KAKATIYA GOVERNMENT COLLEGE,

HANAMKONDA

DIST: HANUMAKONDA –T.S.- 506001

Green Audit Report

2022-2023

KAKATIYA GOVERNMENT COLLEGE,

HANAMKONDA

DIST: HANUMAKONDA - 506001

Internal Green Audit Committee

Chairman: Dr G . RAJA REDDY

Vice- chairman: Dr. B.Ramesh

External Member: Dr. B Santhosh kumar

Coordinator: Dr. B.Vijayapal Reddy

Members: Dr.K.Ganesh

Sri. B.Raju

A.Ashok

S.Chary

(Senior Scientist, Pollution Control Board T.S)

College Profile

Name of the College: Kakatiya Govt.College,

Hanumakonda, Warangal

Contact Info: Dr. G.Raja Reddy, Principal, Mobile:9441412857

Campus Area: 5 Acres

Built-up Area: 10234.3 sq.m

Is the building has ventilators for natural air flow in all rooms: Yes

The student and faculty strength of the college:

Strength	Male	Female	Total
No of Students	1921	1570	3491
No of Teaching Staff	60	20	80
No of Non-Teaching staff	15	12	27

Physical Structure

The available land of the college: 5 Acres
The built-up area of the college: 110161.0884 Sq.Ft.

No. of Class Rooms	26
No. of Laboratories	18
No. of Conference halls	01
Library Halls	02
Canteen	01
Any other (please specify) Class room with LCD facility	10

OBJECTIVES OF GREEN AUDIT

The main aim of the green audit is to assess the quality of environment and management strategies to be implemented in Kakaitya Govt.College Hanumakonda ,Dist: Hanumakonda.

The objectives of green audit are:

1. To assess the quality of the soil, water, air and environmental risk assessment.

2. To quantify the energy, water consumption of college.

3. To assess management of solid and liquid wastes and measures to be taken to reduce waste.

4. To assess the carbon footprint of college.

5. To analyze recycling programs and plans to be implemented.

TARGET AREAS OF GREEN AUDITING

There are different areas of the environment (Soil, Air, and Water) and resources (Water, energy, waste) to audit in an institute to assess the quality of different parameters.

They are as follows:

Auditing for water management

Auditing for waste management

Auditing for green campus management

Auditing for energy management

Carbon footprint analysis

METHODOLOGY ADOPTED:

The methodology adopted to conduct the Green Audit of the Institution had the following components

Onsite Visit:

The team members of green audit visited different departments and areas to be assessed in college and will gather the data

Focus Group Discussion:

The Focus Group discussions will be held with the staff members, students and Science club, Eco-club members focusing on various aspects of Green Audit. The discussion will focus on identifying the attitudes and awareness towards environmental issues at the institutional and local level

Survey:

For energy, water, waste management and Carbon footprint analysis survey forms are and questionnaires will be used.

Survey forms:

1. Water management

Sl. NO	PARAMETERS	Response	Remarks
1	Source of water	Bore well,	
2	No. of Wells (Bore well)	02	
3	No. of motors used	02	
4	Horse power – Motor	3Hp-02,	
5	Depth of well –Total	120 feet	
6	Water level	50 feet	
7	Number of water tanks	8	
8	Capacity of tank	1000 lit-06,	
9	Quantity of water pumped every day	6200 liters	
10	Any water wastage/why?	No	
11	Water usage for gardening	1000 lit	
12	Waste water sources	Labs, Canteen, Water plant	
13	Use of waste water	Waste water from the water plant is used to Garden.	
14	Faith of waste water from labs	After neutralization with water pumped into sewage canal.	

15	Whether waste water from labs mixed with groundwater	No	
16	Any treatment for lab water	Neutralization	
17	Whether any green chemistry method practiced in labs	Rain water has been used as the distilled water	
18	No. of water coolers	nil	
19	Rain water harvest available?	Yes	
20	No. of units and amount of water harvested	02-2000 L	
21	Any leaky taps	Nil	
22	Amount of water lost per day	Nil	
23	Any water management plan used?	Audit for water usage conducted	
24	Any water saving techniques followed?	Awareness on save water is conducted to all the students , faculty and staff of the college	
25	Are there any signs reminding peoples to turn off the water?	Yes	

2. Energy Audit:

KAKATIYA GOVERNMENT COLLEGE - HANAMKONDA							
Details of College Electrical Peripherals and Devices							
S.No	Room No	AC's	Fans	Tubes	Class room with LCD	Lab	Lab with LCD
1	1(PPL ROOM)	1	5	14	0	0	0
2	2(Office)	3	9	19	0	0	0
3	3(Entrance(ppl,office)	0	2	3	0	0	0
4	Portico	0	0	1	0	0	0
5	4(T/H Staff Room)	0	4	4	0	0	0
6	5(Chem Lab)	0	2	4	0	**1**	0
7	6(Chem Lab)	0	3	8	0	**1**	0
8	7(Chem Bal Room)	0	2	6	0	**1**	0
9	8(Chem Lab)		6	8		**1**	
10	12(PHY. Lab)		6	8			1

11	13(PHY. Lab)		4	6		**1**	
12	14(Chem Store room)			3			
13	15 (Commerce Dept.)	1	2	4			
14	16(Chem Staff Room)			6			
15	17(Phy. Staff Room)		4	6			
16	Maths Staff Room		2	1			
17	11 (Store Room)			2			
18	Staff Toilets		1	4			
19	Steps close to store Room			1			
20	Chem - Phy Corridar			4			
21	VC-POL. Sci. Corridar			5			
22	23 (Pol. Sci. Dept)		2	3			
23	24(Boitech Lab)		2	3		**1**	
24	25(Office Record room)						
25	19(Old History Room)		1				
26	26(Comp.Dept)	1	2	3			
27	27(Comp. Lab)	1	4	8	1		
28	28(Botany Staff Room)	1	4	6			
29	18(Economics Dept.)		1	1			
30	21(Zoo. Dept)		2	4			
31	22(Zoo. Lab)		6	19			1
32	20(Bot. Lab)		6	18			1
33	Botany Corridar			1			
34	Zoology Corridar			2			
35	Zoology Anti Room		1	2			
36	Ladies Toilets(Near Zoo. Lab)						
37	56(Micro Biology Class Room	1	4		1		
38	57(Micro Biology Class Room	1	4	8	1		
39	58(Micro BiologyLab)		4	15		1	
40	59(Micro Biology Dept))	1	1	2			
41	55(Bio Tech Lab)	1	3	7		1	
42	Bio Tech Lab - 31 Room Corridar						
43	31			1			
44	32(History Dept.)		3	3			
45	33(Exam Branch)		1	2			
46	34(Exam Branch)	1	2	4			
47	Exam Branch - Ladies NCC Room Corridar)	1	2	8			
48	35(Zoo. Lab)		5	5			
49	36(Bot. Lab)		2	2			

