ENVIRONMENTAL AUDIT REPORT

of



CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY

CHARUSAT Campus, Village: Changa, District: Anand-388421 (April 2019 to March 2020)



Prepared By

Environmental Engineering Laboratory (GPCB Recognised Schedule-I Environment Auditor)

M. S. Patel Department of Civil Engineering, Chandubhai S. Patel Institute of Technology (CSPIT) **Charotar University of Science & Technology, CHARUSAT** CHARUSAT Campus, Changa, Dist.: Anand, State: Gujarat. PIN Code - 388 421



EXECUTIVE SUMMARY

This following observation provides a summary of the findings of an environmental audit of Charotar University of Science & Technology, Changa, Anand.

Particulars	Observations/ Findings	
Consent and Production		
Name & Address of University	Charotar University of Science & Technology, CHARUSAT Campus, Changa, Dist.: Anand- 388421	
Audit Period	1 st April 2019 to 31 st March 2020	
Consumption of Ene	rgy, Fuel, Water, etc.	
Total Power Consumption	14593598.72 KWH	
Water Consumption	535005 L/Day	
Pollution	& Control	
Wastewater Generation	4,28,004 L/Day	
Monitoring Facilities	Adequate	
Gen	neral	
In-house Facilities	Adequate	
Green Belt/Cover	485623 Sq. Meter	
Suggestions	by Auditors	
Please refer Annexure-15 Environment Mana	gement Plan for Suggestions and its Priorities	



TABLE OF CONTENTS

Content	Page No.
Executive Summary	01
Environmental Audit Report for Charotar University of Science & Technology	02
Annexure – 1 Details of Electrical Consumption & Production	10
Annexure – 2 Details of Board of Director	11
Annexure – 3 Accreditation certificate	12
Annexure – 4 Details of Working days	14
Annexure – 5 Details of Quality of Trade Effluent	15
Annexure – 6 Details of Flue gas stack	21
Annexure – 7 Analysis Result of Stack Gas Emission	22
Annexure – 8 Analysis Results of Ambient Air Quality	24
Annexure – 9 Quantity, sources & composition of hazardous waste/solid	25
Annexure – 10 Biomedical Waste Certificate	26
Annexure – 11 Site Plan	27
Annexure – 12 Health Record	28
Annexure – 13 Details of Noise monitoring	31
Annexure – 14 Details of PLI Policy	32
Annexure – 15 Environment Management Plan	33



ENVIRONMENTAL AUDIT REPORT FOR CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY

Period From 1^{st} April 2019 to 31^{th} March 2020

(A)	GENERAL	
1	Name of the Organisation:	Charotar University of Science & Technology
2	Location:	CHARUSAT Campus, Changa Ta- Petlad, Dist Anand-388421
3	Registered Office Address:	CHARUSAT Campus, Changa Ta- Petlad, Dist Anand-388421
4	Month & Year of establishment:	January 2000
5	No. of Employees: Teaching staff	Total Employees: 590 Total:389
	Non- Teaching staff	Total: 281
6	No. of electrical connections with service numbers:	Type : H. T. – 11 KV Consumer No. : 15241
	Total connected load	Contract Demand Load : 550 KVA
	Electric consumption per unit of product manufactured:	Please refer Annexure-1



	Percentage Enhancement in Energy: Saving as Compared to Previous Year:	17.5 % NA	
7	Number of D.G. Set & their capacity:	Name of D.G Set1) Hostel-1 & 22) Hostel-3 and MCA Building Auditorium.3) RPCP Building4) PDPIAS Building5) PDPIAS Auditorium6) PDPIAS VSM Lab7) Admin Building & EC/EE Building	Capacity 45 KVA 100 KVA 20 KVA 82.5 KVA 50 KVA 50 KVA 200 KVA
8	Name/Residential address of all directors/partners:	8) CE/IT Building & ME/Civil Building9) CE/IT Building Win Cell DepartmentPlease refer Annexure-2	200 KVA 63 KVA
9	Telephone Nos:(Residential & Industrial) Fax No: Web site of Institute:	Tele: 02697-265011/21 Fax No: 0697-265007 www.charusat.ac.in	
	E-mail of Institute : E-mail Partners/Directors:	info@charusat.ac.in Please refer Annexure-2	
10	No. of shifts & timings:	Flexi Timings with 7.5 Working Hours Per Core Working Hours	c Day, 11 to 3
11	Working Day:	6 Day (Monday to Saturday)	



12	Has the institute obtained ISO 9000/ISO 14000/OSHAS 18000/Any other EM accreditation/Certification recognition? Give details.	Yes, Please refer Annexure-3
13	No. of Working days	Please refer Annexure – 4
В	WATER	
1	The quantity of water consumed per day :	535005 L/Day
2	The quantity of waste water.	4,28,004 L/Day
3	The quantity and quality of sewage and its method of treatment and disposal	It is discharged to soak pit for individual point. The quantity of sewage effluent is @ 100 lit /day (Approx.) Refer Annexure –5
4	The open area available for disposal of the effluent	Not applicable
5	Whether the quality of treated effluent meets the specified norms:-If no, the extent of deviation and reasons thereof	Yes
С	AIR	
1	No. of the flue gas stacks, their height (from ground level)nature & consumption of fuel:	Refer Annexure – 6



4	The quality of emission from each flue gas stack & the process stack & the extent of deviation from them:	Refer Annexure – 7, Well within Limits
4	The ambient air quality within the factory premises. Ambient air quality monitoring Stations outside the intuitional.	Refer Annexure – 8, Well within Limits
5	The details of air pollution control measures for all process & flue gas stacks:	NA
6	Improvement in emission quality since previous environmental audit based on performance evaluation of air pollution management system	Air pollution Control System performing well & adequate.
D	HAZARDOUS (SOLID) WASTE	
1	The quantity, sources & composition of hazardous waste/solid waste from each process/sources over the last three years	Refer Annexure – 9
2	The method of storage, treatment & disposal of hazardous/solid waste:	Open Burning in a pit & Incineration
Е	BIOMEDICAL WASTE	
1	The Waste is collected for further disposal by GPCB authorized agencies:	Refer Annexure – 10
F	SITE PLAN	
	The site plan showing the location of effluent treatment plant, final point of disposal of effluent, sampling point, drainage line, stacks, solid waste storage, disposal area & green belt	Refer Annexure – 11



