GOVT.MODEL DEGREE COLLEGE, YELLAREDDY Dist.KAMAREDDY-503122

Accredited by NAAC with 'B' Grade

ISO 9001: 2015 Certified College



Green Audit Report

Submitted by

PRINCIPAL

Dr. K. Praveen Kumar, M.Sc., Ph. D

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PRINCIPAL Govt Arts & Science College MARAREDBY - 503111

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PRINCIPAL Govt. Degree College YELLAREDDY. Dist. KAMAREDDY

COMMISSIONERATE OF COLLEGIATE EDUCATION, TELANGANA: HYDERABAD <u>PROFORMA FOR GREEN AUDIT</u>

College Profile:

Name of the College: Govt. Degree College, Yellareddy. Address: Adavilingal , Yellareddy. Contact Info: 9885393125 Campus Area : 23 Acres 22 Guntas Built-up Area : 20540 sq.mts 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	312	457	769
No of Teaching Staff	15	05	20
No of Non-Teaching staff	09	02	11

Physical Structure

The available land of the college: 23 acres and 22 Guntas. The built-up area of the college: 20540 Sq.mts.

No. of Class Rooms	12
No. of Laboratories	04
No. of Conference halls	01
Library Halls	01
Auditorium	Nill
Canteen	01
Any other (please specify)	0

Objectives :	Environmental risk assessment waste minimization & environmental pollution control plans.		
Prepared by:	Mrs.V.Shireesha, Contract Lecturer in Botany		
Approved by:	Dr. K.Praveen kumar, Principal		
Remarks :			
FORMS AND SUPPORT MATERIAL			
Questionnaire Document ref. name/no.:			
Checklist for Environmental Audit Document ref. name/no.:			
Additional forms and support material:			

Background: The history of an Institution / Organization, including information on the setting and construction plan, environmental practices, known environmental issues from the site and neighbours, previous environmental damage/spill at the site and monitoring records. Any changes made or occurred up to the time of the last audit and future plans for the development. The natural resources used as input, processing of materials and all finished products (energy, water, raw material use) and wastes including hazardous and toxic wastes.

General Objectives (can be slightly modified according to need of an Institution)

- Environmental risk assessment including compliance to regulations, soil, Water, solid and Ewastes, emissions, hazardous products & noise pollution.
- > Waste minimization and environmental pollution control plans.
- > The optimal utilization of energy, water and other natural resources.
- > Recycling programs and product life cycle considerations.
- Emergency response plans and procedures.

Protocols used for Environmental Audit

Internal Audit Team Structure: (7+2=9): It comprises Principal as Chairman, IQAC coordinator as Vice-Chairman, Principal of the neighboring college as special invitee, one coordinator from faculty of Botany/Zoology/ Environmental Science and three other members from any faculty interested in environment related activities. College can include two extra invitee members from Forest Department / Pollution control board / Health Department/ etc.

Questionnaire: this is used for acquiring basic information related to different categories to be covered in an institution.

Check List: This is used for providing a detailed listing of all issues to be covered in an institution.

Photographs: A picture speaks 1000 words. Use photographs to support findings and to highlight good practices with geo-tagging.

Comprehensive Methods: The detailed methodology is required for environmental audit and it must be conducted using comprehensive protocols and fixed procedures to ensure collection and documentation of the required data and verification of facts based on the information provided.

Relevant Measures and Standards: The standard measures could be adjusted to be relevant to the organization or activity being audited.

Written Reports: Reports should contain factual observations, reasoning and the documentation of the processes. The Clarity and accuracy should be maintained while presenting the findings with the support of valid and documented evidence.

Evidence verification: The concept of evidence and verification of environmental deficiencies is one of the key elements in an environmental audit. Initially the Internal audit team must verify all procedures, collected data and information through direct field inspection.

Certification and Grading: The External audit team will assess and evaluate the internal audit report and after thorough verification certificate along with grade will be issued.

