



M.A.L.D GOVERNMENT DEGREE COLLEGE GADWAL

JOGULAMBA GADWAL DIST, TELANGANA STATE.

**Affiliated to Palamuru University
(Re-Accredited by NAAC with 'B' grade)**



GREEN AUDIT REPORT 2021-22





M.A.L.D. GOVT. DEGREE COLLEGE,
GADWAL – 509125,
Jogulamba Gadwal Dist., Telangana State
Affiliated by Palamuru University, Mahabubnagar
Re-Accredited by NAAC "B" Grade



GREEN AUDIT REPORT-2021-22

College Profile

Name of the College : M.A.L.D Govt. Degree College - Gadwal

Address : Fort, Near Gandhi Chowk, Gadwal

Contact Info : 9154806699 & 8125448345

Campus Area : 5 acres 1 Gunta

Built-up Area : 3 acres

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

The student and faculty strength of the college:

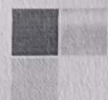
Strength	Male	Female	Total
No of students	1462	920	2382
No of Teaching Staff	38	15	53
No of Non-Teaching staff	16	8	24

Physical Structure

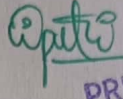
The available land of the college: 5 acres 1 gunta

The built-up area of the college: 1.5 Acres

No. of Class Rooms	18
No. of Laboratories	9
No. of Conference halls	2
Library Halls	3
Auditorium	No
Canteen	Yes
Any other (please specify)	Principal Chamber, Office Room, Staff Room.



Is the building has ventilators for natural air flow in all rooms: Yes/No

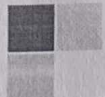
Objectives :	
Prepared by:	Internal Environmental Audit Team/Coordinator G. Krishnaiah Lecturer in physics
Approved by:	Principal  PRINCIPAL MALD Govt. Degree College GADWAL.
Remarks :	NIL
FORMS AND SUPPORT MATERIAL	
Questionnaire Document ref. name/no.:	Enclosed
Checklist for Environmental Audit Document ref. name/no.:	Enclosed
Additional forms and support material:	Enclosed

Background:

Thus Maharani Adi Laxmi Devamma Arts & Science College, Gadwal, the first college in our district, was established in 1960 under private management with a great vision and mission to impart higher education to the economically backward region and to transform it into a knowledge society. The then prince, Raja Krishnam Bhoopal, generously donated the entire royal fort and also Rs. 25000 cash for the establishment of the college. Hence the college is named after erstwhile queen (Raja Krishnam Bhoopal's grandmother) of Gadwal Samsthan.

The college was taken over by the Government of Andhra Pradesh in 1964. Later it has got permanent affiliation to Osmania University, Hyderabad and permanent recognition under section 2(f) and 12(b) of UGC act.

The college switched over to 10+2+3 system of education and Telugu as medium of instruction in 1970, as per the policy of the state government. In 1996, the Government of Andhra Pradesh bifurcated the college into two separate colleges – Government Junior College, Gadwal and M. A. L. D. Government Degree College, Gadwal.



The college when started in 1960 had only 5 groups with only 300 students. In recent years the college has introduced restructured courses with new departments such as computers, microbiology as per the needs of changing times. At present the college has 25 groups with 767 students.

The motto of our college is "Learning to Do, Learning to Be." The ultimate aim and essence of education is learning to do good for society and learning to be a good citizen. Ruskin rightly says:

The college has an open land of 5 acres and 1 gunta. The college has well equipped labs, computer lab, seminar hall, mana TV hall, NSS room, Games, Jim, Library, JKC, Girls waiting room, Museum (Zoology Department), mini Botanical Garden. The students make maximum utilization of all the facilities available in the college. The college also accommodates Dr. Ambedkar Open University Centre so as to enable students to attend classes on Sundays.

The college has an efficient internal co-ordination mechanism helping the smooth conduct of academic and administrative matters. The college Planning and Development Counsel (C.P.D.C.) plays a vital role in guiding the college towards right direction. The college has many committees that help smooth running of the college

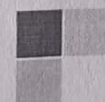
The college has moulded the minds of innumerable minds of young men and women over the years. It has produced a large number of academicians, administrators, doctors, scientists, politicians and experts in various fields.

The TSKC has become an important branch of learning in this college. It has been training the out-going students the essential skills required by a graduate to secure a job in the present corporate world. Every year many students are being selected in campus interviews organized by many multinational companies.

General Objectives

To nurture environmental friendly management in the institution following objectives are formulated

- To set the procedure for disposal of all types of harmful waste
- To minimize the consumption of water and monitor its quality.
- To minimize the environmental pollution
- To increase the greenery of the institution
- To access the carbon foot print of the institution



Protocols used for Environmental Audit

Internal Audit Team Structure:

S.No	Name	Designation	Composition
1	Dr.D.Sreepathi Naidu	Principal	Chairman
2	H Narsimulu	IQAC Coordinator	Vice chairman
3	Dr.S.J.Sampath Kumar	Principal, Govt .Degree College for Women, Gadwal	Special invitee
4	G.Krishnaiah	Lecturer in Physics	Coordinator
5	Venkateswaramma	Lecturer in Zoology	Member
6	J. Venkatesham	Lecturer in Chemistry	Member

Comprehensive Methods:

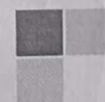
The methodology adopted to conduct the green audit of the institute had the following components.

