

# Green Audit, 2022-'23

NUR MOHAMMAD SMRITI MAHAYIDYALAYA,

DHULIYAN, MURSHIDABAD

## NUR MOHAMMAD SMRITI MAHAVIDYALAYA



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Ref. No...... Date......

## **Declaration**

The Environmental/Green audit conducted and prepared by our college are completely based on self-enquiry and data collected by committee members. The perception about the college campus was conducted on students and their suggestion for improvement helped to make the necessary changes. The best practices adopted needs to be increased for betterment of the students as well as the social messages and responsibility that our college has for its social community.

Countersigned by

Rayon Day Principal

Principal
Nur Mohammad Smriti Maha-Vidyalaya
Duck Banglow, Dhuliyan, Msd

Signature of the members

1. Some Baneyles 2. Md Zinaul Hogre Biswas

3. Ild les tak Asad 4. Anup Kumer Mendes

5. And Bhomid

6. Rajon Das

7. Janul Jestons 8. Januar Basu

9. Problemat Alans

#### FORMAT OF GREEN AUDIT: QUESTIONNAIRE

#### 1. Concept of Environmental Audit or Green Audit

Environmental audit or Green auditis a general term that can reflect various types of evaluations intended to identify environmental compliance and management system implementation gaps, along with related corrective actions. In this way they perform an analogous (similar) function to financial audits. The term "Green" means eco-friendly or environmentally benign. This can acronymically be called as "Global Readiness in Ensuring Ecological Neutrality" (GREEN). "Green Auditing", an umbrella term, is known by another name "Environmental Auditing". Although there is no universal definition of environmental Audit, many leading companies/institutions follow the basic philosophy and approach summarized by the broad definition adopted by the International Chambers of Commerce (ICC) in its publication of Environmental Auditing (1989).

According to ICC Environmental Auditing: "A management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of safeguarding the environment and natural resources in its operations/projects."

#### 2. Introduction:

The term "protocol" in environmental audit means the checklist used by environmental auditors as the guide for conducting the audit activities. Current technology supports many versions of computer-based protocols that attempt to simplify the audit process by converting regulatory requirements into questions with "yes", "no" and "not applicable" check boxes.

Green Audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of environmental diversity. The 'Green Audit' aims to analyze environmental practices within and outside the college campus, which will have an impact on the eco-friendly ambience. It is based on exercises that can help to measure the risk to the health of inhabitants and the environment. Through Green Audit, one gets a direction as how to improve the condition of environment and there are various factors that have determined the growth of carrying out Green Audit.

This includes the plants, greenery and sustainability of the campus to ensure that the buildings conform to green standards. This also helps to monitor that the Environmental Policy is enacted, enforced and reviewed using various environmental awareness programme.

There are generally two different types of environmental audits: Compliance audits and Management systems audits. Compliance audits tend to be the primary type in the US or within US-based multinationals.

#### 3. Purpose of Green Audit:

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

- a. Preparation and filling up of questionnaire
- b. Physical inspection of the campus
- c. Observation and review of the documentation
- d. Interviewing key persons and data analysis
- e. Measurements and recommendations.

It works on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity.

'Green Audit' aims to analyze the environmental practices within and outside the college campus, which will have an impact on the eco-friendly ambience. Green audit is assigned to the criteria 7 of NAAC.

There are main three pillars i.e., zero environmental foot print, positive impact on occupant health and performance and demonstrating 100% environmental literacy among graduates. The goal is to reduce CO<sub>2</sub> emission, energy and water use, while creating an atmosphere where students can learn and be healthy. The college has to work on the several facets of 'Green Campus' including Water Conservation, Tree Plantation, Waste Management, Paperless Work, Alternative Energy and Mapping of Biodiversity.

#### f. Methodology

In order to perform green audit, the methodology included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following areas to summarize the present status of environment management in the campus:

- Water management
- Energy Conservation
- Waste management
- E-waste management
- Green area management

A water audit is an on-site survey and assessment to determine the water use and hence improving the efficiency of its use and method(s) of conservation. Water is used for drinking purpose, canteen, toilets, laboratory and gardening. Loss of water must be checked, neither by any leakages, nor by over flow of water from overhead tanks. The green audit practically involves use of renewable sources, conservation of the energy, rain water harvesting program and efforts of carbon neutrality, plantation of trees, E-waste management and hazardous waste management.

## **AUDIT REPORT**

### 1. GENERAL INFORMATION

#### 1.1 Year of Establishment of college: 2008

#### 1.2 History behind the establishment of the college:

Till the year 2007, there was no institution of Higher Education at Dhuliyan.In the year 1999, a group of enthusiasts and social workers, under the guidance of Abul Hasnat Khan vowed to mitigate the suffering of student-community by setting up a degree college that will go a long way in bringing higher education to their door step.

