

# ENVIRONMENTAL AUDIT REPORT

For

**GITAM UNIVERSITY**



**Nagadinahalli, Bengaluru**

By



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## ACKNOWLEDGEMENT

**Conserve Consultants Private Limited** wishes to thank all the staff, Management & Technical Team of **GITAM UNIVERSITY, Bengaluru** for the kind co-operation and assistance extended to our Auditor during the course of the Environmental audit.

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## 1. EXECUTIVE SUMMARY

Environmental Audit of GITAM University, Bengaluru was carried out by Conserve Consultants during February 2022.

The approach taken in this facility included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and associated systems & equipment,

## 2. PROJECT BACKGROUND

GITAM Bengaluru campus was established in 2012, with modern infrastructure supported by dedicated faculty and administrative staff. The campus is located in an ideal environment in Nagadenhalli on the highway, close to Bengaluru International Airport and at a distance of 3.5 km from Doddaballapur Railway Station. The campus is provided with smart classrooms, laboratories, auditoria, seminar halls, play fields, student hostels and other student support services.

Bengaluru campus consists of three schools: GITAM School of Technology, GITAM School of Business - Bengaluru and GITAM School of Science to impart high quality training in the fields of Technology and Management in the silicon valley of India.

The campus is located near the IT hub of the city. The campus has two academic blocks, one spacious library building, an administrative block and two hostels. All the academic departments have adequate number of smart classrooms, staff rooms, seminar halls well- equipped laboratories, central library, and other facilities.

## 3. ENVIRONMENTAL AUDIT

The main objective of the environmental audit is to promote the Environment Management and Conservation in the GITAM University Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards.

The main objectives of carrying out the Audit are:

- To introduce and aware students to real concerns of environment and its sustainability
- To secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use on the campus.
- To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and their corrections requires high cost.

#### 4. LIGHTING ANALYSIS

Good lighting is necessary to enable work to be done well and in comfort. A facility with bad lighting is an inefficient one, though it may look attractive. Poor lighting can be combated by good eyesight and by keenness on work but at the eventual expenses of efficiency, wellbeing and comfort. Hence, the designer of the building should pay sufficient attention to the need for good lighting.

The lighting details of the facility were studied. The various type of light fitting used are 36W CFL Tube Lights, 20W LED Tube lights, 11W small size Tube lights (1x1ft) and 36W LED Square type lights.

#### LUX LEVEL ANALYSIS

S No.	Area	Lux Levels Measured at multiple spots	Baseline Lux as per NBC
<b>Administration Block-1 (Ground Floor)</b>			
1	Engineering Physics Laboratory 1	130, 111, 105, 152, 330	300
2	Engineering Chemistry Laboratory 1	152, 161, 214, 352, 409	300
3	Chemistry Laboratory 2	161, 132, 144, 131, 235, 310	300
4	Physics Laboratory 2 (New Laboratory)	192, 211, 233, 242, 268	300
5	Directorate of Admissions (Office Admission Room)	295, 213, 126, 297, 177	300

S No.	Area	Lux Levels Measured at multiple spots	Baseline Lux as per NBC
6	Directorate Admission Room	382,540,489,390	300
7	Reception Area	262 & 201	300
<b>Administration Block-1 (First Floor)</b>			
8	Office Room	214, 231, 196	300
9	Principal Room	182, 191 & 210	300
10	Board Room	349, 416, 428, 484 & 430	300
11	C/Data Structure Lab	188, 74, 55, 67 & 53	300
12	Class Room - 104	273, 230, 333,554 & 577	300
<b>Administration Block-1 (Second Floor)</b>			
13	Staff Room - 206	161, 115, 292, 210 & 162	300
14	Class Room - 208	255, 215, 247, 296 & 233	300
15	Language Laboratory	55, 53, 65, 71 & 136	300
<b>Administration Block-1 (Third Floor)</b>			
16	Director Room	209 & 234	300
17	Lecture Hall - 303	115, 113, 240, 105 & 152	300
18	Library (Management & Reference)	411, 501, 498, 507, 476	285
<b>Administration Block-1 (Fourth Floor)</b>			
19	Class Room - 407	267, 387, 244, 278 & 262	300
20	Class Room -412	239,209, 277, 191 & 264	300

