CONTENT

SN	Contents	Page No
1 `	Executive Summary	2
2	Acknowledgment	5
3	Disclaimer	6
4	Introduction	7
5	Audit Team	10
6	Environmental Policy	11
7	General Information	12
8	Green Initiatives By the Institute	18
9	Audit Methodology	19
10	Monitoring, Observations& Recommendations	20
11	Photographic Evidences	21



Principal Government Science College Sector-15, Gandhinagar



1) Executive Summary

- An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. Government Science College, Gandhinagar already done internal green assessment of the campus and annual data has been generated showing the colleges commitment towards environmental conservation and sustainable use of the natural resources including preservation of biodiversity. Audit criterion is environmental cognizance, waste minimization and management, biodiversity conservation, water conservation, energy conservation and environmental legislation compliance by the campus. A questionnaire is used during audit. This audit report contains observation and recommendations for improvement of environmental consciousness.
- During the audit, it was reported that campus has good green cover and college is regularly conducting plantation drive for more greening the campus. The college is also following the rule of save energy by minimizing the various resources.
- College is conducting various environmental awareness programs for the students, teaching and non-teaching faculties by celebrating various days as mentioned in the report.
- The audit program has been initiated for the year 2019-20 from 18/06/2020 and completed the sampling process in three days. After a week a report has been received.



Principal Government Science College Sector-15, Gandhinagar



- The college is government owned higher education institute. The Government Science College, Gandhinagar is affiliated with Gujarat University, Ahmedabad.
- The college is government owned higher education institute. The Government Science College, Gandhinagar is affiliated with Gujarat University, Ahmedabad.
- The Institute is located in the Capital of Gujarat state, Gandhinagar. The total 1522 students out of total human resources working (1582). The campus is spread over an area of 199064.84 M². The College have various class-rooms enables with ICT facilities, well equipment laboratory of various department, Rich library and botanical garden.



Principal Government Science College Sector-15, Gandhinagar





Map showing the location of College



mari

Principal Government Science College Sector-15, Gandhinagar



2) Acknowledgment

We are also thankful to:

On behalf of the Environmental Audit & Consultancy Cell at Atmiya Institute of Technology & Science, Rajkot, we would like to express our sincere gratitude to the management of **Government Science College, Sector-15, Gandhinagar** for entrusting us with the important task of conducting their Environmental Audit/Green Audit.

We deeply appreciate the cooperation extended by your team throughout the assessment process. This cooperation was instrumental in the successful completion of the audit.

We would also like to extend our special thanks to Dr. S. K. Patel **Coordinator**, **IQAC**, for their unwavering support. Their dedication proved to be invaluable in ensuring the project's completion. Finally, we thank all other staff members who actively participated in data collection and field measurements. Their contributions were essential to the smooth execution of the audit.

SN	Name	Designation	Signature
	Dr. C. C. Ambasana	Head, Dept. Of	
1	Dr. C. C. Ambasana	Microbiology	
2	Dr. R. R. Patel	Head, Dept. Of Chemistry	
3	Dr. M. G. Patel	Head, Dept. Of Biology	
4	Prof. B. K. Trivedi	Head, Dept. Of Maths	
5	Mr. H. M. Patel	Head clerk	
6.	Jayshree Pandya	Librarian	

In closing, we would like to express our gratitude to **Dr. M. G. Bhatt, Principal of Government Science College, Sector-15, Gandhinagar**, for extending the opportunity to evaluate their esteemed campus's environmental performance.



Principal Government Science College Sector-15, Gandhinagar



3) Disclaimer

This Green Audit report has been prepared by the Environmental Audit & Consultancy Cell (EA&CC) at Atmiya Institute of Technology & Science, Rajkot, for of **Government Science College**, Sector-15, Gandhinagar. It incorporates data submitted by college officials/representatives along with expert analysis by the EA&CC Audit team.

While all reasonable efforts have been made to ensure its accuracy, the report is based on information gathered in good faith. Conclusions are based on best estimates and do not constitute any express or implied warranty or undertaking. The EA&CC at Atmiya Institute of Technology & Science, Rajkot assumes no responsibility for any direct or consequential loss arising from the use of the information, statements, or forecasts in this report.