An Organizing Committee was formed in presence of the then District Magistrate, S.D.O, representatives of Dhuliyan Municipality and samserganj Block, M.P, Jangipur constituency, M.L.A and people of Dhuliyan, in a 'Nagarik Convention' held on 17.05.1999. The organizing Committee started working with the single aim to translate the idea of establishing a college into reality. 'Nur Family'- eminent merchant in the sector of manufacturing Bidi came forward with a broad heart and promised to pay a large sum for initial expenditure. Accordingly the college was named after "Nur Mohammad", their departed father who was also a social worker and a person interested in education.

The total population of Samserganj Block is 2,11,844 nos out of which 81.22% population belongs to Muslim Community ,18.75% belongs to Hindu Community and 0.03% belongs to other Communities Dhuliyan Municipality is adjacent to this Block with 72850 nos of population where also more than 70% population is belonging to Muslim Community. Literacy rate in this Block is very poor (Male- 38.09%, Female- 22.90% & average is 30.55%), Block is lacking proper education facility especially in Higher Education Sector. There are about 10 Higher Secondary Schools in and around Dhuliyan. However, after Schooling students of this area used to go to Jangipur, Aurangabad, Farakka and Malda for availing College facility and Higher Education. There is no College in the Block area including adjacent Dhuliyan Municipality area till 2007-08.

Mr.Khalilur Rahman and his brothers arranged for the college space-a two storied building (office space of the concern) at DuckBanglow, Ratanpur for inauguration of the academic session temporarily. Meanwhile, recognition and affiliation simultaneously came from the Govt. of West Bengal and the University of Kalyani to the Organizing Committee. Amidst great enthusiasm the college started functioning from 25<sup>th</sup> July,2008 in presence of the Inspector of Colleges and other Departmental heads of the University of Kalyani.

The response was astonishing, within a short span of time 301 students (optimum capacity) took admission in the B.A 1<sup>st</sup> Year class. Most notable, 90% of the students are belonging to minority

Community of which 40% are girl students. It needs mention that most of the students are first generation learners and belonging to families' dependent on Bidi Industry.

Nur Mohammad Smriti Mahavidyalaya started its glorious journey since 2008 with the affiliation to the University of Kalyani. This college has long term vision and dream to establish high value, noble idea, rich culture, justice and eradicate prejudice among the students as roll model in the society. The college offers undergraduate courses in Arts subjects only. It offers honours in Bengali, English, History, Education and Sociology; General/Programme courses in Bengali, History, Education, English, Philosophy and Arabic.

Recently NUR MOHAMMAD SMRITI MAHAVIDYALAYA has started its session from 2008-09.

#### 1.3. Location of the Institute:

Nur Mohammad Smriti Mahavidyalaya Campus is located at Dhuliyan, Murshidabad, West Bengal, Pin-742202.

Dhuliyan is within the Samserganj Block which is one of the 26 revenue Blocks in the district of Murshidabad and about 280 k.m north of Kolkata and at a distance of 320 k.m from siliguri.It also acquires a special place in the state of West Bengal due to its geographical location. It is bounded by Pakur district of Jharkhand in West and Malda district in North and Bangladesh in the East. It is located 18 k.m away from Farakka, well known for India's Largest Barrage on the river 'Ganga' and Super Thermal Power Project of NTPC.

As ancient history of this locality revealed, once Samserganj was an important habitation and commercial centre, the suffix 'Ganja' had come up from that context, Dhuliyan was also a place of Commercial activity —a river port, having direct link with North & East India via river the 'Ganga'. Time had snatched this link; the 'Ganga' had changed its course and now flowing engulfing few k.m. of original century — old Dhuliyan Municipality. The distance from our College to Dhuliyan Ganga railway station 2 k.m & Duck Banglow bus stand 1k.m.



| a. | Total campus area:     | 2 acre.      |  |
|----|------------------------|--------------|--|
| b. | Total built up area:   | 2050 sq. mt. |  |
| c. | Total open space area: | 6044 sq. mt. |  |
| d. | Total green area:      | 1500 sq. mt. |  |

# 1.4Whether the college is implementing the Green Policy for the first time: "yes", "no" and "not applicable"

**Response:** Yes, the College has conducted the internal Green Audit under the College environmental committee. The Annual reports records reviewed during the audit, Main focus of this is to bring awareness of environmental values in students and society.

