

**MAHATMA GANDHI ARTS &
COMMERCE COLLEGE**
PARSEONI, DIST. NAGPUR - 441105
GREEN AUDIT: MAY-2023



CONDUCTED BY :

ENVINZOA, NAGPUR

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CERTIFICATION

Green Audit (1/5)

★ ISO 14001 : 2015 certified



This is to certify that

Mahatma Gandhi Arts & Commerce College
Parseoni 441 105, Nagpur, Maharashtra, India

has conducted detailed
GREEN AUDIT (2022-2023)
of their college campus and provided necessary data and
right credentials for **SCRUTINY**.

The relevant activities and appropriate measures
carried out by college on the basis of submitted responses of
questionnaire and presented report
have been **CHECKED & REVIEWED** and found to be
SATISFACTORY.

The initiatives taken by faculty and students towards
a better **UNDERSTANDING** of environment and
a sensitive awareness towards its
CONSERVATION & SUSTAINABILITY
are highly acknowledged & commendable.

This audit process is completed and certification is done on July 28, 2023
Certificate # **EIZ/GRN/2023/07/08**
and is valid through till next proposed audit on/before July 28, 2024.




Director
ENVINZOA
Nagpur



(Certificate issued on July 28, 2023 at Nagpur)

Note : The whole process includes annual audits and certificates for five years span.
The validity of these certificates is determined by the organization's compliance with Green
Audit recommendations as well as system's maintenance and interim surveillance audit(s).

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DISCLAIMER

The Green Audit Team generated this report for Mahatma Gandhi Arts & Commerce College Parseoni, Dist. Nagpur - 441105, Maharashtra, based on information provided by the College's representatives and the expert team's best judgment.

While every possible precaution was taken in its preparation, the information contained in this report was compiled in good faith based on the information available.

It is also stated that the recommendations are based on best judgments, and that no express or implied representation, warranty, or undertaking is made, and that Audit Team accepts no responsibility for any direct or consequential loss resulting from the use of the information, statements, or forecasts in the report.

Prepared by:

Nitisha V Patankar, Ph D

ENVINZOA, Nagpur

AUDIT PROCESS
REPORT

★ ISO 14001 : 2015 certified

Green Audit Committee of college

Sr. No.	Name	Position	Signature
1.	Dr. Sachin S. Ramteke	Green Audit Coordinator	
2.	Dr. Sudhir kahate	Member	
3.	Rajesh Wanjari	Research Assistant	
4.	Achal Bhujade	Research Assistant	Aachal



IQAC Coordinator
Prof. Pramod M. Gorde



Principal
DR. L. B. Jadhao

PRINCIPAL
M. G. Arts & Commerce College
Parseoni, Dist. Nagpur

IQAC CO-ORDINATOR
Mahatma Gandhi Arts & Commerce College
Parseoni, Dist. Nagpur

**AUDIT PROCESS
REPORT**

★ ISO 14001 : 2015 certified



**Principal
DR. L. B. Jadhao**



**IQAC Coordinator
Prof. Pramod M. Gorde**



**Member
Dr. Sudhir kahate**



**Ass. Prof. Sachin S. Ramteke
Green Audit Coordinator**



**Achal Bhujade
BA. II**



**Rajesh Wanjari
B.Com. II**

Nature offers all of us with free services. Environmental problems have worsened in recent years as a result of human activities and advances in science and technology, and the world is under immense strain as a result of population growth. The most widely discussed phenomenon, "Global warming," is causing the world to warm. Water, air, noise, and soil quality are all deteriorating beyond repair. It is necessary to recognise environmental degradation and adopt mitigation strategies for environmental protection in order to learn more about it. Sustainable development is gaining popularity around the world as a means of preserving the environment. Using resources wisely can help save the earth's valuable resources. The most effective way to conserve and safeguard natural resources is to measure environmental components.

Environmental auditing had begun in the early 1970s with provision of civil lawsuits for non-compliance with environmental regulations. Green auditing entails a site visit, sample collection, analysis, and reporting to the appropriate authorities. Industry and business are beginning to conduct audits in order to save natural resources. Academic institutions can also help with resource preservation and conservation on their own grounds.

In the present write up "Green Audit" report, outline existing scenario of campus is discussed. A summary of the report's contents would encourage everyone to think about preserving resources, demonstrate willingness to learn about their significance, take steps to reduce resource use, and set an example for others to follow the path of green practises in order to achieve the goal of sustainable development.

ACKNOWLEDGEMENT

We express our deep sense of gratitude to the Governing body and Local managing committee Hon'ble Shri. Ranjeetbabu Arvindbabu Deshmukh, President, Mahatma Gandhi Arts Commerce College Parseoni, Dist. Nagpur - 441105, Maharashtra, Hon'ble Shri. Yuvaraj Chalkhor, Secretary of the college and Dr. Lokchand B. Jadhao, Principal of the college for their support in preparation of the report.

We would also like to acknowledge Dr. Pramod M. Gorde, IQAC Coordinator and Dr. Sachin S. Ramteke Green audit in-charge and, Dr. Sudhir kahate members for their rendering services in preparing the draft.

INTRODUCTION

Auditing is a system of examining a college's internal controls for attaining goals. The most important steps of the auditing process include planning, on-site work, audit report production, and follow-up. Aside from providing education, the college is dedicated to environmental protection by lowering environmental consequences such as waste, water, and energy usage. The goal of the college is to achieve environmental sustainability through the adoption of more environmentally sound methods. The planning of a Green Audit entails a series of observation and verification stages that are carried out on-site. The planning process began with a discussion among committee members, followed by the formulation of objectives, the development of methodology, sampling, and the preparation of a final report that included a number of environmental sustainability efforts.

Objectives

Objectives are significant to enhance the vision marked which further converts in the measurement of environmental components for achieving goals. Earth's natural resources are important to support life, but its overexploitation can lead to disturbance of the natural balance. In present time, conventional auditing supported by Green Auditing may assist the college to manage environmental resources by effective environmental mitigation measures.

AUDIT PROCESS REPORT

The following objectives are systematic attempt to reach at a target which could guide us for safe and clean environment for all.

1. To observe land use for various purposes.
2. To record and document flora and faunal diversity in the college premises.
3. To prepare an air quality observation report.
4. To analyse water samples for aesthetic parameters.
5. To record noise level in the college premises and outside area.
6. To study soil quality of the college campus.
8. To prepare report on E-waste disposal and management.
9. To study solid waste management practices in college campus.
10. To study electrical power consumption in college.

Benefits of Green Audit

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

1. It would help to protect the environment in and around the campus.
2. Recognize the cost saving methods through waste minimization, management 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 which helps building better relationships with the group of interested parties.

Finally, it will assist in creating a great impression for the future NAAC inspection through green activities.

About College



Mahatma Gandhi Arts & Commerce College was formally opened on 21th July, 1990 at Parseoni, a small tribal village at the outskirts of Parseoni. The college is recognized and fully aided by Government of Maharashtra and permanently affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. The college is included under section 2(f) and 12(B) of UGC Act 1956. The college offers B.A. B.Com. & M.A. and M.Com. Degree in various subjects.

Mahatma Gandhi Arts & Commerce College is today the leading center providing quality education to the tribal and rural students and empowering them to meet the challenges of 21st century. Mahatma Gandhi Arts & Commerce College from its humble beginnings in 1990. The college had to face many problems but it grows further. The able leadership, strong determination and untiring efforts of President Shri. Ranjeetbabu Deshmukh helped us overcome all this and achieve the present status of the college.

A BRIEF HISTORY OF THE COLLEGE

Mahatma Gandhi Arts & Commerce College was formally opened on 21st July, 1990 at Parseoni, a small tribal village at the outskirts of Parseoni. The college is recognized and fully aided by Government of Maharashtra and permanently affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. The college is included under section 2(f) and 12(B) of UGC Act 1956. The college offers B.A. B.Com., M.A. (Sociology, Marathi & Economics) and M.Com Degree. Mahatma Gandhi Arts & Commerce College is today, the leading centre providing quality education to the tribal and rural students and empowering them to meet the challenges of 21st century. Mahatma Gandhi Arts & Commerce College from its humble beginnings in 1990. The college had to face many problems but it grows further. The able leadership, strong determination and untiring efforts of President Shri. Ranjeetbabu Deshmukh helped us overcome all this and achieve the present status of the college.

