



INDEX

CRITERION: 7.1.2

S.No	Department
1	Solar Energy
2	Wheeling to the Grid
3	Sensor Based Energy Conservation
4	Use of LED bulbs / Power Efficient Equipment


PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

NAAC Criteria 7.1.2

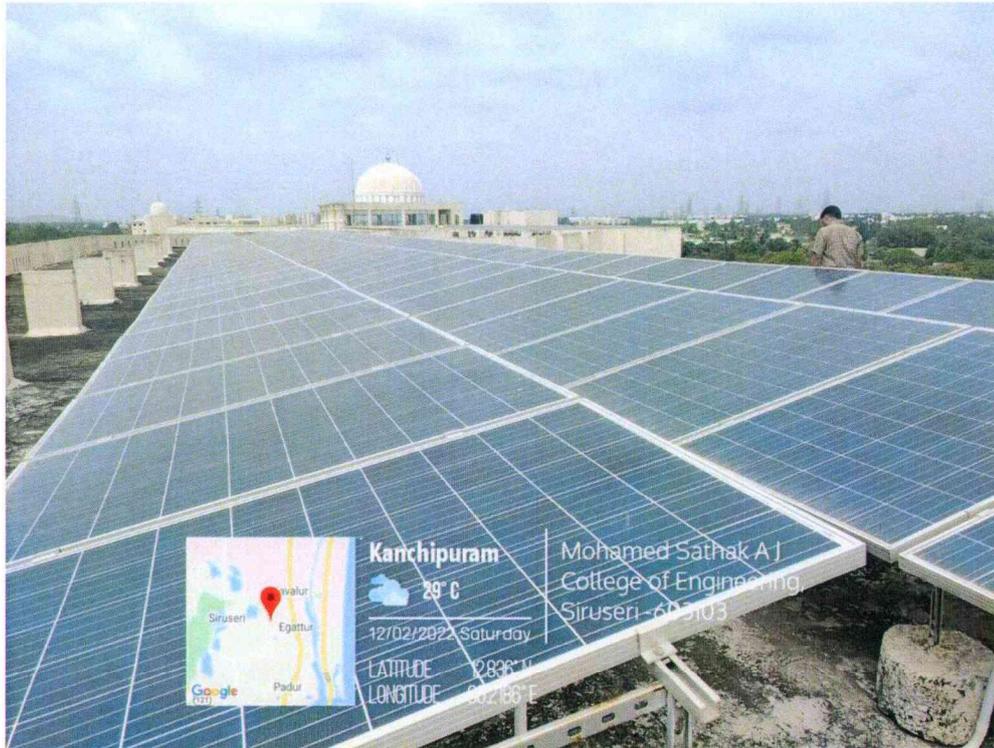
The Institution has facilities for alternate sources of energy and energy conservation measures

1) Solar Power Plant Details:

College Main Camp

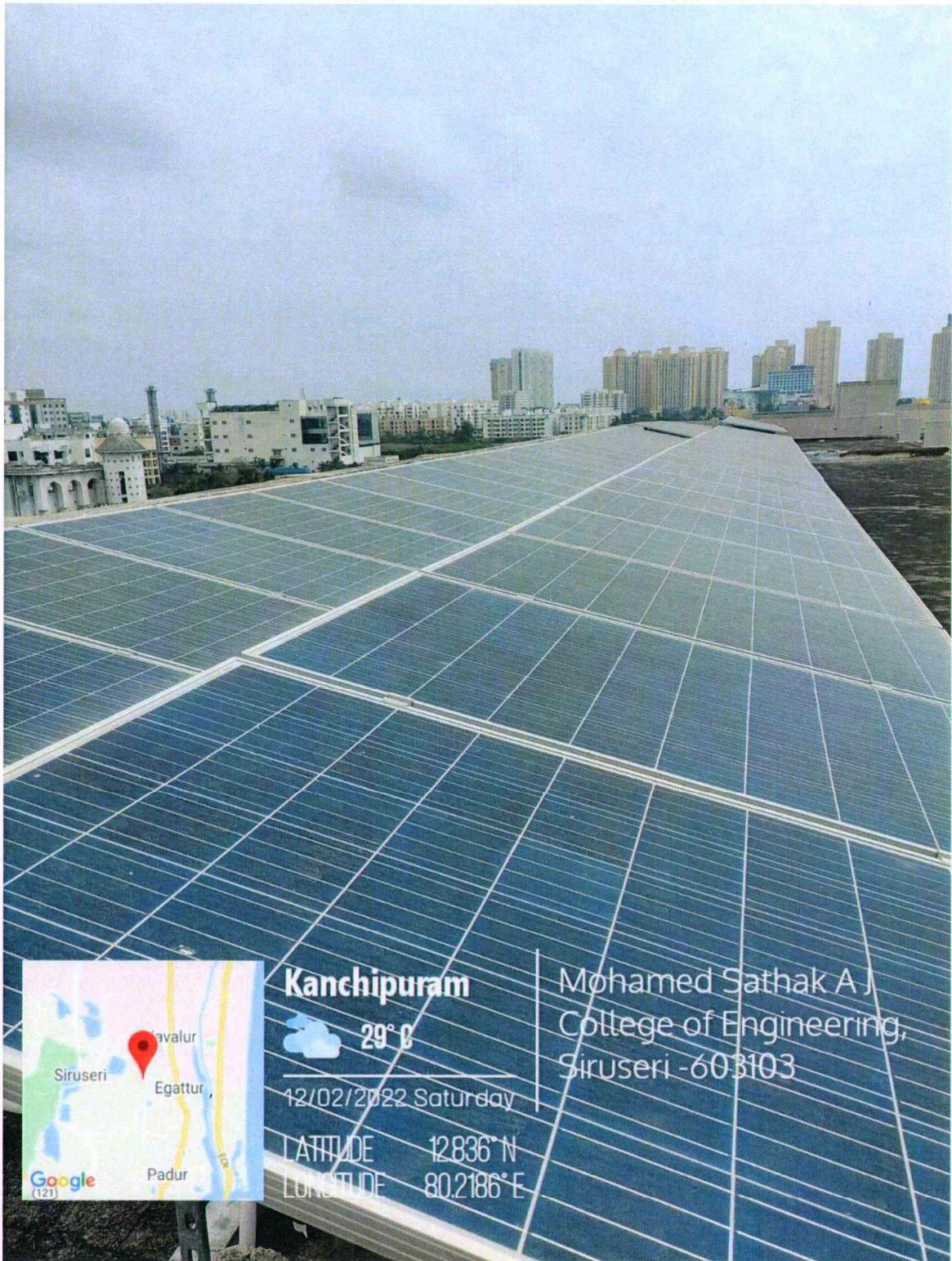
Our Institution constantly strives to conduct its energy operations with utmost environmental consciousness and sustainability by power generation through solar panels. The college has installed solar panels of 50 KW to generate electricity for the college Main campus and for Boys Hostel. The Generated electricity is used for the Corridor and Hostel Mess Hall for Power consumption. During the academic year 2020-2021 the total power consumed was 1,92,000 units and power generated through solar power plant was 93,600 units and the percentage of renewable energy source was 48.75%.