The findings presented in this report are based entirely on data provided by **Government Science College, Sector-15, Gandhinagar**and gathered by the audit team during their audit & monitoring visit. It assumes normal operating conditions within the institution throughout the audit period. The auditors are unable to comment on environmental audit parameters outside the scope of the on-site surveys. Consequently, the report's findings are strictly limited to the timeframe during which the audit team conducted its assessment.

The EA&CC at Atmiya Institute of Technology & Science, Rajkot, maintains strict confidentiality regarding all information pertaining to **Government Science College, Sector-15, Gandhinagar**. No such information will be disclosed to any third party except public domain knowledge or when required by law or relevant accreditation bodies.

This certificate is valid solely for the current Environmental Audit/Green Audit report. It may be automatically revoked if any significant changes occur in the quantity or quality of waste generation at the aforementioned institute.

I/c Director, EA&CC, Atmiya Institute of Technology & Science



Principal Government Science College Sector-15, Gandhinagar



- 6 -

4) Introduction

Since the 2020-21 academic year, the National Assessment and Accreditation Council (NAAC) requires all Higher Educational Institutions (HEIs) to submit an annual Environmental Audit/Green Audit report. This requirement falls under Criterion 7 of the NAAC accreditation process, which evaluates institutions for their environmental sustainability practices. NAAC, an autonomous body in India, assigns accreditation grades (A, B, or C) based on various criteria, including environmental stewardship.

Furthermore, conducting Environmental Audit/Green Audits aligns with the Corporate Social Responsibility (CSR) initiatives of HEIs. By implementing measures to reduce their carbon footprint, institutions contribute positively to mitigating global warming.

In response to the NAAC mandate, the College management opted for an external Environmental Audit/Green Audit conducted by a qualified professional auditor. Environmental Audit/Green Audit entails a comprehensive environmental assessment, examining both on-campus and off-campus practices that directly or indirectly impact the environment. In essence, it is a systematic process of identifying, quantifying, recording, reporting, and analysing environmental aspects within the institute setting.

Environmental Audit/Green Audits originated as a tool to evaluate institutional activities that might pose risks to human health and the environment. It provides valuable insights for improvement, guiding institutions towards environmentally responsible practices and infrastructure.

The specific areas covered by this audit include Green Campus initiatives, Waste Management, Water Management, Air Pollution Control, Energy Management, and Carbon Footprint reduction strategies employed by the college.

The following sections delve deeper into the concept, structure, objectives, methodology analytical tools, and overall goals of this Green Audit.



AITS Environmental Audit Cell. Government Science College Atmiya Institute of Technology & Science, Rajkol 5, Gandhinagar

Nace

Educational institutions are increasingly prioritizing environmental concerns. As a result, innovative concepts are emerging to make campuses more sustainable and eco-friendly. Numerous institutions are adopting various approaches to address environmental challenges within their facilities, such as promoting energy conservation, waste recycling, water use reduction, and rainwater harvesting.

The activities of educational institutions can have both positive and negative environmental impacts. A Green Audit is a formal evaluation process that assesses the college's environmental footprint. It provides a comprehensive picture of the current environmental conditions on campus.

Green Audits are a valuable tool for colleges to identify areas of high energy, water, or resource consumption. This allows institutions to implement targeted changes and achieve cost savings. Additionally, Green Audits can analyse the nature and volume of waste generated, leading to improved recycling programs or waste minimization plans.

Green auditing and the implementation of mitigation measures offer a win-win scenario for institutions, students, and the environment. It can foster health and environmental awareness, promoting values and beliefs that benefit everyone. Green Audits also provide an opportunity for staff and students to gain a deeper understanding of the impact their institution has on the environment.

Furthermore, Green Audits can translate into financial savings by encouraging a reduction in resource usage. This process also empowers students and teachers to develop a sense of ownership for personal and social environmental responsibility.

The Green Audit process typically involves collecting primary data, conducting a site visit with college representatives are visit with

myrand



OBJECTIVE AND SCOPE

The broad aims/benefits of the Environmental Audit/Green Audit would be

- Environmental education through systematic environmental management approach
- Improving environmental standards
- Benchmarking for environmental protection initiatives
- Sustainable use of natural resource in the campus.
- Financial savings through a reduction in resource use
- Curriculum enrichment through practical experience
- Development of ownership, personal and social responsibility for the College campus and its environment
- Enhancement of College profile
- Developing an environmental ethic and value systems in young people

OUTCOMES OF ENVIRONMENT AUDIT TO EDUCATIONAL INSTITUTIONS

There are many advantages of environment audit to an Educational Institute:

- 1. Protect the environment in and around the campus.
- 2. Recognize the cost saving methods through waste minimization and energy conservation.
- 3. Empower the organization to frame a better environmental performance.
- 4. Portrays good image of institution through its clean and green campus.