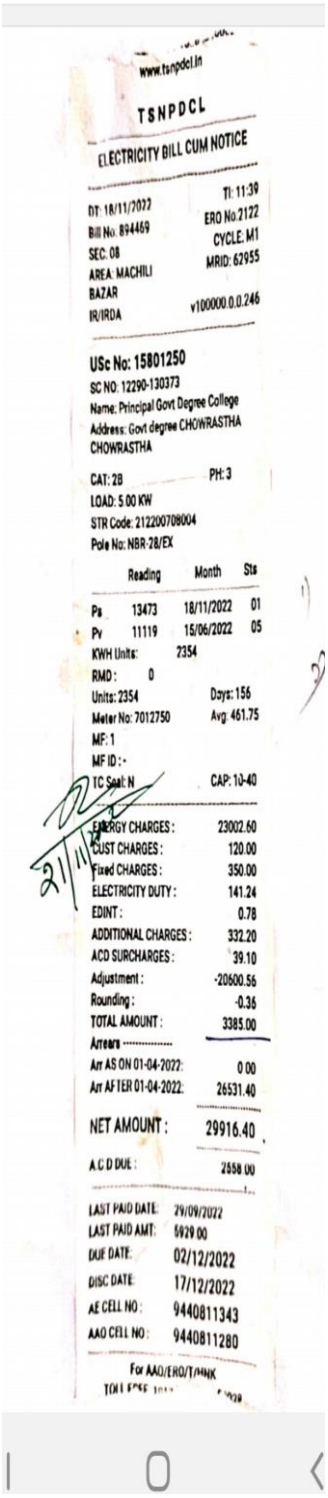
50	37		3	2			
51	38		3	2			
52	39(ELL)	2	4	12			
53	40(English Dept.)		2	4			
54	41(TSKC Lab)	4		24			1
55	43		4	4			1
56	44(NCC Girls Room)		1	4			
57	45		4	4			1
58	46		4	4			
59	47		4	4			
60	48		4	5			
61	49		3	3			
62	50		3	4			
63	51(Seminar Hall)	4	10	9	1		
64	52		2	5			
65	53						
66	54						
67	59		4	6			
68	60		4	5			
69	61		5	5			
70	62(Old Lib.)		3	5			
71	63 (Library)		6	5			
72	64 (Library	1	5	5			
	63-64 Corridar			1			
	65(Digital Library)		5	8			
73	66(RUSA)	1	5	6			1
74	67(RUSA)		5				1
75	68(RUSA)		5	6			1
76	69(RUSA)		5	6		1	
77	68-69 Corridar			5			
78	Rusa Steps Water Plant(Lib.)						
79	Rusa Gents Toilet(Lib.)		1	4			
80	RUSA-1		6	9			
81	RUSA-2		6	9			
82	RUSA-3		6	9			
83	RUSA-4		6	9			
84	RUSA Corridar (1-4)			7			
85	RUSA Gents Toilet		1	4			
86	29(IQAC)	1	2	5			
87	30(RUSA-UGC Room)		1	1			
88	Virtual Class Room	2	6	3	1		

89	Virtual Class Room- Adjaceent Room	1	2	2	1		
90	Public. Admn Dept		1	3			
91	Ambedkar O.U. Staff Room		3	6			
92	Shed		3				
93	NCC Room		1	1			
94	Open Dias RUSA		3	4			
95	Physical Edn. Dept			1			
96	Gym		6	6			
97	Table Tennis Room		2	3			
98	OLD NSS ROOM / M.COM CLASS ROOM		1	2			
99	Canteen		2	2			
	TOTAL	**30**	**276**	**487**	**6**	**9**	**9**

Energy Audit Report

Below Table shows the energy consumption pattern of the college for a month. The college has consumed an average of **3685 kW/hr** electricity in the month of **September 2021**

Sl. No	Electrical appliances/ instruments	Number	Power (W)/ unit	Total power (W)	kW	Average Operation /day	kW/hr	No. of days in month	Total consumption per month
1	FL TUBE	487	36	17532	17.532	1	17.532	25	438.3
2	LED BULB	12	12	144	0.144	4	0.576	25	14.4
	LED BULBS	3	30	90	0.090	3	0.27	25	6.75
3	PROJECTOR	14	250	3500	3.5	1	3.5	10	3.5
4	FAN	276	60	16560	16.56	1	16.56	24	397.44
5	COMPUTER	250	250	62500	62.5	0.5	31.25	24	750
6	LAPTOPS	02	50	100	0.1	4	0.4	20	08
7	PRINTERS	30	60	1800	1.8	1	1.8	15	27
8	PHOTO COPIER	03	650	1950	1.95	2	3.9	15	58.5
9	SCANNER	5	10	50	0.05	1	0.05	10	0.5
10	UPS	3	900	2700	2.7	10	27	20	540
11	A/C	20	4100	82000	82	1	82	5	410
12	REFRIGERATOR	06	150	900	0.9	24	21.6	30	648
13	HOT OVEN	07	3000	21000	21	0.25	5.25	5	26.25
14	CENTRIFUGE	06	110	660	0.66	0.25	0.165	10	1.65
15	AUTOCLAVE	03	1700	5100	5.1	0.25	1.275	5	6.375
16	LAMINAR FLOW	1	600	600	0.6	0.25	0.15	3	0.45
17	INCUBATOR	2	300	600	0.6	4	2-4	25	60
18	INVERTER	3	11000	33000	33	1	33	15	495
19	SANITARY NAPKIN INCINERATOR	1	400	400	0.4	1	0.4	25	10
20	CCTV NVR	02	10	20	0.02	30	0.6	30	18
21	Electric Submersible Motor	02	2238	4476	4.476	1	4.476	24	107.424
	Total Consumption per month								4027.54



www.tsnpdcl.in

TSNPDCL

ELECTRICITY BILL CUM NOTICE

DT: 18/11/2022 TI: 11:39
Bill No: 894469 ERO No.2122
SEC: 08 CYCLE: M1
AREA: MACHILI MRID: 62955
BAZAR
IR/IRDA v100000.0.0.246

USc No: 15801250
SC NO: 12290-130373
Name: Principal Govt Degree College
Address: Govt degree CHOWRASTHA
CHOWRASTHA

CAT: 2B PH: 3
LOAD: 5.00 KW
STR Code: 212200708004
Pole No: NBR-28/EX

	Reading	Month	Sts
Ps	13473	18/11/2022	01
Pv	11119	15/06/2022	05

KWH Units: 2354
RMD: 0
Units: 2354 Days: 156
Meter No: 7012750 Avg: 461.75
MF: 1
MF ID: -
TC Seal: N CAP: 10-40

ENERGY CHARGES:	23002.60
CUST CHARGES:	120.00
Fixed Charges:	350.00
ELECTRICITY DUTY:	141.24
EDINT:	0.78
ADDITIONAL CHARGES:	332.20
ACD SURCHARGES:	39.10
Adjustment:	-20600.56
Rounding:	-0.36
TOTAL AMOUNT:	3385.00
Arrears	
Arr AS ON 01-04-2022:	0.00
Arr AFTER 01-04-2022:	26531.40
NET AMOUNT:	29916.40
A.C.D DUE:	2558.00

LAST PAID DATE: 29/09/2022
LAST PAID AMT: 5929.00
DUE DATE: 02/12/2022
DISC DATE: 17/12/2022
AE CELL NO: 9440811343
AAO CELL NO: 9440811280

For AAO/ERO/T/HNK

I836989-472e-45...

TSNPDCL

ELECTRICITY BILL CUM NOTICE

Ir Mnl Ver-0.94 BNo:0076
SBM ID:D6929D22
ERO :2122 SEC:08
GRP :M CYCLE:M1
DATE:04-11-2022 17:19
AREA :NA

USCNO:15794134
SCNO:22 41 08952
NAME:Principal Govt Degree
ADDR:NA
MACHILI BAZAR
CAT: 2A
LD:60.00 PH:3
STR CODE :212200708006
POLE NO :NBR-28/EX

	READ	MON	STS
PS:	690429	04/11/2022	01
PV:	684632	10/10/2022	01

Pres KVAH: 802683
Prev KVAH: 796886
KWH UNITS: 5797
KVAH UNITS: 5797
TOD UNITS: 2899
RMD : 38.00 UNITS: 5797
MINUNITS: 1210
AVG:7188.28
MNo:4221693 CAP:1
MTR MAKE:
TC seal:N
MF:1.00 PF:1.00

ENERGYCHARGES:	53912.60
FIXED CHARGES:	22990.00
CUST CHARGES :	2000.00
LD :	347.82
LD INT :	6.24
ADDL CHARGES :	3220.81
ROUND/AMOUNT :	-0.48
TOTAL AMOUNT :	82477.00
AS ON:01-04-22:	0.00
AFTER:01-04-22:	275004.00
NET AMOUNT :	357481.00
ACD DUE :	0.00
LAST PAID :	28/09/2022
LAST PAID AMT:	199378.00
DUE DATE :	18/11/2022
DISC DATE :	03/12/2022

AAO/ERO/ERO/TOWN/HANAMK
AE Phone :9440811343
AAO Phone:9440811280
TOLLFREE1912/18004250028
https://tsnpdcl.in/

TSNPDCL

ELECTRICITY BILL CUM NOTICE

Ir Ver-0.94 BNo:0172
SBM ID:D6640D22
ERO :2122 SEC:08
GRP :M CYCLE:M1
DATE:04-11-2022 12:29
AREA :CHOWRASTHA

USCNO:15796131
SCNO:12290-130374
NAME:Principal Govt Degree College
ADDR:Govt degree
CHOWRASTHA
CAT: 2B
LD: 5.00 PH:3
STR CODE :212200708004
POLE NO :NBR-28/EX