	PROCEDURE			
Procedure	Description	Responsibility		
Annual plan	The environmental audit report is prepared by College Authorities each year and it ensures that the entire environmental management system is examined, must specify when the audit was carried out and those responsible for carrying it out.	Internal Environmental audit team/ coordinator		
Preparation	The typical questionnaire and check-lists are developed for the area to be audited before the actual individual audits are carried out. It is done using established procedures, objectives and action plans. They can be used to measure results in each area. The staff and in charges of the area to be audited should be informed well in advance about when the audit would be done and what it covers.	Internal audit team		
Internal Audit	Based on the questionnaire and checklists, the audit is carried out in the form of interviews / physical visit about - and observations of the actual state of affairs. The Team suggests further changes and correction as and when required.	Internal Audit team		
Wrap-up meeting	An audit report is prepared which is examined together with the in-charges responsible for the each area; minor areas are taken care of immediately, while a conclusion for the audit as a whole is written down. Correction reports are examined and corrective action is agreed upon. The internal audit team and the College Management / Principal sign the reports made. Then the reports must be submitted to the CC Office at Hyderabad.	Internal audit team		
Follow-up	When deadlines for corrective action are reached, the Coordinator responsible for the area audited is contacted and the environmental manager checks the corrective action carried out. If corrective action is effective, the case is closed. If not, a new report is prepared.	Coordinator		
Reporting	A comprehensive joint report is prepared on the basis of all the internal environmental audits of the college. This report forms the basis for certification and grading by the external audit team and it holds the authority to review the entire report.	External Audit team/ Principal/ IQAC coordinator		

AUDITING FOR WATER MANAGEMENT

1. List out uses of water in your college.

- 1. Drinking
- 2. Cleaning
- 3. Toilet
- 4. Laboratories
- 5. Hostel
- 6. Canteen
- 7.Garden
- 2. What are the sources of water in your college? Ground water
- 3. How many wells are there in your college? 2 bore wells
- 4. No. of motors used for pumping water from each well?1 motor used for pumping water for each well.
- 5. What is the total horse power of each motor?

2 HP

6. What is the depth of each well?

180 Feet .

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

100 Feet approximately

8. How does your college store water?

Water Tank

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

5000 Ltr.

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

20000 liters approximately

11. If there is water wastage, specify why.

Some quantity of water comes from RO plant during the filtration process . That water is used for garden

12. How can the wastage be prevented / stopped?

Regular maintenance of RO water plants could minimize the waste water output from the plant

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

Point of entry –Nill

Point of Exit – RO plant for garden

14. Where does waste water come from?

RO plant.

15. Where does the waste water go?

Waste water comes from the purifier and after purification of water, it will go in to garden.

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

We use waste water from RO plant for watering the garden.

Waste water from labs & hostel enters the drainage.

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

Used water from labs directly enters into the drainage & does not get mixed with ground water.

- 18. Is there any treatment for the lab water?
- 19. Whether green chemistry methods are practiced in your labs? No
- 20. Write down four ways that could reduce the amount of water used in your college. 1.Taps should be closed properly.
 - 2. Regular checkup toilets & labs for leaky taps and fixing them

Immediately.

- 3. Conducting awareness programs to students & staff on Water conservation in the college
- 4. Constituting a Water team with staff and students to monitor the

Wastage of water in the college

- 21. Record water use from the college water meter for six months. Nill
- 22. Bimonthly water charges paid to water connections if any Nill

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

1 water cooler with 100 liters capacity

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

191 water taps, approx. 20000 liters water used per day

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

25 bath rooms and 10000 litres of water used per day.

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

65 toilets and urinals 30 and 4000 liters of water used per day

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

No

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

2000 Lt of water used for gardening

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

10 taps and 1000 liters per day

30. Total use of water in each hostel?

10000 liters per day.

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	Item	Quantity of water used per day in liters
1	RO Plant	2000
2	Toilets	5000
3	Labs	1000
4	Gardening	2000
5	Hostel	10000
	Total	20000

32. Is there any water used for agricultural purposes? No 33. Does your college harvest rain water? NO 34. If yes, how many rain water harvesting units are there? (Approx. amount) NO 35. How many of the taps are leaky? Amount of water lost per day? No 36. Are there signs reminding people to turn off the water? Yes / No Yes 37. Is there any waterless toilets? No 38. How many water fountains are there? Nill 39. How many water fountains are leaky? Nill 40. Is drip irrigation used to water plants outside? YES/NO No 41. How often is the garden watered? Daily 42. Quantity of water used to watering the ground? 1500 liters 43. Quantity of water used for bus cleaning? (Liters per day) No 44. Amount of water for other uses? (Items not mentioned above) No 45. Area of the college land without tree/building canopy. 23 Acre 46. Is there any water management plan in the college? NO 47. Are there any water saving techniques followed in your college? What are they? 1.Regular maintenance of RO plant 2. Putting signs to remind the students & staff to turn off the water. 3. Water plants in the early morning /evening to decrease the water amount of evaporation. 4. Regular check up of taps for leakage & repairing the damaged taps. 8

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

conducting water awareness programs to the students & staff.