S No.	Area	Lux Levels Measured at multiple spots	Baseline Lux as per NBC
<b>Administration Block-1 (Fifth Floor)</b>			
21	Class Room -508	412,343,262,390 & 324	300
22	Class Room - 515	198, 259, 217, 149, 120	300
<b>Administration Block-1 (Sixth Floor)</b>			
23	Central Research Facility (603) – Chemistry Department	86, 76, 105, 70 & 92	300
24	Carbohydrate Research Lab	160, 155 & 210	300
25	Electro Chemical Energy & Sensors	181, 163 & 155	300
<b>Administration Block-2 (Basement Floor)</b>			
26	Fluid Mechanics Laboratory	158,217,189,224,117	300
27	Mechanics Of Solid Laboratory	165,158,156,162,152	300
28	Electrical Machine Lab 2	111,135,116,155,140	300
29	Mechanical Engineering Lab –IV (Metrology Lab)	145,191,183,189,203	300
30	Mechanical Engineering Lab – I & II	148, 186, 194, 177, 201	300
31	Concrete Technology & NDT Laboratory	130,225, 88, 89, 138	300
32	Machine Shop (Manufacturing Technology II)	103, 74, 91, 118, 100	300
33	Office Area – Governing Body Member –B006	197,137,151,189	300
34	President & Secretary Cabin – B004	312,120,170	300
35	Office Area – B003	183,297,235,199	300
<b>Administration Block-2 (Ground Floor)</b>			

S No.	Area	Lux Levels Measured at multiple spots	Baseline Lux as per NBC
36	Shivaji Auditorium	154,135,191,168,184	300
37	Pro-Vice Chancellor Room	275,283,287	300
<b>Administration Block-2 (First Floor)</b>			
38	Class Room -306	209,234,177,273,353	300
39	Electronic Circuit Simulation Lab -312	133,172,57,51,82	300
<b>Administration Block-2 (Fourth Floor)</b>			
40	Class Room -406	270, 213,170,210,108	300
41	Project Lab - 406	284,247,332,183,256	300
<b>Administration Block-2 (Fifth Floor)</b>			
42	Class Room - 516	438,318,231,209,216	300
43	Project/Research Lab -523	322,339,392,447,375	300
<b>Administration Block-2 (Sixth Floor)</b>			
44	CATS -626	253,272,151	300
45	Data Centre	354,298	300
<b>Boys Hostel – Vinay Sadan (Ground Floor)</b>			
46	Dining Hall (Canteen)	146,104,97,112,128,100,114,131,114,121	200
<b>Boys Hostel – Vinay Sadan (First Floor)</b>			
47	B101 – Room (All Floor Rooms are Typical)	321	50
<b>Boys Hostel – Vinay Sadan (Third Floor)</b>			
48	Reading Room	225, 264,320	300
<b>Boys Hostel – Vinay Sadan (Fifth Floor)</b>			
49	B518 – Room (All Floor Rooms are Typical)	113	50



S No.	Area	Lux Levels Measured at multiple spots	Baseline Lux as per NBC
<b>New Boys Hostel</b>			
50	Room 1	181	50
51	Room 2	177	50
<b>Ladies Hostel – Kokila Sadan (Third Floor)</b>			
52	Room No. 324 ('A' Room)	162	50
53	Study Room No.324 ('C' Room)	156,356	300
<b>Ladies Hostel – Kokila Sadan (Seventh Floor)</b>			
54	'C' Room	172	50
55	Reading Room	186,289,271,216,253	300

**Comments:-**

Library and boys hostel sharing rooms general lux Level can be explored for the reduction, if the reading lights are available separately. It is better to provide the lighting only where its required like general lighting for the whole room and task lighting for the reading spots/tables.

## LIGHTING POWER DENSITY ANALYSIS

S No.	Area	Lamp	Lamp wattage	No of lamps	Total Wattage, W	Area Sq. ft.	LPD W/Sq. ft.	ASHRAE Baseline LPD W/Sq. ft.
<b>Administration Block-1 (Ground Floor)</b>								
1	Engineering Physics Laboratory 1	1x36	36	11	396	2152	0.19	1.24
		1x20	20	1	20			
2	Engineering Chemistry Laboratory 1	1X36	36	11	396	2032	0.20	1.24
		1X20	20	1	20			
3	Chemistry Laboratory 2	1X36	36	12	432	2006	0.21	1.24
4	Physics Laboratory 2 (New Laboratory)	1X36	36	8	288	1564	0.18	1.24
5	Directorate of Admissions (Office Admission Room)	1X36	36	6	216	787	0.27	1.21
6	Directorate Admission Room	1X36	36	6	216	775	0.27	1.21
7	Reception Area	1X36	36	2	72	190	0.37	1.24
<b>Administration Block-1 (First Floor)</b>								
11	Office Room	1X36	36	3	108	389	0.27	1.24