	READ	MON	STS
PS:	16361	04/11/2022	01
PV:	16029	10/10/2022	01

KWH UNITS: 332
RMD : 4.00
AVG:411.68 DAYS:25
MNo:07047341 CAP:10
MTR MAKE:475457
TC seal:N
MF:1.00 PF:0.00

ENERGYCHARGES:	3220.30
FIXED CHARGES:	350.00
CUST CHARGES :	120.00
ED :	19.92
ED INT :	0.38
ADDL CHARGES :	231.18
ROUND AMOUNT :	0.30
TOTAL AMOUNT :	3942.00
AS ON:01-04-22:	0.00
AFTER:01-04-22:	17002.40
NET AMOUNT :	20944.40
ACD DUE :	0.00
LAST PAID :	29/09/2022
LAST PAID AMT:	3239.00
DUE DATE :	18/11/2022
DISC DATE :	03/12/2022

AAO/ERO/ERO/TOWN/HANAMK
AE Phone :9440811343
AAO Phone:9440811280
TOLLFREE1912/18004250028
https://tsnpdcl.in/

Electricity bill for the month of September 2021

KAKATIYA GOVERNMENT COLLEGE
HANUMAKONDA, TELANGANA STATE – 506001
(Affiliated to Kakatiya University, Warangal)
(e-mail:warangal.jkc@gmail.com, website: https://gdcts.cgg.gov.in/hanamkonda.edu)

7.1.6. Quality audits on environment and energy regularly undertaken by the institution

Certificate on Green, Energy and Environment audit

COMMISSIONERATE OF COLLEGIATE EDUCATION
GOVERNMENT OF TELANGANA

CERTIFICATE
(GREEN, ENERGY and ENVIRONMENT AUDIT)

This is to certify that Environmental, Energy and Green Audit has been conducted at the Kakatiya Government College, Hanamkonda by the Green Audit Committee of Telangana State Collegiate Education Department in collaboration with Department of Environmental Sciences of Osmania University, Hyderabad. The Committee has verified the Green initiatives carried out by the College and the College has successfully demonstrated knowledge on Energy Conservation, Water Conservation, Bio Diversity, Waste Management and Carbon footprint.

The Green Audit Committee is pleased to declare the following grades in the following categories for their satisfactory performance and is valid from August 2021 to July 2022.

Green Initiatives - "B+" Grade
Energy Conservation- "B+" Grade
Environmental Protection - "B+" Grade

Academic Guidance Officer, O/o Collegiate Education, Hyderabad
Dr. D. Seshikala, Dept. of. Environ. Science, OU, Hyderabad
Dr. A. Vijaya Bhasker Reddy, Dept. of Botany, Nizam College, OU, Hyd.
Dr. A. Nageswara Rao, Dept. of Zoology, Nizam College, OU, Hyd.

3. E-waste audit:

Waste management

College generate basically the biodegradable waste which consists of fallen leaves ,twigs and weeds of campus area. In addition to this paper waste which is used for day to day work of different departments and paper used by the students. It is usually sent for recycling. E-Waste like damaged computer parts sent for proper disposal. Biodegradable waste like dry leaves, weeds, paper, food waste from the canteen which is used in preparation of compost in the campus. Glass waste is mainly

generated by different science labs. This is sent for recycling. Unused and damaged articles with the permission of higher authorities which will be segregated and sold out .Napkins are disposed of by using incinerators which were available in the girls toilet. The plastic waste is given to municipal waste collection vehicle or proper disposal. Students and staff are encouraged to use biodegradable and cloth bags instead of plastic.

GOVERNMENT OF TELANGANA
KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA
DIST. WARANGAL (U)

Date: 05/08/2019

E-SCRAP SHIFTING CERTIFICATE & GATE PASS

It is to certify that the Vehicle No. AP29 TB 1784 is carrying the load of e-waste being transported from the office of the Kakatiya Government College, Hanamkonda, Dist. Warangal (U) today i.e., on 05/08/2019 started from the college at about 4 p.m. travelling to the destination point T.S.T.S. (Telangana State Technology Services) head offices in Hyderabad. This is a governmental transaction between office to office as directed by the Hon'ble Commissionerate of Collegiate Education, Government of Telangana, Hyderabad.

Principal

PRINCIPAL
KAKATIYA GOVT.COLLEGE
Hanamkonda.

KAKATIYA GOVT. COLLEGE Hanamkonda - Warangal

P. Balachary 9573015860 AP29TB1784

Ramky Enviro Engineers Ltd. HYD.