Automatic flush controls in urinals.

Installation of Aerators to taps that save around 50% of water.

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.

- 2. Electricity bill amount for the last year 96269/-(June 2020 to may 2021)
- 3. Amount paid for LPG cylinders for last one year Nil

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

Nil

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

No, suggested to install solar panels to generate electricity.

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

Rs 8022.4/-

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

Nil

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

Nil

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

7

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

1.92 kWh (13.44 kWh energy used for 7 LED bulb per month)

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)

96 fans (4 hours/day, 24 days/ month)

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

6 kWh (552.96 kWh energy used for 96 fans per month)

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

Nil

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

Nil

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)

10 (1 hr/day,20days/month)

18. Energy used by each electrical equipment per month? (kWh).

6.5kWh

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

64 computers (1 hours/day, 15 days/month)

20. Energy used by each computer per month? (kWh).

3.75 kWh (240 kWh energy used for 64 computers per month)

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

02 (1 hour /day, 20 days /month)

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

1 Refrigerator (24 hours/day, 30 days/month)

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

108kWh

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

6.5kWh (13 kWh energy used per 2 photocopiers /month)

6 inverters (4hours/day, 20days /month)

25. Energy used by each inverter per month? (kWh).

80 kWh (480 kWh energy used for 6 inverters /month)

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)

10 (1hr/day, 20days/month)

27. Energy used by each equipment per month? (kWh)

6.5kWh

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? (kWh) Nil
- 30. No of street lights in your college?
- 31. Energy used by each street light per month? (kWh)25.92 kWh (77.76 kWh energy used for 3 street lights/month)
- 32. No of TV in your college and hostels? Nil
- 33. Energy used by each TV per month? (kWh) Nil

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)

Nil

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.

No

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?

Yes, 4 hours/day

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

Turn off lights & all screens, Close unused rooms.

Take advantage of natural sunlight.

Installing LED Bulbs

40. How many boards displayed for saving energy awareness?

2

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

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

Try to limit electricity usage.

Reduce water wastage

Turn off the Lights

Conduct more save energy awareness programmes for students & staff.

Calculation of energy for electrical appliances Appliance Power used in (watt) Usage per day (hours) Number of appliances Average kWh per day (Watt X hours X Number X 1000) Average kWh per month (Watt X hours X Number X 1000 x 30) Incandescent bulb 60 watt CFL 18 W Microwave 1000W Stove 3000W Kettle 2500W

AUDITING FOR WASTE MANAGEMENT

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

673

No. of Students; No. of Teachers; No. Non-teaching staff; Gents - Ladies Total

673 19 12 Gents :294 , Ladies : 410

Which of the following are available in your College?

Give area occupied, Garden area and Garbage dump (number)

300sq.ft

Playground area, Laboratory, Kitchen, Canteen, Toilets (number) Car/scooter shed area

Play ground area : 2400 Yards

Labs : 600 Yards

Toilet : 48 Yards

Canteen : 50 Yards

Car /Scooter shed : 120 Yards

Number of class rooms, Office rooms and others (specify)

12,01

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.

Municipal dump yard	:	No	
Garbage heap	:	No	
Public convenience Sewer line	:	No	
Stagnant water		:	No
Open drainage Industry – (Mention the type)	:	No	
Bus / Railway station Market / shopping complex / public halls : N			

WASTE

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

Yes

How much quantity?

Number or weight E-waste Hazardous waste (toxic)

Nill

Solid waste

Nill

Dry leaves

Yes, Less than 1 Kg

Canteen waste

Yes

Liquid waste

Yes

Glass

Yes

Unused equipment

Yes

Medical waste if any

No

Napkins Others (Specify)

Nill

Is there any waste treatment system in the college?