~		1
G	RESOURCE RECOVERY	
1	The details regarding resource recovery including treated effluent for recycle/reuse from environmental pollution control system including effluent treatment plant:	Yes
H	HEALTH	
1	Whether any hazard is involved in the manufacturing or from the work environment: Yes/No If yes, provide details thereof:	No
2	Whether Institute has pre-employment & periodical medical examination facilities: Yes/No If yes, provide details thereof:	Yes, Pre-medical check-up is done for all employees and medical check-up of all employees is carried out periodically. Refer Annexure – 12
3	Whether health records are maintained regarding adverse effect on the health of workers: Yes/No If yes, provide details thereof:	NA
4	Whether institute has appointed a factory medical officer: Yes/No If yes; full time or part time. Include the details about the name, address and qualification of the factory medical	Yes CHARUSAT Hospital
	officer	
5	Details of medical facilities available. Dispensary/Ambulance/Hospitals/First Aid box.	First Aid Box – Yes Small Dispensary – Yes Ambulance – Yes Hospital – Yes



6	Whether sanitary facilities like water closets, urinals, bathroom are provided & are satisfactory	Yes. Adequate & Satisfactory sanitary facilities are provided.
Ι	ACCIDENTS	
1	The details of accidents in the Institute if any & remedial measures taken	No
J	SAFETY MEASURES	
1	General Environment of the factory	HousekeepingGoodDustinessLessLightingGoodVentilationGood
3	The details of facilities for disaster management/gas leakage.	NA
4	Whether on site/off site emergency plans are prepared and are being implemented/upgraded regularly; please give details	NA
5	Whether records of occupational hazards are maintained?	NA
6	Preventive measures adopted to minimize occupational hazard.	Yes
K	REMEDIAL MEASURES	
1	The details of sources; monitoring & measures taken for control of noise pollution in & around the Institute premises:	Refer Annexure – 13
2	The measures taken for prevention treatment & control of odour nuisance in & around the Institute premises:	Yes, Green Belt



2	Whether insurance policy obtained for	Yes.
3	Employees? Yes/No	Refer Annexure –14

It is here is declared that all the information submitted in with respect to this format is correct and we will be responsible for any lapse regarding incorrect or incomplete information.

Name and signature of all the members of audit team

Sr. No.	Name with Designation	Sign
1	Mr. Gaurav Kapse Environmental Engineer	Can.
2	Mr. Gaurav Patel Chemical Engineer	a
3	Dr. Seema Amin Microbiologist	Fun
4	Mr. Jinit R. Patel Chemist	AC



ANNEXURE-1

DETAILS OF ELECTRICAL CONSUMPTION

Month		Electric Consumption in KWH
April -2019		1295372.5
May-2019		1502474.74
June-2019		980758.09
July-2019		1766412.83
August-2019		1589195.2
September-2019		1915886.09
October-2019		1650761.38
November-2019		939357.99
December-2019	December-2019 785366.09	
January-2020		681798.27
February-2020		638881.54
March-2020		847334
	Total	14593598.72



ANNEXURE-2

NAME & DESIGNATION OF BOARD MEMBERS

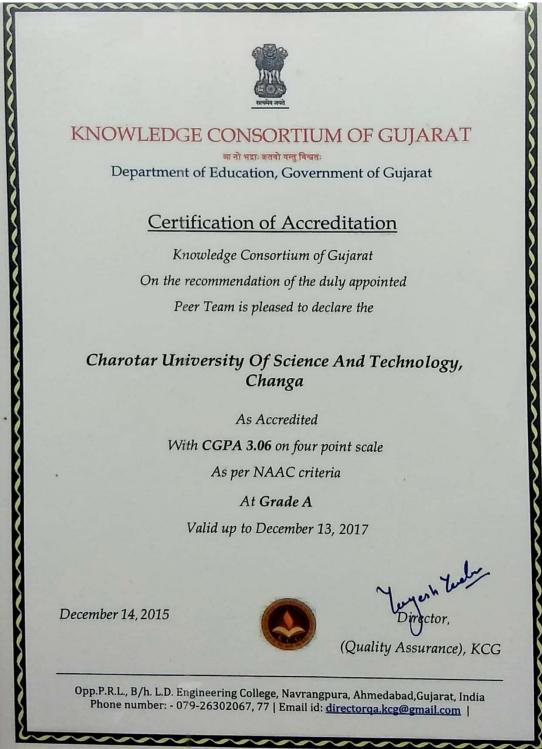
Councils, Boards, Committees at CHARUSAT

Governing Body

Shri Surendra M Patel	
President, CHARUSAT	
President, Shri Charotar Moti Sattavis Patidar Kelavani Mandal	President
Former Chairman, Ahmedabad Urban Development Authority	
Former, Member of Parliament, Rajya Sabha A Renowned Technocrat	
Dr. Pankaj Joshi	Provost
Provost, CHARUSAT	
Shri Virendra S Patel	
Trustee, Shri Moti Sattavis Patidar Kelavani Mandal	Member
Treasurer, CHRF Founder, Charusat Educational Foundation, USA	
Dr. V G Patel**	Member
Founding Director EDI Renowned Expert in Entrepreneurship Development	
Dr. M I Patel	
Former Sheriff of Mumbai Renowned Technocrat and Industrialist	Member
Chief Parton, Smt. Chandaben Mohanbhai Patel Computer Application, CHARUSAT	
Shri Naginbhai M Patel	Manushas
President, CHRF Descident, Shri Charatar Mati Sattavia Lawya Datidar Samai - Mathewaratha	Member
President, Shri Charotar Moti Sattavis Leuva Patidar Samaj – Mathrusanstha	
Dr. Manan Raval Dean Faculty of Dharmaay (Dringing), Ramankhai Datal Callago of Dharmaay	Member
Dean, Faculty of Pharmacy Principal, Ramanbhai Patel College of Pharmacy	
Dr. Amit Ganatra	Manahan
Dean, Faculty of Technology & Engineering	Member
Head, Department of Computer Engineering, CSPIT Shri Hemal Patel	
	Member
CEO, Elitecore Technologies Ltd NJ-USA and India	
Leading Entrepreneur in IT Industry	
Dr. Bimal Patel	Member
Director, Gujarat National Law University	
Dr. Paresh Patel	
Prominent Surgeon (FACS, FICS-USA)	Member
President & Surgeon, Shreedha Hospital, Vahera (Borsad) Leading	
Entrepreneur in IT Industry	
Shri Devang Patel	Manahan
Chief Executive, IPCO Industries & Business operated at USA	Member
Chief Parton, Indukaka Ipcowala Institute of Management A Philanthrope of repute	
Shri Pankaj R Patel Chairman & Managing Director, Codilo Healtheare I td	
Chairman & Managing Director, Cadila Healthcare Ltd	Member
Chief Patron, Ramanbhai Patel College of Pharmacy	
Chairman, Ahmedabad Management Association	Manula
Principal Secretary	Member
Department of Education, Government of Gujarat	luudta a
Shri Mahesh G Patel *	Invitee
Coordinator, Education Campus Anand	Member
Mr. Devang Joshi (Ex – officio)	Ex - officio
Registrar, CHARUSAT	



ACCREDITATION CERTIFICATES





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The Executive Committee of the **Knowledge Consortium of Gujarat, Department of Education, Government of Gujarat** on the recommendation of the duly appointed agency, the Indian Centre for Academic Rankings and Excellence **(ICARE)** has rated

Chandubhai S Patel Institute Of Technology



as a **3 Star** Institution with a CGPA of **2.48 out of 5** in the category of **'ENGINEERING'** on the basis of comprehensive performance metrics as set out in the **Gujarat State Institutional Ratings Framework (GSIRF)** on the 28th February 2019.