Milestones in the History of College

- 31/09/1971 Establishment of VSPM Academy of Higher Education, Nagpur
- July 1990 Establishment of Mahatma Gandhi Arts & Commerce. College, Parseoni.
- 1993 Introduction of N.S.S. Unit in the college
- Jan 2000 College shifted to its own building and campus
- 2003 1st Gold Medal received in University subject Economics Ku. Varsh Jivan Kumbhavar
- 2003-04 NAAC first Accreditation done
- 21/07/2004 Introduction of additional section of B.A. Part I
- 31/07/2004 College permanently affiliated to R.T.M. Nagpur University, Nagpur
- 2005-06 New subject started Home Economics and English Literature
- 18/07/2006 College included under section 2(f) and 12(B) of UGC Act 1956 2006-07 Miss Swati S Bhoge and Miss. Anshul S. Tiwari students of BA Second Year got 1st Prize and 2nd Prize in Flower Decoration in RTM University Cultural Programme "YOUARANG".
- 2007-08 Appointment of Full-Time regular Principal and Assistance professor to Marathi Department. 2007-08 Faculty Exchange programme started with SKP College

AUDIT PROCESS REPORT

Kamptee, Alumni Association started by Alumni named as PAULWAT PRATISTHAN, Miss. Monika Funney Student of B.A Final Year has got Gold Medal in Marathi Literature from the University.

- 2009-10 New Courses for Degree programme B.Com and Master Degree programme Economics, Sociology, and Marathi Stream was Started, 4 MRP proposals are sanctioned by UGC.
- 2010-11 Coaching classes for Entry in Service and Remedial Classes for SC/ST/OBC was started.
- 2011-12 For improvement ICT facility Keyon Computer and Software was purchase. The principal of Mahatma Gandhi College was appointed as registrar of newly form Gondwana University Gadchiroli.
- 2013-14 For improvement ICT facility Computer / Laptop, Projectors were purchased from Grant by UGC. Construction of New two classrooms and girls common room, Women's hostels were done.
- 2014-15 Police Training for the college student was started, Training for college staff was conducted in collaboration with the Central Institute of Business Management and Research Development. The Secretary of VSPM Dr. Amolbabu Deshmukh, Founder of HERD had organized "Employment Fair"
- 2015-16 Miss Mangala Kausale got 1st Prize in YIN Leadership Development programme by 'SAKAL' News Paper, A Computer LAN of computer in all department and Library was done.
- 2016-17 College successfully adopt Semester Pattern as per RTM Nagpur University.
- 2017-18 NAAC SSR was Submitted for the Second Cycle.
- 2018-19 NAAC Second Accreditation done 2019-20 Six Students of Sports Departments of college are represented RTM University at National Level All India Inter-University Woodball Championship at Chandigarh and got 3rd Place.
- 2020-21 Women's Hostel building is provided for Covid Testing and Quarantine Centre to the Government. Teaching Faculty started Online teaching through Youtube, Zoom and other social networking apps and website.

Our Vision :

- ❖ To develop the college into a centre of excellence in education.
- ❖ To extend the benefits of quality education to the tribal, rural and under- privileged sections of society.
- ❖ To promote Higher Education in the remote and Economically Backward Vision
- ❖ To create culture, moral, values and national integration

Our Mission :

- ❖ To develop the all-round personality of students and make them better human beings and responsible citizens of India.
- ❖ To Promote quality education in UG programme of Arts & Commerce college
- ❖ Singing Daily prayer

ENVIRONMENT POLICY OF THE COLLEGE



V.S.P.M. Academy of Higher Education, Nagpur
Mahatma Gandhi Arts & Commerce College,
Parseoni, Dist. Nagpur - 441105

(NAAC Accredited, Affiliated to RTM Nagpur University)

Green Campus Policy of M.G.College

Green College Clean College.

Mahatma Gandhi Arts and commerce College, Parseoni emphasized on environmental quality, it protects its own environment by implementing its green campus initiatives and maintains pollution, free green and clean campus. Environment development is its basic work with the educational policies implemented on the campus. Mahatma Gandhi Arts and commerce College, Parseoni is committed to managing its campus in accordance with responsibilities towards promoting sustainable environment.

The commitment of the college is to maintain sustainable environment and improvement is evident through its "GREEN MGC" policy. Our "GREEN MGC" committee along with staff and students strive to create a campus environment that is clean and free of plastics. This initiative is a reflection of the desire to cultivate a culture of environment responsibility and ethics among the staff and students.

Mission

To comprise students by understanding the importance of environment and lush greenery, its problem areas are the Important functions of the policy.

Objectives

The main objective of the green audit is to promote the Environment Management and Conservation in the College Campus. The purpose of the audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards.

The main objectives of carrying out Green Audit are:

1. To train students to create responsiveness amongst public.
2. To encourage students to keep environment safe and clean.
3. To encourage students to adopt environment friendly practices which include paper bags, save water, preserve plants.
4. To create healthy environment for learning
5. To create awareness amongst students regarding of our surrounding environment and its protection
6. To find the innovative ideas minimize the future threats to the environment

The college is dedicated to uphold its clean and green campus policy (GREEN MGC) when administering its campus. The college has "GREEN MGC Committee" which looks towards having a clean and green campus.

- **use of Solar Energy**

Solar Street Light-semi Integrated SP Set up (SSL-071) is used in order to reduce the conventional electricity utilization.

- **E-waste and solid waste management system**

E-waste management system is incorporated so as to recycle the e-waste generated at the college campus. Solid Waste management system is incorporated in college campus.

- **Uses of LED lights**

LED Light are used throughout the college campus. Hence power consumption is considerably lower.

- **Landscaping of Trees**

Gardener and full time support staff and students have been appointed for the maintenance of garden and keeping the campus litter-free, clean and green. The tree-plantation drives are undertaken by the NSS unit of the college every year.

- **Pedestrian friendly path**

The roads inside the college campus are pedestrian friendly

- **"No Smoking, No Tobacco" in Campus area**

"No Smoking, No Tobacco" initiatives are taken by the college to make campus carbon free.

- **Silence zones in the college**

The college is having silence zones inside the college campus so as to reduce noise pollution around the campus.

- **Plastic free campus**

No plastic initiative is also adopted by the college so as to decrease the plastic waste. Reusable carry bags and avoiding usage of water glass practices are incorporated inside the college campus.

- **Rainwater Harvesting**

The college ensures rain-water conservation through rainwater harvesting. The rain water from the roof top outlets is carried through the well-connected pipelines to the chambers and then to the bore well.