(A) Geo tagged Photographs



Solar Panel in Left Wing of Main Campus


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Chennai.



Kanchipuram

 **29° C**

12/02/2022 Saturday

LATITUDE 12.836° N

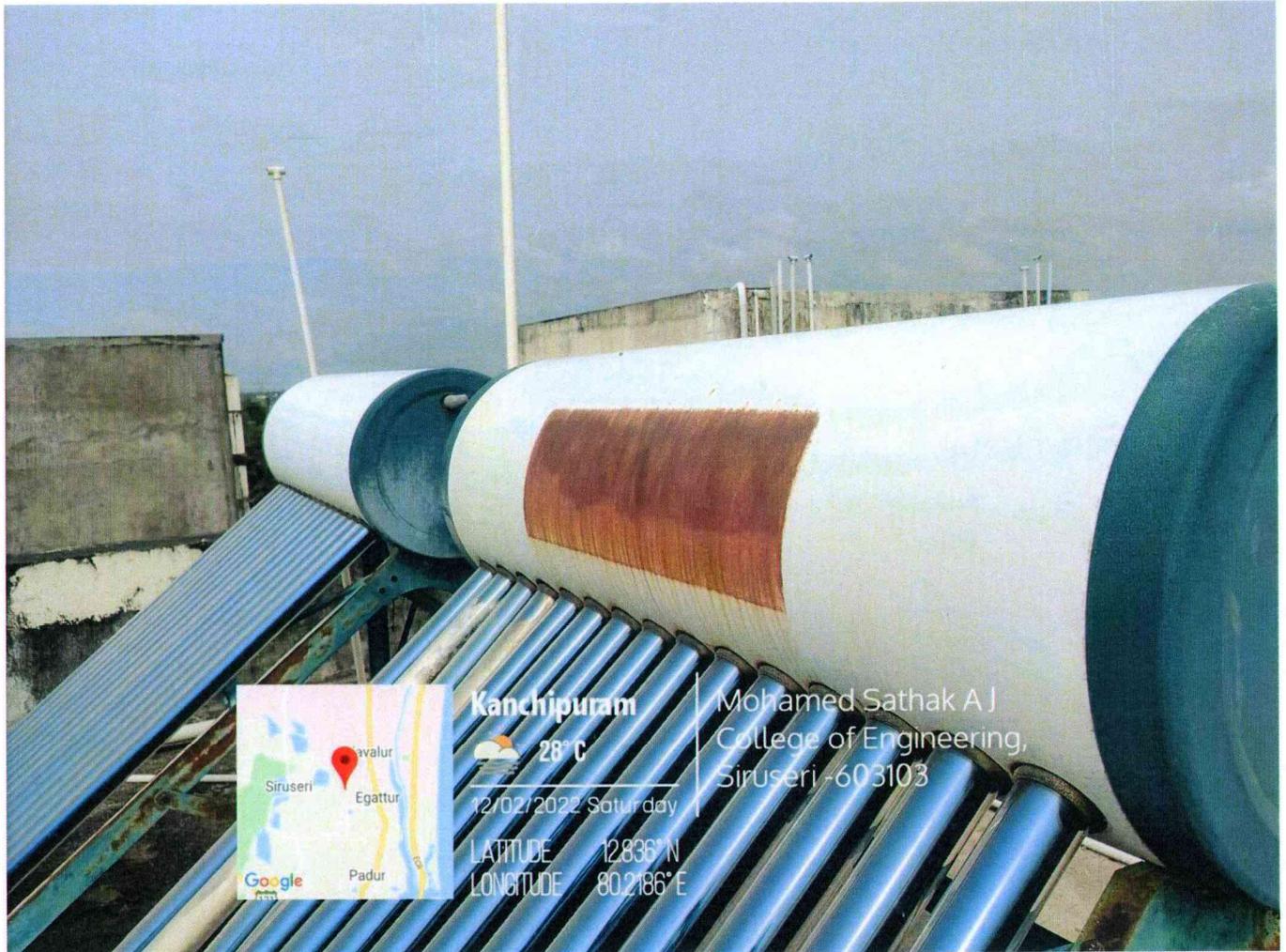
LONGITUDE 80.2186° E

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Siruseri - 603103

Solar Panel in Center of Main Campus

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Chennai-603 103.



Kanchipuram
28° C
12/02/2022 Saturday
LATITUDE 12.836° N
LONGITUDE 80.2186° E

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Solar Water Heater in Boys Hostel

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Chennai - 6

B) Solar Panel Measurements and reading Report Everyday



Mohamed Sathak
A.J. College of Engineering
 ISO 9001:2008 Certified Institution
 Rajiv Gandhi Salai (OMR), Inside Sipcot IT Park, Siruseri, Chennai 603103



