DHARITREE
ENVIRO RESEARCH CENTRE

CERTIFICATE OF ENVIRONMENTAL AUDIT

This is to certify that

Pune Vidyarthi Griha's College of Science & Technology

(Affiliated to University of Mumbai)

Located at CTS No. 218, Br. Nath Pai Nagar,
Ghatkopar (E) Mumbai

Has successfully undergone for Environmental Audit to establish Eco-friendly practices for conservation of environment at all stages. The environmental awareness initiatives taken by the college are substantial to meet all the standards for maintaining a sustainable environment in the college premises.

Dharitree Enviro Research Centre
THANE

(Term of validity)
June, 1st 2017 - May, 31st 2019

Salaskar

Date of Issue: 4th June 2017

(Dr. Pramod Salaskar)
Dharitree Enviro Research Centre

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DHARITREE ENVIRO RESEARCH CENTRE

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Pune Vidyarthi Griha's College of Science & Technology

ENVIRONMENTAL AUDIT REPORT

(2017 – 2019)

For Dharitree Enviro Research Centre

Salaskar

Proprietor

PHOTOGALLARY

Green belt in the college premises

Fire Extinguishers

Approach Road to College

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

History:

An education only can provide, the stability, and one could gain name and fame in the society, an education is a wealth and becomes a treasure to the ones, who do not have money, and to the ones, who have a clever brain and ambitions in mind. "Anath Vidyarthi Griha" came into existence in the year 1909 on May 12th, having the same motto and with the aspiration to educate the poor and destitute needy children. There were many of the students, who used to work hard and some of them would get the charitable offerings from the society, but there was not a home or shelter for them and even a school where they would get an education. Eventually, this task was shouldered idealistically by "Pune Vidyarthi Griha".

Considering the increase in the volume of the students, in year 1912, the arrangement was made to stay for the students at Nagnath Par in the palatial house owned by Shri. Balukaka Kanitkar. It was a time that the school at Yeotmal was closed down by the Government, and so Shri Balukaka Kanitkar had become a part of the Institute. Shri. Balukaka Kanitkar had a wish that this institute should gain its name and fame not only giving education and shelter to the needy and destitute children, but also to hold a fame for offering "National Education", i. e. My Country, My Religion, My Language", which indulges into the fields such as Physical, Intellectual and Professional Education. In the year 1916-17, Shri. Balukaka Kanitkar had shifted one of its branches at Chinchwad. Shri Babasaheb Patwardhan had donated his palatial house of Kasaba Peth to the Institute, and **Shri Dadasaheb Ketkar** had opened the second branch in a row.

The Pune Vidyarthi Griha's College of Science & Technology was established in the year 2008. Itis Affiliated to University of Mumbai and Recognized by Govt. of Maharashtra in 2008. Initially the permission was granted only for B. Sc. Information Technology & B.Sc. Computer Science Course. Observing the excellence of the college, the University granted the permission to the college to start B.com, BMS & BBI course in the year 2017 – 18.

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

Preface....

Pune Vidyarthi Griha's College of Science & Technology aims at producing awareness about the environment consciousness. The institute takes initiatives to organize different events of green practices to percolate the knowledge amongst students, teachers, and nonteaching staff. This green message being transferred along with its practical dimensions among the families, societies and thereby to the stakeholders, forms a chain and network to spread the message at large. College is also aimed at giving solution to the different burning topics related to the environment, its awareness as well as its protection. As the government is taking initiative to sensitize mass with environment protection, newer concepts are being introduced to make college eco-friendly. To create and conserve the environment within the campus and to solve the environmental problems such as promotion of the energy savings, energy conservation, water reduction, water harvesting, solid waste management, improvement in the air quality of the campus, control on noise pollution, and minimizing the use of Plastic, etc. is one of the prime objective of the college.

Environment audit report is one such initiative that has been introduced to make the educational institute environmentally sustainable and active in spreading the education about the same. It is a tool to assess general practices implemented by the organization in terms of the impact on environment. The report also aims to spread the awareness on the adverse practices that are responsible for the degradation of the environment and how strongly the institute is involved in curtailing those practises. It helps in recognizing the need of a college to work around the year for environment sustainability. Thus, Environment audit forms the base line survey to decide for the Green policy.

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

Acknowledgement....

We take this opportunity to express our gratitude towards the president of the Institute, Hon. President, **Shri. Sunil Redekar** and Hon. Secretary of College Development Committee, **Dr. Rajendar Kambale**, & Hon. Director **Shri. Rajendra Borade** and all Hon. Members of the CDC committee of the college for their valuable guidance, continuous encouragement, generous gift of time with constructive critism & suggestion during the composition of work of entire," Environmental Audit Report- 2017-19".

We also express our deep sense of gratitude to our Hon. Principal, **Dr B.G Kulkarni**, who inspired and encouraged us throughout the work. We gratefully acknowledge the help provided by him on several occasions.

It is right time to express our deep sense of gratitude to our college **Prof. Seema Gargote, Prof. Trupti Rongare** and **Prof. Priya Jadhav** for their continuous help, inspiring resoluteness and sensible suggestion without any reservation whenever we approached throughout investigation.

We are thankful to **Dr. Ajay Kumar Pathak** for his valuable guidance.

We are equally thankful to our colleagues' teachers and students of **B.Sc CS/B.Sc. IT/ B.Com/ BMS** which helps during data collections and identification of plants.

Coordinator,
Environmental Audit Report

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

Principal Message....

I express my hearty wishes for success of this publication of 'Environmental Audit 2017- 2019'. Efforts made by our institution and senior college for the protection of environment and biodiversity conservation is really unique, which may become pilot project gives message about to avoid the for coming natural disaster like global warming, land sliding etc. We try to maintain environment eco-friendly through activities like landscaping and plantation, rain water harvesting, solid waste Management, sewage treatment plant, energy conservation, e-waste management, and paperless technology to minimize the use of paper basically prepare from the plants.

The ultimate aim of our institution to develop youth as fertile probe who understand for their social responsibilities.

I express my hearty wishes for success of this movement of Environmental Audit Report for the new beginning of the conservation from the doorstep of the people.

Our Environmental audit reflects assessment and achievement of vision and mission of the college.

Dr. B .G. Kulkarni

Principal

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

ENVIRONMENTAL AUDIT REPORT COMMITTEE

(2017 – 2019)

Sr. No.	Name	Designation	Committee Role	Signature
1	Dr. B.G. Kulkarni	Principal	Coordinator	
2	Dr. Pramod Salaskar	Dharitree Enviro Research Centre	External Auditor	
3	Prof. Seema Gargote	Asst. Professor	Internal Auditor	
4	Prof. Trupti Rongare	Asst. Professor	Internal Auditor	
5	Prof. Priya Jadhav	Asst. Professor	Internal Auditor	

I/C Principal
Pune Vidarthi Griha's
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College of Science & Tech...

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NEED FOR ENVIRONMENT AUDITING:

Environment auditing is the process of identification and determination of the institution's practices in creating awareness and practising the environment friendly measures. Over the period of time over exploitation of resources like energy, water, etc. have resulted in the environmental degradation. It is necessary to check whether our way of living and handling resources is not going to cause detrimental effects in our surroundings. Environment audit Report aims at summarising the college's contribution and its activeness in creating awareness and consciousness in practically applying the environmental friendly measures towards an institute.

GOALS OF ENVIRONMENT AUDIT:

Identification and documentation of environment practices followed by university.

2. Identify strength and weakness in environment practices.
3. Analyze and suggest solution for problems identified.
4. Assess facility of different types of waste management.
5. Increase environmental awareness throughout campus
6. Identify and assess environmental risk.
7. Motivates staff for optimized sustainable use of available resources.
8. The long-term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental issue before they become problem.

OBJECTIVES OF ENVIRONMENT AUDIT:

1. To examine the current practices, which can impact on environment such as of resource utilization, waste management etc.
2. 2. To identify and analyze significant environmental issues.
3. Setup goal, vision, and mission for environment practices in campus.
4. Establish and implement Environment Management in various departments.
5. Continuous assessment for betterment in performance in environment

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BENEFITS OF ENVIRONMENT AUDIT TO EDUCATIONAL INSTITUTIONS:

1. It would help to protect the environment in and around the campus.
2. 2. Recognize the cost saving methods through waste minimization and energy conservation.
3. Empower the organization to frame a better environmental performance.
4. It portrays good image of institution through its clean and green campus. Finally, it will help to build positive impression for through green initiatives the upcoming NAAC visit

OBJECTIVE AND SCOPE:

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

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. This audit report contains observations and recommendations for improvement of environmental consciousness.

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Table: Species wise count of trees

Sr. No.	Botanical Name	Local Name	Family	Native/ Introd. / Nt.	Vegetation type	No. of individuals plants
1	*Aegle marmelos*	Bel	Rutaceae	Native	Deciduous	1
2	*Annona squamosa*	Sitaphal	Annonaceae	Nt	Evergreen	3
3	*Artocarpus heterophyllus*	Phanus	Moraceae	Native	Evergreen	1
4	*Azadirachta indica*	Neem	Meliaceae	Native	Evergreen	2
5	*Bombax ceiba*	Katesavar	Malvaceae	Native	Deciduous	1
6	*Carica papaya*	Pappayi	Caricaceae	Native	Evergreen	1
7	*Cocos nucifera*	Naral	Arecaceae	Native	Evergreen	47
8	*Delonix regia*	Gulmohar	Caesalpiniaceae	Nt	Evergreen	1
9	*Dypsis lutescens*	Areca palm	Arecaceae	Nt	Evergreen	1
10	*Eucalyptus grandis*	Neelgiri	Myrtaceae	Nt	Evergreen	3
11	*Ficus benghalensis*	Vad	Moraceae	Native	Evergreen	1
12	*Ficus racemosa*	Umber	Moraceae	Native	Evergreen	3
13	*Hyophorbe lagenicaulis*	Bottle Palm	Arecaceae	Nt	Evergreen	7
14	*Mangifera indica*	Amba	Anacardiaceae	Native	Evergreen	4
15	*Moringa oleifera*	Shevga	Moringaceae	Native	Deciduous	1
16	*Murraya koenigii*	Kaddi patta	Rutaceae	Native	Deciduous	1
17	*Neolamarckia cadamba*	Kadamb	Rubiacea	Native	Evergreen	1
18	*Peltophorum pterocarpum*	Sonmohar	Caesalpiniaceae	Introd	Evergreen	3
19	*Plumeria obtusa*	Chapha	Apocynaceae	Introd	Evergreen	1
20	*Polyalthia longifolia*	Ashoka	Annonaceae	Native	Evergreen	14
21	*Pongamia pinnata*	Karanj	Fabaceae	Native	Deciduous	1
22	*Tectona grandis*	Sagwan	Verbenaceae	Native	Deciduous	18

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23	*Terminalia catapa*	Deshibadam	Combretaceae	Native	Deciduous	6
					Total	122

Table 2: Avifaunal diversity observed immediate surroundings of the College Campus

Family	Scientific Name	Common Name	IUCN Status	IWPA Assessment	Feeding Habit	Dwelling Status
Corvidae	*Corvus splendens*	House Crow	Least Concern ver 3.1	Schedule - V	Omnivorous	R
Pycnonotidae	*Pycnonotus cafer*	Red Vented Bulbul	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
	Pycnonotus jocosus	Red Whiskered Bulbul	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
Meropidae	*Merops orientalis*	Small Bee Eater	Least Concern ver 3.1	--	Insectivorous	R
Halcyonidae	*Halcyon smyrnensis*	White-throated Kingfisher	Least Concern ver 3.1	Schedule -IV	Piscivorous & Insectivorous	R
Columbidae	*Columba livia*	Blue Rock Pigeon	Least Concern ver 3.1	--	Granivorous	R
Dicruridae	*Dicrurus macrocercus*	Black Drongo	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
Sturnidae	*Acridotheres tristis*	Common Myna	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
Muscicapidae	*Copsychus saularis*	Oriental Magpie-Robin	Least Concern ver 3.1	--	Insectivorous & Herbivorous	R
Cuculidae	*Centropus sinensis*	Greater Coucal	Least Concern ver 3.1	Schedule -IV	Carnivorous	R

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AMBIENT AIR STATION

Date Of sampling	14/04/2017	Analysis Completed On	19/04/2017
Location of H.V.S.	Aprrox. 50 meter from Main Gate		
Lateral Distance	60 Meter from Main Gate		
Receptor Distance	1.5 Meters From Ground Level		
Ambient Temperature (°C)	29	Humidity (%)	39
Wind Speed (km/hr)	07	Wind Direction (deg°)	W 264
Instruments Used	R.D.S.(APM- 460), F.P.S.(APM – 550), G.P.S.(APM – 411) & Benzene Sampler (GTI-177)		