1.8 Whether green audit is followed annually, if so, please produce the year-wise recommendations of the auditor along with report (as Annexure): "yes", "no" and "not applicable"

Response: Not applicable

1.9 Whether college has constituted the "College Environmental Committee", "yes", "no" and "not applicable" (if so, give the details of it):

**Response:** College has constituted "College environmental committee" with faculty of different department along with students, Non-Teaching Staff and the department of Environmental Studies.

#### 1.9.1 Name of the Committee members:

| Sl. No. | Name of committee Members   | Signature           |
|---------|-----------------------------|---------------------|
| 1.      | Dr. Rajesh Das - Principal  | Laren Das           |
| 2.      | Dr. Md Zinarul Hoque Biswas | Md Zinaw Hoave Simo |
| 3.      | Dr. Ishani Basu             | Ishani Basu         |
| 4.      | Dr. Amit Bhowmick           | Ant Bhomid          |
| 5.      | Dr. Anup Kumar Mondal       | Anup Kumer Mondas   |
| 6.      | Dr. Soma Banerjee           | Som Bary            |
| 7.      | Mr. Prabhat Das             | Fraktot Das         |
| 8.      | Md. Mostak Azad             | Ald Slastak Asad    |
| 9.      | Fakrul Islam                | Jawan Jam           |

#### 1.9.2 Number of meetings conducted so far.

**Response:** Committee conducted two meeting in the session 2022-23.

#### 1.9.3 Resolution of the meetings:

- Environmental committee would work on water and energy conservation practices in college premises.
- 2. As per reviews of last twelve months' environmental activities, committee has decided to involve more students from different departments and our targeted number of students is around 200.
- 3. Committee would monitor different environmental activities like awareness programmes, rational utilization of water, energy, sanitation, etc.
- 4. Committee has decided to make artificial nests for birds that visit our green campus for biodiversity conservation.
- 5. Each week Committee members wouldmonitor tending, thinning and weeding programmes for proper health of different tree species.
- 6. Committee has decided to establish a Butterfly Garden for beautification and conservation of insects.
- 7. Committee has decided to establish MOU with different NGOs at National and International level for collaborative works on Conservation as well as environmental protection.

- 8. Committee has decided to arrange awareness campaign among students and staff members about solid waste minimization, how to reduce the carbon footprint and water footprints and bad effect of junk food.
- 9. Committee would advise the faculty members for monitoring and guide the students for conservation of insects, birds and plant diversity in our college campus.
- 10. Committee has decided to arrange a training programme for staff and faculty members and students by different vendors on environmental protection, solid waste management, reducing carbon soot particle, water footprints etc.
- 11. As per committee decision all vendors and their workers would train committee members and volunteers about waste management that will reduce environmental impact.
- 12. The environmental committee has decided to involve vendors for managing the E-waste and repair or reuse of different electronic gadgets and computers, including different laboratory instruments to reduced E-waste.
- 13. Committee has decided to make task force for proper collection, disposal of solid and liquid waste that comes from different sides of the college.
- 14. Committee has decided to conduct different training programmes for students on green entrepreneurship like Vermi-composting, ecotourism, plastic recycling and medicinal and aromatic plant cultivation.

#### 1.9.4 Action taken by the Committee:

The impetus for a successful Green Campus must begin at the top and emanate throughout the rest of the campus. Without a strong message of commitment and involvement from both the Chairperson and Members of the Committee, well-intentioned initiatives may be too fragmented to allow for Institute-wide participation. Thus, in view of this, the committee executed the following plans:

- Involved Stakeholders to make the Go Green Campus initiative function all throughout the year.
- 2. Established a Green Campus Environmental Ethics Awareness campaign.
- 3. Identified the environmental impacts to target specific areas for improvements.
- 4. Organized Awareness Programs for the students, faculty and society.
- 5. Developed a strategic plan and created student teams to carry out specific task (soft plan). For Instance, a plan to save energy at the institute level with time bound plan to install Solar Power Station mandatorily either at the top of the Institute building or in the open field. This will enable the institute to have 24 x7 power supply.

- Phased out the CFL and conventional light source such as bulbs and tube lights, halogen and mercury street/campus lights and replaced them by LEDs, Old fans are replaced by power saving fan.
- 7. Established a vermicomposting unit, mushroom culture unit.
- 8. Awarded the students for proper use of waste management system.
- 9. Established public/private partnerships with personnel from federal, state, and local environmental agencies, utilities, and the business community.
- 10. Evaluated daily operations in terms of pollution prevention, waste stream management, and energy efficiency reducing, reusing, recycling, and repairing wherever possible.
- 11. Purchased only Energy Efficient Computers and other electronic appliancesviz: "ENERGY STAR" or any other equivalent.