Solar inverter - I

Solar inverter - II

Date	Initial reading	closing reading	Per day unit	Per / unit	Unit cost	Initial reading	closing reading	Per day unit	Per / unit	Unit cost
1-Feb-2021	1,589.0	1,721.0	132	6.50	858.00	1,25,779.0	1,25,910.0	131	6.50	851.50
2-Feb-2021	1,721.0	1,844.0	123	6.50	799.50	1,25,910.0	1,26,031.0	121	6.50	786.50
3-Feb-2021	1,844.0	1,967.0	123	6.50	799.50	1,26,031.0	1,26,152.0	121	6.50	786.50
4-Feb-2021	1,967.0	2,104.0	137	6.50	890.50	1,26,152.0	1,26,289.0	137	6.50	890.50
5-Feb-2021	2,104.0	2,236.0	132	6.50	858.00	1,26,289.0	1,26,420.0	131	6.50	851.50
6-Feb-2021	2,236.0	2,369.0	133	6.50	864.50	1,26,420.0	1,26,553.0	133	6.50	864.50
7-Feb-2021	2,369.0	2,509.0	140	6.50	910.00	1,26,553.0	1,26,685.0	132	6.50	858.00
8-Feb-2021	2,509.0	2,646.0	137	6.50	890.50	1,26,685.0	1,26,821.0	136	6.50	884.00
9-Feb-2021	2,646.0	2,781.0	135	6.50	877.50	1,26,821.0	1,26,954.0	133	6.50	864.50
10-Feb-2021	2,781.0	2,916.0	135	6.50	877.50	1,26,954.0	1,27,085.0	131	6.50	851.50
11-Feb-2021	2,916.0	3,050.0	134	6.50	871.00	1,27,085.0	1,27,218.0	133	6.50	864.50
12-Feb-2021	3,050.0	3,170.0	120	6.50	780.00	1,27,218.0	1,27,337.0	119	6.50	773.50
13-Feb-2021	3,170.0	3,304.0	134	6.50	871.00	1,27,337.0	1,27,470.0	133	6.50	864.50
14-Feb-2021	3,304.0	3,439.0	135	6.50	877.50	1,27,470.0	1,27,603.0	133	6.50	864.50
15-Feb-2021	3,439.0	3,565.0	126	6.50	819.00	1,27,603.0	1,27,727.0	124	6.50	806.00
16-Feb-2021	3,565.0	3,700.0	135	6.50	877.50	1,27,727.0	1,27,862.0	135	6.50	877.50
17-Feb-2021	3,700.0	3,830.0	130	6.50	845.00	1,27,862.0	1,27,986.0	124	6.50	806.00
18-Feb-2021	3,830.0	3,962.0	132	6.50	858.00	1,27,986.0	1,28,117.0	131	6.50	851.50
19-Feb-2021	3,962.0	4,063.0	101	6.50	656.50	1,28,117.0	1,28,217.0	100	6.50	650.00
20-Feb-2021	4,063.0	4,172.0	109	6.50	708.50	1,28,217.0	1,28,324.0	107	6.50	695.50
21-Feb-2021	4,172.0	4,247.0	75	6.50	487.50	1,28,324.0	1,28,398.0	74	6.50	481.00
22-Feb-2021	4,247.0	4,383.0	136	6.50	884.00	1,28,398.0	1,28,533.0	135	6.50	877.50
23-Feb-2021	4,383.0	4,522.0	139	6.50	903.50	1,28,533.0	1,28,670.0	137	6.50	890.50
24-Feb-2021	4,522.0	4,663.0	141	6.50	916.50	1,28,670.0	1,28,811.0	141	6.50	916.50
25-Feb-2021	4,663.0	4,807.0	144	6.50	936.00	1,28,811.0	1,28,855.0	44	6.50	286.00
26-Feb-2021	4,807.0	4,948.0	141	6.50	916.50	1,28,855.0	1,28,855.0	0	6.50	-
27-Feb-2021	4,948.0	5,088.0	140	6.50	910.00	1,28,855.0	1,28,855.0	0	6.50	-
28-Feb-2021	5,088.0	5,219.0	131	6.50	851.50	1,28,855.0	1,28,855.0	0	6.50	-
Grand Total			3630		23,595.00	Grand Total		3076		19,994.00

TOTAL : 43,589/-

Mohamed Sathak
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 34 Rajiv Gandhi Road (OMR), Siruseri,
 Chennai-603103.

2) Biogas Plant

Our institution is facilitated with a 50 kgs Biogas plant through which all the food waste and other organic waste are fermented and biogas is produced. Which is used for cooking in hostel mess.



Biogas Plant

3) Wheeling to the Grid

On average per month we are producing 6700 KWh of power from our solar plant. In that we are using 6600 KWh of power for our main building and we are exporting 100 KWh to the Grid. The details are attached below.

Mohamed Satish A.J.
PRINCIPAL
A.J. COLLEGE OF ENGINEERING
32, S. P. Road



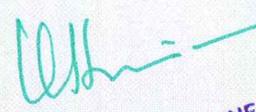
Net Meter for Solar Grid


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34, Rajiv Gandhi Road (OMR) Siruseri IT Park
Chennai-600 100

CONSUMER NAME:A.J.COLLEGE

CONSUMER NUMBER: 0929600412

REGION		PHASE		SLAB RATE	
09-Chennai-South	3	111 KW			
CIRCLE	401-South2	LOAD			
SECTION	296-Siruseri	TARIFF	LM2B2		
DISTRIBUTION	004-Attiyambakkam	METER NUMBER	8727546		
SERVICE NUMBER	12	ACCD* AS ON Date/ SD Available for Refund or Adj.(Rs.)		From Unit	Max. Unit
ADDRESS	NO34, SIPCOT IT PARK, OPP FSS SIRUSERI, Adj.(Rs.)	MCD AS ON Date/ MCD Available for Refund or Adj.(Rs.)	344726 / NIL	1/Above	9999999
SERVICE STATUS	LIVE	SERVICE CATEGORY	OTHERS	Min.Chrg:	120/KW
				BPSC*:	15%
				E.Tax:	5% (CC + DPF + WD+RDFC)