POLLUTIONAL PARAMETERS

Parameters	Result	Units	NAAQS Limits	Method
PM_{10}	67	µg/m³	100.00	IS 5182 (Part 23): 2006 (RA 2022)
$PM_{2.5}$	36	µg/m³	60.00	EPA Quality assurance guidance document 2.12, based on CPCB- 2011
SO_2	23	µg/m³	80.00	IS 5182 (Part 2): 2001 (RA 2022)
NO_2	19	µg/m³	80.00	IS 5182 (Part 6): 2006 (RA 2022)
Ammonia (NH_3)	<20	µg/m³	400.00	CPCB Guidelines For Measurement Of Ambient Air Pollutants Volume-I ,2011
CO	0.92	mg/m³	04.00	IS 5182 (Part 10) : 1999 (RA 2019)
Lead as Pb	<0.1	µg/m³	01.00	EPA compendium method IO 3.5:2012
Benzene (C_6H_6)	< 4	µg/m³	5.00	IS 5182 (Part 11) :2006 (RA 2022)
Arsenic(As)	< 5	ng/m³	6.00	EPA compendium method IO 3.5:2012
Nickel(Ni)	< 5	ng/m³	20.00	EPA compendium method IO 3.5:2012
Ozone (O_3)	17	µg/m³	180.00	IS 5182 (Part 9): 1974 RA 2019
Benzo(a)Pyrene	< 0.1	ng/m³	1.00	IS 5182 (Part 12): 2004 (RA 2019)

NOTE: 1) The above results relate only to the item tested & the condition prevailing at the time of sampling

2) PM_{10}-Particulate Matter of size < 10 µm, $PM_{2.5}$ - Particulate Matter of size < 2.5 µm

3) NAAQS-National Ambient Air Quality Standards

4) Lower Detection Limit (NH_3 <20 µg/m³), (Pb <0.10 µg/m³), (C_6H_6 <4 µg/m³), (As <5 ng/m³), (Ni <5 ng/m³), (Benzo(a)Pyrene < 0.1 ng/m³)

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AMBIENT NOISE LEVEL MONITORING		
Date Of Monitoring : **26.04.2017**		
Sampling Location : Approx. 50 Meter from Main Gate		
Sr. No.	**Time**	**Noise Levels in dB(A) Leq***
1	8.00 am	43.1
2	9.00 am	46.7
3	10.00 am	53.3
4	11.00 am	49.4
5	12.00 am	41.2
6	2.00 pm	39.2
7	4.00 pm	45.6
8	6.00 pm	58.4

Method:-IS:9989-1981 (RA 2001)

NOTE: 1) CPCB Limit During Day time < 55. (Day time shall mean from 6.00 am to 10.00 pm.)

2) CPCB Limit During Night time < 45. (Night time shall mean from 10.00 pm to 6.00 am.)

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ANALYSIS TEST REPORT

Sample Collection Date	16/04/2017	Analysis Completed On	28/04/2017
Sampling Point	**Canteen**		
Sample Details	**Drinking Water**		
Sample Container	PVC Can	Sample Quantity	5000 ml

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.3	-	6.5 - 8.5	IS 3025 (Part-11): 2022
2	Colour	<5	CU	5.0	IS 3025 (Part-4/4): 2021
3	Odour	Agreeable	-	Agreeable	IS3025 (Part-5):2018:RA 2022
4	TDS	113	mg/lit	500	IS 3025 (Part-16):2023
5	Turbidity	<1.0	NTU	1.00	IS 3025 (Part-10): 1984:RA 2022
6	Ammonia	<0.5	mg/lit	0.5	IS 3025 (Part 34/2.2 & 2.3): 1988:RA 2019
7	Chlorides as Cl	9.4	mg/lit	250.00	IS 3025 (Part 32/2): 1988: RA 2019
8	Fluorides as F	0.4	mg/lit	1.0	APHA (24th Edition) 4500 F – D -
9	Residual Chlorine	<0.2	mg/lit	0.2	IS 3025 (P-26/5):2021
10	Nitrate as NO_3	10.2	mg/lit	45.00	APHA (24th Edition) 4500- NO_3-B -
11	Total Alkalinity as	43.8	mg/lit	200	IS 3025(Part23/8.1):1986: RA
12	Total Hardness as	52.6	mg/lit	200.00	IS 3025(Part21/5):2009: RA 2019
13	Sulphate as SO4	2.7	mg/lit	200.00	APHA (24th Edition) 4500 SO4 – E – 2022
14	Cyanide as CN	<0.05	mg/lit	0.05	IS 3025 (Part27/sec1/4) :2021
15	Calcium as Ca	13.6	mg/lit	75.00	IS 3025 (Part40/5):1991: RA 2019
16	Magnesium as	4.92	mg/lit	30.00	IS 3025 (Part 52-6):2003: RA 2019
17	Total Chromium	<0.01	mg/lit	0.05	IS 3025 (Part46/6):1994: RA 2019

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SOLID WASTE MANAGEMENT

Aim :-

1) Scientific disposal of solid waste
2) Protection of human health and environment

Objective:-

1) To increase recycling level
2) To reduce organic waste in landfills
3) To control air, water, soil pollution
4) Production of green manure and vermicompost.

Activity / Observation :

Solid waste is separated as dry and wet. Dry waste includes plastic, glass, paper, metals, wood and related product. Wet waste typically refers to organic waste usually generated as canteen waste, plant debris. Dry waste is separated and it is given for its reuse and recycling to the recycler agency to avoid the pollution. Wet waste is also known as organic waste. It is obtain from canteen , fallen leaves , litter, ort, trash etc. produce in this campus if it is not disposed properly it creates air pollution, to avoid this we have implemented solid organic waste management activity, we run it at two level one is decomposition of solid waste through the composting in pit, vermicompost form solid organic waste and second is training to the students, farmers about production of organic manure like vermicompost, production of mushroom from the solid organic agricultural waste which ultimately conversion of Best from Waste, further the best biofertilizer is used for plants of college campus which enhances greenery leads environment clean and fresh.

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ENVIRONMENT AWARENESS PROGRAM

Aim and objective:

- To plan, organize and implement programmes like landscape and plantation, water management & conservation, and rain water harvesting.
- To provide education that prepares students for leadership and social responsibility teaching them to think and communicate effectively and develop a global awareness.
- To introduce environmental education programmes for strengthen the existing ecological and environment related training infrastructure.
- To organize training programmes for vocationalisation of environmental careers.
- To strengthen Global Environmental Education Programmes for standardization of greening activities.
- To introduce environmental education programmes in strengthen the existing ecological and environment related training infrastructure.
- To make special plans for the studies vermiculture, plantation, nursery development, water & energy conservation and management, rain water harvesting and other related fields.
- To provide environmental education that prepares students for leadership and social responsibility by teaching them to think and communicate effectively and develop global environmental awareness and sensitivity.

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Ventilation and Indoor Air Quality (IAQ) :

- There is adequate size of windows in college class rooms as well as in corridor which allow sufficient light and ventilation.
- Corridors are wide with good ceiling height
- Classrooms also have high ceiling with wide doors. Windows are kept open to receive sunlight.
- All classrooms are provided with ceiling fans for proper air circulation.

Water Efficiency & Wastewater Management:

- Two RO filtration plant has been installed on main building to provide clean drinking water in campus.
- No water leakage observed anywhere in Campus.
- The students have awareness for water conservation.

Energy Efficiency:

- All the CRT monitors of computers have been replaced with LED monitors.
- Computers are kept switched off when not required to operate.
- Save energy posters/stickers such as "Switch off all electrical equipment's when not required to use" at maximum locations to spread energy conservation awareness.
- All conventional incandescent tube lights are replaced with LED tube lights.

Ambiance and Acoustic Control:

- Tree plantation in and around the campus help in reducing ambient temperature and acoustic control.
- The college is located away from road side so there is no major noise pollution.

Waste Management:

Paper waste

- Being academic institution, waste paper is the main solid waste generated in the premises. The institution has taken steps to minimize usage of papers by implementing e-notice board.

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- Both sides of the pages are utilized to avoid excess paper usages.
- Paper wastes are not directly disposed off in dustbin, it is given to local vendors for recycling and reuse.

e-waste

- The college has taken initiative to segregate and collect e-wastes and stored at designated place for its proper disposal.

Canteen and Solid Waste Management

- Wet and dry wastes are segregated in college canteens and directly handed over to the concern Municipal Corporation for disposal.
- Bio-degradable and Non-biodegradable waste is generated labs, are also segregated and disposed of through Municipal Corporation

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Location:

Pune Vidyarthi Griha's College of Science & Technology located at CTS No. 218, Br. Nath Pai Nagar, Ghatkopar-E Ghatkopar (East) Mumbai-400077, Maharashtra, India.

Figure. Schematic representation of Pune Vidyarthi Griha's College of Science & Technology Campus

Country	India
State	Maharashtra
District	Mumbai
City	Mumbai
Area	Ghatkopar East
Elevation	20 meter
Population (1917)	6.2 Lakh
Area Code	+91 – 022
Official Languages	Marathi, English
College Campus area:	Approximately 9,586.6Sq. meter
Perimeter	Approximately 467.3 meter
Location:	19°04.197'N; 72°54.236'E

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Fire Extinguishers

Sports facilities at premises

Green belt around the college premises

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Acknowledgement....

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We also express our deep sense of gratitude to our Hon. Principal, **Dr Ajay Kumar Pathak,** who inspired and encouraged us throughout the work. We gratefully acknowledge the help provided by him on several occasions.

It is right time to express our deep sense of gratitude to our college **Prof. Meena Patel, Prof. Sadhana Mishra,** and **Prof. Gaurav Singh** for their continuous help, inspiring resoluteness and sensible suggestion without any reservation whenever we approached throughout investigation.

We are thankful to **Dr. B.G Kulkarni,** President of Alumni Pune Vidyarthi Griha for his valuable guidance.

We are equally thankful to our colleague's teachers and students of B.Sc. CS/B.Sc. IT /B.Com/ BMS which helps during data collection and identification of plants.

Coordinator,

Environmental Audit Report

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

Pune Vidyarthi Griha's College of Science & Technology Ghatkopar (East) Mumbai 400 077.

Principal Message....

I express my hearty wishes for success of this publication of 'Environmental Audit 2019- 2021'. Efforts made by our institution and senior college for the protection of environment and biodiversity conservation is really unique, which may become pilot project gives message about to avoid the for coming natural disaster like global warming, land sliding etc. We try to maintain environment eco-friendly through activities like landscaping and plantation, rain water harvesting, solid waste Management, sewage treatment plant, energy conservation, E-waste management, and paperless technology to minimize the use of paper basically prepare from the plants.

The ultimate aim of our institution to develop youth as fertile probe who understand for their social responsibilities.

I express my hearty wishes for success of this movement of Environmental Audit Report for the new beginning of the conservation from the doorstep of the people.

Our Environmental audit reflects assessment and achievement of vision and mission of the college.

Dr. Ajay Kumar Pathak
I/C Principal

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

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I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

ENVIRONMENTAL AUDIT REPORT COMMITTEE

(2019 – 2021)

Sr.No.	Name	Designation	Committee Role	Signature
1	Dr. Ajay Kumar Pathak	I/C Principal	Coordinator	
2	Dr. Pramod Salaskar	Dharitree Enviro Research Centre	External Auditor	
3	Prof. Meena Patel	Asst. Professor	Internal Auditor	
4	Prof. Sadhana Mishra	Asst. Professor	Internal Auditor	
5	Prof. Gaurav Singh	Asst. Professor	Internal Auditor	

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

Location:

Pune Vidyarthi Griha's College of Science & Technology located at CTS No. 218, Br. Nath Pai Nagar, Ghatkopar-E Ghatkopar (East) Mumbai-400077, Maharashtra, India.

Figure. Schematic representation of Vidya Bhavan Campus

Country	India
State	Maharashtra
District	Mumbai
City	Mumbai
Area	Ghatkopar East
Elevation	20 meter
Population	**Population (2020):** 146056
	Male Population: 76084 **Female Population:** 69972
Area Code	+91 – 022
Official Languages	Marathi, English
College Campus area:	Approximately 9,586.6Sq. meter
Perimeter	Approximately 467.3 meter
Location:	19°04.197'N; 72°54.236'E

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

History:

An education only can provide, the stability, and one could gain name and fame in the society, an education is a wealth and becomes a treasure to the ones, who do not have money, and to the ones, who have a clever brain and ambitions in mind. "Anath Vidyarthi Griha" came into existence in the year 1909 on May 12th, having the same motto and with the aspiration to educate the poor and destitute needy children. There were many of the students, who used to work hard and some of them would get the charitable offerings from the society, but there was not a home or shelter for them and even a school where they would get an education. Eventually, this task was shouldered idealistically by "Pune Vidyarthi Griha".

Considering the increase in the volume of the students, in year 1912, the arrangement was made to stay for the students at Nagnath Par in the palatial house owned by Shri. Balukaka Kanitkar. It was a time that the school at Yeotmal was closed down by the Government, and so Shri Balukaka Kanitkar had become a part of the Institute. Shri. Balukaka Kanitkar had a wish that this institute should gain its name and fame not only giving education and shelter to the needy and destitute children, but also to hold a fame for offering "National Education", i. e. My Country, My Religion, My Language", which indulges into the fields such as Physical, Intellectual and Professional Education. In the year 1916-17, Shri. Balukaka Kanitkar had shifted one of its branches at Chinchwad. Shri Babasaheb Patwardhan had donated his palatial house of Kasaba Peth to the Institute, and **Shri Dadasaheb Ketkar** had opened the second branch in a row.