There was on-site field visit by the audit team as planned the background information was collected using the survey forms/questionnaires as a part of audit.

The methodology included preparation and filling up of questionnaires, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. the study includes several facets of green campus including.

1. Water usage and conservation
2. Tree plantation
3. Alternative energy
4. 4.Waste management

A report pertaining environmental management plan with strength, weakness and suggestion on the environmental issue of campus are documented.



Energy Management

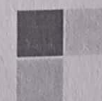
SL.N O	Electrical appliances /instruments	Number	Power(W)/ UNIT	KW	Operation/ Day	KW/ hr	No. of Days in Month	Total consumption per month
1	LED TUBE	54	20	1.08	6	6.48	25	162
2	TUBE	163	20	3.26	6	19.56	25	489
3	LED BULB	58	20	1.16	6	6.96	25	174
4	FAN	207	60	12.42	6	74.52	25	1863
5	PRINTERS	12	60	0.72	0.5	0.36	25	9
6	COMPUTER	122	250	30.5	1	30.5	25	762.5
7	UPS	7	1000	7	0.5	3.5	25	87.5
8	LAPTOPS	2	50	0.1	1	0.1	25	2.5
9	REFRIGERATOR	9	150	1.35	24	33.75	25	843.75
10	PROJECTOR	5	280	1.4	1	1.4	25	35
11	EXHAUST FAN	14	32	0.448	2	0.896	25	22.4
12	MOTORS	2	2238	4.476	2	17.90	25	447.6
13	AIR CONDITION	6	490	2.94	1	2.94	25	73.5
14	AIR COOLER	1	175	0.175	1	0.175	25	4.375
15	TV	1	60	0.06	1	0.06		1.5
19	STREET LIGHT	3	50	0.15	24	3.6	25	90
	Total Consumption per Month							5067.625+16.3 =5229

Total amount of monthly = 43.819 Rs

Apurva

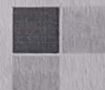
PRINCIPAL

M.A.L.D. Govt. Arts & Science College
GAPWAL - 509 125



Energy Management(Departments)

SL.N O	NAME OF THE ITEM	QUANTITY	Power(W) /UNIT	KW	Operation /Day	KW/hr	No.of Days in Month	Total consumption per month
Dept of physics								
1	Electric Stove	1	450	0.45	1	0.45	25	11.25
2	Kettle	1	450	0.45	1	0.45	25	11.25
3	Steafan constant	1	24	0.024	1	0.024	25	0.6
4	Thevenin	1	18	0.018	1	0.018	25	0.45
5	Norton	1	18	0.018	1	0.018	25	0.45
6	Maximum power transfer	1	18	0.018	1	0.018	25	0.45
7	Sodium Lamp	1	35	0.035	1	0.035	25	0.875
8	Mercury lamp	1	80	0.08	1	0.08	25	2
9	Zener diode	1	24	0.024	1	0.024	25	0.6
10	P-N junction diode	1	24	0.024	1	0.024	25	0.6
11	Transistor	1	20	0.02	1	0.02	25	0.5
12	rc coupled amplifier	1	24	0.024	1	0.024	25	0.6
13	rc phase shift oscillator	1	24	0.024	1	0.024	25	0.6
14	AND,OR.NOT Gates	1	24	0.024	1	0.024	25	0.6
15	energy gap	1	24	0.024	1	0.024	25	0.6
Dept of Chemistry								
1	Colorimeter	1	450	0.45	0.5	0.225	25	5.625
2	PH meter	1	450	0.45	0.5	0.225	25	5.625
3	Conductometer	1	450	0.45	0.5	0.225	25	5.625
4	Potentiometer	1	450	0.45	0.5	0.225	25	5.625
5	centrifugation machine	1	450	0.45	0.5	0.225	25	5.625
6	Electrical water bath	1	450	0.45	0.5	0.225	25	5.625
Dept of Botany								
1	Centrifuge	1	450	0.45	0.5	0.225	25	5.625
2	incubator	1	450	0.45	0.5	0.225	25	5.625
3	Hot air oven	1	450	0.45	0.5	0.225	25	5.625
4	Colorimeter	1	450	0.45	0.5	0.225	25	5.625
5	Electrical water bath	1	450	0.45	0.5	0.225	25	5.625
6	Digital Weighing machine	1	450	0.45	0.5	0.225	25	5.625
Dept of Biotechnology								
	Centrifuge	1	450	0.45	0.5	0.225	25	5.625
	incubator	1	450	0.45	0.5	0.225	25	5.625