KAKATIYA GOVT. COLLEGE Hanamkonda - Warangal

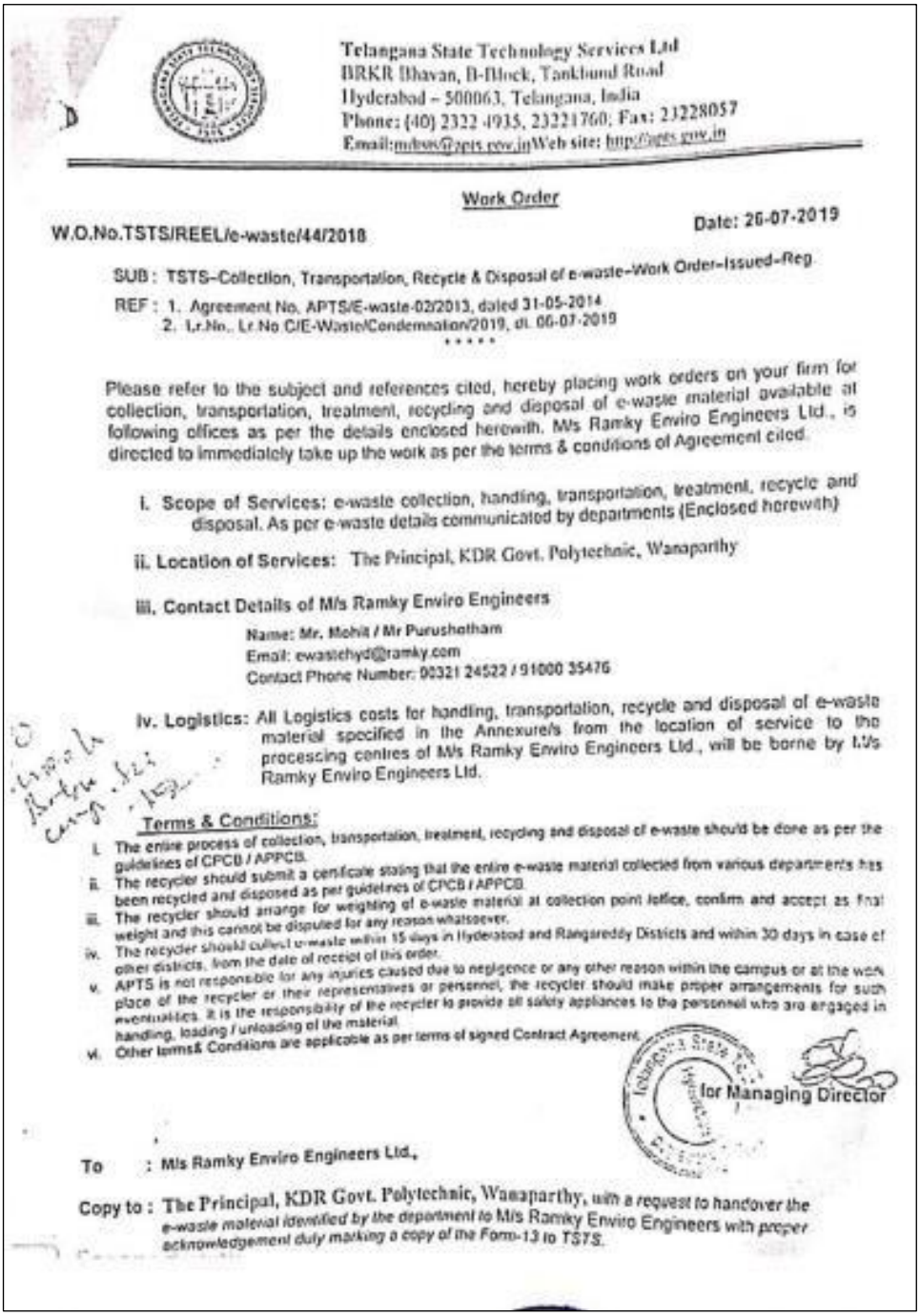
e-scrap shifting certificate

RAMKY EWASTE RECYCLING FACILITY
E WASTE TRANSPORT MANIFEST
Form 6

1	Sender's name and mailing address (including Phone No.) :	Kakatiya Govt college Hanumakonda.
2	Sender's authorisation No , if applicable. :	
3	Manifest Document No.:	1992
4	Transporter's name and address (including Phone No.):	Ramky Enviro Engineers Ltd
5	Type of Vehicle : (Truck or tanker or Special Vehicle)	D.C.M Eicher
6	Transporter's registration No.:	AP129/6185/epc/2011
7	Vehicle registration No:	AP29 TB 1784
8	Receiver' s name & address :	Ramky E Waste Recycling Facility (Ramky Enviro Engineers Ltd),Sy No 1/1, Plot No 25, Hardware park, Maheshwaram(M), RR Dist., 500081
9	Receiver' s authorisation No, if applicable.:	TSPCB/16/CFO/RO-RR-I/HO/2016-2595 Date :- 12 . 02 . 2016
10	Description of E Waste (item, Weight/ Numbers) :	E-waste :- 2113.4 Kg
11	Name and stamp of sender*(Manufacturer/Producer (or) Bulk Consumer (or) Collection Centre (or) Refurbishes (or) dismantler) Signature:	Day /Month /Year 05/08/2019
12	Name and stamp of Transporter acknowledgement of receipt of E-Wastes Signature:	Day /Month /Year 05/08/2019
13	Name and stamp of Receiver*(Collection Center(or) Refurbishes (or) Dismantler (or) Recycler) certification of receipt E-Waste Signature:	Day /Month /Year 05/08/2019

Copy number with color code (1)	Purpose (2)
Copy 1 (Yellow)	To be retained by the sender after taking signature on it from the transporter and other three copies will be carried by transporter.
Copy 2 (Pink)	To be retained by the receiver after signature of the transporter .
Copy 3 (Blue)	To be retained by the transporter after taking signature of the receiver.
Copy 4 (Green)	To be returned by the receiver with his/her signature to the sender

KAKATIYA GOVT. COLLEGE
Hanamkonda - Warangal



Telangana State Technology Services Ltd
BRKR Bhavan, B-Block, Tankbund Road
Hyderabad – 500063, Telangana, India
Phone: (40) 2322 4935, 23221760; Fax: 23228057
Email:mdsts@apts.gov.inWeb site: http://apts.gov.in

Work Order

W.O.No.TSTS/REEL/e-waste/44/2018

Date: 26-07-2019

SUB : TSTS–Collection, Transportation, Recycle & Disposal of e-waste–Work Order–Issued–Reg.

REF : 1. Agreement No. APTS/E-waste-02/2013, dated 31-05-2014
2. Lr.No., Lr.No CIE-Waste/Condemnation/2019, dt. 06-07-2019

*****

Please refer to the subject and references cited, hereby placing work orders on your firm for collection, transportation, treatment, recycling and disposal of e-waste material available at following offices as per the details enclosed herewith. M/s Ramky Enviro Engineers Ltd., is directed to immediately take up the work as per the terms & conditions of Agreement cited.

i. Scope of Services: e-waste collection, handling, transportation, treatment, recycle and disposal. As per e-waste details communicated by departments (Enclosed herewith)

ii. Location of Services: The Principal, KDR Govt. Polytechnic, Wanaparthy

iii. Contact Details of M/s Ramky Enviro Engineers

Name: Mr. Mohit / Mr Purushotham
Email: ewastehyd@ramky.com
Contact Phone Number: 90321 24522 / 91000 35476

iv. Logistics: All Logistics costs for handling, transportation, recycle and disposal of e-waste material specified in the Annexure/s from the location of service to the processing centres of M/s Ramky Enviro Engineers Ltd., will be borne by M/s Ramky Enviro Engineers Ltd.

Terms & Conditions:

i. The entire process of collection, transportation, treatment, recycling and disposal of e-waste should be done as per the guidelines of CPCB / APPCB.
ii. The recycler should submit a certificate stating that the entire e-waste material collected from various departments has been recycled and disposed as per guidelines of CPCB / APPCB.
iii. The recycler should arrange for weighing of e-waste material at collection point /office, confirm and accept as final weight and this cannot be disputed for any reason whatsoever.
iv. The recycler should collect e-waste within 15 days in Hyderabad and Rangareddy Districts and within 30 days in case of other districts, from the date of receipt of this order.
v. APTS is not responsible for any injuries caused due to negligence or any other reason within the campus or at the work place of the recycler or their representatives or personnel, the recycler should make proper arrangements for such eventualities. It is the responsibility of the recycler to provide all safety appliances to the personnel who are engaged in handling, loading / unloading of the material.
vi. Other terms& Conditions are applicable as per terms of signed Contract Agreement.

for Managing Director

To : M/s Ramky Enviro Engineers Ltd.,

Copy to : The Principal, KDR Govt. Polytechnic, Wanaparthy, with a request to handover the e-waste material identified by the department to M/s Ramky Enviro Engineers with proper acknowledgement duly marking a copy of the Form-13 to TSTS.

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: HYDERABAD ZONE
H.No : 1-8-269, Balasamudram, Warangal – 506001
ISO Certified Laboratory
ISO 9001:2015 (Q-180211R) & ISO-45001:2018 (S-180204R)

Lr. No.19/TSPCB/ZL/WGL/Analysis Reports/2022- 8499 **Date: 28.03.2022**

Sub:- Analysis of the samples – Completed – Report – Communicated – Reg.

***

With reference to the subject, please find enclosed analysis report of the sample of M/s.Kakatiya Govt College, Near Bus Stand, Hanamkonda, Warangal – 506 001. Sample collected from Kakatiya Government Building.

Report No.	Date of collection	Date of submission
ZLWGL22-03460	24.03.2022	24.03.2022

Senior Environmental Scientist

To

M/s.Kakatiya Govt College,
Near Bus Stand, Hanamkonda,
Warangal – 506 001

Certificate

HYM International Certifications Pvt. Ltd.

Certified that the Quality Management System of

KAKATIYA GOVERNMENT COLLEGE

Hanamkonda, Telangana State, India.

has been assessed and found to be in accordance with the requirements of the quality standards

ISO 9001 : 2015

for the following scope of certification

PROVIDING EDUCATIONAL SERVICES

Further information about the scope of this certificate and applicability of ISO 9001 : 2015 requirements may be obtained by consulting the organization.

Surveillance Audit

Issued Certificate Date : 04.02.2020

Certificate Renewal Date : 03.02.2023

Due on 03.02.2021 ( )

Due on 03.02.2022 ( )

Authorised Signature

Certificate No : Q91864141534

HYM International Certifications Pvt. Ltd

This is an accredited certificate authorized for issue by Accreditation Service for Certifying Bodies (Europe) Limited who have assessed M/s HYM International Certifications Pvt. Ltd. against defined criteria and in cognisance of ISO 17021:2015 "Conformity Assessment - Requirements for bodies providing audit and Certification of management Systems".

www.hymcertifications.com on for checking validate of the Certification

Regd. Office : Plot No. 265/C, Addagutta Society, Opp. JNTU, Kukatpally, Hyderabad - 500 072, Telangana State, India.
E-mail: hymcert09@gmail.com, Website: www.hymcertifications.com

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: HYDERABAD ZONE
H.No : 1-8-269, Balasamudram, Warangal – 506001
ISO Certified Laboratory
ISO 9001:2015 (Q-180211R) & ISO-45001:2018 (S-180204R)

Ambient Air Quality Analysis Report

Sample Nos. :	ZL-WGL-03460
Name of the industry:	M/s. Kakatiya Govt College, Near Bus Stand, Hanamkonda, Warangal-506001.
Samples Collected & Submitted by :	Zonal Lab, Warangal

Sl. No	Sampling Location	Date of sampling	Sample No.	Time and duration of sampling	PM10 * µg/m³	TSPM µg/m³	SO_2* µg/m³	NOx µg/m³	NH_3 µg/m³
1.	Ambient Air Quality Monitoring conducted on Kakatitiya Government Building.	24.03.2022	ZL-WGL-03460	10:00 AM to 02:00 PM	55	110	06	22	88
National Ambient Air Quality Standard (NAAQS) * for 24 hours					100	-	80	80	400

*Standards: National Ambient Air Quality Standards, CPCB Notification, New Delhi Dt. 18.11.2009[(Shedule VII) (Rule 3(3B)] of E(P), Act,1986.
TSPM; Total Suspended Particulate Matter: SO_2; Sulphur dioxide:NH_3 Ammonical Nitrogen, NOx; Oxides of nitrogen:PM10-Particle size less than 10 micrometers.