The Pune Vidyarthi Griha's College of Science & Technology was established in the year 2008. Itis Affiliated to University of Mumbai and Recognized by Govt. of Maharashtra in 2008. Initially the permission was granted only for B. Sc. Information Technology & B.Sc. Computer Science Course. Observing the excellence of the college, the University granted the permission to the college to start B.com, BMS & BBI course in the year 2017 – 18.

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

Pune Vidyarthi Griha's College of Science & Technology Ghatkopar (East) Mumbai 400 077.

DHARITREE ENVIRO RESEARCH CENTRE

CERTIFICATE OF ENVIRONMENTAL AUDIT

This is to certify that

Pune Vidyarthi Griha's College of Science & Technology

(Affiliated to University of Mumbai)

Located at CTS No. 218, Br. Nath Pai Nagar,
Ghatkopar (E) Mumbai

Has successfully undergone for Environmental Audit to establish Eco-friendly practices for conservation of environment at all stages. The environmental awareness initiatives taken by the college are substantial to meet all the standards for maintaining a sustainable environment in the college premises.

Dharitree Enviro Research Centre THANE

(Term of validity)
June, 1st 2019 - May, 31st 2021

Date of Issue: 3rd June 2019

(Dr. Pramod Salaskar)
Dharitree Enviro Research Centre

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

NEED FOR ENVIRONMENT AUDITING:

Environment auditing is the process of identification and determination of the institution's practices in creating awareness and practising the environment friendly measures. Over the period of time over exploitation of resources like energy, water, etc. have resulted in the environmental degradation. It is necessary to check whether our way of living and handling resources is not going to cause detrimental effects in our surroundings. Environment audit Report aims at summarising the college's contribution and its activeness in creating awareness and consciousness in practically applying the environmental friendly measures towards an institute.

GOALS OF ENVIRONMENT AUDIT:

1. Identification and documentation of environment practices followed by university.
2. Identify strength and weakness in environment practices.
3. Analyze and suggest solution for problems identified.
4. Assess facility of different types of waste management.
5. Increase environmental awareness throughout campus
6. Identify and assess environmental risk.
7. Motivates staff for optimized sustainable use of available resources.
8. The long-term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental issue before they become problem.

OBJECTIVES OF ENVIRONMENT AUDIT:

1. To examine the current practices, which can impact on environment such as of resource utilization, waste management etc.
2. 2. To identify and analyze significant environmental issues.
3. Setup goal, vision, and mission for environment practices in campus.
4. Establish and implement Environment Management in various departments.
5. Continuous assessment for betterment in performance in environment

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

BENEFITS OF ENVIRONMENT AUDIT TO EDUCATIONAL INSTITUTIONS:

1. It would help to protect the environment in and around the campus.
2. 2. Recognize the cost saving methods through waste minimization and energy conservation.
3. Empower the organization to frame a better environmental performance.
4. It portrays good image of institution through its clean and green campus. Finally, it will help to build positive impression for through green initiatives the upcoming NAAC visit

OBJECTIVE AND SCOPE:

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

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. This audit report contains observations and recommendations for improvement of environmental consciousness.

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

Table: Species wise count of trees

Sr. No.	Botanical Name	Local Name	Family	Native/ Introd. / Nt.	Vegetation type	No. of individuals plants
1	*Aegle marmelos*	Bel	Rutaceae	Native	Deciduous	1
2	*Annona squamosa*	Sitaphal	Annonaceae	Nt	Evergreen	3
3	*Artocarpus heterophyllus*	Phanus	Moraceae	Native	Evergreen	1
4	*Azadirachta indica*	Neem	Meliaceae	Native	Evergreen	2
5	*Bombax ceiba*	Katesavar	Malvaceae	Native	Deciduous	1
6	*Carica papaya*	Pappayi	Caricaceae	Native	Evergreen	1
7	*Cocos nucifera*	Naral	Arecaceae	Native	Evergreen	47
8	*Delonix regia*	Gulmohar	Caesalpiniaceae	Nt	Evergreen	1
9	*Dypsis lutescens*	Areca palm	Arecaceae	Nt	Evergreen	1
10	*Eucalyptus grandis*	Neelgiri	Myrtaceae	Nt	Evergreen	3
11	*Ficus benghalensis*	Vad	Moraceae	Native	Evergreen	1
12	*Ficus racemosa*	Umber	Moraceae	Native	Evergreen	3
13	*Hyophorbe lagenicaulis*	Bottle Palm	Arecaceae	Nt	Evergreen	7
14	*Mangifera indica*	Amba	Anacardiaceae	Native	Evergreen	4
15	*Moringa oleifera*	Shevga	Moringaceae	Native	Deciduous	1
16	*Murraya koenigii*	Kaddi patta	Rutaceae	Native	Deciduous	1
17	*Neolamarckia cadamba*	Kadamb	Rubiacea	Native	Evergreen	1
18	*Peltophorum pterocarpum*	Sonmohar	Caesalpiniaceae	Introd	Evergreen	3
19	*Plumeria obtusa*	Chapha	Apocynaceae	Introd	Evergreen	1
20	*Polyalthia longifolia*	Ashoka	Annonaceae	Native	Evergreen	14
21	*Pongamia pinnata*	Karanj	Fabaceae	Native	Deciduous	1
22	*Tectona grandis*	Sagwan	Verbenaceae	Native	Deciduous	18
23	*Terminalia catapa*	Deshibadam	Combretaceae	Native	Deciduous	6
					Total	122

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

Table 2: Avifaunal diversity observed immediate surroundings of the College Campus

Sr. No.	Family	Scientific Name	Common Name	IUCN Status	IWPA Assessment	Feeding Habit	Dwelling Status
1	Corvidae	*Corvus splendens*	House Crow	Least Concern ver 3.1	Schedule - V	Omnivorous	R
2		*Corvus macrorhynchos*	Jungle Crow	Least Concern ver 3.1	--	Omnivorous	R
3	Pycnonotidae	*Pycnonotus cafer*	Red Vented Bulbul	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
4		*Pycnonotus jocosus*	Red Whiskered Bulbul	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
5	Meropidae	*Merops orientalis*	Small Bee Eater	Least Concern ver 3.1	--	Insectivorous	R
6	Halcyonidae	*Halcyon smyrnensis*	White-throated Kingfisher	Least Concern ver 3.1	Schedule -IV	Piscivorous & Insectivorous	R
7	Columbidae	*Streptopelia chinensis*	Spotted Dove	Not Assessed	Schedule -IV	Granivorous	R
8		*Columba livia*	Blue Rock Pigeon	Least Concern ver 3.1	--	Granivorous	R
9	Dicruridae	*Dicrurus macrocercus*	Black Drongo	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
10	Sturnidae	*Acridotheres tristis*	Common Myna	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
11	Muscicapidae	*Copsychus saularis*	Oriental Magpie-Robin	Least Concern ver 3.1	--	Insectivorous & Herbivorous	R
12	Cuculidae	*Centropus sinensis*	Greater Coucal	Least Concern ver 3.1	Schedule -IV	Carnivorous	R

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AMBIENT AIR STATION

Date Of sampling	10/05/2019	Analysis Completed On	17/05/2019
Location of H.V.S.	Aprrox. 50 meter from Main Gate		
Lateral Distance	80 Meter from Main Gate		
Receptor Distance	1.5 Meters From Ground Level		
Ambient Temperature (^{0}C)	32	Humidity (%)	43
Wind Speed (km/hr)	08	Wind Direction (deg^0)	W 267
Instruments Used	R.D.S.(APM- 460), F.P.S.(APM – 550), G.P.S.(APM – 411) & Benzene Sampler (GTI-177)		

POLLUTIONAL PARAMETERS

Parameters	Result	Units	NAAQS Limits	Method
PM_{10}	60	µg/m^3	100.00	IS 5182 (Part 23): 2006 (RA 2022)
$PM_{2.5}$	32	µg/m^3	60.00	EPA Quality assurance guidance document 2.12, based on CPCB- 2011
SO_2	19	µg/m^3	80.00	IS 5182 (Part 2): 2001 (RA 2022)
NO_2	17	µg/m^3	80.00	IS 5182 (Part 6): 2006 (RA 2022)
Ammonia (NH_3)	<20	µg/m^3	400.00	CPCB Guidelines For Measurement Of Ambient Air Pollutants Volume-I ,2011
CO	0.86	mg/m^3	04.00	IS 5182 (Part 10) : 1999 (RA 2019)
Lead as Pb	<0.1	µg/m^3	01.00	EPA compendium method IO 3.5:2012
Benzene (C_6H_6)	< 4	µg/m^3	5.00	IS 5182 (Part 11) :2006 (RA 2022)
Arsenic(As)	< 5	ng/m^3	6.00	EPA compendium method IO 3.5:2012
Nickel(Ni)	< 5	ng/m^3	20.00	EPA compendium method IO 3.5:2012
Ozone (O_3)	13	µg/m^3	180.00	IS 5182 (Part 9): 1974 RA 2019
Benzo(a)Pyrene	< 0.1	ng/m^3	1.00	IS 5182 (Part 12): 2004 (RA 2019)

NOTE: 1) The above results relate only to the item tested & the condition prevailing at the time of sampling

2) PM_{10}-Particulate Matter of size < 10 µm, $PM_{2.5}$ - Particulate Matter of size < 2.5 µm

3) NAAQS-National Ambient Air Quality Standards

4) Lower Detection Limit (NH_3 <20 µg/m^3), (Pb <0.10 µg/m^3), (C_3H_6 <4 µg/m^3), (As <5 ng/m^3), (Ni <5 ng/m^3), (Benzo(a)Pyrene < 0.1 ng/m^3)

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Pune Vidarthi Griha's
College of Science & Technology

AMBIENT NOISE LEVEL MONITORING		
Date Of Monitoring : **24.05.2019**		
Sampling Location : 50 Meter from Main Gate		
Sr. No.	**Time**	**Noise Levels in dB(A) Leq***
1	8.00 am	39.4
2	9.00 am	42.4
3	10.00 am	56.8
4	11.00 am	51.6
5	12.00 am	48.2
6	2.00 pm	50.4
7	4.00 pm	44.2
8	6.00 pm	57.2

Method:-IS:9989-1981 (RA 2001)

NOTE: 1) CPCB Limit During Day time < 55. (Day time shall mean from 6.00 am to 10.00 pm.)

2) CPCB Limit During Night time < 45. (Night time shall mean from 10.00 pm to 6.00 am.)

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College of Science & Technology

ANALYSIS TEST REPORT

Sample Collection Date	10/05/2019	Analysis Completed On	24/05/2019
Sampling Point	Canteen		
Sample Details	Drinking Water		
Sample Container	PVC Can	Sample Quantity	5000 ml

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.6	-	6.5 - 8.5	IS 3025 (Part-11): 2022
2	Colour	<5	CU	5.0	IS 3025 (Part-4/4): 2021
3	Odour	Agreeable	-	Agreeable	IS3025 (Part-5):2018:RA 2022
4	TDS	116	mg/lit	500	IS 3025 (Part-16):2023
5	Turbidity	<1.0	NTU	1.00	IS 3025 (Part-10): 1984:RA 2022
6	Ammonia	<0.5	mg/lit	0.5	IS 3025 (Part 34/2.2 & 2.3): 1988:RA 2019
7	Chlorides as Cl	13.4	mg/lit	250.00	IS 3025 (Part 32/2): 1988: RA 2019
8	Fluorides as F	0.6	mg/lit	1.0	APHA (24th Edition) 4500 F– D -
9	Residual Chlorine	<0.2	mg/lit	0.2	IS 3025 (P-26/5):2021
10	Nitrate as NO_3	11.2	mg/lit	45.00	APHA (24th Edition) 4500- NO_3-B -
11	Total Alkalinity as	46.8	mg/lit	200	IS 3025(Part23/8.1):1986: RA
12	Total Hardness as	54.2	mg/lit	200.00	IS 3025(Part21/5):2009: RA 2019
13	Sulphate as SO4	2.8	mg/lit	200.00	APHA (24th Edition) 4500 SO4 – E – 2022
14	Cyanide as CN	<0.05	mg/lit	0.05	IS 3025 (Part27/sec1/4) :2021
15	Calcium as Ca	12.4	mg/lit	75.00	IS 3025 (Part40/5):1991: RA 2019
16	Magnesium as	4.60	mg/lit	30.00	IS 3025 (Part 52-6):2003: RA 2019
17	Total Chromium	<0.01	mg/lit	0.05	IS 3025 (Part46/6):1994: RA 2019

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College of Science & Technology

SOLID WASTE MANAGEMENT

Aim :-

1) Scientific disposal of solid waste
2) Protection of human health and environment

Objective:-

1) To increase recycling level
2) To reduce organic waste in landfills
3) To control air, water, soil pollution
4) Production of green manure and vermicompost.