#### 1.9.5 Future programme of the Committee:

- 1. Environmental committee will work on water and energy conservation practices in college premises as early as possible.
- 2. As per reviews of last twelve months' environmental activities, we will involve more students from different departments and our targeted number of students is around 300.
- 3. Committee has decided to establish a bio-floc in the near future.
- 4. Establishing more MOU-s with different NGOs at National and International level for collaborative works on Conservation as well as environmental protection.
- 5. Committee has decided that different certificate courses will start for students on Environmental Advocacy, Green Technology, Nursery technology, gardening, Women empowerment, child protection, Ecotourism and Sustainable Development.
- 6. Committee monitors different environmental activities like awareness programmes, rational utilization of water, energy, sanitation, hygiene and use of bio-fertilizers and bio-stimulating pest control systems.

#### 1.9.6 Policy enforcement strategies:

#### Vision:

The College recognizes that in pursuing its strategic objectives, not least in relation to research and teaching, it has a responsibility towards, and should aim to protect and nurture the environment. By exercising proper control over all its activities, the College will aim to ensure sustainable use of resources and prevent the damage of the natural attributes and landscape of the college.

The College will aim to manage its operations in ways that are environmentally sustainable economically feasible and socially responsible. Therefore, this policy represents an important

component of the College broader sustainability strategy. The aims and objectives of the College has always been for safeguarding the environment, and. It applies to all land, premises and activities within the control of the College.

The Environmental policy aims and objectives will be supported by a series of specific policies aimed at identified environmental issues (for example Paper Policy). The specific policies will set the management standards for these issues and will be further supported by guidance to assist responsible groups and individuals.

#### **Aimsand Objectives**

#### **Environmental Management**

- > To implement a carbon management strategy, including the efficient use of energy.
- > To ensure the uptake of low carbon technologies in buildings and equipment.
- > To promote sound environmental management policies and practices throughout the College.
- To reduce and, where practicable, prevent pollution of all kinds.
- > To adopt targets for improving environmental performance.
- To reduce greenhouse gas emissions in line with College targets; 6% on 2005/06 levels by 2025.

#### Water

☐ To make efficient and environmentally responsible use of water, including identifying opportunities for water reuse.

#### Procurement

- To work with suppliers to promote sustainable resource management practices.
- To promote life cycle thinking in the procurement of goods and services.

#### Waste Reduction and Recycling

- ♣ To set and achieve targets for reducing resource use.
- To minimize the adverse environmental impacts of the decommissioning and disposal of college assets.
- 4 To increase the rate of recycling of all appropriate materials based on life-cycle principles.
- ♣ To implement sustainable resource management practices, based on reduce, reuse and recycle principles.

#### **Transport**

- To develop and implement a college strategy based on sound environmental and sustainability principles.
- To implement sustainable transport practices with the aim of achieving the carbon reduction targets of the College.

#### College Estate

- To raise awareness of staff and students of the College regarding environmental impact, activities and performance and good practice.
- To require a sustainable construction plan for any new College development and refurbishment project.
- To manage the College estate with a view to enhancement of biodiversity wherever possible.

#### Awareness and Training

- To communicate internally and externally the College environmental objectives and performance.
- o To provide appropriate environmental educational programmes for staff and students.
- o To encourage and facilitate feedback and suggestions on ensuring good practice.

#### Evaluation of Environmental Policy

• To undertake a regular review of environmental management procedures and activities to ensure suitability, adequacy and effectiveness.

#### Responsibilities

The main responsibility for implementation of this policy lies with the Environmental Protection Committee and the Principal as the Chief Executive.

The Environmental Committee will actively monitor the performance of College and Departments in the implementation of the aims and objectives of this Policy in the activities under their control. Whilst the College accepts the main responsibility for implementation of this policy, individuals have a very important role in co-operating with those responsible for safeguarding the environment. Individuals are required to abide by rules and requirements made under the authority of this policy.

| Question  | Response                                  |
|---|---|
| 1.10 Whether college has conducted any            | College has conducted awareness           |
| awareness/responsibility programme among the      | programme and responsibility about        |
| staff members: "yes", "no" and "not               | environmental pollution every year in our |
| applicable"                                       | college campus                            |
| 1.11 Whether all the departments/teachers/non-    | Yes                                       |
| teaching members/students are aware about the     |   |
| need of the environmental protection and audit:   |   |
| "yes", "no" and "not applicable"                  |   |
| 1.12 Whether college has involved the students as | Yes                                       |
| volunteers in greening programmes: "yes", "no"    |   |

| and "not applicable"   |   |
|--|---|
| 1.13 Whether construction/demolition/repairing are in compliances with green standard: "yes", "no" and "not applicable"  | Yes   |
| 1.14 Whether college has conducted any workshop/seminar/lecture on environmental awareness programme inside and/or outside the campus:"yes", "no" and "not applicable" | Yes   |
| 1.15 Whether the institute has ENVS Course curriculum "yes", "no" and "not applicable"   | Yes   |
| 1.16. Whether college provides any community services: "yes", "no" and "not applicable"  | Yes, College provides different community services to the local area around in our college. |

1.17 Whether the students are aware about the use of medicinal plants (any lecture/seminar/conference organized on it): "yes", "no" and "not applicable"

Response: No.