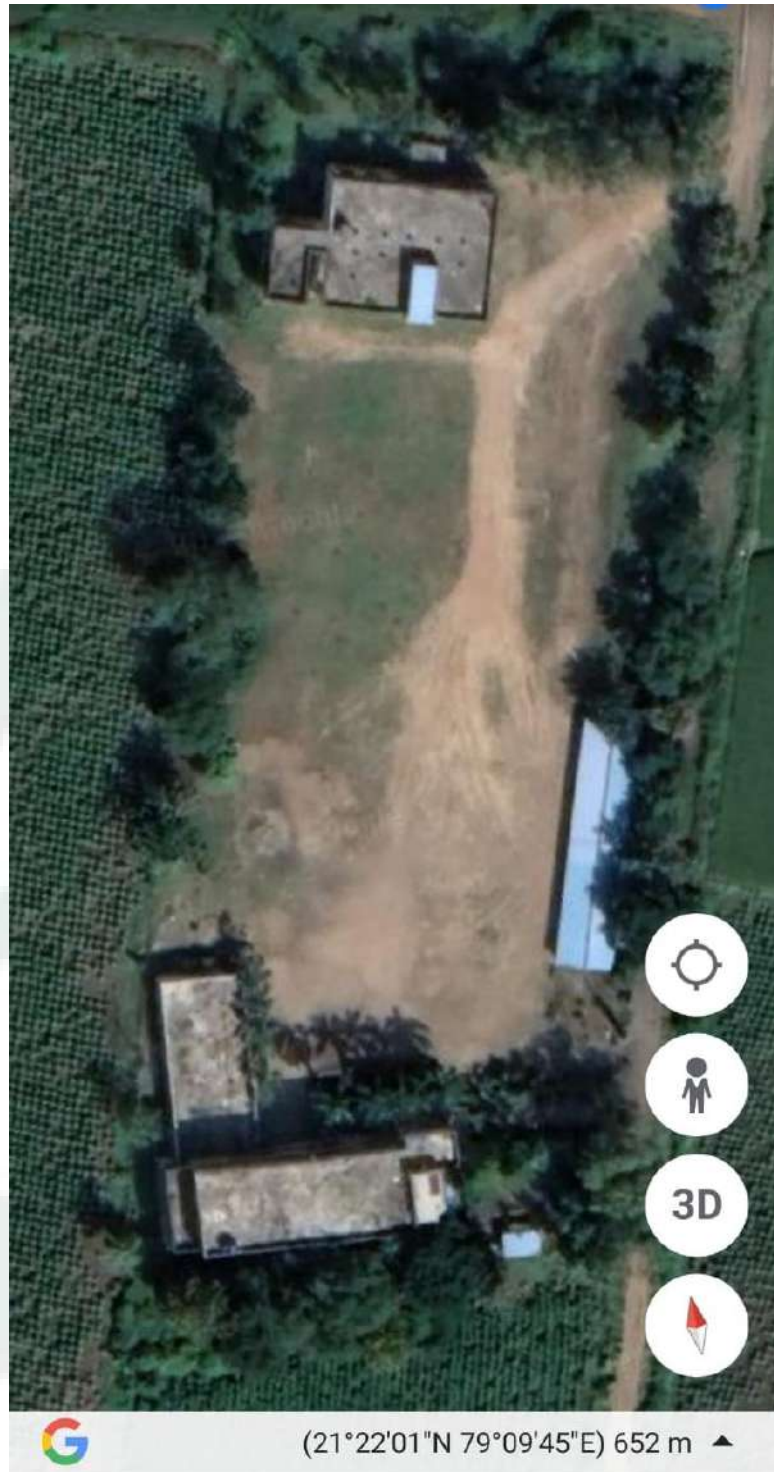
- **Display Boards to promote Environment Sensibilities on College Campus**

Various boards including quotes that promote environment awareness and ethics including air-pollution control, plastic-free campus, conservation of energy, recycling of resource, tree plantation, Nature conservation, etc. are displayed for all the stakeholders of the college.

- **Restricted Entry of Vehicles**

Vehicles entry is prohibited in college campus beyond parking areas. Security guards continuously monitor movement of vehicle inside the institute area.

Google Earth Images



LATITUDE- 21° 22'01" N
LONGITUDE- 79°09'45"E

GREEN AUDIT EXECUTIVE SUMMERY REPORT

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institute which will lead for sustainable development.

Mahatma Gandhi Arts & Commerce College Parseoni, Dist. Nagpur - 441105, Maharashtra, is deeply concerned and unconditionally believes that there is an urgent need to these fundamental problems and reverse the trends. Being a premier institution of higher learning, the college has initiated 'The Green Campus' program that actively promote the various projects for the environment protection and sustainability.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution.

The methodology include: physical inspection of the campus, observation and review of the documentation, interviewing key persons, data analysis, measurements and recommendations.

It works on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work and Alternative Energy. With this in mind, the specific objectives of the audit are to evaluate the adequacy of the management control framework of environment sustainability as well as the degree to which the departments are in compliance with the applicable regulations, policies and standards.

It can make a tremendous impact on student's health and learning college operational costs and the environment. The criteria, methods and recommendations used in the audit are based on the identified risks.

ABOUT COLLEGE IN BRIEF

1. Name of the Institute: Mahatma Gandhi Arts & Commerce College, Parseoni
2. No. of Branches: 02
3. No. of Students: Intake UG- 597 PG- 190, Total: 787
4. No. of Faculty Members: 14
5. No. of Non-Teaching Members: 07
6. No. of Buildings- 03
8. Total campus area: – 2 acrs. (87120 sqft.) (8094 sqm)
9. College building Spread Area: 25299 sqft (2351.27 sqm)

Build Up Area of the Institute	25299 Sq. ft.
Area of Plantation	26135 Sq. ft.
Total Area	87120 Sq. ft.

	No. of Students	No. of Teachers	Non-teaching staff
Gents	428	13	06
Ladies	359	01	01

- a) Girls common room: 01
- b) Garbage collection bins: 10
- c) Labs: 03
- d) Class rooms: 17
- e) Boys common room: 01
- f) First aid/Sick room: 01
- g) Drinking water coolers: 02
- h) IQAC Room -01
- i) Sports Room-01
- j) Presentation/Seminar Hall -02 (Capacity 150, Capacity-300)