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Dues To Be Paid Details

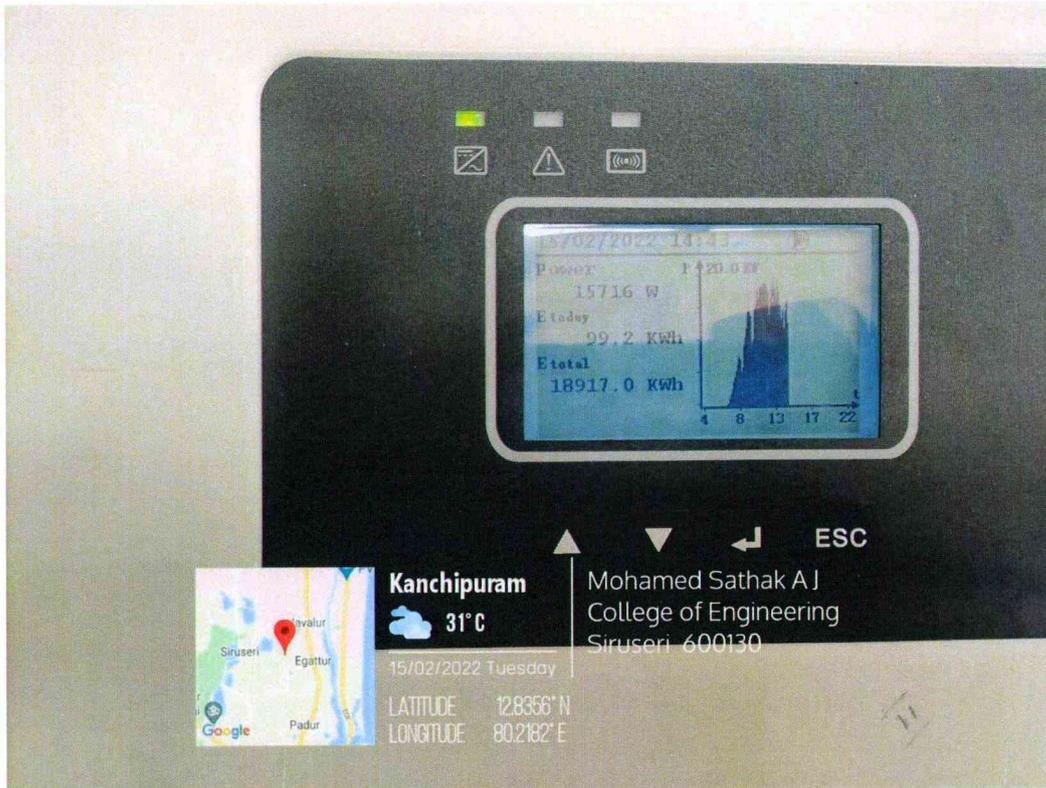
Bill Month	Year	Acct. Description	Amount	Due Date	Description
11	2021	23100-CC Charges	48677	20-12-2021	CC CHARGES
Total:			48677		PAY ONLINE

Monthly Consumption Charge Collection Details

Assessment Date	KWH Reading	KVAH Reading	EXPORT KWH reading	EXPORT KVAH reading	Maximum Demand	Power Factor	Consumed Unit	CC Charges (Rs.)	Other charges			Assessed Amount (Rs.)	Advance Amount (Rs.)	Adjustment Amount (Rs.)	Total Bill Amount (Rs.)	Due Date For payment	Receipt No	Amount Paid	Payment Date	Assessment Status	
									ETAX (Rs.)	WD (Rs.)	EDC (Rs.)										DPF (Rs.)
30/11/2021	295.53	399.61	100.38	130.2	56.76	.78	5380.4	40353	2188.65	0	0	6660	8848.65	48677	0	48677	20/12/2021	0		NORMAL	
30/10/2021	365.02	226.74	94.08	171.64	55.28	.73	3708.8	27818	1558.8	0	0	6660	8216.8	32010	0	32010	30/11/2021	32010	FGNIOB34249513	20/11/2021	NORMAL
29/09/2021	72.3	100.21	45.71	60.03	55.28	.78	4670	35025	1919.25	0	0	6660	8579.25	39801	0	39801	20/10/2021	39801	FGNIOB33948832	13/10/2021	NORMAL

Meter Change Details

MeterNo	MeterMake	MeterType	MIF	New Initial Rdg	Old Final Rdg	New Initial KVAH	Old Final KVAH	New Meter Install Date	Old Meter Removed Date	Reason
04253531	L&T	Static Electronic Meters	40	1873.71	1873.71	2382.52	2382.52	23-07-2009	23-07-2009	Normal
3736826	GENUS	Static Electronic Meter With MD recording Facility	40	0	26458	0	30350	23-08-2014	23-08-2014	Meter Burnt With Out Final Reading
8727546	AVON	Static Bidirectional Meter	40	.35	11173	.51	13756	24-09-2021	24-09-2021	Normal



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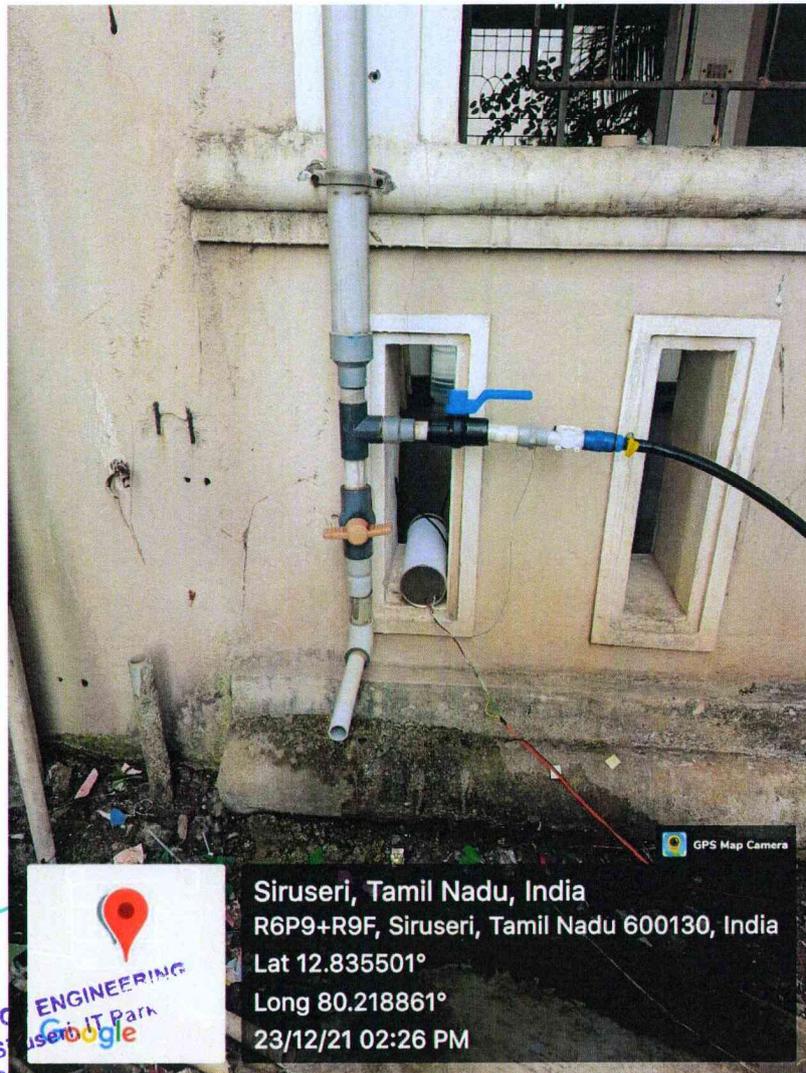
Ac & DC Meter for Solar Power plant