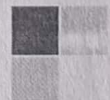


	Hot air oven	1	450	0.45	0.5	0.225	25	5.625
Dept of Zoology								
1	Centrifuge	1	450	0.45	0.5	0.225	25	5.625
2	incubator	1	450	0.45	0.5	0.225	25	5.625
3	Hot air oven	1	450	0.45	0.5	0.225	25	5.625
Dept of Micro-Biology								
1	Autoclave	1	450	0.45	0.5	0.225	25	5.625
2	Centrifuge	1	450	0.45	0.5	0.225	25	5.625
3	incubator	1	40	0.04	0.5	0.02	25	0.5
4	Hot air oven	1	450	0.45	0.5	0.225	25	5.625
5	laminar air flow	1	450	0.45	0.5	0.225	25	5.625
6	Electrical water bath	1	450	0.45	0.5	0.225	25	5.625
	Total Consumption per Month							161.3

W. A. L. D.

PRINCIPAL

W.A.L.D. Govt. Arts & Science College
GADWAL - 509 125



AUDITING FOR WATER MANAGEMENT

1. List out uses of water in your college.

Water is used for Drinking, cleaning, labs, washrooms and gardening

2. What are the sources of water in your college?

Bore water

3. How many wells are there in your college?

02

4. No. of motors used for pumping water from each well?

02

5. What is the total horse power of each motor?

5 HP

6. What is the depth of each well?

150 Ft.

7. What is the present depth of water in each well?

120 Ft.

8. How does your college store water?

With overhead water tanks

9. Quantity of water stored in your overhead water tank? (In liters)

6000L

10. Quantity of water pumped every day? (In liters):

12000L

11. If there is water wastage, specify why.

Yes

12. How can the wastage be prevented / stopped?

Repairing of taps which are leaking

13. Locate the point of entry of water and point of exit of waste water in your College.

Entry of water from motor and Exit of waste water is at taps

14. Where does waste water come from? **RO plant.**

15. Where does the waste water go?

Diverted to the Lab.

16. What are the uses of waste water in your college?

Used for Labs & Gardening and plantation

17. What happens to the water used in your labs? Whether it gets mixed with ground water?

Lab water connected with Septic tank

18. Is there any treatment for the lab water?

No

19. Whether green chemistry methods are practiced in your labs?

Yes

20. Write down four ways that could reduce the amount of water used in your college.

By showing sign boards like. "Save water"

With drip irrigation system

Allow the students to use toilets and drinking water as per timetable

Recycling and reusing of waste water

21. Record water use from the college water meter for six months

No water meter

22. Bimonthly water charges paid to water connections if any

Nil

23. No. of water coolers. Amount of water used per day? (in liters)

2-10L

24. No. of water taps. Amount of water used per day?

25-100L

25. No. of bath rooms in staff rooms, common, hostels. Amount of water used per day?

300L

26. No. of toilet, urinals. Amount of water used per day?

50L

27. No. of water taps in the canteen. Amount of water used per day? **Nil**

28. Amount of water used per day for garden use.

1200 L

29. No. of water taps in laboratories. Amount of water used per day in each lab?

24 -100L

30. Total use of water in each hostel?

Not applicable

31. At the end of the period, compile a table to show how many liters of water have been used in the college for each purpose

S.No.	Use of water	Quantity of water ysed
1	Bathrooms	1000L
2	Toilets	1700L
3	Garden trees	1200 L
4	Drinking	1800 L
5	Ground cleaning	800 L

32. Is there any water used for agricultural purposes?

No

33. Does your college harvest rain water?

YES

34. If yes, how many rain water harvesting units are there? (Approx. amount)

02

35. How many of the taps are leaky? Amount of water lost per day?

02/ 10 L

36. Are there signs reminding people to turn off the water?

Yes

37. Is there any waterless toilets?

No

38. How many water fountains are there?

Nil

39. How many water fountains are leaky?

Nil

40. Is drip irrigation used to water plants outside?

NO

41. How often is the garden watered?

Alternate days

42. Quantity of water used to watering the ground?

100 L

43. Quantity of water used for bus cleaning? (Liters per day)

Not applicable

44. Amount of water for other uses? (Items not mentioned above)

200 L

45. Area of the college land without tree/building canopy.

1. acre

46. Is there any water management plan in the college?

YES

47. Are there any water saving techniques followed in your college? What are they?

Rain water harvesting pit, waste water sinking pit, supplying water to the need

48. Please share Some IDEA for how your college could save more water.

By using drip irrigation system for garden we can save more water usage.

Stoppage of leakages in pipes, fixing of nozzle taps,

AUDITING FOR ENERGY MANAGEMENT

1. List ways that you use energy in your college. (Electricity, electric stove, kettle, microwave, LPG, firewood, Petrol, diesel and others).

- **. Electricity**
- **Electric Stove**
- **Kettle**
- **Diesel**
- **. LPG**

2. Electricity bill amount for the last year

2020-2021 -Rs.3,74,295

3. Amount paid for LPG cylinders for last one year

Rs. Nil

4. Weight of firewood used per month and amount of money spent? Also mention the amount spent for petrol/diesel/ others for generators?