Senior Environmental Scientist

Senior Environmental Scientist
T.S. Pollution Control Board,
Zonal Laboratory Hyderabad Zone
WARANGAL-506 001.

7.1.6. Quality audits on environment and energy regularly undertaken by the institution

Certificate on Green, Energy and Environment audit

COMMISSIONERATE OF COLLEGIATE EDUCATION
GOVERNMENT OF TELANGANA

CERTIFICATE
(GREEN, ENERGY and ENVIRONMENT AUDIT)

This is to certify that Environmental, Energy and Green Audit has been conducted at the Kakatiya Government College, Hanamkonda by the Green Audit Committee of Telangana State Collegiate Education Department in collaboration with Department of Environmental Sciences of Osmania University, Hyderabad. The Committee has verified the Green initiatives carried out by the College and the College has successfully demonstrated knowledge on Energy Conservation, Water Conservation, Bio Diversity, Waste Management and Carbon footprint.

The Green Audit Committee is pleased to declare the following grades in the following categories for their satisfactory performance and is valid from August 2021 to July 2022.

Green Initiatives - "B+" Grade
Energy Conservation- "B+" Grade
Environmental Protection - "B+" Grade

Academic Guidance Officer
O/o Collegiate Education
Hyderabad

Dr. D. Seshikala
Dept. of. Environ. Science
OU, Hyderabad

Dr. A. Vijaya Bhasker Reddy
Dept. of Botany
Nizam College, OU, Hyd.

Dr. A. Nageswara Rao
Dept. of Zoology
Nizam College, OU, Hyd.

Solid waste collecting by students

Approximate quantity of waste generated per day (in kg)

Office				
Approx.	Biodegradable	Non -Biodegradable	Hazardous	Others
<1Kg	<1Kg	nil	nil	nil
2-10Kg	nil	nil	nil	nil
>10Kg	nil	nil	nil	nil

Laboratories				
Approx.	Biodegradable	Non - Biodegradable	Hazardous	Others
<1Kg	nil	nil	< 1Kg	nil
2-10Kg	2-10Kg	6 kgs	nil	nil
>10Kg	nil	nil	nil	nil

Canteen / kitchen				
Approx.	Biodegradable	Non - biodegradable	Hazardous	Others
<1Kg	nil	<1Kg	nil	nil
2-10Kg	4 kg	nil	nil	nil
>10Kg	nil	nil	nil	nil

How is the waste generated in the college managed?

A) .Composting/ Vermicomposting	Yes	The manure used to gardenplants
B). Recycling	Yes	
C). Reusing	Yes	Glass ware , plastic cans
D). Other ways	Yes	

Different types of waste generated in the college and their disposal:

e-waste	**Computer peripherals and electronic devices**	The scrap of e waste is handed over to Telangana state Technical Services
Hazardous waste		
Solid waste	Food waste , Paper waste	GWMC Warangal
Dry leaves		Used to prepare compost
Canteen waste		Used to prepare compost
Liquid waste		Is sent to the drainage canals
Glass	Used and broken chemical bottles	
Unused Equipment	Laboratory equipment	Kept with departments
Napkins		incineration
Others (specify)		

Do you use recycled paper in college?	No
Any waste management methods used?	

4. Carbon foot print analysis

1. Total Number of vehicles used by the stakeholders of the college. (per day): 98

2. No. of cycles used: 15

3. No. of two wheelers used (average distance travelled and quantity of fuel and amount used per day): 83. 19300 m within the college. 2 liters

4. No. of cars used (average distance travelled and quantity of fuel and amount used per day) ; 17 and 3300 m and 1 liter

5. No. persons using common (public) transportation (average distance travelled and quantity of fuel and amount used per day): nil

6. No. of persons using college conveyance by the students, non-teaching staff and teachers (average distance travelled and quantity of fuel and amount used per day): nil

7. Number of parent-teacher meetings in a year? Parents turned up (approx.): 01

8. Number of visitors with vehicles per day? : 50

9. Number of generators used per day (hours). Give the amount of fuel used per day. nil

10. Number of LPG cylinders used in the canteen (Give the amount of fuel used per day and amount spent). : 01

11. Quantity of kerosene used in the canteen/labs (Give the amount of fuel used per day and amount spent).: nil

12. Amount of taxi/auto charges paid and the amount of fuel used per month for the transportation of vegetables and other materials to the canteen. : nil

13. Amount of taxi/auto charges paid per month for the transportation of office goods to the college. : Rs 500/-

14. Average amount of taxi/auto charges paid per month by the stakeholders of the college.: Rs. 10,000/-

15. Use of any other fossil fuels in the college (Give the amount of fuel used per day and amount spent).: nil

16. Suggest the methods to reduce the quantity of use of fuel used by the

Stakeholders / students/teachers/ non-teaching staff of the college. : Yes

17. Are the Rooms in Campus Well Ventilated? Yes

Report of green audit

Water Management:

The source of water used in the College is two bore wells present in the campus. These wells are recharging with rainwater from the roof. A total of 6000 L of water is pumped out from the sources of water every day (Table -1). An average of 180,000 L of water is used by the College per month.

Water harvesting pit at Kakatiya government College, Hanamkonda

Physico-chemical Parameters

Water is generally alkaline in nature due to the presence of carbonates and bicarbonates. The pH highest 7.60 was in the month of September. The Dissolved Oxygen (DO) is one of the most important parameters that reflect the physical and biological processes prevailed in water. DO level in water is depending upon the atmospheric air pressure, photosynthetic activity, temperature, salinity and turbulence. The solubility of oxygen increases with decrease in temperature. Moreover, the TDS represents the presence of both organic and inorganic nutrients of the water. In the present investigation, maximum free CO_2 was found in summer and minimum in winter. Similarly, the Total Hardness of water is mainly due to the presence of various salts of calcium and magnesium.

Chloride is considered to be an important factor as it is one of the contributions to the Total hardness of freshwater. It is observed that the levels of Ammonia in this pond water was higher than the desired range which may adversely affect on the aquatic biota. Nitrates were observed, the highest of 0.61 mg/l recorded in the month of August.

Month	pH	DO	BOD	TDS	NH4	Na	K	No3
Jul.	7.42	10.20	9.02	106.75	1.24	5.67	1.56	0.59
Aug.	7.40	9.07	7.00	98.50	1.19	6.54	1.50	0.61
Sep.	7.60	8.45	8.07	153.75	1.28	6.61	1.58	0.60
Oct.	7.45	6.00	11.62	243.50	1.27	6.21	1.50	0.58

Plankton Collection and Analysis

Planktons are the microscopic plants (Phytoplankton) and animals (zooplankton) in and around the eutrophotic zone in an aquatic ecosystem. Biological methods used for the plankton analysis are sample collection, preservation, counting and identification of the aquatic organisms and processing and interpretation of biological data.

During the period of investigation, monthly samples were collected by a plankton net made of silk bolting cloth silk no. 25 (Mesh size 56 µm). Water sample (50 liter) was filtered through the net from littoral and open water zones and carefully transferred to 50 ml bottle and preserved in 4% formalin. Preserved samples were examined under a binocular microscope with different magnification. Quantitative analysis was done on a Sedgwick Rafter Counter cell by taking 1 ml sample. Taxonomic identification was carried out with the help of standard literature by Pennak (1978), Michael(1986), Kodarkar (1992) and Dhanapathi (2000).

Sedgwick Rafter Cell Method:

The rectangular cavity slide (50x20x1mm) contains exactly 1 ml (1000mm^3) of water sample. The sample was shaken well and 1ml of sample was transferred quickly to the cavity with the help of graduated pipette. The cover slip was properly adjusted so that air bubbles do not remain inside. Binocular microscope was focused and slide examined.

Plankton Ind. / Lit = n x c x 1000/ Volume of
sample. Where,
n – No. of Plankton
c – Concentration of Sample.