12	Principal Room	1X36	36	1	36	389	0.31	1.21
		2X11	11	8	88			
13	Board Room	1X36	36	12	432	1163	0.37	1.24
14	C/Data Structure Lab	1X36	36	8	288	1570	0.18	1.24
15	Class Room - 104	1X36	36	6	216	1009	0.21	1.24
<b>Administration Block-1 (Second Floor)</b>								
13	Staff Room - 206	1X36	36	3	108	563	0.19	1.24
14	Class Room - 208	1X36	36	6	216	1015	0.21	1.24
15	Language Laboratory	1X36	36	8	288	1567	0.18	1.24
<b>Administration Block-1 (Third Floor)</b>								
16	Director Room	1X20	20	1	20	387	0.27	1.21
		2X11	11	8	88			
17	Lecture Hall - 303	1X36	36	6	216	1023	0.21	1.24
18	Library (Management & Reference)	1X36	36	12	432	2073	0.20	0.93
<b>Administration Block-1 (Fourth Floor)</b>								
19	Class Room - 407	1X36	36	5	180	1044	0.19	1.24
		1X20	20	1	20			
20	Class Room - 412	1X36	36	6	216	1038	0.20	1.24
<b>Administration Block-1 (Fifth Floor)</b>								

21	Class Room - 508	1X36	36	6	216	1035	0.20	1.24
22	Class Room - 515	1X36	36	8	288	2478	0.11	1.24
<b>Administration Block-1 (Sixth Floor)</b>								
23	Central Research Facility (603)	1X36	36	6	216	1453	0.14	1.24
<b>Administration Block-2 (Basement Floor)</b>								
24	Fluid Mechanics Lab	1X36	36	14	504	2088	0.25	1.24
		1X20	20	1	20			
25	Mechanics of Solid Lab	1X36	36	15	540	1937	0.27	1.24
26	Electrical Machine Lab -2	1X36	36	10	360	1292	0.27	1.24
27	Mechanical Engineering Lab –IV (Metrology Lab)	1X36	36	3	108	680	0.15	1.24
28	Mechanical Engineering Lab (I & II)	1X36	36	12	432	1744	0.24	1.24
29	Concrete Technology & NDT Lab	1X36	36	4	144	1302	0.14	1.24
		1X20	20	2	40			
30	Machine Shop (Manufacturing Technology)	1X36	36	15	540	1934	0.27	1.24

	-II)							
31	Office Area – Governing Body Member – B006	1X36	36	4	144	743	0.19	1.24
32	B004- President & Secretary Cabin	1X36	36	2	72	344	0.20	1.24
33	B003 – Office Area	1X36	36	5	180	732	0.24	1.24
<b>Administration Block-2 (Ground Floor)</b>								
34	Shivaji Auditorium	1X36	36	78	2808	6420	0.43	1.21
35	Pro-Vice Chancellor Room	1X12	12	4	48	337	0.14	1.21
<b>Administration Block-2 (First Floor)</b>								
36	Library Reference section (Periodic section)	1X15	15	48	720	2691	0.26	0.93
<b>Administration Block-2 (Third Floor)</b>								
37	Class Room-306	1X20	20	6	120	1141	0.10	1.24
38	Electronic Circuit Simulation Lab (312)	1X20	20	8	160	1658	0.09	1.24
<b>Administration Block-2 (Forth Floor)</b>								