#### 1.18 Comments on the following:

#### 1.18.1 Plantation program: Y/N

**Response:** Yes, Plantation program is organized every Year, 5<sup>th</sup> June (World Environment Day) by Eco club, environmental committee and NSS.

#### 1.18.2 Formation of Natural club/Eco club: Y/N

Response: No.

1.18.3 Management of natural resources, wildlife, conservation of species: Y/N

Response: Yes, Natural Resources include the entire natural environment that is essential and useful to human beings. Management of natural resources are actually stocks of nature like soil, minerals, water, coal, forest. In these circumstances Environmental committee entities, the following steps:

- a) Plantation.
- b) Management of plastics containing garbage

# 1.18.4 <u>Any project sponsored by national funding agency/NGO; independent project related to environmental issues: Y/N</u>

Response: No.

# 1.18.5 <u>Is there any incidence of burning of plastics containing garbage within the campus for necessary reduction: Y/N.</u>

**Response:** NO, for the reduction of plastic containing garbage college authority especially environmental committee collected plastic containing garbage from different sites of college campus and delivered to Dhuliyan Municipality for recycling.

### 1.18.6 Celebration of 5th June (Environmental), Ozone day, Earth Day etc.: Y /.N

**Response:** Yes, World Environmental day is organized every year on 5<sup>th</sup> June in our college campus with different programme like plantation, cleaning college campus and collection of non-biodegradable waste material awareness programme about environmental pollution.

#### 1.18.7 Number of field visits/survey records: Y/N (if Y number)

Response: NO

#### 1.18.8 Campus biodiversity register

Response: NO

#### 1.19 General aspects (express in statements)

**Response:** The College caters to a biodiversity register in order to assess the existing status of the biodiversity and to monitor the existing status of the different flora and fauna of the campus. The register also tries to maintain the other issues related to biodiversity of the campus in the related issues.

| Aspects                   | Discuss about  |  |
|---------------------------|--|--|
| 1.19.1 Campus cleanliness | The campus cleaning is the most cultivated process as we believe. "Cleanliness is the next to godliness". The entire process is executed |  |

|  | with the mutual collaboration of college<br>authority and other wings for having the<br>pleasure of clean, green and plastic-free eco-<br>friendly campus.  |
|--|---|
| 1.19.2 Rainwater harvesting  | No, Rain water harvesting plant yet to be executed but future planning prospects to be exercised in the near future.  |
| 1.19.3 Solar street lamps  | Yes, we have Solar Street lamps are there.  |
| 1.19.4 Carbon dioxide neutrality on the campus by developing greenery  | The Carbon neutrality is being exercised by the mass afforestation & fruition programmes as a part of the celebration of the different days related to the issues of carbon neutrality.                                   |
| 1.19.5 Restriction in use of plastic products  | Yes, uses of plastics are restricted.   |
| 1.19.6 Culture of some ducks, swans etc., for scenic beauty in pond or any water body resources (if available) | No, ducks, swans etc., for scenic beauty in pond are not yet to be executed but future planning prospects to be exercised in the near future.   |
| 1.19.7 Green monitoring by green committee/volunteers/team   | The Green committee along with the green volunteers also gives attention for monitoring the green ambience around the college campus by exercising the different parameters in order to maintain a sustainable ecosystem. |
| 1.19.8 Training on vermicomposting   | No, Vermi-compost pit yet to be executed but future planning prospects to be exercised in the near future.  |
| 1.19.9 Celebration of 'No vehicle Day' on a particular day   | Yes,  |
| 1.19.10 Dams inside the campus to meet the demand for water  | NO  |
| 1.19.11 Installation of fire safety instruments in all the buildings/departments                               | Yes,  |
| 1.19.12 Toilets/separate toilets for differently abled students  | One separate toilet has been designed and developed in order to cater the need of the differently able students along with the designed ramps for their smooth running around the campus as far as possible.              |

## 1.20 Over all noise level

| Sl. no.  | Inside campus area (dB) | Outside campus (dB) | Class<br>room (dB) | Lawn (dB) | Office (dB) |
|----------|-------------------------|---------------------|--------------------|-----------|-------------|
| 14.02.23 | 69.2                    | 98.7                | 55.4               | 70.1      | 52.2        |
| 16.03.23 | 68.1                    | 96.5                | 58.8               | 69.9      | 50.3        |
| 13.04.23 | 72.2                    | 102.5               | 55.5               | 75.0      | 55.5        |
| 25.04.23 | 73.0                    | 91.9                | 56.4               | 59.9      | 48.5        |
| 10.05.23 | 66.5                    | 100.1               | 52.1               | 68.8      | 46.6        |

1.19 Is there any device (preferably HVS: High Volume Sampler) for measuring ambient air quality in the campus (if so, please mention the data month wise): "yes", "no" and "not applicable"

Response: NO.