Qualitative and quantitative plankton analyses were done up to the genus and plank tonic organisms were numerically counted, identified and confirmed by following using various monographs, books and other published literature Ward, Henry Baldwin and Whipple, Chon (1945).Needham, G. James and Needham, R. Paul.(1972), Patil and Gouder (1982), Pace, M. L. et. al., (1990), Battish (1992) and Ndebele M. M. R. (2012). After an accurate identification of each genus, the density of zooplankton was calculated as per the Lackey's drop method (Lackey, J. B.1938).

Zooplankton

Zooplankton plays an important role in an aquatic ecosystem not only in converting plant food to animal food but also provide an important food source for higher organisms. The study of freshwater fauna especially zooplankton, even of a particular area is extensive and complicated due to environmental, physical, geographical and chemical variation involving ecological, extrinsic and intrinsic factors. This is particularly so with freshwater fauna (Zooplankton) which

plays a key role in preservation and maintenance of ecological balance and its basic study is wanting and absolutely necessary.

The seasonal fluctuations of the zooplankton population are a well known phenomenon and zooplanktons exhibits bimodal oscillation with a spring and autumn in the temperate lakes and reservoirs Welch, (1952). This fluctuation is greatly influenced by the variation in the temperature along with many other factors. Temperature seems to exhibit the greatest influence on the periodicity of. Thus, in any aquatic ecosystem zooplankton not only take part in transferring food from primary to secondary level but also switch over conversion of detritus matter into edible animal food.

Zooplankton of four groups *Viz*. rotifera, cladocera, copepoda and ostracoda. The most significant feature of zooplankton is its immense diversity over space and time. Zooplankton species composition and their number in three monts in Table.1 During the present investigation, the total zooplankton population was dominated by Rotifers in this lake, followed by Cladocerans, Copepodes and ostracods.

Rotefera:

6 species belonging to rotifera has been identified. *Brachionus calciflorus* , *Brachionus falcatus and Keratella tropica* were more dominant among the rotiferans. High population was observed during October followed by September and August months. Fluctuations in zooplankton density have been attributed to turbidity. Welch (1952), Roy (1955), Tandon and Singh (1972) have shown a direct relationship between rotifera population and water temperature. Dissolved oxygen has been correlated with abundance ofrotifers.

Cladocera:

Cladoceran populations were maximum during in October followed by September and August month. The total 4 species of cladocera were identified in the presentstudy, and observed in this period total study and they are seasonally fluctuated. Micheal (1969) .

Copepods:

The copepods population was maximum in the month of October. The total 4 species of copepods were identified in the present study. *Nauplius larva, Copepoda naplii,* were more dominant and observed in this period they are seasonally fluctuated.

Ostracoda:

The Ostracods population was maximum August and September .The total 4 species of Ostracods were identified in the present study. *Hemicypris fossucula, Heterocypris spp* were more dominant and observed in this period of total study and they are seasonally fluctuated. Chandrasekhar (1996), reported higher population of Ostracods during monsoon in Saroornagar lake of Hyderabad.

Monthly Variation in the Zooplankton (Group wise) population

Zooplankton Group	Aug	Sep	Oct	Min	Max
Rotifera	15	23	48	**15**	**48**
Cladocera	11	12	28	**11**	**28**
Copepoda	9	13	21	**9**	**21**
Ostracoda	43	23	22	**22**	**43**
Total	**78**	**71**	**119**		

Table shows Monthly variation of Zooplankton Population

S.No.	ROTIFERA	Aug	Sep	Oct	Total
1	*Brachionus calciflorus*	2	1	4	7
2	*Brachionus caudatus*	2	0	3	5
3	*Brachionus falcatus*	2	1	3	6
4	*Filinia opoliensis*	0	0	2	2
5	*Keratella tropica*	2	2	5	9
6	*Testudinella patina*	2	1	4	7
	Total	10	5	21	36
	CLADOCERA				
1	*Acropenus harpae*	1	1	3	5
2	*Alona rectangula*	0	2	3	5
3	*Daphnia carinata*	2	0	4	6
4	*Daphnia sarsi*	2	2	7	11
	Total	5	5	17	27
	COPEPODA				
1	*Copepoda naplii*	2	1	5	8
2	*Cyclops strennus*	0	2	4	6
3	*Mesocyclops naplii*	2	1	3	6
4	*Nauplius larva*	2	2	6	10
	Total	6	6	18	30
	OSTRACODA				
1	*Cypris subglobosa*	9	6	6	21
2	*Hemicypris fossucula*	11	12	09	32
3	*Heterocypris sps*	11	09	6	26
4	*Llycypris gibba*	09	08	06	23
	Total	40	35	27	102

Conclusion:

From the present study, it may be concluded that all the physico-chemical parameters are at nearly permissible limit at all the 4 stations. Results of water quality assessment clearly showed that most of the water quality parameters vary slightly higher in the wet season than in the dry season. This lake was not considered to be more polluted. This lake has shown rich biodiversity of aquatic fauna. Therefore, it is suggested that the immediate measures are necessary to be initiated to avoid further contamination of lake due to anthropological activities. The baseline data generated would help planning and future management decisions to develop fresh water lakes for better water quality and production of fish in the fresh water. This will ensure that some of the parameters in this study will not exceed levels that could be harmful to fish in the environment. Such a measure will guarantee the safety of the aquatic ecosystem.

Auditing for Green Campus Management

Trees are vital. As the biggest plants on the planet, they **give us oxygen, store carbon, stabilise the soil** and give life to the world's wildlife. They also provide us with the materials for tools and shelter.

The college has a botanical garden in the campus at the entrance. The botanical garden is located in about 2400 yards and it is look after by Faculty of Department of Botany. About 25-35 plant species in the garden. The list of the Plants in the campus is as shown in the following table.

LIST OF PLANTS IN THE COLEGE CAMPUS
(including Botanical Garden)

Shrubs and Ornamentals:

S.No	Scientific name	Family	Local Name
1	*Acalypha indica*	Euphorbiaceae	muripinda/
2	*Acalypha wilkesiana*	Euphorbiaceae	acalypa
3	*Bougainvillea spectabilis*	Nyctaginaceae	kagithpula chettu
4	*Ficus benjamina*	Moracea	ficus
5	*Thevetia peruviana*	Malvaceae	pachaganneru
6	*Ixora coccinea*	Rubiaceae	nuruvarahalu
7	*Plumeria rubra*	Apocyanaceae	devaranneru-red flower
8	*Plumeria alba*	Apocyanaceae	devaganneru-white flower
9	*Hibiscus rosa- roja*	Malvaceae	mandhara

10	*Bauhinia purpurea*	Fabaceae	devakanchanam/bauhinia
11	*Conocarpus erectus*	Combretaceae	conocaparpus
12	*Ravenala madagascariensis*	Musaceae	east west plant
13	*Cycas* ramphii	Gymnosperm	cycas
15	*Tradescantia spathacea*	Commelinaceae	
16	*Musa paradisiaca*	Musaceae	banana/arati
17	*Almanda cathartica*	Apocyanaceae	
18	*Thuja orientalis*	Cupressaceae	thuja
19	*Jasminum sambac*	Oleaceae	malle
20	*Tabernaemontana divaricata*	Apocyanaceae	kanakambaram
21	*Araucaria araucana*	Gymnosperm	Chrismas tree
22	*Roystonearegia (Royal palm)*		Royal palm

TREES

S.No	Scientific name	Family	Local Name
1	*Peltophorum pteocarpum*	Ceasolpinaceae	peltophorm
2	*Azadiracta indica*	Meliaceae	neem/vepa
3	*Dalbergia sissoo*	Fabaceae	sissoo
4	*Samania saman*	Fabaceae	nidraganneru
5	*Pongamia pinnata*	Fabaceae	pongamia/kanuga
6	*Terminalia catappa*	Combretaceae	badam
7	*Syzygium cumini*	Myrtaceae	jamun/allaneredu
8	*Cocos nucifera*	Palmae	coconut/kobbari
9	*Mangifera indica*	Anacardiaceae	mango/mamidi
10	*Polyalthia longifolia*	Annonaceae	naramamidi
11	*Psidium guajava*	Myrtaceae	jama
12	*Phyllanthus emblica*	Euphorbiaceae	gooseberry/usiri
13	*Syzygium jambolarum*	Myrtaceae	Jamun/water jamun
14	*Leucaena leucocephala*	Fabaceae	subabul
15	*Bamboo sp.*	Poaceae	bamboo/veduru
16	*Manilkara zapota*	Sapotaceae	sapota
17	*Spathodia campanulata*	Bignoniaceae	tuliptree