39	Class Room - 406	1X20	20	6	120	1098	0.10	1.24
40	Project Lab - 406	1X36	36	12	432	1658	0.26	1.24
<b>Administration Block-2 (Fifth Floor)</b>								
41	Unix/Operating System Lab	1x36	36	12	432	1658	0.26	1.24
42	Project/Research Lab (523)	1X36	36	12	432	1498	0.28	1.24
<b>Administration Block-2 (Sixth Floor)</b>								
43	CATS - 626	1X36	36	4	144	572	0.25	1.24
44	Data Centre	1X36	36	2	72	306	0.23	1.24
<b>Boys Hostel – Vinay Sadan (First Floor)</b>								
45	B101 Room	1X20	20	1	20	60	0.33	1.24
		1X12	12	1	12			
<b>Boys Hostel – Vinay Sadan (Third Floor)</b>								
46	Reading Room	1X20	20	6	120	484	0.24	1.24
<b>Boys Hostel – Vinay Sadan (Fifth floor)</b>								
47	Room No. 518	1X20	20	1	20	60	0.53	1.24
		1X12	12	1	12			
<b>Boys Hostel – Vinay Sadan (Ground floor)</b>								
48	Dining Hall (Canteen)	1X36	36	9	324	13144	0.09	0.90
		1X20	20	44	880			
<b>New Boys Hostel</b>								
49	Room 1	1X12	12	1	12	320	0.1	1.24

		1X20	20	1	20			
50	Room 2	1X12	12	1	12	320	0.1	1.24
		1X20	20	1	20			
<b>Ladies Hostel – Kokila Sadan (Third Floor)</b>								
51	Room No.324	1X20	20	1	20	60	0.53	1.24
		1X12	12	1	12			
52	Study Room 'C'	1X36	36	1	36	60	0.93	1.24
		1X20	20	1	20			
<b>Ladies Hostel – Kokila Sadan (Seventh Floor)</b>								
53	'C' Room	1X20	20	1	20	60	0.53	1.24
		1X12	12	1	12			
54	Reading Room	1X36	36	4	144	474	0.30	1.24

**Comments:**

LPD is much within in the ASHRAE recommended limits.

## 5. INDOOR AIR QUALITY

Indoor air quality (IAQ) is a term which refers to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants. IAQ can be affected by various gases, volatile organic compounds etc. Source control, filtration and the use of ventilation to dilute contaminants are the primary methods for improving indoor air quality in most buildings. Determination of IAQ involves the collection of air samples at various locations of the building.

During the course of audit, the Indoor air quality survey was carried out at various locations in the building.

S No.	Area	CO <sub>2</sub> PPM	Air Temperature °C	RH %	WBT °C	DPT °C	TVOC mg/m <sup>3</sup>	HCHO mg/m <sup>3</sup>	PM 2.5	PM 10	Level of Air only based on PM2.5 & PM10
<b>Administration Block-1 (Ground Floor)</b>											
1	Engineering Physics Laboratory 1	524	23.8	71	19.9	18.1	0	0	94	109	Unqualified
2	Engineering Chemistry Laboratory 1	502	24.8	65	20.1	17.8	0	0	107	121	Unqualified
3	Chemistry Laboratory 2	504	23.8	68	19.6	17.6	0	0	106	121	Unqualified
4	Physics Laboratory 2 (New Laboratory)	481	24.3	65.9	19.7	17.5	0	0	70	83	Unqualified
5	Directorate of Admissions (Office Admission Room)	702	24.2	59.1	20.1	17.2	0.002	0.006	77	88	Unqualified



S No.	Area	CO <sub>2</sub> PPM	Air Temperature °C	RH %	WBT °C	DPT °C	TVOC mg/m <sup>3</sup>	HCHO mg/m <sup>3</sup>	PM 2.5	PM 10	Level of Air only based on PM2.5 & PM10
6	Directorate Admission Room	816	26.5	62.5	21.2	18.6	0.003	0.012	74	84	Unqualified
7	Reception Area	539	25.2	58.1	19.4	16.5	0	0	80	92	Unqualified
<b>Administration Block-1 (First Floor)</b>											
8	Office Room	525	25.2	57.5	19.2	16.2	0.002	0.022	83	96	Unqualified
9	Principal Room	588	24.8	59.9	19	16.3	0	0	76	87	Unqualified
10	Board Room	554	22.6	66.5	18.2	15.4	0	0.006	56	62	Unqualified
11	C/Data Structure Lab	548	26.7	52.1	19.6	16.1	0	0	60	70	Unqualified
12	Class Room - 104	493	26.3	49.4	18.8	14.8	0	0.002	64	75	Unqualified
<b>Administration Block-1 (Second Floor)</b>											
13	Staff Room - 206	617	26.4	51.9	19.3	15.8	0	0	63	73	Unqualified
14	Class Room - 208	797	26.3	53.5	19.5	16.2	0	0	65	75	Unqualified
15	Language Laboratory	519	26.2	49.3	18.7	14.7	0	0	62	74	Unqualified
<b>Administration Block-1 (Third Floor)</b>											
16	Director Room	558	25.8	51.2	18.8	15	0	0.002	67	76	Unqualified
17	Lecture Hall - 303	529	26.1	53.8	19.2	16.1	0	0	63	71	Unqualified
18	Library (Management)	538	26.4	53.1	19.5	16.1	0	0	57	68	Unqualified