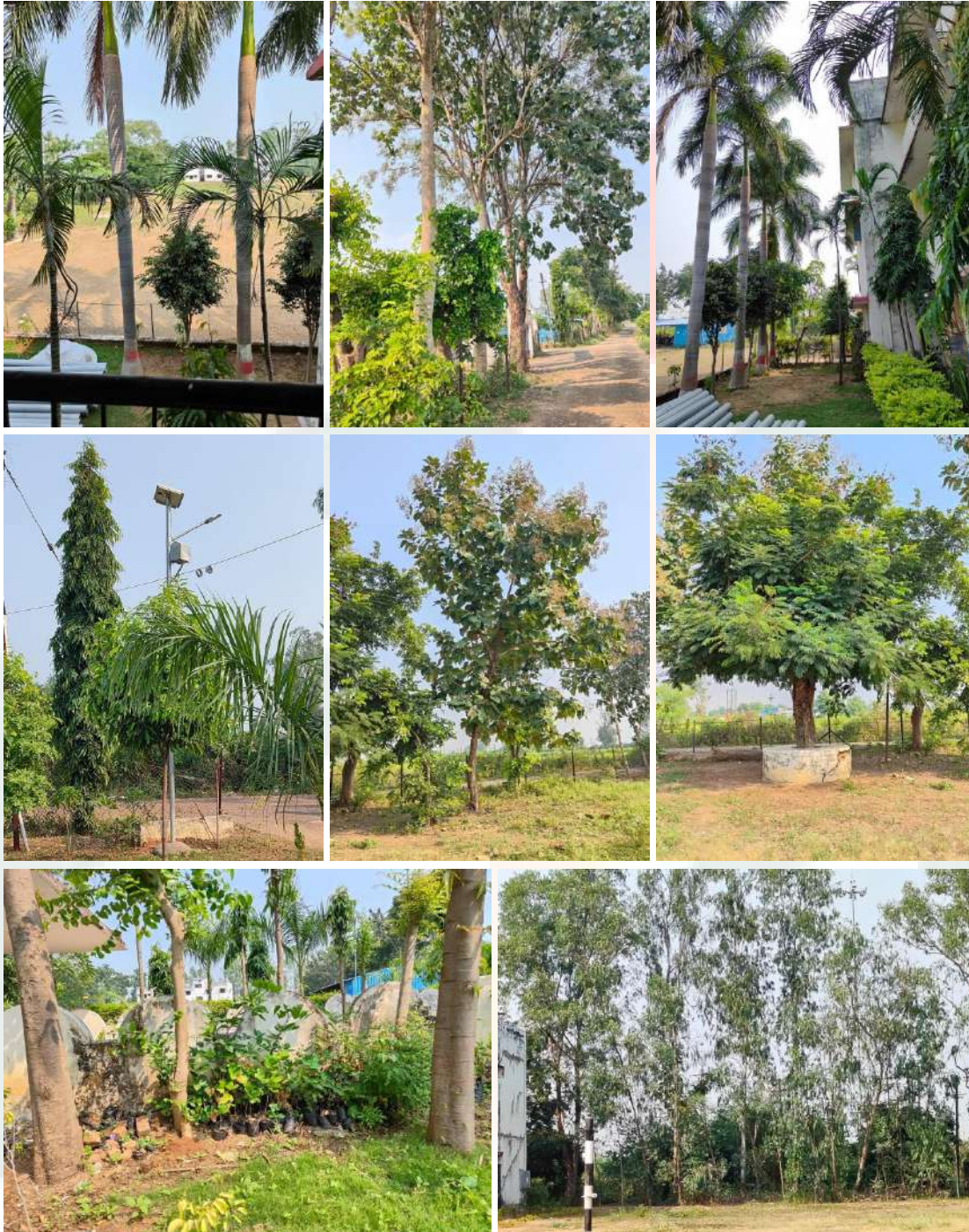
LAND USE OBSERVATION

The total area of Mahatma Gandhi Arts & Commerce College, Parseoni is 87120 Sq meters out of which the built up area is 25299 Sq meters and open space & plantation area is 4294.78 Sq. meters and 26135 Sq. ft, respectively. Based on finding, it can be concluded that college campus covered with vegetation is adequate to curb pollutants from the air.

Plantation within College

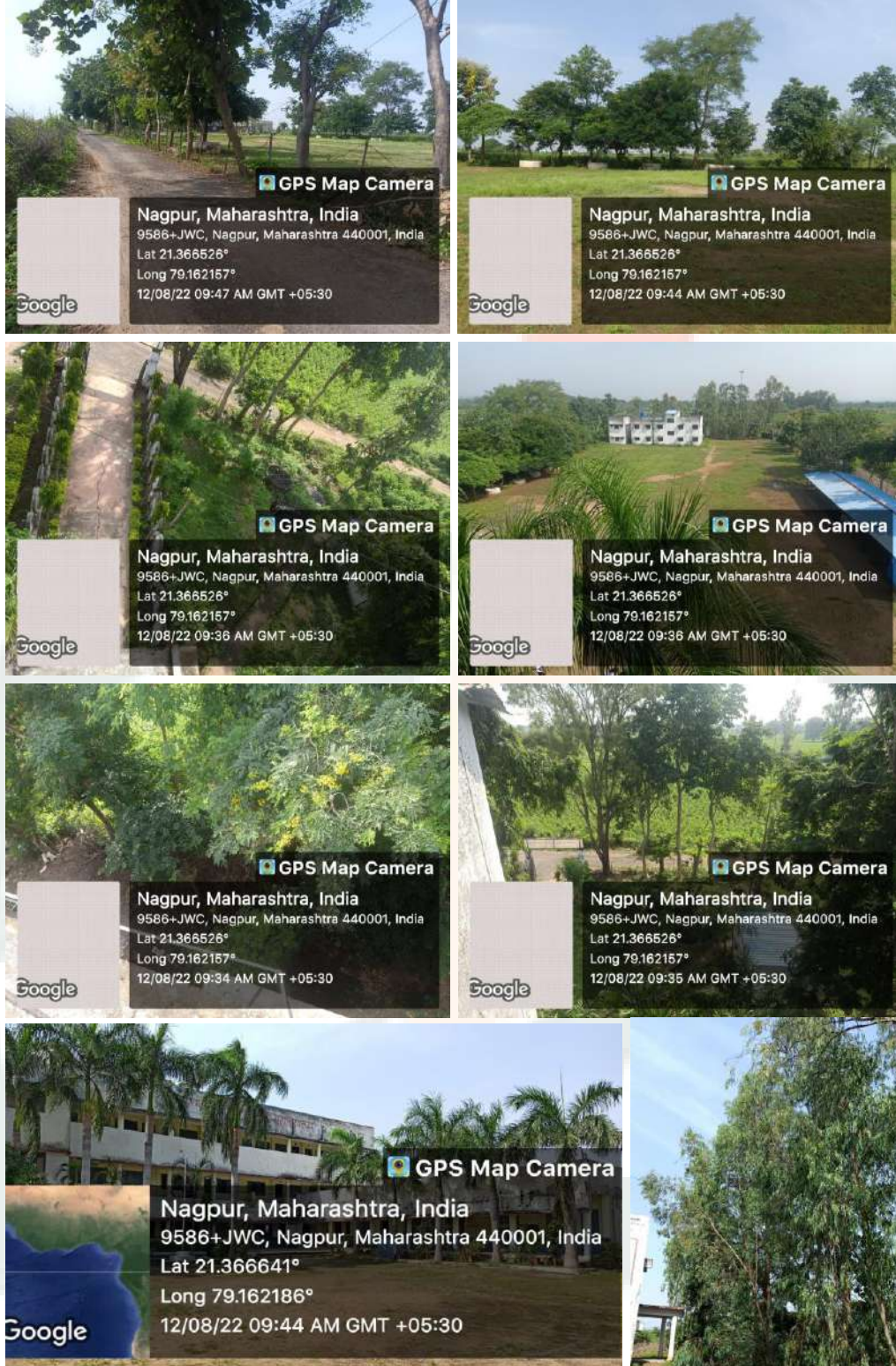


Plantation within College



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Plantation within College

Build up area of the institution



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Build up area of the institution

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 AIR QUALITY**

Temperature

Average Temp of Summer	39.75 °C
Average Temp of Winter	30.5 °C
Average Temp of Rainy Season	32-5 °C

The Climate of the Parseoni is characterized by the hot summer and general dryness throughout the year except during the south-west monsoon season, i.e., June to September. The temperature rises rapidly after February till May, which is the hottest month of the year. The mean daily maximum temperature during May is 44°C and the mean daily minimum temperature during December is 10°C

Test Report (Near Main Gate)

Meteorological Data / Environmental Conditions				
Average Wind Velocity: 3.0 km/h	Wind Direction: E-W	Relative Humidity (Max./Min.): 40/25 %	Temperature (Max./Min.): 35/28°C	Duration of Survey: 24 h
Parameter	Results	NAAQS 2009	Unit	
Sulphur Dioxide (SO ₂)	16.51ppb	80	µg/m ³	
Nitrogen Dioxide (NO ₂)	10.34ppb/ 5.5 µg/m ³	80	µg/m ³	
Particulate Matter (size less than 10 µm)	101.12	100	µg/m ³	
Particulate Matter (size less than 2.5µm)	45.17	60	µg/m ³	
Carbon Monoxide (CO)	0.54ppm/ 6.3 mg/m ³	4	mg/m ³	
Ozone (O ₃)	60.23ppb	180	µg/m ³	
AQI	107	0-500		
Observation: The higher the AQI value, the greater the level of air pollution and the greater the health concern. The AQI value of 50 or below represents good air quality, while an AQI value over 300 represents hazardous air quality.				
Remark: Low				

Ventilation Study:

Sr. No.	Location	Temp. (°C) (Min/Max)	Humidity (%) (Min/Max)	Local Air Velocities (m/s)
1.	Class room	21 °C - 33 °C	40- 60%	2.5
3.	Ground Floor	20 °C - 32 °C	40- 55 %	2.9
4.	2 nd Floor	21 °C - 39 °C	45- 60%	3.5

Observation: Air Velocity Should be at least 0.5 m/s to produce cooling effects
Remark: Comfortable

Recommendations

Management of College may consider on top priority:-

- 1) World Environment Day to be celebrated in college premises every year on 5th June and whole college students and staff should get involved and take OATH for ENVIRONMENT CONSERVATION not only in college but also in every span of life.
- 2) Environment and green club committee should monitor the Ambient Air Quality as per the guidelines of "Air (Prevention and Control of Pollution) Act 1981, and Water Quality as per IS 10500.
- 3) Use of bicycle in campus to be promoted.
- 4) Promote sharing of vehicles among the students and faculty members.