Activity / Observation :

Solid waste is separated as dry and wet. Dry waste includes plastic, glass, paper, metals, wood and related product. Wet waste typically refers to organic waste usually generated as canteen waste, plant debris. Dry waste is separated and it is given for its reuse and recycling to the recycler agency to avoid the pollution. Wet waste is also known as organic waste. It is obtain from canteen , fallen leaves , litter, ort, trash etc. produce in this campus if it is not disposed properly it creates air pollution, to avoid this we have implemented solid organic waste management activity, we run it at two level one is decomposition of solid waste through the composting in pit, vermicompost form solid organic waste and second is training to the students, farmers about production of organic manure like vermicompost, production of mushroom from the solid organic agricultural waste which ultimately conversion of Best from Waste, further the best biofertilizer is used for plants of college campus which enhances greenery leads environment clean and fresh.

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

ENVIRONMENT AWARENESS PROGRAM

Aim and objective:

- To plan, organize and implement programmes like landscape and plantation, water management & conservation, and rain water harvesting.
- To provide education that prepares students for leadership and social responsibility teaching them to think and communicate effectively and develop a global awareness.
- To introduce environmental education programmes for strengthen the existing ecological and environment related training infrastructure.
- To organize training programmes for vocationalisation of environmental careers.
- To strengthen Global Environmental Education Programmes for standardization of greening activities.
- To introduce environmental education programmes in strengthen the existing ecological and environment related training infrastructure.
- To make special plans for the studies vermiculture, plantation, nursery development, water & energy conservation and management, rain water harvesting and other related fields.
- To provide environmental education that prepares students for leadership and social responsibility by teaching them to think and communicate effectively and develop global environmental awareness and sensitivity.

I/C Principal
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College of Science & Technology

Ventilation and Indoor Air Quality (IAQ) :

- There is adequate size of windows in college class rooms as well as in corridor which allow sufficient light and ventilation.
- Corridors are wide with good ceiling height
- Classrooms also have high ceiling with wide doors. Windows are kept open to receive sunlight.
- All classrooms are provided with ceiling fans for proper air circulation.

Water Efficiency & Wastewater Management:

- Two RO filtration plant has been installed on main building to provide clean drinking water in campus.
- No water leakage observed anywhere in Campus.
- The students have awareness for water conservation.

Energy Efficiency:

- All the CRT monitors of computers have been replaced with LED monitors.
- Computers are kept switched off when not required to operate.
- Save energy posters/stickers such as "Switch off all electrical equipment's when not required to use" at maximum locations to spread energy conservation awareness.
- All conventional incandescent tube lights are replaced with LED tube lights.

Ambiance and Acoustic Control:

- Tree plantation in and around the campus help in reducing ambient temperature and acoustic control.
- The college is located away from road side so there is no major noise pollution.

I/C Principal
Pune Vidarthi Griha's
College of Science & Technology

Waste Management:

Paper waste

- Being academic institution, waste paper is the main solid waste generated in the premises. The institution has taken steps to minimize usage of papers by implementing e-notice board.
- Both sides of the pages are utilized to avoid excess paper usages.
- Paper wastes are not directly disposed off in dustbin, it is given to local vendors for recycling and reuse.

e-waste

- The college has taken initiative to segregate and collect e-wastes and stored at designated place for its proper disposal.

Canteen and Solid Waste Management

- Wet and dry wastes are segregated in college canteens and directly handed over to the concern Municipal Corporation for disposal.
- Bio-degradable and non-biodegradable waste is generated labs, are also segregated and disposed of through Municipal Corporation

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CERTIFICATE OF ENVIRONMENTAL AUDIT

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Dharitree Enviro Research Centre
THANE

(Term of validity)
June, 1st 2021 - May, 31st 2023

Date of Issue: 6th June 2021

(Dr. Pramod Salaskar)
Dharitree Enviro Research Centre

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RESEARCH CENTRE

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Pune Vidyarthi Griha's
College of Science & Technology

ENVIRONMENTAL AUDIT REPORT

(2021 – 2023)

For Dharitree Enviro Research Centre

Salaskar

Proprietor

Preface....

Pune Vidyarthi Griha's College of Science & Technology aims at producing awareness about the environment consciousness. The Institute takes initiatives to organize different events of green practices to percolate the knowledge amongst students, teachers, and nonteaching staff. This green message being transferred along with its practical dimensions among the families, societies and thereby to the stakeholders, forms a chain and network to spread the message at large. College is also aimed at giving solution to the different burning topics related to the environment, its awareness as well as its protection. As the government is taking initiative to sensitize mass with environment protection, newer concepts are being introduced to make college eco-friendly. To create and conserve the environment within the campus and to so..e the environmental problems such as promotion of the energy savings, energy conservation, water reduction, water harvesting, solid waste management, improvement in the air quality of the campus, control on noise pollution, and minimizing the use of Plastic, etc. is one of the prime objectives of the college.

Environment audit report is one such initiative that has been introduced to make the educational institute environmentally sustainable and active in spreading the education about the same. It is a tool to assess general practices implemented by the organization in terms of the impact on environment. The report also aims to spread the awareness on the adverse practices that are responsible for the degradation of the environment and how strongly the institute is involved in curtailing those practises. It helps in recognizing the need of a college to work around the year for environment sustainability. Thus, Environment audit forms the base line survey to decide for the green policy.

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

Acknowledgement....

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Coordinator, Green Audit Report

I/C Principal
Pune Vidyarthi Griha's
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The ultimate aim of our institution to develop youth as fertile probe who understand for their social responsibilities.

I express my hearty wishes for success of this movement of Environmental Audit Report for the new beginning of the conservation from the doorstep of the people.

Our green audit reflects assessment and achievement of vision and mission of the college.

Dr. Ajay Kumar Pathak
I/c Principal

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

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College of Science & Technology

ENVIRONMENTAL AUDIT REPORT COMMITTEE

(2021 – 2023)

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2	Dr. Pramod Salaskar	Dharitree Enviro Research Centre	External Auditor	
3	Prof. Meena Patel	Asst. Professor	Internal Auditor	
4	Prof. Sita Nadar	Asst. Professor	Internal Auditor	
5	Prof. Gaurav Singh	Asst. Professor	Internal Auditor	
6	Prof. Archana Bhosale	Asst. Professor	Internal Auditor	

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

BENEFITS OF ENVIRONMENT AUDIT TO EDUCATIONAL INSTITUTIONS:

1. It would help to protect the environment in and around the campus.
2. 2. Recognize the cost saving methods through waste minimization and energy conservation.
3. Empower the organization to frame a better environmental performance.
4. It portrays good image of institution through its clean and green campus. Finally, it will help to build positive impression for through green initiatives the upcoming NAAC visit

OBJECTIVE AND SCOPE:

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

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. This audit report contains observations and recommendations for improvement of environmental consciousness.

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

NEED FOR ENVIRONMENT AUDITING:

Environment auditing is the process of identification and determination of the institution's practices in creating awareness and practising the environment friendly measures. Over the period of time over exploitation of resources like energy, water, etc. have resulted in the environmental degradation. It is necessary to check whether our way of living and handling resources is not going to cause detrimental effects in our surroundings. Environment audit Report aims at summarising the college's contribution and its activeness in creating awareness and consciousness in practically applying the environmentally friendly measures towards an institute.

GOALS OF ENVIRONMENT AUDIT:

1. Identification and documentation of environment practices followed by university.
2. Identify strength and weakness in environment practices.
3. Analyse and suggest solution for problems identified.
4. Assess facility of different types of waste management.
5. Increase environmental awareness throughout campus
6. Identify and assess environmental risk.
7. Motivates staff for optimized sustainable use of available resources.
8. The long-term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental issue before they become problem.

OBJECTIVES OF ENVIRONMENT AUDIT:

1. To examine the current practices, which can impact on environment such as of resource utilization, waste management etc.
2. 2. To identify and analyse significant environmental issues.
3. Setup goal, vision, and mission for environment practices in campus.
4. Establish and implement Environment Management in various departments.
5. Continuous assessment for betterment in performance in environment

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

Location:

Pune Vidyarthi Griha's College of Science & Technology located at CTS No. 218, Br. Nath Pai Nagar, Ghatkopar-E Ghatkopar (East) Mumbai-400077, Maharashtra, India.

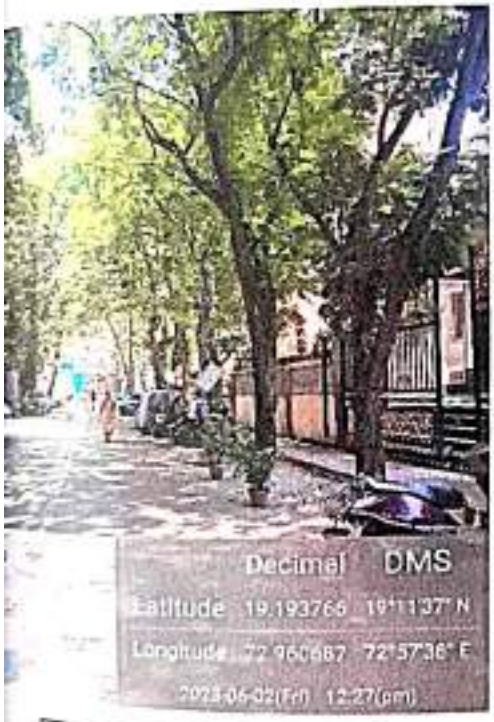
Figure. Schematic representation of Vidya Bhavan Campus

Country	India
State	Maharashtra
District	Mumbai
City	Mumbai
Area	Ghatkopar East
Elevation	20 meters
Population	**Population (2020):** 146056 **Male Population:** 76084 **Female Population:** 69972
Area Code	+91 – 022
Official Languages	Marathi, English
College Campus area:	Approximately 9,586.6Sq. meter
Perimeter	Approximately 467.3 meter
Location:	19°04.197'N; 72°54.236'E

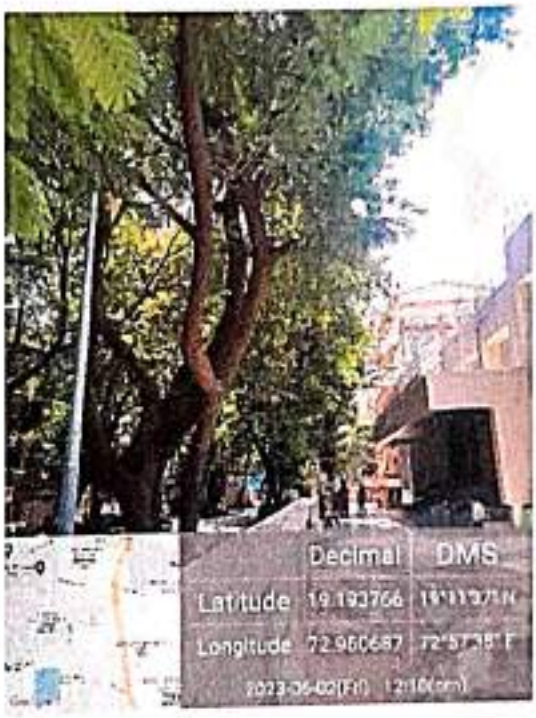
I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

Sports facilities at premises

Green Belt



Approach Road to College



Green Belt in College Premises

For Dharitree Enviro Research Centre

Proprietor

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

Recommendations:

- CFL lamps can be used in all sections to minimize the usage of fluorescent tubes
- Waste water management still needs to be practiced and designed in the campus.
- Drips and sprinklers can be used for watering the gardens and lawns.
- Roof top rain water harvesting can be designed and constructed.
- Special days like, Teachers Day, Guru Poornima, van Mahotsav can be celebrated by plant donations.
- E-waste segregation, handling and disposal can be deployed at the campus.

PHOTO GALLERY

Fire Extinguishers

Plastic Waste Segregation Bin

Systematic Identification and Geo-Tagging of the flora

Environmental Education program

I/C Principal
Pune Vidyarthi Griha's College of Science & Technology

CERTIFICATE OF ENVIRONMENTAL AUDIT

This is to certify that

Pune Vidyarthi Griha's College of Science & Technology

(Affiliated to University of Mumbai)

Located at CTS No. 218, Br. Nath Pai Nagar,
Ghatkopar (E) Mumbai

Has successfully undergone for Environmental Audit to establish Eco-friendly practices for conservation of environment at all stages. The environmental awareness initiatives taken by the college are substantial to meet all the standards for maintaining a sustainable environment in the college premises.

(Term of validity)
June, 1st 2021 - May, 31st 2023

Date of Issue: 6th June 2021

(Dr. Pramod Salaskar)
Dharitree Enviro Research Centre

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

For Dharitree Enviro Research Centre

Proprietor

AMBIENT NOISE LEVEL MONITORING		
Date Of Monitoring: **03.02.2023**		
Sampling Location: 50 Meter from Main Gate		
Sr. No.	**Time**	**Noise Levels in dB(A) Leq***
1	8.00 am	44.7
2	9.00 am	46.4
3	10.00 am	59.8
4	11.00 am	54.3
5	12.00 am	51.2
6	2.00 pm	49.8
7	4.00 pm	56.1
8	6.00 pm	58.4

Method: -IS:9989-1981 (RA 2001)

NOTE: 1) CPCB Limit During Day time < 55. (Day time shall mean from 6.00 am to 10.00 pm.)