#### 2. WATER MANAGEMENT

Water management is the control and movement of water resources to minimize damage to life and property and to maximize efficient beneficial use.

#### Questionnaires and Response

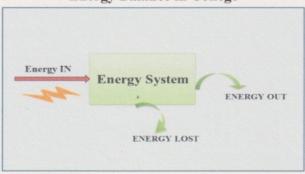
| Question  | Response                                       |
|---|--|
| 2.1 Whether college has an efficient and          | Yes, College takes necessary steps to maintain |
| hygiene water storage mechanism to minimize       | efficient and hygiene water storage mechanism  |
| the loss of water during storage "yes", "no"      | to minimize the loss of water during storage.  |
| and "not applicable"                              |  |
| 2.2 Whether college is using water filter with    | Yes, College use water filter with RO.         |
| RO, Aqua Guard and/or large water filter with     |  |
| cooler at the strategic locations in the college. |  |
| If so, are they under AMC: "yes", "no" and        |  |
| "not applicable"                                  |  |
| 2.3 Whether college has its own mechanism in      | No, Still now college does not arrange own     |

| repairing of water leakage: "yes", "no" and "not applicable"   | mechanism in repairing of water leakage |
|--|---|
| .4 Is there any rainwater harvesting unit in college: "yes", "no" and "not applicable" (if so, what are the uses of this water:)   | No.                                     |
| 2.5 Whether college has developed any reuse and recyclable of water system: "yes", "no" and "not applicable"   | No                                      |
| 2.6 Is there any scope of measurement of water quality parameters used in hostel, lab, office, canteen, tap water (if so, parameters: pH, EC, Total Hardness <i>etc.</i> ) | No                                      |
| 2.8 Whether college has sufficient/adequate drainage system: "yes", "no" and "not applicable"  |   |

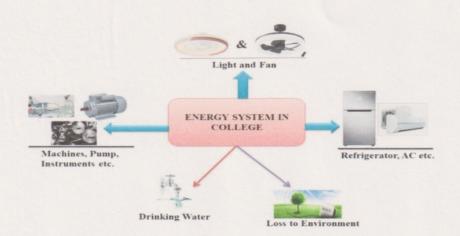
## 2.7 Lab-wise consumption of water (lt/d): Not Applicable

#### 3. ENERGY CONSERVATION

#### **Energy Balance in College**



**Energy Lost** 



## 3.1 Reduction of energy consumptions, especially fossil fuel energy

| Comments                                      |             | Response             |  |
|---|-------------|----------------------|--|
| a) Total electric consumption amount (KWH/Yr) |             | Approx. 11545 KWH/Yr |  |
| b) Average electrical consumption in a month  |             | 1000 KWH             |  |
| c) Total                                      | No. of      |                      |  |
| i)  | Tube light: | 154                  |  |
| ii)   | LED:        | 151                  |  |
| iii)  | Fans:       | 183                  |  |

## Questionnaires and Response

| Question   | Response  |
|--|---|
| <b>3.1.1.</b> Whether college has any provision/choice of renewable and carbon-neutral electricity options: "yes", "no" and "not applicable" |   |
| 3.1.2. Whether college has planned to install  | Yes, College has planned to install solar panels. |

| solar panels: "yes", "no" and "not applicable" (If so, Project installed/working: Date/Month/Year)  | Targeted a monthly average generation through 200 kVA power station with 2 inverters (each 100 kVA) connected to main grid. Messages will be displayed at various locations to aware the People about Energy Savings. |
|---|---|
| 3.1.3. Whether college has efficient water heating system: "yes", "no" and "not applicable"   | Not Applicable.   |
| 3.1.4. Whether the staff members of all sectors are concerned in turning off electrical appliances when not in use in both commercial and residential area: "yes", "no" and "not applicable"          | Yes   |
| 3.1.5. Is there any monitoring system – like put off the main switch where there is no need of electricity? "yes", "no" and "not applicable"  | Yes   |
| 3.1.6. Whether the users follow the appropriate and measurable targets for a reduction of energy, such as, computer, printers, electrical equipment when not in use: "yes", "no" and "not applicable" | Yes   |
| 3.1.7. Are there any options for equipment's running on standby mode: "yes", "no" and "not applicable"  | Yes, Computer and other instrument in practices   |
| 3.1.8. Whether college has taken initiative to purchase efficient and environmentally sound appliances in order to fulfill the green budget: "yes", "no" and "not applicable"                         | Yes   |