PARAMETER	STAR RATINGS
TEACHING, LEARNING & RESOURCES	****
RESEARCH AND PROFESSIONAL PRACTICE	**
GRADUATION OUTCOMES	****
OUTREACH AND INCLUSIVITY	***

BY ORDER

Anju Sharma IAS Principal Secretary Education Government of Gujarat KB Upadhyay IAS (Retd.) CEO Knowledge Consortium of Gujarat Government of Gujarat

Dr Karthick Sridhar Vice Chairman ICARE

Syed Mujahid Director - Ratings ICARE

VALID UPTO 30TH MARCH 2020



ANNEXURE – 4 DETAILS OF WORKING DAYS

Month	Working Days
April -2019	25
May-2019	26
June-2019	24
July-2019	26
August-2019	23
September-2019	24
October-2019	19
November-2019	25
December-2019	24
January-2020	23
February-2020	25
March-2020	24
Total	288



Date of Collection: 27.11.2019 Mode of Collection: Grab								
Sample Description	Sample ID	рН	Тетр	TDS	EC	Chlorides (mg/L)		
Centre Square Left Side-1 RO Water(A-6 Building)	CH/W/19/1	7.02	26.6	26.4	58.9	9.0752		
Boys Washroom Tap Water RHS(A-6 Building)	CH/W/19/2	7.21	27.1	389	0.3	49.9136		
Ro Water Tap-2 Nr Boys Washroom LHS(A-6 Building)	CH/W/19/3	7.01	27.1	26.4	58.7	6.8064		
Centre Square RO Water, RHS-1 G.Floor(A-6 Building)	CH/W/19/4	6.6	26.5	30.1	59.5	4.5376		
Centre Square Ro Water LHS-1, G.Floor(A-6 Building)	CH/W/19/5	6.36	26.7	26.7	59.1	6.8064		
Boys Washroom Tap Water(A-6 Building)	CH/W/19/6	7.12	27.5	BLQ	0.01	47.6448		
Centre Square Ro Water LHS-2,G.Floor(A-6 Building)	CH/W/19/7	6.85	27	27.21	60.5	4.5376		
Centre Square Ro Water LHS-3, G.Floor(A-6 Building)	CH/W/19/8	6.49	27.1	26.8	69	BLQ		
RO Water RHS,1stFloor(A-6 Building)	CH/W/19/9	6.98	27	26.3	58.8	9.0752		
Smithy shop RO Water, Nr Mech. Workshop(A-6 Building)	CH/W/19/10	7.28	26.1	BLQ	0.04	49.9136		
RO Water, Nr Workshop(A-6 Building)	CH/W/19/11	7.08	26.5	23.9	52.74	6.8064		
Boys Washroom LHS(A-6 Building)	CH/W/19/12	7.35	26.9	0	0.01	47.6448		
G.Floor Tap Water, Nr. Staff Room(A-2 Building)	CH/W/19/13	7.49	27.4	479	1045	45.376		
Ro Water, Nr. Girls Washroom G.Floor(A-2 Building)	CH/W/19/14	7.03	26.5	68.9	151.8	13.6128		
Staff Room, 1st Floor Ro Water(A-2 Building)	CH/W/19/15	7.43	27.4	40.4	0.04	49.9136		
Nr. Boys Washroom Ro Water RHS-1 G.Floor(A-2 Building)	CH/W/19/16	7.51	25.9	40.4	88.6	15.8816		
Ro Water Nr. Girls Washroom 1 st Floor(A-2 Building)	CH/W/19/17	7.13	26.9	68.5	151.7	2.2688		
RO Water nr.Girls Washroom, 1 st Floor(A-2 Building)	CH/W/19/18	7.08	26.9	69	152.8	15.8816		
Garden Water G.Floor(A-2 Building)	CH/W/19/19	7.44	26.5	345	0.03	45.376		

DETAILS OF QUALITY OF WATER



Girls Washroom Tap Water 1 st Floor(A-2 Building)	CH/W/19/20	7.57	27.3	478	1028	45.376
Lab-313 Tap Water(A-8 Building)	CH/W/19/21	7.64	27.6	462	0.02	49.9136
Nr.Lab No.313 RO Water(A-8 Building)	CH/W/19/22	6.68	28.2	13.7	31.6	BLQ
Room No-218 RO Water(A-8 Building)	CH/W/19/23	6.85	25.4	28.6	13.21	2.2688
Girls Washroom RO Water, G.Floor(A-2 Building)	CH/W/19/24	6.81	26.89	69.2	155.3	45.376
Girls Washroom Tap Water, G.Floor(A-2 Building)	CH/W/19/25	7.37	27.1	486	28	4.5376
Room No.125 RO Water, G.Floor(A-8 Building)	CH/W/19/26	6.1	28.4	10.85	24.9	45.376
Lab No.125 Tap Water, G.Floor(A-8 Building)	CH/W/19/27	7.14	27.7	BLQ	0.01	13.6128
Room No.119 Ro Water, G.Floor(A-8 Building)	CH/W/19/28	7.09	25.3	13.62	30.1	6.8064
Room No.117 RO Water, G.Floor(A-3 Building)	CH/W/19/29	6.87	26	15.5	33.9	2.2688
Gardening Point(A-2 Building)	CH/W/19/30	7.45	27	512	1136	49.9136
Nr. Boys Washroom RO Water(A-9 Building)	CH/W/19/31	7.12	27	56	132	9.0752
Washroom Tap Water, G.Floor (A9 Building)	CH/W/19/32	7.49	27.8	427	924	43.1072
Boys Washroom Tap Water, G. Floor (A-3 Building)	CH/W/19/33	7.78	27.5	68.5	151.7	52.1824
Tap Water, G.Floor (H-1 Building)	CH/W/19/34	7.49	26.9	479	1023	68.064
Garden Tap Water(A-9 Building)	CH/W/19/35	7.48	29.4	431	958	43.1072
RO Water, G.Floor(H-2 Building)	CH/W/19/36	6.9	28	37.3	85	6.8064
Nr.Boys Washroom, RO Water, G.Floor(A-9 Building)	CH/W/19/37	7.37	28	26.3	59.6	18.1504
Nr. Girls Washroom RO Water 1 st Floor(A-7 Building)	CH/W/19/38	7.47	26.1	76.7	164.7	6.8064
Girls Washroom Tap Water, G.Floor(A-7 Building)	CH/W/19/39	7.49	27.6	502	1099	45.376
Girls Washroom RO Water, G.Floor(A-9 Building)	CH/W/19/40	7.03	27.8	36.6	82.3	6.8064
Nr. Boys Washroom RO Water, G.Floor(A-5 Building)	CH/W/19/41	7.65	27.7	28.9	13.1	22.688
Boys Rest Room, Tap Water, 1stFloor(A-7 Building)	CH/W/19/42	7.58	26.3	447	972	49.9136
Nr. Boys Washroom, RO Water, 1 st Floor(A-9 Building)	CH/W/19/43	7.11	25.8	26.7	59.4	6.8064
Boys Rest Room, Tap Water, 1stFloor(A-5 Building)	CH/W/19/44	7.58	27.4	479	1014	47.6448
Boys Rest Room, Tap Water, G.Floor(A-5 Building)	CH/W/19/45	7.62	28.9	486	105	49.9136
Nr. Girls Washroom, RO Water, 1 st Floor(A-9 Building)	CH/W/19/46	7	24.3	36.5	73.7	9.0752
RO Water 1 st Floor(A-9 Building)	CH/W/19/47	7.06	21.6	37.8	75.3	11.344