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 34, Rajiv Gandhi Road (OMR) Siruseri - 600130
 Chennai - 600130.

3) Sensor Based Energy Conservation

(A) Geo tagged Photographs

Our Institution monitors and controls the usage of water supply through flow meter and sensor to measure the level of water in tank which is indicated through IOT platform and Mobile Application.



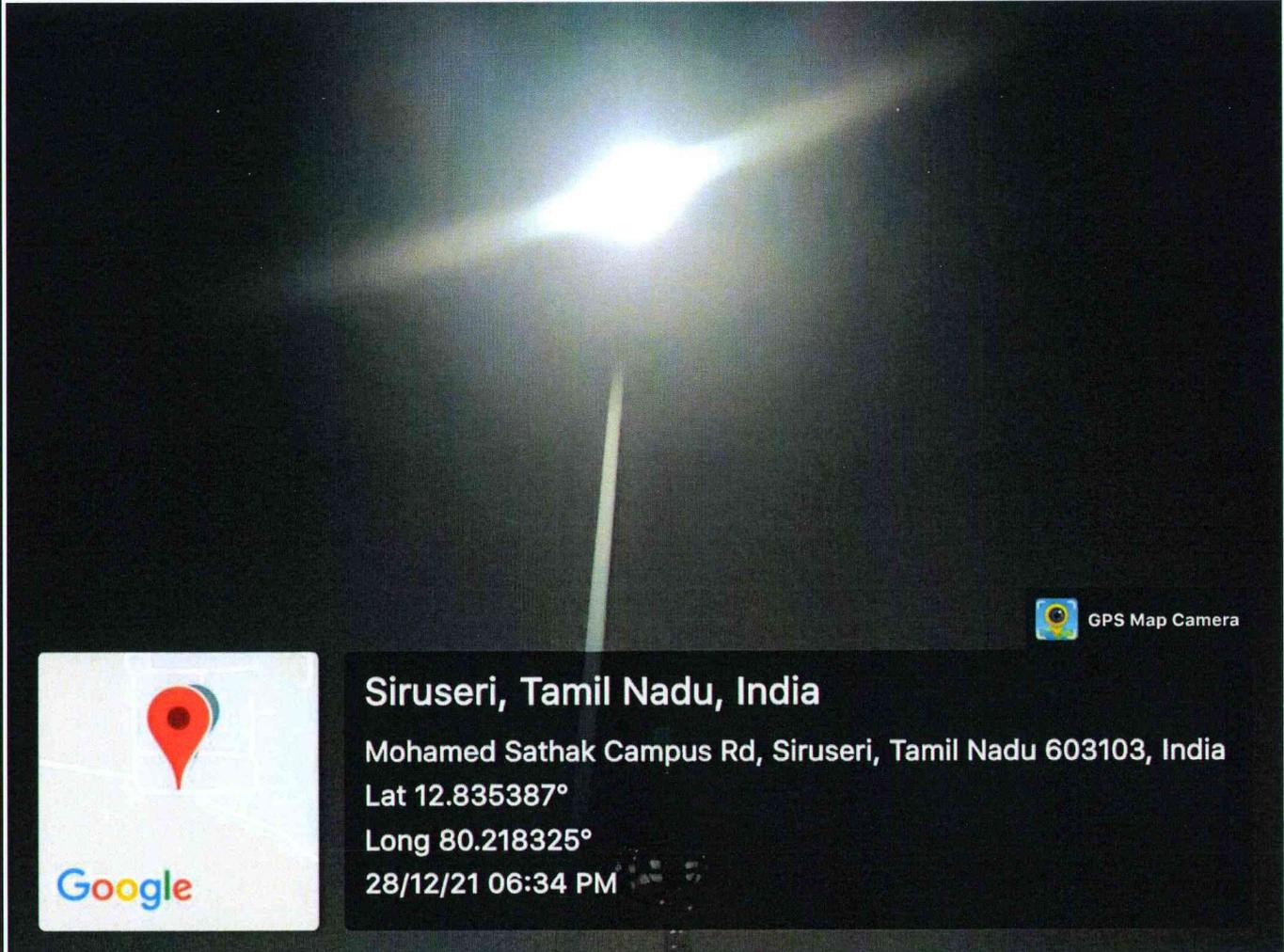
Ushini

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Chennai-603 103.



