalgi_college@rediffmail.com

Prof. S. M. Gujagond

Principal

REPORT & APPRECIATION LETTER OF AUDITS ON GREEN, ENVIRONMENT & ENERGY; 2018-19 TO 2022-23

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E-mail: mudalgi_college@rediffmail.com
Accredited by NAAC at "B++" level

UKAI-GLHV-23-169178

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Cell No : 9902428248, Reg No : UD-KR-04-058972

LETTER OF APPRICATION

Mudalgi Education Society's **Art and Commerce College, MUDALGI** Ta: Mudalgi Dist: Belagavi PIN: 591 312, was established in 1984 to cater higher educational needs of people in and around Mudalgi. The college is located in Mudalgi taluka head quarter.

It is a UGC recognized Institute under 2(f) and 12(B) UGC act 1956 and is affiliated to RCU Belagavi.

The college is housed in 42 acres of lustrous green campus with all basic educational amenities. The infra structure is suitably built to felicitate the academic developments. There are various independent academic blocks. Main block, Computer Science Dept, Gymnastics, Library, NSS, NCC, with 400 meter x 6 track run felicity. The Library facility is elevated to its own glittering standard by the support of many NGOs.

College is powered by diesel run electric generator. The utilization is made in needy hours only. The energy sensitization among the staff and students is appreciable

The lush green campus of the college is the centre of attraction. Variety of plants are available. Rare plants like **Rakta-Chandan, Ratka-Honne,** bring value addition to flora of campus. The College has enough potential to grow **Mahagoni** trees (10 to 15 acres), which will fetch higher income to Mudalgi Education Society **in future**. It is speculated as **"OXYGEN LUNG OF MUDALGI".**

The College is fit with all academic standard under the visionary support of management and with a eminent teaching faculty.

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Convenor
Global Eco Tech
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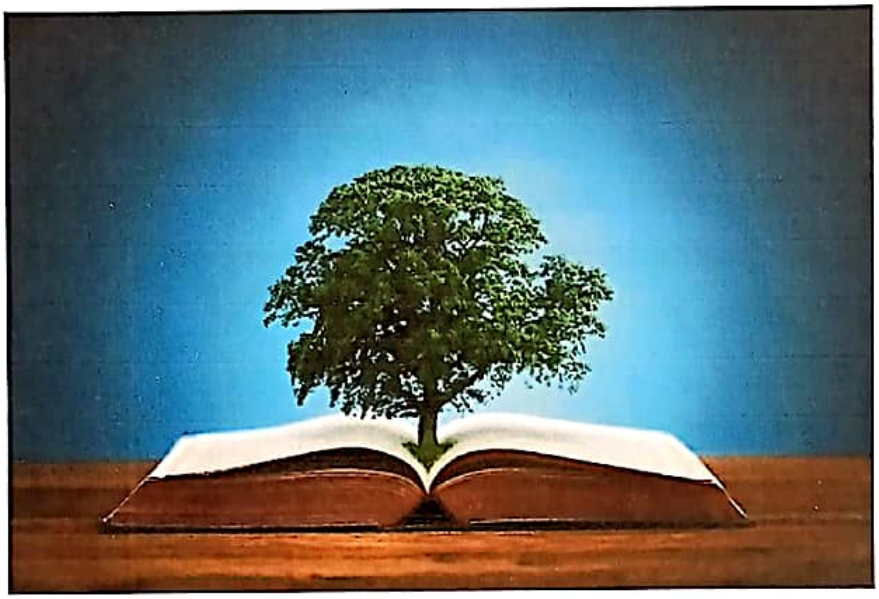
GREEN AUDIT REPORT



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GREEN AUDIT

This is to certify that, *Our Audit Team* has visited Mudalgi Education Society's Arts & Commerce College, **MUDALGI** Ta: Mudalgi Dist: Belagavi **591 312** on 11th Dec 2023 and undertook the "***Environment Audit***" of college campus.

The college is located in Mudalgi Town Municipal Council Limits. The population of city is 42,823 as per 2011 census. The literacy rate is Average :70% which is more than the national average

Mudalgi is well known for **Cattle Market** in Karnataka. It is business and agriculture marketing based centre.

Environment Audit is conducted

Electric bills have been analyzed The average electric bill is 661 units higher as compared to last five years average 523 units. This is because of infra structure developments.

Plantation is carried out during Celebration of Vanamahotsav day

The related data have been analyzed. It is found by graphical analysis there is decline in use of electricity without affecting the routine academic activities.

And related charts and their importance are submitted to the college.

Technical staff

Convener
Energy Audit Team

Date :11th Dec 2023
Place :Mudalgi

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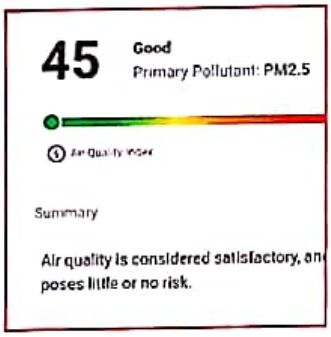
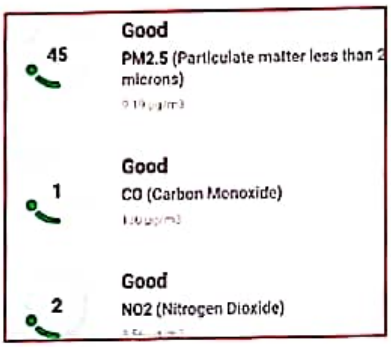
ENVIRONMENTAL AUDIT

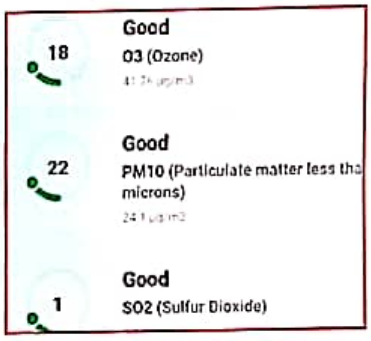
I. ENVIRONMENTAL AUDIT.

This academic year additional plantation of ornamental, creepers and flowers is made which enhance serene beauty of campus and which provides a check to entry of 10 and 2.50 particulate matter (PM). This in turn helps to reduce the dB level of sound.

1) Manicure lawns are developed adjacent corridor of **class rooms**, which provides a check to the entry of heat radiations ,and in this in turn helps to keep the campus cool.
2) Drip irrigation is provided to the plants which saves labour, time and economy in water consumption







Pollutant parameters are within the safe range as per MoEF standards

Technical staff

Convener
GREEN Audit Team

Place : Mudalgi
Date: 11th Dec 2023

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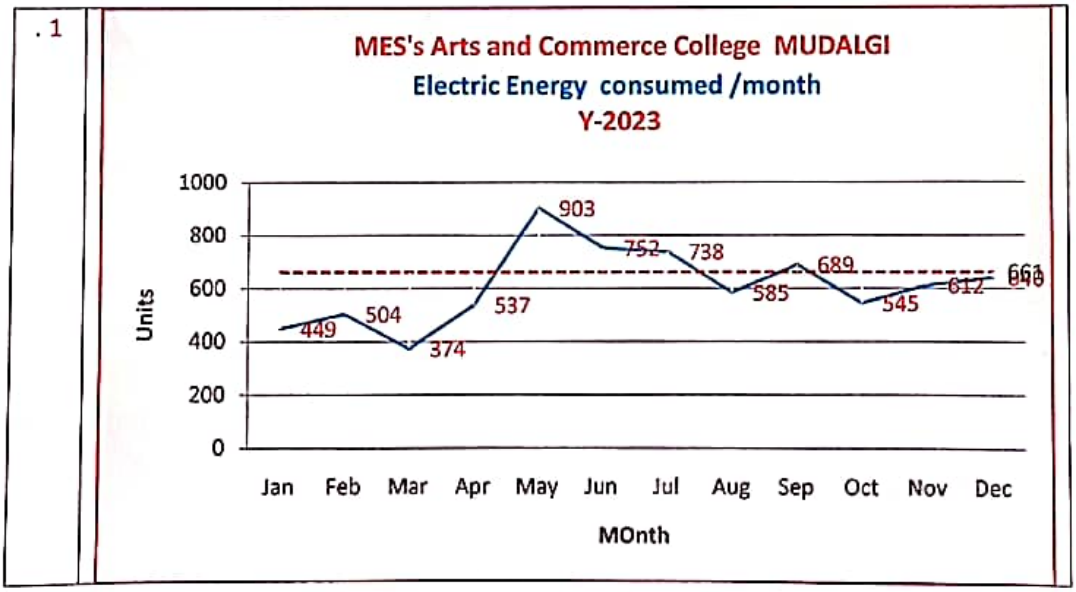
ENERGY AUDIT

II. OPTIMUM ENERGY UTILIZATION POLICY

1. Energy sensitization programs are set up in the campus.
2. Awareness is spread among the staff and students regarding judicious use of electrical energy
3. Additional stand alone solar units are installed at prime location of the campus
4. The energy utility curve has a exponential decline trend (slope of energy curve is negative compared to previous year
5. A polynomial equation fits the energy utilization curve .
6. The polynomial equation is $y = -6.850x^2 + 103.2x + 310.5$ with order 2
7. R squared value =R^2= 0..393 it is in a acceptable value
8. The average monthly utilization of electric energy is 661 Units (KWH)
   Graphical representation of Energy Curve



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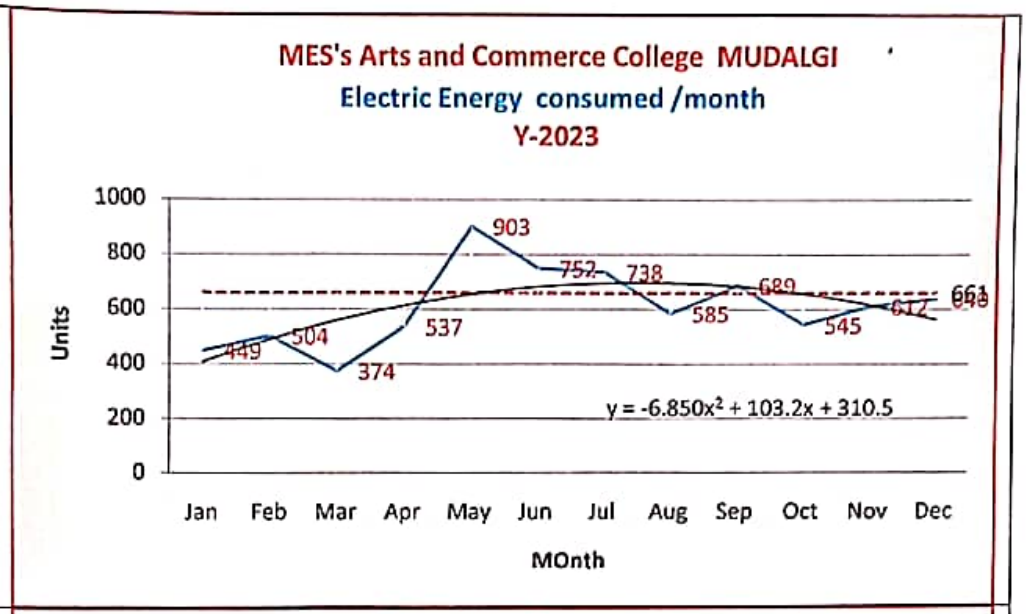
2



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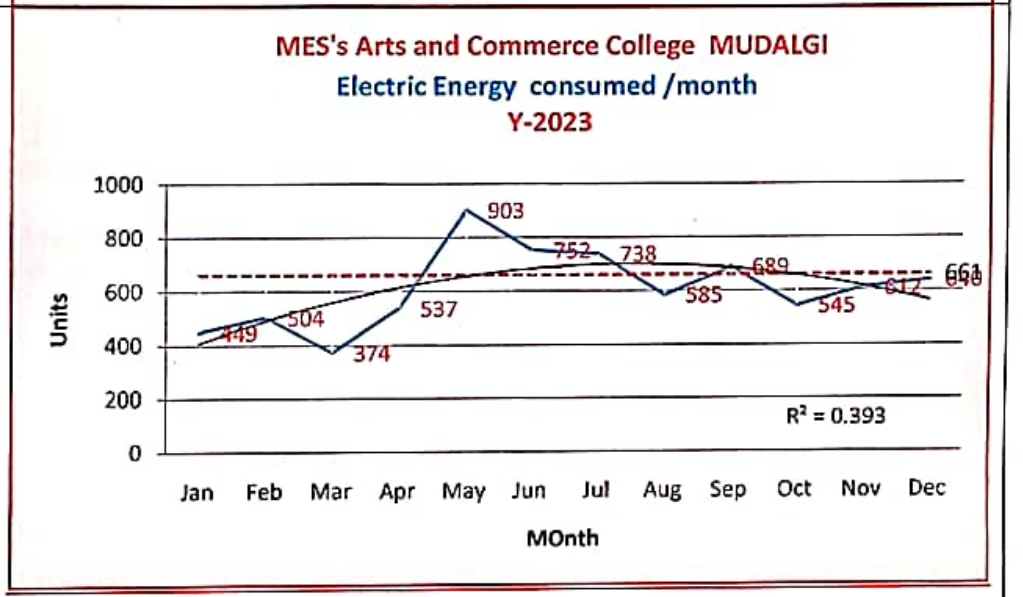

Conclusion

1. Annual average consumption is 661 unit(kWh)
    a. as compared to 749 units of consumption
2. It is because of infra structure developments

    a. Least Square Fit Equation : $y = -6.850x^2 + 103.2x + 310.5$ polynomial curve with order 2
    b. Slope value : $m = -0.0665$ rate declining, without affecting academic developments

3. R squared value : $R^2 = R^2 = 0.393$ acceptable

4. **As seen from the energy utility curve there is judicial use of electric energy**

Technical staff

Convener
GREEN Audit Team

Place : Mudalgi
Date: 11th Dec 2023

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GREEN AUDIT

III. FLORA IN CAMPUS

Following number of plants are planted during "*Vanamahostav Day*" celebration

1. Medicinal plants : 2
2. Oxygen oozing plants : 10
3. Fruit bearing plants : 2
4. Sacred plants : : 03
5. Climbers : 2
6. Rare Plants : - -
7. Ornamental plants : : Additional 15

Staff and students hypothecated some plants to nourish at their own cost.
"My college My plant" an innovative program to nourish the plants has been popularized and is being continued.

Policies regarding waste management have been introduced
The campus shall be **LUSH GREEN and SERENE** in future and will be most suitable Academic Developments.

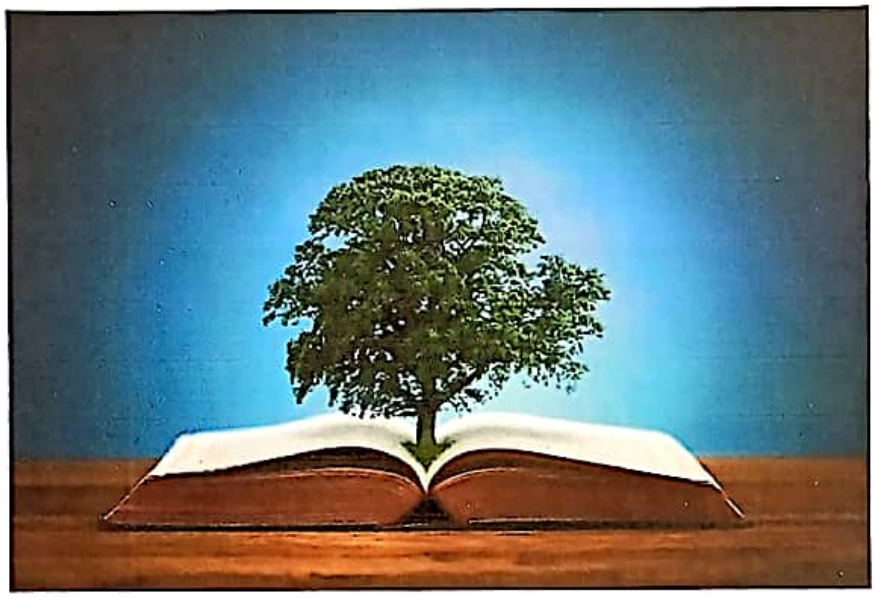
Technical staff

Convener
GREEN Audit Team

Global Eco Tech Solutions BELGAUM 590 016

Place : Mudalgi
Date: 11th Dec 2023

GREEN AUDIT REPORT



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ENVIRONMENT AUDIT

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ENVIRONMENT AUDIT REPORT

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The college is located in Mudalagi Town Municipal Council Limits. The population of city is 42,823 as per 2011 census. The literacy rate is Average :70% which is more than the national average

Mudalagi is well known for **Cattle Market** in Karnataka. It is business and agriculture marketing based centre.