F.M Lab(A-7 Building)	CH/W/19/48	8.86	25.8	647	1334	61.2576
Nr. Boys Washroom, RO Water,1st Floor(A-7	CH/W/19/49	7.82	24.4	77.3	161.5	9.0752
Building)						
Nr.Room No-414, RO Water(A-5 Building)	CH/W/19/50	7.6	27.7	220	480	20.4192
Nr. Boys Washroom, RO Water, G.Floor(A-7 Building)	CH/W/19/51	7.61	23.4	76.4	154.9	9.0752
Nr. Girls Washroom, RO Water, 1 st Floor(A-9 Building)	CH/W/19/52	7.05	23.9	39.1	81.4	6.8064
Nr Girls Rest Room, RO Water, 1 st Floor(A-9 Building)	CH/W/19/53	7.15	20	37	70.8	9.0752
Boys Washroom, Tap Water, G.Floor(A-7 Building)	CH/W/19/54	7.47	27.6	515	1108	45.376
Boys Washroom, RO Water, G.Floor(A-7 Building)	CH/W/19/55	7.32	25.4	77.5	166.7	18.1504
Nr. Boys Washroom, Tap Water, G.Floor(A-9 Building)	CH/W/19/56	7.49	28.1	26.8	60.7	BLQ
Boys Washroom, RO Water, 2 nd Floor(A-7 Building)	CH/W/19/57	7.33	25.8	77.2	164.2	9.0752
Boys Washroom, Tap Water, 2 nd Floor(A-7 Building)	CH/W/19/58	7.51	27.7	516	1112	40.8384
Boys Washroom, Tap Water, 2 nd Floor(A-5 Building)	CH/W/19/59	7.33	28.1	483	1046	22.688
Boys Restroom, Tap Water, 2 nd Floor(A-5 Building)	CH/W/19/60	7.52	28.5	486	1069	47.6448
Boys Washroom, Tap Water, 1stFloor(A-3 Building)	CH/W/19/61	7.2	28.5	563	1214	65.7952
Room No.219, RO Water, 1stFloor(A-3 Building)	CH/W/19/62	6.66	25.9	14.93	31.7	9.0752
Room No.471, RO Water, 2 nd Floor(A-5 Building)	CH/W/19/63	7.59	28.3	223	496	15.8816
Room No.219, RO Water, 1stFloor(A-3 Building)	CH/W/19/64	6.33	26.1	14.6	32.5	4.5376
Room No.219,RO Water,1stFloor(A-3 Building)	CH/W/19/65	6.15	26.5	14.5	32.2	2.2688
Room No.111,RO Water(H-5 Building)	CH/W/19/66	6.3	28.4	25.6	60.7	15.8816
Room No.212, RO Water (H-5 Building)	CH/W/19/67	6.34	27.9	26.7	60.7	4.5376
Room No.112,RO Water(H-5 Building)	CH/W/19/68	6.72	23.4	15.1	31.9	4.5376
Room No.109, Tap Water, G.Floor(A-3 Building)	CH/W/19/69	7.25	27.6	561	1186	68.064
Boys Washroom, RO Water,1stFloor(A-3 Building)	CH/W/19/70	7.19	27.5	561	1196	61.2576
Lab-106, Tap Water, G.Floor(A-3 Building)	CH/W/19/71	7.19	26.5	561	1190	70.3328
Room No.117, RO Water, G.Floor(A-3 Building)	CH/W/19/72	6.64	25.6	14.7	32	6.8064
Room No.103, Tap Water, G.Floor(A-3 Building)	CH/W/19/73	7.21	27.9	561	1195	70.3328
Room No.213,RO Water,1st Floor(H-5 Building)	CH/W/19/74	6.27	28.7	26.8	60	9.0752