2) CPCB Limit During Night time < 45. (Night time shall mean from 10.00 pm to 6.00 am.)

For Dharitree Enviro Research Centre

Malavre

Proprietor

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

AMBIENT AIR STATION

Date Of sampling	06/01/2023	Analysis Completed on	13/01/2023
Location of H.V.S.	Approx. 50 meters from Main Gate		
Lateral Distance	50 Meter from Main Gate		
Receptor Distance	1.5 Meters from Ground Level		
Ambient Temperature (°C)	26	Humidity (%)	45
Wind Speed (km/hr)	09	Wind Direction (deg°)	W 280
Instruments Used	R.D.S. (APM- 460), F.P.S. (APM – 550), G.P.S. (APM – 411) & Benzene Sampler (GTI-177)		

POLLUTIONAL PARAMETERS

Parameters	Result	Units	NAAQS Limits	Method
PM_{10}	68	µg/m³	100.00	IS 5182 (Part 23): 2006 (RA 2022)
$PM_{2.5}$	33	µg/m³	60.00	EPA Quality assurance guidance document 2.12, based on CPCB- 2011
SO_2	16	µg/m³	80.00	IS 5182 (Part 2): 2001 (RA 2022)
NO_2	22	µg/m³	80.00	IS 5182 (Part 6): 2006 (RA 2022)
Ammonia (NH_3)	<20	µg/m³	400.00	CPCB Guidelines for Measurement of Ambient Air Pollutants Volume-I ,2011
CO	0.97	mg/m³	04.00	IS 5182 (Part 10): 1999 (RA 2019)
Lead as Pb	<0.1	µg/m³	01.00	EPA compendium method IO 3.5:2012
Benzene (C_6H_6)	< 4	µg/m³	5.00	IS 5182 (Part 11) :2006 (RA 2022)
Arsenic (As)	< 5	ng/m³	6.00	EPA compendium method IO 3.5:2012
Nickel (Ni)	< 5	ng/m³	20.00	EPA compendium method IO 3.5:2012
Ozone (O_3)	14	µg/m³	180.00	IS 5182 (Part 9): 1974 RA 2019
Benzo(a)Pyrene	< 0.1	ng/m³	1.00	IS 5182 (Part 12): 2004 (RA 2019)

NOTE: 1) The above results relate only to the item tested & the condition prevailing at the time of sampling

2) PM_{10}-Particulate Matter of size < 10 µm, $PM_{2.5}$ - Particulate Matter of size < 2.5 µm

3) NAAQS-National Ambient Air Quality Standards

4) Lower Detection Limit (NH_3 <20 µg/m³), (Pb <0.10 µg/m³), (C_3H_6 <4 µg/m³), (As <5 ng/m³), (Ni <5 ng/m³), (Benzo(a)Pyrene < 0.1 ng/m³)

For Diaritree Enviro Research Centre

Proprietor

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

Table: Lepidopteran diversity observed in the College Campus

Sr. No.	Common Name	Scientific Name	Family	Status
1	Common Jay	Graphium doson	Papilionidae	C
2	Lime Butterfly	Papilio demoleus	Papilionidae	VC
3	Common Mormon	Papilio polytes	Papilionidae	VC
4	Common Albatross	Appias albina	Pieridae	C
5	Common Grass Yellow	Eurema hecabe	Pieridae	VC
6	Small Grass Yellow	Eurema brigitta	Pieridae	C
7	Plain Tiger	Danaus chrysippus	Nymphalidae	VC
8	Common Indian Crow	Euploea core	Nymphalidae	VC
9	Common Sailer	Neptis hylas	Nymphalidae	VC
10	Common Pierrot	Castalius rosimon	Lycaenidae	VC

C: Common; VC: Very Common

... Shelltree Enviro Research Centre

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

Table 2: Avifaunal diversity observed immediate surroundings of the College Cam

	Family	Scientific Name	Common Name	IUCN Status	IWPA Assessment	Feeding Habit	Dwelling Status
1	Corvidae	*Corvus splendens*	House Crow	Least Concern ver 3.1	Schedule - V	Omnivorous	R
2		*Corvus macrorhynchos*	Jungle Crow	Least Concern ver 3.1	--	Omnivorous	R
3	Pycnonotidae	*Pycnonotus cafer*	Red Vented Bulbul	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
4		*Pycnonotus jocosus*	Red Whiskered Bulbul	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
5	Meropidae	*Merops orientalis*	Small Bee Eater	Least Concern ver 3.1	--	Insectivorous	R
6	Halcyonidae	*Halcyon smyrnensis*	White-throated Kingfisher	Least Concern ver 3.1	Schedule -IV	Piscivorous & Insectivorous	R
7	Columbidae	*Streptopelia chinensis*	Spotted Dove	Not Assessed	Schedule -IV	Granivorous	R
8		*Columba livia*	Blue Rock Pigeon	Least Concern ver 3.1	--	Granivorous	R
9	Leiothrichidae	*Turdoides striatus*	Jungle Babbler	Least Concern ver 3.1	Schedule -IV	Omnivorous	R
10	Dicruridae	*Dicrurus macrocercus*	Black Drongo	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
11	Sturnidae	*Acridotheres tristis*	Common Myna	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
12	Musticapidae	*Copsychus saularis*	Oriental Magpie-Robin	Least Concern ver 3.1	--	Insectivorous & Herbivorous	R
13	Cuculidae	*Centropus sinensis*	Greater Coucal	Least Concern ver 3.1	Schedule -IV	Carnivorous	R

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College of Science & Technology

Table: Species wise count of trees

Sr. No.	Botanical Name	Local Name	Family	Native/ Introd. / Nt.	Vegetation type	Individual plants
1	*Aegle marmelos*	Bel	Rutaceae	Native	Deciduous	1
2	*Annona squamosa*	Sitaphal	Annonaceae	Nt	Evergreen	3
3	*Artocarpus heterophyllus*	Phanus	Moraceae	Native	Evergreen	1
4	*Azadirachta indica*	Neem	Meliaceae	Native	Evergreen	2
5	*Bombax ceiba*	Katesavar	Malvaceae	Native	Deciduous	1
6	*Carica papaya*	Pappayi	Caricaceae	Native	Evergreen	1
7	*Cocos nucifera*	Naral	Arecaceae	Native	Evergreen	47
8	*Delonix regia*	Gulmohar	Caesalpiniaceae	Nt	Evergreen	1
9	*Dypsis lutescens*	Areca palm	Arecaceae	Nt	Evergreen	1
10	*Eucalyptus grandis*	Neelgiri	Myrtaceae	Nt	Evergreen	3
11	*Ficus benghalensis*	Vad	Moraceae	Native	Evergreen	1
12	*Ficus racemosa*	Umber	Moraceae	Native	Evergreen	3
13	*Hyophorbe lagenicaulis*	Bottle Palm	Arecaceae	Nt	Evergreen	7
14	*Mangifera indica*	Amba	Anacardiaceae	Native	Evergreen	4
15	*Moringa oleifera*	Shevga	Moringaceae	Native	Deciduous	1
16	*Murraya koenigii*	Kaddi patta	Rutaceae	Native	Deciduous	1
17	*Neolamarckia cadamba*	Kadamb	Rubiacea	Native	Evergreen	1
18	*Peltophorum pterocarpum*	Sonmohar	Caesalpiniaceae	Introd	Evergreen	3
19	*Plumeria obtusa*	Chapha	Apocynaceae	Introd	Evergreen	1
20	*Polyalthia longifolia*	Ashoka	Annonaceae	Native	Evergreen	14
21	*Pongamia pinnata*	Karanj	Fabaceae	Native	Deciduous	1
22	*Tectona grandis*	Sagwan	Verbenaceae	Native	Deciduous	18
23	*Terminalia catapa*	Deshibadam	Combretaceae	Native	Deciduous	6
					Total	122

I/C Princ
Pune Vidyarthi Griha's
College of Science & Technology

Waste Management:

Paper waste

- Being academic institution, waste paper is the main solid waste generated in the premises. The institution has taken steps to minimize usage of papers by implementing e-notice board.
- Both sides of the pages are utilized to avoid excess paper usages.
- Paper wastes are not directly disposed off in dustbin, it is given to local vendors for recycling and reuse.

e-waste

- The college has taken initiative to segregate and collect e-wastes and stored at designated place for its proper disposal.

Canteen and Solid Waste Management

- Wet and dry wastes are segregated in college canteens and directly handed over to the concern Municipal Corporation for disposal.
- Bio-degradable and non-biodegradable waste is generated labs, are also segregated and disposed of through Municipal Corporation

Summary:

Environment Audit is one of the important tools to check the balance of natural resources and its judicial use. Environment auditing is the process of identifying and determining whether institutional practices are eco-friendly and sustainable. It is a process of regular identification, quantification, documenting, reporting and monitoring of environmentally important components in a specified area. College has conducted a "Environment Audit" in the academic year 2023. The main objective to carry out environment audit is to check the Green practices followed by college and to conduct a well-defined audit report to understand whether the Institute is on the track of sustainable development.

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

Water Efficiency & Wastewater Management:

- Two RO filtration plant has been installed on main building to provide clean drinking water in campus.
- No water leakage observed anywhere in Campus.
- The students have awareness for water conservation.

Energy Efficiency:

- All the CRT monitors of computers have been replaced with LED monitors.
- Computers are kept switched off when not required to operate.
- Save energy posters/stickers such as "Switch off all electrical equipment's when not required to use" at maximum locations to spread energy conservation awareness.
- All conventional incandescent tube lights are replaced with LED tube lights.

Ambiance and Acoustic Control:

- Tree plantation in and around the campus help in reducing ambient temperature and acoustic control.
- The college is located away from road side so there is no major noise pollution.

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

ENVIRONMENT AWARENESS PROGRAM

Aim and objective:

- To plan, organize and implement programmes like landscape and plantation, water management & conservation, and rain water harvesting.
- To provide education that prepares students for leadership and social responsibility teaching them to think and communicate effectively and develop a global awareness.
- To introduce environmental education programmes for strengthen the existing ecological and environment related training infrastructure.
- To organize training programmes for vocationalisation of environmental careers.
- To strengthen Global Environmental Education Programmes for standardization of greening activities.
- To introduce environmental education programmes in strengthen the existing ecological and environment related training infrastructure.
- To make special plans for the studies vermiculture, plantation, nursery development, water & energy conservation and management, rain water harvesting and other related fields.
- To provide environmental education that prepares students for leadership and social responsibility by teaching them to think and communicate effectively and develop global environmental awareness and sensitivity.

Ventilation and **Indoor Air Quality (IAQ):**

- There is adequate size of windows in college class rooms as well as in corridor which allow sufficient light and ventilation.
- Corridors are wide with good ceiling height
- Classrooms also have high ceiling with wide doors. Windows are kept open to receive sunlight.
- All classrooms are provided with ceiling fans for proper air circulation.

I/C Principal
Pune Vidyarthi Griha
College of Science & Tech...

SOLID WASTE MANAGEMENT

Aim: -

1] Scientific disposal of solid waste

2] Protection of human health and environment

Objective: -

1] To increase recycling level

2] To reduce organic waste in landfills

3] To control air, water, soil pollution

4] Production of green manure and vermicompost.

Activity / Observation:

Solid waste is separated as dry and wet. Dry waste includes plastic, glass, paper, metals, wood and related product. Wet waste typically refers to organic waste usually generated as canteen waste, plant debris. Dry waste is separated and it is given for its reuse and recycling to the recycler agency to avoid the pollution. Wet waste is also known as organic waste. It is obtain from canteen , fallen leaves , litter, ort, trash etc. produce in this campus if it is not disposed properly it creates air pollution, to avoid this we have implemented solid organic waste management activity, we run it at two level one is decomposition of solid waste through the composting in pit, vermicompost form solid organic waste and second is training to the students, farmers about production of organic manure like vermicompost, production of mushroom from the solid organic agricultural waste which ultimately conversion of Best from Waste, further the best biofertilizer is used for plants of college campus which enhances greenery leads environment clean and fresh.