Not Applicable

5. Are there any energy saving methods employed in your college? If yes, please specify. If no, suggest some.

All Class rooms fans and lights control command at Principal Chamber

Electronic devices, Lights, Fans turned off when not in use.

Sign boards placed at the power points saying that “Save Power is equivalent to Power Generation”

6. How much money does your college spend on energy such as electricity, gas, firewood, etc. in a month?

Rs.374295/--

7. How many CFL bulbs has your college installed? Mention use (Hours used/day for how many days in a month)

163 CFL Bulbs are installed 6 hrs/day, 25days a month.

8. Energy used by each bulb per month? (For example- 60 watt bulb x 4hours x number of bulbs = Kwh).

489 kWh

9. How many LED bulbs are used in your college? Mention the use (Hours used/day for how many days in a month)

54 LED Bulbs.6 hrs /day, 25 days a month

10. Energy used by each bulb per month? (KWh). **162 kWh**

11. How many incandescent (tungsten) bulbs have your college installed? Mentions use (Hours used/day for how many days in a month)

NIL

12. Energy used by each bulb per month? (KWh). NIL

13. How many fans are installed in your college? Mention use (Hours used/day for how many Days in a month)

207 Fans 6 hrs/day, 25 days a month

14. Energy used by each fan per month? (KWh).

1863 Kwh

15. How many air conditioners are installed in your college? Mention use (Hours used/day, for How many days in a month)

06

16. Energy used by each air conditioner per month? (kWh).

73.5kwh

17. How many electrical equipment including weighing balance are installed your college? Mention the use (Hours used/day for how many days in a month)

NIL

18. Energy used by each electrical equipment per month?

Not applicable

19. How many computers are there in your college? Mention the use (Hours used/day for how many days in a month)

106 Computers 1hrs /day,25 days a month.

20. Energy used by each computer per month?

662.5 KWh

21. How many photocopiers are installed by your college? Mention use (Hours used/day for how many days in a month).

12 PRINTER CUM SCANNER 0.5 hrs / day,25 days a month

22. How many cooling apparatus are in installed in your college? Mention use (Hours used/day for how many days in a month)

NIL

23. Energy used by each cooling apparatus per month? (kWh) Mention use (Hours used/day for how many days in a month)

NIL

24. Energy used by each photocopier per month? (Kwh) Mention the use (Hours used/day for how many days in a month)

PRINTER CUM SCANNER 9 KWh

25. How many inverters your college installed? Mentions use (Hours used/day for how many days in a month)

07, 24hrs / day,25 days a month

25. Energy used by each inverter per month?

87.5kWh.

26. How many electrical equipment are used in different labs of your college? Mention the use (Hours used/day for how many days in a month)

36 Electrical equipments all departments 1hrs /day, 25 days a month

27. Energy used by each equipment per month?

161.3 KWh

28. How many heaters are used in the canteen of your college? Mention the use (Hours used/day for how many days in a month)

NIL

29. Energy used by each heater per month? **NIL** kWh

30. No of street lights in your college? **03**

31. Energy used by each street light per month? **90** (kWh)

32. No of TV in your college and hostels? **01**

33. Energy used by each TV per month? **1.5** (kWh)

34. Any other item that uses energy (Please write the energy used per month) Mention the use (Hours used/day for how many days in a month)

02 Water Pumping Motors/447.6/2 hours/25 days

35. Are any alternative energy sources/nonconventional energy sources employed / installed in your college? (Photovoltaic cells for solar energy, windmill, energy efficient stoves, etc..) Specify.

Yes. 09 Solar street lights

36. Do you run "switch off" drills at college? **YES**

37. Are your computers and other equipment put on power-saving mode?

YES

38. Does your machinery (TV, AC, Computer, weighing balance, printers, etc.) run on standby mode most of the time? If yes, how many hours?

NO

39. What are the energy conservation methods adapted by your college?

Energy conserved through the single switch for all computers on and off

Lights,fans and all electronic devices are turned off when not in use.

40. How many boards displayed for saving energy awareness?

06

41. How much ash is collected after burning fire wood per day in the canteen?

NO

42. Write a note on the methods/practices/adaptations by which you can reduce the energy use in your college campus in future.

The college is planning to install small solar plants

Energy Management

SL.NO	Electrical appliances/instruments	Number	Power(W)/UNIT	KW	Operation/Day	KW/hr	No.of Days in Month	Total consumption per month
1	LED TUBE	54	20	1.08	6	6.48	25	162
2	TUBE	163	20	3.26	6	19.56	25	489
3	LED BULB	58	20	1.16	6	6.96	25	174
4	FAN	207	60	12.42	6	74.52	25	1863
5	PRINTERS	12	60	0.72	0.5	0.36	25	9
6	COMPUTER	122	250	30.5	1	30.5	25	762.5
7	UPS	7	1000	7	0.5	3.5	25	87.5
8	LAPTOPS	2	50	0.1	1	0.1	25	2.5
9	REFRIGERATOR	9	150	1.35	24	33.75	25	843.75
10	PROJECTOR	5	280	1.4	1	1.4	25	35
11	EXHAUST FAN	14	32	0.448	2	0.896	25	22.4
12	MOTORS	2	2238	4.476	2	17.904	25	447.6
13	AIR CONDITION	6	490	2.94	1	2.94	25	73.5
14	AIR COOLER	1	175	0.175	1	0.175	25	4.375
15	TV	1	60	0.06	1	0.06		1.5
19	STREET LIGHT	3	50	0.15	24	3.6	25	90
	Total Consumption per Month							4951.625+144.425= 5114.425