Parking area of the college showing vehicle usage



Parking area of the college showing vehicle usage

NOISE QUALITY ASSESSMENT REPORT

The most crucial aspect of the noise management programme is noise quality measurement. It provides information about potential noise-generating areas in the workplace, as well as students and employees who may be affected. Noise measurements taken during peak hours provide useful data for planning, preventing, and managing noise in the workplace. If there is a noise problem in the workplace, it is useful to track noise measurements taken at several locations.

Sound Meter Results

Location	Noise Level In dB
First floor	40- 45.9 db
Open passage- First floor	43- 46.9 db
Ground floor	42- 46.9 db
Library	35- 40.01 db
Open Ground	46- 49.9 db
College Office	40- 43.04 db
Outside entry gate	60- 65.08 db



Entry gate of the college and Road in front of the entry gate of the college

**AUDIT PROCESS
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Entry gate of the college and Road in front of the entry gate of the college

Recommendations

Management of College may consider on top priority:-

- 1) Noise levels must be monitored in accordance with the "Noise Pollution (Regulation and Control) Rules 2000."
- 2) According to the Central Motor Vehicle Act of 1988, vehicle exhausts must be evaluated on a regular basis in the college.
- 1) To avoid further Higher Noise level at Main Gate–
 1. Make a Green Canopy (Dense plantation) along the side of the college border.
 2. Display **No honking** board or **Sound Limit** Board outside the gate.

WATER MANAGEMENT AND QUALITY ASSESSMENT REPORT

The purpose of the Water Management is to collect rainfall, store it for later use, and/or recharge groundwater through constructing and renovating infrastructure in the villages. It encourages the restoration of historical water bodies, the development of infrastructure for water storage, and the secure disposal of sewage. It encourages WASH (water, sanitation and hygiene) behavior and affordable, sustainable innovations to ensure that everyone has access to clean water. It raises awareness of the importance of water conservation and strengthens local communities' capacities for effective resource management and long-term sustainability.

It is observed that the main source of water supply for the institute is a Municipal Corporation, bore well and well. Water is used for drinking purpose, toilets, Laboratories and gardening. During the survey, no loss of water was observed, neither by any leakages, nor by over flow of water from overhead tanks. During survey it was found that there are 3 Water Tanks, 2 Water Cooler assembled each on one floor.

The data collected is examined and verified. On an average the total use of water in the college is 2,500 L/day., 1,500 L/day for gardening, and rest for domestic the purpose.

Location/ Area	Avg. total consumption of water per day (in Litres)
College	2500L/day
Gardening	1500 L/day
Utilities/uses	1000 L/day
Source of Drinking Water	Municipal Corporation
Source of Water that requires other than drinking	Bore well

In addition to this an arrangement is made for collection of rainwater from Main Building and used it for ground water level recharging. The well which collects the rain water from all the collecting points helps to increase the seepage in soil to enhance the ground water level. The rain water collection pipes throughout college building are actively functioning to collect water in the collection well. Since the soil has seeping ability the rain water in rainy season is completely absorbed which helps to increase ground water level.

Water analysis results (Five Elements App)

Water parameters	Municipal Corporation	Bore well
Color	Clear	Clear
Odour	No Odor	No Odor
Temperature in celsius	28.9	28.9
PH	7.2	6.9
Conductivity	809	890
Total dissolved salts	404	449
Total hardness	347.8 mg/lit Very Hard	405.8 mg/lit Very Hard
Ca hardness	231.9 mg/lit	521.7 mg/lit
Mg hardness	115.9 mg/lit	58 mg/lit
Chloride	92.6 mg/lit Normal	72 mg/lit High
Alkalinity	0.0 mg/lit	0.0 mg/lit
P type Alkalinity	0.0 mg/lit	0.0 mg/lit
Total Alkalinity	0.0 mg/lit	0.0 mg/lit
Hydroxide Alkalinity	0 mg/lit	0 mg/lit
Carbonate Alkalinity	0 mg/lit	0 mg/lit
Bicarbonate Alkalinity	0 mg/lit	0 mg/lit

Report Generated by Using On Filed Water Testing Kit

Name of Student -

Lat - 21.09704

Long - 79.10701

Physico-Chemical Parameters

1. Color - Clear

2. Odor - No Odor

3. Temperature Degree Celsius - 28.9

4. pH - 7.2

5. Conductivity - 809

6. TDS in ppm - 404

7. Total Hardness = 347.8 mg/lit Very Hard

8. Ca Hardness = 231.9 mg/lit

9. Mg Hardness = 115.9 mg/lit

10. Chloride = 92.6 mg/lit Normal

11. P Type Alkalinity = 0.0 mg/lit

12. Total Alkalinity = 0.0 mg/lit

13. Hydroxide Alkalinity = 0 mg/lit

14. Carbonate Alkalinity = 0 mg/lit

15. Bicarbonate Alkalinity = 0 mg/lit

Report is Generated by Five Elements App.

Municipal Corporation water analysis

Report Generated by Using On Filed Water Testing Kit

Name of Student -

Lat - 21.09704

Long - 79.10701

Physico-Chemical Parameters

1.Color - Clear

2.Odor - No Odor

3.Temperature Degree Celsius - 28.9

4.pH - 6.9

5.Conductivity - 898

6.TDS in ppm - 449

7.Total Hardness = 463.8 mg/lit Very Hard

8. Ca Hardness = 405.8 mg/lit

9. Mg Hardness = 58 mg/lit

10.Chloride= 72.0 mg/lit Normal

11. P Type Alkalinity = 0.0 mg/lit

12. Total Alkalinity = 0.0 mg/lit

13. Hydroxide Alkalinity = 0 mg/lit

14. Carbonate Alkalinity = 0 mg/lit

15. Bicarbonate Alkalinity = 0 mg/lit

Report is Generated by Five Elements App.

Bore well water analysis



Drinking water facility, Water storing Tanks



Rain water harvesting management

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REPORT**

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Exit points from the roof, point of collection and well where the rain water is collected from the all the exit points .

Recommendations

- 1) To establish and implement the Water Conservation and Management Plan as per Environment Protection Act 1986.
- 2) Water analysis should be done regularly following the standards of CPCB.
- 3) The water Conservation Awareness Program to be conducted on World Water Day on 22nd March every year.
- 4) Display boards for switching off the taps to be put on at appropriate place.
- 5) To eliminate the spillage and over usage of water in washbasins, urinals and toilet push taps are highly recommended.
- 6) Need of monitoring, controlling overflow is essential and periodically supervision drills should be arranged. Automatic Leak detection systems and sensors for conservation of water.
- 7) Water meters to be installed on Well water -extraction system as per the guideline of Central Ground Water Authority (CGWA).
- 8) Ensure RO filtration equipment used for such usage, are regularly serviced and the next service date is displayed.
- 9) Ensure that all cleaning products used by college staff have a minimal detrimental impact on the environment, i.e. are biodegradable and non-toxic, even where this exceeds the Control of Substances Hazardous to Health (COSHH) regulations.

SOIL QUALITY ASSESSMENT REPORT

The goal of the soil quality assessment is to protect and improve the soil on campus while also increasing its fertility for plant development. The level of organic matter in soil is the most significant factor in sustaining soil quality. Litter fall in plantation areas is sufficient to keep soil organic matter at a healthy level. The following are the results of soil samples taken from the campus area.

VISUAL TEST (Main Campus Area)

Particle Type:	Clayey and Clay loam soil
Water Conditions:	Seeping Water
Type of material used to make Road in the entrance of the college	Cement
Fertility of Land	Fertile

Observations

Various trees are planted and maintained to keep the campus green. The College Campus possess has more than 147 plants of various kinds which includes herbs, shrubs and trees. A Row of Giant Royal Palm trees in front of main building greet the visitors as they enter the Campus. Most of the shade trees in the Campus like Neem, Gulmohar, Shisham, Karanja and Black Berry are more than 10 years old.