18	*Anthocephalous chinenesis*	Rubiaceae	kadamba
19	*Artabotrys hexapetalus*	Annonaceae	teegasampenga
20	*Grevillea robusta*	Proteaceae	silver oak tree
21	*Casuarina equisetifolia*	Casuarinaceae	casuarinas/sarugudu
22	*Terminalia arjuna*	Combretaceae	arjun/maddi
23	*Pterocarpus santalinus*	Ceasolpinaceae	redsander/errachandanam
24	*Samanea saman*	Fabaceae	Raintree
25	*Tectona grandis*	Verbinaceae	Teak

MEDICINAL PLANTS

S.No	Scientific name	Family	Local Name
1	*Aloe vera*	Asphodenaceae (Liliaceae)	Kalabanda
2	*Phyllanthus emblica*	Euphorbiaceae	Usiri
3	*Tinospora cordifolia*	Menispermaceae	Thippateega
4	*Aristolochia indica*	Aristolochiaceae	Gadidhagadapa
5	*Vitex negundo*	Lamiaceae	Vavili
5	*Jatropha gassypifolia*	Euphorbiaceae	biodiesel plant/adavi amudam
6	*Crotalaria retusa*	Fabaceae	Crotalaria
7	*Ocimum tenuflorum*	Lamiaceae	basil/tulasi
8	*Lawsonia inermis*	Lythraceae	Gorintaku
9	*Murraya koenigii*	Rutaceae	curry leaf/karivepa
10	*Bryophyllum pinnatum*	Crassulaceae	bryophyllum/ranapala
12	*Gynnema sylvestre*	Apocyanaceae	Podapatri
13	*Calotropis gigantia*	Asclpiadaceae	Jilledu
14	*Euphorbia pulcherrima*	Euphorbiaceae	Poinsettia
15	*Coleus aromaticus*	Lamiaceae	Coleus
16	*Asparagus recemosus*	Lilioaceaea	Shathavari

17	*Mimosa pudica*	Mimosaceae	Touch me not plant/atti patti
18	*Sauropus andragynum*	Phyllanthaceae	
19	*Catharanthus roseus(vinca)*	Apocyanaceae	vinca/bilaganneru
20	*Ficus carica*	Moraceae	Anjeera
21	*Chamaecostus cuspidatus*	Costaceae	Costus
22	*Bixa orellana*	Bixaceae	Bixa/sindhuram
23	*Cymbopogon citratus*	Poaceae	Lemon grass
24	*Mimosa pudica*	Mimosaceae	Touch me not plant

Xerophytes

1. Euphorbia molli, Euphorbia tirukalli- Euphabiacae

2. Barrel cactus

3. Bryophyllum

4. *Kalanchoe pinnata* (Bryophyllum pinnata) –Crassulaceae

Overview of Botanical Garden

View of Botanical garden in the campus

All the plants in the garden are given QR Codes with the details of Common name, scientific name, family, habit and uses of plants. Students and other botany people also can find information about the plants by scanning it. Students also actively participate in the plantation programme in the garden. Border plants Acalypha, Duranta are planted by the students.

Haritha Haram flagship programme of Telangana undertaken every year in the college in monsoon season i.e in the month of June and July. But due to lack of space, every year about 30-50 saplings are planted in the campus. Saplings were planted in campus where the space is available.Vegetable farming is not done due to lack of space in the campus. Medicinal plants are there in the botanical garden. About 20 medicinal plant species are there in the garden in 150 yards. Every day about 1000 liters of water is used to water the plants in campus from bore wells and also recycled water from the water purifier was directly connected for watering in the botanical garden. Compost prepared from biodegradable waste in the campus used to manure the plants. No chemical fertilizers or pesticides are used.

Overview of Botanical Garden

Cymbopogon citrates (nimmagaddi)

Bixa orellana

Mimosa pudica(touch me not)

Tinospora cordifolia(Tippateega)

Terminalia catappa(badam)

Phyllanthus emblica(usiri)

Vitex negundo

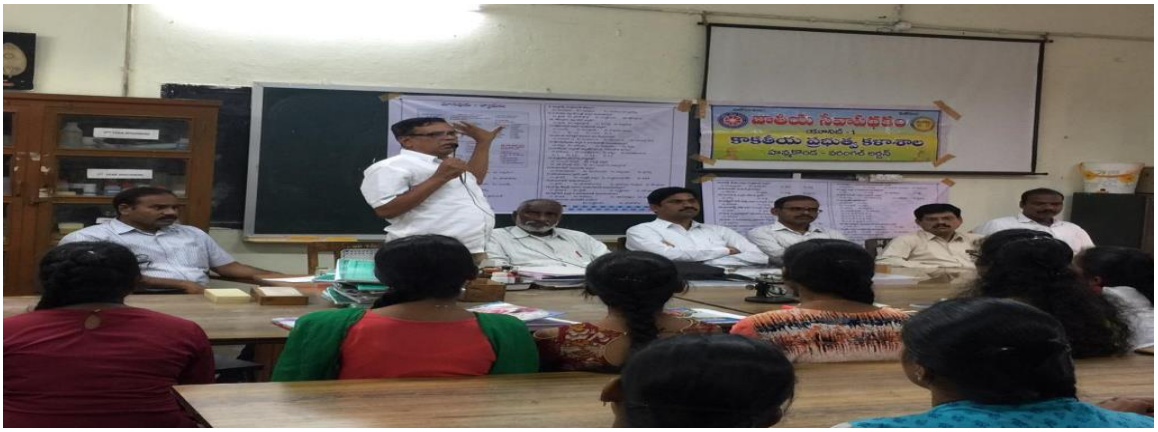
Spathodia campanulata

Azdiracta Indica

Eco-club Activities:

Every year the college celebrates world environment day, World forest day, World Biodiversity day , Ozone days are celebrated by conducting Quiz, Essay writing, Elocution and poster presentation competitions. This will help in bringing awareness among the students about environment, conservation and sustainable use of bio- diversity and natural resources.

Cleaning and removal of weeds in college campus



HEALTH AWERNESS PROGRAMME

Cycle rally conducted from KGC to Public Garden on the occasion of world earth day on 22nd April.2022

Preparation of seed balls in the college botanical garden

COVID vaccination camp organized in the college, in association with health club

ప్లాస్టిక్ బ్యాగులు వాడొద్దంటూ ప్రచారం

ప్రచారం నిర్వహిస్తున్న అధ్యాపకులు, విద్యార్థులు

విద్యారణ్యపురి: ప్లాస్టిక్ బ్యాగులు వాడొద్దంటూ హనుమకొండలోని కాకతీయ ప్రభుత్వ డిగ్రీ కళాశాల ఎకో క్లబ్ ఆధ్వర్యంలో అధ్యాపకులు, విద్యార్థులు ప్రచారం నిర్వహించారు. ఈమేరకు హనుమకొండలోని కూరగాయల మార్కెట్‌లో వ్యాపారులు, వినియోగదారులకు శుక్రవారం అవగాహన కల్పించారు. ఈ సందర్భంగా కళాశాల ప్రిన్సిపాల్ డాక్టర్ రాజారెడ్డి మాట్లాడుతూ ప్లాస్టిక్ వాడకంతో అనేక అనర్థాలు కలుగుతాయని తెలిపారు. పర్యావరణానికి విఘాతం కలిగించే ప్లాస్టిక్‌ను త్యజించాలని సూచించారు. క్లాత్‌బ్యాగులనే వాడాలని వినియోగదారులకు విద్యార్థులు సూచించారు. మార్కెట్‌లో పలువురికి క్లాత్ బ్యాగులను పంపిణీ చేశారు. కార్యక్రమంలో కేడీసీ ఎకో క్లబ్ కన్వీనర్ రమణారావు, ఐక్యూఏసీ కోఆర్డినేటర్ డాక్టర్ రమేష్, అధ్యాపకులు విజయపాల్‌రెడ్డి, శ్యామ్, సత్యనారాయణ, అశోక్, రావుల మొగిలి గణేష్, ఓంకార్, శ్రీనివాస్, కిరణ్, రాధిక పాల్గొన్నారు.