It seems that, the city is free from industrial harmful- gas effluents.

AIRVEDA Camera Techniques Beta Attenuation Method (BAM) has been employed to check the air quality parameters in terms of Air Quality Index **(AQI)** and audible intensity measured by standard sensors of sound, in decibel Bell **(dB).**

The details of Geographical, Environmental and Weather parameters of Mudalagi

And related charts and their importance are submitted to the college.

Technical staff

Convener
Environment Audit Team

Date :22nd Dec 2023
Place :Mudalagi

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GEOGRAPHICAL PARAMETERS

1. Altitude from sea level : 562m (2323.10 ft)
2. Latitude : 16.336254 N.
3. Longitude: 74.960282 E.
4. Geographical location: Ghataprabha sub basin (Main basin :Krishna)
5. Weather zone : *Koppen Gieger* - BSh
6. Topo sheet : enclosed
7. Perennial water flow direction : N-S and S-N
8. Ridge points in Campus : NO
9. Low Contour pole level :680 m
10. Slope of the land :1:100
11. Mudalagi : Semi Agriculture town .

PHYSICAL PARAMETERS

12. Average Temperature : 18 to 38 Celsius.
13. Average rainfall: 100 to 320 mm.
14. Peak rainy month : July-August
15. Snow fall : Nil
16. /Gust / Wind speed: 10 to 30 km/h
17. Average pressure : 1006.5 to 1014 mb
18. Least pressure : June
19. Max pressure: January
20. UV Index : 5 to 9 normal
21. Average Humidity : 25 % to 78%
22. Least humid period : Jan to May
23. Ave Sun days :85 to 310 hours
24. Clear Visibility : up to 9-10 km

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SUSTANABLE POLLUTION LEVELS

25. **AQI level : 43**		Good		(Acceptable as per MoEF)
26. **RPM :**	: 43	8.04 $\mu g\ m^{-3}$	Good	(605 μgm^{-3} as per MoEF.)
27. **CO** level:	1.00	160.00 $\mu g\ m^{-3}$	Good	(250$\mu g\ m^{-3}$ as per MoEF)
28. **NO_x** level :	3.00	5.48 $\mu g\ m^{-3}$	Good	(80 μgm^{-3} as per MoEF)
29. **O_3** level :	17.00	27.77 $\mu g\ m^{-3}$	Good	(100μgm^{-3} as per MoEF)
30. **SPM:**	20.00.	49.23 μgm^{-3}	Good	(100 μgm^{-3} as per MoEF)
31. **SO_x** level :	1.00	2.53 μgm^{-3}	Good	(50μgm^{-3} as per MoEF.)
32. The pollution levels : within the safe range				(as per MoEF standard)
33. dB level: around 45 to 50 Very Good .				(as per the BIS standards).
34. The illumination level : Appreciable				(as per BIS mark 3646 part I.)

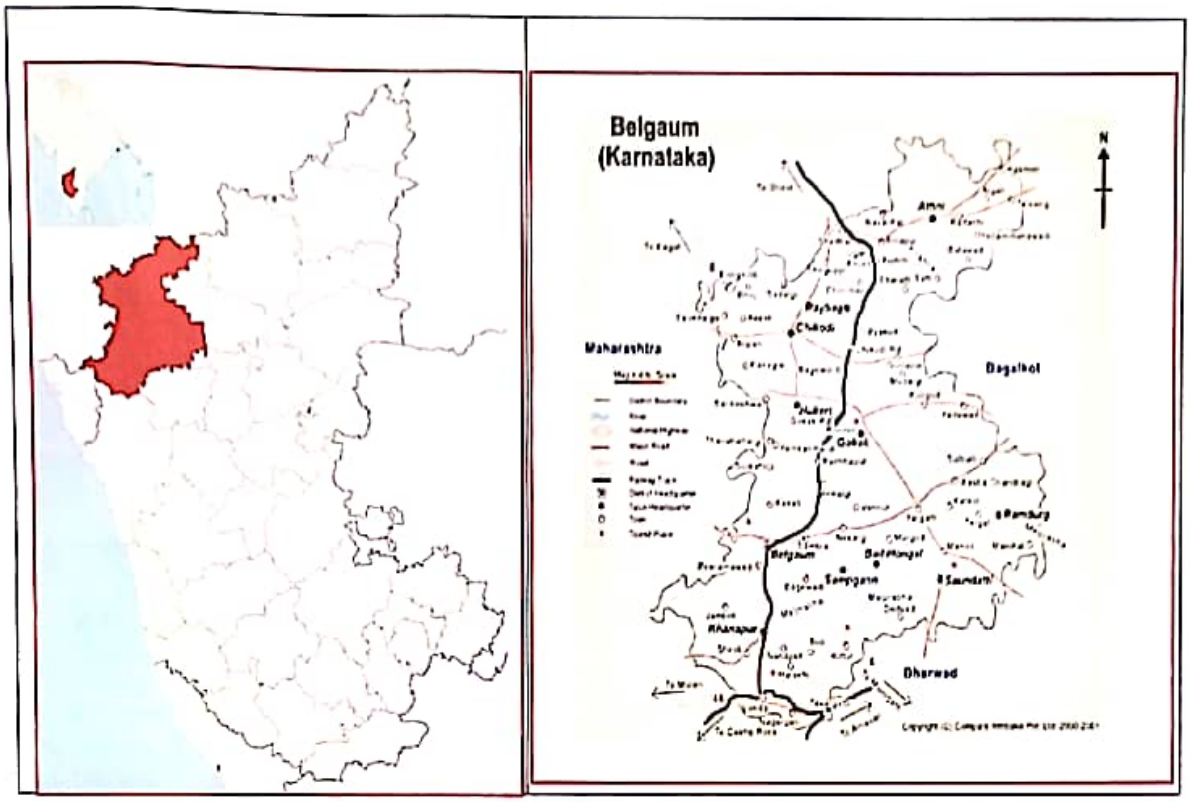
TYPE OF SOIL, PH, QUALITY OF WATER AND GREENARY

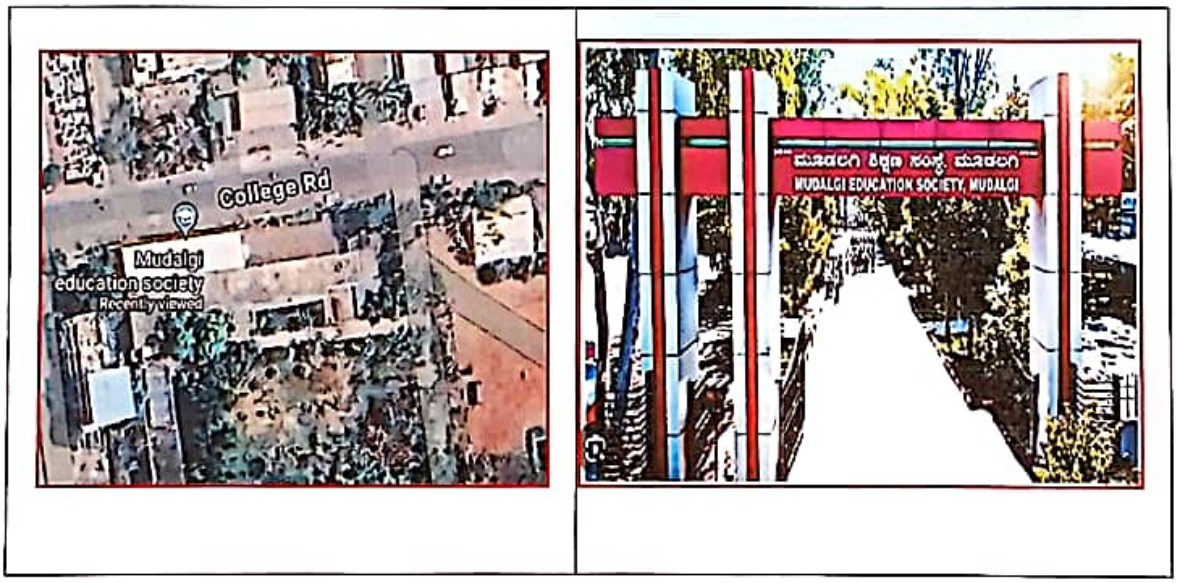
35. **Type of soil** :Yellowish Red loamy mix
36. PH of soil : 8.2to 9.
37. **Water quality** : Tested. (Test report is enclosed)
38. Greenery in the campus : Appreciable

MISCELLANEOUS

39. Max Hottest day 5th May 12.27 PM + 5.30 GMT
40. Max Humid day 7th Aug 12.36 PM + 5.30 GMT
41. Distance from Equator 1813.51 km
42. Distance from Tropic Cancer 787.91 km
43. Electromagnetic Radiation < 40μT (safe as per the BIS standards).

LOCATION DETAILS





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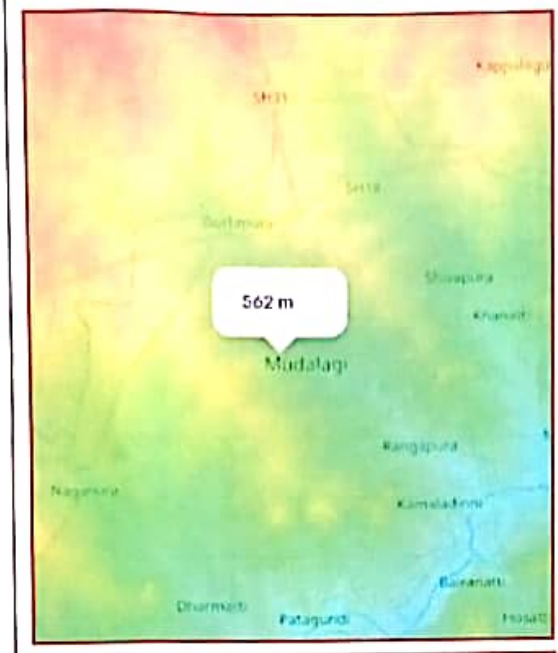

The Weather Channel

Mudalgi, Karnataka, India Weather

Air Quality

43 **Good**

Primary Pollutant: PM2.5

Air Quality Index

Summary

Air quality is considered satisfactory, and air pollution poses little or no risk.

All Pollutants

43	**Good**	**PM2.5** (Particulate matter less than 2.5 microns)
1	**Good**	**CO** (Carbon Monoxide)
3	**Good**	**NO2** (Nitrogen Dioxide)
17	**Good**	**O3** (Ozone)
20	**Good**	**PM10** (Particulate matter less than 10 microns)
1	**Good**	**SO2** (Sulfur Dioxide)

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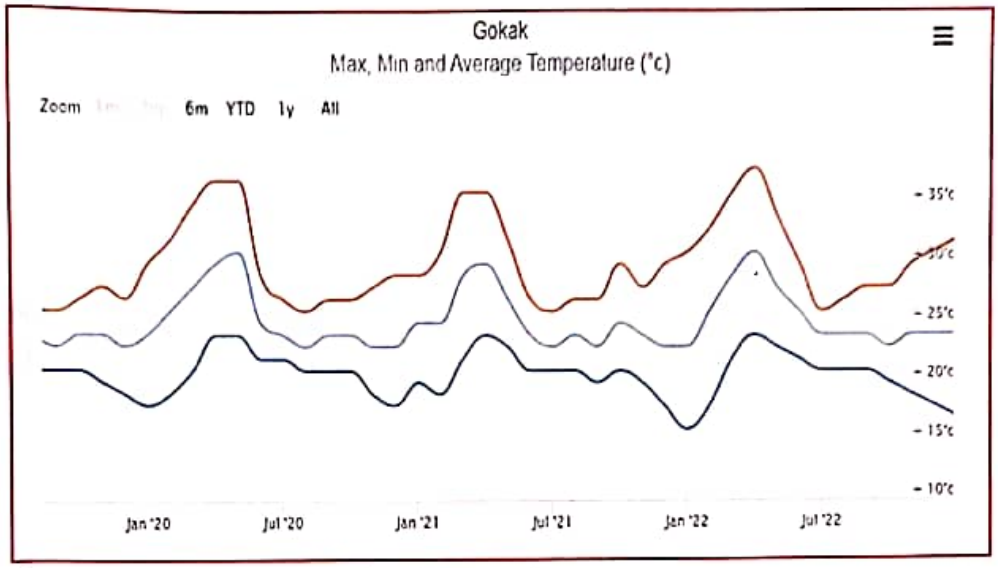
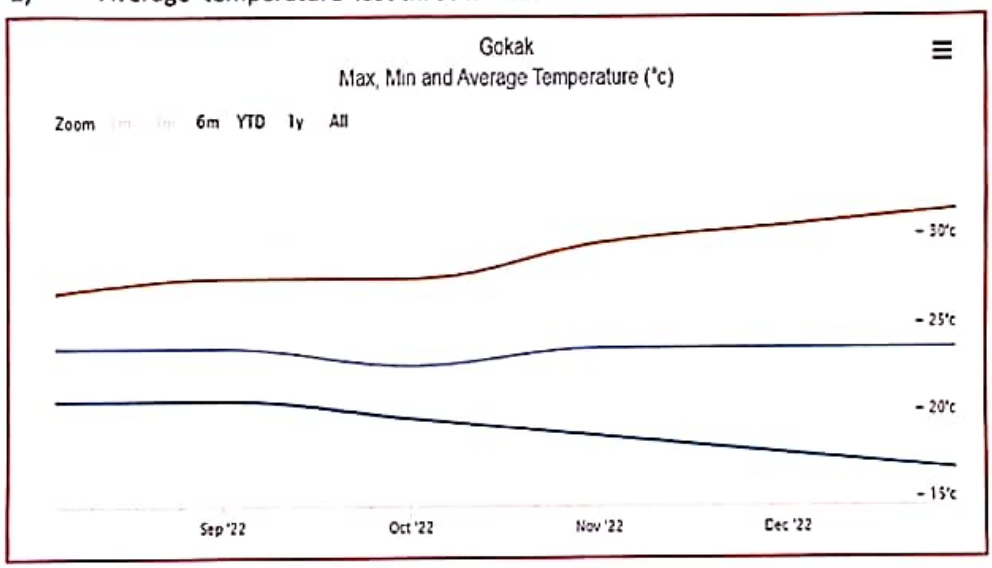
ENVIRONMENT PARAMETERS