| 3.1.9. Whether college has its own mechanism in repairing of electrical fault: "yes", "no" and "not applicable"                                  | Not Applicable                                      |
|--|---|
| 3.1.10. Total number of computers, printer, Laptop, Xerox machine in college:  | Computer: 16 Printer: 14 Laptop: 2 Xerox machine: 1 |
| 3.1.11Whether college has organized lectures on energy conservation in order to give awareness to the students: "yes", "no" and "not applicable" | Yes   |
| 3.1.10 Whether the class rooms are with sufficient illumination in day time and ventilation: "yes", "no" and "not applicable"                    |   |

| Comments  | Response                   |
|---|----------------------------|
| a) Number of lights & fans in class room (average):   | Light: Six Fans: Six       |
| <ul><li>b) Use of light &amp; fans in the day time (average hours):</li><li>c) Number of windows per class:</li></ul> | Light: Four Fans: Six Five |
| d) Natural light source in day time (in hours) (average per class):   | Six hours                  |

## 3.2 Energy conservation strategies

| Question  | Response |  |
|---|----------|--|
| 3.2.1. Whether the architectural design for college is based upon use of natural lighting & ventilation, to save extra power for bulbs and fans: "yes", "no" and "not applicable" |          |  |

|   | 33.2.2 Whether florescent bulbs are  | Yes, Maximum florescent bulbs are replaced |
|---|--------------------------------------|--|
| - | replaced with CFL bulbs/LEDs: "yes", | by CFL bulbs/LEDs                          |
|   | "no" and "not applicable"            |  |

#### 3.3 Minimize the use of unsustainable transport

| Question  | Response  |
|---|---|
| transport facilities used by the staff  | Maximum student used Bicycle for their transport to arrive College; Staff members also uses cycle, motorcycle, e-rickshaw and bicycle |
| 3.3.2 Whether college has any common car sharing/car pool among the students and faculty:"yes", "no" and "not applicable" | Not Applicable  |

#### 4. WASTE MANAGEMENT

**Waste management** is the process and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process and wasterelated laws, technologies, economic mechanisms.

Waste can be solid, liquid, or gases and each type have different methods of disposal and management. In our campus, College mainly manages solid (degradable and non-degradable), liquid, chemical and biological waste.

#### 4.1 Maximization of the process of wastes & minimization of non-renewable refuse

| Question   | Response                                |  |  |  |
|--|---|--|--|--|
| <b>4.1.1</b> Is there any method of segregation of | Yes, On the basis of the basis of waste |  |  |  |

| waste materials? "yes", "no" and "not applicable"  | segregation, waste is identified and classified of the following categories  Dry waste: Refers to all items that are not considered wet/soiled items. This includes both recyclable and non-recyclable materials. Dry waste includes items such as bottles, cans, clothing, plastic, wood, glass, metals and paper.  Wet waste: Refers to all items that are organic like food items, soiled food wrappers, hygiene products, yard waste, tissues and paper towels, as well as any other soiled item that would contaminate the recyclables.  Sanitary waste: Refers to all liquid or solid waste originating solely from humans and human activities. (Can also include items from medical waste)  E-waste: Refers to all kinds of electronic waste.  Inert waste: Refers to waste items that are neither chemically or biologically reactive nor decompose easily.  Note: For ease of waste segregation, the disposal bins are color coded in following Fig. 1. |
|--|---|
| 4.1.2 Total amount of solid waste generated in the campus (including tree droppings & Lawn wastes)  Total number of staff (Per capita production per day)                      | 10 kg One   |
| 4.1.3 Whether college arrange any workshop/seminar/conference for awarding the students/staff for specific arrangements for recyclable wastes:"yes", "no" and "not applicable" | Yes   |