Principal Government Science College Sector-15, Gandhinagar



5) Audit Team

SN	Name of Auditor	Designation
1	Dr. Hemantkumar G. Sonkusare	Civil Engineer
2	Dr. Anilkumar S. Patel	Chemist
3	Prof. Ravi S. Tank	Chemical Engineer



wypen

Principal Government Science College Sector-15, Gandhinagar



6) Environmental Policy

- Generating mass awareness on cleanliness and hygiene amongst students and staff members by holding regular cleanliness drives. The idea is to motivate them to contribute in a proactive manner.
- Activities under 'Swachh Bharat Abhiyan' will be a key component of all the community work being done by NSS, NCC and Green Society volunteers of the college.
- Staff Members will be encouraged to participate in the cleanliness drive in the college campus.
- Events such as poster and slogan competitions, essay writing, spoken word poetry, speeches, skits on 'Swachh Bharat' will be organised.
- Rallies on themes connected with 'Swachh Bharat Abhiyan' in and around the college campus will be conducted to create mass awareness.
- Remove all kinds of waste material like broken furniture, unusable equipment etc.
- Administer of the pledge by students and staff members to maintain cleanliness of the college campus and its surrounding areas on an annual basis.
- Conduct workshops on the 3Rs: Reduce, reusing and recycling of waste.
- Commit to manage waste and maintain clean campus especially during college events.



Principal Government Science College Sector-15, Gandhinagar



7) General Information

- a. Does any Green Audit conducted earlier? (Yes/No)Yes
- b. Total Area of the college = 199064m²
- c. What is the total strength (people count) of the Institute?

АУ	Students		Teaching Staff		Non-Teaching Staff		Total					
	M	F	Trans	М	F	Trans	M	F	Trans	М	F	Trans
2020-	1085	398	00	18	13	00	18	11	00	1121	422	00
21	1000	570					10					

d. What is the total number of working days of your campus in a year?

Month	No. of Working Days
July-20	25
August-20	23
September-20	22
October-20	23
November-20	10
December-20	24
January-21	23
February-21	23
March-21	18
April-21	Lockdown
May-21	Lockdown
June-21	Lockdown
Total	191



Principal Government Science College AITS Environmental Audit Cell. Sector-15, Gandhinagar Atmiya Institute of Technology & Science, Rajkot

e. '	Which	of the follow	ng are found	l near your	institute?
------	-------	---------------	--------------	-------------	------------

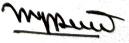
Municipal dump yard	(Yes/No) YES
Garbage heap	(Yes/No) YES
Public convenience	(Yes/No) YES
Sewer line	(Yes/No) YES
Stagnant water	(Yes/No)YES
Industry – (Mention the type)	(Yes/No) NO
Bus / Railway station	(Yes/No) NO
Market / Shopping complex	(Yes/No) NO
Play Ground	(Yes/No) YES

f. Does your institute generate any waste? If so, what are they?

Type of waste		Type of waste Response Generated		Quantity of Waste Generated (kg)
	Biodegradable	(Yes/No)	LEAF LITTER	2000 KG PER MONTH
Solid	Non- biodegradable	(Yes/No)	NO	NO
	e-waste	(Yes/No)	NO	NO
Liquid		(Yes/No)	NO	NO
Gas		(Yes/No)	NO	NO

- g. How is the waste managed in the institute? By Composting, Recycling,
 Reusing, Others (specify)
- h. Do you use recycled paper in institute? NO





Principal Government Science College AITS Environmental Audit Cell. Sector-15, Gandhinagar Atmiya Institute of Technology & Science, Rajkot

i. How would you spread the message of recycling to others in the community?

Poster competition activities	(Yes/No) YES
Campaigns	(Yes/No) YES
Rally	(Yes/No) YES
Webinars and seminars	(Yes/No) YES
Others (Please specify)	(Yes/No) PLANTATION DRIVE

j. Is there a garden in your institute?

Garden (Yes/No) YES	Area = 10443 m ²
---------------------	-----------------------------

k. Total number of Plants in Campus?