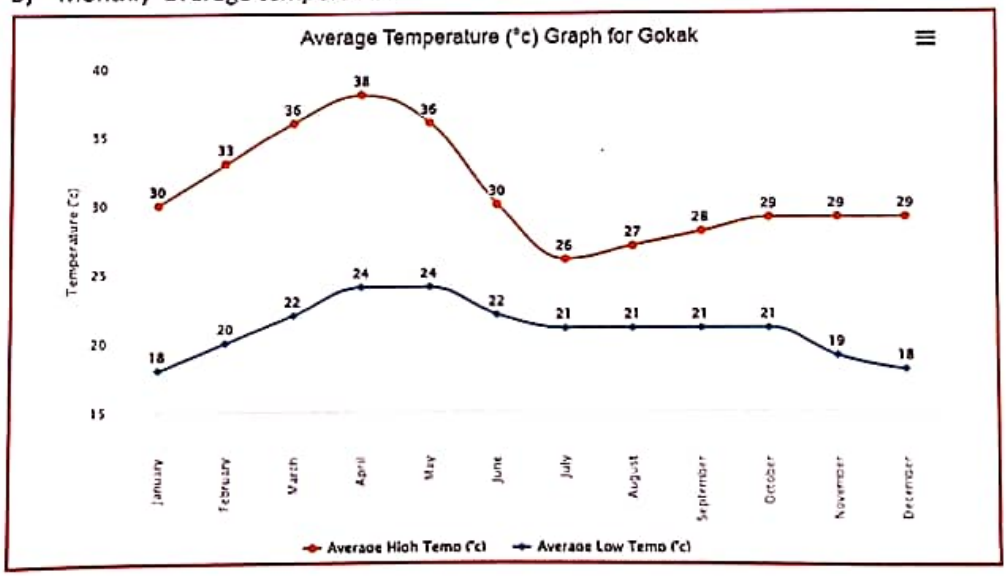
1) Average Temperature last three years



2) Average temperature last three months



3) Monthly average temperature



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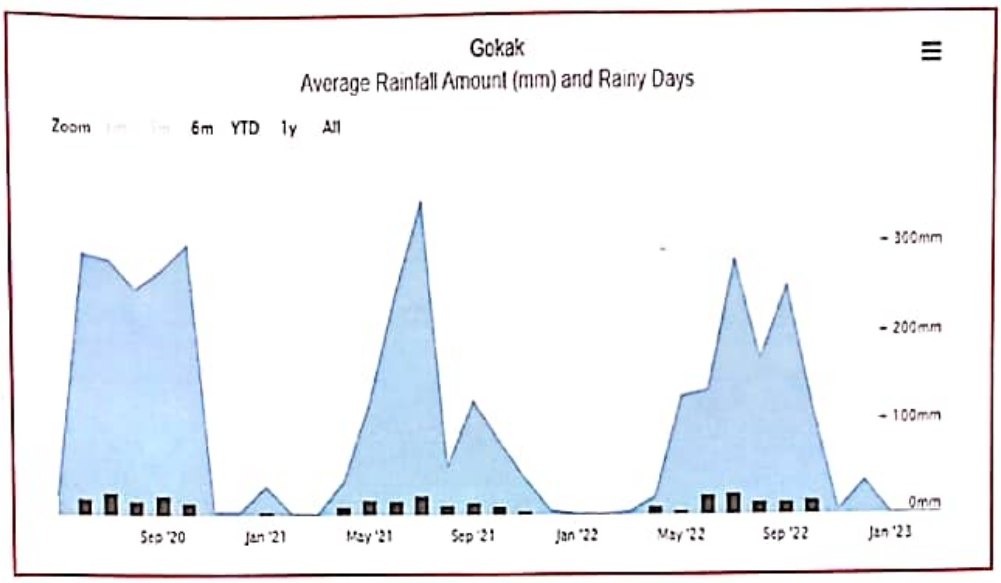
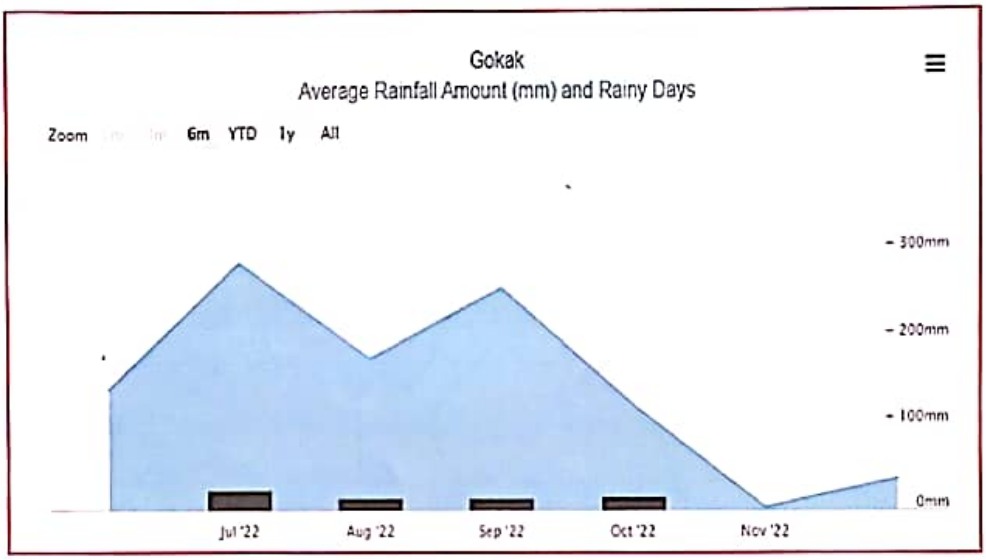
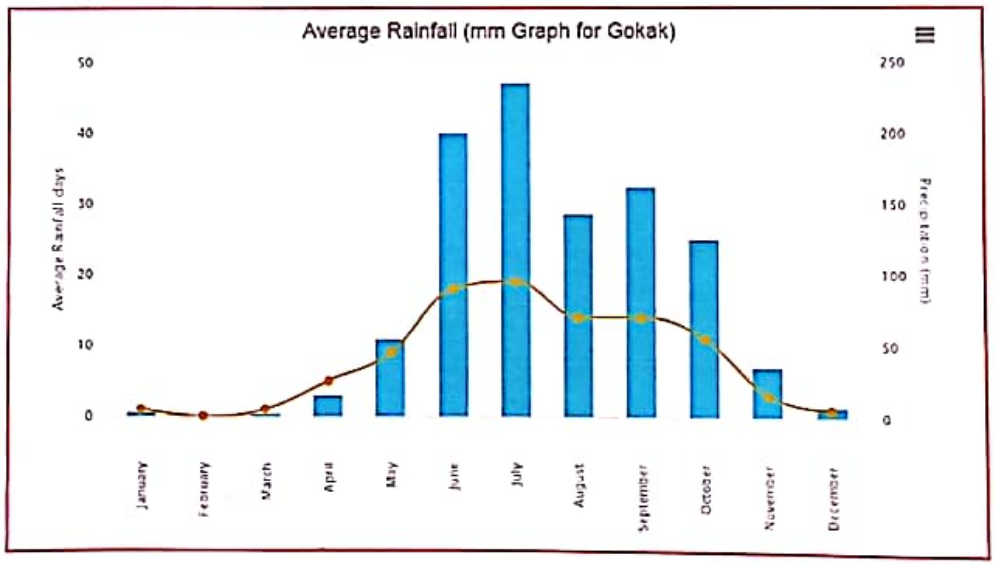
4) Average rain fall Rain fall lain (last three years)



5) Average Rain fall rain fall (last three months)



7) Monthly average rain fall



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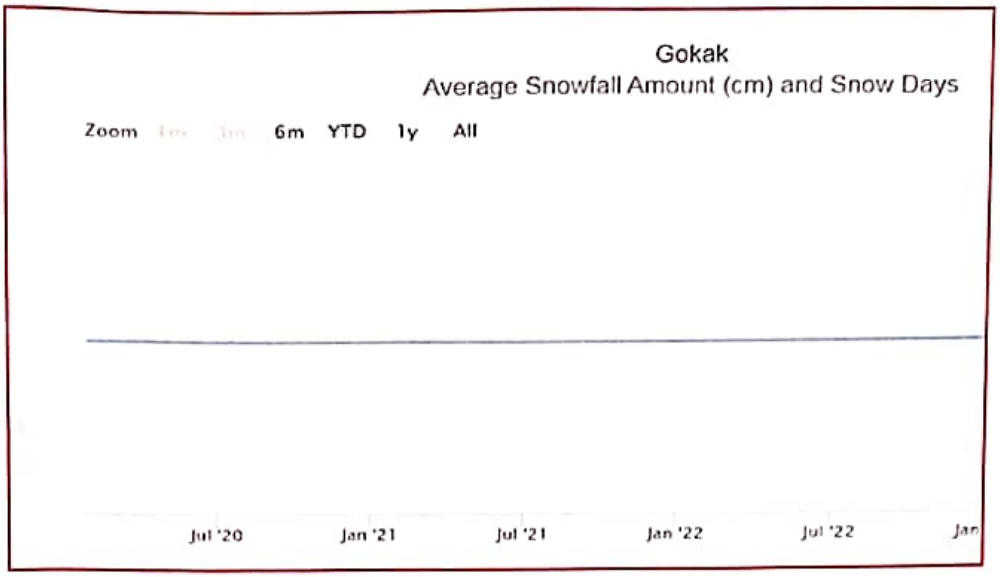
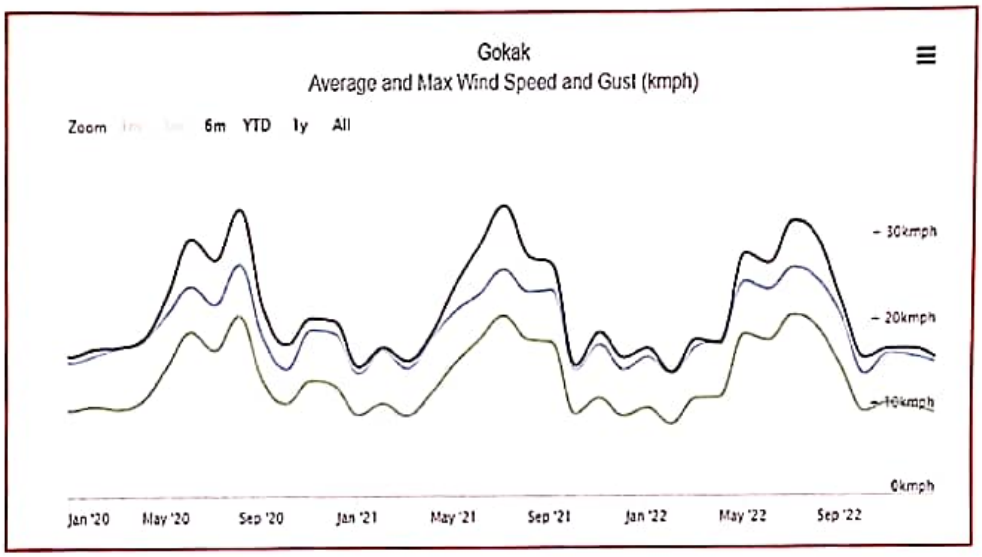
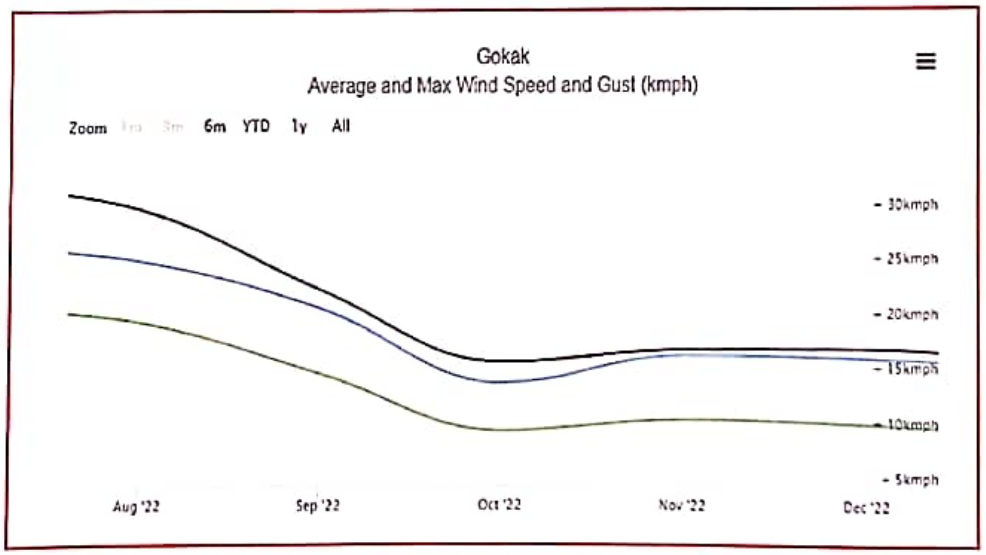
8) Snow fall



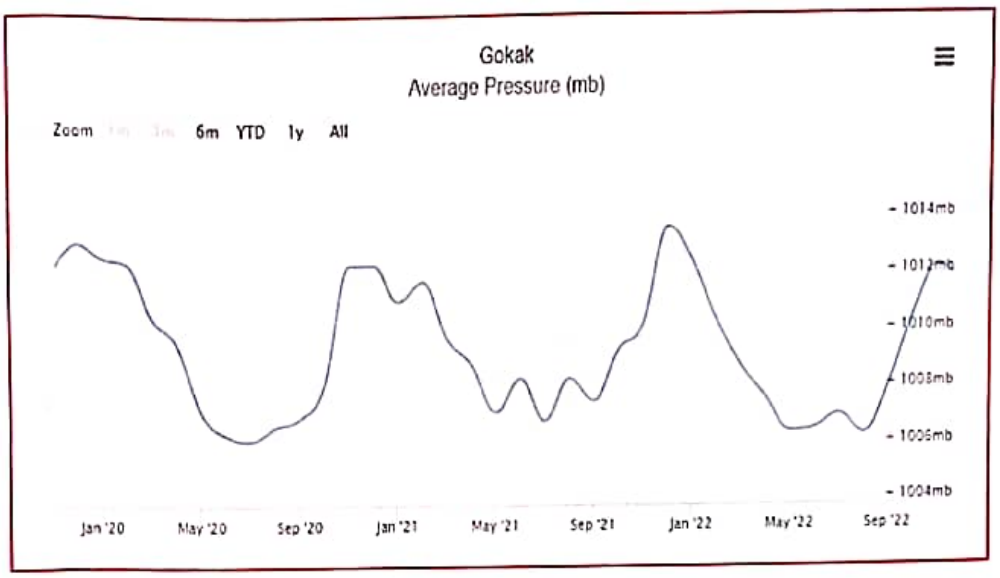
9) Average wind speed (last three years)



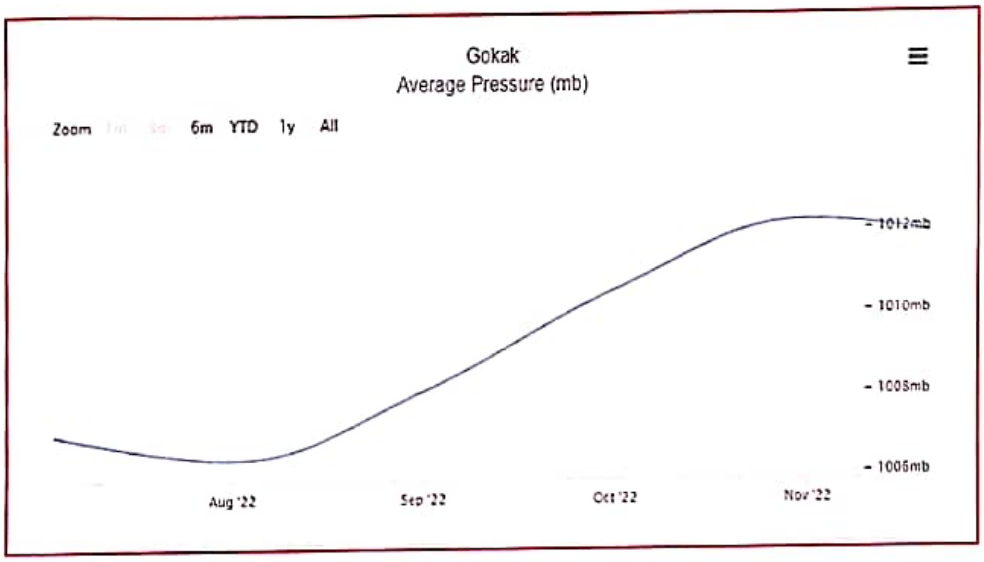
10) Average wind speed (last three months)