| 4.1.4 Whether college follow specific disposal method for solid or liquid waste in specific manner: "yes", "no" and "not applicable"  | Yes |
|---|-----|
| 4.1.5 Whether the recycling/collection facilities are provided by the city Municipality and/or private suppliers (including glass, white plastic bottle, printer cartridges, cardboard, furniture, plastics, thermocol, waste papers, electrical goods & alliances, electronic gadgets, instruments, equipment, packing materials):  "yes", "no" and "not applicable" | Yes |
| <b>4.1.6</b> Whether college has any composting ground/vat or any collection unit <i>etc.</i> :"yes", "no" and "not applicable" (If yes, what is the percentage of waste undergone composting and the final use of the products)  | No  |
| <b>4.1.7</b> Is there any mechanism of treatment/uses of domestic influent in the college campus (if so, what is the capacity of treatment plant/composting <i>etc.</i> ):"yes", "no" and "not applicable"  | No  |
| 4.1.8 Whether the cleaning products used by the college staff are ecofriendly and under the COSHH (Control of Substances Hazard to Health) regulations: "yes", "no" and "not applicable"  | No  |
| 4.1.9 Whether the college is using fertilizers, pesticides for any purposes, if so, amount used per month and places of uses Use of public transport:"yes", "no" and "not   | No  |

| applicable"   |     |
|---|-----|
| 4.1.10 How many (%) e-notice generated by the college for academic/administrative purposes in a month     | 50  |
| 4.1.11 How many (%) paper-notice generated by the college for academic/administrative purposes in a month | 100 |









Fig. 1. Different Color code disposal bin for different waste

## 4.1.10 Minimize use of chemical pollutant

Response: Not Applicable

### 4.1.11 Records of dustbins/collection bins inside the campus

| SI<br>no. | Location of dustbin | No. of dustbins |                       |                  | Quantity of collection (per day) | Disposal<br>time | Cleaning by ecofriendly Product Y/N |
|-----------|---------------------|-----------------|-----------------------|------------------|----------------------------------|------------------|-------------------------------------|
|           |                     | Biodegradable   | Non-<br>biodegradable | Plastic<br>waste |                                  |                  |                                     |
| 1         | Each department     | 1               | 1                     | 2                | 5kg                              | 1100am           | Y                                   |
| 2         | office              | 1               | 1                     | 1                | 500 gm                           | 11:30 am         | Y                                   |
| 3         | library             | 1               | 1                     | 1                | 100 gm                           | 11:00 am         | Y                                   |
| 4         | Open space          | 4               | 1                     | 5                | 5 kg                             | 9:30 am          | Y                                   |

## 5. E-WASTE MANAGEMENT

| Comments   | Response |
|--|----------|
| 5.1.Quantity of e-waste generated:   | 09       |
| 5.2. Number of cartridges used month-wise:   | 05       |
| 5.3. Number of cartridges disposed in a year (average):  | 60       |
| 5.4. Number of times refilling & reusing method of disposal of e-waste (if any)  | 50       |
| 5.5. Whether college has conducted any awareness programme on e-waste management:"yes", "no" and "not applicable"                                  | Yes      |
| 5.6. Is there any means of disposal of unusedcomputers, printers and electronic wastes through authorized agents: "yes", "no" and "not applicable" | No       |

## 5.7 Disposal methods

| Sl. No. | Location   | Amount of        | Method of disposal  | Name of the Agency (if |
|---------|------------|------------------|---------------------|------------------------|
|         |            | generation/ year |                     | any) for disposal      |
| 1       | Each       | 20 kg            | Sold to third party | NO                     |
|         | department |                  | after regular       |                        |
| 2       | office     | 5 kg             | interval            |                        |
| 3       | library    | 1 kg             |                     |                        |
| 4       | Open space | nil              |                     |                        |

## **6. GREEN AREA MANAGEMENT**

| Comments   | Response |  |
|--|----------|--|
| 6.1.Is there any garden in the college campus/outside the campus under college custody: "yes", "no" and "not applicable" | No       |  |
| <b>6.2.</b> Whether the garden is watered by using drip/sprinkler irrigation system: "yes", "no" and "not applicable"    | No       |  |
| <b>6.3.</b> Is there any mechanism of review of periodical   | Yes      |  |

| monitoring of tree species: "yes", "no" and "not applicable"                                |     |
|---|-----|
| <b>6.4.</b> Whether the college has taken any programmed for plantation of some fruit trees | Yes |
| which can attract birds, bees etc. "yes", "no" and "not applicable"                         |     |

#### 6.6 Records of Plantation programmes

#### 6.6.1. Plantation Programme conducted

| SI  | Programme                | Date of                    | No. of tree | Documentation | No. of beneficiaries         |
|-----|--------------------------|----------------------------|-------------|---------------|------------------------------|
| No. | conducted                | functioning                | planted     | (if any)      |                              |
| 1.  | World Environment<br>Day | 5 <sup>th</sup> June       | 05          | No            | In and outside of College    |
| 2.  | Independence Day         | 15 <sup>th</sup> August    | 05          | No            | In and outside of<br>College |
| 3.  | Ozone Day                | 16 <sup>th</sup> September | 05          | No            | In and outside of<br>College |

Checked and Signed by External Expert

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