No

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

Garbage Drum

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

250

2 Why waste is a problem?

Climate will change ,air polluted & directly affects many ecosystems & species.

3 Whether waste is polluting ground/surface water? How?

Ground water pollution can be caused by untreated waste discharge leading to diseases like skin lesions, bloody diarrhea & dermatitis.

4 Whether waste is polluting the air of the college? How?

No

5 How is the waste generated in the college managed?

Methods 1 Composting

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

Nill

What should be the use for each box? (Develop a Colour code with reasons)

Nill

7 Do you use recycled paper in College?

No

8 Is there any waste wealth program practiced in the college?

No

Approx. Bio degradable Non-Bio degradable Hazardous Others < 1 kg.

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

No

10 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, 300 sqd

The department of Botany maintain a botanical garden which consists of flowering & Ornamental plants. The botanical garden caters to the needs of students for their practical work, also they collected twigs from the garden for herbarium purpose & practicals.

2. Do students spend time in the garden?

Yes.







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

S.NO	Botanical Name	Common Name	Family	No.of
				species
1	Hibiscus rosasinensis	Mandara	Malvaceae	08
2	Nyctanthes arbortristis	Parijatham	Oleacae	03
3	Nerium oderatum	Ganneru	Apocyanaceae	03
4	Delonix regia	Thurai	Caesalpinaceae	05
5	Rosa sinensis	Rose	Rosaceae	15
6	Ocimum sanctum	Thulasi	Lamiaceae	15
7	Tectona grandis	Teak	Lamiaceae	20
8	Ixora coccinea	Ramabanam	Rubiaceae	02
9	Curcuma longa	Turmeric	Zingiberaceae	05
		(pasupu)		
10	Aloe barbadensis miller	Alovera	Liliaceae	04
11	Acalypha wilkesiana	Acalypha	Euphhorbiaceae	30
12	Codium variegatum	Croton	Euphhorbiaceae	04
13	Adonidia merrilli	Christmas palm	Arecaceae	02
14	Ficus benjamina	Weeping fig	Moracaeae	02
15	Catharanthus roseus	Periwinkle	Apocynaceae	04
16	Euphorbia tithymaloides	Slipper flower	Euphhorbiaceae	04
17	Ficas benjamina	panda	Moraceae	20
18	Dypsis lutescens	Areca palm	Arecaceae	02
19	Coleus amboinicus	Ajwain(oma)	Lamiaceae	02
20	Piper betle	Thamalapaaku	Piperaceae	02
21	Phyllanthus emblica	Usiri	Euphhorbiaceae	02
22	Ceiba pentandra	Booruga	Malvaceae	04

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

S.NO	Botanical Name	Tress/vegetables/Herbs
1	Tinospora cordifolia	Creeper
2	Ficus carica(Anjeer)	Tree
3	Musa paradisica	Tree
4	Rauwolfia serpentina	Herb
5	Withania somnifera	Herb
6	Cymbopogon citratus(lemon grass)	Herb
7	Pterocarpus santalinus	Tree
8	Terminalia catappa(badam)	Tree

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

S.NO	Name of the plant	NO.of plants
1	Ficas benjamina	10
2	Tectona grandis	07
3	Rosa sinensis	10
4	Hibiscus rosa sinensis	05
5	Nerium oderatum	03
6	Nyctanthes arbortristis	02
7	Acalypha wilkesiana	15
8	Ocimum sanctum	12
9	Euphorbia tithymaloides	02
10	Curcuma longa	03

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

Yes with QR Codes.











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

Yes ,Plantation around campus has been done in college entrance area.

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 particular medicinal garden, but some plants growing in college premises.

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

No particular vegetablel garden , but some plants growing in college premises. Like Spincah, Coriyender

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

No

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?

No

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

Not using

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, utilizing for some plants

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.