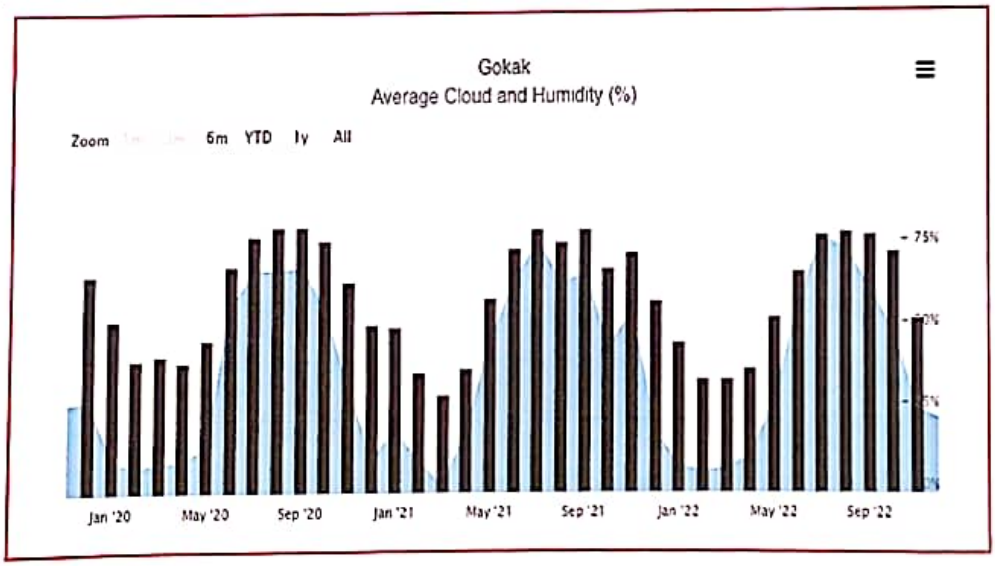
10) Average pressure (last three years)



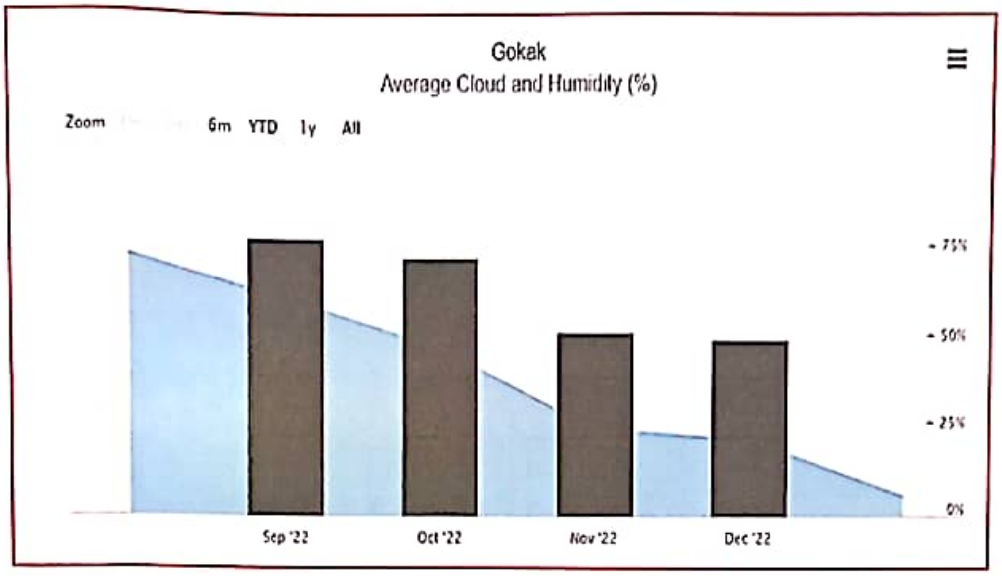
11) Average pressure (last three months)



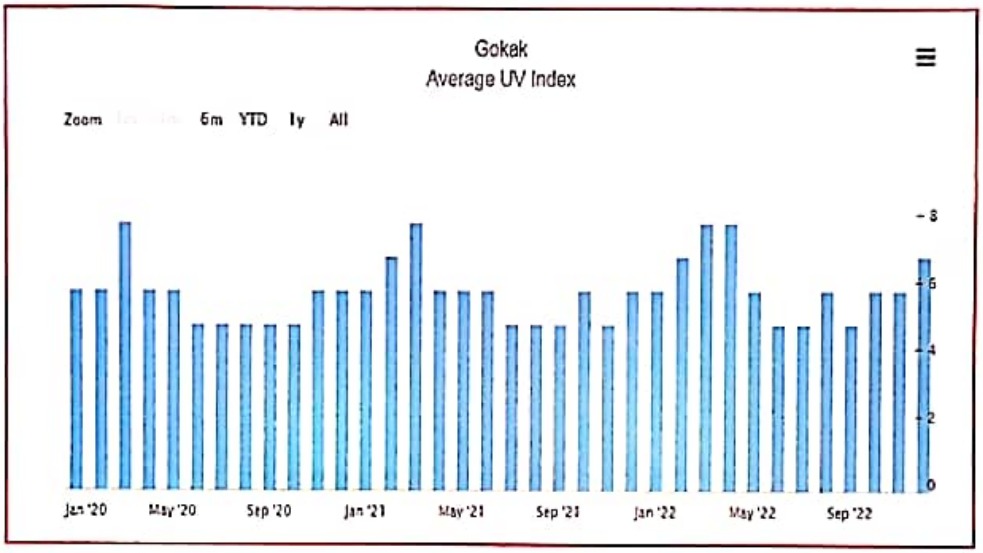
12) Average cloud and Humidity (last three years)



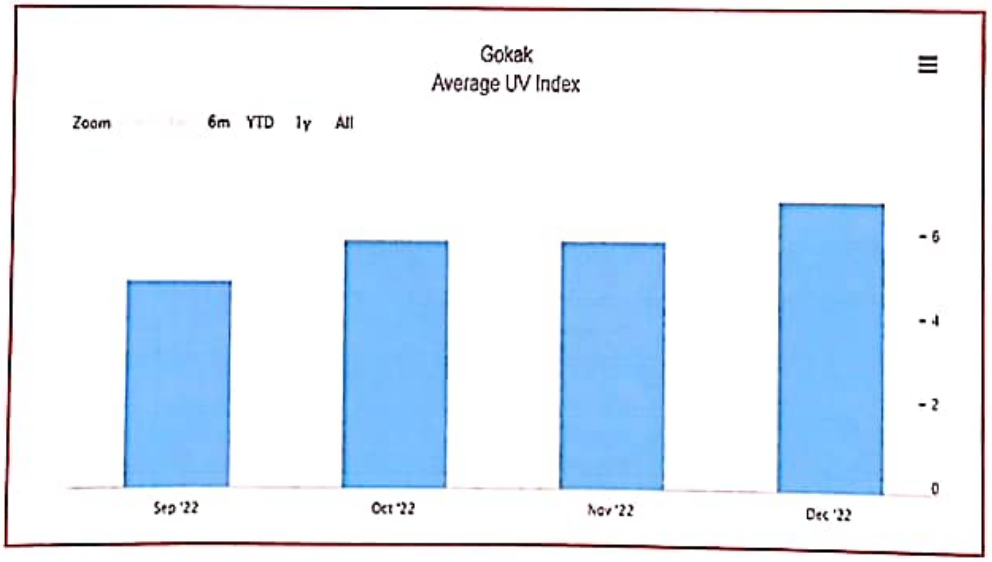
13) Average cloud and Humidity (last three years)



14) AverageUV index cloud and Humidity (last three years)



15) Average UV index (last three years)



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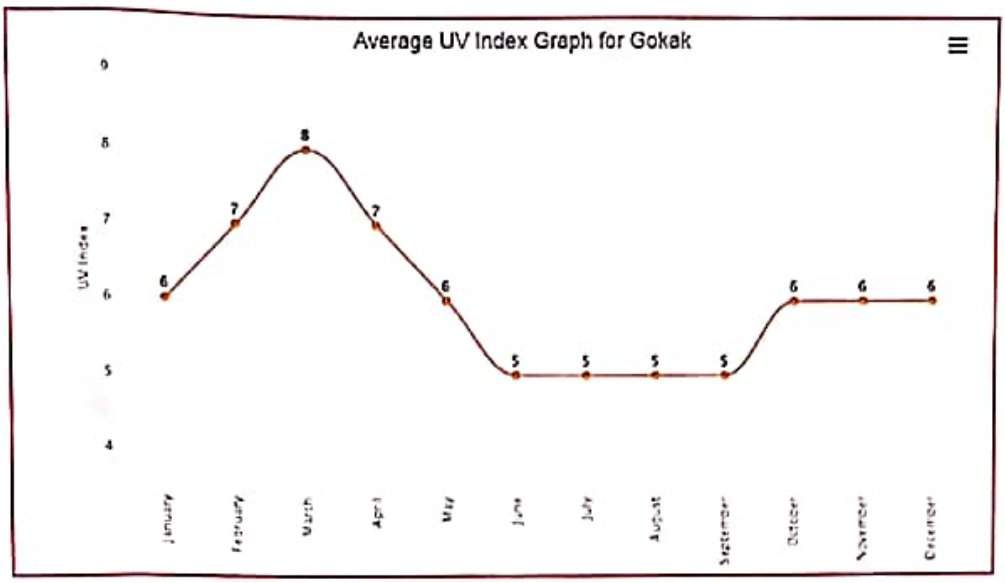
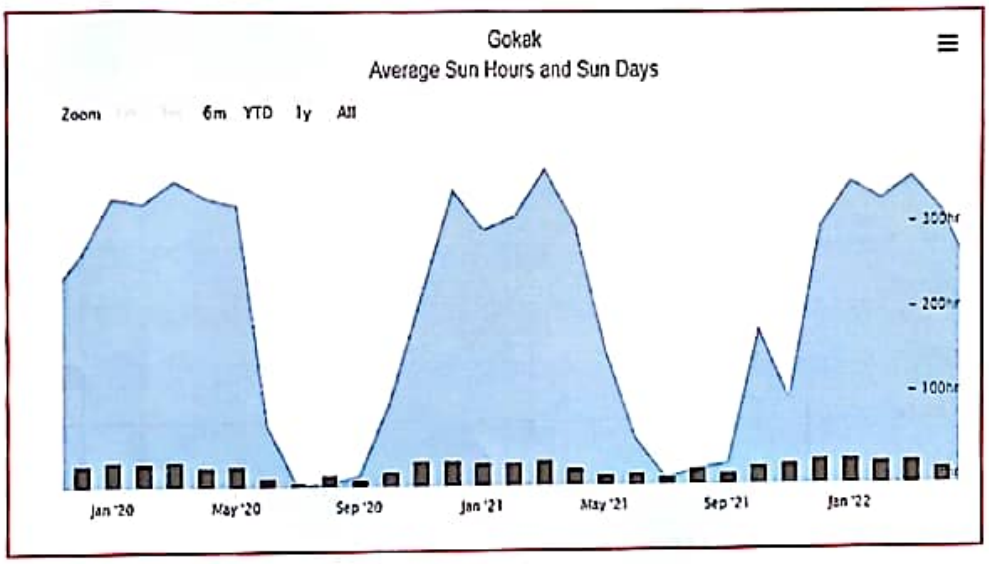
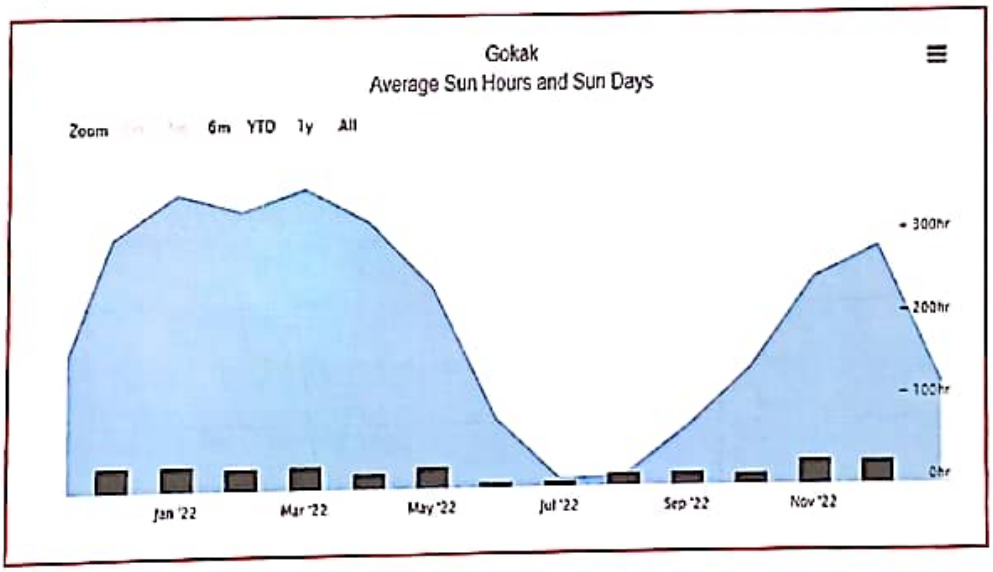
16) Average UV index (IMonthly)



17) Average Sun hours an sun days (last three years)



18) Average Sun hours an sun days (last three months)