Sensor Based Smart Irrigation Project Developed by MSAJCE Students



GPS Map Camera



Siruseri, Tamil Nadu, India

Mohamed Sathak Campus Rd, Siruseri, Tamil Nadu 603103, India

Lat 12.835387°

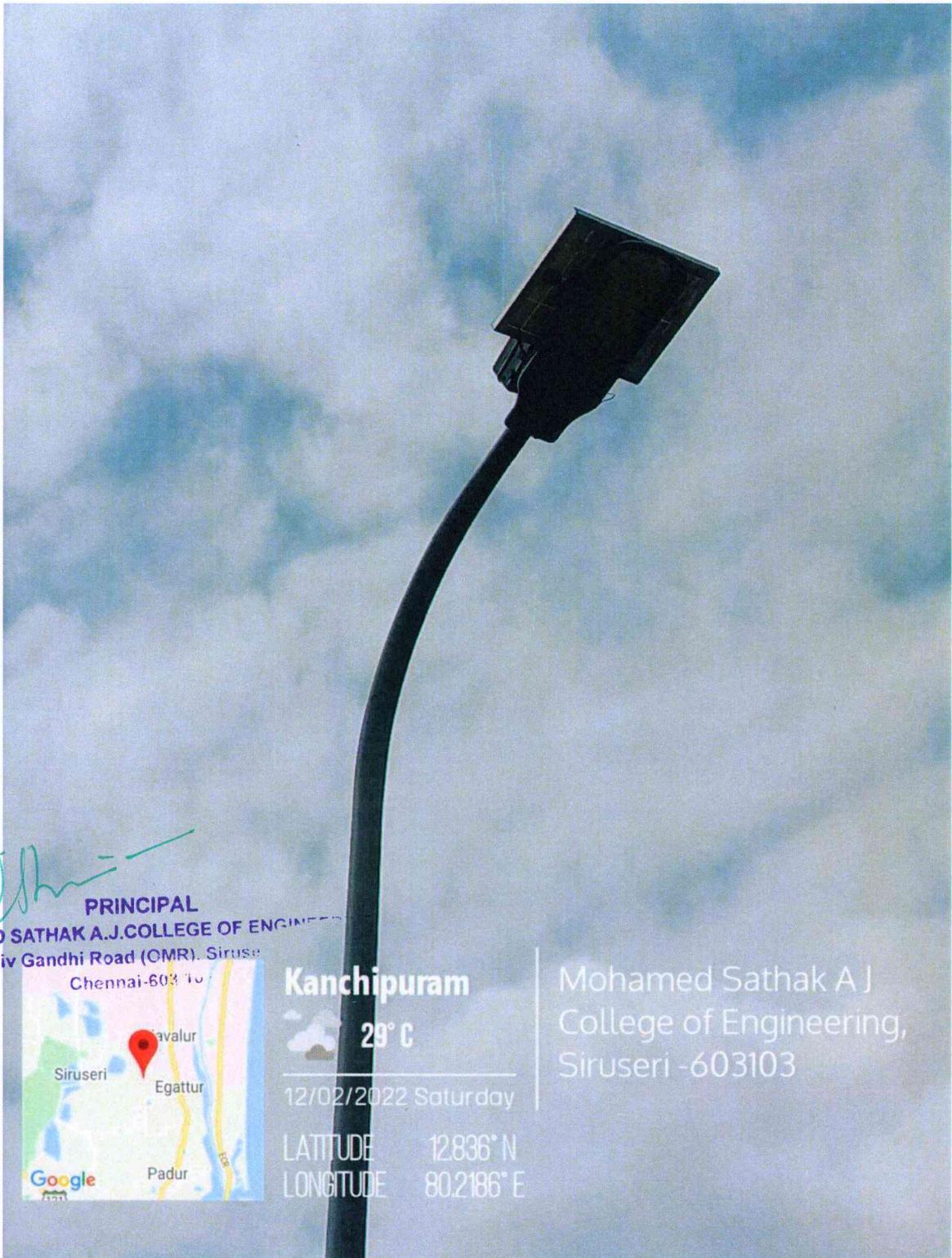
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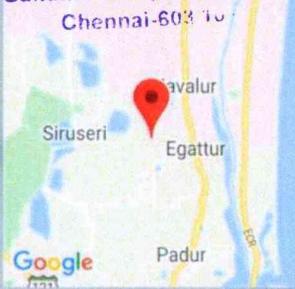
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Chennai-603 103

Sensor Based Smart Street light developed by EEE Department Faculties



[Signature]
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34, Rajiv Gandhi Road (OMR), Siruseri,
Chennai-603103



Kanchipuram

 **29° C**

12/02/2022 Saturday

LATITUDE 12.836° N

LONGITUDE 80.2186° E

Mohamed Sathak A J
College of Engineering,
Siruseri -603103

Sensor Based Smart Street light developed by EEE Department Faculties



Signature
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Chennai-603 103.

Sensor Based Automatic Light turn On/Off Model in IOT Lab



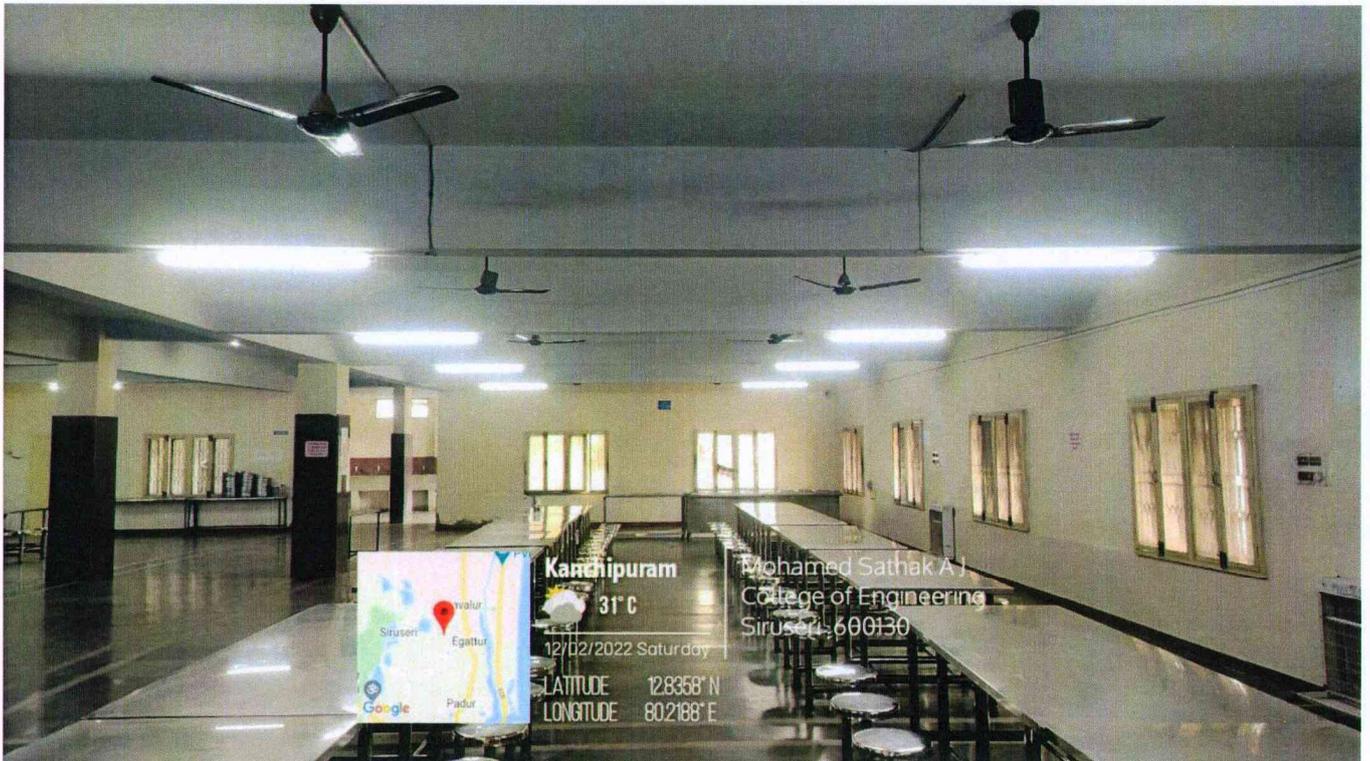
Sensor Based Automatic Light turn On/Off Model in IOT Lab