Yes,

S.NO	Botanical Name	Common Name	Family	No.of
				species
1	Hibiscus rosa sinensis	Mandara	Malvaceae	08
2	Nyctanthes arbortristis	Parijatham	Oleacae	03
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21	Phyllanthus emblica	Usiri	Euphhorbiaceae	02
22	Ceiba pentandra	Booruga	Malvaceae	04

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

S.NO	Botanical Name	Common Name	Family
1	Ocimum sanctum	Thulasi	Lamiaceae
2	Piper betle	Thamalapaaku	Piperaceae
3	Phyllanthus emblica	Usiri	Euphhorbiaceae
4	Curcuma longa	Turmeric (pasupu)	Zingiberaceae
5	Nerium oderatum	Ganneru	Apocyanaceae
6	Coleus amboinicus	Ajwain(oma)	Lamiaceae

20. Any threatened plant species planted/conserved?

No

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

No

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

No

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

NO

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?

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

Yes . Extension lecture arranged on Medicinal plants & values by resource person Dr. Hallem T.U.

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

Plantation programme & garden work.

CLEAN AND GREEN PROGRAMME





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

35%

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

Taking care of Tress Start afforestation. & Stop deforestation.

AUDITING FOR CARBON FOOTPRINT

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

No. of Students No. of Teachers No. of Non-teaching staff Gents Ladies Total

673 19 12 Gents :294 ,Ladies : 410

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

15 Vehicles per day

3. No. of cycles used

01

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

18x1x105= 1890/- per day (Avg kms per day 42, petrol consumption 1 ltrs)
5. No. of cars used (average distance travelled and quantity of fuel and amount used per day)
02x13.33x105 = 2799 (Avg distance 200, avg kms per ltrs:15kms)

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

9x95=855/- (Avg distance 30 kms, avg per 1 ltrs

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)

Nill

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

2-12

9. Number of visitors with vehicles per day?

6

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

Nill

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

Nill

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

Nill

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.

Nill

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

Nill

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

Nill

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

No

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

Suggested to all come to college by Cycles

18. Are the Rooms in Campus are Well Ventilated? Yes/No

Yes

19. Window Floor ratio of the Rooms Good/Not Enough

Good

Carbon Footprint - Sample Report

- Petrol used by two wheelers/day-18 Lt
- (Per person to and fro 40 Kms=1L) Fuel used by four wheelers (52 Persons) 104 L

• (Per person to and fro 40 Kms=2L) Fuel for persons (total 2314 persons) travelling by common

• Transportation =9 L (4L x 50 persons)

Total fossil fuel use is

53.66 L/Day

Total fuel cost per day for transportation =Rs. 5634.30/- (53.66x105)

Cost of stakeholder transportation per month (Rs.36190x22 days)-

Rs. 1,23,955/-

1. Water management

SL NO	PARAMETERS	Response	Remarks
1	Source of water	Borewellsl	
2	No. of Wells	2	
3	No. of motors used	02	
4	Horse power – Motor	1 Hp	
5	Depth of well –Total	180 feets	
6	Water level	180 feets	
7	Number of water tanks	8	
8	Capacity of tank	5000 Ltrs	
9	Quantity of water pumped every day	5000 Ltrs	
10	Any water wastage/why?	Yes,RO	
11		Plant Yes	
11	Water usage for gardening	Mail Hole	
12	Waste water sources	and	
		gardening	
13	Use of waste water	Gardening	
14	Faith of waste water from labs	200 letres	
15	Whether waste water from labs mixed with ground water	No	
16	Any treatment for lab water	No	
17	Whether any green chemistry method practiced in labs	No	
18	No. of water coolers	01	
19	Rain water harvest available?	No	
20	No. of units and amount of water harvested	No	
21	Any leaky taps	No	
22	Amount of water lost per day	No	-
23	Any water management plan used?	No	
24	Any water saving techniques followed?	Yes	
25	Are there any signs reminding peoples to turn off the water?	No	

Results of water quality

Parameters	Bore Well water	Municip al Tap water	Standard value (BIS)
Dissolved Oxygen (mg/l)	10.0-7.0 mg		6-8
Acidity (mg/l)	5.2 to 6.5		200
Alkalinity (mg/l)	61 to 120		200
Chloride (mg/l)	20 to 30 mg		250
Hardness (Total)	1000		200
Conductivity (µs)			
Ph.	6-10 to 6-97		6.5-8.5
Total Dissolved Solids (ppm)	4.13 to 7.22		500
Salinity (ppt)	500ppm		
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)	No	No
2	Rotifers	No	No
3	Ostracods	No	No
4	Insect Larvae	No	No
5	Water Fleas	No	No
6	Bivalves	No	No
7	Snails	No	No
8	Mussels	No	No
9	Any Other (Specify)	No	No