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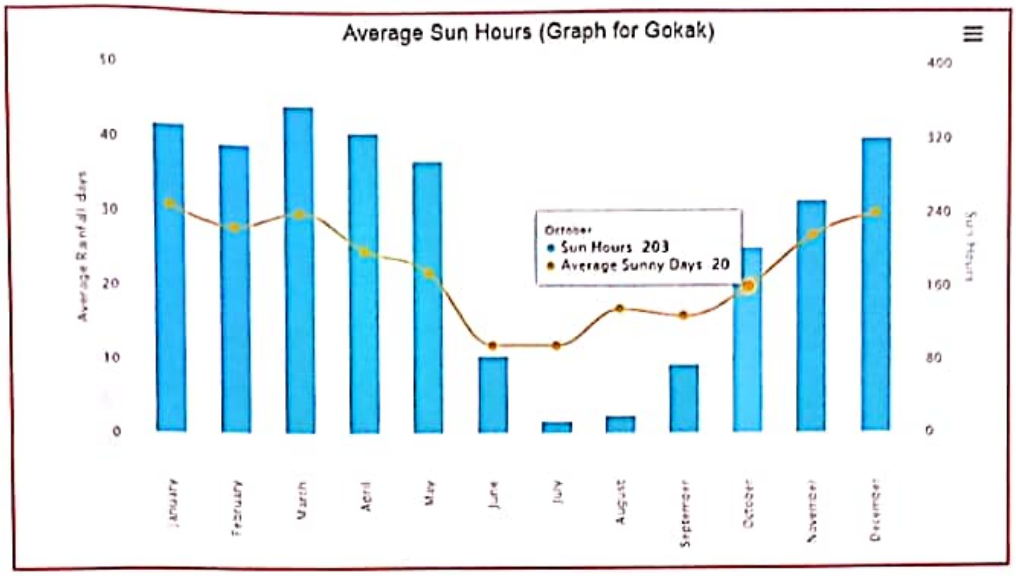
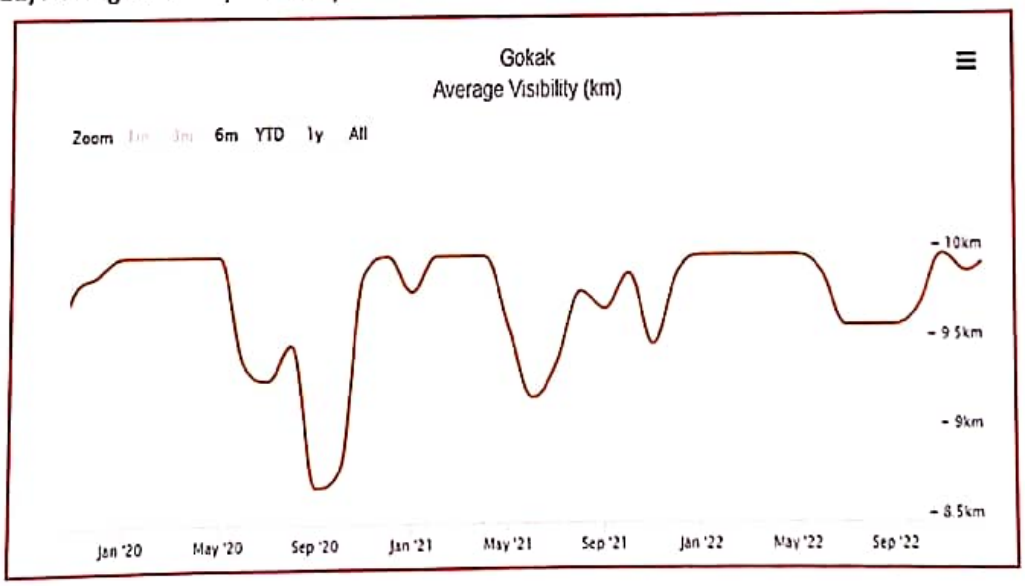
19) Average Sun Hours



20) Averae vislbility (last three months)

21) Average Visibility Monthly



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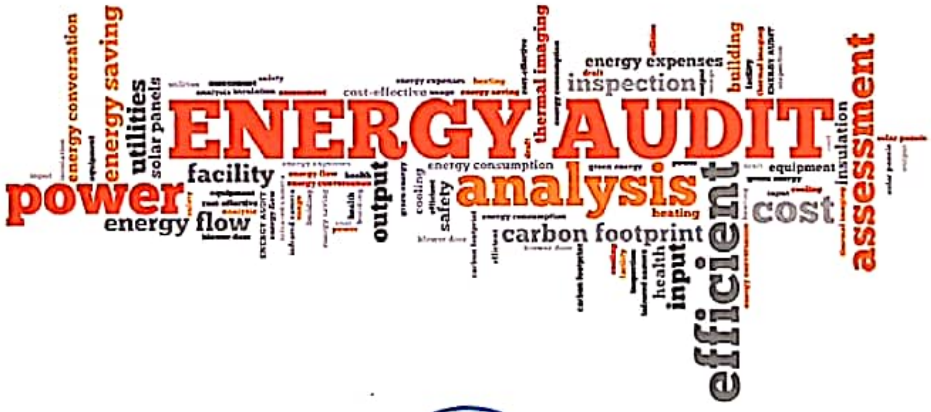
SOLUTIONS

ENERGY AUDIT



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Belgaum -16 Cell No : 9902428248

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#2311, I - Cross Mahantesh Nagar, BELGAUM - 16
e-mail : beecube81@gmail.com
Cell No : 9902428248, Reg No : UD-KR-04-058972

ENERGY AUDIT

This is to certify that, *Our Audit Team* has visited Mudalgi Education Society's Arts & Commerce College, **MUDALGI** Ta: Mudalgi Dist: Belagavi **591 312** on 15th Dec 2022 and undertook the "***Environment Audit***" of college campus.

The college is located in Mudalgi Town Municipal Council Limits. The population of city is 42,823 as per 2011 census. The literacy rate is Average :70% which is more than the national average

Mudalgi is well known for **Cattle Market** in Karnataka. It is business and agriculture marketing based centre.

To run all the college academic activities as per needs, the college is powered by six electric meters in different locations.

The related data have been analyzed. It is found by graphical analysis there is decline in use of electricity without affecting the routine academic activities.

And related charts and their importance are submitted to the college.

Technical staff

Convener
Energy Audit Team

Date :15th Dec 2022
Place :Mudalgi

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POWER METER CONNECTIONS IN THE CAMPUS

S.No	R.R.NO	Date of service	Max Load
1	MDL 2079	25/03/1996	3 kW
2	MDL 42295	19/09/2004	1.94 kW
3	MDL 70364	18/12/2013	1 kW
4	MDL 80755	24/04/2017	2 kW
5	MDL 81066	13/06/2017	2 kW
6	MDL 106765	04/04/2021	2 kW

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#2311, I - Cross Mahantesh Nagar, BELGAUM - 16
e-mail : beecube81@gmail.com
Cell No : 9902428248, Reg No : UD-KR-04-058972

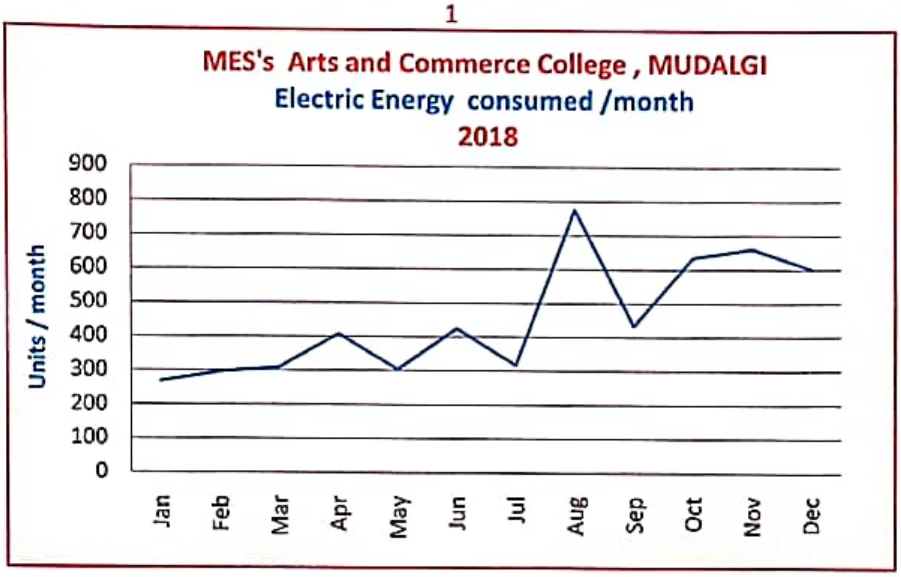
MES's

ARTS & COMMERCE COLLEGE, MUDALGI

Ta: Mudalgi Dist : Belagavi

YEAR WISE CONSUMPTION OF ELECTRIC ENERGY

1



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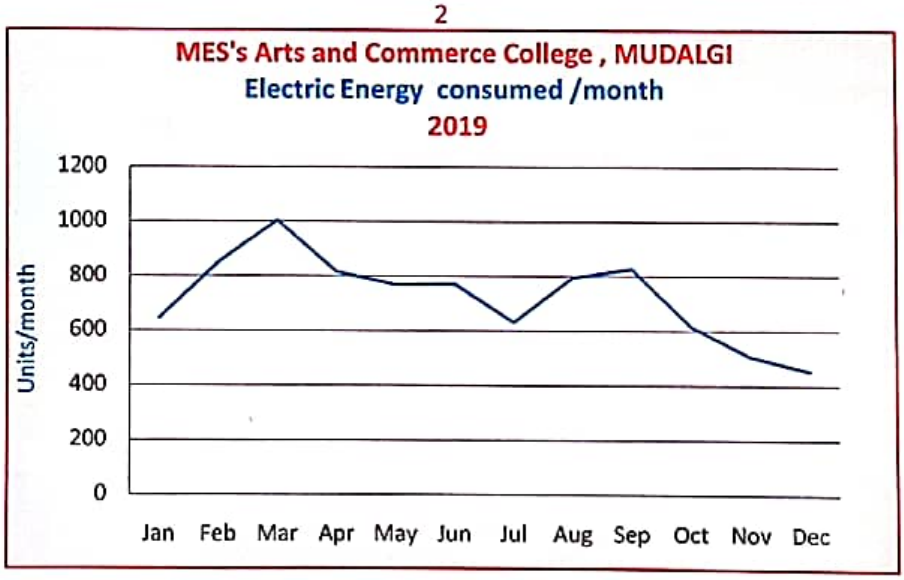

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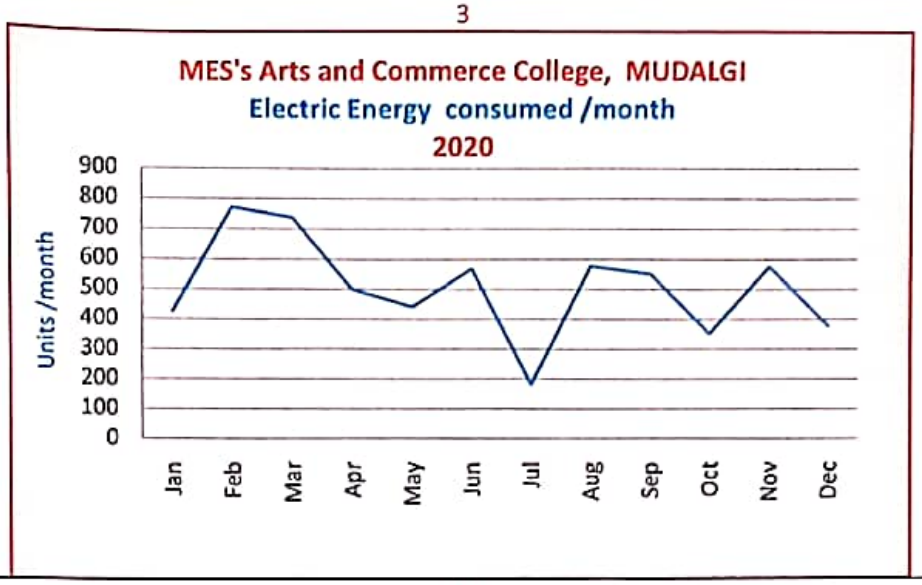

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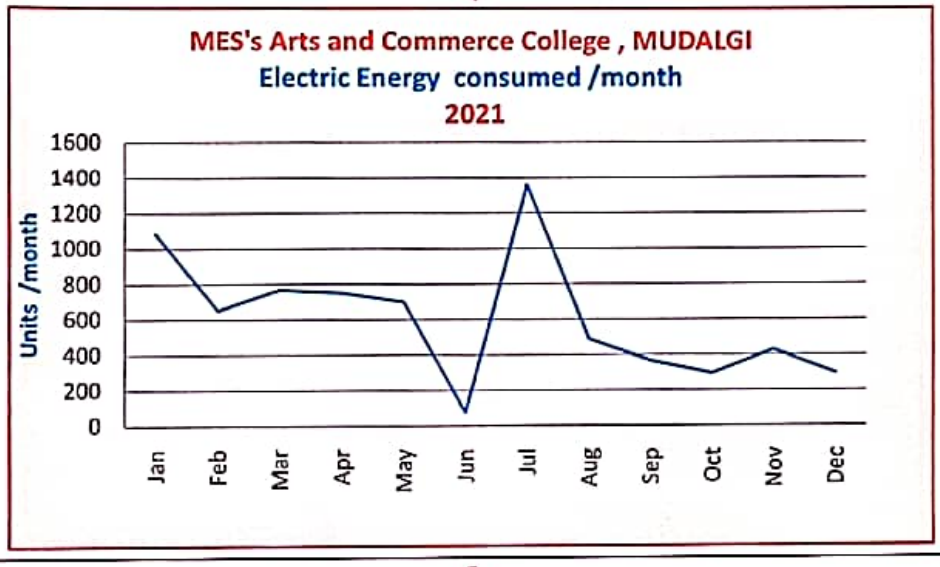

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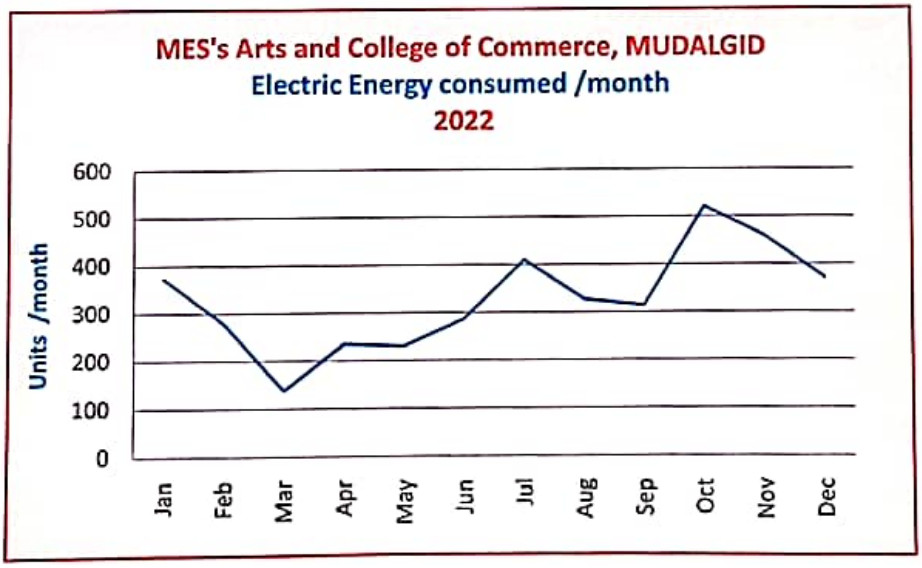

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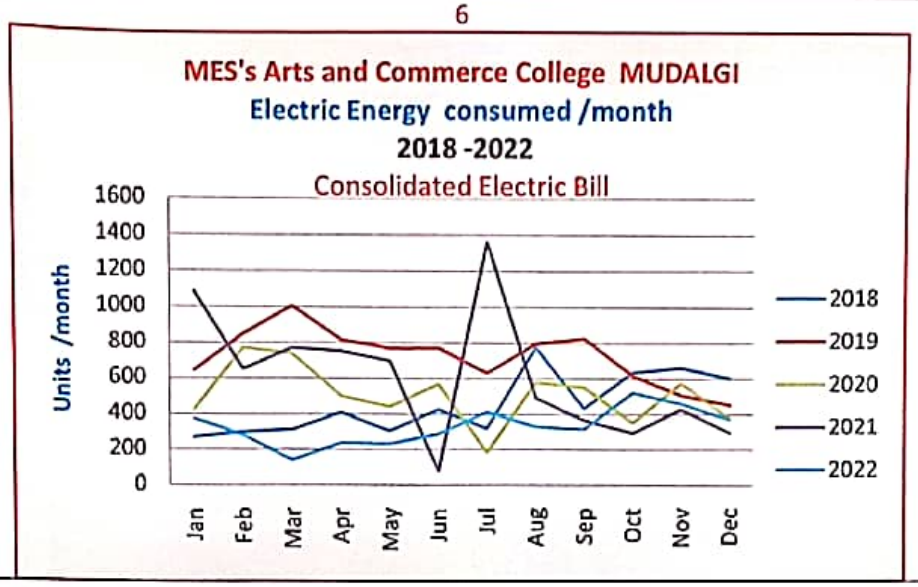