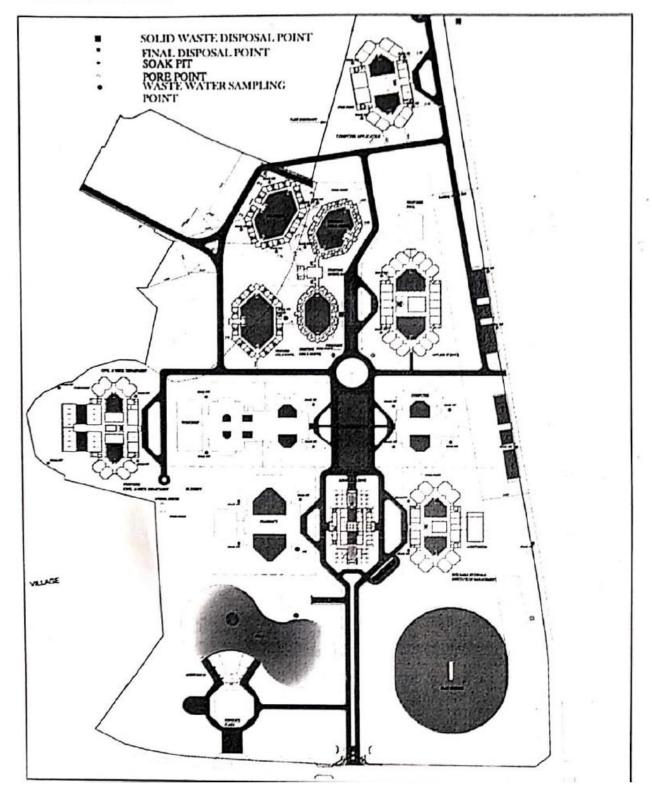
RO Water(A-1 Building)	CH/W/19/100	6.61	21.9	69.9	138.4	6.8064
RO Water(A-1 Building)	CH/W/19/99	5.97	97.1	37.8	83.9	9.0752
Tap Water(A-1 Building)	CH/W/19/98	7.45	28.1	461	997	49.9136
Nr. Room No. 23-24, Tap Water, G.Floor(A-5 Building)	CH/W/19/97	7.6	26.3	230	489	27.2256
Nr. Room No. 23-24, Tap Water, G.Floor(R-4 Building)	CH/W/19/96	7.3	26.5	423	886	38.5696
Nr. Room No. 23-24, Tap Water, G.Floor(R-4 Building)	CH/W/19/95	7.42	26.7	422	890	43.1072
Nr. Room No.27, RO Water, 1 st Floor, (R-4 Building)	CH/W/19/94	6.72	26.8	28.3	62.7	9.0752
Nr. Room No.316, Tap Water (A-5 Building)	CH/W/19/93	7.54	27	479	1013	43.1072
Boys Washroom, RO Water,1st(A-7 Building)	CH/W/19/92	7.29	24.2	76.5	163.3	9.0752
Room No.102, RO Water(H-6 Building)	CH/W/19/91	6.72	24.8	44	91.3	11.344
Room No.110,RO Water(H-6 Building)	CH/W/19/90	7.01	28.3	77.9	168.8	18.1504
Room No.110, RO Water(H-6 Building)	CH/W/19/89	6.8	23.6	76.9	164.4	18.1504
Nr. Room No.102, RO Water(H-6 Building)	CH/W/19/88	6.69	21.9	27.9	56.6	13.6128
Boys Washroom, RO Water(H-5 Building)	CH/W/19/87	6.6	26.5	27.6	60.2	11.344
Between Room No.15-16, Tap Water, G.Floor(R-3 Building)	CH/W/19/86	7.17	31.5	431	998	38.5696
Between Room No.27-28, Tap Water(R-3 Building)	CH/W/19/85	7.24	30.4	426	995	38.5696
Nr. Room No.102,RO Water, G.Floor(H-6 Building)	CH/W/19/84	6.77	23.2	27.8	57.3	9.0752
Between Room No.15-16, Tap Water, G.Floor(R-3 Building)	CH/W/19/83	7.29	27	427	912	38.5696
Between Room No.15-16 RO Water, G.Floor(R-3 Building)	CH/W/19/82	6.85	26.8	31.5	69.5	18.1504
Nr. Room No.28, Tap Water, 1stFloor(R-4 Building)	CH/W/19/81	7.38	27.8	420	916	27.2256
Between Room No.2-3 RO Water(R-4 Building)	CH/W/19/80	6.48	27.4	24.4	63	9.0752
Tap Water,1 st Floor(R-4 Building)	CH/W/19/79	7.07	29.2	421	963	34.032
Between Room No.2-3 Tap Water, G.Floor(R-4 Building)	CH/W/19/78	7.34	26.6	423	904	38.5696
RO Water, RHS,1st Floor(A-5 Building)	CH/W/19/77	7.31	23.9	26.8	60	11.344
Boys Washroom, RO Water, 1 st Floor(H-5 Building)	CH/W/19/76	6.67	28	28.2	63.7	11.344
Nr. Boys Washroom, RO Water, 1 st Floor(H-5 Building)	CH/W/19/75	6.73	28.7	28.4	64.4	6.8064



Tap Water(A-1 Building)	CH/W/19/101	7.57	26.4	47.6	123.3	56.72
RO Water(F-1 Building)	CH/W/19/102	7.38	25.9	27.1	57.6	54.4512
RO Water(F-2 Building)	CH/W/19/103	6.79	24.1	54.9	124.4	9.0752
Tap Water(F-2 Building)	CH/W/19/104	7.94	25.8	562	1157	56.72
RO Water(F-2 Building)	CH/W/19/105	7.36	24.9	132.9	278	56.72
RO Water(F-1 Building)	CH/W/19/106	7.71	25.9	632	1.5	70.3328
Tap Water (Nr. Iceberg)	CH/W/19/107	7.58	26.5	467	980	9.0752
Ro Water,1stFloor(A-7 Building)	CH/W/19/108	6.7	25.2	62.2	131.7	49.9136
Tap Water, Mech.Garden(A-7 Building)	CH/W/19/109	7.35	27.9	505	1076	47.6448
Backyard, Tap Water(A-3 Building)	CH/W/19/110	7.39	27.3	482	1020	52.1824
RO Water,1 st Floor(A-3 Building)	CH/W/19/111	5.7	24.8	17.6	37.5	6.8064
Smithy Shop, Tap Water(A-6 Building)	CH/W/19/112	7.35	26.9	546	1140	74.8704
I.T Boys Washroom, RO Water(A-7 Building)	CH/W/19/113	6.63	20.2	57.8	110.5	11.344
I.T Girls Washroom, RO Water(A-7 Building)	CH/W/19/114	6.66	20.2	57.9	110.7	6.8064
Nr. Boys Washroom, Tap Water(A-9 Building)	CH/W/19/115	7.42	26.9	478	1009	4.5376
RO Water(H-1 Building)	CH/W/19/116	5.8	23.8	17.83	37	70.3328
Between Room No.28-29, RO Water, 1 st Floor(R-3 Building)	CH/W/19/117	5.77	23.3	29.8	61.2	6.8064
Between Room No.2-3, RO Water, G.Floor(R-3 Building)	CH/W/19/118	5.89	24.3	27.6	58	4.5376
Between Room No.52-53, RO Water, 3 rd Floor(H-1 Building)	CH/W/19/119	5.71	18.9	29.1	54.4	9.0752
RO Water(H-2 Building)	CH/W/19/120	6.87	25.9	76.1	163.2	6.8064
Nr. Women's Health & PT, RO Water(H-5 Building)	CH/W/19/121	5.92	23.5	33.5	69	9.0752
Child Lab, RO Water(H-6 Building)	CH/W/19/122	7.16	24	38.9	81	58.9888
Nr. HOD Office, Tap Water(A-7 Building)	CH/W/19/123	7.52	27.2	489	1037	47.6448
Nr. KDCC Bank, RO Water(Charusat Campus)	CH/W/19/124	5.88	24.6	14.16	30	BLQ
Nr. Nescafe, Tap Water(Charusat Campus)	CH/W/19/125	7.43	27.5	476	1018	56.72
Garden, Tap Water (A-3 Building)	CH/W/19/126	7.3	29.3	547	1205	72.6016
Tap Water(H-1 Building)	CH/W/19/127	7.92	28.4	355	547	49.53
RO Water, 1stFloor(A-7 Building)	CH/W/19/128	7.35	24.5	26.3	58	9.05