The parking area of the campus has a large *Tectona grandis* tree along with *Syzygium cumini* and other species of the trees to provide a large canopy and shade in the parking lot and boundary of the college near the fencing. One can find students sitting and studying under the canopy. The whole campus is surrounded by large trees which helps in reducing the noise pollution. There is a beautiful small landscaped garden with rose plants, *Thuja occidentalis* and other ornamental plants at the entrance of the Main Building.

The College premises has a collection of 64+ medicinal plants. Campus flora consists of more than 147 trees, 20 shrubs, 14 palms, 9 climbers and continuous belt of small herbs belongs to various families of angiosperms, gymnosperms and pteridophytes. Most of the shade trees like Peepal, Neem, Gulmohar, Shisham, Karanja, Teak and Black Berry are very old (above 20 Yrs of age).

Plantation within the college campus



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Plantation in the college campus

Plantation within the college premises



Plantation within the college premises



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- **1, 2 & 3- Fields at the back of the college premises.**
- **4- Juvenile plants in the college nursery.**
- **5- plantation in front of college building.**
- **6- garden near main gate of college**

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Herbs and weeds near boundary of the college

List of the plants in the college premises



V.S.P.M. Academy of Higher Education, Nagpur
Mahatma Gandhi Arts & Commerce College
Parseoni, Dist. Nagpur - 441105
(NAAC Accredited, Affiliated to BTM Nagpur University)



प्रमाणित करण्यात येत आहे की, आमच्या महाविद्यालयातील परिसरामध्ये खालील प्रमाणे झाडे आणि झाडांची संख्या आहे.

०१) महाविद्यालयात असलेले मोठी झाडांची नावे आणि त्याची संख्या (१५७)


- १) साग - ०९ (पश्चिम -०३, दक्षिण- ०१, पूर्व - ०५,)
- २) करंजी - २२ (पश्चिम -०४ , दक्षिण- ०४, पूर्व - ०७, उत्तर - ०२)
- ३) शिवम - ०८ (पश्चिम -०५, दक्षिण- ०१, पूर्व - ०१, उत्तर - ०२)
- ४) गुलमोहर (पिवळा) - ०६ (पश्चिम -०२, पूर्व - ०२ , उत्तर - ०२)
- ५) चीचवा - ०४ (पश्चिम -०१, उत्तर - ०३)
- ६) गुलमोहर (लाल) - ०१ (पश्चिम -०१)
- ७) सप्तपर्णी - ०४ (पश्चिम -०३, दक्षिण- ०१,)
- ८) जांभूळ - ०१ (पश्चिम - ०१)
- ९) बोर - ०२ (पश्चिम - ०२)
- १०) पाल्म - १७ (पश्चिम -०५, उत्तर - १२)
- ११) निलगिरी - २५ (दक्षिण - २५)
- १२) वड - ०२ (पूर्व - ०२)
- १३) कडुलिंब - ०६ (पूर्व - ०१)
- १४) बांबू - ०१ (उत्तर - ०१)
- १५) अशोक - २६ (पूर्व - ०१ , उत्तर - २५)
- १६) शिंदी - ०८ (पश्चिम -०६ , उत्तर - ०२)
- १७) पकस - ०१ (पश्चिम - ०१)
- १८) उंबर - ०१ (पश्चिम - ०१)
- १९) जाभं - ०१ (उत्तर - ०१)
- २०) बागुळ - ०२ (पश्चिम - ०१, दक्षिण - ०२)



Co - Ordinator
Green Audit
Mahatma Gandhi Arts
& Com College, Parseoni




IQAC CO-ORDINATOR
Mahatma Gandhi Arts & Commerce College
Parseoni, Dist. Nagpur



PRINCIPAL
Mahatma Gandhi Arts
& Commerce College
Parseoni, Dist. Nagpur

List of the medicinal plants in the college premises



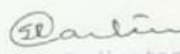
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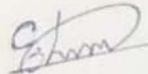



प्रमाणित करण्यात येत आहे की, आमच्या महाविद्यालयातील परिसरामध्ये खालील प्रमाणे औषधीयुक्त झाडे आणि झाडांची संख्या आहे.

०१) महाविद्यालयात असलेले औषधीयुक्त झाडांची नावे आणि त्याची संख्या (६४)

०१) करंजी - २२
०२) जांभूळ - ०१
०३) निलगिरी - २५
०४) काडूतिंब - ०६
०५) उंबर - ०१
०६) जाभं - ०१
०७) बाभुळ - ०२
०८) आवळा - ०६


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LIST OF BIRDS SPOTTED IN AND AROUND THE CAMPUS
Asian Koel
Common Myna
Indian Owl
Green Bee Eater
House Crow
House Sparrow
Indian Grey Hornbill
Indian Robin
Cuckoo
House Sparrow
Indian Grey
Hornbill
Indian Robin
Cuckoo
Common Kingfisher
Plum Headed Parakeets
Red Vented Bulbul
Bulbul
Baya Weaver Bird
Magpie Robin
Crane
Pigeon
Common Tailor Bird
Red Munia
Shikra
Blue Pigeon

Recommendations

1. Review periodically the list of trees planted in the garden, allot numbers to the trees and keep records. Give scientific names to all the trees using a method that will not hurt plant. Nailing plant should be strictly avoided.
2. Promote environmental awareness as a part of course work in various curricular areas, independent research projects and community service.
3. Create awareness of environmental sustainability and take actions to ensure environmental sustainability.
4. Establish a College Environmental Committee that will hold responsibility for the enactment, enforcement and review of the Environmental Policy. The Environmental Committee shall be the source of advice and guidance to staff and students on how to implement this Policy.
5. Ensure that an audit is conducted annually and action is taken on the basis of audit report, recommendation and findings.
6. Plantation of plants which are best for absorbing carbon dioxide (CO₂) and reducing carbon footprint (Aloe Vera, Areca Palm, Neem, Gerbera, Tulsi, Peepal, etc.) should be initiated.
7. Unlike trees, grasslands sequester most of their carbon underground. When they burn, the carbon stays fixed in the roots and soil instead of in leaves and woody biomass. Forests have the ability to store more carbon, but in unstable conditions due to climate change, grasslands stand more resilient. So it is recommended that the grassland area should be maintained and taken care of as before in the college premises.

WASTE GENERATION

This indicator addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, construction, glass, dust etc. and recycling. Furthermore, solid waste often includes wasted material resources that could otherwise be channeled into better service through recycling, repair and reuse. Solid waste generation and management is a burning issue. Unscientific handling of solid waste can create threats to everyone. The survey focused on volume, type and current management practice of solid waste generated in the campus.

E-waste disposal and management

Because of technological advancements, the use of electronic devices is increasing at a quicker rate. People are buying more advanced electronic equipment while discarding older ones, resulting in an increase in E-waste generation. E-waste contains harmful compounds such as cadmium, chromium, and PCBs, which pose a health concern. On a college campus, e-waste creation is at a minimum.

Observations

The organization is well established and equipped with the necessary and up-to-date electronic infrastructure, the e-waste generation is very minimal. The college has total of 64 computers and 08 printers in working condition. The cartridges of laser printers are refilled outside the college campus.

In the college's scrap yard, tube lights, CFLs and LEDs are typically included in the e-waste. This trash still needs to be disposed of. The amount of electronic garbage produced on campus is really little. E-waste and damaged items from the computer lab are being appropriately stored. In order to dispose of E-waste in a scientific manner, the institution has made the decision to get in touch with an authorised E-waste management and disposal facility. The audit team observed that because most electronic equipment still has some technical life left in it, there is now just a small amount of E-waste being produced.

SOLID WASTE MANAGEMENT

Solid waste is a heterogeneous material that must be disposed of in a methodical and environmentally conscious manner. The administrative office and the campus generate solid trash in college. Solid garbage generated on campus is separated and placed in green and blue collection receptacles. This indicator addresses waste production and disposal of different wastes like paper, food, plastic, biodegradable, construction, glass, dust etc. and recycling. Furthermore, solid waste often includes wasted material resources that could otherwise be channeled into better service through recycling, repair and reuse. Solid waste

AUDIT PROCESS REPORT

generation and management is a burning issue. Unscientific handling of solid waste can create threats to everyone. The survey focused on volume, type and current management practice of solid waste generated in the campus. The different solid wastes collected as mentioned above.