Sr. No	Tree species name	No. of Trees
1	Annona squamosaL	3
2	Polyalthialongifolia	8
3	BixaorellanaL.	1
4	Adansoniadigitata	1
5	Bombexceiba L.	4
6	Aegle marmelos (L.) Corr.	4
7	Citrus limon (L.) Burm.	1
8	Citrus medica	1
9	Murrayakoenigii (L)	1
10	Murrayapaniculata (L.) Jack.	2
11	Ailanthus excelsaRoxb.	1
12	Balanitesaegyptica (L.) Del.	1
13	Azadirachtaindica A. Juss.	50
14	Meliaazadirach L.	2
15	Mangiferaindica L.	2
16	MoringaconcanensisNimmo	1
17	Dalbergiasissoo	1
18	Derris indica (Lam.) Bennet	65
19	Gliricidiasepium (Jacq.) Walp.	2
20	Caesalpiniapulcherrima (L.) Sw.	15
21	Cassia fistula L.	4
22	Cassia javanica L.	1



Principal AITS Environmental Audit Cell. Atmiya Institute of Technology & Sclence/ORajkat Gandhinagar

		1
23	Cassia roxburghii DC.	1
24	Cassia siameaLam.	1
25	Delonixregia (Boj.) Raf.	
26	Peltophorumpterocarpum (DC.) Backer	5
27	Tamarindusindica L.	2
28	Terminalia bellirica (Gaertn.) Roxb.	11
29	Alangiumsalvifolium (L.F.) Wang.	2
30	Hamelia patens	2
31	Xeromphisspinosa	1
32	Madhucaindica J.F. Gmel.	1
33	Mimusopselengi L.	10
34	Manilkarahexandra (Roxb.) Dub.	4
35	Nyctanthesarbortristis L.	3
36	Salvadorapersica L.	1
37	Holarrhenaantidysenterica	1
38	Plumeriarubra	2
39	CordiadichotomaForst.	2
40	CordiasebestenaL.	10
41	Jacaranda mimosifolia D.Don	2
42	Kigeliapinnata(Jacq.) DC.	5
43	Millingtoniahortensis L.	2
44	Oroxylumindicum (L.) Vent.	1
45	SpathodeacampanulataBeauv.	2
46	Tecomastans (L.) H.B. & K.	15
47	Tecomellaundulata (Sm.) Seem.	5
48	GmelinaarboreaRoxb.	1
49	Vitexnegundo L.	5
50		25
51	Holoptelaintegrifolia (Roxb.) Planch.	5
52	P. Ficusbengalensis L.	8
53	3 Ficusracemosa L.	8
54	4 Ficusreligiosa L.	3
5	5 Morus alba L.	4
5		2
	Total No. of Trees	314



AITS Environmental Audit Cell. Atmiya Institute of Technology & Science, Rajkot

m

l. List uses of water in your institute

Basic use of water in campus	KL/Day
Drinking	1.20
Gardening	45.00
Kitchen and Toilets	0.70
Others LABORATORY	2.50
Hostel	20.00
Total	69.40

m. How does your institute store water? Are there any water saving techniques followed in your institute?

SN	Storage Type	Capacity	Quantity	Total (in Litres)
1	OVER HEAD TANK	10000	5	50000
2	UNDER GROUND TANK	50000	2	100000
3	Any Other (Specify)			
TOTAL STORAGE CAPACITY				150000



11

Principal Government Science College Sector-15, Gandhinagar



n. Electricity Consumed

Month	Electricity Consumed (kWh) (Unit)		
July-20	1404		
August-20	1500		
September-20	2800		
October-20	2294		
November-20	1840		
December-20	1546		
January-21	1674		
February-21	1404		
March-21	1392		
April-21	2162		
May-21	2540		
June-21	1558		
Total	22114 Units		



Nar

Principal Government Science College Sector-15, Gandhinagar



8) Green Initiatives By the Institute

- College eco club and all departments as well as different NGOs jointly organized plantation drive with in the college campus.
- College is actively participated in the government programmes like *VanMahotsava*, Environment Day celebration, Gurupurnima day celebration etc.
- Regularly adding new plant species in College Botanical Garden.
- Conservation of the Rare and Endangered plant species.
- College established their own cactus house, Fern house and Orchidarium
- Organised Eco friendly Ganesh idol making competition.
- Celebrating Wild Life week and conduct competition on "Save wild life" theme.
- Celebration of "World sparrow day" by making Artificial nest and water pot from waste material and placed on various trees.