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

S.No	Phytoplanktons	Scientific Name and number	Methodology
1	Diatoms (Bacillariophyceae)	No	No
_			
2	Dinoflagellates (Dinophyceae)	No	No
3	Coccolithophores (Prymnesiophyceae	No	No
)		
4	Green algae (Chlorophyceae)	Oedogonium	Microscopic
5	Cyanobacteria (earlier Blue-green algae)	Spirogyra	Microscopic
(), T	NT
6	Others (specify)	No	No

1. ENERGY AUDIT

Room	Electrical	Number	Power	Total power	kW	usage	Kw/hr	No.of	Total power
No./ name	device/ items					time (hr/dav)		days in month	consumption per month
1	Tube light	128	38	4864	4.864	4	19.456	24	466.944
2	LED Tube	07	20	140	0.14	4	0.56	24	13.44
3	Fan	96	60	5760	5.76	4	23.04	24	552.96
4	Computer	64	250	16000	16	1	16	15	240
5	Printers	05	60	300	0.3	1	0.3	10	3
6	Photocopiers	02	650	1300	1.3	1	1.3	20	26
7	RO Plant	01	3.7kWh	3000	3	0.5	1.5	20	30
8	LCD Projector	06	280	1380	1.38	1	1.38	10	13.8
9	Internet box	2	850	1700	1.7	3	5.1	20	102
10	Exhaust fans	16	32	512	0.51	3	1.53	20	30.6
11	Refrigerator	1	150	150	0.15	24	3.6	30	108
12	Pumping motors	2	2HP	2984	2.984	1	2.984	25	74.6
13	Cooler	1	200	200	0.2	2	0.4	20	8
14	Street light	3	72	216	0.216	12	2.592	30	77.76
15	CCTV DVR	2	10	20	0.02	24	0.48	30	14.4
16	Centrifuge	01	850	850	0.85	0.25	0.2125	15	5.31
17	Inverters	06	1000	6000	6	4	24	20	480
	2246.81								

2. Waste management

Office				
Approx.	Biodegradable	Non -Biodegradable	Hazardous	Others
<1Kg	250	Nill	Nill	
2-10Kg	No	Nill	Nill	
>10Kg	No	Nill	Nill	

Approximate quantity of waste generated per day (in kg)

Laboratories				
Approx.	Biodegradabl e	Non - Biodegradable	Hazardou s	Others
<1Kg	Nill	Nill	Nill	
2-10Kg	Nill	Nill	Nill	
>10Kg	Nill	Nill	Nill	

Canteen/kitchen				
		Non -		
Approx.	Biodegradabl	biodegradable	Hazardou	Others
	e		S	
<1Kg	Nill	Nill	Nill	
2-10Kg	Nill	Nill	Nill	
>10Kg	Nill	Nill	Nill	

How the waste generated in the college is managed?

A)Composting/		
Vermicomposting	Yes	Remark
B)Recycling	Nill	Nill
C)Reusing	Nill	Nill
D)Other ways	Nill	Nill

Waste generated in the college?

E-waste		
Hazardous waste		
Solid waste	No	No
Dry leaves	No	Less than 1 kg
Canteen waste	No	No
Liquid waste	No	No
Glass		No
Unused Equipment	No	No
Napkins		1 to 2 kg
Others (specify)	No	No

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

Energy Audit Sample Report

Sl. No	Electrical appliances/inst	Numb er	Power (W)/	Tot al	kW	Operation /day	kW/hr.	No.of days in	Total consump
	ruments	UI	unit	W)		/duy		month	don per montin
1	CFL	63	14	882	0.882	4	3.528	25	88.2
2	TUBE	272	38	103	10.33	4	41.34	25	1033.6
				36	6		4		
4	LED BULB	97	9	873	0.873	4	3.492	25	87.3
5	LED TUBE	42	20	840	0.84	4	3.36	15	50.4
6	PROJECTOR	10	280	280	2.8	1	2.8	25	70
				0					
7	SPEAKERS	36	10	360	0.36	1	0.36	25	9
8	FAN	233	60	139	13.98	4	55.92	20	1118.4
				80					
9	COMPUTER	140	250	350	35	4	140	20	2800
				00					
10	LAPTOPS	10	50	500	0.5	4	2	20	40
11	PRINTERS	2	60	120	0.12	1	0.12	20	2.4
12	PHOTOSTAT	6	650	390	3.9	2	7.8	15	117
	MACHINE			0					
13	SCANNER	1	50	50	0.05	0.5	0.025	15	0.375