S No.	Area	CO <sub>2</sub> PPM	Air Temperature °C	RH %	WBT °C	DPT °C	TVOC mg/m <sup>3</sup>	HCHO mg/m <sup>3</sup>	PM 2.5	PM 10	Level of Air only based on PM2.5 & PM10
	(† & Reference)										
<b>Administration Block-1 (Fourth Floor)</b>											
19	Class Room - 407	499	26.7	48	17.3	14.7	0	0	66	78	Unqualified
20	Class Room - 412	509	25.5	51.4	18.5	14.7	0.002	0.002	59	68	Unqualified
<b>Administration Block-1 (Fifth Floor)</b>											
21	Class Room - 508	583	27.2	48.3	19.4	15.3	0	0.003	60	71	Unqualified
22	Class Room - 515	464	26.3	53.9	19.6	16.2	0.003	0.002	55	63	Unqualified
<b>Administration Block-1 (Sixth Floor)</b>											
23	Central Research Facility (603) – Chemistry Department	564	26.7	47.5	18.8	14.8	0	0.011	58	68	Unqualified
24	Carbohydrate Research Lab	560	27.5	44.8	19	14.4	0.003	0.011	72	83	Unqualified
25	Electro Chemical Energy & Sensors	558	27.1	44.3	19.7	15	0	0.011	69	81	Unqualified
<b>Administration Block-2 (Basement Floor)</b>											
26	Fluid Mechanics Laboratory	669	23.7	74.3	20.4	18.8	0.003	0	66	78	Unqualified

S No.	Area	CO <sub>2</sub> PPM	Air Temperature °C	RH %	WBT °C	DPT °C	TVOC mg/m <sup>3</sup>	HCHO mg/m <sup>3</sup>	PM 2.5	PM 10	Level of Air only based on PM2.5 & PM10
27	Mechanics Of Solid Laboratory	500	23.2	63.1	18.3	15.8	0	0	65	74	Unqualified
28	Electrical Machine Lab 2	472	23.3	68.8	19.2	17.2	0	0	49	58	Unqualified
29	Mechanical Engineering Lab –IV (Metrology Lab)	481	24.1	65.5	19.4	17.1	0	0	45	54	Unqualified
30	Mechanical Engineering Lab – I & II	500	24.3	64.3	19.5	17.2	0	0	49	54	Unqualified
31	Concrete Technology & NDT Laboratory	462	23.6	66.9	19.2	17	0.003	0	44	48	Unqualified
32	Machine Shop (Manufacturing Technology II)	503	23.1	63.7	19	16.1	0	0	49	58	Unqualified
33	Office Area – Governing Body Member – B006	565	25	58.8	19.2	16.3	0	0	54	62	Unqualified
34	President & Secretary Cabin – B004	714	24.3	65.1	19.7	17.4	0	0.006	47	53	Unqualified