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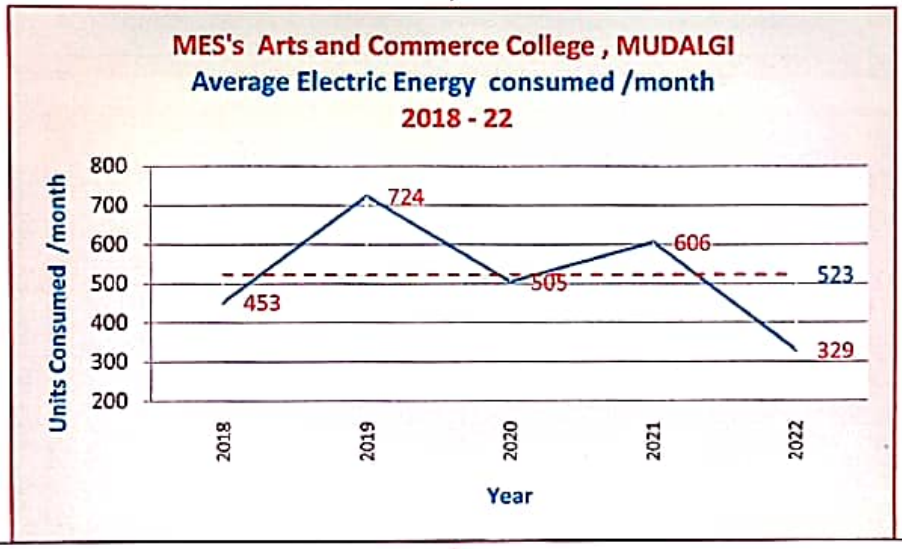

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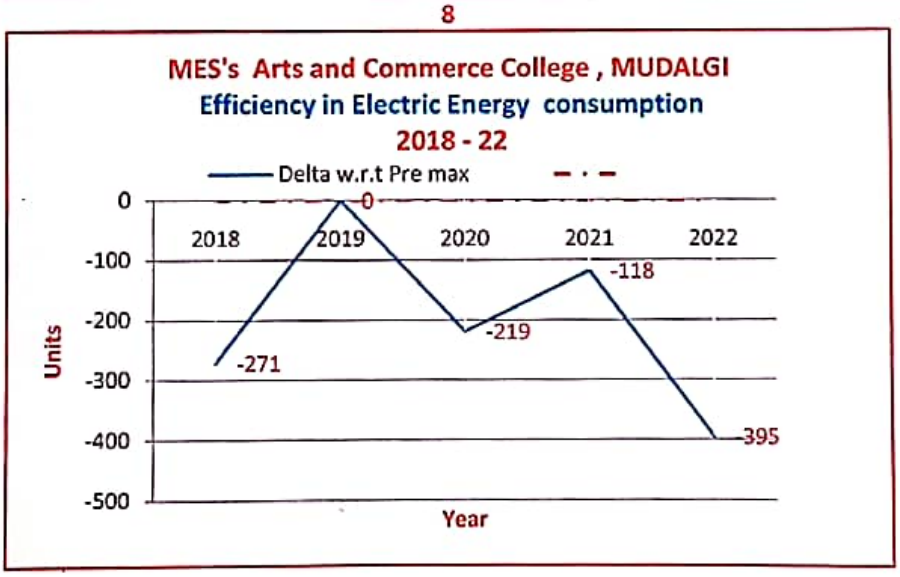

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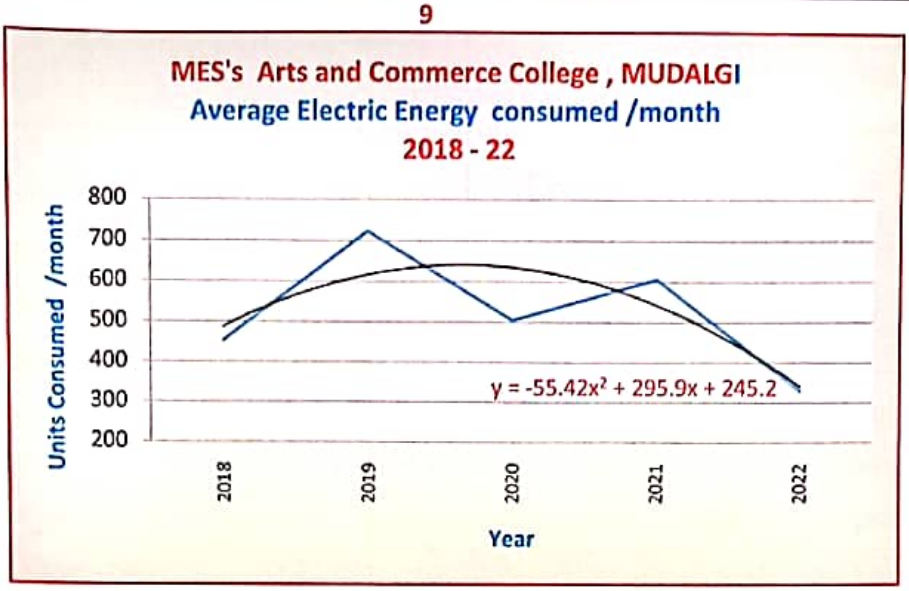

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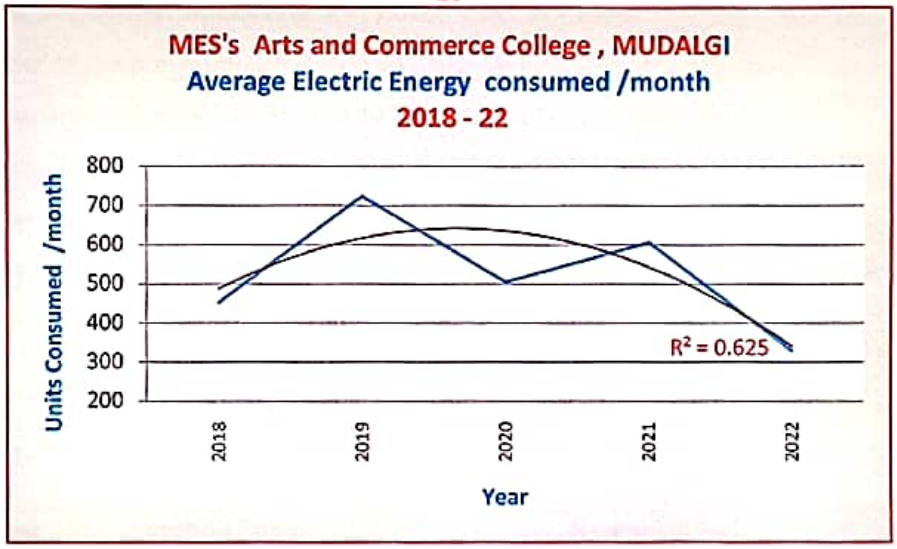

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OPTIMUM ENERGY UTILIZATION POLICY

1. Energy sensitization programs are set up in the campus.
2. Awareness is spread among the staff and students regarding judicious use of electrical energy
3. Additional stand alone solar units are installed at prime location of the campus
4. The energy utility curve has a initial exponential increasee trend later exponential decrease trend has appeared (slope of energy curve is negative compared to previous years
5. The average monthly utilization of electric energy is 358 Units (KWH)
6. A polynomial equation fits the energy utilization curve .
7. The polynomial equation is $y = -55.42x^2 + 295.9x + 245.2$
8. Order of the polynomial = 2
9. R squared value =R^2= $R^2 = 0.625t$ is in a acceptable value
10. Since R^2 value is more than 0.5 the polynomial fits the data
11. Slope m= - 0.1872 negative slope
12. Negative slope is **Good Practice** of using Electric energy is used very judiciously

S.No	Year	Average Power units consumed	Remarks
1	2018	453	A graphical analysis shows that there is initial increase in the beginning. It is found that there is "decreasing tread in the two three year because of adopting new technology and by using modern electric appliances
2	2019	724*	
3	2020	505	
4	2021	606	
5	2022	329*	
	Average	523	
		*Achievement	- 54.55% as compared to last max reading
*Note : However conservation of electric energy is followed (Adopting modern electric appliances)			

Global ECO TECH SOLUTIONS

GREEN AUDIT

Global Eco Tech Solutions BELGAUM 590 016

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Belgaum -16 Cell No : 9902428248

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GLOBAL ECO TECH SOLUTIONS

#2311, I - Cross Mahantesh Nagar, BELGAUM - 16
e-mail : beecube81@gmail.com
Cell No : 9902428248, Reg No : UD-KR-04-058972

GREEN AUDIT REPORT

This is to certify that, *Our Audit Team* has visited Mudalagi Education Society's Arts & Commerce College, **MUDALGI** Ta: Mudalgi Dist: Belagavi **591 312** on 15th Dec 2022 and undertook the "**GREEN *Audit***" of college campus.

The college is located in Mudalgi Town Municipal Council Limits. The population of city is 42,823 as per 2011 census. The literacy rate is Average :70% which is more than the national average

Mudalgi is well known for **Cattle Market** in Karnataka. It is business and agriculture marketing based centre.

It seems that, the city is free from industrial harmful- gas effluents.

Our team has conducted as survey on the flora and fauna of the campus. The campus is a clean and lush green beauty with serene atmosphere.

It is a matter of pride that rare trees like **RAKTA CHANDAN** and **RAKTA HONNE** are being grown in the campus. There is enough potential background to grow **MAHAGONI** trees in the campus .

Related charts and their importance are submitted to the college.

Technical staff

Convener
Environment Audit Team

Date :15th Dec 2022
Place :Mudalgi

Global Eco Tech Solutions BELGAUM 590 016

SOLID AND HAZARDOUS WASTE MANAGEMENT

The university has deep concern regarding sustainable practices to protect the environment, health and wellbeing through implementation of effective waste management practices such as segregation. Recycling, composting and solid wastes are classified as

1. BIODEGRADABLE WASTE :

   Litter, food waste, canteen waste and waste from toilets etc.

   Biodegradable kitchen waste from mess and canteen, such as dried leaves, twigs, and plant clippings is collected from all around the campus and used for vermin composting. Dustbins have been installed throughout the campus for waste segregation.

2. NON-BIODEGRADABLE WATSE.

   Waste like Plastic, metals, glass, waste bottle (dry waste) are systematically collected, segregated and sold to authorized Vendors for its recycling purpose

3. RECYCLABLE WASTE

   Newspaper, cardboard, and stationery write off books are collected and sold to authorized vendors

4. **SOLID WASTE MANAGEMENT:**

   College has a tie-up with Town Municipality to collect solid waste from the campus every day. The waste is segregated at a source and later collected by Poura karmikas to dispose of properly to the dumping yard of HDMP.

5. **LIQUID WASTE MANAGEMENT:**

   The liquid wastes are mainly drained to improve the ground water level. The grey water from the hostels and canteen is discharged to the recharge pit. Neutralized water from the above process is allowed to sediment in a tank to remove solid suspended waste and later this water is utilized for gardening and landscaping around Campus.

6. SANITORY WASTE

   Biomedical waste disposed off as per the Bio-medical Waste Management Rules 2016.Biomedical waste is collected in color-coded bags, disposed and managed as per norms of as per the standard Protocol of Karnataka State Pollution Control Board, in Girls' hostels provided with incinerators for the Disposal of menstrual waste material.

7. **e-WASTE MANAGEMENT**

   The e-wastes generated from Computer Section, Library, Examination section, academic and administrative offices. It includes out of order equipment or obsolete items like circuits, desktop, laptop and accessories, printers, charging and network cable, Wi-Fi devices, sound system, display unit, UPS, Biometric Machine, Electronic instruments etc. All such equipment which cannot be reused or recycled are disposed through authorized e-waste recyclers.

Mudalgi Education Society's

ARTS AND COMMERCE COLLEGE MUDALGI-591312

Dist: Belagavi) (State: Karnataka

Affiliated to Rani Channamma University, Belagavi

Prof. S. M. Gujagond
Principal

Phone/Fax: 08334-251238 Mob: 9449517918
E-mail: mudalgi_college@rediffmail.com
Accredited by NAAC at "B++" level

Vanamahostava @ NSS Camp Khanatti Village

Mudalgi Education Society's

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Phone/Fax: 08334-251238 Mob: 9449517918
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Vanamahostava on 18-06-2023 @ 10.30

Mudalgi Education Society's

ARTS AND COMMERCE COLLEGE MUDALGI-591312

Dist: Belagavi) (State: Karnataka

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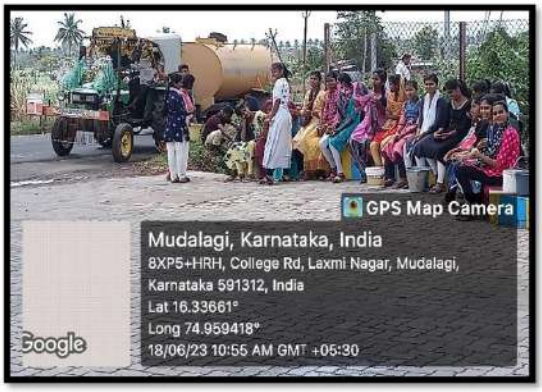

Mudalgi Education Society's

ARTS AND COMMERCE COLLEGE MUDALGI-591312

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Dr. R.A.Shastrimath
Principal

Phone/Fax: 08334-251238 Mob: 9448860053
E-mail: mudalgi_college@rediffmail.com
Accredited by NAAC at "B++" level

Vanamahotsava
on 04-09-2020 @ 11.15 am

Mudalgi Education Society's

ARTS AND COMMERCE COLLEGE MUDALGI-591312

Dist: Belagavi) (State: Karnataka

Affiliated to Rani Channamma University, Belagavi

Dr. R.A.Shastrimath
Principal

Phone/Fax: 08334-251238 Mob: 9448860053
E-mail: mudalgi_college@rediffmail.com
Accredited by NAAC at "B++" level

Vanamahostavaa
on 17-08-2019 @ 01-15 am

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2311, I - Cross Mahantesh Nagar, BELGAUM - 16
e-mail : beecube81@gmail.com
Cell No : 99024 28248, Reg No : UD-KR-04-058972

MES's

ARTS AND COMMERCE COLLEGE, MUDALGI

FLORA

S.No	Scientific name	Family	Vernacular name	NO
1	*Polyalthia longifolia*	Fabaceae	Ashok	35
2	*Mangifera indica*	Anacardiaceae	Mavu	12
3	Santalum album	Santalaceae	Chandan	18
4	*Pterocarpus santalinus*	Fabaceaeae	Rakta Chandan	27
5	*Tectona grandis*	Lamiaceae.	Sagavani	25
6	*Hyophorbe lagenicaulis*	Arecaceae	Bottle plam	18
7	*Caesalpinia pulcherrima*	Fabaceae	Sankeshwar	13
8	*Acacia baileyana*	Fabaceae	Acasia	10
9	*Roystonea regia:*	Arecaceae	Royal Palm	12
10	*Azadirachta indica*	Meliaceae.	Neam	60
11	*Citron Citrus reticulata*	Rutaceae	Citrus	4
12	*Syzygium jambos*	Myrtaceae	Jambosa	8
13	*Ziziphus mauritiana*	Rhamnaceae	Jajuba	4
14	*Livistona rotundifolia*	Arecaceae	Table Palm	4
15	*Bauhinia variegata*	Fabaceae	Kanchan	4
16	*Murraya koenigii*	Rutaceae	Karibevu	8
17	*Hibiscus* heterophyllus	Malvaceae	Hibiscus	10
18	*Ficus religiosa*	Moraceae	Arali	10
19	*Terminalia arjuna*	Combretaceae	Arjuna	6
20	*Tamarindus indica L*	Fabaceae	Tamarindus indica	6
21	*Carissa carandas*	Apocynaceae	Kavali	2
22	Leucaena leucocephala	Fabaceae	Balavalu	4
23	*Bambusa vulgaris*	Poaceae	Bamboo	2
24	*Carica papaya Linn.*	Caricaceae	Papaya	8
25	Aegle marmelos	Rutaceae	Bangali	3
26	Samanea saman	Fabaceae	Kagirotti	3
27	*Prosopis cineraria*	Fabaceae	Banni	5