Observations

Organic plantation has been developed by the college. The campus collects 10 kilogrammes of solid garbage every day in total. Tree trash is a significant source of solid garbage on campus. Important and private documents are delivered to the Raddi Centre for recycling once their preservation term is over. Printing papers are reused by college staff. Single sided papers are used for writing and photocopy.



Garden waste and tree thrash collection point



Solid waste and E-waste

Recommendations

1. The vermicomposting units are suggested to make functional technically to get compost which could be used within college for the plants.
2. Create a vermicomposting certificate programme for students, and colleges may host an awareness-raising event for local farmers and offer advice on how to set up a vermicomposting unit on their property as part of an extension activity.
3. The waste should be segregated at source by providing separate dustbins for Bio-degradable and Non Bio-degradable waste.
4. The vermicompost produced in the college vermicomposting unit could be sold in reasonable rates to the required farmers, nurseries or houses under ISO: 9001-2015 for self-fund generation in college.
5. Reduce the absolute amount of waste that is produced from college staff offices. Set a goal for reducing the amount of trash generated each week.
6. Make full use of all recycling facilities provided by Nagar panchayat and private suppliers, including glass, cans, white coloured and brown paper, plastic bottles, batteries, print cartridges, cardboard and furniture.
7. Recycle or safely dispose of computers and electrical appliances. Think twice before printing material from the internet. If Possible, print on both sides of the paper.

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8. Shred or compost untreated wood and leaf wastes into chips and use them as mulch on garden beds to prevent weed growth, retain moisture, regulate soil temperature, and add nutrients back to the soil.
9. Check with local repair shops to see if they can use your old appliances for spare parts.

ENERGY USE AND CONSERVATION

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliance, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment.

Aim and objective:

- 1) To save conventionally produce electric energy
- 2) Use of non- conventional source of energy
- 3) Use carbon neutral electricity
- 4) Minimization of electric expenses

Observations

Following Energy Sources are used in the college:

- Electrical
- Petrol

ELECTRICAL POWER CONSUMPTION

The use of electricity is related to urbanisation, economic development, transportation, and industry. To do routine operations, electricity is needed. Energy use, energy sources, energy monitoring, lighting, appliances, natural gas, and cars are all included by this indication. Energy use is undoubtedly a crucial component of campus sustainability, thus its inclusion in the assessment doesn't call for any justification. The college is committed to lowering electricity use by swapping out outdated fluorescent lighting for LED bulbs and tube lights. The necessity to conserve energy by turning off electrical equipment when it's not in use is understood by both students and staff.

Total Energy consumption for last 3 years 2020-21, 21-22, 22-23.

Sr.No.	Equipment	Quantity
1	Computer	161
2	Printers	08
3	3D Printer	00
4	Xerox	02
5	Projector	03
6	Water cooler	02
7	Air Cooler	02
8	Fire Extinguishers	05
9	LED bulbs/Tubelights	98

Details	20-21	21-22	22-23
Electrical Consumption	7082 Units	5956 Units	6966 Units

Electricity Expenses for last 12 months 2022-23

Month	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
Units	277 units	853 units	576 units	727 units	613 units	612 units	668 units	446 units	658 units	188 units	527 units	821 units
Electrical expenses	2848.55	7559.14	6177.07	7276.42	6226.87	5625.15	6097.35	4225.40	6013.03	2049.89	4908.41	4916.84

List of major consuming equipment's/ devices lab instrument in institute are- AC, water Cooler, Workshop machineries

- Total no. of coolers used in summer- 02 Nos.
- No. of generator set : 01, Capacity: 30 KVA

Air conditioners used are-

Sr. No.	Type	Total No.
1	Split AC	03
2	Cassette AC	00
3	Window AC	00
4	Tower AC	00
5	Variable refrigerant flow (VRF AC)	00
	Total	03

Other than Electrical Energy consumption details

- No. of LPG cylinder used in canteen per year- 01
- No. of Two Wheeler Vehicle: 05
- No. of Four Wheeler: 07
- No. of Cycle: 01
- Pickup vans: 00
- Avg. Driving: Two Wheeler 312 km (one month Per person) (60km(one day km) *26(day) / 5(person))
- Avg. Driving : Four Wheelers 222 Km (one month Per person) (60km(one day km) *26 (day) / 7 (person))
- Last year Generators run: 00 Hrs.
- Total diesel consumption amount Rs 1 100 in 2022-23

Observations

Mahavitaran is the major source of electricity. 15500 KWH is the requirement of the college. In the terms of units, institute needs 580 units per month. All the department and common facility Centre are equipped with LED lamps. 98 LED lamps/tube lights are counted during survey. The photocell lights are seen installed in the college.

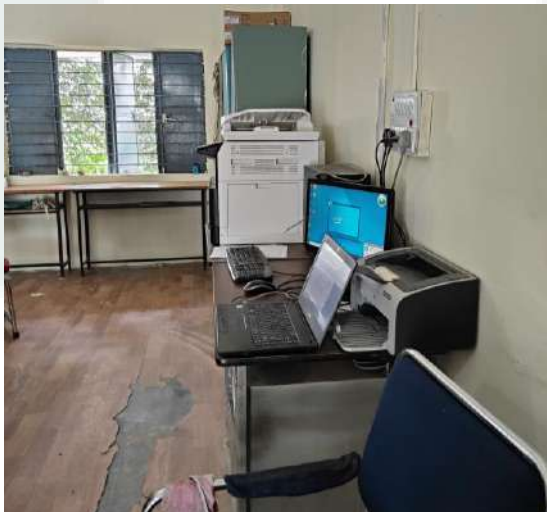


Generator, battery, photocells installed in the college

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Electrical appliances within the college



Recommendations

1. Management of College may encourage the staff and students, to use Common or public Vehicle instead individual vehicle to conserve fossil fuel.
2. Energy saving awareness should be done by displaying the boards at appropriate place
3. Give preference to the most energy efficient and environmentally sound appliances available.
4. Monitor and understand the importance of different sources of college energy consumption, and set appropriate and measurable targets for a reduction certain areas of consumption and/or in the overall consumption of energy.
5. Ensures that all electronic and electrical equipment's, such as computers, are switched off when not in use.
6. Centralized controls of lighting, Common Hall etc. to avoid any miss-use of electricity
7. Increase Installation of Solar panels for future convenience.
8. Shift to paperless regime wherever not required, example attendance muster replaced by biometrics, DG logbook replaced by computerized logbook, daily reports converted from paper to paper less, HOD meetings converted to paperless formats, and all such examples.
9. If there are equipment's running on standby mode, reduce the energy consumption on standby mode or minimize the running of equipment's on standby mode.

Overall facilities provided for the students

- College has spacious building .
- There are 2 Departments, Commerce and Arts with the following subjects: Arts stream- English, Marathi, Economics, History, Sociology and Political Science. B Com. Stream- Financial Accounting-I, Business Organization, Company Law, Business Economics-I.
- Certificate Course in Functional English, Applied Sociology, Economics of Self-Help Group and Human Rights is run by department.