SL.NO	NAME OF THE ITEM	QUANTITY	Power(W)/UNIT	KW	Operation /Day	KW/hr	No.of Days in Month	Total consumption per month
Dept of physics								
1	Electric Stove	1	450	0.45	1	0.45	25	11.25
2	Kettle	1	450	0.45	1	0.45	25	11.25
3	Steafan constant	1	24	0.024	1	0.024	25	0.6
4	Thevenin	1	18	0.018	1	0.018	25	0.45
5	Norton	1	18	0.018	1	0.018	25	0.45
6	Maximum power transfer	1	18	0.018	1	0.018	25	0.45
7	Sodium Lamp	1	35	0.035	1	0.035	25	0.875
8	Mercury lamp	1	80	0.08	1	0.08	25	2
9	Zener diode	1	24	0.024	1	0.024	25	0.6
10	P-N junction diode	1	24	0.024	1	0.024	25	0.6
11	Transistor	1	20	0.02	1	0.02	25	0.5
12	rc coupled amplifier	1	24	0.024	1	0.024	25	0.6
13	rc phase shift oscillator	1	24	0.024	1	0.024	25	0.6
14	AND,OR.NOT Gates	1	24	0.024	1	0.024	25	0.6
15	energy gap	1	24	0.024	1	0.024	25	0.6
Dept of Chemistry								
1	Colorimeter	1	450	0.45	0.5	0.225	25	5.625
2	PH meter	1	450	0.45	0.5	0.225	25	5.625
3	Conductometer	1	450	0.45	0.5	0.225	25	5.625
4	Potentiometer	1	450	0.45	0.5	0.225	25	5.625
5	centrifugation machine	1	450	0.45	0.5	0.225	25	5.625
6	Electrical water bath	1	450	0.45	0.5	0.225	25	5.625
Dept of Botany								
1	Cetrifuge	1	450	0.45	0.5	0.225	25	5.625
2	incubator	1	450	0.45	0.5	0.225	25	5.625
3	Hot air oven	1	450	0.45	0.5	0.225	25	5.625
4	Colorimeter	1	450	0.45	0.5	0.225	25	5.625
5	Electrical water bath	1	450	0.45	0.5	0.225	25	5.625
6	Digital Weighing machine	1	450	0.45	0.5	0.225	25	5.625
Dept of BioTechnolohy								
	Cetrifuge	1	450	0.45	0.5	0.225	25	5.625
	incubator	1	450	0.45	0.5	0.225	25	5.625
	Hot air oven	1	450	0.45	0.5	0.225	25	5.625
Dept of Zoology								
1	Cetrifuge	1	450	0.45	0.5	0.225	25	5.625
2	incubator	1	450	0.45	0.5	0.225	25	5.625
3	Hot air oven	1	450	0.45	0.5	0.225	25	5.625

Dept of Micro-Biology								
1	Autoclave	1	450	0.45	0.5	0.225	25	5.625
2	Cetrifuge	1	450	0.45	0.5	0.225	25	5.625
3	incubator	1	40	0.04	0.5	0.02	25	0.5
4	Hot air oven	1	450	0.45	0.5	0.225	25	5.625
5	laminar air flow	1	450	0.45	0.5	0.225	25	5.625
6	Electrical water bath	1	450	0.45	0.5	0.225	25	5.625
	Total Consumption per Month							161.3

AUDITING FOR WASTE MANAGEMENT

1 What is the total strength of students, teachers and Non-teaching staff in your College?

Strength	Male	Female	Total
No of students	1297	969	2266
No of Teaching Staff	41	17	58
No of Non-Teaching staff	11	8	19

Which of the following are available in your College?

S.NO	Available in the college	Area occupied IN ACER	NUMBER
1	Garbage dump	0.075	02
2	Playground area	1	1
3	Laboratory,	0.5	09
4	Kitchen,	-	-
5	Toilets	0.5	06
6	Car/scooter shed area	0.5	1
7	Garden area	1	1
8	classrooms	1	11
9	Office room	0.5	2
10	Others seminar hall	0.2	1

2 Which of the following are found near your college? Mark the level of disturbance it creates for the college in a scale of 1 to 9.