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

ANALYSIS TEST REPORT

Sample Collection Date	17/03/2023	Analysis Completed on	18/03/2023
Sampling Point	Canteen		
Sample Details	Drinking Water		
Sample Container	PVC Can	Sample Quantity	5000 ml

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500) (As	Method
1	pH	7.4	-	6.5 - 8.5	IS 3025 (Part-11): 2022
2	Colour	<5	CU	5.0	IS 3025 (Part-4/4): 2021
3	Odour	Agreeable	-	Agreeable	IS3025 (Part-5):2018:RA 2022
4	TDS	112	mg/lit	500	IS 3025 (Part-16):2023
5	Turbidity	<1.0	NTU	1.00	IS 3025 (Part-10): 1984:RA 2022
6	Ammonia	<0.5	mg/lit	0.5	IS 3025 (Part 34/2.2 & 2.3): 1988:RA 2019
7	Chlorides as Cl	15.6	mg/lit	250.00	IS 3025 (Part 32/2): 1988: RA 2019
8	Fluorides as F	0.8	mg/lit	1.0	APHA (24th Edition) 4500 F – D -
9	Residual Chlorine	<0.2	mg/lit	0.2	IS 3025 (P-26/5):2021
10	Nitrate as NO_3	10.4	mg/lit	45.00	APHA (24th Edition) 4500- NO_3-B -
11	Total Alkalinity as	48.37	mg/lit	200	IS 3025(Part23/8.1):1986: RA
12	Total Hardness as	58.00	mg/lit	200.00	IS 3025(Part21/5):2009: RA 2019
13	Sulphate as SO4	3.6	mg/lit	200.00	APHA (24th Edition) 4500 SO4 – E – 2022
14	Cyanide as CN	<0.05	mg/lit	0.05	IS 3025 (Part27/sec1/4) :2021
15	Calcium as Ca	14.43	mg/lit	75.00	IS 3025 (Part40/5):1991: RA 2019
16	Magnesium as	5.34	mg/lit	30.00	IS 3025 (Part 52-6):2003: RA 2019
17	Total Chromium	<0.01	mg/lit	0.05	IS 3025 (Part46/6):1994: RA 2019

For Dharitree Enviro Research Centre

Proprietor

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

Acknowledgement....

We take this opportunity to express our gratitude towards the president of the Institute, Hon. President, **Shri. Sunil Redekar** and Hon. Secretary of College Development Committee **Dr. Rajendar Kambale,** & Hon. Director **Shri. Rajendra Borade** and all Hon. Members of the CDC committee of the college for their valuable guidance, continuous encouragement, generous gift of time with constructive critism & suggestion during the composition of work of entire," Green Audit Report- 2023".

We also express our deep sense of gratitude to our Hon. Principal, Dr **Ajay Kumar Pathak,** who inspired and encouraged us throughout the work. We gratefully acknowledge the help provided by him on several occasions.

It is right time to express our deep sense of gratitude to our college Prof. Meena Patel, Prof. Sita Nadar, Prof. Gaurav Singh for their continuous help, inspiring resoluteness and sensible suggestion without any reservation whenever we approached throughout investigation.

We are thankful to **Dr. B.G Kulkarni** for his valuable guidance.

We are equally thankful to our colleagues' teachers and students of

B.Sc. Cs/B.Sc. IT B.com/ BMS which helps during data collection and identification of plants.

Coordinator, Green Audit Report

1/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

troduce....

The term "Green" means eco-friendly or not damaging the environment. "Green Auditing", an umbrella term, is known by another name „Environmental Auditing". In auditing literature both the terms are being used interchangeably. To implement the green audit other important aspects such as objective of green audit, drivers of green audit, future scope, benefits, and advantages are necessary to understand.

Concept of green audit is not limited to the decorating the college campus but also corporate responsibility, with quality education keep college environment eco-friendly with its facilities. Attempt has been made on that direction by landscaping and plantation, solid waste management, recycling of waste water, conservation of energy, water conservation, rainwater harvesting and minimum of usage of paper.

With keeping this view our campus is clean and fresh, we try to inculcate value of surrounding environment amongst the students through Environmental awareness activities like nature club, NSS", Quiz competition on environment, Flower Arrangement, Gardening development and nursery management course, Mushroom cultivation course, Production of vermicomposting from solid waste and activity like Competition on Preparation of „Best from Waste", preparation of trenches and plantation of tree sapling on „ Green sunrise hill", greenery of the campus is maintaining by the student of Zoology and Botany departments. Because of the greenery and eco-friendly sustainable environment, college campus becomes more charming, refreshing and healthier. This increases efficiency of every element of the college.

I/C Principal
Pune Vidyarthi Griha's
College of Science & Technology

CERTIFICATE OF ENVIRONMENTAL AUDIT

This is to certify that

Pune Vidyarthi Griha's College of Science & Technology

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Located at CTS No. 218, Br. Nath Pai Nagar,
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Dharitree Enviro Research Centre THANE

(Term of validity)
June, 1st 2023 - May, 31st 2025

Date of Issue: 10th June 2023

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(Dr. Pramod Salaskar)
Dharitree Enviro Research Centre

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Pune Vidyarthi Griha's College of Science & Technology

ENVIRONMENTAL AUDIT REPORT

(2023 – 2025)

For Dharitree Enviro Research Centre

Salaskar

Proprietor

Preface....

Pune Vidyarthi Griha's College of Science & Technology aims at producing awareness about the environment consciousness. The institute takes initiatives to organize different events of green practices to percolate the knowledge amongst students, teachers, and non-teaching staff. This green message being transferred along with its practical dimensions among the families, societies and thereby to the stakeholders, forms a chain and network to spread the message at large. College is also aimed at giving solution to the different burning topics related to the environment, its awareness as well as its protection. As the government is taking initiative to sensitize mass with environment protection, newer concepts are being introduced to make college eco-friendly. To create and conserve the environment within the campus and to solve the environmental problems such as promotion of the energy savings, energy conservation, water reduction, water harvesting, solid waste management, improvement in the air quality of the campus, control on noise pollution, and minimizing the use of Plastic, etc. is one of the prime objective of the college.

Environment audit report is one such initiative that has been introduced to make the educational institute environmentally sustainable and active in spreading the education about the same. It is a tool to assess general practices implemented by the organization in terms of the impact on environment. The report also aims to spread the awareness on the adverse practices that are responsible for the degradation of the environment and how strongly the institute is involved in curtailing those practices. It helps in recognizing the need of a college to work around the year for environment sustainability. Thus, Environment audit forms the base line survey to decide for the green policy.

Acknowledgement....

We take this opportunity to express our gratitude towards the president of the Institute, Hon. President, **Shri. Sunil Redekar** and Hon. Secretary of College Development Committee, **Dr. Rajendra Kamble,** & Hon. Director **Shri. Rajendra Borhade** and all Hon. Members of the CDC committee of the college for their valuable guidance, continuous encouragement, generous gift of time with constructive critism & suggestion during the composition of work of entire," Environmental Audit Report- 2023-25".

We also express our deep sense of gratitude to our Hon. Principal, **Dr Ajay Kumar Pathak,** who inspired and encouraged us throughout the work. We gratefully acknowledge the help provided by him on several occasions.

It is right time to express our deep sense of gratitude to our college **Prof. Meena Patel, Prof. Jayshri Borhade, Prof. Gaurav Singh** for their continuous help, inspiring resoluteness and sensible suggestion without any reservation whenever we approached throughout investigation.

We are thankful to **Dr. B.G Kulkarni** for his valuable guidance.

We are equally thankful to our colleagues teachers and students of B.Sc CS/B.Sc. IT B.com/ BMS which helps during data collection and identification of plants.

Coordinator,

Environmental Audit Report

Principal Message....

I express my hearty wishes for success of this publication of 'Environmental Audit 2023-2025'.

Efforts made by our institution and senior college for the protection of environment and biodiversity conservation is really unique, which may become pilot project gives message about to avoid the for coming natural disaster like global warming, land sliding etc. We try to maintain environment eco-friendly through activities like landscaping and plantation, rain water harvesting, solid waste Management, energy conservation,

e-waste management, and paperless technology to minimize the use of paper basically prepare from the plants.

The ultimate aim of our institution to develop youth as fertile probe who understand for their social responsibilities.

I express my hearty wishes for success of this movement of Environmental Audit Report for the new beginning of the conservation from the doorstep of the people.

Our Environmental audit reflects assessment and achievement of vision and mission of the college.

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ENVIRONMENTAL AUDIT REPORT COMMITTEE

(2021 – 2023)

Sr.No.	Name	Designation	Committee Role	Signature
1	Dr. Ajay Kumar Pathak	I/C Principal	Coordinator	
2	Dr. Pramod Salaskar	Dharitree Enviro Research Centre	External Auditor	
3	Prof. Meena Patel	Asst. Professor	Internal Auditor	
4	Prof. Jayshri Borhade	Asst. Professor	Internal Auditor	
5	Prof. Gaurav Singh	Asst. Professor	Internal Auditor	
6	Prof. Archana Bhosale	Asst. Professor	Internal Auditor	

CERTIFICATE OF ENVIRONMENTAL AUDIT

This is to certify that

Pune Vidyarthi Griha's College of Science & Technology

(Affiliated to University of Mumbai)

Located at CTS No. 218, Br. Nath Pai Nagar,
Ghatkopar (E) Mumbai

Has successfully undergone for Environmental Audit to establish Eco-friendly practices for conservation of environment at all stages. The environmental awareness initiatives taken by the college are substantial to meet all the standards for maintaining a sustainable environment in the college premises.

(Term of validity)
June, 1st 2023 - May, 31st 2025

Date of Issue: 10th June 2023

(Dr. Pramod Salaskar)
Dharitree Enviro Research Centre

History:

An education only can provide, the stability, and one could gain name and fame in the society, an education is a wealth and becomes a treasure to the ones, who do not have money, and to the ones, who have a clever brain and ambitions in mind. "Anath Vidyarthi Griha" came into existence in the year 1909 on May 12th, having the same motto and with the aspiration to educate the poor and destitute needy children. There were many of the students, who used to work hard and some of them would get the charitable offerings from the society, but there was not a home or shelter for them and even a school where they would get an education. Eventually, this task was shouldered idealistically by "Pune Vidyarthi Griha".

The Pune Vidyarthi Griha's College of Science & Technology is affiliated to Mumbai University & managed by Pune Vidyarthi Griha's [PVG] formerly called as "Pune Anath Vidyarthi Griha's". Pune Anath Griha's was established in 1909 Kul guru Dada Saheb Ketkar for imparting school education to the students for weaker section of the society. Initially till 1969 it was called as Pune Ananth Vidyarthi Griha's. Since 1969 it was called as a Pune Vidyarthi Griha's as suggested by the Dr. Nana Saheb Parudekar than editor of Sakal Marathi newspaper published from Pune the beginning has focused on school education & for school Maharashtra Vidyalaya was founded in 1921, Later on realizing the need of higher education institution PVG started higher education institution in Printing technology, Engineering and Management. At present PVG has campuses located at Pune and Nashik & Mumbai where more than 20,000 students take education right from school to higher education.

The Pune Vidyarthi Griha's College of Science & Technology was established in the year 2008. It is Affiliated to University of Mumbai and Recognized by Govt. of Maharashtra in 2008. Initially the permission was granted only for B. Sc. Information Technology & B.Sc. Computer Science Course. Observing the excellence of the college, the University granted the permission to the college to start B.com, BMS & BBI course in the year 2017 – 18.

Location:

Pune Vidyarthi Griha's College of Science & Technology located at CTS No. 218, Br. Nath Pai Nagar, Ghatkopar-E Ghatkopar (East) Mumbai-400077, Maharashtra, India.

Figure. Schematic representation of Vidya Bhavan Campus

Country	India
State	Maharashtra
District	Mumbai
City	Mumbai
Area	Ghatkopar East
Elevation	20 meter
Population	Population (2020): 146056
	Male Population: 76084 Female Population: 69972
Area Code	+91 – 022
Official Languages	Marathi, English
College Campus area:	Approximately 9,586.6Sq. meter
Perimeter	Approximately 467.3 meter
Location:	19°04.197'N; 72°54.236'E

NEED FOR ENVIRONMENT AUDITING:

Environment auditing is the process of identification and determination of the institution's practices in creating awareness and practising the environment friendly measures. Over the period of time over exploitation of resources like energy, water, etc. have resulted in the environmental degradation. It is necessary to check whether our way of living and handling resources is not going to cause detrimental effects in our surroundings. Environment audit Report aims at summarising the college's contribution and its activeness in creating awareness and consciousness in practically applying the environmental friendly measures towards an institute.

GOALS OF ENVIRONMENT AUDIT:

Identification and documentation of environment practices followed by university.

2. Identify strength and weakness in environment practices.
3. Analyze and suggest solution for problems identified.
4. Assess facility of different types of waste management.
5. Increase environmental awareness throughout campus
6. Identify and assess environmental risk.
7. Motivates staff for optimized sustainable use of available resources.
8. The long-term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental issue before they become problem.

OBJECTIVES OF ENVIRONMENT AUDIT:

1. To examine the current practices, which can impact on environment such as of resource utilization, waste management etc.
2. 2. To identify and analyze significant environmental issues.
3. Setup goal, vision, and mission for environment practices in campus.
4. Establish and implement Environment Management in various departments.
5. Continuous assessment for betterment in performance in environment

BENEFITS OF ENVIRONMENT AUDIT TO EDUCATIONAL INSTITUTIONS:

1. It would help to protect the environment in and around the campus.
2. 2. Recognize the cost saving methods through waste minimization and energy conservation.
3. Empower the organization to frame a better environmental performance.
4. It portrays good image of institution through its clean and green campus. Finally, it will help to build positive impression for through green initiatives the upcoming NAAC visit

OBJECTIVE AND SCOPE:

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

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. This audit report contains observations and recommendations for improvement of environmental consciousness.