Overall Observations



Language lab

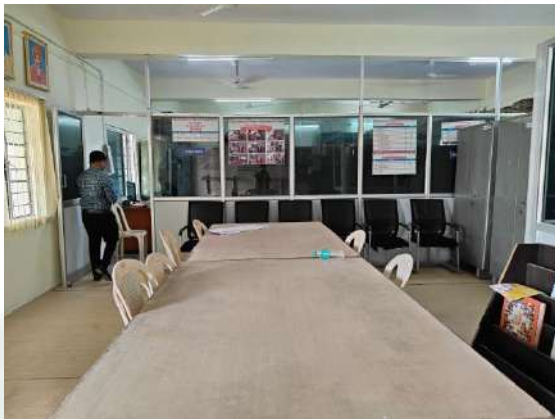


Library

Library



Library



Reading room in the Library



Plantation Drive

Sports Achievements



Name of Player	Game	Level	Place
Harshala Ghatole	Woodball	All India Inter University Woodball Championship,	Chandigarh
Sweta Jawanjaj	Woodball	All India Inter University Woodball Championship,	3rd Position Chandigarh
Pallavi Pachare	Woodball	All India Inter University Woodball Championship,	3rd Position Chandigarh
Ahbaj Pathan	Woodball	All India Inter University Woodball Championship,	3rd Position Chandigarh
Manish Tekam	Woodball	All India Inter University Woodball Championship,	3rd Position Chandigarh
Aniket Bhalavi	Woodball	All India Inter University Woodball Championship,	3rd Position Chandigarh
Prateek Bhagat,	Fencing	All India Inter University Fencing Championship,	Jammu



All India Inter University Wood ball championship Organized by Suresh Gyan Vihar University Jaipur Rajasthan. Date – 26 April 2023

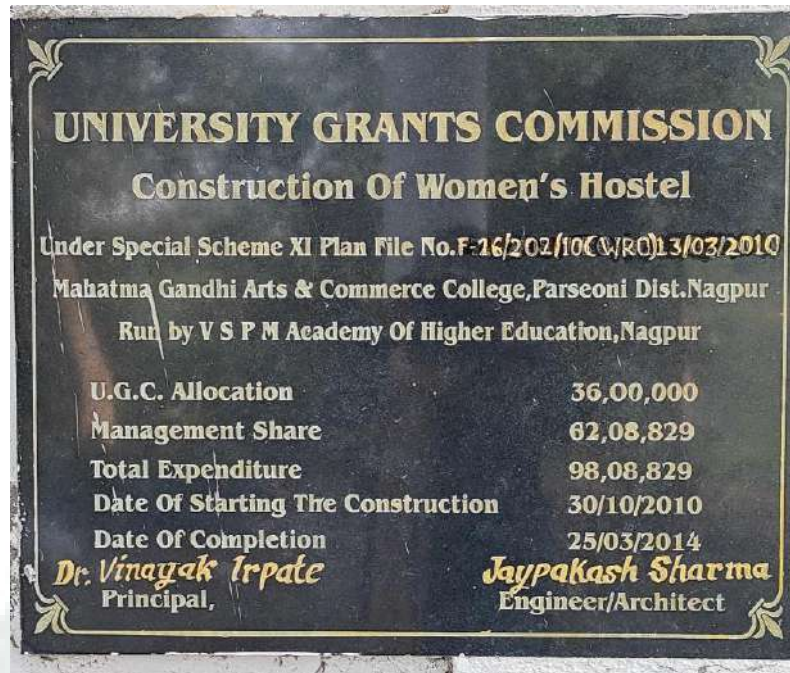
Name of the players :- 1. Dnyaneshwar Sawarkar (Silver Medal), 2. Kunal Dhobale, 3. Narendra Chatap, 4. Ishika Sahare (Gold Medal), 5. Ashlesha Sahare, 6. Khushi Lad

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Students playing on ground



Women's Hostel

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Girls common room



Visitors room, IQAC Room

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IQAC room and conference room



ICT facility

OVERALL RECOMMENDATIONS

1. Awareness among students and staff about green environment to be done by using tools like display boards. Encourage the faculties and students to plant trees in the college campus.
2. Prepare one **Medicinal Garden** and try to plant rare and endangered plant species.
3. Display of **Switch off Light, Energy saving, Water Saving** boards in Each Classroom, Staff rooms, and computer Lab.
4. Display of **Use Dustbin** boards in college premises.
5. Display Parking board at proper Places.
6. Update No smoking and No tobacco boards.
7. Maximize the proportion of waste that recycle & minimize the quantity of non- recyclable refuse.
8. Ensure stable public transport.
9. Promotion of Non-Motorized Transport (NMT): Usage of bicycles. Promote electrification of vehicles.
10. Measures for conservation of lower fauna needed.
11. Reduce energy consumption
12. Increase Awareness of Environmentally Sustainable Development- Use every opportunity to raise public, government, industry, foundation, and university awareness by openly addressing the urgent need to move toward an environmentally sustainable future.
13. Educate for Environmentally Responsible Citizenship- Establish programs to produce expertise in environmental management, sustainable economic development, population, and related field with help of environment science subject to ensure that all students are environmentally literate and have the awareness and understanding to be ecologically responsible citizens.
14. Promote environmental awareness as a part of course work in various curricular areas, independent research projects, and community service.
15. Do green audit regularly.

AUDITOR FOR THE PROCESS



Dr Nitisha Patankar
Director, ENVINZOA

About Auditor

- Director, ENVINZOA- Providing consultancy services.
- Developed an Application for assessing an **Insect Biodiversity**
- Developed an Application to know about insects coming across our daily life. **"We are Insects"**.
- **Entomology Consultant** in ongoing project Gevra Coal mining in Korba District, Chhattisgarh in **NEERI** in which insect diversity was studied.
- Developed an Application "I am Butterfly" in collaboration with Head of the Department (2021-22) to enlighten the information of different species of the butterflies found in the campus area and for interactive handbook on same.
- Research going on **gall-inducing insects** in central India.
- Had experience working under different projects in Environment Impact & Risk Assessment Division, National Environmental Engineering Research Institute (**NEERI**), Nagpur, India from **October 2004 - September 2006**.
- Had experience of post-doctoral research in the project entitled **"Network Project in Insect Biosystematics"** specifically on the Family-Curculionidae, Order- Coleoptera in the Division of Entomology, **Indian Agricultural Research Institute (IARI)**, PUSA, New Delhi, India from **September 2006 - August 2009**.
- Trained in different biological experimental techniques and methodologies like Immunohistochemistry (Single/Double), Cryomicrotomy, Electronmicroscopy (EM) of insect Brain, Scanning Electron microscopy (SEM) for insect morphological structures, Microtomy, Histological and Neuroanatomical staining techniques, Tissue Mounting techniques and methodologies, Insect collection and their preservation, Insect culture, Morphological study of Insect (Insect Taxonomy), Biological Component Studies of Environment Assessment, Zoo/Phytoplankton Analyses, Physico-Chemical Analysis of Water, etc.
- Teaching experience in Zoology in **Hislop College**, Nagpur, Biological Sciences in **Ramdeobaba College of Engineering and Technology, Bhiwapur Mahavidyalaya**, Bhiwapur, **PG Department of Zoology, Hislop College**, Nagpur, **Air Force School**, Vayusedna, **Sanjuba High School**, **Nevjabai Hitkarini College**, Bramhapuri, **PGTD of Zoology**, Nagpur University, Nagpur.
- Had **15 National and International** publications
- Presented **17** papers in National and international conferences and participated in **2** National seminars.
- Talk/Lecture and keynote Speaker experience-
 - Delivered lecture in training program on Ecology and Biodiversity for EIA projects on the topic **"Assessment and identification of insect fauna as an ecological indicators"** in CSIR- National Environmental Engineering Research Institute, Nagpur, India under Online Training Program on "Ecology and Biodiversity" held from
 - Delivered lecture series on respective science II syllabus of 8th, 9th and 10th class in Wainganga Vidyalaya, Kolari, Mahatma Phule Sikshan Santha, Bramhapuri.
 - Delivered Lecture on the topic **"Assessment and identification of aquatic insects as an ecological indicator"** on **October 28-29, 2021** in CSIR- National Environmental Engineering Research Institute, Nagpur, India who organized CPCB sponsored online Training Program on Biological Monitoring Analysis and Testing (Microbiology, Bio-Assay and Bio-monitoring) SOPs, Data Interpretation and Quality Assurance".
 - Delivered Lecture in training Programme on **"Ecology and Biodiversity for Environmental Resource person Impact Assessment"** Projects held during **February 19-21, 2020** in CSIR- National Environmental Engineering Research Institute, Nagpur, India.