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28	*Moringa oleifera*	Moringaceae	Mor Panki	22
29	*Cycas revoluta*	Cycadaceae	Cycas	1
30	*Phyllanthus amarus*	Phyllanthaceae	Nel neeli	2
31	*Ficus racemosa*	Moraceae	Atti mar	4
32	*Plumeria rubra*	Apocynaceae	Haladi Kanagal	4
33	*Ricinus communis*	Euphorbiaceae	Audal	2
34	*Thuja occidentalis*	Cupressaceae	Tuja	1
35	*Calotropis gigantea*	Apocynaceae	Ekka	7
36	*Areca catechu*	Arecaceae	Areca	20
37	*Solanum dulcamara*	Solanaceae	Solenum	5
38	*Swietenia macrophylla*	Meliaceae	Mahagoni	22
39	*Terminalia catappa*	Combretaceae	Kadu Badam	9
40	*Psidium guajava*	Myrtaceae	Peru	3
41	*Duranta repens*	Verbenaceae	Beli gid	20
41	*Eucalyptus globulus Labill*	Myrtaceae	Ecalyptus	10
42	*Cocos nucifera (L.)*	Arecaceae	Tengu	10
43	*Ficus benaium*	Moraceae	Atti hannu	3
44	*Catharanthus roseus*	Apocynaceae	Vinca Rose	N
45	*Lemon grass*	Poaceae	Leman grass	03
46	*Pongamia pinnata*	Fabaceae	Honge	11
47	*Artocarpus heterophyllus*	Moraceae	Halasu	3
48	*Leucaena leucocephala*	Fabaceae	Subabul	20
49	*Ficus carica*	Fabaceae	Basari	4
50	*Vachellia nilotica*	Fabaceae	Karijaali	5
51	*Moringa oleifera*	Moringaceae	Nugge	5
52	*Holoptelea integrifolia*	Ulmaceae	Tapasi	3
53	*Hardwickia binata*	Detarioideae	Anjani	2
54	*Pterocarpus marsupium*	Fabaceae	Rakta Honne	20
55	*Tinospora cordifolia*	Menispermaceae	Amruta Balli	10
60	*Pithecellobium dulce*	Fabaceae	Ilachi	4
61	Clitoria ternatea	Fabaceae	Shankpushpa (white)	4
62	*Aegle marmelos*	Rutaceae	Bel patri	6
63	Clitoria ternatea	Fabaceae	Shankpushpa (blue)	8
64	Phyllanthus emblica	Phyllanthaceae	Guddad Nelli	5
65	*Ficus religiosa*	Moraceae	Arali mar	

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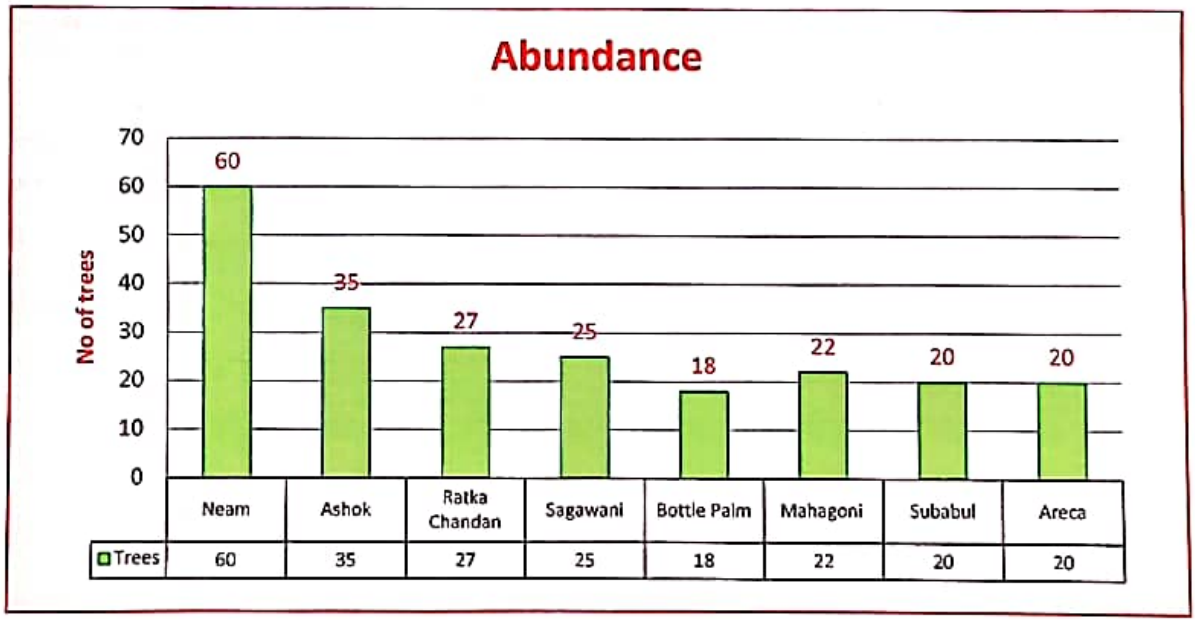
590 016

ABUNDANCE IN PLORA

S.No	Name	Number
1	Neam	60
2	Ashok	35
3	Rakta chandan	27
4	Sagavani	25
5	Bottle Palm	18
6	Mahagoni	22
7	Subabul	20
8	Areca	20

ABUNDANCE

There are about 227 big trees of different variety. which are abundant in the campus. They contribute a lot to major amount of bio mass and fresh oxygen ooze in the campus. Predominant photosynthetic activity by this fresh air keeps the campus cool.



The campus is spread on 42 Acres of land. At least 75% of the College under vegetation canopy. This adds a serene beauty to the campus. Rest the area includes the carpet area ofbuilding, play ground and approach roads, manicure lawn etc

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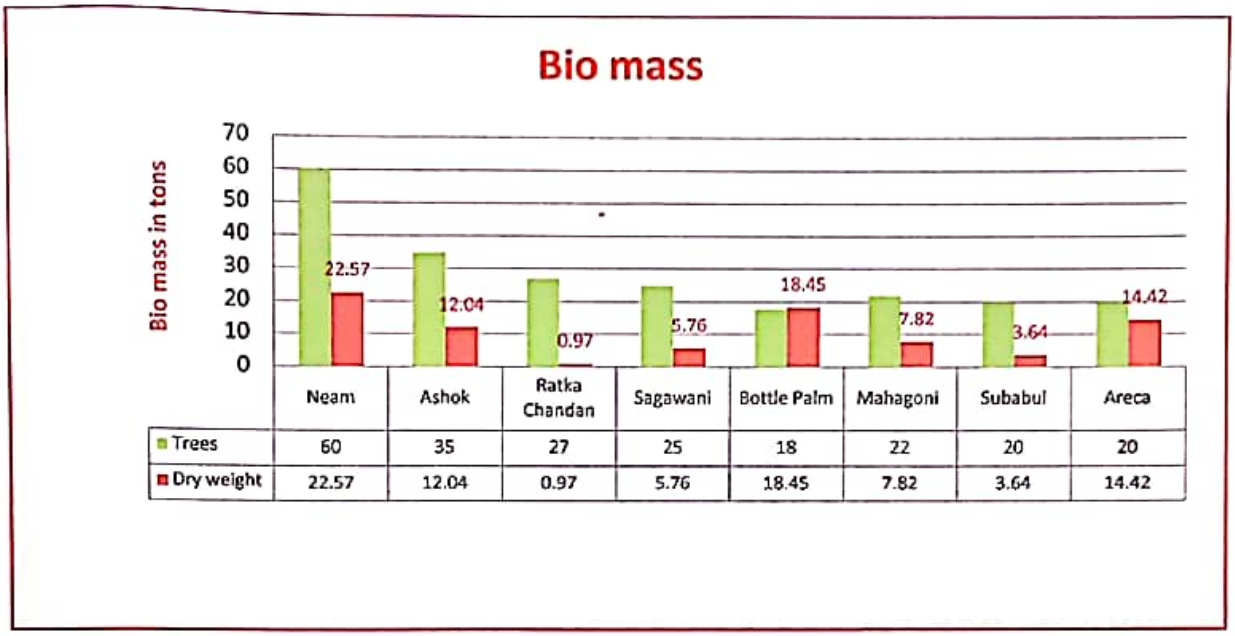
BIO MASS

Biomass is renewable organic material that comes from plants. Biomass contains stored chemical energy from the sun that is produced by plants through photosynthesis. Biomass can be burned directly for heat or converted to liquid and gaseous fuels through various processes.



	Neam	Ashok	Ratka Chandan	Sagawani	Bottle Palm	Mahagoni	Subabul	Areca
Trees	60	35	27	25	18	22	20	20
Dry weight	22.57	12.04	0.97	5.76	18.45	7.82	3.64	14.42

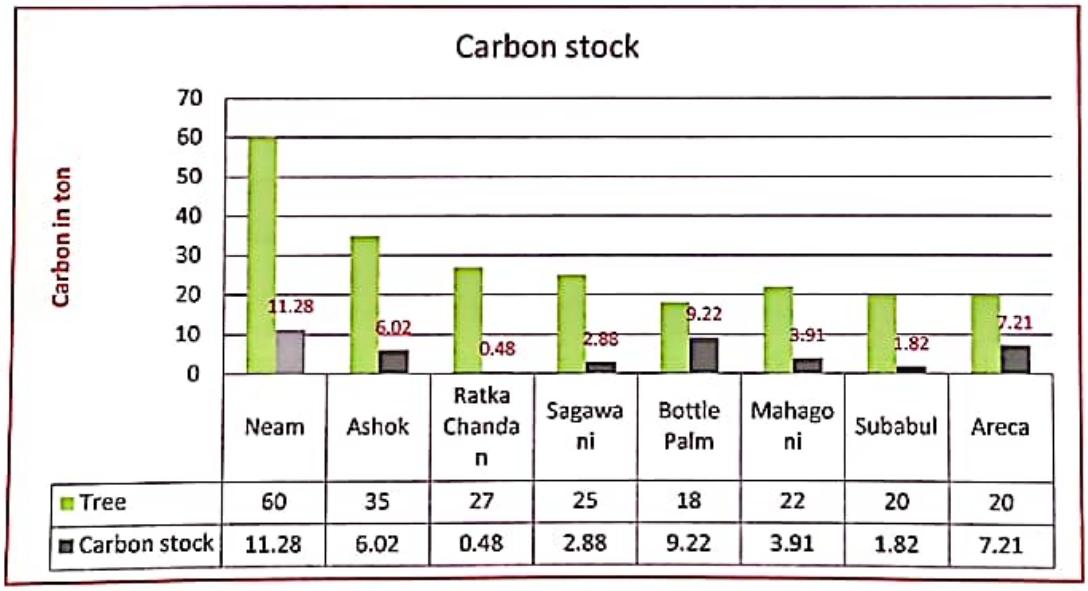
Bio mass from abundant trees = 85.67 ton

Bio mass contribution from rest of trees = 17.13 ton

Net Bio mass = 102.80 ton

CARBON STOCK

Forest carbon stock is the amount of carbon that has been sequestered from the atmosphere and is now stored within the forest ecosystem, mainly within living biomass and soil, and to a lesser extent also in dead wood and litter.



	Neam	Ashok	Ratka Chandan	Sagawani	Bottle Palm	Mahagoni	Subabul	Areca
Tree	60	35	27	25	18	22	20	20
Carbon stock	11.28	6.02	0.48	2.88	9.22	3.91	1.82	7.21

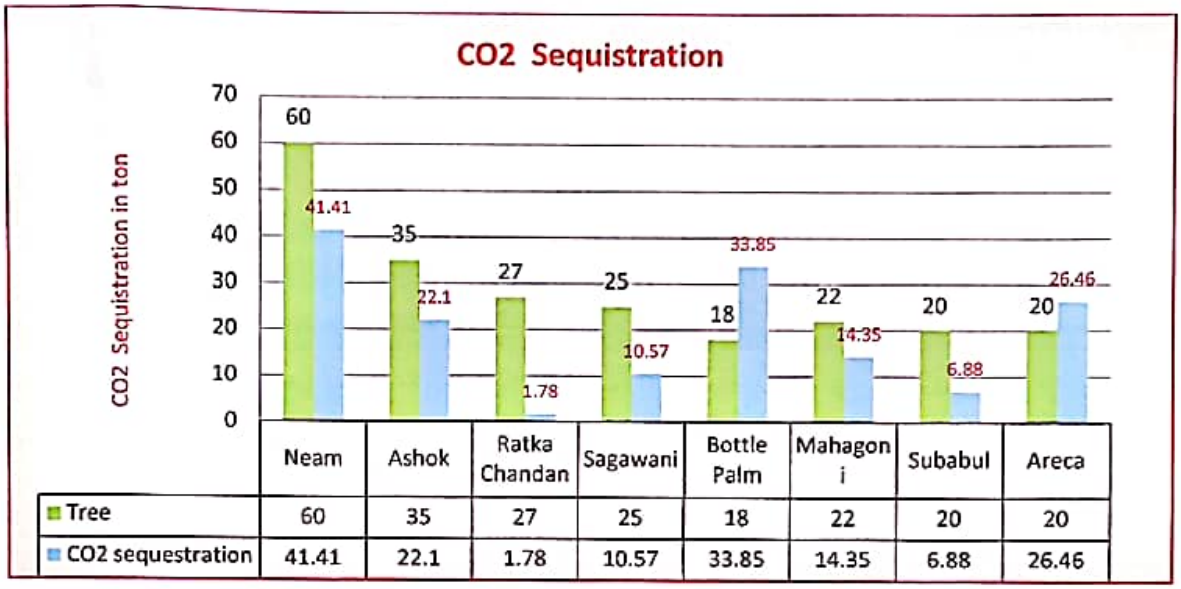
Carbon stock from abundant tree = 42.82 ton

Carbon stock from rest of trees = 8.56 ton

Net Carbon stock = 51.38 ton

CARBON SEQUISTRATION

Carbon sequestration is the removal of carbon dioxide from the air by plants. Carbon storage is the amount of carbon already bound up in the parts of woody vegetation



	Neam	Ashok	Ratka Chandan	Sagawani	Bottle Palm	Mahagoni	Subabul	Areca
Tree	60	35	27	25	18	22	20	20
CO2 sequestration	41.41	22.1	1.78	10.57	33.85	14.35	6.88	26.46