Table: Species wise count of trees

Sr. No.	Botanical Name	Local Name	Family	Native/ Introd. / Nt.	Vegetation type	No. of individuals plants
1	*Aegle marmelos*	Bel	Rutaceae	Native	Deciduous	1
2	*Annona squamosa*	Sitaphal	Annonaceae	Nt	Evergreen	3
3	*Artocarpus heterophyllus*	Phanus	Moraceae	Native	Evergreen	1
4	*Azadirachta indica*	Neem	Meliaceae	Native	Evergreen	2
5	*Bombax ceiba*	Katesavar	Malvaceae	Native	Deciduous	1
6	*Carica papaya*	Pappayi	Caricaceae	Native	Evergreen	1
7	*Cocos nucifera*	Naral	Arecaceae	Native	Evergreen	47
8	*Delonix regia*	Gulmohar	Caesalpiniaceae	Nt	Evergreen	1
9	*Dypsis lutescens*	Areca palm	Arecaceae	Nt	Evergreen	1
10	*Eucalyptus grandis*	Neelgiri	Myrtaceae	Nt	Evergreen	3
11	*Ficus benghalensis*	Vad	Moraceae	Native	Evergreen	1
12	*Ficus racemosa*	Umber	Moraceae	Native	Evergreen	3
13	*Hyophorbe lagenicaulis*	Bottle Palm	Arecaceae	Nt	Evergreen	7
14	*Mangifera indica*	Amba	Anacardiaceae	Native	Evergreen	4
15	*Moringa oleifera*	Shevga	Moringaceae	Native	Deciduous	1
16	*Murraya koenigii*	Kaddi patta	Rutaceae	Native	Deciduous	1
17	*Neolamarckia cadamba*	Kadamb	Rubiacea	Native	Evergreen	1
18	*Peltophorum pterocarpum*	Sonmohar	Caesalpiniaceae	Introd	Evergreen	3
19	*Plumeria obtusa*	Chapha	Apocynaceae	Introd	Evergreen	1
20	*Polyalthia longifolia*	Ashoka	Annonaceae	Native	Evergreen	14
21	*Pongamia pinnata*	Karanj	Fabaceae	Native	Deciduous	1
22	*Tectona grandis*	Sagwan	Verbenaceae	Native	Deciduous	18
23	*Terminalia catapa*	Deshibadam	Combretaceae	Native	Deciduous	6

		Total	122

TABLE . FLORAL DIVERSITY (TREE) OBSERVED IN THE COLLEGE CAMPUS

Tree No.	Botanical name	Local Name	Lat./Long (Location)
1	*Terminalia catapa*	Deshibadam	19°04.216'N ; 72°54.240'E
2	*Polyalthia longifolia*	Ashoka	19°04.216'N ; 72°54.238'E
3	*Terminalia catapa*	Deshibadam	19°04.216'N ; 72°54.238'E
4	*Dypsis lutescens*	Aareca Palm	19°04.215'N ; 72°54.223'E
5	*Polyalthia longifolia*	Ashoka	19°04.211'N ; 72°54.234'E
6	*Terminalia catapa L.*	Deshibadam	19°04.211'N ; 72°54.232'E
7	*Terminalia catapa L.*	Deshibadam	19°04.211'N ; 72°54.233'E
8	*Polyalthia longifolia*	Ashoka	19°04.210'N ; 72°54.232'E
9	*Terminalia catapa L.*	Deshibadam	19°04.197'N ; 72°54.223'E
10	*Cocos nucifera L.*	Naral	19°04.204'N ; 72°54.229'E
11	*Tectona grandis*	Sagwan	19°04.194'N ; 72°54.220'E
12	*Cocos nucifera L.*	Naral	19°04.193'N ; 72°54.219'E
13	*Tectona grandis*	Sagwan	19°04.193'N ; 72°54.217'E
14	*Cocos nucifera*	Naral	19°04.193'N ; 72°54.217'E
15	*Tectona grandis*	Sagwan	19°04.192'N ; 72°54.223'E
16	*Cocos nucifera*	Naral	19°04.193'N ; 72°54.215'E
17	*Tectona grandis*	Sagwan	19°04.193'N ; 72°54.217'E
18	*Mangifera indica L.*	Amba	19°04.185'N ; 72°54.213'E
19	*Tectona grandis*	Sagwan	19°04.185'N ; 72°54.213'E
20	*Neolamarckia cadamba*	Kadam	19°04.185'N ; 72°54.213'E
21	*Cocos nucifera*	Naral	19°04.183'N ; 72°54.213'E
22	*Cocos nucifera L.*	Naral	19°04.183'N ; 72°54.216'E
23	*Tectona grandis*	Sagwan	19°04.183'N ; 72°54.219'E
24	*Cocos nucifera L.*	Naral	19°04.183'N ; 72°54.212'E
25	*Hyophorbe lagenicaulis*	Bottle palm	19°04.183'N ; 72°54.214'E
26	*Cocos nucifera L.*	Naral	19°04.182'N ; 72°54.211'E

27	*Tectona grandis*	Sagwan	19°04.182'N ; 72°54.218'E
28	*Tectona grandis*	Sagwan	19°04.183'N ; 72°54.227'E
29	*Tectona grandis*	Sagwan	19°04.183'N ; 72°54.222'E
30	*Tectona grandis*	Sagwan	19°04.183'N ; 72°54.225'E
31	*Tectona grandis*	Sagwan	19°04.183'N ; 72°54.219'E
32	*Polyalthia longifolia*	Ashoka	19°04.183'N ; 72°54.214'E
33	*Cocos nucifera L.*	Naral	19°04.183'N ; 72°54.209'E
34	*Tectona grandis*	Sagwan	19°04.183'N ; 72°54.210'E
35	*Tectona grandis*	Sagwan	19°04.183'N ; 72°54.227'E
36	*Cocos nucifera L.*	Naral	19°04.183'N ; 72°54.227'E
37	*Cocos nucifera L.*	Naral	19°04.183'N ; 72°54.227'E
38	*Tectona grandis*	Sagwan	19°04.182'N ; 72°54.218'E
39	*Cocos nucifera L.*	Naral	19°04.182'N ; 72°54.218'E
40	*Tectona grandis*	Sagwan	19°04.182'N ; 72°54.218'E
41	*Hyophorbe lagenicaulis*	Bottle palm	19°04.182'N ; 72°54.218'E
42	*Cocos nucifera L.*	Naral	19°04.182'N ; 72°54.218'E
43	*Cocos nucifera L.*	Naral	19°04.183'N ; 72°54.227'E
44	*Polyalthia longifolia*	Ashoka	19°04.183'N ; 72°54.227'E
45	*Cocos nucifera L.*	Naral	19°04.183'N ; 72°54.227'E
46	*Cocos nucifera L.*	Naral	19°04.183'N ; 72°54.227'E
47	*Annona squamosa*	Sitphal	19°04.184'N ; 72°54.226'E
48	*Cocos nucifera L.*	Naral	19°04.184'N ; 72°54.226'E
49	*Ficus racemosa L.*	Umber	19°04.184'N ; 72°54.221'E
50	*Cocos nucifera L.*	Naral	19°04.184'N ; 72°54.226'E
51	*Annona squamosa*	Sitphal	19°04.184'N ; 72°54.230'E
52	*Tectona grandis*	Sagwan	19°04.184'N ; 72°54.225'E
53	*Cocos nucifera L.*	Naral	19°04.184'N ; 72°54.218'E
54	*Polyalthia longifolia*	Ashoka	19°04.184'N ; 72°54.213'E
55	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.207'E
56	*Hyophorbe lagenicaulis*	Bottle palm	19°04.188'N ; 72°54.242'E

57	*Tectona grandis*	Sagwan	19°04.188'N ; 72°54.240'E
58	*Terminalia catapa L.*	Deshibadam	19°04.185'N ; 72°54.194'E
59	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.194'E
60	*Polyalthia longifolia*	Ashoka	19°04.186'N ; 72°54.194'E
61	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.197'E
62	*Hyophorbe lagenicaulis*	Bottle palm	19°04.184'N ; 72°54.269'E
63	*Cocos nucifera L.*	Naral	19°04.184'N ; 72°54.269'E
64	*Polyalthia longifolia*	Ashoka	19°04.184'N ; 72°54.271'E
65	*Polyalthia longifolia*	Ashoka	19°04.184'N ; 72°54.276'E
66	*Cocos nucifera L.*	Naral	19°04.184'N ; 72°54.283'E
67	*Mangifera indica L.*	Amba	19°04.185'N ; 72°54.294'E
68	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.194'E
69	*Tectona grandis*	Sagwan	19°04.185'N ; 72°54.194'E
70	*Polyalthia longifolia*	Ashoka	19°04.185'N ; 72°54.194'E
71	*Artocarpus heterophyllus Lamk.*	Phanas	19°04.185'N ; 72°54.197'E
72	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.195'E
73	*Moringa oleifera*	Shevga	19°04.185'N ; 72°54.199'E
74	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.202'E
75	*Hyophorbe lagenicaulis*	Bottle palm	19°04.185'N ; 72°54.204'E
76	*Polyalthia longifolia*	Ashoka	19°04.185'N ; 72°54.209'E
77	*Ficus racemosa L.*	Umber	19°04.185'N ; 72°54.213'E
78	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.218'E
79	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.223'E
80	*Delonix regia*	Gulmohar	19°04.185'N ; 72°54.225'E
81	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.229'E
82	*Polyalthia longifolia*	Ashoka	19°04.185'N ; 72°54.234'E
83	*Hyophorbe lagenicaulis*	Bottle palm	19°04.185'N ; 72°54.237'E
84	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.239'E
85	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.241'E
86	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.243'E

87	*Cocos nucifera L.*	Naral	19°04.185'N ; 72°54.247'E
88	*Cocos nucifera L.*	Naral	19°04.182'N ; 72°54.247'E
89	*Aegle marmelos*	Bel	19°04.182'N ; 72°54.244'E
90	*Cocos nucifera L.*	Naral	19°04.182'N ; 72°54.240'E
91	*Hyophorbe lagenicaulis*	Bottle palm	19°04.182'N ; 72°54.235'E
92	*Murraya koenigii*	Kadi Patta	19°04.184'N ; 72°54.253'E
93	*Peltophorum pterocarpum*	Sonmohar	19°04.190'N ; 72°54.270'E
94	*Bombax ceiba L.*	Katesavar	19°04.184'N ; 72°54.249'E
95	*Cocos nucifera L.*	Naral	19°04.184'N ; 72°54.241'E
96	*Peltophorum pterocarpum*	Sonmohar	19°04.192'N ; 72°54.267'E
97	*Ficus benghalensis L.*	Vad	19°04.192'N ; 72°54.273'E
98	*Azadirachta indica*	Neem	19°04.192'N ; 72°54.273'E
99	*Eucalyptus grandis*	Neelgiri	19°04.192'N ; 72°54.273'E
100	*Azadirachta indica*	Neem	19°04.193'N ; 72°54.269'E
101	*Plumeria obtusa L.*	Chapha	19°04.193'N ; 72°54.268'E
102	*Carica papaya*	Pappayi	19°04.192'N ; 72°54.274'E
103	*Eucalyptus grandis*	Neelgiri	19°04.192'N ; 72°54.273'E
104	*Eucalyptus grandis*	Neelgiri	19°04.192'N ; 72°54.273'E
105	*Annona squamosa*	Sitphal	19°04.189'N ; 72°54.255'E
106	*Cocos nucifera L.*	Naral	19°04.198'N ; 72°54.264'E
107	*Tectona grandis*	Sagwan	19°04.200'N ; 72°54.112'E
108	*Cocos nucifera L.*	Naral	19°04.202'N ; 72°54.243'E
109	*Cocos nucifera L.*	Naral	19°04.202'N ; 72°54.245'E
110	*Cocos nucifera L.*	Naral	19°04.200'N ; 72°54.206'E
111	*Mangifera indica L.*	Amba	19°04.200'N ; 72°54.203'E
112	*Cocos nucifera L.*	Naral	19°04.200'N ; 72°54.176'E
113	*Cocos nucifera L.*	Naral	19°04.200'N ; 72°54.189'E
114	*Cocos nucifera L.*	Naral	19°04.200'N ; 72°54.192'E
115	*Ficus racemosa L.*	Umber	19°04.200'N ; 72°54.196'E
116	*Cocos nucifera L.*	Naral	19°04.200'N ; 72°54.184'E

117	*Cocos nucifera L.*	Naral	19°04.200'N ; 72°54.169'E
118	*Cocos nucifera L.*	Naral	19°04.206'N ; 72°54.282'E
119	*Pongamia pinnata*	Karanj	19°04.205'N ; 72°54.279'E
120	*Polyalthia longifolia*	Ashoka	19°04.207'N ; 72°54.223'E
121	*Peltophorum pterocarpum*	Sonmohar	19°04.208'N ; 72°54.237'E
122	*Polyalthia longifolia*	Ashoka	19°04.208'N ; 72°54.249'E