Final Disposal Point







DETAILS OF FLUE GAS STACKS

Sr. No.	Stack attached to DG Set	Fuel	Height of the stack
1	Hostel-1 & 2	Diesel	11
2	Hostel-3 and MCA Building Auditorium	Diesel	11
3	RPCP Building	Diesel	11
4	PDPIAS Building	Diesel	11
5	PDPIAS Auditorium	Diesel	11
6	PDPIAS VSM Lab	Diesel	11
7	Admin Building & EC/EE Building	Diesel	11
8	CE/IT Building & ME/Civil Building	Diesel	11
9	CE/IT Building Win cell Department	Diesel	11



THE QUALITY OF EMISSION FROM EACH FLUE GAS STACK

First Monitoring

FLUE	LUE GAS STACKS									
NI -	I		Dete	Flue Gas	Flue Gas	Pollu	Pollutants, mg	g/Nm ³		
No.	Location	Stack Attached to	Date	Temp. in ⁰ K	Velocity in m/s	PM	SO ₂ ppm	NO _x Ppm		
1.	Hostel-3	D.G.Set (100 KVA)	12.06.2019	372.3	3.90	48.4	37	47		
2.	PDPIAS Building	D.G.Set (82.5KVA)	12.06.2019	440	15.89	42.3	18	49		
3.	PDPIAS Auditorium	D.G.Set (50 KVA)	12.06.2019	349.1	16.91	35.6	09	30		
4.	PDPIAS VSM Lab	D.G.Set (50 KVA)	12.06.2019	353	17.43	45.5	05	40		
5.	Admin & EC/EE Building	D.G.Set (200 KVA)	12.06.2019	359.4	21.37	50.8	05	46		
6.	CE/IT Building, Wincell Dept.	D.G.Set (82.5KVA)	12.06.2019	381.6	20.55	45.3	15	40		
7.	Hostel 1& 2	D.G.Set (45 KVA)	12.06.2019	355.5	20.55	36.6	06	48		
8.	RPCP Building	D.G.Set (20 KVA)	12.06.2019	353.1	17.43	33.4	10	46		

Second Monitoring

FLUE	FLUE GAS STACKS								
N				Flue Gas	Flue Gas	Pollu	tants, mg	g/Nm ³	
No.	Location	Stack Attached to	Date	Temp. in ⁰ K	Velocity in m/s	PM	SO ₂ ppm	NOx Ppm	
1.	Hostel-3	D.G.Set (100 KVA)	18.09.2019	368.4	3.88	45.3	35	49	
2.	PDPIAS Building	D.G.Set (82.5KVA)	18.09.2019	383.5	11.88	35.6	12	46	
3.	PDPIAS	D.G.Set (50 KVA)	18.09.2019	353.1	14.23	30.2	06	35	
	Auditorium								
4.	PDPIAS VSM Lab	D.G.Set (50 KVA)	18.09.2019	356.5	13.78	32.3	05	39	
5.	Admin & EC/EE	D.G.Set (200 KVA)	18.09.2019	357.4	13.78	56.5	07	40	
	Building								
6.	CE/IT Building,	D.G.Set (82.5KVA)	18.09.2019	372.7	11.05	42	16	48	
	Wincell Dept.								
7.	Hostel 1& 2	D.G.Set (45 KVA)	18.09.2019	355.3	13.27	35.4	08	48	
8.	RPCP Building	D.G.Set (20 KVA)	18.09.2019	350.3	11.36	28.6	01	48	



FLUE	GAS STACKS								
NI -			Dete	Flue Gas	Flue Gas Velocity in m/s	Pollutants, mg/Nm ³			
No.	Location	Stack Attached to	Date	Temp. in ⁰ K		PM	SO ₂ ppm	NO _x Ppm	
1.	Hostel-3	D.G.Set (100 KVA)	25.11.2019	363.3	6.68	50.3	35	45	
2.	PDPIAS Building	D.G.Set (82.5KVA)	25.11.2019	393.3	12.68	39.8	15	30	
3.	PDPIAS Auditorium	D.G.Set (50 KVA)	25.11.2019	352.1	16.11	32.3	07	48	
4.	PDPIAS VSM Lab	D.G.Set (50 KVA)	25.11.2019	358	14.83	58.4	03	35	
5.	Admin & EC/EE Building	D.G.Set (200 KVA)	25.11.2019	359.3	17.58	45.1	03	40	
6.	CE/IT Building, Wincell Dept.	D.G.Set (82.5KVA)	25.11.2019	376.5	14.16	46.3	11	43	
7.	Hostel 1& 2	D.G.Set (45 KVA)	25.11.2019	353.4	14.24	38.1	08	29	
8.	RPCP Building	D.G.Set (20 KVA)	25.11.2019	348	13.08	30.3	02	36	



AMBIENT AIR QUALITY WITHIN THE FACTORY PREMISES

1 st Monitoring							
Locations	Nr.Nursing	Nr.Nursing Nr.Physioth		Nr. Civil			
		erapy	Department	Department			
Date	30.06.2019	30.06.2019	02.07.2019	02.07.2019			
Duration in Minutes	1440	1440	1440	1440			
PM 2.5 (µg/M ³)	13.38	33.31	22.02	42.88			
PM $_{10} (\mu g/M^3)$	27.23		26.18				
$SO_x(\mu g/M^3)$	13.92		17				
$NO_x (\mu g/M^3)$	2.39		1.87				



ANNEXURE –9 QUANTITY, SOURCES & COMPOSITION OF HAZARDOUS WASTE/SOLID WASTE

	Solid Waste Generation				
Sr No.	AREA	QUANTITY OF DAY (kg)			
	Food Courts				
1	Danny	8			
2	Ice berg	6			
3	Krishna	9			
4	Sweet spot	4			
5	Nescafe	3			
6	Tea Post	4			
7	Lalabhai Sevsal	5			
8	Canteen	22			
9	Mess	88			
10	Papelon	21			
11	Civil/ME	24			
12	EE/EC	23			
13	Depstar	21			
14	Pharmacy	23			
15	Admin	11			
16	IIIM	16			
17	PDPIAS	37			
18	CMPICA	9			
19	Hostels	152			
20	ARIP	19			
21	Nursing	21			
22	Campus Roads	54			
	Total	580 Kg			



BIOMEDICAL WASTE CERTIFICATE

This is to certify that	CERTIFICE	116	
Dr. / In-charge :	Dr. Uma Patel		
Located at the address :	Charusat Campus, Chan	1000 C	
Taluka	<u>Petlad</u> Dist:	Anand	Pincode: <u>388421</u>
Samvedna Reg. ID N PT- 2316	o.: <u>Valid Upto</u> 31-07-201	111 117 19	<u>GPCB - ID</u> 366659
Place : Changa		For Samvedna	Bmw Incinerator
Date: 19-Jul-18		Partner	(Bar)
			F