Carbon sequestration from abundant trees = 157.4 ton

Carbon sequestration from rest of trees = 31.48 ton

Net Bio mass = 188.88 ton

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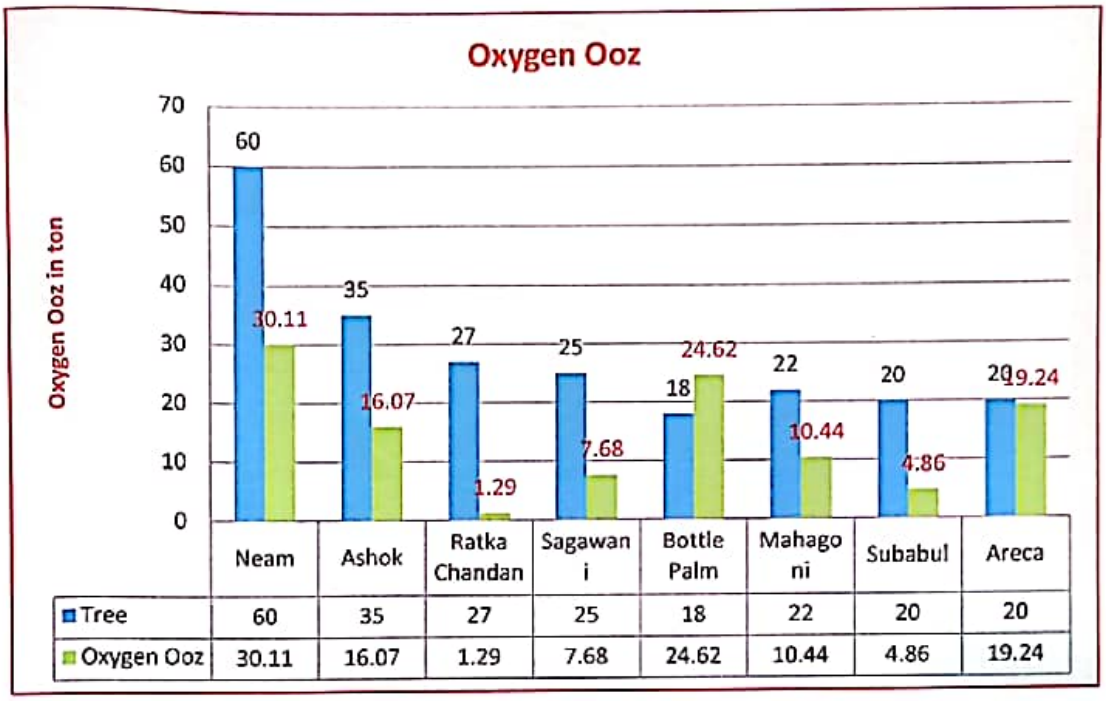
OXYGEN OOZE

One oxygen molecule is oozed from every one molecule of Carbon dioxide sequestration



Oxygen ooze from abundant trees = 114.31 ton

Oxygen ooze from rest of trees = 22.86 ton

Net Oxygen ooze = 137.17 ton

S.No	Type of tree	Number	S.No	Type of tree	Number
1	Oxygen oozing plants	16	2	Tree species	65
3	Medicinal	12	4	Rare	02
5	Woody	40	6	Fruit bearing	08
7	Sacred plants	08	8	Creepers	20
9	Endangered	-	10	Ornamental	Lot Many

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MES's
ARTS AND COMMERCE COLLEGE, MUDALGI

FAUNA

S.No	Scientific name	Family	Vernacular name
1	*Centropus sinensis*	Cuculidae	Ratna paksi
2	*Pavo cristatus*	Phasianidae	Naveelu
3	*Corvus splendens*	Corvidae	Kage
4	*Vanellus indicus*	Charadriidae.	Bellakki
5	*Lumbricus terrestris*	Lumbricidae	Ere Hula
6	*Mycteria leucocephala*	Ciconiidae	Kokkare
7	*Eudynamys scolopaceus*	Cuculidae	Kogile
8	*Columba livia domestica*	Columbidea	Parival
9	*Acridotheres tristis*	Sturnidae	Goravank
10	*Bucerotidae / Buceros bicornis*	Bucerotidae	Horn bill
11	*Sciurus niger*	Sciuridae	Inachi
12	*Daboia russeli*	Serpentes	Snake
13	*Rana tigrina*	Ranidae	Frog
14	*Canis lupus familiaris*	Canidea	Dog
15	*Passer domesticus*	Passeridae,	Gubbi

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Global ECO TECH SOLUTIONS

#2309 I - Cross Mahantesh Nagar, BELGAUM - 16
e-mail : beecube81@gmail.com
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CARBON FOOT-PRINT OF THE INSTITUTE

(ISO 14064)

"A carbon foot print of the Institute is the total sum of Green House Gases (GHG) emissions caused by the organization event or product".

INPUT DATA

- Electric energy consumed in kWh/monthly(avrg of last three years) = 480 units/month.
- No of petrol cars used staff = 02.
- No of diesel cars used staff = 02.
- No of two wheelers brought by staff and students = 4+20 =24.
- Diesel generator =1.
- Omni bus = Nil
- LPG consumed in(kg) /month (staff common room) = Nil.
- LPG consumed in(kg) /month (canteen) = Nil.

CONSUMPTION RATES

- Electric energy consumed (avrg) last five years = 480 x12 = 5726 units/year.
- Average petrol consumed petrol car Liter /month =12 lit /month.
- Average diesel consumed diesel l car Liter/month =12 lit /month.
- Average petrol consumed by students-two wheelers (Liter)/month =12 x2 lit /month.
- Average diesel consumed for Generator = 5 lit /month.
- Average diesel consumed diesel by Omni buss =)1x (5 Liter)/day =25.00 lit /month.
- LPG consumed in(kg) /month (staff room) = 7.4 Kg /month.
- LPG consumed in(kg) /month (canteen) = 29.6 Kg /month.

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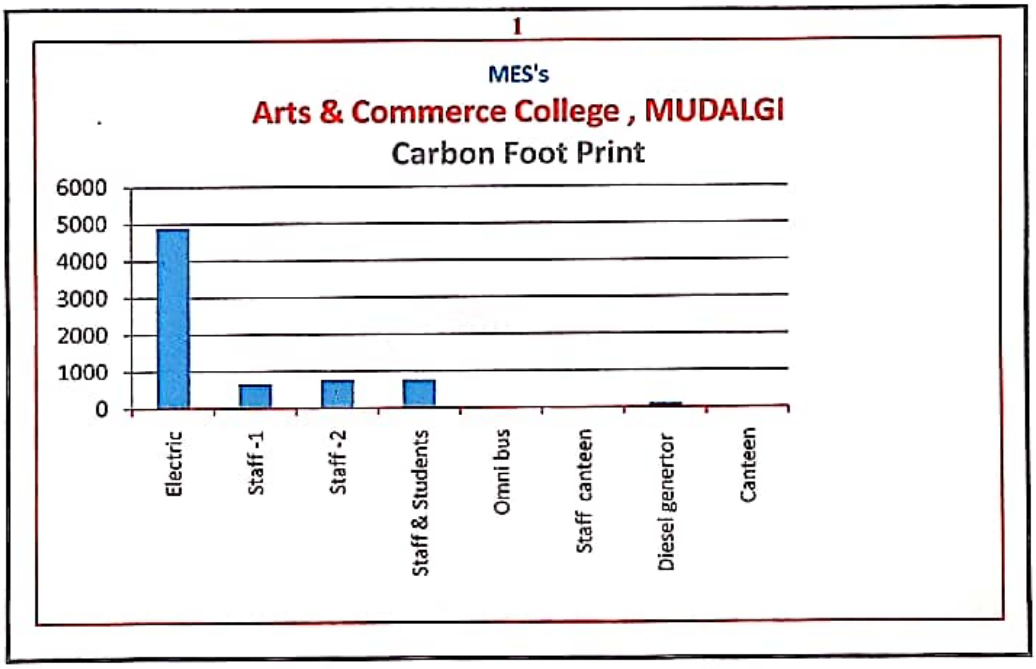
CARBON FOOT PRINT BY THE WAY OF IN KG OF CO_2 EQUIVALENTS

1. Electricity = 480x12x0.85 = 4896.00
2. Petrol (staff) = 2 x 12x12 x2.296 = 662.00
3. Diesel (staff) = 2 x12 x 12 x2.653 = 764.00
4. Two wheeler Petrol (staff and students) = 24x2x12 x210 x 2.296/365 = 760.00
5. Diesel (Generator)= 1x5x8x2.653=106.00
6. Diesel by Omni buses = 0.00x100 x12x 2.653x210/365 = 0.00
7. LPG (staff room) =0.00x12x2.983 = 0.00
8. LPG (Canteen) = 0.00 x12x2.983 = 0.00 (Out sourced)
9. **Net Carbon foot print in ton of CO_2 = 7188 Kg /year**
   = 7.188 ton/year



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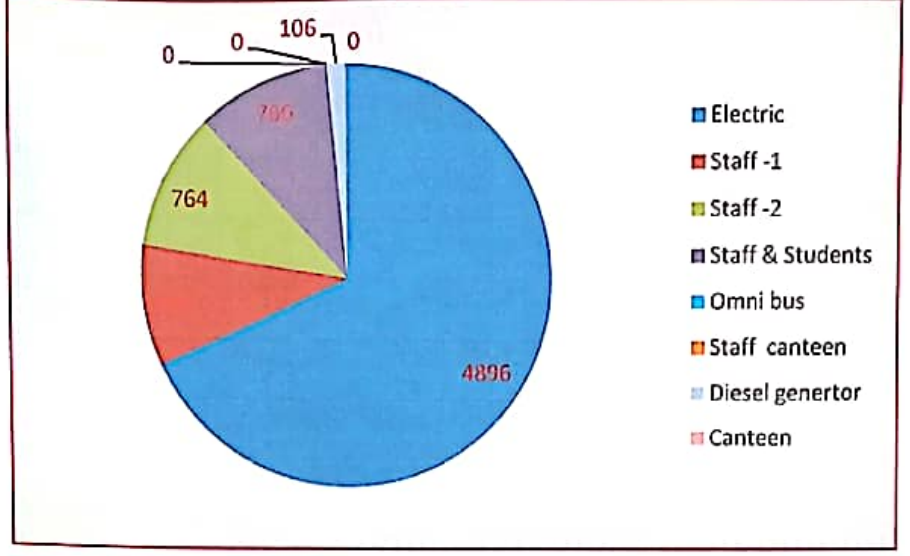

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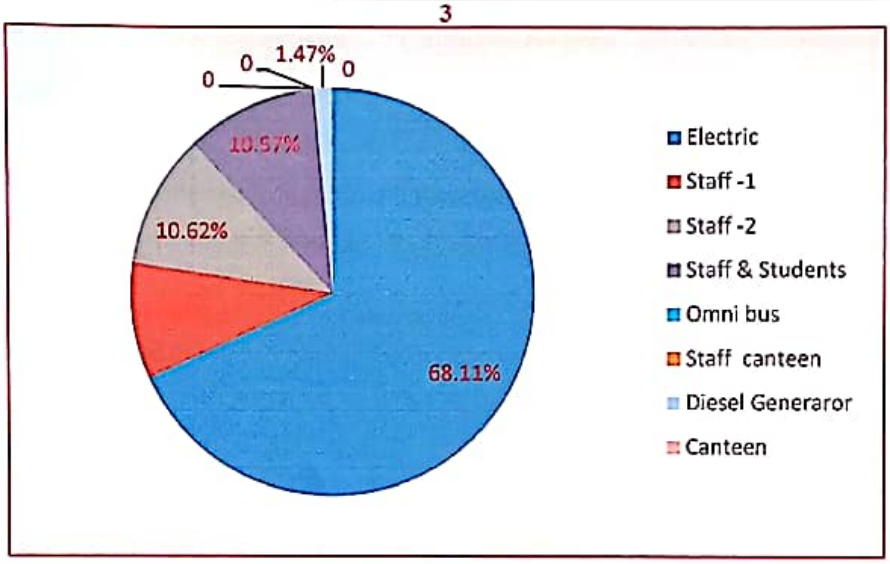

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UKAI-GLHV-23-169178

GLOBAL ECO TECH SOLUTIONS

#2311, I - Cross MahanteshNagar, BELGAUM - 16
e-mail : beecube81@gmail.com
Cell No : 9902428248, Reg No : UD-KR-04-058972

CARBON HAND PRINT FOR THE INSTITUTE

(ISO 14064)

"A Carbon Hand print of the Institute is the total sum of positive impact produced on the environment by reducing the carbon foot print ".

To **reduce** the "*Carbon foot print*", "*Carbon hand print*" following techniques practiced

i) Creating awareness regarding energy sensitization programs.
ii) Creating awareness annual **'PUC'** test of vehicles (**P**ollution **U**nder **C**ontrol).
iii) Encouraging to purchase of BS VI certified vehicles.
iv) Promoting electrical vehicles.
v) Encouraging to purchase of five star rating fridges
vi) Replacing resistor controlled dimmer with Semiconductor controlled dimmers.
vii) Installing stand alone solar units in the campus.
viii) Planning for roof top harvesting of solar energy.
ix) Celebrating Green Earth day
x) Following Citizen Charter like Do & Don'ts

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RURAL DRINKING WATER & SANITATION DEPARTMENT, GoK

District:Belagavi

Laboratory Name:Gokak Taluka Lab

TEST REPORT

Name Of District: Belagavi
Name Of Taluka: Mudalagi
Name of Hostel: Arts & Commerce College Mudalagi

Report date: 01-07-2024
Report Number: 028
Reference: Sample receipt Form
Sample receipt date: 01-07-2024
Sample code:028
Date of Sample collection: 01-07-2024
Analysis start date: 01-07-2024
Analysis completion date: 01-07-2024
Sample collection protocol: IS 3025(Part-1)
Sample quantity: 1litre

Sample Particulars: Borewell

Sl.No	Test	Results	Acceptable Limit IS 10500 : 2012 RA:2018	Permissible Limit IS 10500 : 2012 RA:2018	Protocol
1.	pH Value @Temp25.0°C	6.96	6.5 – 8.5	No relaxation	IS 3025 (Part-11) : 1983
2.	Specific Conductance,µS/cm@Temp°C	1430	–	–	IS 3025 (Part-14) : 1984
3.	Odour	Agreeable	Agreeable	Agreeable	IS 3025 (Part-5 & 6):2018
4.	Taste	Agreeable	Agreeable	Agreeable	IS 3025 (Part-8):1983
5.	Colour, Hazen Units	5	5	15	IS 3025 (Part-4) :1983
6.	Turbidity, NTU	1.2	1	5	IS 3025 (Part-10) : 1984
7.	Total Dissolved Solids@ 105°C, mg/l	677	500	2000	IS 3025 (Part-16) : 1984
8.	Alkalinity as $CaCO_3$, mg/l	340	200	600	IS 3025 (Part-23) : 1986
9.	Total Hardness as $CaCO_3$, mg/l	428.38	200	600	IS 3025 (Part-21) : 2009
10.	Calcium as Ca, mg/l	95.10	75	200	IS 3025 (Part-40) : 1991
11.	Magnesium as Mg, mg/l	38.07	30	100	IS 3025 (Part-46) : 1994
12.	Chloride as Cl, mg/l	142.5	250	1000	IS 3025 (Part-32) : 1988
13.	Sulphate as SO_4, mg/l	56.40	200	400	IS 3025 (Part-24) : 1986
14.	Fluoride as F, mg/l	0.08	1	1.5	APHA 23rd Edition
15.	Nitrate as NO_3, mg/l	21.58	45	No relaxation	APHA 23rd Edition
16.	Iron as Fe, mg/l	0.10	1	No relaxation	IS 3025 (Part-53) : 2003

Remarks: The above tested parameters are within the Acceptable limits, except TDS, Alkalinity, Total Hardness, are within the permissible limit as per specification of IS 10500:2021.

Analysed by:
Analyst

RDWSD/WQMSP/TeR/01

Note:

1) The above results relate only to the sample tested.
2) The report shall not be reproduced except in full without the prior approval of the Quality Manager.
3) Traceability: Traceability of measurements is established using CRMs traceable to National/International standards.
4) Samples will be discarded after 15 days from the date of report generation.
5) Decision rule is applicable as per the procedure mentioned in RDWSD/WQMSP/DR-01