THANE

For Dharitree Enviro Research Centre

Proprietor

Table : Avifaunal diversity observed immediate surroundings of the College Campus

Sr. No.	Family	Scientific Name	Common Name	IUCN Status	IWPA Assessment	Feeding Habit	Dwelling Status
1	Corvidae	*Corvus splendens*	House Crow	Least Concern ver 3.1	Schedule - V	Omnivorous	R
2		*Corvus macrorhynchos*	Jungle Crow	Least Concern ver 3.1	--	Omnivorous	R
3	Pycnonotidae	*Pycnonotus cafer*	Red Vented Bulbul	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
4		*Pycnonotus jocosus*	Red Whiskered Bulbul	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
5	Meropidae	*Merops orientalis*	Small Bee Eater	Least Concern ver 3.1	--	Insectivorous	R
6	Halcyonidae	*Halcyon smyrnensis*	White-throated Kingfisher	Least Concern ver 3.1	Schedule -IV	Piscivorous & Insectivorous	R
7	Columbidae	*Streptopelia chinensis*	Spotted Dove	Not Assessed	Schedule -IV	Granivorous	R
8		*Columba livia*	Blue Rock Pigeon	Least Concern ver 3.1	--	Granivorous	R
9	Dicruridae	*Dicrurus macrocercus*	Black Drongo	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
10	Sturnidae	*Acridotheres tristis*	Common Myna	Least Concern ver 3.1	Schedule - IV	Omnivorous	R
11	Muscicapidae	*Copsychus saularis*	Oriental Magpie-Robin	Least Concern ver 3.1	--	Insectivorous & Herbivorous	R
12	Cuculidae	*Centropus sinensis*	Greater Coucal	Least Concern ver 3.1	Schedule -IV	Carnivorous	R

For Dharitree Enviro Research Centre

Malaskar

Proprietor

Table: Lepidopteran diversity observed in the College Campus

Sr. No.	Common Name	Scientific Name	Family	Status
1	Common Jay	*Graphium doson*	Papilionidae	C
2	Lime Butterfly	*Papilio demoleus*	Papilionidae	VC
3	Common Mormon	*Papilio polytes*	Papilionidae	VC
4	Common Grass Yellow	*Eurema hecabe*	Pieridae	VC
5	Small Grass Yellow	*Eurema brigitta*	Pieridae	C
6	Plain Tiger	*Danaus chrysippus*	Nymphalidae	VC
7	Common Indian Crow	*Euploea core*	Nymphalidae	VC
8	Common Sailer	*Neptis hylas*	Nymphalidae	VC

C: Common ; VC: Very Common

For Dhariwal Enviro Research Centre

Proprietor

AMBIENT AIR STATION

Date Of sampling	16/05/2023	Analysis Completed On	29/05/2023
Location of H.V.S.	**Aprrox. 50 meter from Main Gate**		
Lateral Distance	50 Meter from Main Gate		
Receptor Distance	1.5 Meters From Ground Level		
Ambient Temperature (^{0}C)	29	Humidity (%)	49
Wind Speed (km/hr)	09	Wind Direction (deg^0)	W 296
Instruments Used	R.D.S.(APM- 460), F.P.S.(APM – 550), G.P.S.(APM – 411) & Benzene Sampler (GTI-177)		

POLLUTIONAL PARAMETERS

Parameters	Result	Units	NAAQS Limits	Method
PM_{10}	72	µg/m^3	100.00	IS 5182 (Part 23): 2006 (RA 2022)
$PM_{2.5}$	34	µg/m^3	60.00	EPA Quality assurance guidance document 2.12, based on CPCB- 2011
SO_2	18	µg/m^3	80.00	IS 5182 (Part 2): 2001 (RA 2022)
NO_2	23	µg/m^3	80.00	IS 5182 (Part 6): 2006 (RA 2022)
Ammonia (NH_3)	<20	µg/m^3	400.00	CPCB Guidelines For Measurement Of Ambient Air Pollutants Volume-I ,2011
CO	0.92	mg/m^3	04.00	IS 5182 (Part 10) : 1999 (RA 2019)
Lead as Pb	<0.1	µg/m^3	01.00	EPA compendium method IO 3.5:2012
Benzene (C_6H_6)	< 4	µg/m^3	5.00	IS 5182 (Part 11) :2006 (RA 2022)
Arsenic(As)	< 5	ng/m^3	6.00	EPA compendium method IO 3.5:2012
Nickel(Ni)	< 5	ng/m^3	20.00	EPA compendium method IO 3.5:2012
Ozone (O_3)	13	µg/m^3	180.00	IS 5182 (Part 9): 1974 RA 2019
Benzo(a)Pyrene	< 0.1	ng/m^3	1.00	IS 5182 (Part 12): 2004 (RA 2019)

NOTE: 1) The above results relate only to the item tested & the condition prevailing at the time of sampling

2) PM_{10}-Particulate Matter of size < 10 µm, $PM_{2.5}$ - Particulate Matter of size < 2.5 µm

3) NAAQS-National Ambient Air Quality Standards

4) Lower Detection Limit (NH_3 <20 µg/m^3), (Pb <0.10 µg/m^3), (C_3H_6 <4 µg/m^3), (As <5 ng/m^3), (Ni <5 ng/m^3), (Benzo(a)Pyrene < 0.1 ng/m^3)

For Dharitree Enviro Research Centre

Proprietor

AMBIENT NOISE LEVEL MONITORING		
Date Of Monitoring : **07.06.2023**		
Sampling Location : 50 Meter from Main Gate		
Sr. No.	**Time**	**Noise Levels in dB(A) Leq***
1	8.00 am	46.2
2	9.00 am	47.8
3	10.00 am	53.6
4	11.00 am	56.3
5	12.00 am	54.9
6	2.00 pm	51.4
7	4.00 pm	49.7
8	6.00 pm	57.1

Method:-IS:9989-1981 (RA 2001)

NOTE: 1) CPCB Limit During Day time < 55. (Day time shall mean from 6.00 am to 10.00 pm.)

2) CPCB Limit During Night time < 45. (Night time shall mean from 10.00 pm to 6.00 am.)

For Dharitree Enviro Research Centre

Proprietor

ANALYSIS TEST REPORT			
Sample Collection Date	01/06/2023	Analysis Completed On	08/06/2023
Sampling Point	**Canteen**		
Sample Details	**Drinking Water**		
Sample Container	PVC Can	Sample Quantity	5000 ml

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.4	-	6.5 - 8.5	IS 3025 (Part-11): 2022
2	Colour	<5	CU	5.0	IS 3025 (Part-4/4): 2021
3	Odour	Agreeable	-	Agreeable	IS3025 (Part-5):2018:RA 2022
4	TDS	112	mg/lit	500	IS 3025 (Part-16):2023
5	Turbidity	<1.0	NTU	1.00	IS 3025 (Part-10): 1984:RA 2022
6	Ammonia	<0.5	mg/lit	0.5	IS 3025 (Part 34/2.2 & 2.3): 1988:RA 2019
7	Chlorides as Cl	15.6	mg/lit	250.00	IS 3025 (Part 32/2): 1988: RA 2019
8	Fluorides as F	0.8	mg/lit	1.0	APHA (24th Edition) 4500 F– D -
9	Residual Chlorine	<0.2	mg/lit	0.2	IS 3025 (P-26/5):2021
10	Nitrate as NO_3	10.4	mg/lit	45.00	APHA (24th Edition) 4500- NO_3-B -
11	Total Alkalinity as	48.37	mg/lit	200	IS 3025(Part23/8.1):1986: RA
12	Total Hardness as	58.00	mg/lit	200.00	IS 3025(Part21/5):2009: RA 2019
13	Sulphate as SO4	3.6	mg/lit	200.00	APHA (24th Edition) 4500 SO4 – E – 2022
14	Cyanide as CN	<0.05	mg/lit	0.05	IS 3025 (Part27/sec1/4) :2021
15	Calcium as Ca	14.43	mg/lit	75.00	IS 3025 (Part40/5):1991: RA 2019
16	Magnesium as	5.34	mg/lit	30.00	IS 3025 (Part 52-6):2003: RA 2019
17	Total Chromium	<0.01	mg/lit	0.05	IS 3025 (Part46/6):1994: RA 2019

For Dhanlaxmi Enviro Research Centre

Proprietor

SOLID WASTE MANAGEMENT

Aim :-

1) Scientific disposal of solid waste

2) Protection of human health and environment

Objective:-

1) To increase recycling level

2) To reduce organic waste in landfills

3) To control air, water, soil pollution

4) Production of green manure and vermicompost.

Activity / Observation :

Solid waste is separated as dry and wet. Dry waste includes plastic, glass, paper, metals, wood and related product. Wet waste typically refers to organic waste usually generated as canteen waste, plant debris. Dry waste is separated and it is given for its reuse and recycling to the recycler agency to avoid the pollution. Wet waste is also known as organic waste. It is obtain from canteen , fallen leaves , litter, trash etc. produce in this campus if it is not disposed properly it creates air pollution, to avoid this we have implemented solid organic waste management activity, we run it at two level one is decomposition of solid waste through the composting in pit, vermicompost form solid organic waste and second is training to the students, farmers about production of organic manure like vermicompost, production of mushroom from the solid organic agricultural waste which ultimately conversion of Best from Waste, further the best biofertilizer is used for plants of college campus which enhances greenery leads environment clean and fresh.

ENVIRONMENT AWARENESS PROGRAM

Aim and objective:

- To plan, organize and implement programmes like landscape and plantation, water management & conservation, and rain water harvesting.
- To provide education that prepares students for leadership and social responsibility teaching them to think and communicate effectively and develop a global awareness.
- To introduce environmental education programmes for strengthen the existing ecological and environment related training infrastructure.
- To organize training programmes for vocationalisation of environmental careers.
- To strengthen Global Environmental Education Programmes for standardization of greening activities.
- To introduce environmental education programmes in strengthen the existing ecological and environment related training infrastructure.
- To make special plans for the studies vermiculture, plantation, nursery development, water & energy conservation and management, rain water harvesting and other related fields.
- To provide environmental education that prepares students for leadership and social responsibility by teaching them to think and communicate effectively and develop global environmental awareness and sensitivity.

Ventilation and Indoor Air Quality (IAQ) :

- There is adequate size of windows in college class rooms as well as in corridor which allow sufficient light and ventilation.
- Corridors are wide with good ceiling height
- Classrooms also have high ceiling with wide doors. Windows are kept open to receive sunlight.
- All classrooms are provided with ceiling fans for proper air circulation.

Water Efficiency & Wastewater Management:

- Two RO filtration plant has been installed on main building to provide clean drinking water in campus.
- No water leakage observed anywhere in Campus.
- The students have awareness for water conservation.

Energy Efficiency:

- All the CRT monitors of computers have been replaced with LED monitors.
- Computers are kept switched off when not required to operate.
- Save energy posters/stickers such as "Switch off all electrical equipment's when not required to use" at maximum locations to spread energy conservation awareness.
- All conventional incandescent tube lights are replaced with LED tube lights.

Ambiance and Acoustic Control:

- Tree plantation in and around the campus help in reducing ambient temperature and acoustic control.
- The college is located away from road side so there is no major noise pollution.

Waste Management:

Paper waste

- Being academic institution, waste paper is the main solid waste generated in the premises. The institution has taken steps to minimize usage of papers by implementing e-notice board.
- Both sides of the pages are utilized to avoid excess paper usages.
- Paper wastes are not directly disposed off in dustbin, it is given to local vendors for recycling and reuse.

e-waste

- The college has taken initiative to segregate and collect e-wastes and stored at designated place for its proper disposal.

Canteen and Solid Waste Management

- Wet and dry wastes are segregated in college canteens and directly handed over to the concern Municipal Corporation for disposal.
- Bio-degradable and non-biodegradable waste is generated labs, are also segregated and disposed of through Municipal Corporation

Summary:

Environment Audit is one of the important tools to check the balance of natural resources and its judicial use. Environment auditing is the process of identifying and determining whether institutional practices are eco-friendly and sustainable. It is a process of regular identification, quantification, documenting, reporting and monitoring of environmentally important components in a specified area. College has conducted a "Environment Audit" in the academic year 2023. The main objective to carry out environment audit is to check the green practices followed by College and to conduct a well-defined audit report to understand whether the Institute is on the track of sustainable development.

Recommendations:

- CFL lamps can be used in all sections to minimize the usage of fluorescent tubes
- Waste water management still needs to be practiced and designed in the campus.
- Drips and sprinklers can be used for watering the gardens and lawns.
- Roof top rain water harvesting can be designed and constructed.
- Special days like, Teachers Day, Guru poornima, van mahotsav can be celebrated by plant donations. • E-waste segregation, handling and disposal can be deployed at the campus.

PHOTOGALLARY

Rainwater Harvesting Unit

Compost Pit

Compost Pit

Compost Pit

For Dh[illegible] Enviro Research Centre

Proprietor

Fire Extinguishers

Plastic Waste Segregation Bin

Environmental Education program

Systematic Identification and Geo-Tagging of the flora

Sports facilities at premises

Green belt

Approach Road to college

Green belt in the college premises