Principal Government Science College Sector-15, Gandhinagar



9) Audit Methodology

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution. The criteria, methods and recommendations used in the audit were based on the identified risks. The methodology includes: preparation and filling up of questionnaire, physical inspection of the campus, observation and review of the document, interviewing responsible persons and data analysis, measurements and recommendations. The methodology adopted for this audit was a three-step process comprising of:

1. Data Collection – In preliminary data collection phase, exhaustive data collection was performed using different tools such as observation, survey communicating with responsible persons and measurements.

Following steps were taken for data collection:

- Site Visit
- Data about the general information was collected by observation and interview.
- The power consumption of appliances was recorded by taking an average value in some cases.

2. Data Analysis - Detailed analysis of data collected include: calculation of energy consumption, analysis of latest electricity bill of the campus, Water consumption, Waste Generation and Greenery Management.

3. Recommendation – On the basis of results of data analysis and observations, some steps for reducing power and water consumption were recommended. Proper treatments for waste were also suggested. Use of fossil fuels has to be reduced for the sake of community health.

The above target areas particular to the University was evaluated through questionnaire circulated among the students for data collection.

The following data collected for the following areas during the assessment.

- 1. Environment & Waste Management
- 2. Energy Management
- 3. Water Management



Government Science College Sector-15, Gandhinagar



10) Observations& Recommendations

Observations:

- The college has taken preventive initiative of Covid-19 pandemic as per guideline of Government of Gujarat and Ayush Mantralaya Government of India.
- The campus has good plantation inside premises.
- The building design promotes natural light, reducing reliance on artificial lighting.

Recommendations:

- The college may install sewage water treatment plant.
- The college is advised to purchase 5 star rated electric equipment for power saving.
- It is recommended to display posters, paintings, and slogans throughout the college premises for Health & Hygiene.



Principal Government Science College Sector-15, Gandhinagar



11) Photographic Evidences







wypen

Principal Government Science College AITS Environmental Audit Cell. Sector-15, Gandhinagar Atmiya Institute of Technology & Science, Rajkot





Neu

Principal Government Science College Sector-15, Gandhinagar



12) Certificate



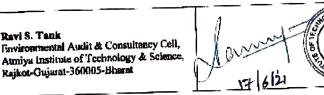
Government Science College, Sector-15, Gandhinagar, Gujarat-382016-Bharat

For the AY (2020-21)

Environmental Audit for the period June 2020 to May 2021 has been conducted for the Government Science College, Sector-15, Gundhinggar to assess the green initiatives plauning and efforts implemented in the college campus like Green Compus Management. This Environmental Audit is also aimed to assess eco-friendly initiatives of the Institute towards sustainability.

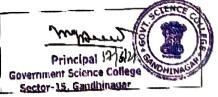
It is believed that the institution has presented authentic data on various aspects of working α^2 the institute before the audit team. The recommendations are based on the data presented before the team as they existed at the audit time. This certificate is valid for the audit period only. However, it is subject to automatic cancellation in case of any change in prevailing green practice or misleading data. The findings reported in this audit report are entirely based on data furnished by the institute and data collected by the audit team during the audit. Thus, the findings reported in this audit report are strictly limited to the period when the audit was conducted.

The Environmental Quality in the campus is found adequate and efficacious.



I assure that the data presented is authentic to the best of my knowledge & I agree to comply with the recommendations received this report within a year at maximum after the internal review.

Dr. Mahendra G. Bhatt, Principal, Government Science College, Sector-15, Gandhinagar, Gujarat-382016-Bhurat



"YOGIDHAM GURUKUL",Kalawac Road, Rojkot-360 005. (Gujarat - India) fel., ~\$1.381-3581443, altarur alkovázyahoc .com . Web . www.uka edu.m (⊈1-281-3930500) Taka Fax - 255376©, e-mailitiadri h@aha.e- umj





Principal Government Science College Sector-15, Gandhinagar

References

- The Environment [Protection] Act 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules: 1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Air [Prevention & Control Of Pollution] Act 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules 1982
- The Gas Cylinders Rules 2016 (Replaces the Gas Cylinder Rules 1981
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices



Principal Government Science College Sector-15, Gandhinagar