PLACES NEAR THE COLLEGE	YES /NO	MARK OF DISTRUBENCE LEVEL
Municipal dump yard	NO	NA
Garbage heap	NO	NA
Public convenience Sewer line	NO	NA
Stagnant water	YES	500 Mtrs
Open drainage Industry	NO	NA
BUS STATION	NO	NA

WASTE

3 Does your college generate any waste? If so, what are they?

4 How much quantity?

5 Numbers or Weight E-Waste Hazardous Waste

TYPE OF WASTE	QUANTITY IN KG
E-waste	10 KG
Hazardous waste	0.5 KG
Solid waste	15 KG
Dry leaves	5 KG
Canteen waste	2
Glass	1
Unused equipment	5
Napkins	3

6 is there any waste treatment system in the college? **YES**

7 Is there any treatment for toilet/urinal/sanitary napkin waste?

Yes. Sanitary napkin incinerator used.

8 . What is the approximate quantity of waste generated per day? (in Kilograms) Office
Laboratories Canteen/kitchen

5 KG

9 .Why wastes is a problem?

Overflowing waste create serious negative health and environmental impacts such as spreading of infectious diseases

10 .Whether wastes is polluting ground/surface water? How?

Yes, Deposition of solid or liquid waste materials contaminates the soil and ground water

11 .Whether wastes is polluting the air of the college? How?

Contaminated soil and ground disposes the gases to air

12 .How is the waste generated in the college managed?

1 Composting 2. Recycling 3. Reusing 4. Others (specify)

13. How many separate boxes do you think you would need to put into a classroom to start a waste segregation and recycling campaign?

14 What should be the use for each box

Blue dustbins, are used for plastics waste bottles

Green dustbins are used for wet waste collected from various departments and disposed in vermy compost pit developed and managed by the department of Botany.

15. Do you use recycled paper in College?

No, but we using used papers for other purposes

16. Is there any waste wealth program practiced in the college?

Raw wood which is collected from the dismantled old building in the college premises were transformed into chairs and tables.

Iron anglers which was used for the sheds now transformed to the fencing pipes.

17 .How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, please specify.

Yes. Through conduction of rallies we are spreading the message for protection of environment.

18.Can you achieve zero garbage in your college? (Reduce, Recycle, Reuse, Refuse) If yes, how?

No

AUDITING FOR GREEN CAMPUS MANAGEMENT

1. Is there a garden in your college? Area?

Yes, 1 acre

2. Do students spend time in the garden?

YES

3. List the plants in the garden, with approx. numbers of each species.

22 types of plants and total approx. 1112 plants

4. Suggest plants for your campus. (Trees, vegetables, herbs, etc.)

Cycas, boganwillia, saraka indica, nerium

5. List the species planted by the students, with numbers.

1 Guava –psidium guajva and 1 rose plants 2-KAPOOR TULASI

6. Whether you have displayed scientific names of the trees in the campus?

QR codes generated

7. Is there any plantations in your campus? If yes specify area and type of plantation.

Yes, Four areas are identified for the plantation. Which is under process to plant.

8. Is there any vegetable garden in your college? If yes how much area?

NO

9. Is there any medicinal garden in your college? If yes how much area?

No, its planning

10. What are the vegetables cultivated in your vegetable garden? (Mention the quantity of harvest in each season)

Not applicable

11. How much water is used in the vegetable garden and other gardens? (Mention the source and quantity of water used).

Not applicable

12. Who is in charge of gardens in your college? **Dept. of Botany**

13. Are you using any type of recycled water in your garden?

Yes

14. List the name and quantity of pesticides and fertilizers used in your gardens?

Urea-5 Kgs

15. Whether you are doing organic farming in your college? How?

No

16. Do you have any composting pit in your college? If yes, what are you doing with the compost generated? **YES**

17. What do you doing with the vegetables harvested? Do you have any student market?

No

18. Is there any botanical garden in your campus? If yes give the details of campus flora.

No, Planning to develop.

19. Give the number and names of the medicinal plants in your college campus.

S.NO	DISTRICT	NAME OF THE COLLEGE	Scientific Name	No.of Plants	Year Planted
1	JOGULAMBA GADWAL	MALD GDC GADWAL	Bryophyllum	5	5
2			Centella asiatica	5	5
3			Vitex negundo	5	5
4			Gymnema sylvestre	5	5
5			Stevia rebaudiana	5	5
6			Cissus quadrangularis	5	5
7			Chrysopogon zizanoidis	5	5
8			Kapoor tulasi	5	5
9			Cymbopogon citratus	5	5
10			Pedilanthus	5	5
11			Duranta erecta	100	100
12			Tabebuia rosea	15	15
13			Cypress halefka	4	4
14			Pisonia brunoniana	50	50
15			Spathodea campanulata	15	15
16			Arakeria columnaris	4	4
17			Saraca indica	10	10
18			Tecoma stans	10	10
19			Woodyentia bifurcata	4	4
20			Pisonia brunoniana	50	50
21			Acalypha wilaesiana	400	400
22			Dracena marginata	400	400
TOTAL				1112	1112

20. Any threatened plant species planted/conserved?

No

21. Is there a nature club in your college? If yes what are their activities? **Eco Club**

22. Is there any arboretum in your college? If yes details of the trees planted.

Yes.