S No.	Area	CO <sub>2</sub> PPM	Air Temperature °C	RH %	WBT °C	DPT °C	TVOC mg/m <sup>3</sup>	HCHO mg/m <sup>3</sup>	PM 2.5	PM 10	Level of Air only based on PM2.5 & PM10
35	Office Area – B003	785	25.6	61	20.1	17.5	0	0.003	50	58	Unqualified
<b>Administration Block-2 (Ground Floor)</b>											
36	Shivaji Auditorium	481	23	62.7	18.6	16	0	0	65	74	Unqualified
37	Pro-Vice Chancellor Room	986	24.6	57.2	18.3	15.3	0.002	0.026	32	37	Fresh
<b>Administration Block-2 (First Floor)</b>											
38	Library (Reference Section-Periodical Section)	576	26.2	53	19.3	15.4	0.002	0.015	43	51	Unqualified
39	Class Room - 306	580	26.7	48	18.8	14.6	0	0	40	46	Unqualified
40	Electronic Circuit Simulation Lab -312	547	26	49.1	18.5	14.4	0	0.008	42	46	Unqualified
<b>Administration Block-2 (Fourth Floor)</b>											
41	Class Room - 406	612	27.5	50.3	19.8	16	0	0	42	46	Unqualified
42	Project Lab - 406	511	27.1	50.5	19.7	15.8	0.002	0.014	34	39	Unqualified
<b>Administration Block-2 (Fifth Floor)</b>											
43	Class Room - 516	542	27.4	48.4	19.6	15.5	0	0.005	37	42	Unqualified
44	Project/Rese	566	26.6	48.7	18.8	15	0	0.014	36	41	Unqualified

S No.	Area	CO <sub>2</sub> PPM	Air Temperature °C	RH %	WBT °C	DPT °C	TVOC mg/m <sup>3</sup>	HCHO mg/m <sup>3</sup>	PM 2.5	PM 10	Level of Air only based on PM2.5 & PM10
	arch Lab - 523										
<b>Administration Block-2 (Sixth Floor)</b>											
45	CATS -626	702	26.5	51.2	19.3	15.6	0	0.013	39	45	Unqualified
46	Data Centre	655	22.7	38	14.1	7.6	0	0.076	28	32	Fresh
<b>Boys Hostel – Vinay Sadan (Ground Floor)</b>											
47	Dining Hall (Canteen)	480	23.3	51.1	16.7	12.7	0.002	0.006	37	42	Unqualified
<b>Boys Hostel – Vinay Sadan (First Floor)</b>											
48	B101 – Room (All Floor Rooms are Typical)	581	23.7	60.7	18.7	15.9	0	0	44	52	Unqualified
<b>Boys Hostel – Vinay Sadan (Third Floor)</b>											
49	Reading Room	511	23.7	52.9	17.2	13.4	0.002	0.012	37	42	Unqualified
<b>Boys Hostel – Vinay Sadan (Fifth Floor)</b>											
50	B518 – Room (All Floor Rooms are Typical)	513	24.3	60	18.9	16.2	0	0.022	32	37	Unqualified
<b>New Boys Hostel</b>											
51	Room 1	521	24.5	61.3	18.2	15.9	0	0	42	51	Unqualified
52	Room 2	517	24.5	61.7	18.9	16.2	0	0	47	53	Unqualified
<b>Ladies Hostel – Kokila Sadan (Third Floor)</b>											
53	Room No. 324 ('A')	456	23.4	62.8	18.5	16	0.007	0.002	38	44	Unqualified

S No.	Area	CO <sub>2</sub> PPM	Air Temperature °C	RH %	WBT °C	DPT °C	TVOC mg/m <sup>3</sup>	HCHO mg/m <sup>3</sup>	PM 2.5	PM 10	Level of Air only based on PM2.5 & PM10
	Room)										
54	Study Room No.324 ('C' Room)	667	23.8	60	18.3	15.6	0	0.002	55	63	Unqualified
<b>Ladies Hostel – Kokila Sadan (Seventh Floor)</b>											
55	'C' Room	701	25.7	58.2	19.7	16.9	0.002	0.021	49	52	Unqualified
56	Reading Room	528	26.6	44.7	18.3	13.6	0.003	0.012	34	39	Fresh

**Comments:-**

To improve the indoor air quality inside the campus, site barricading through trees/other features shall be explored to reduce the particulate pollution inside the campus from the nearby roads.

## 6 SITE OBSERVATION REPORT

Site Observation Report (SOR)			
Report No.	C&A/SOR/01	Date	10.02.2022
Location	At entrance of the College Campus and of the Blocks.		

### Observation Images



### Description

Safety precaution awareness posters for COVID-19 are kept inside the GITAM University Campus.

### Safety Measures

COVID -19 Safety measures protocol are followed very strictly inside the University Campus, which creates awareness among Students and Staff to maintain a social distance and wear a mask.

Site Observation Report (SOR)			
<b>Report No.</b>	C&A/SOR/03	<b>Date</b>	10.02.2022
<b>Location</b>	Class Rooms		

**Observation Images**



**Description**

Daylight in the class rooms.