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Chennai-603 103.

4) Used LED Lights in Main Campus, Canteen and Mess

To ensure minimum power consumption and maximum energy saving, the college utilizes LED Bulbs for its maximum requirement.

(A) Geo tagged Photographs

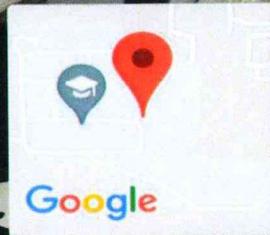
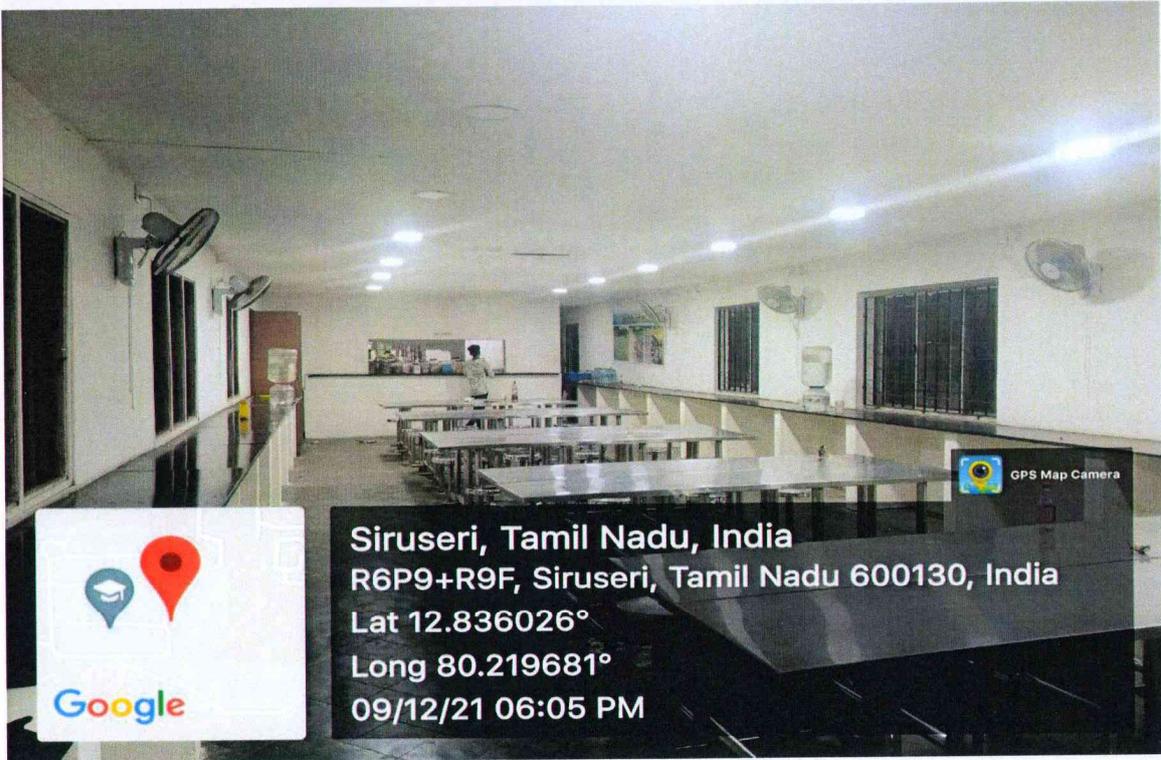


LED Tube Lights in College Mess

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Chennai-603 103.