23. Is there any fruit yielding plants in your college? If yes details of the trees planted.

Yes,

24. Is there any groves in your college? If yes details of the trees planted.

NO

25. Is there any irrigation system in your college?

NO

26. What is the type of vegetation in the surrounding area of the college?

Azadiracta Indica, Tamarindus Indica, Ficus Religiosa,

27. What are the nature awareness programmes conducted in the campus?

Ozone day, Gardening techniques programme , Preparation of vermi compost through fallen leaf debris

28. What is the involvement of students in the green cover maintenance?

NSS volunteers regularly doing clean and green.

29. What is the total area of the campus under tree cover? Or under tree canopy?

2 acres

30. Share your IDEAS for further improvement of green cover.

1. Needs to install cattle grid for the plant protection

2 Maintenance of the ornamental plants

3 Developing of pond to grow algae and water plants such as nymphaea

4 maintenance of medicinal garden, fruit garden and flower garden

NUMBER OF PLANTS AVAILABLE IN COLLEGE

TOTAL PLANT LIST

S.N O	DISTRIC T	NAME OF THE COLLEGE	Scientific Name	No.of Plants	Year Planted
1	JOGULAMBA GADWAL	MALD GDC GADWAL	Bryophyllum	5	5
2			Centella asiatica	5	5
3			Vitex negundo	5	5
4			Gymnema sylvestre	5	5
5			Stevia rebaudiana	5	5
6			Cissus quadrangularis	5	5
7			Chrysopogon zizanoidis	5	5
8			Kapoor tulasi	5	5
9			Cymbopogon citratus	5	5
10			Pedilanthus	5	5
11			Duranta erecta	100	100
12			Tabebuia rosea	15	15
13			Cypress halefka	4	4
14			Pisonia brunoniana	50	50
15			Spathodea campanulata	15	15
16			Arakeria columnaris	4	4
17			Saraca indica	10	10
18			Tecoma stans	10	10
19			Woodyentia bifurcata	4	4
20			Pisonia brunoniana	50	50
21			Acalypha wilaesiana	400	400
22			Dracena marginata	400	400
TOTAL				1112	1112

AUDITING FOR CARBON FOOTPRINT

1. What is the total strength of students and teachers in your College?

Strength	Male	Female	Total
No of students	1297	969	2266
No of Teaching Staff	41	17	58
No of Non-Teaching staff	11	8	19

2. Total Number of vehicles used by the stakeholders of the college. (per day)

90

3. No. of cycles used

48

4. No. of two wheelers used (average distance travelled and quantity of fuel and amount used per day)

100 , 20 km, 50 L

5. No. of cars used (average distance travelled and quantity of fuel and amount used per day)

4, 10Km, 2L

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

1428

7. 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

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

3

9. Number of visitors with vehicles per day?

25

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

1, 2L,220Rs

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

4 kg per day (Rs 155)

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

NIL

13. Amount of taxi/auto charges paid and the amount of fuel used per month for the transportation of vegetables and other materials to canteen. **NIL**

14. Amount of taxi/auto charges paid per month for the transportation of office goods to the college.

Rs. 1200

15. Average amount of taxi/auto charges paid per month by the stakeholders of the college.

Rs.3000

16. Use of any other fossil fuels in the college (Give the amount of fuel used per day and amount spent). **Nil**

17. Suggest the methods to reduce the quantity of use of fuel used by the stakeholders/students/teachers/non-teaching staff of the college.

By using bicycles and by walk.

18. Are the Rooms in Campus are Well Ventilated?

Yes

91. Window Floor ratio of the Rooms

Good

Carbon Footprint - Sample Report

- Petrol used by two wheelers/day–**50 L**
- Fuel for persons (total 1612 persons) travelling by common Transportation = **115L**

Total fossil fuel use is **Nil / day**

Total fuel cost per day for transportation =Rs. **8060/- (115L x Rs 70)**

Cost of stakeholder transportation per month (**Rs.3000x22 days**)-
Rs.66000

Water management

SL NO	PARAMETERS	Response	Remarks
1	Source of water	Bore	
2	No. of Wells	02	
3	No. of motors used	02	
4	Horse power – Motor	5 HP	
5	Depth of well –Total	150	
6	Water level	120	
7	Number of water tanks	6	
8	Capacity of tank	6000 L	
9	Quantity of water pumped every day	6000 L	
10	Any water wastage/why?	Yes	Leakage at taps, which will be repaired
11	Water usage for gardening	1200 L	
12	Waste water sources	RO PLANT	
13	Use of waste water	Used for plants and for Lab	
14	Faith of waste water from labs	Connected to the septic tank	
15	Whether waste water from labs mixed with ground water	No	
16	Any treatment for lab water	Septic tank	
17	Whether any green chemistry method practiced in labs	Yes	
18	No. of water coolers	02	
19	Rain water harvest available?	Yes	
20	No. of units and amount of water harvested	02, 5000 L in a season	
21	Any leaky taps	NO	
22	Amount of water lost per day	10 L	
23	Any water management plan used?	YES	
24	Any water saving techniques followed?	Yes	
25	Are there any signs reminding peoples to turn off the water?	Yes	