సాక్షి Sat, 07 May 2022
https://epaper.sakshi.com/c/67879275

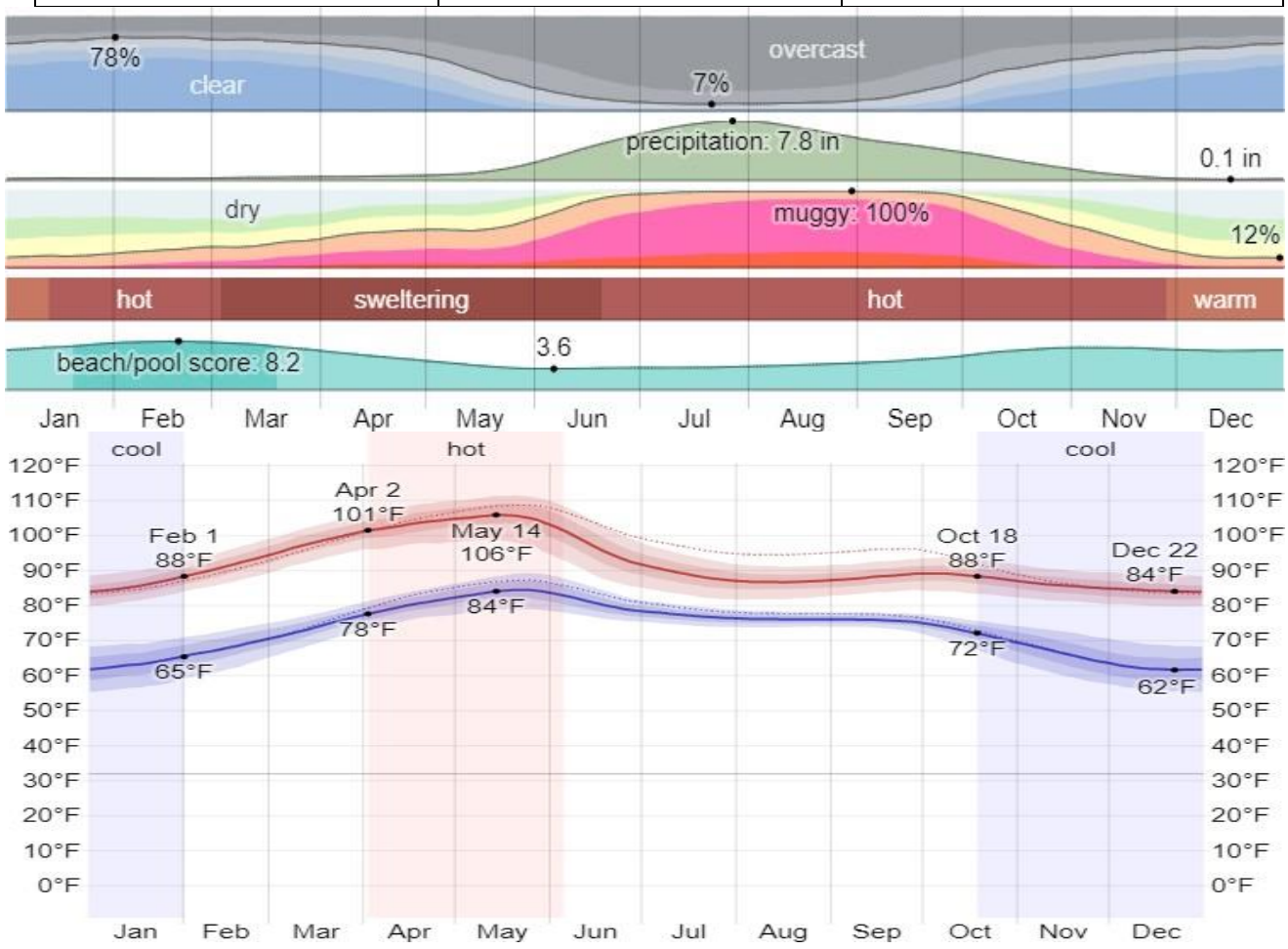
Conducted awareness programme on say no to plastic and use of Biodegradable bags on 06/05/202

GROUP DISCUSSION ON EFFECTS OF SMART PHONE

GROUP DISCUSSION ON ECO SYSTEM

Air quality Determinatin: Air Quality Index (parameters studied/recorded/ Seasonal)**:**

Parameter	Standards	At Warangal
NO_2	80 ppm	21 ppm
SO_2	75ppb	6.4 ppb
O_3	100 ppm	---
PM2.5	60 ppm	---
PM10	100 ppm	51 ppm
CO	4 per one hour	----
Humidity	20-30	25
Barometric Pressure	1013.25 mbar	1013.25 m bar
Wind Speed	6 mph	6 mph
Wind Direction	South – 12.1,SW-12.6 West – 12.1,NW- 19.5	South – 12.1,SW-12.6 West – 12.1,NW- 19.5
Sun Rise	6.15 AM	6.15 AM
Sun Set	5.37 PM	5.37 PM



Telangana State Pollution Control Board, CENTRAL LABORATORY

Monthly Air Quality Index Values of Telangana state for the month of January to December, 2022

Location	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Warangal Zone - NAMP Stations												
Kuda, Warangal	58	64	49	66	54	72	40	43	41	64	49	116
Mee-Seva, Warangal	73	73	76	60	77	85	47	56	48	64	94	94
SAAQM Stations												
Balasamudram	76	45	71	79	-	77	47	54	71	79	103	82
Nakkalagutta	67	87	103	81	65	73	51	79	76	87	90	95

AQI Colour Index & Health Effects:

GOOD (0-50)	Minimal impact
SATISFACTORY(51-100)	Minor breathing discomfort to sensitive people
MODERATE (101-200)	Breathing discomfort to the people with lungs, asthma and heart disease
POOR (201-300)	Breathing discomfort to most people on prolonged exposure
VERY POOR (301-400)	Respiratory illness to people on prolonged exposure
SEVERE (>400)	Affects healthy people and seriously impacts those with existing diseases

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Reference: National Ambient Air Quality Standards, Central Pollution Control Board

Measurements of Noise level in and around the college

Standards of Noise according to Pollution Control Board

Day Time : 65 dB, Night Time : 55 dB

The pollution control Board given the Noise standards and they inferred that the Warangal City is notunder the noise zone

S.No	Place (S)	Noise measured
1	Library	Lesser than 40dB
2	Canteen	Lesser than 50dB
3	Play ground	Lesser than 45 dB
4	Auditorium	Lesser than 45 dB
5	Science Block	Lesser than 45 dB

Air Quality Analysis - Report

TELANGANA STATE POLLUTION CONTROL BOARD
ZONAL LABORATORY: HYDERABAD ZONE
H.No : 1-8-269, Balasamudram, Warangal – 506001
ISO Certified Laboratory
ISO 9001:2015 (Q-180211R) & ISO-45001:2018 (S-180204R)

Ambient Air Quality Analysis Report

Sample Nos. :	**ZL-WGL-03460**
Name of the industry:	**M/s. Kakatiya Govt College, Near Bus Stand, Hanamkonda, Warangal-506001.**
Samples Collected & Submitted by :	**Zonal Lab, Warangal**

Sl. No	Sampling Location	Date of sampling	Sample No.	Time and duration of sampling	PM10 * µg/m³	TSPM µg/m³	SO_2* µg/m³	NOx µg/m³	NH_3 µg/m³
1.	**Ambient Air Quality Monitoring conducted on Kakatitiya Government Building.**	**24.03.2022**	**ZL-WGL-03460**	10:00 AM to 02:00 PM	**55**	**110**	**06**	**22**	**88**
National Ambient Air Quality Standard (NAAQS) * for 24 hours					**100**	**-**	**80**	**80**	**400**

*Standards: National Ambient Air Quality Standards, CPCB Notification, New Delhi Dt. 18.11.2009[(Shedule VII) (Rule 3(3B)] of E(P). Act,1986.
TSPM; Total Suspended Particulate Matter: SO_2; Sulphur dioxide:NH_3 Ammonical Nitrogen, NOx; Oxides of nitrogen:PM10-Particle size less than 10 micrometers.

Senior Environmental Scientist
Senior Environmental Scientist
T.S. Pollution Control Board,
Zonal Laboratory Hyderabad Zone
WARANGAL-506 001.