14	UPS	3	1000	300 0	3	12	36	20	720
15	INDUCTION	1	2000	200 0	2	0.25	0.5	15	7.5
16	A/C	2	7000	140 00	14	1	14	15	210
17	REFRIGERA TOR	7	150	105 0	1.05	24	25.2	30	756
18	TABLE FAN	2	55	110	0.11	2	0.22	25	5.5
19	MIXER GRINDER	2	750	150 0	1.5	2	3	15	45
20	OVEN	3	1500	450 0	4.5	2	9	10	90
22	CENTRIFUG E	2	850	170 0	1.7	0.25	0.425	8	3.4
23	AUTOCLAV E	1	1700	170 0	1.7	1	1.7	4	6.8
24	ULTRASOU ND	1	700	700	0.7	0.25	0.175	5	0.875
25	LAMINAR FLOW	1	600	600	0.6	1	0.6	15	9
26	EXHAUST FAN	1	32	32	0.032	4	0.128	25	3.2
27	IRON BOX	2	2000	400 0	4	0.25	1	15	15
28	SEWING MACHINE	6	100	600	0.6	4	2.4	25	60
29	COLOUR BULB	13	60	780	0.78	1	0.78	5	3.9
30	INCUBATOR	2	40	80	0.08	4	0.32	25	8
31	DISTILLATI ON UNIT	1	1000	100 0	1	1	1	12	12
32	SANITARY NAPKIN INCINERAT OR	6	1200	720 0	7.2	1	7.2	25	180
33	CCTV DVR	24	10	240	.24	24	5.76	30	720
	Total Consumption per month						9515.15 kW/hr		

Faunal group	Scientific name	Number (If enumeration is done)	Seasonality			
Spiders	Argiote catenulata	No	Winter			
Moths & butterflies	Macro lepidopteran clade	No	Winter			
Other insects: (Dragon Flies, Bees, Wasps, Bugs, and Beetles etc)	Anaxindicus	No	Winter			
Annelids	Hirudinaria Granulosa	No	Winter			
Other Arthropods	Werpegnathose saltator	No	Winter			
Amphibians	Rana trigena	No	Winter			
Reptiles	Garden lizard	No	Summer			
Birds	Carvous Corone	No	Summer			
Mammals	Palm squirrel	No	Summer			
Any other (specify)						

Faunal diversity in college campus (with Photographic evidence)

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

NO ₂	53ppb
NO	Ppm
O ₃	0.07ppm
PM2.5	12 nu/m3
PM10	150 nu/m3
СО	35 ppb
Humidity	82%
Barometric Pressure	14.7 Pounds per square
	inch (PS1)
Wind Speed	2 mph or 8 Km/h
Wind Direction	29 Degrees
Sun Rise	6:04 am East
Sun Set	6:29 pm west

S.No	place (S)	Measurements (Duration in seconds)	Minimum (dBA)	Maximum (dBA)	Average (dBA)
1	Library	No	No	No	No
2	Canteen	No	No	No	No
3	Play ground	No	No	No	No
4	Auditorium	No	No	No	No
5	Science Block	No	No	No	No
6	Any Other (Specify)	No	No	No	No

Measurements of Noise level in and around the college

If any eco-friendly or restoration activities conducted, please specify.

S.NO	COMPONENTS FOR ASSESSMENT	MARKS	GRADES
1	Energy audit	20	
2	Waste audit	15	A+ : 91-100
3	Water audit	15	
4	Landscape or Environment audit	15	
5	Carbon footprint & Oxygen emission audit	15	A : 81-90
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

GRADING FOR ENVIRONMENTAL AUDIT REPORT

CIPAL Gow Ans & Science College KAMAREDDY - 303111

PRINCIPAL Govt. Degree Collega YELLAREDDY, Dist. KAMAREDDY