Results of water quality

Parameters	Bore Well water	R.O.Unit Water	Standard value (BIS)
Dissolved Oxygen (mg/l)			6-Aug
Acidity (mg/l)			200
Alkalinity (mg/l)	NILL	NILL	200
Chloride (mg/l)	525	51	250
Hardness (Total)			200
Conductivity (μ s)	3774	349	
Ph.	7.68	7.32	6.5-8.5
Total Dissolved Solids (ppm)	2120	194	500
Salinity (ppt)			
Total coliform			0
Fecal coliform			0

Water Quality analysis (Biological) report of college – II (with Photographic evidence)

S.No	Parameter/ WHO permissible level	Zooplankton (No of Samples/Sites)	Methodology
1	Protozoan (Ciliates)	Nil	microscope
2	Rotifers	Nil	microscope
3	Ostracods	Nil	microscope
4	Insect Larvae	Nil	microscope
5	Water Fleas	Nil	microscope
6	Bivalves	Nil	microscope
7	Snails	Nil	microscope
8	Mussels	Nil	microscope
9	Any Other (Specify)	Nil	microscope

1. **Waste management**

Approximate quantity of waste generated per day (in kg)

<i>Office</i>				
Approx.	Biodegradable	Non -Biodegradable	Hazardous	Others
<1Kg				
2-10Kg	-	--	-	-
>10Kg	13 KG	1 KG	-0	-

<i>Laboratories</i>				
Approx.	Biodegradable	Non - Biodegradable	Hazardous	Others
<1Kg				-
2-10Kg	4.5 KG	0.4 KG	0.1 KG	-
>10Kg	--	-	-	-

<i>Canteen/kitchen</i>				
Approx.	Biodegradable	Non - biodegradable	Hazardous	Others
<1Kg	-	-	-	-
2-10Kg	- 2 KG	- 0	-0	-
>10Kg	-	-	-	-

How the waste generated in the college is managed?

A)Composting/ Vermicomposting	YES	Maintaining
B)Recycling	No	
C)Reusing	No	
D)Other ways	No	

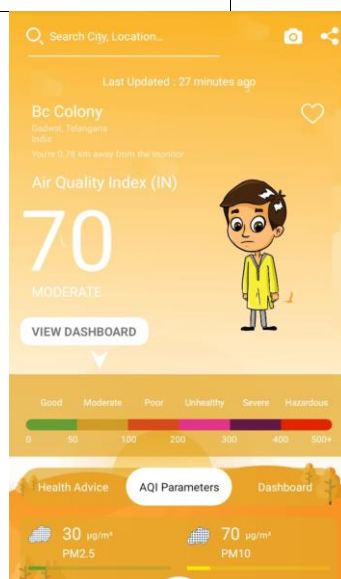
Waste generated in the college?

TYPE OF WASTE	QUANTITY IN KG
E-waste	10
Hazardous waste	0.5
Solid waste	15
Dry leaves	5
Canteen waste	5
Glass	1
Unused equipment	5
Napkins	3

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

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

SL. NO	Place	parameters	quality
1	MALD GDC GADWAL	70AQL	Moderate



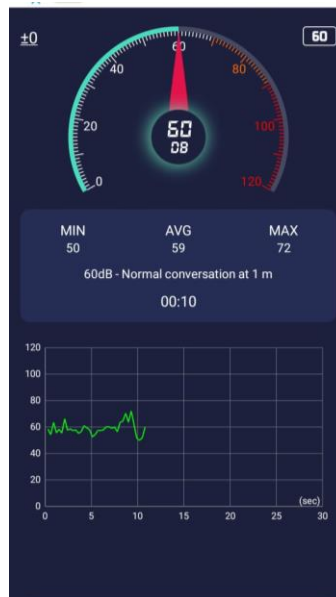
Measurements of Noise level in and around the college

SL.NO	place (S)	Measurements in (Duration seconds)	Minimum (dBA)	Maximum (dBA)	Average (dBA)
1	Library	10	58	71	66
2	Seminar Hall	10	50	72	60
3	Old building	10	51	65	56
4	New building	10	46	89	66

Library



Seminar Hall



Old building



New building



GRADING FOR ENVIRONMENTAL AUDIT REPORT

S.NO	COMPONENTS FOR ASSESSMENT	MARKS	GRADES
1	Energy audit	20	A+ : 91-100
2	Waste audit	15	
3	Water audit	15	
4	Landscape or Environment audit	15	A : 81-90
5	Carbon footprint & Oxygen emission audit	15	
6	Green activities (conduction of seminars/conferences/workshops/student competitions/awareness programmes/observation of environmental related days etc.	10	B+ : 71-80
7	Student clubs (Environmental club/Green club/Nature club/Biodiversity club/ ECO Club/Friends and Fauna Club/Science club etc.) activity annual report	10	B : 61-70
	Total	100	C : 51 - 60

Photo Gallery