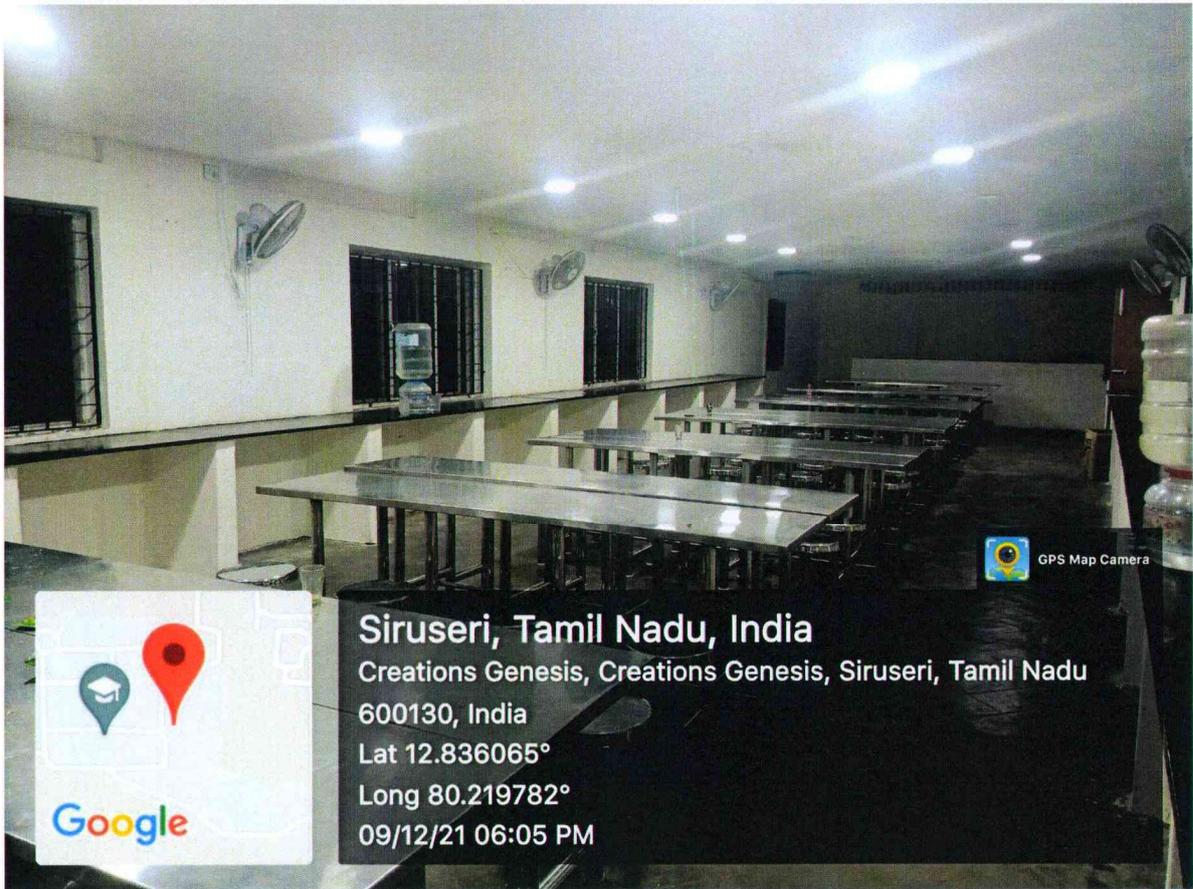
Siruseri, Tamil Nadu, India
R6P9+R9F, Siruseri, Tamil Nadu 600130, India
Lat 12.836056°
Long 80.219663°
09/12/21 06:05 PM



Siruseri, Tamil Nadu, India
R6P9+R9F, Siruseri, Tamil Nadu 600130, India
Lat 12.836026°
Long 80.219681°
09/12/21 06:05 PM

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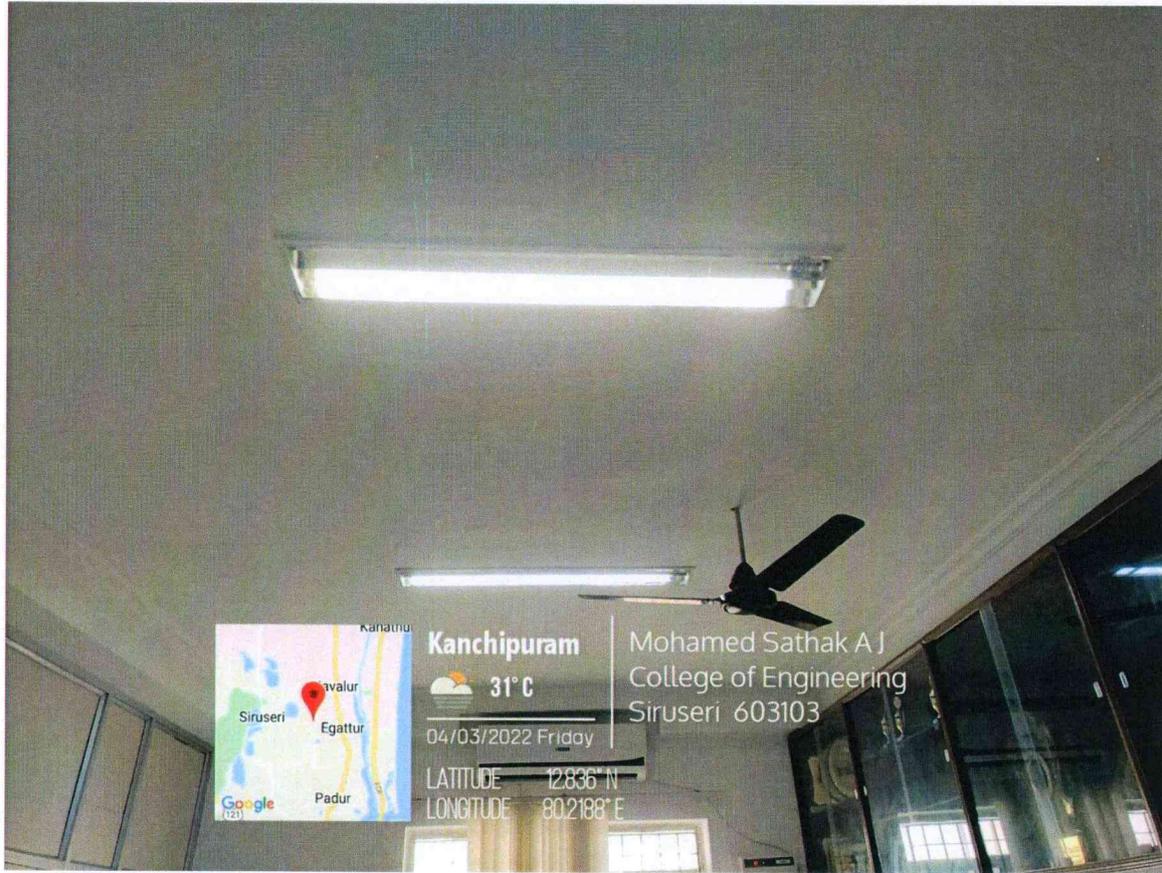
PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, Tamil Nadu
Chennai-603 103.



Siruseri, Tamil Nadu, India
Creations Genesis, Creations Genesis, Siruseri, Tamil Nadu
600130, India
Lat 12.836065°
Long 80.219782°
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LED Bulbs in College Canteen

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LED Bulbs in Principal Cabin

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Chennai-603 103.



LED Bulbs in Principal Cabin

Mohamed Sathak A J

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