11		CERTIF	ICATE	
	Dr. / In-charge :	<u>Charusat Hospital</u> <u>Dr. Uma Patel</u>		
11	Located at the address : Taluka:	Charusat Campus Petlad	<u>s, Changa</u> Dist: Anand	Pincode: 388421
	Samvedna Reg. ID N PT- 2316		<u>iid Upto:</u> -07-2020	<u>GPCB - ID</u> 366659
- 11	Place : Changa	the second se	For Sam	vedna Bmw Incinerator
			i or Sam	vedita biliw incluciator



SITE PLAN



Site Plan of CHARUSAT Campus



HEALTH RECORDS

Year	Employee Health Checkup Date	No of Employees Checkı		Student Health Checkup Date	No of Students	Total No of Employees Underwent Checkup	Total No of Students Underwent Health Checkup	
	26/11/2019, 03/12/2019	CSPIT - EC	24+10 = 34	18/02/2020, 06/03/2020	CSPIT - EC	69+70 = 139		
	25/11/2019, 14/12/2019 and 06/01/2020	CSPIT - ME	17+ 12+3 = 32	17/02/2020, 02/03/2020	CSPIT - ME	211+48 = 259		
2019- 20	23/11/2019, 07/12/2019, 04/01/2020 and 06/01/20	CSPIT - CL	24+1+4+2 = 31	19/02/2020, 05/03/2020	CSPIT - CL	73+56= 129	337	3422
20	30/11/2019, 07/12/2019 and 31/01/2020	CSPIT - CE	14+5+6 = 25	20/02/2020, 04/03/2020	CSPIT - CE	127+ 108 = 235		
	29/11/2019, 07/12/2019 and 11/12/2019	CSPIT - IT	13+2+1 = 16	02/03/2020, 03/03/2020	CSPIT - IT	125+66= 191		
	07/12/2019, 17/01/2020	CSPIT - EE	9+9=18	24/02/2020	CSPIT - EE	34		



12/12/2019,			05/02/2020, 11/02/2020 and 12/02/2020	DEPSTAR - CE	118+ 71+17= 206	
13/12/2019, 02/01/2020	DEPSTAR	5+12+1+5=23	06/02/2020, 12/02/2020	DEPSTAR - IT	105+ 42= 147	
and 29/02/2020			04/02/2020, 07/02/2020 and 12/02/2020	DEPSTAR - CSE	140+102+17= 259	
06/03/2019 09/03/2020 and 15/03/2019	RPCP	23	05/03/2020, 06/03/2020, 07/03/2019, 09/03/2019, 15/03/2019 and 18/11/2019	RPCP	93+91+51+12+51+70= 368	
-	IIIM	-	19/11/2019	IIIM	39	
11/11/2019	CIPS	20	07/11/2019 and 08/11/2019	CIPS	108+36= 144	
18/11/2019	ARIP	10	12/11/2019, 13/11/2019 and 14/11/2019	ARIP	55+21+50 = 126	
28/01/2020	MITN	31	11/11/2019, 26/11/2019, 27/11/2019, 28/11/2019, 04/12/2019, 07/12/2019, 12/12/2019	MITN	57+59+26+43+58+8+ 26+27=304	



			and 03/01/2020			
-	CMPICA	-	06/01/2020, 07/01/2020, 08/01/2020 and 10/01/2020	CMPICA	100+ 75+75+61= 311	
17/12/2019, 18/12/2019, 26/12/2019, 27/12/2019 and 28/12/2019	PDPIAS	35+ 27+1+2+ 1 = 66	17/12/2019, 18/12/2019, 19/12/2019, 20/12/2019, 26/12/2019, 27/12/2019, 28/12/2019, 31/12/2019 and 01/01/2020	PDPIAS	50+40+34+56+32+87+63+71+43= 476	
24/04/2019	ADMINISTRATION DEPARTMENT	2	28/09/2019	INTERNATIONAL STUDENTS	29	
11/12/2019	WINCELL	6	02/01/2020	RESEARCH STUDENTS	26	



DETAILS OF NOISE MONITORING

Date	of Sampling	29-02-2020
No.	Locations	Reading dB(A) (Day time 6:00 am to 10:00 pm)
1.	Near Civil Building	61
2.	Near Mechanical Workshop	53
3.	Near Kamlaben Girls Hostel	45
4.	Near Tapas Hall	55
5.	Near Girls Hostel-3	43
6.	Near MCA Building	61
7.	Near Main Gate Parking	54
8.	Near Student Store	60
9.	Near Main Gate(Karoli)	67
10.	Near Amul(Hospital)	51
11.	Near ARIP & Nursing Center	48
12.	Near CHRF Hospital	55
13.	Near CHRF Hospital H ₂	53
14.	Near Volleyball Court	52
15.	Near Main Ground	56
16.	Near Main Gate (Changa)	63
17.	Near Pond	49
18.	Near Admin & Canteen	54
19.	Near MBA Building	53
20.	Near Centre Loan	57
21.	Near PDPIAS	64