**Potential Sustainability Measures**

There is enough daylight available in the class rooms, views and natural ventilation are also good.

**Site Observation Report (SOR)**

<b>Report No.</b>	C&A/SOR/04	<b>Date</b>	10.02.2022
<b>Location</b>	Dust Bins		

**Observation Images**





**Description**

Different type waste collection bins are kept for the collection of waste.

**Potential Sustainability Measures**

This helps in reducing the segregation of waste at source.

**Site Observation Report (SOR)**

<b>Report No.</b>	C&A/SOR/07	<b>Date</b>	10.02.2022
<b>Location</b>	Admin 1 & 2 Blocks, Staff Quarters Roof Top (498 kW Solar PV Panels)		

**Observation Images**



**Description**

Dusts on Solar PV panels were observed.

**Potential Sustainability Measures**

It is highly recommended to clean the Solar PV Panel at manufacturer recommended intervals better power generation efficiency.

**Site Observation Report (SOR)**

<b>Report No.</b>	C&A/SOR/12	<b>Date</b>	10.02.2022
<b>Location</b>	Admin Block 1 & 2 – UPS Battery Rooms		

**Observation Images**



**Description**

It is observed that conditioned UPS battery rooms are accumulated with more waste items, dust and debris.

**Potential Sustainability Measures**

It is advised to keep the conditioned UPS battery rooms clean. And install exhaust fans and Hydrogen sensors in the battery rooms.

Site Observation Report (SOR)			
Report No.	C&A/SOR/13	Date	10.02.2022
Location	Admin Block -2 Backside		

**Observation Images**



**Description**

It is observed that body earth is conventional type. University's Earthing system must be in better condition as it is prone to malfunction and gives rise to harmonic and multiply the same into the electrical network.

**Potential Sustainability Measures**

It is recommended to plan for maintenance free Earthing instead of the conventional Earthing. And also location should be mentioned along with B.E -01 no.

**Site Observation Report (SOR)**

<b>Report No.</b>	C&A/SOR/14	<b>Date</b>	10.02.2022
<b>Location</b>	Pathways and Garden Area		

**Observation Images**



**Description**

Regular cleaning inside the campus pathways and gardening area.

**Potential Sustainability Measures**

Nil



**Site Observation Report (SOR)**

<b>Report No.</b>	C&A/SOR/17	<b>Date</b>	10.02.2022
<b>Location</b>	Canteen		

**Observation Images**



**Description**

In the canteen area, Pest O Flash (Flying insect electric control system) are installed, Hand washer at Wash basins and Drinking Water slogan pasted near Drinking Water Area. It is highly encouraged. But Food waste slogan label is not pasted in the Food waste Bin.

**Potential Sustainability Measures**

It is recommended to Paste the Food Waste slogan in the Food waste Bin. So it will easy to segregate from the different source of Wastes. Also paste the Waste slogan wherever necessary.

**Site Observation Report (SOR)**

<b>Report No.</b>	C&A/SOR/19	<b>Date</b>	10.02.2022
<b>Location</b>	Canteen & Hostels		

**Observation Images**



**Description**

There are different posters for Energy, Water and Food Conservation and they are displayed in the respected Areas.

**Potential Sustainability Measures**

It is highly encouraged. This type of practice need to be followed in the University Campus, which creates awareness to future generations about savings of energy, water and food, the natural resources.

**Site Observation Report (SOR)**

<b>Report No.</b>	C&A/SOR/21	<b>Date</b>	10.02.2022
<b>Location</b>	In all the Laboratories		

**Observation Images**



**Description**

It is observed that in all the Laboratories Safety Practices, How to use Fire Extinguisher, Do's and Don't's, List of Experiments banners are displayed on the wall.

**Potential Sustainability Measures**

It is highly encouraged practices in the Laboratories, which creates awareness and safety measures on how to handle the experiments among the students.



## **7 GOOD PRACTICES AT GITAM UNIVERSITY CAMPUS**

During Conserve Consultant's Audit, it is observed that M/s GITAM University, Bengaluru Campus has already adopted the following Performance Improvement Measures in its facility;

### **1.1 Safety Measures for COVID-19 precautions**

COVID -19 safety measure protocol is followed very strictly inside the University Campus, which creates awareness among students and staff to maintain the social distance and wear the mask.