ANNEXURE –14 INSURANCE POLICY

						1 193 11
					What have been all	
Poliçy Schedu	le					the second second
						IFFCO-TO
					Policy Servicing Office	enusity rates
IFF		Incurance Com	anna Lineit			
	CO-TOKIO General Office: IFFCO SADAN,C				301/B-1,3rd Floor, Int Centre,Majura Gate, I	
nega.	Office. In CO JADAN, C.	L'Disti Centre , Saket	,New Deini-11	5017	Road, Surat, Gujarat3	
Corporate Ide	ntification Number (CIN		107621 1804	Pag No. 106		
				-		1. This ha
610	up Personal Accide	ent insurance P	olicy Sched	ule	1 State B	
	C 111	M TAX INVOICE				1 Mellet
		VI TAX INVOICE			S. A. COMPANY	1. 10 1. 10
	181				General Insurance Se	
					General insurance se	
					24AAACI75	
					Invoice No.	544970
Insured	CHAROTAR UNIVERSI	TY OF SCIENCE AND	TECHNOLOGY		Policy No	
Address	CHAROTAR CAMPUS,	AT. CHANGA, TA- PE	ETLAD		Covernote No	1 1 1 1 1
	DIS. ANAND-388421				an in the second	and send that
		1.1			Period of In:	
GSTIN			State Code	24	from 00.00 hours on	29/06/2
Phone No			Agent Code	52001446	To Mid Night on	28/06/2
Total Member	s Covered	625		Co-ir	surance Details	e 211 1
Intra State			L	00-11		1. 191 - 1
Premium Deta	ils		IFFCO TOKIO	General Insur	ance Co. Ltd.	1 1 1 1
Taxable Value		153,234			1 1 1 1	19321 14
CGST @ 9%		13,791				
SGST @ 9%		13,791				S 111
IGST @ 18%					1. A. A. 194	S States
Total Value		180,816			1	
Policy Condit	tions/ Extensions/ En	dorsements				1 19 11 1
Group Compo		Employees of the l	nsured			
Basis of Policy	and the second se	Unnamed Cover				1
	Table "A": Benefit 1,	Table "B1": Benefit	1-4, Table "B	": Benefit 1-5	Table "C": Benefit 1	
Coverage				Table "B1"		1. Ju di
Day 1 cover fo	or new Joinees is allow	ed subject to receip	at of premium	/ sufficient C	D balance as on effect	tive date of r
	n by 15th of every succe				1	
	mium on account of Mi		Members is a	lowed from t	he date of separation	subject to re-
	by 15th day of every su					
	TGI. No refund is allowe					
	n Insured under Table C				times of monthly ncon	ne which eve
lower.					Capital I	
	% of sum insured max. o	f Rs.1000/- per wee	k max. of 100 v	weeks	Self-ra di	L. A. L. I
TTD benefit 19	edical Extension : Actu				er is lower. (Linked to	the PA disa
Accidental Me	ble under the policy).					S. 3
Accidental Me Claim admissit			ses incurred or	Rs 5,000/- w	hichever is lower. (No	t Linked to th
Accidental Me Claim admissit Accidental Me	edical Extension (Only C	policy)			10.00	1 P. L.
Accidental Me Claim admissib Accidental Me disability Clain	n admissible under the p		discolorization also	ise	1. C.F	1
Accidental Me Claim admissib Accidental Me disability Clain			ojustment clau			
Accidental Me Claim admissit Accidental Me disability Clain The policy wil	n admissible under the p	ly declaration cum a			client should maintain	daily attend
Accidental Me Claim admissit Accidental Me disability Claim The policy will The entire stre	n admissible under the p I be subject to half year	ly declaration cum a be covered. No sel	ectivity will be	allowed.The		
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ENVIRONMENT MANAGEMENT PLAN (EMP)

By understanding the dynamics of present situation of resource utilization and current practices of waste disposal, the Environmental Engineering Lab has prepared an Environment Management Plan for the University. This plan will reveal the strengths and weaknesses and suggests remedies to develop green and clean campus. The EMP also gives suggestion for the priority of work to carry out.

	Solid Waste							
Sector	Strengths	Weakness	Suggestions	Priority				
1. Paper	 Use of green computing practices Use of one sided papers in main building and many departments. Paperless Digital Exam The convocation process also involves online system. The administration use emails and online payment. 	 Multiple number of copies required for office work. More number of departments and affiliated colleges where circulars to be sent. Multiple copies of Project Report and Internship Reports 	 Towards paperless office: more use of e- mails, e- money transfer and advance IT technology for communication. Pulping of major portion of papers i.e. answer sheets, bills and other administrative papers. 	Medium				

Environment Management Plan 2019-20 to 2023-24



	• Recycling and reuse of	• Sometimes plastic items are	• Segregation of waste at the	
2. Plastic	plastic at some departments.	thrown with general waste.	source and sending plastic	Medium
	• Incineration in controlled conditions	 The plastic covering of dispatched laboratory equipment boxes and other items are unavoidable. Sometimes plastic bottles and bags are required for water and soil sampling which is unavoidable as per the protocol. Distribution of RO water through plastic cans. 	 waste for recycling. Total Plastic ban on campus. In all functions the plastic mineral water bottles, tea cups, straws, bouquets and gifts with plastic covering, decorations, etc. unnecessary plastic use is avoided. 	
3. Biodegradable waste	• Segregation of Plant Waste and Paper Waste	• Burning of dry bio- degradable waste at some places.	 Composting of all bio- degradable waste at various places by Garden section and using it for nursery, plantation and gardening. The kitchen waste generated in hostel kitchens should be utilized for compost production or biogas generation. 	Medium



4. Glass waste	• Reuse of bottles at some	• Throwing of glass waste	• Maximum reuse of bottles.	High
	departments for storage of	with regular waste though it	• Sending the broken glass	
	chemicals.	is recyclable.	for recycling.	
		• Sometimes the glasses of		
		windows and doors crack		
		suddenly which produce		
		glass waste.		

Energy				
Sector	Strengths	Weakness	Suggestions	Priorit
5. Electricity	 Installation of solar panels for production of electricity Use of LED lamps With sensors Most of the buildings are well constructed considering the need of illumination and ventilation which reduces the use of electricity. 	 Insufficient use of solar energy for electricity generation. Unnecessary use of lights, fans and computers at some places when no one is using. 	 Electrification of street lights by solar power. Use of solar pumps for water tanks. Use of electricity efficient equipment for laboratory and office use. 	Medium



6. Fuel	Use of Bicycles on university campus	• Hostels using high quantity of LPG fuel for their kitchens.	 "Cycle on rent" service for students will be beneficial. The biogas generation plant can be helpful to the hostel kitchens. General awareness about efficient use of fuel. No Vehicle Day" on first Saturday of every month which saves fuel. 	Medium
7. Water Utilization	 Water Purifiers on campus to filter water. Maximum water self- sufficiency by watershed management and harvesting 	 Overflowing of tanks at some places Fitting of old taps in toilets Leakages not repaired on time. 	 Installation of water guards or sensors at overhead water tanks to avoid overflowing losses. Proper and timely maintenance of plumbing. Installation of rain water harvesting assembly at every department. 	Medium



Hazardous Waste				
Sector	Strengths	Weakness	Suggestions	Priority
8. Chemical waste	 The practical protocols are set to use minimum quantity of chemicals for the routine practical. Microbial waste thrown out after proper disinfection measures at every departments dealing with microorganisms. 	• No proper disposal method for hazardous chemicals wastes.	• Hazardous chemical waste should be transferred to disposal facility center.	High
9. E-waste	• Regular disposal of e- waste through certified e- waste collection agency.	• E-waste is thrown along with regular waste, some material in e- waste can be hazardous and most of it can be recycled.	 There must be segregation of e- waste from regular waste at source. Precious metal recovery can be possible by university laboratories. 	High



Air				
Sector	Strengths	Weakness	Suggestions	Priority
10. Air	• University has ample amount of green cover for maintaining fresh atmosphere.	• The construction activities and burning of waste on the University campus are adding contamination of ambient air quality.	• The precautions like water sprinkling or use of enclosures should be made to reduce the particulate matter in air during construction activity.	Low
		Noise		
Sector	Strengths	Weakness	Suggestions	Priority
11. Noise	 University is located away from noisy area of city. The tree cover absorbs the noise of highway traffic. 	• The construction activities like excavation, digging, hammering, welding, transportation, loading and unloading operations. are responsible for ambient noise which disturbs the routine classes and research activities.	 Silent zone rules be followed. The noise producing activities should be done during the holidays or after the office hours. The contractor should be advised to use less noisy machines. 	Low